Podarcis pityusensis Newspaper clipping

A clippings section dedicated to the extinction event of the Pityusic wall lizard populations

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Table of contents (2010-2022)

Table of contents (2023-2024)

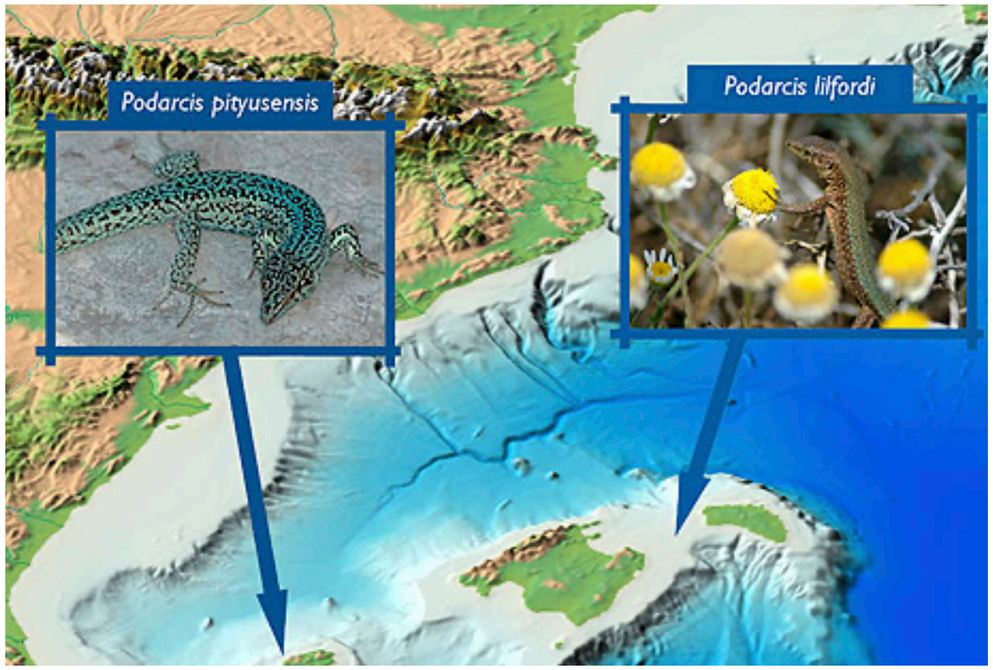
Table of contents (2024-2025)

Table of contents (2025)

EL MUNDO | Baleares

El Mediterráneo según las lagartijas

The Mediterranean according to lizards



Elena Soto | Palma

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About six million years ago, the confluence of the European and African plates blocked the Mediterranean's communication with the Atlantic. The Strait of Gibraltar closed and—being isolated and subjected to intense evaporation—began to dry out, with large areas of its basin emerging. During this period, the landscape of the Mare Nostrum was very different from today, and what is now the Balearic Islands was connected to the Iberian Peninsula, forming a large promontory, a continuation of the Sierra Bética. These lands were inhabited by a species of lizard that spread throughout the practically dry Mediterranean basin.

Today, the two descendants of this reptile—along with the ferreret—are the only three surviving terrestrial vertebrate species that populated the Balearic Islands before the arrival of humans; the rest were introduced by humans. In Mallorca and Menorca, lizards probably became extinct with the arrival of the Romans, and populations survived only in the Pitiusas, the Cabrera archipelago, and the islands and islets surrounding Mallorca and Menorca, evolving differently in each of them.

The uniqueness of these organisms, their survival mechanisms, their current distribution, and their diversity make them species that raise numerous questions: 5.3 million years ago, a major event occurred in the Mediterranean. It was an abrupt change, after which the common ancestor of lizards

(*Podarcis*) was divided in the Balearic Islands into two species (*Podarcis pityusensis* and *P. lilfordi*). This separation, engraved, so to speak, in their DNA, found a biogeological explanation just a year ago, when the journal Nature published part of the work of a group of researchers from the Spanish National Research Council (CSIC), which explained that the waters returned to the Mediterranean thanks to the largest and most abrupt flood the planet has ever known.

A gigantic discharge of water that, according to scientists, filled the Mare Nostrum in just two years, forever divided the Balearic Islands into two large blocks of land: the Gran Gimnesia (Mallorca and Menorca) and the Gran Pitiusa (Ibiza and Formentera). The two platforms never reunited, and this event explains the sudden isolation of the two populations of the same species.

As a result, part of the geological history of the Mediterranean could be told by lizards, following the path of mitochondrial DNA sequences—the DNA inherited from the maternal line, unalterable from one generation to the next and affected only by mutations. Studying a set of populations of an organism, or populations of similar organisms, allows us to compare them and draw a family tree, establishing which are genetically closest and which are most distant, even helping to interpret the evolutionary processes responsible for their current distribution. The genetic distance between populations, like a molecular clock, tells us how long they have been separated from a common ancestor.

It should be noted that over the last two million years, numerous glacial periods have followed one another, separated by warmer periods. During the former, ice covered large areas of land, sea levels dropped, and the largest islands were connected to neighboring islets, allowing different organisms to colonize and mix. During interglacial periods, however, sea levels rose, and vast regions were flooded, once again isolating the islet populations. In the Quaternary, the two large blocks of land into which the Balearic Islands were divided experienced these ups and downs of the sea in particular.

Gene sequencing makes it possible to determine whether individuals in a population have evolved over the past 2,000 or 3,000 years or whether they are the result of sporadic translocations (movements from one place to another) and just arrived two weeks ago on a yacht.

Research on the Balearic Islands' endemic lizards dates back to the early 1980s, when the Genetics Laboratory of the Department of Biology at the University of the Balearic Islands (UIB) attempted a first molecular approach to studying their populations. However, at that time, techniques for studying DNA were not as developed as they are today, and this approach was achieved through the study of proteins.

The rise of DNA sequencing techniques has made it possible for the INSULAEVOL group—made up of genetic researchers, zoologists, and terrestrial ecologists from the UIB, the University of Salamanca,

and the University of Liverpool—to work together and interdisciplinarily on the different evolutionary and ecological aspects of these unique reptiles of the islands.

"Lizards became extinct in Mallorca and Menorca, probably in Roman times," explains Misericordia Ramon, professor of Genetics at the UIB, "with the introduction of predators, such as weasels and cats, which could have caused the species to disappear. On the other hand, Ibiza and Formentera were barely Romanized, and perhaps this is the reason why the species has survived in the Pitiusas."

Currently, DNA sequencing techniques have made it possible to measure the genetic divergence between populations of Podarcis lilfordi and determine the phylogenetic relationships within this species. The results indicate the existence of four distinct groups: the one in Menorca, located on small islands and islets surrounding the main island where the species has disappeared (Illa de l'Aire, Porros, Colom, Addaia petita, and Addaia gran, among others); the one in western Mallorca (Dragonera, Malgrats, and Toro). The other two belong to the Cabrera archipelago and to the northern and southern islands and islets of Mallorca (Na Guardia, Moltona, and Colomer).

From these four major phylogenetic groups, the evolutionary significant units (ESUs) that require the most protection can be determined. The existence of four major lineages provides a starting point for the recognition of unique matrilineal populations and indicates that at least four major groups should be recognized on a genetic scale for conservation objectives.

Regarding P. pityusensis, the main populations are distributed on Formentera and the islets surrounding the Pitiusas. "Interestingly," comments Bàrbara Terrasa, a member of this research group, "there is a group of this species on the Palma wall that is about 100 years old and possibly descends from specimens that arrived by boat to the port of Palma."

Due to the highly diverse conditions of the different habitats, the threats are highly varied. Frequent visits to confined spaces such as the islets can end up degrading them. Furthermore, translocations of individuals occasionally occur, which eliminates the genetic isolation and morphological traits that uniquely characterize many populations. Illegal capture, the introduction of potential competitors, or the use of poisoned traps for seagulls or rodents also affect the lizards. In short, their closely tied endemism to a habitat makes them vulnerable species, whose extinction could be driven by any eventuality.

DIARIO de IBIZA

El color de las lagartijas

The color of lizards

The biologist and professor at the University of Miami, Nathan Dappen, has been working for ten months in the Pitiusas, especially in Formentera, to study the influence of the different colors of lizards on their sexual relations.

Photomontage of the various lizard specimens studied in the Pitiusas and their adjacent islets. / NATHAN DAPPEN

Formentera | Carmelo Convalia
04 JUN 2011 3:17

Why do the lizards of the Pitiusas have such a wide variety of colors? How does this chromatic diversity influence their sexual relationships? Why does the same color gene manifest differently in males and females? These are just some of the questions that North American biologist and professor at the University of Miami, Nathan Dappen (Modesto, California, 1983), is trying to answer after ten months of fieldwork and various scientific experiments in which he has neither killed nor harmed any of the reptiles he has captured in order to observe their behavior.

In a few days, he will return to Miami to continue his research, working with the blood samples he has obtained from the aforementioned specimens, which are part of his doctoral thesis, entitled: "Color diversity and genetic evolution of the species *Podarcis pityusensis*" and its endemic subspecies, all of which are protected by current legislation.

On the occasion of International Environment Day, Dappen gave a lecture yesterday in the interpretation center of the Ses Salines Natural Park in Can Marroig, attended by the Park Director, Paula Goberna, and the Acting Minister for the Environment, Silvia Tur. This marked the beginning of a series of educational activities to be held in this space, dedicated to promoting knowledge and research into the marine and terrestrial environment of the Natural Park.

Three Colors in Formentera

The expert explained that the color of the lizards, Podarcis pityusensis, of the Pitiusas and their 42 adjacent islets is closely related to the characteristics of the territory. In the case of Formentera, there are three different types of specimens depending on their color. The blue ones are found in the forested and heavily vegetated area of Es Cap de Barbaria. The green ones are found mainly in La Mola, and the brown ones in the area of Ses Illetes and Es Trucadors, on the northern tip of the island. It so happens that in the central area, on es Ca Marí, specimens of various colors, green and blue, are found. It is particularly striking that on the islet of es Vedrà, he found blue-green specimens with a longitudinal yellow stripe down their backs, and that on the Bledes Islands, some of the specimens are black, although when observed closely, they are a very dark blue. He has also classified orange lizards on s'Illa Negra.

Nathan Dappen explains that his research has several parts. The most basic is the morphological and color classification of lizards. Another is the study of their behavior, especially during sexual relations, where he has detected that the dominant male is always the largest and most vividly colored. Dappen explains: "We want to know why there is such a large variation in colors in this species in Ibiza and Formentera, something that doesn't occur anywhere else in the world. It's very curious that we find such diversity in such a small area." He points out as his first conclusion that the colors of lizards vary depending on the vegetation in which they live: "When we are in a forested area, we find blue or green lizards, but when the land becomes desertified and there is little vegetation, they are brown. Furthermore, you don't find green lizards in Es Cap or blue lizards in La Mola." The reason is that this species combines its reproductive power and territorial defense through its color, mimicking its surroundings.

Cannibals and Omnivores

The expert reveals: "We have discovered that the intensity of the colors of male lizards is related to their size. If they are large, the color is more intense. Thus, when they see a large, very blue or very green specimen, they don't fight. However, the smaller and less colorful the specimen, the more susceptible it is to being attacked by another specimen, since this species is cannibalistic but also omnivorous."

The objective of this research, funded by the University of Miami's Faculty of Biology, in which nine students participated under the direction of Dappen, is to study the sexual behavior of this species, which is closely related to color.

A male lizard can copulate about ten times a day, but the larger and more intense its

color, the more females it can win over. Another experiment was to isolate 20 males and 20 females in a cage. After a week of coexistence, they introduced 20 more females, and the males only copulated with the newcomers.

The research team went further and used tattoo ink on 40 male and 40 female specimens. The result was that the artificially painted lizards had more sexual relations than those that hadn't been dyed. Dappen therefore concludes that color is a fundamental factor in the maintenance and reproduction of this species. "The bluer or greener the males are, the more females they attract," he concludes.

The biologist explained that the key lies in a common gene that determines the colors of males and females. When he arrives in Miami, he will be able to study this mechanism in the laboratory, thanks to the blood samples he sent from Formentera, which will be the subject of another investigation that will complete his work. The biologist explains: "When a female reproduces with a blue male, they have blue offspring, which is good for the males, but they also have blue females, which is not good for them, as they are confused and more vulnerable to predators. This creates a conflict over the same genes. That's what I'm studying."

Another conclusion is that blue lizards are the most attacked by predators, especially birds, followed by green lizards and finally brown lizards. For this reason, a female with bright colors is not beneficial for the maintenance of the species and represents a conflict for its survival.

Sexual behavior

One of the conclusions Nathan Dappen has drawn from his ongoing research is that males mate about ten times a day and prefer unknown females to those they've already met through sexual encounters. The male's color is a sign of attraction.

DIARIO de IBIZA

Serpientes versus lagartijas

Snakes versus lizards

Opinión

06 FEB 2012 6:30

It was always said that snakes didn't thrive in Ibiza due to some supposed virtues of the land and the supposed protection of the god Bes. But the gods are dead, as Nietzsche said—even Nietzsche died too, I believe—and surely this very morning many Ibizans aren't feeling very well.

Ah, the god Bes, what a lovable, pot-bellied, ugly fellow, what a good snake hunter. If there were an archaeological museum open in Ibiza, which unfortunately isn't the case, we could go and devoutly visit one of his images, even offer him a gift. One could always say that snakes have proliferated in Ibiza precisely when archaeological museums are no longer open to the public.

But you'd have to be very sensitive to think that the snakes eating our lizards are doing so out of revenge on the big-bellied god, now relegated to display cases where no one can see them. Thank goodness, instead of a very ugly god, we now have a government that, when it comes to cutting whatever is necessary, drafts decrees to cut off the heads of foreign snakes.

Ancient Egyptian god Bes was a god of childbirth, sexuality and fertility. He was also the god of war and humor.

DIARIO de IBIZA

Per què hi ha sargantanes negres?

Why are there black lizards?

Reptiles are poikilothermic, so their internal body temperature depends on how warm or cool the outside is.

The side is the sexy zone for lizards. / DIARIO DE IBIZA

Antònia M. Cirer | Eivissa

16 JUN 2013 6:30

Each person has their own perception of colors that is different from others. And the same person also modifies the chromatic perception according to the lighting. When it comes to outdoor appreciations, with sunlight, we could say that depending on the time of year or the clouds in the sky, we all have a different chromatic experience every day.

In today's world, where the image easily replaces the description, there is little point in getting into arguments, it is enough to show a good collection of photographs to answer the question of what color is a lizard?

But it is worth knowing what to look for when we want to know what meaning each body color has, each design, and why they can have contrasting colors in one part of the body, and not in other areas of the body.

The dorsal design is what the few predators that act on the populations of the islets will see: birds. On the back, the lizards have three lines of black spots that can be continuous, or scattered spots. In fact, all juveniles have these three continuous and thick lines, and as the lizard grows, the black dots separate, while the color of the dorsolateral lines (what we identify as the color of the lizard in the strict sense) becomes more evident. The fact that the three black lines lose continuity when the

individual is older is an optical camouflage effect, since the silhouette of the lizard is thus blurred.

The coloration hides us from the lizard that, observed from the sky (from a bird's eye view), is confused with the colors of the vegetation, lichens, branches, sand, pebbles, dry leaves or cracks in the rocks. Depending on the most characteristic chromatic features of a micro-landscape, the predominant color of the back of the lizards in that place has been selected.

The coloration of the sides, on the other hand, is what other lizards see, and has a function of sexual attraction, intra-population hierarchy, and communication between congeners. The flanks usually have a different coloration from that observed in the center of the back. This coloration can be very striking: orange, turquoise, intense blue, and is then mentioned when we describe the coloration of a lizard, but it frequently has whitish, beige, more or less pearly colors.

Coloration of the sides

The coloration of the sides sometimes extends to the belly, where there is a lot of color variability. In many islets (Negre del Nord) it is common to find bellies of a bright orange color; in Es Vedrà and la Mola they are intense cobalt blue, in Trucadors practically pearly white, in s´Espartar emerald green, and dark gray or completely black in the melanistic populations of ses Bledes.

On the sides of the belly and on the throat there are usually spots, like freckles, of contrasting colors: black, blue, turquoise, orange... Very showy.

Why so much chromatic fantasy on the bellies and sides? Well, because this is the sexy area of the lizards. The sides are the part of the body most exposed to the view of other congeners and, when looking for a partner, one of the attraction movements that males make is to show their sides to the female, to rise slightly to show their belly, and to stand on their front legs to show their throat area. So individuals with more colored spots seem to be more attractive to the other sex and therefore would have more reproductive success, positively selecting for this character.

Conspicuousness in front of the opposite sex, or crypsis in front of predators is not the only function of color in saurians. The basic function of coloration is related to body temperature, in the possibility of absorbing more or less solar radiation and thus being able to thermoregulate.

Reptiles are poikilothermic (cold-blooded, as it was said before), so the internal temperature of the body depends on the heat or coolness of the outside. When they need to warm up, they flatten their bodies, so that their backs are flat, perpendicular to the direction of the sun's rays, and radiation is better absorbed. The belly in direct contact with the rock absorbs the heat of the substrate. On the other hand, if they do not need heat, they walk on all fours without touching their belly to the ground.

Poikilothermy

Poikilothermy is a mechanism that restricts large sizes, since absorption is carried out over the area (in cm^2) of skin that the animal has, but this energy must be supplied to the entire body volume (in cm^3); therefore, if the size increases, the area of energy absorption increases squared (cm^2), but the consumption of this energy increases

cubed (cm^3). So a larger size implies that it must improve the obtaining of thermo-solar energy.

This system can only improve with coloration, since light colors reflect more of the radiation received and dark colors absorb it more. Therefore, to be able to have a large size (gigantism observed in most islets) the mechanism for absorbing solar energy must be improved. And this is only possible if the body colors are darker. For this reason, all robust and large populations have high chromaticity, even black (ses Bledes), almost black (Margalida), or a blue so dark that it looks black (Murada). Melanism therefore has a positive selective value.

But this has the counterpart that the lizard becomes more apparent to its predators (negative natural selection). How is it, then, that large and black lizards, so visible to human eyes, have been positively selected in different places in the Pityüses? They seem like easy prey to visualize.

Let's look at which populations have achieved melanism and what the habitat where they live is like.

The most melanistic populations, and also of larger body size, are those of the Bledes islands; Margalida island and Murada island, there is also this tendency to darken the back at the other end of the Pitiusan archipelago at Cap de Barbaria, where they are in reproductive contact without barriers with the rest of the lizards of Formentera, which in the north of the island (Trucadors) are the smallest lizards and have the lightest dorsal coloration of the entire species.

All these places: Bledes, Margalida, Murada, Cap de Barbaria, are places of whitish limestone rocks, very fissured, with abundant cracks with sharp edges. The sun casts shadows from these cracks and edges, and if we saw the ground without depth or relief it would be a light surface with elongated black stripes and spots. And this is where the camouflage of the black lizards lies.

Seagulls

Birds, especially seagulls, are the main predators of lizards on islets. On large islands they are joined by some mammals, but on islets predation can only come from the sky. These predators have great visual acuity for colors, contours and movements, but they do not have stereoscopic vision like mammals, that is, they do not see the relief, they do not have depth of field, 3D does not exist for seagulls. Therefore, they do not differentiate the black shadow that a hole in the rock projects, from a silhouette of a black lizard lying sunbathing next to the hole.

So a still lizard is not visible, everything that moves is seen, but *Podarcis pityusensis* has quiet habits and spends most of its time without moving.

Based on this premise: "he who does not move is not seen", lizards with their indolence, without knowing it, save themselves from predation. And the selection of colors that are cryptic in each specific place is carried out each generation simply by natural selection.

DIARIO de IBIZA

Les sargantanes de Formentera

The lizards of Formentera

On this island you can see populations with very different colors.

The silhouette of the island of Formentera recalls a 3-point star, with a large central body. / IBIZA DIARY

Antònia M. Cirer | eivissa

30 JUN 2013 6:30

That within the same island we can find different populations of visually distinguishable lizards, and that each chromatic modality lives in a specific area, is a phenomenon that is easily verified in Formentera. On this island, without there being any geographical or ecological barrier that cannot be crossed by a lizard, populations with markedly different colors can be seen depending on the area.

The silhouette of the island of Formentera is reminiscent of a 3-pointed star, with a wide central body. The ends of the 3 points have remarkable geological and ecological characteristics. On the contrary, the center of the island is a strongly humanized landscape, more similar to the island of Ibiza than to the ends of Punta de Trucadors, Cap de Barbaria or the cliff of La Mola. Thus, on each of these 3 points there are very different lizards.

Cap de Barbaria

Es Cap is a rugged, arid, stony area, full of ravines and cracks. With a low vegetation cover formed by mastic bushes (*Pistacea lentiscus*) flattened on the ground by the wind, of large diameter and small height. It is a typical exokarst landscape and, as in

Ses Illes Bledes, the angularity of the edges of the rocks projects small areas of shadow that help to camouflage the elongated silhouette of a black lizard.

The dorsal coloration of the lizards tends to be melanic due to the 3 lines of black spots being very wide, the color of the dorsolateral lines being very dark bluish green. This very dark coloration, almost black, allows the lizards to be much larger than the lizards in humanized areas or Punta de Trucadors. A phenomenon that is also observed in the lizards of the Bledes Islands (the largest of all the Pitiüses), and that is also repeated in La Mola: a large size requires a thermoregulatory supplement, which is only possible by darkening the dorsal color, but this is not possible if this coloration makes the lizard too visible to birds; therefore, melanism can only occur where a black body goes unnoticed in the environment. Difficult if the rocks are white!

The juveniles that are observed in this area frequently have the 3 clearly defined black dorsal lines, with the 2 dorsolateral lines and the flanks of a lighter color, generally brown or greenish-brown with variable intensity.

Why are large adults so dark, if there are lighter juveniles? Probably because only melanistic ones (which here go unnoticed by predators) achieve a thermoregulation that is optimal enough to maintain a large body, and large-bodied adults are the ones that dominate intraspecific competition, therefore those that are more likely to feed better and have a longer life expectancy.

La Mola

Like the area of Es Cap, La Mola is a massif of organogenic limestone. With an impressive cliff that reaches the maximum elevation of Formentera: 192 meters almost vertical from the sea. On this wall full of caves, the legend that most identifies the Pitiusas at the end of the 20th century around the world was forged: the hippies and their peculiar way of living and understanding reality.

Is this where the silhouette of a lizard begins to appear as a symbol of a way of living outdoors, in contact with nature, in search of inner peace? Probably.

Many plastic artists, filmmakers, jewelry designers, writers, fashion designers, musicians,... have spent seasons in this place, have contemplated the sea from the promontory of La Mola while enormous bluish and very dark lizards ran between their feet.

It is not surprising, then, that the best symbol of the Pitiüses that encompasses the entire cultural and social explosion of recent years is a large cyan blue, almost black lizard.

Punta de Trucadors

It is a coastal sand bar sedimented by the drift current that stretches north, where the Espalmador Island is located. If sedimentation continues in this way, the two islands will be joined by a tombol.

It is a very unstable area where prolonged periods of good weather cause the bar to almost emerge (the old mayors used to go to Espalmador by cart). Or a considerable depth appears, even breaking, in the Racó de ses Ampollas area, with small islets lined up after a strong storm.

The coastal dunes are weakly fixed with thin limestone crusts, produced by the upward migration of water during periods of aridity, small thickets of Trucador grass (*Otanthus maritimus*), of sedges (*Limonium* sp.), of piles of dry *Posidonia* leaves. The color of the landscape is characteristic and very uniform throughout the year: grayish ochre, straw or light sand color. The texture of the ground is smooth, without cracks or roughness, as corresponds to semi-consolidated dunes.

Any color other than light brown or beige will be a strident chromatic note for any bird that flies over this area. Thus, the lizards of Trucadors are ´forced´ to have light, cryptic colors in a sandy environment. The lizard of Trucadors is the one that presents the lightest coloration, and also the smallest of all the Pitiüses, as well as the one that has the most stylized body proportions, long and thin legs and fingers. Coloration and proportions similar to those presented by the populations of Illa Caragoler and Illot de s´Alga, islets of sandstone and sand with a substrate similar to that of Trucadors.

The 3 dorsal lines of the Caller lizards are light brown, and the 2 dorsolateral lines are even lighter in color (beige or light gray); the sides and gray belly are almost white, pearly; they may have spots (like a row of freckles) of turquoise color on the sides of the belly, since it is an area that predators do not see and that will have a sexual attraction function.

This coloration does not allow for the capture of large doses of solar energy, so it will not be very efficient in thermoregulation, and this will force the lizards not to reach a large size. They are always small if we compare them with those in other places on the island.

From an adaptive point of view, didn't we say that it was better to be larger, since there is better competition within the population and you can have more reserves in times of scarcity? In the rest of Formentera, the lizards are quite large.

Obviously it is better to be large, but let's remember that in order to leave descendants you must first survive predators, that is, you must not be visible. Therefore, the further north you go, the lighter the dorsal color of the lizards, since these are the only ones that can go unnoticed by the eyes of birds. Since birds have flat vision, without relief; and the body of a lizard blends in, to the bird's eye, with its surroundings if its back is the same color and texture as the substrate where it is sunbathing.

Darker lizards are certainly also born (small dark brown juveniles are seen in the area of Ses Salines de Marroig), since there is certainly a constant gene flow from the center of the island to the north. (There is no physical barrier that prevents this). But the darker lizards cannot thrive in this specific environment of Trucadors, with light, cryptic colorations being positively selected, in each generation, within a landscape dominated by ochres.

We therefore have what scientists call a clinal variation in the dorsal color and body size of the lizards, which varies from very light colors in the northernmost part of Trucadors, with a very small and agile body size; they gradually darken, very little by little, as we move south, and the ground acquires more plant cover and a greater diversity of micro-landscapes; until we reach the rural fields where the color and size of the lizards are already similar to the rest of the centre of the island, and quite similar to the lizards of Ibiza.

DIARIO de IBIZA

Què mengen les sargantanes?

What do lizards eat?

On all the islands and islets, lizards complement their diet with small fruits, flowers of all kinds, buds and tender leaves.

Lizard eating prickly pear flowers.

Antònia M. Cirer | ibiza
28 JUL 2013 6:30

Occupying, therefore, an intermediate position within the trophic scale: it needs some steps below, and its populations are controlled by the next step, or fourth trophic level.

On small islands, this is not possible, since there is no possibility of maintaining such a structured ecosystem. Let's not fool ourselves, however; with the few ecological resources available to each island, a climax stage is reached in which the various populations are structured in intrinsically well-regulated trophic networks. On each island, if there is no external distortion, especially human activity, populations are sustained with the maximum possible individuals of each of the species that inhabit it.

In the Pityusic Islands, the ideal food web that exists on the continent is truncated in several ways. Lizards do not have efficient predators that subject their populations to

a selective pressure that keeps them agile, small, elusive, with cryptic colorations, always hidden. Predators are scarce and those that could prey on lizards usually have other more interesting food sources. A very different situation may occur in the future if snakes continue to arrive from the continent hidden in gardening stocks: olive trees, palm trees and other trees with roots and soil, where snake eggs and young are hidden and are released into the wild on the island of Ibiza.

In all populations of any species, if there is no predation, their numbers increase considerably. And if there are denser populations, there is much more intraspecific competition for food, and here comes the first major evolutionary change that the lizard *Podarcis pityusensis* had to face: change of diet and increase of intrapopulation competition strategies.

The main selective pressure has been to adapt to a new food source, not as elaborate as insects, but has had to resort to the first trophic level and feed directly on plants. On all the islands and islets, the lizards complement their diet with small fruits such as those of sea fennel (*Crithmum maritimum*) and the mastic bush (*Pistacia lentiscus*), flowers of all kinds, especially sea fennel or coca marine (*Limonium* sp.), buds and tender leaves. As well as any type of food that can be brought. It is common to observe lizards on small plants at the edge of the sea. And even more frequently they come to look for the food brought by people who visit the islets. Many fishermen tell anecdotes of when they went to make lunch on this or that islet. Since they always had to leave a person on guard to prevent the lizards from jumping into the boiling pot, attracted by the smell of the stew. This is currently the main selective pressure that the lizards of the Pityusic islets have: food.

Not so the predation, as in other European places. Much more relaxed pressure on the small islets and that has allowed the morphological change necessary to successfully achieve this change in ecological function (a 'formal' change as ecologist Ramon Margalef would say).

The search for new food sources does not stop with plants and becomes a little more daring. In some islets, such as sa Torreta, Espalmador or Illa d'en Pou, sea storms leave piles of dry *Posidonia* on the rocks, which will later be a good habitat for small crustaceans such as sea fleas. And there the lizards go to look for these large animals in the middle of the dry seaweed.

When a lizard is captured alive and held with your hands to prevent it from escaping, the lizard usually expels a defecation, which will inevitably contain remains of the food it has ingested in the hours or days prior to capture. By crushing these excrements, you can identify plant fibers, small pieces of invertebrate exoskeletons, sea flea legs, pits of some fruits, etc. That have revealed these dietary supplements that the lizards of the islets enjoy, where otherwise there would not be enough food to maintain the dense populations of large individuals that live there.

However, any change in diet implies some morphological change. You cannot have the same digestive tract if you are a herbivore, carnivore or insectivore. And therefore, now comes the great adaptive change that, through natural selection, we witness in the current individuals of a good part of Formentera (except Trucadors) and of most of the islets: gigantism.

Gigantism

The Pityusic lizards have a great tendency towards gigantism. All populations are much larger than any species of continental lizard. The Ibiza population is ostensibly larger than the lizards on the mainland, although those on Ibiza are much smaller than those found south of Formentera, or on any western islet.

A larger body size allows for a longer digestive tract; which allows for more efficient digestion of a diet rich in plants.

The increase in size is only possible if predator pressure is reduced, since otherwise they are very appetizing prey.

But it is not only a digestive issue, the increase in size is also favored because it allows for the accumulation of more energy reserves; which in a fluctuating ecosystem such as small islets are always a guarantee of being able to withstand times of food shortage.

And it also provides good assets within intraspecific competition, since, from lizard to lizard, the strongest and most robust one wins, which is the one that takes the bite. Everyone has seen two lizards fight: they try to bite off the base of each other's tail in order to snatch it from the other. The severed tail continues to move while the shorn lizard quickly flees. And what happens to this tail? Nothing is lost on an island where there is such a shortage of protein, the winning lizard will later return to look for the tail to eat it.

But this convenient increase in size is not possible if there is strong predation, since predators eliminate from the evolutionary game those individuals that present themselves as more appetizing (and a large lizard is, without a doubt!). Therefore, here is the reason for the possibility of a change in diet: the weakening of predatory pressure; a fact that allows very abundant populations and that requires larger individuals, as is observed in the current populations of the most isolated islets.

No matter how small an islet may seem, no matter how poor its vegetation may seem, with minimal conditions it is enough to sustain a population of lizards. A few thickets of tripe and sea fennel are enough, which apart from constituting the diet of the lizards, at the same time support insects, snails and other small invertebrates that will be the prey of the lizards. And lizards, in turn, do not have a predator efficient enough to control the entire network, so they have become the final step of the terrestrial trophic pyramid.

To a certain extent, they have ceased to be ecological strategists (species that produce many offspring but with high juvenile mortality), through a change of occupation that has allowed them to become species with an ecological strategy: more stable populations, with fewer offspring per female, but with larger and more resistant offspring.

DIARIO de IBIZA

Las lagartijas pitiusas temen a las serpientes de herradura

Pityusic lizards fear horseshoe whip snakes

j. m. l. r. | es vaixell

20 JUN 2014 17:57

In addition to visiting the islets of Escull Vermell, s'Espardell, s'Espartar, es Penjats, sa Sal Rossa, Dau Gros, na Gorra, and Redona to collect data on their respective lizard populations, Zaída Ortega and Abraham Mencía conducted a week-long olfactory discrimination experiment to test whether Ibizan lizards recognize the danger posed by introduced ladder and horseshoe snakes.

Although they only have preliminary data at the moment, they believe that "they do recognize snakes as predators," although further tests are needed. The experiment consisted of introducing lizards from Ibiza (which are already familiar with snakes) and from the islet of sa Sal Rossa (where they have not yet arrived) into terrariums previously occupied by snakes. Inside, they clearly responded to the threatening scent of snakes, for example by wagging their tails, a step prior to autotomy.

Curiously, the Balearic wall lizard doesn't react this way. Perhaps that's why it disappeared from Mallorca and now only inhabits certain islands.

DIARIO de IBIZA

Serpientes y lagartijas

Snakes and lizards

Opinión

08 JUL 2014 6:30

In Roman times, it was said that Ibiza was an island blessed by the Egyptian god Bes, and that its fertile soil was endowed with mysterious properties capable of repelling snakes, scorpions, and other poisonous creatures. The naturalist Pliny recorded this in the first century. From then on, according to legend, nobles and centurions demanded the importation of Ibizan soil to surround their tents during expeditions and thus ward off reptiles and other poisonous animals.

Two thousand years later, just last week, a professor of Zoology at the University of Granada shattered the legend and confirmed an unprecedented and worrying reality: half of the Ibizan countryside has been colonized by garter snakes, or horseshoe snakes, unaffected by the supposed toxicity of Bes. They pose a serious threat to our ecosystem and the species that live within it.

Reading the conclusions of Dr. Pleguezuelos—the reptile specialist—sent a shiver of repulsion through me, due to my phobia of snakes. But it also left me with the unpleasant feeling that the presence of snakes constitutes a metaphor for our decadence; for the extinction of the magical glow and magnetism that have surrounded Ibiza since ancient times and made the island a unique destination in the world. A while later, while I was philosophizing about Ibiza with a handful of strangers in this parallel universe that is the Internet, a woman offered a brief but extremely powerful reflection. In my view, it explains why snakes now slither among us with such familiarity: "The best thing about Ibiza was its simplicity," she chatted on Facebook, using the preterite tense. A sociologist could not have been more accurate in his diagnosis.

Certainly, until very recently, Ibiza was characterized by a simple and friendly lifestyle, whose essential values were hospitality, freedom, intelligent coexistence with nature, and a dogmatic respect for what was different from us—others describe it as polite indifference, but it amounts to the same thing. At the same time, we accumulated an ancestral culture, which we displayed with the same pride as our beaches, our cuisine, or our heritage.

Unlike other destinations, here, in addition to beauty, travelers above all found authenticity. They would see the fisherman moor his llaüt to any rock and lower it with a box of still-bouncing fish. Then, they would savor it at a beach bar run by a smiling Ibizan, who served them the food jokingly, without protocol or genuflections; face to face. A few such beach bars still exist, but they are gradually being replaced by beach clubs or substitutes owned by foreign investors and multinationals, staffed by a crew of waiters who look like they've stepped out of a swimsuit catalog. They don't serve rice dishes, fish stew, or stews, but sushi and Kobe burgers; the same offerings travelers enjoy in the trendy bars of their icy homeland or in the beach clubs of Miami, Monaco, or Barceloneta. Everything fits in Ibiza, but there must be a balance.

The same process of globalization affects many other things: the establishment of large retail outlets, new hotels built in the image and likeness of others around the world... Even the nightclub parties have long since lost the Ibizan touch of yesteryear. Right now, there's a legion of businesspeople and merchants from all over, including locals, who have set about milking the island at breakneck speed, their eyes clouded by greed. And no one seems to realize that the udders will eventually run dry.

Nature is always ahead and has been firing warning shots for some time, which we ignore like automatons: snake infestations resulting from not monitoring the olive trees we import to decorate our gardens, micro-algae invasions due to not caring for the beaches that turn the pristine waters of yesteryear into a thick broth, and which are increasing in number.

At the same time, Ibizans and longtime residents are selling off their businesses, homes, and land in the face of offers they can't refuse, leading to the expansion of a tourist destination devoid of local personality, which gains greater prominence with each passing season. I am convinced that there is a point of no return, an invisible frontier that, once crossed, will turn Ibiza into a tired and declining tourist destination, as has happened in other Mediterranean enclaves, such as the Costa del Sol or the Côte d'Azur. Snakes are just one more notch in the butt of the revolver aimed at our economic and environmental survival, but there have already been many. If we don't become aware and act, the snakes will eventually eat the lizards.

DIARIO de IBIZA

Lagartijas en la dieta de las ratas

Lizards in the diet of rats

Two British researchers are studying whether the regenerated tails of *Podarcis pityusensis* are an indicator that they are attacked by rodents.

The es Vedrà lizards are characterized by their turquoise-blue flanks and a striking yellow-orange stripe on their backs. / J.M.L.R.

José Miguel L. Romero | es Vedrà

16 SEPT 2014 20:03

How beautiful Vedrà is, how wonderful the turquoise waters that surround it, what a lovely picture. But what appears from a sailboat or from the coast to be a bucolic paradise is nothing short of hell for the few creatures that inhabit it: from dawn, the sun scorches the slopes of an islet carpeted with bones, molded from dried clay and covered with treacherous boulders that crumble at the slightest misstep. On an island at odds with the word horizontal and where there is barely any shade to shelter them, the few beings that inhabit it refuse to do anything to survive. There is such scarcity, the plants that grow there are so few and so withered, that only the opportunistic and the clever have a chance of living another day. There, only the most resourceful, the least gastronomically sybaritic, succeed: with so little food, some animals will eat anything, even their own kind, while others have developed spectacular techniques to escape the constant dangers that threaten them. British researchers John Newton and Paul Hudson have been visiting the nature reserves of es Vedrà, es Vedranell, and the Ponent islets for a week, specifically to investigate the relationship between two of the most abundant species there: rats (introduced and only temporarily eliminated from s'Espartar) and native lizards.

Of course, they get along terribly, as reflected in the title of the study initiated in 2012 by this British couple: "Regenerated lizard tails as a possible indicator of predation of *Podarcis pityusensis* by rats." Newton, 62, head of the Sheffield-based company Newton Ecology & Design, is convinced that lizards, although they seem indigestible, are part of the rats' daily menu, which, lacking anything better to munch on (there's little choice), raid their hiding places at nightfall. He claims that lizards are terrified of rats, perhaps because they already know (it must be ingrained in their genes) that they want to sink their teeth into them. Faced with the critical situation—which Newton describes as "anxious danger"—of seeing a damned rodent up close, they self-mutilate (autotomy): they lose their tail, which, by snaking for a long time, confuses the rats and gives them a chance to escape.

Few of the lizards that Hudson—a 40-year-old Sheffield electrician who repairs washing machines and other household items and is a volunteer in this research—and Newton captured last Wednesday in es Vedrà have their tails intact. Almost all of them have fully regenerated, although in some cases, parts are missing. Does this mean they have been attacked by rats? They don't know. They admit it could even be the result of fighting with other lizards (they are very territorial and aggressive) or even being harassed by other predators (raptors, for example, which are abundant on the islets), although the suspicion falls on rodents given their abundance, especially in places like es Vedranell. Newton also believes that autotomy is so aggressive and requires so much energy (something that is in short supply in these areas, now plagued by drought) that the Pityusic podarcis only resort to this mutilation in cases of extreme danger, as deadly as that posed by rats.

The couple has been recording the characteristics (sex, tail and total length, distance from the stump, etc.) of the lizards that inhabit the islets since 2012—then accompanied by nature reserve naturalist Jorge Calvo, whom they fondly remember as very helpful. Their goal is to complete their fieldwork this summer to begin drawing conclusions from the numerous statistics they've accumulated. During their visit to es Vedrà on Wednesday alone, they captured around thirty, although they were less fortunate when they landed at es Vedranell: "There was no way they would get near the tomatoes. They preferred to eat the seagull droppings," explained Newton, who also studies *Lacerta agilis* (agile lizard) in his country. They eat everything: droppings, their own eggs, their own young, any insect that comes near them, rotten seagull or rat meat...

Squashed tomatoes are ideal for trapping them, although other herpetologists prefer pieces of pear or apple (what a headline if Newton had used that for this research!). They place them in water bottles cut off at the nozzle and place them vertically between the bushes and *Limonium*, or between rocks, so that when the reptile enters, it has no way to escape, as it slides down the plastic walls. The sweet smell of tomatoes, which becomes more intense the hotter the sun, attracts them powerfully.

Blue, yellow, and orange

But in es Vedrà, the *Podarcis pityusensis vedrae*, with turquoise-blue flanks and belly and a striking yellow-orange stripe on their backs, are barely visible. There are no large concentrations, unlike in sa Bleda Plana or s'Espartar, which are rat-free islands. In es Vedrà, they are less curious and more elusive, a sign that they fear something (and that, perhaps, they don't have the same fear in sa Bleda Plana or s'Espartar). Only the aroma of tomatoes makes them lose their caution, show themselves in full sunlight, and fall into the traps or snares of the rods used by herpetologists to capture these elusive reptiles. The males are enormous. Some measure 13 centimeters from the tip of their snout to the beginning of their tail, 20 centimeters if you include the tail (when it's whole, of course).

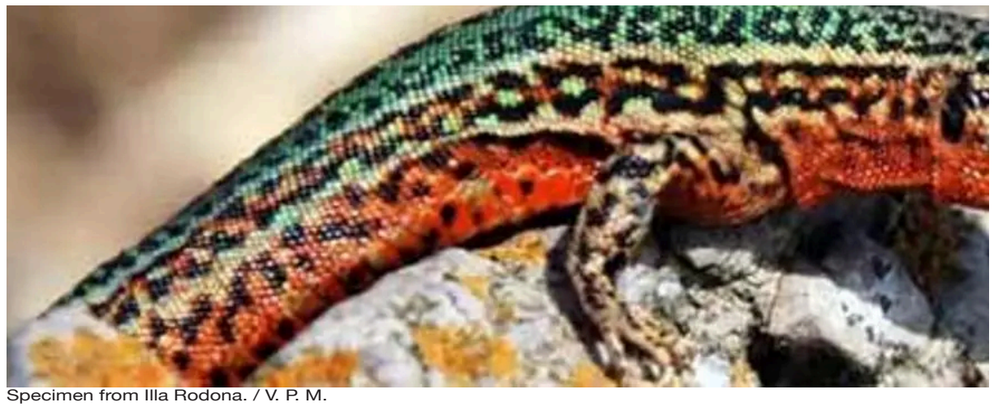
The day on es Vedrà is exhausting for both researchers. It's a beautiful backdrop for those circling the islet in their boats or sailboats, but for Newton and Hudson, it's a 32-degree oven with no shade, whose slopes force them to maintain a precarious balance for four hours. They end up exhausted, their clothes soaked from the effort, their pants stained with dirt from constant slipping, bruised by the rocks and the dried branches of the bushes and stunted shrubs through which the striking *Podarcis pityusensis vedrae* scurry.

DIARIO de IBIZA

Las lagartijas de Tagomago, estresadas

Tagomago's lizards, stressed

A report warns that the massive arrival of tourists to the islet is disrupting its behavior and reducing its population.



Specimen from Illa Rodona. / V. P. M.

J.M.L.R. | IBIZA

21 MAY 2015 19:26

The current situation of the endemic lizard on the islet of Tagomago "is not optimal," concludes Valentín Pérez Mellado, PhD in Biology, zoologist and herpetologist, as well as a professor at the University of Salamanca and the world's leading expert on the reptiles of Ibiza, in the "Analysis and Diagnosis of the Islets of Santa Eulària," in which he collaborated as an external consultant with an extensive report. Pérez is concerned that while the population densities of the podarcis on other Llevant islets (such as Canar, Rodona, and Santa Eulària) are high, those on Tagomago, the largest island, are low: "It exhibits significantly lower densities, even with lower values than those recorded in areas of Formentera and Ibiza, which would indicate that the current situation of the Tagomago population is not optimal," warns the scientist.

In his opinion, there is a possible explanation for its "significantly low" lizard density: the islet is under "environmental stress and human pressure" that directly affects the lizards. Without mentioning this in the report, one can guess that the islet's beach club does not provide relief to these small, colorful, and delicate reptiles.

Tagomago specimens, which before German entrepreneur Matthias Kühn began exploiting it for tourism had a diet rich in ants, now have access, especially in summer, to a range of food that, according to Mellado, does not favor their survival: "The influx of food products and the organic waste generated from them disrupts and interferes with the lizards' natural food-gathering patterns, disrupts their foraging behavior, and creates artificial densities in suboptimal but food-abundant areas, where individuals are in a state of permanent stress." And this, the herpetologist warns, affects their immune systems, their escape behavior from predators, and "other essential traits of their life history."

The massive influx of pets, especially cats, is another factor altering their population. But the scientist goes further. Just as dangerous as the landing of felines would be the "undesirable" arrival of lizards from the island of Ibiza, which is not unusual given the large volume of boat traffic. This could lead to the loss of "a unique population from an evolutionary perspective."

Prohibit landing

Hence, in addition to requesting its inclusion in a Nature Reserve along with the islets of es Canar, Rodona and Santa Eulària, which also have endemic populations, some of them spectacular, it is considered necessary to restrict landing throughout the archipelago, establish a system to eliminate inorganic waste and potential traps for lizards (such as plastic water bottles) and, above all, "the prohibition of public uses and tourist exploitation of Tagomago."

PERIÓDICO de IBIZA Y FORMENTERA

Encuentran la muda de una serpiente en el islote de s'Espartar, en plena reserva natural

A shed snake has been found on the islet of s'Espartar, in the heart of the nature reserve

FORMENTERA. Snakes arrive in La Mola. The horseshoe snake is an invasive species that arrives on large olive trees used for landscaping. In the image, a snake of this type in Ibiza | Photo: Local News

Juan A. Torres | Eivissa | 27/07/15 0:00

Snakes are no longer content to roam freely around Ibiza and are beginning to explore new territories. This is the case of one specimen, or at least its shed, found a year and a half ago on the islet of s'Espartar. The Ibiza Council does not know how the snake reached this esparto grass patch, but they do not rule out the possibility that the reptile swam there, as one has been sighted in the water off the coast of Capdepera in Mallorca. Another option, perhaps the most likely, is that a seagull picked up the snake's skin and carried it to s'Espartar.

However, the Council points out that no further trace of the snake has been found on any of the Ponent Islands. If snakes were to colonize this area, "the situation would be extremely serious," says Jaume Estarellas, environmental specialist for the Ibiza Council, since small rodents are absent there, and they could wipe out the area's endemic lizards, such as *Podarcis pityusensis kameriana*, a subspecies of the Pityusic wall lizard.

For more than a decade, Ibiza has ceased to be the island Pliny the Elder spoke of almost two thousand years ago, where snakes had no place. Sightings of these reptiles are increasing, and therefore, their captures are increasing. A pest that, a priori, is difficult to exterminate, but it hasn't discouraged the environmental experts of the Consell d'Eivissa (Eivissa Council). Earlier this spring, they installed 200 traps made by students from the Escola d'Arts i Oficis (Eivissa School of Arts and Crafts), which have captured 80 specimens so far. The island's highest authority describes the situation as satisfactory. "[The traps] are working very well, but many more would be needed," comments Estarellas.

Areas

Most of the traps have been set up in Santa Gertrudis, Sant Llorenç, the Can Guasch area (Santa Eulària), and Sant Carles, with the s'Aigua Blanca area being the location where many specimens have recently been found, and they are even reaching Sant Vicent de sa Cala.

For now, the south of Ibiza is being spared from this plague, which has also reached Formentera.

PERIÓDICO de IBIZA Y FORMENTERA

'Sargantanes' y hormigas, a estudio

Lizards and ants, under study

Scientist Sara Castro holds a 'sargantana' in Formentera at one point in this interview

Marta Vázquez | Eivissa | 09/08/15 0:00

Biologist Sara Castro and environmental scientist and project technician Carles Molina, researchers at the Doñana Biological Station belonging to the Spanish National Research Council (CSIC), are currently in Formentera conducting a study on the native reptile, the lizard (*Podarsis pityusensis*), and an invasive insect species, the Argentine ant (*Linepithema humile*).

—What does this scientific project involve?

—Carles Molina: The project aims to compare two very different species: a typical invasive species like the Argentine ant and a native species like the Pityusic lizard, which has been found to be invasive in an area of the Basque Country and in Mallorca. We are measuring various parameters both here and in the invaded area to understand their adaptive capacity, as well as, in the case of lizards, their evolution and their response capacity to attacks from potential predators.

—We see that you have different instruments to perform calculations and measurements...

—Sara Castro: That's right. We set different traps to capture the lizards. The bait is usually a tomato. From there, we catch them and take a series of measurements: head size, body length, and tail. We check if this appendage has regenerated recently, since when the reptile feels threatened, it releases its tail to distract the predator, giving it time to flee. We also check if it still has all its toes or has V-shaped marks on its abdomen, indicating it has been fighting with its peers. We also use the homemade 'Lizzcelerator,' which we use to calculate the lizards' running speed when they feel threatened. We also analyze the parasites and mites found in the native reptiles and those that have been transported off the island.

—C.M: Regarding the parasitic load, we calculate it both externally, in the blood, and in feces, as we want to verify whether the new parasites found in the invaded area affect them or make them stronger and allow them to adapt to the new habitat. In the case of the Basque Country, the Pityusic lizard is found on a rock where they have displaced the native lizard.

—What are the most notable characteristics of the Pityusic lizard?

—C.M: One of the main features is their varied diet. They can eat fruit but also carrion, which makes them more resilient compared to other species that only eat live animals. Another point is their rather strong greenish coloration, although within the same population they come in different shades, and if we go to the islets, even though they are the same species, the range of colors changes. The fact that the ones from Formentera are so attractive has contributed to people trafficking them, and that's why there are colonies off the island. It's a gregarious animal with colonies of large numbers of individuals, although we've been told that garter snakes, a new predator, have appeared here on La Mola a few years ago. In any case, this doesn't affect the lizards' very high reproduction rate.

—Let's now talk about an invasive species, the Argentine ant.

—S.C: The species we've taken as an invasive reference is the Argentine ant, which is continental and has spread practically throughout the world. On the Iberian Peninsula, it's found throughout the periphery, especially in Catalonia, and it's also reached the islands, although on Formentera we've only located it in a specific spot.

It's an aggressive insect, with very large colonies, and its unique feature is that it's polygynous—it has many queens, which makes its reproductive rate extremely high. It also eats everything, is accustomed to nesting near inhabited areas, and is easy to spot because it forms long rows full of these medium-sized, brown insects. This type of ant arrived in the Balearic Islands, it's estimated, in the 1950s, probably in fruit crates. One of the primary characteristics of this species is that the fertilized queen forms a new nest with the help of a few workers, so there's no need for many to arrive. This creates what's called a super-colony, with large nests. Even when nests of this species are miles apart, they can recognize each other by their antennae and don't attack each other. They even collaborate with other nests of the same species to help them harvest. Of course, they are ferocious toward colonies belonging to a different species, hence their high invasiveness.

DIARIO de IBIZA

87 años metidas en etanol

87 years immersed in ethanol

Three experts on Pityusic lizards are studying the collection of Ibizan subspecies described by Martin Eisentraut in 1930 in Berlin.

Jars filled with lizards collected by Eisentraut in na Gorra between 1928 and 1930. The labels were written by the naturalist / VALENTÍN PÉREZ

José Miguel L. Romero | Ibiza

29 ENE 2016 17:47

Between 1928 and 1930, naturalist Martin Eisentraut (Gross-Tofer, 1902–Bonn, 1994) traveled throughout the Pitiusas and each of its islets to describe the subspecies of lizards that inhabited them. From each island, he collected dozens of *Podarcis pityusensis*, which he placed in jars filled with ethanol and deposited at the Natural History Museum (Naturkunde) in Berlin, where he was then working as a scientific assistant.

Eight decades later, at the beginning of last December, the Berlin museum opened its doors to Valentín Pérez Mellado, professor of Zoology at the University of Salamanca, and to the biology doctors Ana Pérez Cembrano and Zaida Ortega—also experts on Pityusic lizards—so they could study Eisentraut's valuable legacy: dozens of jars that the naturalist himself sealed with ground-glass stoppers after rubbing their edges with Vaseline to prevent the alcohol from evaporating. Pérez, who has spent decades analyzing the German scientist's every visit to these islands and each of the experiments he conducted there, felt "like a rocket," excited to have before him such "historical, unique, and enormously interesting material," jars overflowing with blue, green, and almost black podarcis, labeled by Eisentraut in pen and ink, in his own hand.

The Naturkunde in Berlin possesses the types and holotypes, that is, the original specimens, with which Eisentraut described the subspecies of the Pitiusas: "The objective of our trip," explains Pérez Mellado, "was to study these types. We are conducting a systematic review of the subspecies of the

Ibizan lizard and the Balearic lizard, for which the types are essential. Each type is exactly the physical specimen with which the author made their description. You have to verify that there were no errors and that, indeed, that specimen belongs to that population and is representative. Because sometimes it isn't." In the 1930s, when Eisentraut collected the lizards from the Pityusic islets, they weren't very methodical: "When you describe a new subspecies, you are obliged to designate one specimen as the type. And a series (the specimens captured to carry out that description) as paratypes. That's done very strictly now, but in the 1930s, some people weren't so strict. That's why there were times when it was later necessary to decide which type the author had actually used to describe a particular subspecies.

From nine in the morning to six in the evening, one of them measured, another examined with a magnifying glass, and the third took notes. The professor and the two doctors thus attempted to verify whether the types in Eisentraut's collection were representative specimens. They verified and studied more than two hundred from all over the Balearic Islands, more than half of which were from the Pitiusas. They even analyzed reptiles from places where they have already disappeared, such as those from the island of Les Rates, in the port of Mahon (Menorca), which was dynamited in 1935. There are no living specimens of that Menorcan *Podarcis lilfordi*, but several are preserved in ethanol at the Naturkunde Museum.

Not a single creature sacrificed

The jars contain lizards (sometimes up to thirty in each one) collected from the islets of Ponent, such as Na Gorra. But there are none from es Vaixell because Eisentraut believed that not a single reptile lived on that inhospitable rock. Therefore, the naturalist used it for one of his experiments: on March 5, 1930, he introduced 51 specimens from the island of Ibiza. But he failed: none survived, probably because he deposited them near the sea, not high up, a very difficult place to access. The lizards that survive up there are, according to recent research by these three experts from Salamanca, a subspecies of their own. And that, precisely, is another purpose of the trip to Berlin: to describe them, they needed to study the specimens from na Gorra and all the nearby islets that Eisentraut captured.

Valentín Pérez Mellado isn't willing to sacrifice a single specimen for the description of this new subspecies: "We'll do something unusual, but it's sometimes done: use a photo as a type of the subspecies. The nomenclature code allows it. The reason is that I don't want to sacrifice any creature. I don't feel like it. I refuse." They have already submitted this work for publication. In it, they explain the population and its genetics. They also compare it morphologically with other populations."

In the medium term, these scientists' goal "is to conduct a complete revision of all the subspecies of *Podarcis pityusensis*," something for which the study of the Eisentraut collection at the Naturkunde Museum has been essential. And how are these lizards doing after more than eight decades immersed in ethanol? "Fairly well," the professor notes: "85 years ago, the specimens were fixed in a fairly basic way. They were placed in preservative liquids, not injected, as is done now." They were generally labeled by jar, not individually, as is done now. Eisentraut packed up to thirty of them into some jars, like sardines in a can: "First, we removed the 30 from each jar; then we examined them one by one carefully with a binocular magnifying glass, and finally, we put them back inside. It was laborious," explains Valentín Pérez. It was hard work "but very enjoyable because it is historical material that has, above all, the quality of being unique. We must not forget that it was collected 85 years ago and, therefore, its interest is enormous," he emphasizes.

The race of the subspecies

Martin Eisentraut's collection dates back to a time, the late 1920s, when there was "a real race" to describe the Pityusic subspecies: "Eisentraut, who used to work in the tropics, saw at one point that this was a gold mine. He competed directly with the herpetologist Lorenz Müller, although they had great mutual respect, and also, to a lesser extent, with the herpetological guru of the time, Robert Mertens. There was another individual named Karl F. Buchholz, who was a physiologist, but who also took to describing subspecies. He was very aggressive and accused Eisentraut of being a Lamarckist, which isn't strictly true," explains Pérez Mellado. They were at odds with each other. They rushed to describe subspecies. Anything went to be the first, to go down in history: "The race was so brutal that they started publishing their descriptions in third-rate magazines just to get them published quickly and be the first. These were magazines for aquaristic hobbyists (like 'Acuarology') and terrarium enthusiasts. There were populations of *Podarcis* from Ibiza that were published three times in the same year, in three magazines and by three different authors." But out of that rush, this excellent collection of the Berlin Natural History Museum originated.

DIARIO de IBIZA

El calentamiento amenaza las lagartijas

Global warming threatens lizards

A Pityusic *Podarcis* expert warns in her thesis of the consequences that climate change could have on this endemic species.

Ortega holds some lizards from the islet of ses Margalides / J.M.L.R.

José Miguel L. Romero | Ibiza

19 FEB 2016 12:24

The Pityusic lizards could face a difficult time if climate change continues: If the temperature continues to rise, the reptiles endemic to the islets could have difficulty finding a more favorable habitat, as their land area is limited and they cannot escape. Furthermore, their ecosystem would become "unbalanced", threatening their food sources (plants and invertebrates), according to Zaida Ortega Diago, who in September received her doctorate in Biology from the University of Salamanca after defending her thesis "Thermal Biology of High Mountain Lizards of the Genus *Iberolacerta*",supervised by the Salamanca-based herpetologist and professor of Zoology, Valentín Pérez Mellado, a leading figure in the field. Ortega is an expert on Ibizan *Podarcis*, whose thermoregulation she has studied in situ for years with Pérez Mellado.

The biologist explains in her thesis that *Iberolacerta*, specialists in low temperatures and excellent thermoregulators, already adopt various behaviors to cope with rising temperatures. In the case of *Iberolacerta cyreni*, they counteract the impact of climate change through their behavioral thermoregulation. For their part, *Iberolacerta galani* "modifies their preferred temperature range between spring and summer", leading to greater thermoregulatory effectiveness in both seasons. "All the results of this thesis have added relevance due to the climate change we are experiencing, which particularly threatens these species of high-mountain Iberian lacertids", says Ortega, who is confident that "the contributions to our knowledge of the thermal biology of ectotherms will be useful in preventing their extinction in the medium term".

Lizards that are already adapting

Ortega concludes that Mediterranean lacertids "that live confined to high mountain areas are one of the reptiles most threatened by climate change." The *cyreni* "would already be counteracting the effects of global warming through its behavior."

But she warns that "there are consequences of global warming that are not related to thermoregulation and that could threaten the survival of these high-mountain lizards" and, therefore, of the Pityusic lizards: "The five species of the genus *Iberolacerta* are specialists in low temperatures. This characteristic is very important in light of the effect that global warming could have on mountain lizards, since the more specialized an ectotherm is, the more its biological effectiveness declines when its body temperatures exceed the physiological optimum." Hence, "the fact that they live in high mountain areas, where they could not migrate to colder places, combined with the fact that they are low-temperature specialists, makes these lizards one of the most vulnerable animal groups to climate change."

Vulnerability of the Podarcis

Something similar could happen to the *Podarcis* lizards of Ibiza and Formentera, according to the scientist, whose temperatures she has studied in recent years, similar to the studies conducted for the different *Iberolacerta* species that are part of her thesis. Although they are still working on analyzing the data for publication, for now she believes the preferred temperature range (PTR) of Ibizan lizards is "high but narrow, between 33°C and less than 35°C." The narrower this range, the more specialized they are; the wider it is, the more generalist they are: "*Podarcis pityusensis* is more thermophilic compared to *Iberolacerta*s, which would be adapted to low temperatures; but its optimal temperature range is narrow."

And this fact is crucial when studying what would happen to it if climate change continues to turn the planet into a furnace: "A priori, it would not be as physiologically vulnerable as the *Iberolacerta* of the Peninsula, since its optimal range is higher, but it could be more vulnerable than other more generalist species, such as the [also peninsular] *Podarcis bocagei*."

Complications on the Islets

The populations of the Pityusic islets, the doctor warns, "could indeed find themselves in an increasingly complicated situation as temperatures and droughts increase with global warming," since in these small rocky outcrops, just as on mountaintops, "the lizards lack the ability to move to favorable locations once current habitats become unfavorable." For example, where could they find a cooler spot on the small island of Gorra? Added to this is another problem: the population density of lizards on the different islets. On some islands, they are very low. This factor would be "important, as there are very small populations that could be truly compromised."

Food Shortage

Furthermore, Zaida Ortega warns of another additional problem. Even if the Pityusic *Podarcis* were able to adapt to the new temperatures, the species they feed on might not be so lucky: "With climate change, ecosystems could become unbalanced, which would be a further threat. It's possible that it would affect the plants and invertebrates that serve as food for the lizards differently, altering, for example, their biological cycles, so that there could be greater food shortages during certain periods." This would have "negative effects on the populations," since, for example, "any alteration could be critical during the lizards' breeding season."

The biologist points out, however, that "it is very difficult to predict what could happen, since we still don't know what could happen to each organism individually, but we do know that the relationships between species would be significantly altered." In this sense, she believes that "it is possible that the great adaptability of Ibizan lizards when it comes to taking advantage of any trophic resource [related to nutrition] played in their favor to adapt to new conditions." In other words, perhaps they are saved because, above all, they are very smart.

PERIÓDICO de IBIZA Y FORMENTERA

Las serpientes llegan a Vila

The snakes arrive in Ibiza Town

Image of the snake located on the roadway of the Eurocentro industrial estate

Juan A. Torres | Eivissa | 18/05/16 0:00

Workers at the Eurocentro industrial park in the city of Ibiza received quite a scare this morning when they encountered this snake, specifically a ladder snake (*Rhinechis scalaris*), as they began their workday.

Shortly before 10:00 a.m., Ibanat officers responded to the area to remove the snake, which was found dead. The authorities are trying to control the snake infestation that has plagued the Pityusic Islands for more than five years, since they arrived en masse hidden in trees from the peninsula.

DIARIO de IBIZA

«Las serpientes comerán lagartijas hasta saciarse si no actuamos»

"Snakes will eat lizards until they are full if we don't act"

Biologist Antònia Maria Cirer will explain the importance of the lizards of the Pityusic Islands in a talk to be held today at the Cervantes Cultural Center, on the occasion of Biodiversity Day.

Maria Antònia Cirer with her book on Pityusic lizards. / SERGIO G. CAÑIZARES

LAURA RIERA | IBIZA
21 MAY 2016 6:30

Biologist and author of the book "Ibiza and Formentera. Lizards and Islands," Antònia Maria Cirer, will give the talk "The Riches of Everyday Life: Biodiversity of the Pityusic Species" this afternoon, starting at 7:30 p.m., at the Centro Cultural Cervantes. Before her talk, she expressed her concern about the proliferation of snakes on the islands, as they pose a threat. "If we don't act, the snakes will feast on the lizards, eating them to their hearts' content," says Cirer.

On the occasion of Biodiversity Day, which is celebrated tomorrow, the Sant Antoni City Council and the Ibiza Daily Club have organized this talk, which highlights the lizard as an example of biodiversity. To begin, the Ibizan biologist defines this concept as a set of different varieties and agents that can exist within the same species and ecosystems. "Biodiversity has a value that isn't monetary; it can't be quantified with

money, but it is very valuable," the expert emphasizes. In her opinion, it's a "free" value offered to tourists as a lure.

Cirer maintains that the Pityusic islets are an example of biodiversity in the Pityusic Islands. "Each of them has its own genetic diversity of lizards, since there are different species of these reptiles on each one," Cirer points out, adding that the plant and lizard populations on each islet are isolated, forming a "microcosm." As an example, the professor chose Sa Conillera to explain the characteristics of the reptiles that live there: they are large and robust.

Regarding color, she explained that "it varies greatly" because lizards of different colors can be found in the same place. Therefore, "their coloration is not limited to the common deep green, bordering on blue," the expert points out.

To demonstrate this wide range, the speaker has prepared a series of slides so attendees can admire some of the most unique lizards. "There are rather light browns, which are not quite dark brown; light green, through a more intense color, up to bottle green, and even a bluish green that everyone uses to describe these creatures," explains the biologist, who points out that only the most striking ones capture most people's attention. "However, to study their genetics, you have to observe them all," she adds.

Black Lizards

Although the lizards of Sa Conillera are large, they are no larger than those of Ses Bledes: "They are enormous for one reason: they are as black as coal, which allows them to maintain a higher temperature. If they get more heat, they have a faster metabolism and can accumulate more matter, which allows them to grow larger."

Second in the ranking

Next in this ranking of lizards are those from es Vedrà. They are characterized by the yellow color, "lemon or similar to Parcheesi," which dominates their dorsal area, the center of their back, and their belly. Their sides are blue, with shades ranging "between navy blue and Parcheesi," a combination reminiscent of the old Ibizan marine flag.

"For me, this type of lizard is a symbol of this flag, which our ancestors venerated and to which we owe respect," says Cirer. Although she only highlighted the lizards from these three islets, the researcher and educator insists that each one of them forms "the complete collection." Therefore, she maintains that "each and every one of these lizard populations should be taken into account and given the value they deserve as an individual category." She also recalls that if the scientist Charles Darwin had traveled to the Pityusic Islands instead of the Galapagos Islands, he would have reached similar conclusions, but with the lizards as an example of evolutionary radiation instead of the famous finches from his theory of species.

Finally, to help children better understand these tiny reptiles, Cirer recommends teaching them to observe them "with patience."

DIARIO de IBIZA

La evolución de las lagartijas en 3D

The evolution of lizards in 3D

German scientists are studying the evolution of the lizards of es Bosc, s'Escull Vermell and sa Bleda Plana using three-dimensional images of their current populations, which they compare with those collected almost 90 years ago by Martin Eisentraut and 40 years ago by Alfredo Salvador.

German scientists are studying the evolution of the lizards of es Bosc, s'Escull Vermell, and sa Bleda Plana / J.M.L.R.

José Miguel L. Romero | Ibiza

10 JUN 2016 13:23

Naturalist Martin Eisentraut (Gross-Tofer, 1902–Bonn, 1994) would faint if he saw how science has evolved in recent decades. Eighty-eight years ago, he began collecting Pitiusan lizards left and right, in all the populations on the islets, without worrying about the possibility of decimating them. He simply captured them (himself or the fishermen he hired) and placed them in dozens of jars, the edges of which he greased with Vaseline to prevent the alcohol from evaporating. Thanks to his care (and the fact that this collection was miraculously saved from bombing during World War II), they have been preserved to this day in Berlin's Naturkunde, the Natural History Museum in the German capital, and are the key element of a study that seeks to determine whether, since then (Eisentraut immersed them in alcohol between 1928 and 1930), the populations he captured have undergone any morphological variation.

And is morphological evolution possible in such a short time? But didn't Charles Darwin say that even a minimal variation would take thousands of years? Peter and Rosemary Grant already demonstrated that something similar had happened with Darwin's finch on Daphne Major Island in the Galapagos, whose story was chronicled by Jonathan Weiner in "The Finch's Beak." Evolution, they showed, can be faster than the British scientist imagined: after long periods without rain on Daphne Major, only a few finches managed to survive, those with beaks hard enough to crack a very hard seed, the only food that survives on the archipelago after extreme droughts, and their subsequent generation's beaks grew by 10%.

A lizard before its 3D photo shoot. Three cameras and three synchronized flashes were used. Photo: J.M.L.R.

Something similar has happened on several uninhabited islets (of *Podarcis pityusensis*) off Ibiza, where almost 90 years ago Eisentraut introduced, as an experiment, lizards from various populations, some melanic (dark) and others not: in just nine decades, at breakneck speed, the morphological characteristics of some of the original populations were diluted. This is what happened on es DauGros, where Eisentraut released eight male *Podarcis pityusensis maluquerorum* from s'Escull Vermell (a rock opposite sa Bleda Plana, where they are dark and bluish) and 20 females from Ibiza (lighter colors). Now they all have black backs and dark blue bellies, with hardly any trace of the green of the originals from the main island.

Changes in the Skull

Something similar is what a team of scientists composed of Valentín Pérez Mellado, professor of Zoology at the University of Salamanca and the leading expert on Pityusic reptiles, Ana Pérez, PhD in Biology from the same university, Johannes Müller, professor of Paleozoology and one of the heads of Naturkunde in Berlin, and his doctoral candidate, 30-year-old biologist Martin Kirchner, have been investigating this week on the islets of es Bosc, s'Escull Vermell, s'Espartar, and sa Bleda Plana. The latter is preparing a thesis on the evolution of the lizards on these islets in recent decades as a result of several factors: "There are populations that have been devastated by humans, while there are other places that have been very well preserved over time and have barely changed.

"What Müller and Kirchner want to find out are the effects that human pressure, confrontations between males (as they are very territorial), or the degree of escarpment [slope] have had on the cephalic morphology [the skull] of these *Podarcis*," explains Pérez Mellado. These are factors that can cause them to have "increasingly powerful heads" over time. They also believe that the variation in morphological characteristics can also be "very intense" when the population density is high, as is the case in Sa Bleda Plana, while in Es Bosc it is much lower.

From a caliper to 3D

The interesting thing is how they're going to investigate. In addition to the populations collected by Eisentraut in the 1930s, they're also going to use those collected in the 1970s by Alfredo Salvador, a CSIC researcher, which are housed in the Museum of Natural Sciences in Madrid, and they're going to compare them with current populations. To do this, they use a sophisticated portable 3D system invented by Martin Kirchner. Typically, herpetologists measure the lizards' morphology (head, legs, body, tail) with a caliper and photograph them with a camera, then identify them using the same software used for whale sharks (whose bodies are covered with polka dots similar to those on frilled dresses).

The German biologist is preparing the ingenious device he invented for taking three-dimensional photographs. Its small size allows it to be carried by hand to hard-to-reach islets. Photo: J.M.L.R.

But Kirchner has set out to use three-dimensional (3D) images to verify whether the lizard's skull has evolved. To do this, he designed a device consisting of three cameras and three flashes that synchronously shoot each lizard (tied with a Pilates band) on a pedestal that moves slowly 360 degrees while the images are captured with macro lenses. It's "geometric morphology," more detailed than that captured with a caliper, says Pérez.

At Naturkunde in Berlin, there's a similar photogravimetry device, but it's a behemoth that, logically, can't be moved from there, much less transferred to an islet. That's where the novelty lies. The hundreds of lizards Eisentraut collected died submerged in alcohol, something that is ethically unacceptable for today's scientists. Since they couldn't be killed, nor could they be transported alive to Berlin for scanning (they are extremely protected by law, so their removal from their natural environment is prohibited), Kirchner devised a miniature 3D scanner, which this week he took with him to each islet in an airtight box, a tiny photographic laboratory that allows these scientists to maintain their ethics while achieving their goals. Could the same thing be done by holding them in one's hand? "No, with a slight turn, a slight stretch of the arm, the proportions would change dramatically," Kirchner points out.

The cameras, three digital Nikons, capture up to a total of 80 images (it looks like a tiny photo booth), from which those with errors can be discarded (inevitably, the lizard sometimes moves its head): 20 are taken by each device, although one of them captures a double through a special mirror that doesn't produce reflections, as Kirchner explained. The result is a spectacular 3D image of each *Podarcis pityusensis pityusensis* head currently captured in es Bosc (where they analyzed 28), sa Bleda Plana, and s'Escull Vermell, which will be compared with others taken in Berlin and Madrid with those captured by Eisentraut and Salvador, respectively.

A Tray as a Reflector

Every time he photographs a new lizard, Martin Kirchner controls the focal length, the flash power (necessary to avoid shadows), and the shutter speed to maintain the correct proportions and intensities. He even created the software that controls the system. And when problems arise, he uses his ingenuity: at Es Bosc, he was missing a reflector panel, so he used a white polyurethane tray instead, containing a sandwich, which he devoured first.

This isn't the first time Kirchner has used his invention. He took a similar but larger device to Croatia, which he has now rebuilt to make it more manageable, although he wants to make it even smaller. There, he captured Balkan lizards such as the *Podarcis sicula*, the *muralis*, and the *melisellensis*, as well as the Dinarolacerta mosorensis, in 3D. "It sounds like a crazy invention, but it's perfect!" Kirchner says. Martin Eisentraut would have been amazed.

PERIÓDICO de IBIZA Y FORMENTERA

Las 'sargantanes' podrían desaparecer en Ibiza por la proliferación de serpientes

The lizards could disappear in Ibiza due to the proliferation of snakes

Image of a lizard | Photo: Ultima Hora

Europa Press | Ibiza | 24/05/16 0:00

PP MP Miquel Àngel Jerez stated this Tuesday that the lizards could disappear from Ibiza as a result of the proliferation of snakes in the Pitiusas. "Possibly one of our symbols of Ibiza, the lizard, will end up disappearing, and we'll see a snake before a lizard," he declared.

This was his statement during the plenary session of the Parliament, where he asked the Government if it plans to limit the entry of ornamental trees in the Pitiusas to reduce the proliferation of snakes. The Minister of the Environment, Vicenç Vidal, replied that they are working with the Government to control the entry of olive trees into the islands, especially in the summer, since "the entry of olive trees has brought these snakes."

Vidal, who expressed satisfaction with the PP's current concern about invasive species, which are the main cause of biodiversity loss, explained that the winter months are the most appropriate for the arrival of olive trees in the Pitiusas and said that they are working with the State to develop regulations on the matter.

However, he admitted that with this issue, "we clash with free trade" and the Government can only "deal with phytosanitary issues." He indicated that a pilot plan is being developed in Formentera that is proving "great success," with 21 specimens captured with 20 traps in two days.

He said that the knowledge they gain in Formentera will allow them to "act better in Ibiza." He also added that the fact that "nothing" has been done against invasive species for years means that it is now "more difficult" to combat them.

DIARIO de IBIZA

Lagartijas desde todos los ángulos

Lizards from all angles

German biologist Martin Kirchner has already created the first 3D models of lizard skulls from the Pitiusas.

A lizard from S'Illa Grossa seen from different angles thanks to the 3D device designed by Martin Kirchner.

José Miguel L. Romero | Ibiza
16 AGO 2016 6:30

Two German biologists, Johannes Müller, professor of paleozoology and one of the directors of Naturkunde in Berlin, and his doctoral student, 30-year-old biologist Martin Kirchner, visited Ibiza and its islets in early June to investigate the evolution of the head morphology of the lizards that inhabit them over the past 90 years. They used a sophisticated device invented by Kirchner himself to photograph each individual on each island in three dimensions. These dimensions were then compared with those of the lizards captured by Martin Eisentraut between 1928 and 1930 and those captured by Alfredo Salvador, a CSIC researcher, in the 1970s, which are housed in the Museum of Natural Sciences in Madrid.

As a result of that work, Martin Kirchner has now developed a series of models in Germany that allow lizards and their proportions to be observed and analyzed using a three-dimensional image. From a computer screen and with a mouse, each skull can be rotated to any possible angle, a very useful tool for researchers, as well as a spectacular one.

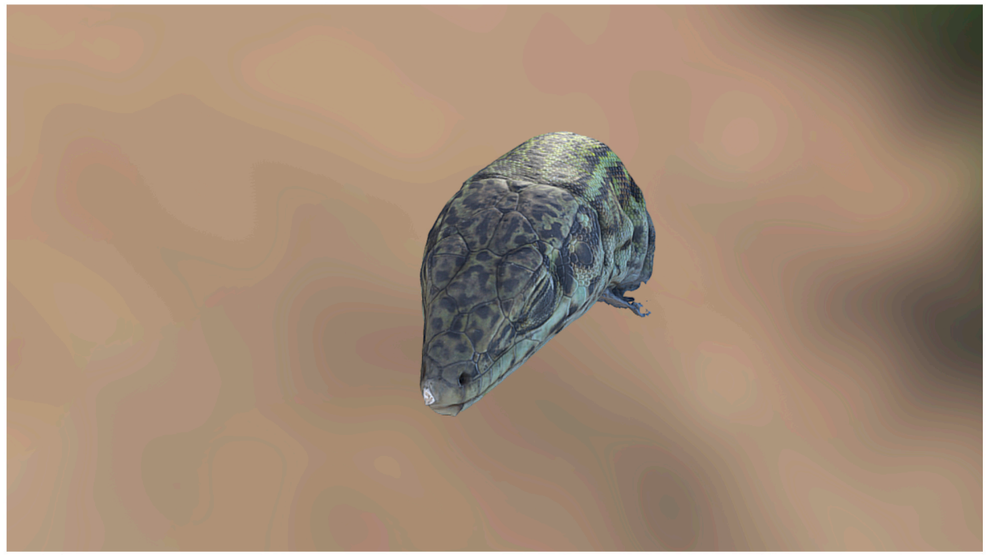
Readers of Diario de Ibiza can use this 3D image on the newspaper's website,

specifically with the skull of a lizard from s'Illa Grossa, where the es Botafoc lighthouse is located. Valentín Pérez Mellado, professor of Zoology at the University of Salamanca, who accompanied the German researchers in this experiment along with Ana Pérez, a doctor in Biology from the same university. He explains that they selected reptiles from this islet (connected to the rest of Ibiza by a road) to see how human pressure may have altered their head dimensions. To do this, they will have to compare them with those of lizards trapped 90 and 45 years ago in the same location, but also with the evolution that may have occurred on islets where human presence has been accidental, such as s'Escull Vermell, s'Espartar, sa Bleda Plana, or na Gorra.

This is the thesis Kirchner is preparing: the evolution experienced by lizards in recent decades as a result of various factors. Kirchner wants to investigate, in addition to the effects of human pressure, the effects that confrontations between males (who are very territorial) and the slope may have had on the skulls of Pitiusan lizards.

To capture the 3D images, Kirchner designed a device (which, despite its sophistication, can be placed in a sealed suitcase) composed of three cameras and three flashes that fire synchronously at the lizard's head, placed on a pedestal that moves, little by little, 360 degrees. It's like a miniature 3D scanner (the one at Naturkunde in Berlin is gigantic) that, thanks to its size, can be transported to each islet.

The cameras used are three digital Nikon cameras that capture up to a total of 80 images of each lizard. Each camera takes 20 per animal, although one captures a double image through a special, glare-free mirror. The result is a spectacular 3D image of each *Podarcis pityusensis pityusensis* head, like the ones illustrated in this article.



Ibiza Wall lizard 3D scanned alive in the field
3D Model

3DLab MfNBerlin PRO
FOLLOW

2k ☆ 28

DIARIO de IBIZA

La simbiosis de la ´sargantana´ y la ´olivella´

The symbiosis of the 'sargantana' and the 'olivella'

The Pitiusan reptiles and the *Cneorum tricoccon* plant have developed an association that has even determined the size of the plant species' seeds, which are smaller in Ibiza than in the rest of the islands.

CAT | Joan Costa

18 SEPT 2016 18:02

Ecosystems are dense networks of connections and associations in which anything can have unexpected consequences. This unquestionable premise has a little-known but striking example in the symbiosis between the popular lizards and a plant known in Spanish as olivillo and olivella or raspall on the islands (*Cneorum tricoccon*).

The presence of lizards in Ibiza and Formentera explains the abundance of this plant in the Pitiusas, just as the scarcity of lizards in Menorca and their disappearance in Mallorca result in the reduced presence of this plant species. Lizards are precisely the most efficient dispersers of the seeds of these plants; the animals eat the fruits, the seeds pass through their digestive tract, and then germinate. With the added peculiarity that, as biologist Joan Carles Palerm, president of the Grup d'Estudis de la Naturalesa (GEN), explains, reptiles are generally rare as dispersal agents, although such a relationship is more common in island ecosystems, where the number of species is lower.

Fifteen years ago, a study by Imedea (Mediterranean Institute for Advanced Studies) explored the hypothesis of a decline in *Cneorum* populations due to the disappearance of lizards and reached interesting conclusions about the evolutionary pressure that animals have exerted on the plant. When lizards have to eat them, they choose the smallest fruits and, by doing so, have forced the plant, over the years, to adapt to reptilian tastes. All this means that *Cneorum tricoccon* specimens from Ibiza produce visibly smaller fruits compared to those grown in Mallorca or Menorca.

"The introduction of carnivores to the Balearic Islands has led to significant changes in the population dynamics of many native species. On the larger islands (Mallorca and Menorca), carnivores appear to have caused the extinction of endemic lizards that acted as the sole dispersers of some plants such as *C. tricoccon*," states the study, written by Nuria Riera, Anna Traveset, and Oscar García. In Mallorca, lizards became extinct with the arrival of humans and their pets, which became the main predators of reptiles (cats are as effective lizard hunters as snakes). This extinction is considered to have directly caused *C. tricoccon* to become a rare species, as it lacks its most effective seed disperser. Likewise, biologists believe that the disappearance of *Podarcis lilfordi* in Menorca (subspecies survive on some islets) has led to the near extinction of the olivella on that island.

The plant, which blooms from April onwards and is abundant near streams, has small yellow flowers and produces red fruits that ripen in groups of three (hence the species' name, three coconuts) and turn dark when dry. The intense drought the islands are experiencing this year has made it difficult to find the red fruits most appealing to lizards. In the past, children made necklaces with these fruits, and the branches were used as brooms to sweep houses.

An olive tree with its fruits, which lizards feed on.
Photo: Joan Costa

DIARIO de IBIZA

Las serpientes han acabado ya con la mitad de las lagartijas en la finca del GEN

Snakes have already killed half of the lizards on the GEN farm

A control carried out in Can Toni d'en Jaume Negre confirms the decline of this species in four years.

Can Toni d'en Jaume Negre estate in Sant Llorenç, where the count took place. / DIARIO DE IBIZA

IBIZA
12 ENE 2017 5:30

The spread of snakes in the Pityusic Islands seems unstoppable. This was confirmed by a survey conducted by the Nature Studies Group (GEN) at the Can Toni d'en Jaume Negre estate, which determined that, in just four years, the lizard population density had decreased by 40%.

In the spring of 2012, on this Sant Llorenç estate, which the environmental organization maintains and operates as ecological land, the GEN decided to implement the SARE program developed by the Spanish Herpetological Association. The project consisted of conducting a lizard count along a predetermined one-kilometer route around the estate. "So, that year, we had only seen one shed snake on the farm. The following year we saw two, the following year we located a snake... And so it was until last year when we did the lizard count again and found that the population density was 40% lower," said Joan Carles Palerm, president of the GEN, yesterday.

"The Government has it on hold."

This count is yet another of the measures that Palerm considers "essential" to tackle the snake problem, an issue that the Government seems to have no response to. "What is unacceptable is that the plan to eradicate snakes is on hold; that cannot be. The excuse that, in theory, the arrival of olive trees to the islands cannot be prohibited because it cannot go against free trade is relatively false: European regulations allow, for environmental reasons, restrictions on the trade of olive trees, and the Balearic Islands can do it, we can do it, and Madrid doesn't need to do it." "If they don't like it, let them come and cancel it later," questioned the president of the GEN, who pointed out that until now the initiative to try to control the snake infestation has been carried out by the Consell, "when it's a government responsibility." "They don't believe the problem really exists, and by the time they realize it, it might already be too late."

Palerm asserted that work can be done on "several fronts," but that the government lacks the political will. "We can work with local nurseries, run information campaigns with landscapers and designers, award badges through the Pimeef (National Institute of Conservation and Conservation) to businesses involved in snake eradication... many things can be done. To begin with, population censuses should have been conducted to determine the incidence, as we did in Can Toni d'en Jaume," he insisted.

It can be achieved in Ibiza.

For the president of the GEN, we must get to work "seriously and put millions of euros on the table; develop an effective plan, not a control campaign. The current plan seems to be designed to reduce snake density, which is great, but not to eradicate them."

Palerm recalled that "it's true that there's no successful case of snake eradication on an island in the world, but it hasn't been seriously attempted either, except for the island of Guam, where it's been impossible. But if anywhere it can be eradicated, it's here, with 18 billion houses in the countryside and a huge population density eager to set a trap and control it."

For her part, Hazel Morgan, president of Amics de la Terra, shares Palerm's concern about the proliferation of snakes. "It's terrible. I live in the countryside, in Santa Eulària, and I haven't seen lizards in a while," Morgan stated yesterday, adding that greater forcefulness and effectiveness on the part of the administration is needed. "It's becoming clear that the measures are insufficient, but at least now with Minister Vericad, more is being done than before, when nothing was being done," she noted.

Last June, Amics de la Terra sent a letter to the Balearic Minister of the Environment, Vicenç Vidal, calling for urgent measures to eradicate this plague that is wiping out the lizards in the Pityusic Islands.

DIARIO de IBIZA

La pesadilla de las lagartijas ibicencas

The nightmare of the Ibizan lizards

Horseshoe whip snake captured after hunting a rat. It was so fat it couldn't get out of the rodent's burrow. / C.C.

José Miguel L. Romero | Ibiza

20 ENE 2017 13:39

Pitiusan wall lizards (*Podarcis pityusensis*) "know Latin," according to Valentín Pérez Mellado, professor of Zoology at the University of Salamanca and the scientist who has studied the reptile of these islands the most. At least they recognize snakes as a threat and don't become enraged when they see or smell one. Pérez Mellado confirmed this in an experiment he conducted in 2014 with his students. The wall lizards went crazy when they were placed in a terrarium where a horseshoe whip snake (*Hemorrhois hippocrepis*) had recently slithered. That, he says, is the positive side of that study. The negative side is that they learned this very quickly due to the brutal predatory pressure they are subjected to. They know what they are exposed to if they are around them. They panic when they see them. They are their nightmare.

Pérez Mellado will present the results of this experiment this Friday, January 20th, at the Club Diario de Ibiza, alongside Ana Pérez Cembranos, a doctor in biology and fellow lizard expert, in a talk entitled "Predators and Human Pressure. Old and New Threats to the Ibizan Wall Lizard." According to the herpetologist, "these threats to the species *Podarcis pityusensis* have always been somewhat the same: human pressure and the pressure of predation, which is partly the result of human pressure, as predators have usually been introduced by humans." When they face natural predators, "nothing happens, as populations never become extinct as a result of natural predation pressure."

But predatory pressure has had very different consequences for the two sister species of Balearic lizards. In the case of the Balearic lizard (*Podarcis lilfordi*), it became completely extinct on the main islands, Mallorca and Menorca. Its presence was thus reduced to the surrounding islets. However, the Pitiüses lizard survives on the main island. Pérez Mellado goes back to the origins of that species to explain the reasons for such a divergent fate: "Each one has had a different history. The Balearic lizard lived in a kind of paradise for five million years, since there were no predators in Mallorca and Menorca that would have it as part of their menu." Relaxed, with no one wanting to eat it, it gradually lost many of its anti-predator mechanisms. "Hence," Pérez Mellado continues, "when humans arrived in Mallorca and Menorca accompanied by allochthonous predators around 5,000 years ago, they had already lost their ability to defend themselves. The animals introduced by humans wiped them out on the main

islands, and they only survived on the coastal islets." They were eaten mainly by "cats, weasels, and martens, which hadn't existed there before. Snakes were also introduced later, but were barely relevant," the Salamanca scientist assures.

Five million years under threat

The case of the Pitiusan lizard is completely different, despite the fact that Mallorca is just a stone's throw away: "They lived in a different world where there were no mammals, except for bats, but where there were an enormous number of birds that, in many cases, were predators of lizards. There were giant owls, all kinds of creatures that surely exerted intense predation on the *Podarcis*. Hence, for five million years, the Pitiusan lizards adapted to the pressure of predators; they recognized them. They suffered more or less, but like all natural populations. A portion of the population, which is always a minority, died as a result of being hunted, but the majority was adapted and had defense mechanisms."

Unlike the rest of the Balearic Islands, these reflexes remained intact when humans settled in Ibiza and Formentera, accompanied by all the animals they introduced: "In Mallorca and Menorca, they didn't know how to defend themselves because they hadn't had predators for five million years. In the Pitiusas, on the other hand, they had been under that threat for five million years. They knew how to protect themselves. When humans arrived with cats, rats, and genets, the lizards already knew Latin. That's why they still survive on the main island today." Hope and that, according to Pérez Mellado, is one of the advantages the Pitiusan lizard has against the snake invasion of the Iberian Peninsula: "The hope is that the snakes are facing a species of lizard that has been standing up to predators for millions of years. The predation pressure from these predators is brutal, but all is not lost because they recognize snakes as a threat, as we have verified in a couple of experiments," the zoologist indicates.

In these experiments, they worked with the Balearic lizard and the Pitiusan lizard: "We found that the Balearic lizards did not identify the introduced snakes. They don't even know who they are. The Italian lizard that lives in Menorca, which is more or less contemporary with the introduction of these predators, does identify them perfectly. There is an intermediate situation in the Moroccan lizard, which is also found in Menorca."

The results were very different with the lizards of the Pitiusas: "The amazing thing is that the *Podarcis pityusensis* of the main island already knows perfectly well how the horseshoe snake smells. They know it in an astonishing way. In just 10 years they have already learned that they pose a threat." At Sa Sal Rossa they do not fear them.

They also worked with the lizard from the islet of Sa Sal Rossa: "The most amazing thing of all is that when they did the experiment with the *Podarcis* from that islet, where a snake has never been present, they were unable to recognize that smell, that threat, that predator. This is clear proof that the lizard on the main island has suffered that pressure over the last ten years, that it's not a reminiscence of experiences with snakes from thousands of years ago, which they didn't have because there's no fossil record of that. It could be a possibility, but it's ruled out since the lizards on the islet of Sa Sal Rossa don't recognize horseshoe snakes."

In the professor's opinion, this has two interpretations: "The positive interpretation is that the creature is prepared to recognize the threat. It already knows how to react to these predators. That gives some hope that there won't be a mass extinction of Ibiza's lizards." And then there's the dark side of this matter: "The negative interpretation is that this predation pressure has been so brutal that it has caused the lizards to learn so quickly. This learning cannot be explained without enormous pressure. Practically all of the individuals must have had bad experiences with snakes. The snake must be present all over the island because what is certain is that no relative from the north of Ibiza has communicated this information to those in the south by letter. It's evident that they must have directly experienced, in some way, the presence of these snakes." He says this because in the area where they captured the lizards they experimented with, near Sa Casilla (at kilometer 5 of the Sant Josep road), there was no evidence of snakes: "But they definitely exist. The horseshoe snake must now be distributed throughout Ibiza."

He wonders what would happen in other places: "That's why we'll try this experiment on other islets and in more areas of Ibiza." However, the reactions they observed in the reptiles left no room for doubt, he assures. They used three types of terrariums. One smelled like the snake they had placed there for a day. Another was odorless. And the third had a pungent odor, like cologne, which the lizards detect but have no meaning for them. When they put them in the terrarium where a snake had been, there were "some blatant results." They exhibited anti-predator behaviors, such as moving around more, trying to escape, or wagging their tails, which is the first step toward autotomy (cutting their tails to leave a decoy and thus have a better chance of escape). This didn't happen in the control terrariums." In the one that smelled like snakes, "they went crazy."

They were surprised that he "perfectly" recognized the horseshoe snake as a predator: "The *Podarcis* has developed defense mechanisms that work very well. The bad thing is that the pressure they have endured has been so enormous that it has already triggered those anti-predator mechanisms."

PERIÓDICO de IBIZA Y FORMENTERA

Una serpiente de herradura en Santa Gertrudis

A horseshoe whip snake in Santa Gertrudis

A young man dares to pick up the snake while his friends watch. Photo: Snakes on Ibiza no thank you - Serpientes en Ibiza no gracias (Facebook).

R.I. | 18/08/19 10:26

A horseshoe whip snake, the most common invasive snake, was found this Saturday in Santa Gertrudis. This snake, just over a meter and a half long, was found dead. The discovery of this specimen was shared by a Facebook group called 'Snakes on Ibiza no thank you'. The horseshoe snake has been found in numerous locations across the island and is becoming a serious threat to some endemic lizard species.

PERIÓDICO de IBIZA Y FORMENTERA

Capturan 1.800 serpientes en las Pitiusas durante los últimos cinco meses

1,800 snakes have been captured in the Pitiusas over the past five months

A horseshoe whip snake captured in Ibiza | Photo: Daniel Espinosa

Laura Amores | Eivissa | 09/09/19 4:01

From April to the end of August, around 1,800 snakes were captured in Ibiza and Formentera by the Balearic Hunting Federation and the Consortium for the Recovery of Fauna of the Balearic Islands (COFIB). The vast majority were horseshoe snakes, according to the Balearic Hunting Federation. Of these 1,800 specimens, approximately 1,600 were captured in Ibiza, of which 800 were captured by a Hunting Federation employee and 800 by two COFIB employees. The remaining 200 specimens were captured in Formentera by an employee of the Consortium for the Recovery of Fauna of the Balearic Islands. During the entire last season, 1,500 snakes were captured between Ibiza and Formentera, according to the Hunting Federation.

The Hunting Federation has around 400 traps distributed throughout the island of Ibiza and assures that this species of snake "is neither poisonous nor dangerous to humans; if cornered, it could bite, causing a minor injury." However, it does pose a threat to the survival of the native lizard, as well as to baby partridges and young rabbits.

Snakes are an invasive species that began arriving in Ibiza more than 10 years ago, but the Balearic Hunting Federation began this work three years ago.

"They probably arrived in olive trees or containers of plants that were transported to the island by boat," said Alejandro Macías Torres, a member of the Balearic Hunting Federation. "They come hidden, hibernating, and with the heat, they emerge; April to October is their most active season," he concluded.

Sant Carles, Sant Lorenç, Santa Gertrudis, and Sant Miquel are the areas with the highest number of snakes. The Hunting Federation pointed out that this could simply be due to the fact that these are "the areas where plants have been distributed, which have arrived with snakes inside, and there, by reproducing without predators, the population has increased rapidly."

This oviparous species, lacking predators on the island, as Alejandro explained, "is important to control the population and prevent mass reproduction." To this end, the Balearic Hunting Federation sets traps in areas where the animal has been most prevalent and encourages individuals to distribute them around their homes if they suspect snakes may be inhabiting their land.

Furthermore, it's important to keep in mind that these animals' life expectancy can reach up to 15 years.

The Ibiza Council signed an agreement with the Balearic Hunting Federation in which it pledged to collaborate with snake capture.

The Santa Eulària cooperative sells traps, subsidized by the island's institution, for 15 euros. These traps consist of a wooden box with two compartments. One contains a mouse and the other is empty, where the snake will become trapped when it tries to enter and eat the rodent. The system works through a grid through which the oviparous mouse can enter, but not exit. The mouse remains alive in the trap. It can last for years if fed simply once every 10 days. It can even be stored for the next season. If a new mouse is needed, one can be purchased for six euros.

The best areas to place the traps, Alejandro explained," are the places where they usually live, such as tree trunks, rock walls, and streams."

Once the snake is captured, it is killed with a blow to the head and sent to the UIB (University of the Balearic Islands) to be studied and to better understand the species.

"People are increasingly aware and try to collaborate to capture the snakes because they know that the island's native lizard is in danger," he concluded.

Alejandro assured that his phone number is always available "to help anyone who has problems with the trap."

The Government informed Periódico de Ibiza y Formentera that "the first snakes to colonize Ibiza probably arrived thanks to the trade in ornamental olive trees from the Peninsula. They were hibernating in the root balls of these trees, and when they were transplanted and spring arrived, they awoke, escaped from their hiding place, and dispersed, establishing stable populations. Today, it is impossible to completely eradicate them." He added that this entry route makes "controlling the snakes very difficult, given that they are hidden and, at the same time, protected by the tree itself."

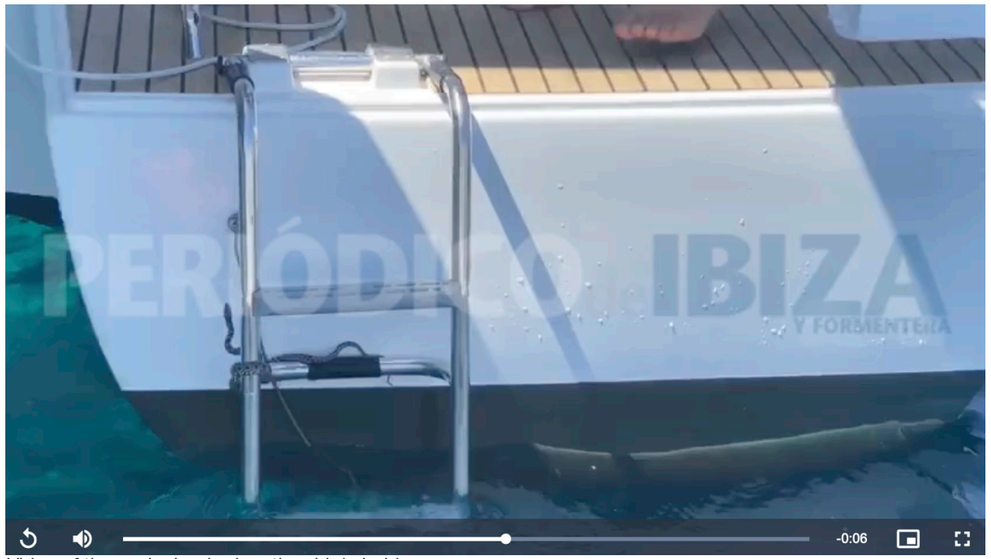
Regarding the possibility of restricting the entry of plants or other merchandise that could contain them, the Government indicated that the issue of limiting the free movement of goods "in the EU is not simple. There are many legal obstacles to imposing these restrictions." However, he assured that they are "evaluating the possibility of finding some legal loophole that, for biosecurity reasons, would allow for the establishment of controls."

The Ibiza Council indicated that, regarding any option other than killing the oviparous birds, according to the Department of Environment technicians, "it is the only way that currently exists." Although they affirm that some current opinions "advocate reintroducing them to the Peninsula," the technicians' general opinion "is that reintroducing a species that has changed its habitat in its original habitat can be very counterproductive, given that it has undergone behavioral, parasitic, and genetic changes, and given that the reintroduced species' behavior is unpredictable." Therefore, "no other option is being considered other than killing them."

PERIÓDICO de IBIZA Y FORMENTERA

Una serpiente intenta acceder a un barco en Ibiza

A snake tries to access a boat in Ibiza



Video of the snake hooked on the ship's ladder

R.I. | Ibiza | 12/06/20 12:40

A horseshoe whip snake was filmed this Friday hooked on a boat's ladder in the Port de Sant Miquel, as can be seen in the accompanying video.

The presence of these snakes is becoming more frequent on Ibiza's beaches. On the first of July, a horseshoe whip snake was seen on Talamanca Beach.

The horseshoe whip snake is an animal, despite its large size and rapid movement, which bite is not poisonous.

PERIÓDICO de IBIZA Y FORMENTERA

Capturan ocho grandes serpientes en una finca de Sant Llorenç

Eight large snakes captured on a farm in Sant Llorenç

Paco S. Pérez | Ibiza | 29/06/20 20:29

Eight snakes over a meter long in a trap. This was the catch found yesterday in a trap located on a property in Sant Llorenç.

This catch is one of the most remarkable captures made on the island. The horseshoe whip snakes were found in one of the traps deployed by the Balearic Hunting Federation through an agreement with the Consell.

This impressive capture joins other recent images that have gone viral, such as that of a snake climbing onto a boat.

PERIÓDICO de IBIZA Y FORMENTERA

«El área de dispersión de las serpientes en la isla de Ibiza no para de aumentar»

"The snake breeding ground on the island of Ibiza continues to increase"

Veterinarian Víctor Colomar laments that "with the lack of protocols," they are always one step behind.

Manu Gon | Eivissa | 13/07/20 4:01

"The snake dispersal area continues to increase on the island of Ibiza, and new nuclei are being detected every year." This was the blunt and direct statement made yesterday by Víctor Colomar Costa, veterinarian and invasive species expert from the Consorci de Recuperació de la Fauna de les Illes Balears (Cofib), to the Periódico de Ibiza y Formentera, when he spoke and analyzed the current situation of these reptiles on the largest of the Pityusic islands.

Although this expert does not want to generate public alarm—"fundamentally because a bite from a horseshoe snake or a ladder snake is not fatal or causes major problems for humans"—Colomar did make it clear that "the situation in 2020 is far from being under control."

This is due, above all, as the veterinarian commented, to the fact that technicians are always behind in the protocols being used to combat them. "The serious problem we face when working to eradicate an invasive species is that there are no previous action protocols on the islands that we can refer to or draw inspiration from. This means that, although we constantly

learn about their behavior, we are unfortunately always one step behind."

This problem of lack of documentation is not unique to the Pitiusas. According to Colomar, Europe in general "has never taken the issue of the spread of invasive species very seriously, as did Australia or New Zealand, which are pioneers in this field." Furthermore, the technician asserts that all this is aggravated by the fact "that the inhabitants of Ibiza or other places in Spain, having never considered hunting or capturing snakes among their priorities, have left nothing written down on such fundamental issues as the creation or installation of traps."

Given the magnitude of this problem, the Balearic Government's Department of Environment and Territory launched the Sustainable Tourist Tax (ITS) a year ago, which includes a program specifically designed to address invasive animal species, implemented by the Cofib itself. According to Colomar, this represents a significant commitment by the Balearic Islands' highest authority, "since €853,000 will be invested to equip the Cofib over the next three years with approximately 2,000 traps, replacing the current 400, six technicians, and three new vehicles." All of this is to achieve, according to this expert, "the ultimate goal of not capturing any snakes in the coming years because it would be a sign that we have eradicated them from the Pitiusas."

"There's no need to be afraid."

In this regard, as Alejandro Macías, an expert working for the Pitiusas branch of the Balearic Hunting Federation, insisted to this same newspaper a few days ago, Víctor Colomar asserted that horseshoe snakes and ladder snakes—the two species found in Ibiza and Formentera—should not be feared because their bites are not fatal. "It's completely understandable that people might be frightened when they encounter them because in Ibiza, until relatively recently, we were only used to seeing lizards measuring about 20 centimeters and not snakes that can reach two meters, but we must call for calm and remember that they are not harmful to humans." This doesn't mean, as the Cofib veterinarian made clear, "that we have to confront them, but rather that we act using common sense and the precautionary principle."

At the same time, Colomar called for calm following the latest news, videos, and photographs that have appeared on social media of up to eight snakes on a property in the Sant Llorenç area. "We as technicians don't give it too much importance because in this case, it's not a sign of a significant increase in snakes in this area, but rather that it was very likely a female that entered the trap, attracting the attention of seven other males that were also trapped there."

Furthermore, we shouldn't give "excessive importance" to the snakes that have appeared in the sea, on boats, or among towels. "Perhaps these are biological behaviors that we hadn't documented on our island due to the lack of previous protocols for fighting snakes, but we have confirmed that this is a rare occurrence in a place like Ibiza, where snakes don't have major predators to worry about and a high population that can record everything with their cell phones and upload it to social media."

Despite this, Víctor Colomar assures that these images are always welcome because they serve to update his work and his way of staying ahead of snake behavior in the Pitiusas. "It's always good to discover that there are snakes near the sea or living peacefully among the rocks or cliffs because that helps us discover the new places they are colonizing and try to stay one step ahead of them."

"Patience and care"

Traps play a very important role in the fight against snakes. The Cofib veterinarian stated that to see results, "you have to be patient because snakes don't come in and get trapped every day," and that "proper maintenance by the individuals who have purchased them from the institutions or cooperatives that sell them" is also essential.

According to Colomar, the results have been noticeable for several years now. "In 2014, the Ibizan Council attempted to trap snakes through a two-year experimental program that helped implement improved traps in Formentera. Later, four years ago, the project, in which Cofib and the Ibizan delegation of the Balearic Hunting Federation, with Alejandro Macías, are now participating, has allowed us to make significant progress in the fight against this invasive species."

Furthermore, the catches are sent to Palma, where, among other things, their diet and the location where they were found are analyzed to learn more about their lifestyle and coexistence with other species. In this regard, Colomar noted that the Cofib "almost monitors each individual specimen, thanks to the fact that all the traps set up on the island are mapped using a GPS system."

These results are then shared in meetings attended by experts from the Cofib and the team hired by the Balearic Hunting Federation, university researchers, representatives of the administrations, and people involved in the issue. All this with the aim, according to Víctor Colomar, "of closing the gap that still separates us from the behavior of snakes in the Pitiusas."

"In Formentera, we can eradicate snakes in the medium term."

The island of Formentera is also part of the campaigns to combat invasive species being carried out by the Cofib. Colomar explained that in this case, "sentinel cages are placed around the affected area, into which snakes must never enter." If any captures are made, "they are moved to increase the number and analyze the different areas."

In the case of the lesser Pitiusa, "the intensive trapping area suggests that the snakes can be completely eradicated in the medium term." However, there have also been surprising discoveries, such as snakes over twenty years old, which, according to the Cofib veterinarian, is causing experts to seriously question "whether they really arrived in the Pitiusas hidden in olive trees or on logs that crossed the sea."

DIARIO de IBIZA

Leva contra las serpientes

Snake Relief

SOS Salvem sa Sargantana Pitiusa is seeking volunteers to monitor more than 2,000 traps to combat the invasive snake plague.

Image of snakes captured in Ibiza by the Balearic Hunting Federation's traps. / D. I.

Josep Àngel Costa | **Ibiza**

11 ENE 2021 21:41

The snake infestation that has spread across Ibiza in recent years has prompted the creation of a platform that seeks to eradicate this invasive species, particularly given the threat it poses to the native lizard, *Podarcis pityusensis*. Under the slogan "Save the Pityusic Lizard," a campaign is being launched to mobilize volunteers willing to collaborate in maintaining a cordon of traps around the entire island. The goal is to have the entire system ready for spring, when the snakes' hibernation has ended and their breeding season begins.

The initiative is being promoted by the organizations Amics de la Terra, GEN-GOB Eivissa, Institut d'Estudis Eivissa, and Prou! Pitiüses en Acció. Furthermore, according to Antònia Cirer, a representative of the Institut d'Estudis Eivissa, the initiative is open to the involvement of neighborhood associations or farmers who want to join the cause, in addition to seeking coordination with groups that have already mobilized to capture snakes, such as the Balearic Hunting Federation.

Political involvement

Cirer, who holds a PhD in Biological Sciences and has conducted various studies on the Pityusic lizard, was one of the driving forces behind the snake eradication platform, which was launched in mid-September 2019. "At the time, we were seeking political action and received very positive support from the town councils and the regional government," she recalls. "It's time to move on to fieldwork."

"The snakes are currently hibernating, and we'll try to ensure that when they begin to wake up in March, they find a welcoming committee," Cirer jokes. Once the SOS Save the Pityusic Lizard campaign has begun to spread, interested parties can join through participating organizations. Her intention is for the working groups to cover the monitoring and maintenance of a cordon of mousetraps, which, to be effective, would require more than 2,000 units.

Maintaining the bait

The volunteers' primary task would be to ensure that each cage is kept in good condition, adding bait, and ensuring they are in a suitable location. The platform also seeks to coordinate with municipal technicians and the Consortium for the Recovery of Fauna of the Balearic Islands (Cofib), the agency responsible for combating this pest and collecting captured snakes.

"The authorities are responsible for providing the resources and financing the traps; we will provide the volunteers and the hours to make this campaign possible, because their technicians cannot monitor all the cages," she emphasizes. In fact, last December, the Catalan government approved allocating €853,000 to Cofib for snake control.

The infestation of horseshoe and ladder snakes, which initially affected the municipality of Santa Eulària and the Sant Llorenç area, has also spread to Sant Joan, Sant Miquel, Sant Mateu, and Corona, the biologist warns. "The western part is safe for now, but it is essential to create a cordon of traps across the island to prevent their further spread," she emphasizes.

This invasive species has arrived in Ibiza in recent years inside large ornamental olive trees brought from the mainland, where they hide and hibernate. Therefore, this platform will continue to urge the Balearic Government and the Consell to insist that the central government regulate the entry of these goods into the Balearic Islands with the goal of eradicating the snake infestation.

PERIÓDICO de IBIZA Y FORMENTERA

Vila comienza la campaña para preservar la 'sargantana pitiusa'

Ibiza town begins campaign to preserve the Pityusic lizard

Horseshoe snake captured after hunting a rat. It was so fat it couldn't get out of the rodent's burrow. / C.C.

R.I. | Ibiza | 21/03/21 4:01

Yesterday, Ibiza Town Council launched the "SOS Salvem sa Sargantana Pitiüsa" campaign in collaboration with the environmental organizations GEN-GOB and Amics de la Terra, an initiative to preserve native lizards from the proliferation of predators such as snakes.

With this step, the Ibiza Town Council becomes the first on the island to launch this initiative.

The campaign, which took place at the Can Tomeu estate, began with a workshop-lecture where projections produced by the Balearic Government's Species Protection Service were shown. Questions were then answered, and volunteers handed out snake-catching equipment, consisting of traps equipped with mice, water bowls, and mouse feed to facilitate the capture process.

The representatives of the aforementioned associations explained to the attendees how to care for and handle the trap, where it should be placed, and how to proceed correctly with the capture. All the materials were funded by Ibiza Town Hall, according to a statement released yesterday.

The workshop was held in two shifts, at 11 a.m. and 12 p.m., with small groups of seven people to comply with current COVID-19 protection measures.

During the trapping season, volunteers will be monitored, and advice and support will be provided to ensure the maximum number of snake captures and thus contribute to the protection of the lizard, which has been seriously threatened since the introduction of snakes into ornamental trees from the peninsula.

DIARIO de IBIZA

Vila entrega trampas contra serpientes en un campaña para salvar las lagartijas

Ibiza town delivers snake traps in a campaign to save lizards

The City Council, the GEN and Amics de la Terra launch the 'SOS Salvem sa Sargantana Pitiüsa' project.

REDACCIÓN. Ibiza
21 MAR 2021 6:00

Ibiza Town Council announced yesterday the start of activities at the Can Tomeu estate for a campaign in which it is collaborating with environmentalists from GEN and Amics de la Terra to protect the island's lizards. The initiative, dubbed "SOS Salvem sa Sargantana Pitiüsa," includes talks, workshops, and the distribution of traps for capturing snakes, which have been proliferating in Ibiza and Formentera for years in the roots of olive trees imported from the peninsula to decorate gardens.

These traps "are equipped with mice, a watering trough, and food" for these animals, which act as decoys, "to make the work easier." Volunteers from both associations explained to the attendees yesterday "how to care for and handle the traps, where to place them, and how to respond to any snakes caught."

The City Council explains, after highlighting that it is the first on the island to launch this campaign, that it will finance all the materials used to make these snake traps.

DIARIO de IBIZA

Opinión

La burocracia extingue las lagartijas

Bureaucracy extinguishes lizards

Xescu Prats

23 MAR 2021 6:00
Actualizada 23 MAR 2021 10:26

I am saddened and somewhat indignant to witness a debate on social media sparked by the publication of a scientific study that examines the spread of snakes across the island and how their advance is resulting in the extinction of the native lizard at an identical rate. The most worrying conclusion of this work is that, without a drastic change in pest control, Ibiza and the surrounding islets will lose their entire lizard population by 2030.

This report, prepared by a multidisciplinary team from the universities of Valencia, Michigan, Granada, and Tetouan, with the participation of Elba Montes, the former Environmental Technician for the Island Council, reveals such worrying data as the fact that horseshoe snakes, which did not exist on Ibiza two decades ago, now occupy 50% of the island's territory and will spread to the entire island by 2027 or 2028. In 2010, the snakes only inhabited 1,000 hectares of the island, and by 2018 they had already expanded to more than 28,000.

Since there are no predators in Ibiza to control this exponential growth of the snake population, there are two options to exterminate them or at least slow their spread: set a large number of traps and prohibit or monitor the import of ornamental olive trees, of which we actually have an absolute surplus, as well as straw bales and other plant species where the snakes camouflage themselves while hibernating. When they wake up, they find themselves in a paradise where no other living beings threaten them and a plentiful diet based on lizards and mice, among other species.

Setting traps works, as hundreds of specimens are caught in them every year. However, the number is absolutely insufficient, and new ways to capture them are necessary. A map of the expansion of horseshoe snakes across the island in just eight years suggests that the bait currently used is like a drop in the ocean.

The debate I referred to at the beginning, however, revolved around the second issue: preventing or effectively monitoring the reintroduction of snakes into imported plant species. The lack of progress on this issue provoked angry criticism until an environmentalist didactically explained the root of the problem. To prohibit the harvesting of olive trees or establish an expensive inspection service, it is essential to first declare snakes an invasive species. The problem is that this species is protected on the peninsula, and ecological criteria are unified for the entire national territory. Only the Ministry of the Environment, currently known as the Ministry of Ecological Transition, has the authority to change this classification.

The Ibiza Island Council, at the time, sent reports to the Balearic Government detailing the spread of snakes and the damage they cause to the native lizard population. The Ministry, in turn, referred them to the Ministry of the Environment requesting control of plant species likely to harbor snakes. Since then, the equivalent of a legislative term has passed, not a single inch of progress has been made.

We are, therefore, facing a bureaucratic mess of the kind that festers and doesn't unravel until the problem is beyond repair. When there is not a single lizard left and the fields and forests of Ibiza are infested with snakes, then the Ministry of the Environment will declare the snake an invasive species.And while the tragedy is on its way to perpetuating itself, is that it? Do we leave it like that? Do we wash our hands because now the ball is in the court of the Ministry of Ecological Transition, where the island's problems, judging by the progress made, represent a non-event?

We have a Balearic government that is expeditious enough to shoot and exterminate the goats of Es Vedrà in order to protect the native flora, but it doesn't bother to put the slightest pressure on Madrid to save the lizards, which have immeasurable value and are also an icon of the island. And what can we say about all these Ibizan and Balearic politicians who occupy a seat in Congress or the Senate, supposedly to represent us? Has anyone presented a motion, requested a meeting with the minister, or expressed the slightest complaint about this?

The fact that all we have been able to do in a decade to prevent the extermination of the lizards is set a few traps is a dramatic example of the incompetence, indolence, and lack of ideas of our administrations. In reality, the lizards, just like the snakes, are being exterminated by bureaucracy.

DIARIO de IBIZA

Opinión

Sin lagartijas pero con ineptos

Without lizards but with inept people

César Navarro

08 ABR 2021 6:01
Actualizada 08 ABR 2021 10:21

In ten years, there won't be any lizards in Ibiza and Formentera, and that recurring and original logo will have to be replaced with one of a boa constrictor or a python. A study by environmentalist Elba Montes dates what seems inevitable due to the entry of snakes into the roots of olive trees, which have been imported, by the thousands, as decoration. As if we didn't already have wonderful, exuberant flora on the islands. Stupidity, snobbery, and globalization are what they have, destroying any hint of what today seems outdated, tacky, and even tacky, but which the day after tomorrow will be a bucolic memory of a paradise we will regret having lost. It terrifies me to think what the Pitiusas will offer tourists who in a decade decide to spend their summers in these latitudes when, thanks to climate change, they can do so on the wild Norwegian coast. We won't even have any nightclubs. And if the virus takes hold and continues to mutate relentlessly, we won't be able to offer them those wonderful bars and restaurants that served as a refuge for socializing. We've been unable to stop the snakes, and we'll be left without *Posidonia* and even pine trees, even though it seems unthinkable and exaggerated. Is such ineptitude, such uselessness, normal?

DIARIO de IBIZA

Vicent Roig: «Para erradicar las serpientes hay que restringir la entrada de olivos»

Vicent Roig: "To eradicate snakes, we must restrict the entry of olive trees"

The measure to curb the arrival of snakes depends on the Ministry of Ecological Transition, and the Consell plans to request it. "The next two months will be crucial to corralling them."

The island's Environment Minister, Vicent Roig, during the interview. / TONI ESCOBAR

Joan Lluís Ferrer

Ibiza 12 ABR 2021 6:00 Actualizada 12 ABR 2021 13:23

Almost twenty years after the spread of invasive snakes began in Ibiza, and when the island's endemic lizard is already on the verge of extinction, the Island Council has finally concluded that the entry of olive trees, the only cause of the snakes' arrival, should be restricted. However, as the Island Councilor for the Environment, Vicent Roig, explains in this interview, this is a request that has yet to be submitted to the relevant authorities. The Council believes, in any case, that the widespread distribution of traps by individuals can decisively halt the spread of the snakes that are exterminating Ibiza's endemic lizard.

What is the Council's assessment of the situation of the endemic lizard of Ibiza and its critical situation due to the proliferation of snakes?

The important thing is that, while until now some town councils and the Consell (Spanish Consell) had acted somewhat independently in the manufacture of traps and through agreements with the Hunting Federation, this year will be a turning point, with the launch of the campaigns launched by Cofib (the Government's Wildlife Recovery Center) and the four social platforms (Amics de la Terra, Institut d'Estudis Ibizasencs, Prou, and GEN-Gob). This year's action will mark a turning point. These campaigns will have a significant impact on the island, as they aim to set between 2,000 and 2,500 traps. The process may be slower than we thought because coordinating volunteers is not easy, but it's true that the four platforms

are doing a great job in this regard. The Consell is and will continue to be involved in this issue, as an island institution, we must help with coordination and in any way we can, because this is an issue that has been a concern of ours for some time. We have made several requests to the Government, approved motions, and initiatives at the parliamentary level. Also important was the approval of this Sustainable Tourism Tax (ITS) allocation to set 1,000 traps this year, with seven people and two vehicles. This week, we will call a coordination meeting to see how we can present this campaign to the public.

What do you think of the current situation, with 50% fewer lizards?

The situation in Ibiza today is a bit out of control. It's true that the actions taken haven't been as decisive as they should have been. The Balearic Government is finally taking action with a fairly significant measure, two years late, but here it is. The Port Authority has been asked to create a quarantine area and to prevent the transport of olive trees during periods when they could be carrying snake eggs. This is a request we will make from the Consell. Because we can deploy all the resources we want to combat them, but if they continue to enter the island, we have a problem. And, above all, we must study ways to capture these specimens before they leave the port area, whether they have been quarantined or not. It's true that we're late, but we must apply pressure to achieve this. Now that the port area plan is underway, it's a good time to push for this, which is why the environmental report prepared by the Consell included this observation.

Why is it coming so late when this situation has been known from the very beginning, almost twenty years ago?

Well, I can talk about what we've done since we took office. And since then, we haven't stood still. We've pushed for the implementation of the Cofib agreement, an entity that now has a space in Sa Coma to set the traps. We've coordinated meetings with the four platforms to deploy volunteers. Negotiations have been made with the State, motions... Within our means, we've done everything we could. And now, with the support of these platforms, we'll continue along these lines. Hasn't this been done before? It's true. There has been some neglect on the part of the governing teams, but now we must insist on these lines.

Isn't the possibility of completely banning the arrival of olive trees being considered?

It would be a very important step to transport the olive trees only when the snakes are no longer reproducing. Deciding that they can never be transported? Well, it's an issue that must be put on the table and evaluated..

And, if necessary, who makes that decision?

From the Ministry of Ecological Transition. When there is a supra-regional scope (transport from the Peninsula to the Balearic Islands), it depends on the Ministry and also on the Government.

Is there any kind of coordination or communication between the Consell and the Balearic Government for the fight against snakes?

This is the problem. The problem is that the Government delegates control to the Cofib (National Council of the Balearic Islands), which has done what it could, but not what it should have done. Now it has a headquarters here, staff, and the strength to act. There is constant contact with them; there is coordination. And from the Consell, we try to do our part to coordinate administrations and other stakeholders. What we need is a meeting point.

One of the proposals in the study by environmentalist (and former Consell technician) Elba Montes is to breed lizards in captivity in case they become extinct. Is this action planned?

It's on the table. And it's one of the topics we'd like to discuss at the coordination meeting we'll have on Thursday.

Do you think there's a chance of preventing the disappearance of Ibiza's endemic lizard?

There are possibilities for carrying out very intensive action to halt their disappearance. Everyone agrees that eradicating snakes at this point will be complicated, but it's not ruled out either. The objective must be to eradicate them. At least there's a general awareness among the population that they must be eradicated. Whatever can be done in the next two months will be extremely important, because it could have a significant impact. We must corner the snakes and see if we can eradicate them that way.

The initiatives you mentioned have arisen either from private entities or from other administrations. Doesn't the Consell plan to design its own strategy or some initiative directly from the institution?

The only thing that has happened so far has been at the initiative of the Consell... Everything that has been done so far in terms of traps and coordination with different actors was, first in 2014, an initial initiative of the Consell, and then the city councils (especially Sant Antoni and Santa Eulària) have acted together with the cooperatives to set the traps, but they have always been initiatives from the Consell, not from other areas.

How many traps are ready to be distributed?

Right now, there are about a thousand in place. People need to know that the traps they set require maintenance. The mice need to be fed and watered, and they need to be replaced. Anyone who has traps at home and isn't using them should hand them in to the platforms to optimize resources.

In other words, if individuals mobilize, the situation can change...

Absolutely. Furthermore, if there isn't global collaboration to plant around 2,000 more traps across the territory, it will be complicated. And this has to be done now, before the snakes hatch, which happens when the heat arrives.

The Council considers citizen mobilization essential to halt the disappearance of the native lizard. | T. ESCOBAR / JOAN LLUÍS FERRER

PERIÓDICO de IBIZA Y FORMENTERA

La extinción de la 'sargantana' pondría en peligro a plantas endémicas de Ibiza

The extinction of the lizard would endanger endemic plants of Ibiza

Several studies on the relationship between lizards and some plants in the Mallorca and Menorca areas reveal that the population of some plant species suffered a serious impact after the extinction of the reptiles.

File photo of a lizard among plants on the island of Ibiza.

Isaac Vaquer Ferrer | Eivissa | 19/04/21 4:01

What impact could the disappearance of the Pityusic wall lizard have? Does protecting Ibiza's only endemic vertebrate simply mean preventing the disappearance of a symbol that appears on T-shirts, ashtrays, and car bumper stickers?

Working to save an endemic animal from extinction due to a human-caused snake infestation seems more than enough reason to act.

This fact has led dozens of people to participate in the "SOS Salvem sa Sargantana Pitiüsa" platform to work toward the eradication of invasive snakes and, as the platform's name suggests, save the wall lizard. But the impact of the snakes' expansion goes beyond the threat to a single species. Some plants will also suffer from their voracity.

It's not that snakes have become herbivores in Ibiza due to wellness tourism; it's simply the impact that the disappearance of one of the cogs in the wheel—the lizards—that make a complex mechanism work

could have on such a delicate island ecosystem. This is what several studies on the impact of the lizard's disappearance in Mallorca and Menorca reveal, giving an idea of what could happen to Ibiza in a few years if no action is taken.

Mutualisms

In a study by Anna Travesset and Nuria Riera published in 2005 in Conservation Biology, the journal of the international Society of Conservation Biology, they analyzed the relationship between the lizard and the Menorcan Daphne. This shrub is currently only abundant on the only islet where lizards still exist. The study shows that the absence of this lizard in most of Menorca's populations is what has caused the decline of this plant, currently considered at risk of extinction.

The interruption of this mutualism, this relationship of dependence between two living beings, has led to the practical extinction of the plant following the disappearance of the vertebrate. As the study shows, lizards are the ones that disperse the seeds of this plant. When they ingest them, they carry them to other locations in their digestive tract, and when they are defecated, the seeds become viable and germinate. Furthermore, the researchers indicate that the seeds of this plant have a harder time germinating when they fall to the ground, while when they pass through the reptile's digestive system, the seed coating softens, making germination easier.

But this is not the only example. In another study in which the two researchers participated on the olivilla, a plant from which vegetable oil can be obtained, they discovered that the disappearance of the lizard in Mallorca and Menorca "would have had significant ecological consequences for the plant" with a significant reduction in its growth areas. On Menorca, in 2002, when this study was conducted, around 50 specimens remained.

The researchers propose that "the large number of undispersed fruits in areas where lizards have become extinct supports the hypothesis that seed dispersal of this plant has decreased after the introduction of carnivores."

As with the Menorcan *Daphne*, the impact is not only on seed dispersal, but also on promoting germination. Lizards select smaller fruits with lighter seeds, and their passage through the reptile's digestive tract makes them more suitable for development.

The study reveals that in the case of Ibiza, the Pitiusan lizard is the only seed disperser, except in areas where genets, already very rare, also consume the fruits of this plant.

Action is needed

Could something similar happen in Ibiza? "The lizard is a very ancient species in Ibiza, the only vertebrate that remains from before the island was colonized by humans, so it has had many years of coevolution with many plant species. Therefore, yes, the disappearance of the lizards could mean the disappearance of other plant species endemic to the island," explains Nuria Riera.

For this researcher, who dedicated herself between 1999 and 2003 to studying the diet of the Pitiusan lizard with grants from the CSIC and the Mediterranean Institute for Advanced Studies, the *Podarcis pityusensis* is "a jewel" of our fauna. "They are small treasures that allow us to have enormous biodiversity in a small area. A single species like the *Podarcis pityusensis* could have up to 45 subspecies," she explains.

He believes that "a very important effort should be made here to eradicate" snakes, given that "this invasive species was introduced only very recently, in the evolutionary scale of ecosystems, but the impact is being very rapid and the consequences could be disastrous."

The trigger for the extinction of the Menorcan and Mallorcan lizards was the introduction of carnivorous mammals from the time of Roman rule. Their disappearance came after centuries of predation. The Pitiusan lizards resisted the invading carnivores, like irreducible Gallic villagers, but now they find themselves besieged by another exotic species with unprecedented voracity on the island: the snake.

For this reason, she is highly critical of the scant action she believes the Balearic Government is taking. "We need to give the Balearic Government a hard time, we need to urge the Cofib and the Ministry of

the Environment, because we are facing a very serious problem. The Balearic Government should have very powerful eradication plans to reverse this situation, but what we have are small interventions," she complains.

Above all, she is concerned about the arrival of snakes on the islets. "It will surely lead to the disappearance of more than one endemic plant species. Lizards are the only vertebrates found on these small islands; in many cases, they are primarily responsible for seed dispersal and pollination. If a snake reaches an island, it's a catastrophe. It's a very small space where lizards often have little shelter. Any snake that reaches this territory will eat everything there," he warns.

Impact on other animals

In a recent study published in one of the Oxford University Press journals, "Collapse of the endemic lizard *Podarcis pityusensis* on the island of Ibiza caused by an invasive snake," environmentalist Elba Montes, along with other researchers, revealed that the main prey of snakes on the island is the lizard. A study of the digestive tracts of captured snakes and their excrement revealed this.

But what happens when the lizard population in an area is already completely decimated? "This remains to be studied," Montes indicates. "In addition to micromammals such as mice, rats, and dragons, their diet also includes birds. In Ibiza, we have some endangered birds such as the virot and the Balearic warbler that could begin to suffer greater attacks from snakes."

On the other hand, farmers in Santa Eulària are noticing the absence from their fields of another mammal that is very beneficial for pest control: the shrew.

Ibiza is the only island in Spain with a subspecies of shrew adapted to the island's conditions, the *Crocidura russula ibizanensis*. This insectivorous mammal was once present in the cultivated fields of northeastern Ibiza. Shrews make their burrows at the edges of fields, where they return at night to eat beetles, snails, or worms. Furthermore, in their search for food, they dig holes in the ground, which aerate the soil and improve soil fertility.

Although there are no studies on the impact of snakes on these mammals, the perception of farmers surveyed in Santa Eulària is that shrews no longer exist in the area. Perhaps they have become a memory, like the lizard.

The Particular Island Phenomenon of Lizards as Pollinators

An interesting aspect of the Pitiusan lizard is its role as a pollinator. The consumption of flower nectar by reptiles is a rare phenomenon that has only been described on the islands of New Zealand, Madeira, the Seychelles, the Antilles, and the Balearic Islands.

According to Nuria Riera, "all lizards that include nectar in their diet act as pollinators, thanks to the fact that the texture of their skin favors the transport of pollen."

In Ses Salines, specifically on Es Codolar beach, Riera describes how this curious behavior of lizards can be observed with sea fennel. "The lizards move from flower to flower, consuming nectar, just as insects do. Nectar normally acts as a means of transport that increases the probability of pollen loading. That is, when the lizard sucks nectar from flowers, it touches the stamens with its snout, and a large number of grains become stuck. When it moves to another flower to collect nectar, if it touches the stigma, the grains fall, and pollination occurs.

A similar phenomenon was studied on the island of Aire, in Menorca, with the *Rapa mosquera*, a plant with a flower similar to the water lily. The potential role of the lizard in the pollination of the *Rapa mosquera* was studied through an exclusion experiment. The test consisted of isolating a series of randomly selected plants from their potential pollinators, flies or lizards. To do this, 10 plants were isolated from lizard access by means of plastic fences fixed to the ground. Fly access was prevented by isolating another plant sample using cubic cages made of mosquito netting, which only allowed lizards access from the bottom. Seed viability and fruit development were subsequently compared in these two exclusion groups with a third control group of plants to which all potential pollinators were allowed access. The study revealed that flies were the main pollinators of this plant, although lizards also played this role, despite being a "poor transport" in this case.

PERIÓDICO de IBIZA Y FORMENTERA

Aprendiendo en el instituto a luchar contra las serpientes de Ibiza

Learning how to fight Ibiza's snakes at school

Yesterday, the Santa Eulària City Council, together with Amics de la Terra, held an informative workshop for fourth-grade students at the Quartó del Rei Secondary School.

One of the lectures to students of the municipality of Santa Eulària.: Photo: Ayuntamiento de Santa Eulària.

Manu Gon | Santa Eulària des Riu | 20/04/21 12:50

Members of the Santa Eulària City Council and the environmental association Amics de la Terra visited the Quartó del Rei Institute yesterday to explain how the extensive operation implemented on our island works to try to end the snake infestation that is endangering endemic species of the Pitiusas.

According to the council, the initiative was initiated by the school's management and was aimed at the 35 students in its five fourth-grade classes. "As soon as they told us about it, we thought it was a very good idea because at this age, students are already fully aware of the need to take care of our environment and the very delicate situation the Pitiusa lizard is experiencing due to the proliferation of snakes on our island," explained Santa Eulària's Environment Councilor, Mónica Madrid, yesterday.

Thus, the initiative consisted primarily of a workshop in which the campaign was explained to the students in a fun and entertaining manner. In addition, together with a specialist from Amics de la Terra, they saw firsthand half a dozen snakes captured in different locations on the island of Ibiza by volunteers from the Balearic Hunting Federation, as well as a few small mice that serve as bait without running any risk to the snake.

One of the talks for students from the municipality of Santa Eulària. Photo: Santa Eulària City Council.

They also learned how to react if they see a reptile, how to maintain traps, how to handle the mice inside, and how to report their findings through an app launched by the Santa Eulària City Council.

Traps for students

The council also provided each class with traps to be placed around the school, an area where, according to the City Council's Environmental Officer, Javi Gómez, there is a large proliferation of snakes.

There are 15 of them, three per class, plus one that the students themselves created in a very comprehensive and effective way. "The intention is for the students to be in charge of all maintenance, taking care of the mouse, monitoring the catches, and learning how to use the information app that the city council has launched so that the fight against snakes can advance as quickly and effectively as possible," Gómez summarized.

New event on Saturday afternoon at the Palau de Congressos

The city councils of Santa Eulària and Sant Joan, in collaboration with the COFIB and the SOS Salvem sa Sargantana Pitiüsa Platform, are organizing an informational event on Saturday at 5:30 p.m. It is aimed at approximately 200 volunteers – 150 from Santa Eulària and 50 from Sant Joan – who will receive training on how and where to place traps, how to care for bait, how to handle captured snakes, and how to share information on the municipal app.

In addition, attendees can purchase a trap and bait after paying a €20 reservation fee to begin collaborating in snake containment.

Those interested should fill out a form available at the top of the Santa Eulària City Council website.

PERIÓDICO de IBIZA Y FORMENTERA

Jornada para formar a 200 voluntarios en la lucha contra las serpientes

Training workshop to train 200 volunteers in snake control

Attendees learned how to set traps and capture snakes

The training session, organized by Santa Eulària and Sant Joan in collaboration with the COFIB and the SOS SOS Salvem Sa Sargantana Pitiusa platform, took place at the Conference Center. Photo: Arguiñe Escandón

Redacción Local | Santa Eulària | 25/04/21 9:33

The Santa Eulària City Council held a training session this Saturday to instruct 200 people in the handling and care of baits to combat the proliferation of snakes in Villa del Río and the municipality of Sant Joan.

Attendees were able to obtain a trap to place on their properties and contribute to containing this snake infestation, which seriously affects the island's ecological balance, particularly the disappearance of lizards. The activity was jointly organized by the City Councils of Villa del Río and Sant Joan in collaboration with the COFIB and the SOS Salvem sa Sargantana Pitiüsa platform.

During the training, municipal technicians and specialists from the SOS Salvem Sa Sargantana Pitiüsa platform and the COFIB explained how and where the traps should be placed, as well as how to care for the mouse used as bait to extend its useful life.

They also discussed snake capture and management, as well as how to report information to the City Council so it can monitor the progress of the infestation, determine where the snakes are most prevalent, and study the effectiveness of measures to fine-tune procedures.

PERIÓDICO de IBIZA Y FORMENTERA

'SOS salvem sa sargantana' reparte 47 trampas para serpientes en Santa Eulària

'SOS salvem sa sargantana' distributes 47 snake traps in Santa Eulària

Volunteers receive training prior to lending the traps and assistance during the campaign | Photo: Daniel Espinosa

Isaac Vaquer Ferrer | Ibiza | 09/04/21 4:01

No snakes have yet been sighted in Ibiza this year. Their hibernation season ends in the spring months, but it seems the climate is still too cold for this invasive reptile, which could lead to the extinction of the Pitiusan wall lizard in less than a decade. That's why the "SOS Salvem sa Sargantana Pitiüsa" platform is working against the clock to receive them with a network of traps distributed among its volunteers.

From last Wednesday until today, Friends of the Earth will distribute a total of 47 traps to 30 volunteers in Santa Eulària. Participants in the initiative will place the traps around their homes and will be responsible for caring for them, ensuring they remain active until November or December, when the snakes return to hibernation. This task involves feeding the rodent that serves as bait to attract the snakes, monitoring captures, and eliminating them. Volunteers receive a trap with a laboratory mouse and food for a week.

It should be noted that the mice used have lost their instinct to fear predators, so they don't suffer stress in the presence of snakes in the trap.

Hazel Morgan, the president of Amics de la Terra in Ibiza, is very satisfied with the response from Santa Eulària's civil society, which has sold out the three days of trap distribution. Some have requested more than one trap.

Similar to what the Vila City Council did a couple of weeks ago, the Santa Eulària City Council has funded the traps and provided the platform with a training space for volunteers. It has also set up a digital trap monitoring system to obtain data that will allow for future improvements in the fight against this invasive species. Volunteers will have access to a section of the digital pest control system, set up exclusively for this purpose, where they can record the tracking of their trap catches, their location, and any incidents they encounter.

Morgan highlights the improvement this monitoring entails "so that in the coming years, we can use this data to improve the strategy for combating snakes."

Facilitating Collaboration

Furthermore, he emphasizes the improvement in trap management brought about by the platform's involvement. In previous years, the island's municipalities offered subsidized traps to agricultural cooperatives. Individuals there had to purchase them at a reduced price, but they received no training and no monitoring of catches.

"Now we provide training to the volunteers; we have direct contact with them for any questions. This makes it easier for people who previously wouldn't consider setting a trap because they wouldn't know what to do with the snake or where to get a mouse, to participate thanks to the distribution of tasks we've implemented."

"SOS Salvem sa Sargantana Pitiüsa" now has a network of 70 volunteers on the island. Participants offer their services according to their ability and availability in three areas: mouse breeding, trap setting and care, and snake culling. In this way, the platform itself provides volunteers with mice for the traps, and if the user with a trap doesn't know how or can't kill the snake, another person can go to the trap location to euthanize it.

So far, the platform has distributed 67 traps, including the 20 distributed in Vila and the 47 that will be distributed in total in Santa Eulària. The trap distribution campaign will take place in the municipality of Sant Josep in the coming weeks. The platform "SOS Salvem sa Sargantana Pitiüsa" is made up of the associations GEN-GOB, Amics de la Terra, the Institut d'Estudis Ibizasencs (IEE), and "Prou!". Anyone who wishes to can volunteer and collaborate in any of the campaign's activities through the links on the GEN-GOB and Amics de la Terra websites.

One of the traps. Photo: Daniel Espinosa.

DIARIO de IBIZA

Las 2.342 'sargantanes' de Sebastián Candela

The 2,342 lizards by Sebastián Candela

The objective of this photography enthusiast is to raise awareness with his photos of the "serious danger" in which this species is found


Sebastián Candela, with two paper reproductions of his photos. / MARTA TORRES MOLINAM. T.M.

Marta Torres Molina
Ibiza 07 AGO 2021 6:00

Sebastián Candela has a total of 2,342 photographs of lizards on his computer. Or had, at least, until the Jew. Maybe now there are already some more. Practically all of them are captured in the Natural Park of Ses Salines and three of them are also winners of the Eight of August Photography Award of the Ibiza Council. A series that has been named 'Sargantana pitiüsa, let's protect it'. "They are fascinating, captivating animals", comments Candela, who was editor-in-chief of the Sports section of Diario de Ibiza, looking at a paper enlargement of one of the images included in the award-winning series. The little saurian looks at the camera with its mouth so open that it seems capable of eating the photographer's lens. The eyes are directed, irremissibly, towards the black hole framed by the pink palate and the almost violet shine of the tongue about to stick out. The green and gray scales contrast with the intense terracotta of the tile on which the animal rests.

"It was very difficult for me to choose the ones I presented", he confesses. Of those more than 2,300 he managed to keep a dozen. And there he already had to ask for help. Well, advice, who is in charge of making the paper copies, Rafa Domínguez. Because he likes to have copies. palpate them Watch them without having to turn on the computer. "Also, it doesn't sell the same on a screen. They are much more beautiful," he says, showing an image that he did not submit to the competition, but from the same series as another that he did include in his award-winning triad and in which he captured all the movements of a lizard devouring a piece of apple that he had brought from home. The thin claws hold the piece of fruit, which it seems to hug with its body, the pale belly stuck to the pulp and the jaws open to the

Candela, with his camera in Ses Salines. | D. I. / MARTA TORRES MOLINAM. T.M.

unimaginable for the juicy morsel. Sometimes it's an apple in small pieces of ripe banana. Tomato in some of the last ones. Use the bait only occasionally. So that the ones that are in the surroundings come out, they get together, they swirl around the food, they fight over it... "It may seem like a trap, but we look for the game between them", he considers.

When his phone rang on Wednesday and he saw an unknown number, he got nervous. The moment he heard the voice of the Minister of Culture, Sara Ramón, telling him he had won, he thought his heart was going to jump out of his chest. I had confidence. In your photos. And on the subject. But I knew it was going to be very difficult to win. The 2,500 euros of the prize will be used to make a present for his wife and daughter and to offset the cost of paper copies of his photos, some of which hang on the walls of the homes and offices of friends and family.

"They'll disappear"

Her photos of lizards have a very clear objective: "To protect them, to make people aware of them and realize that if we don't do something, they'll disappear in a few years. To make them realize that it's a problem." She warns that it's increasingly difficult to see these animals and is seriously concerned about the snakes entering the natural park. "They've already been seen on Sant Jordi, very close by. If they get in there, they'll be gone. Future generations will have to go to a zoo to see them," reflects Candela, who doesn't understand why the entry of olive trees hasn't been restricted and urges people to be more aware of this "serious problem." "It's not just snakes that kill lizards, but also cats and even some birds," she comments, showing a photograph on Instagram of a bird devouring a lizard.

Looking back, he remembers the *Podarcis pityusensis* as an omnipresent animal in his daily life. So much so that, he says, as a child and young adult, they didn't catch his attention. He wasn't afraid of them, but he didn't like them. "I didn't know them, but now I love them; I find

'Pitiüsa lizard, let's protect it', three award-winning images / MARTA TORRES MOLINAM. T. M.

them very funny. They're a spectacle, with their movements and colors, their docked tails, when they shed their skin, their scales... They're like little dinosaurs," says Candela, who began taking photography seriously when he retired.

Before that time, he had already taken some sports photos for the newspaper, where, as editor-in-chief of the section, he also had to select a large portion of the images. "I learned a lot from the photographers. I was always interested in the technical details of the photographs," he emphasizes. So, in 2018, when he quit his job, his colleagues gave him a photography course, which he learned "for real." Photojournalist Germán G. Lama taught him how to get the most out of his camera, a "normal" Nikon.

The three photographs in the winning series were taken at spots he knows well in Ses Salines Natural Park, which has become one of his favorite spots on the island. He is also convinced that, despite all the talk and writing about it, it is largely unknown: "Most people don't know what we have." This is not the case for him. He has located the pools where birds go to drink, the holes where lizards seek shade, the times when flamingos appear pinkest, where the sun rises and sets in all seasons of the year, and the walls favored by small Pitiusan lizards. Of the latter, he has his favorite. He especially likes the terracotta, almost red tones of one, the perfect contrast with the greens, blues, blacks, and grays of these animals' scales.

“Every day I go, I discover new things. I go at six in the morning and at ten at night. The sunrises at es Cavallet are beautiful,” says the amateur photographer, who in recent years has learned a tremendous amount about the flora and especially the fauna that inhabits ses Salines. Curious and eager to learn more about those who brought his photos to life, he has been building a small library. His long hours in the park have served him not only to observe the beaked, tailed, and clawed animals, but also the two-legged ones and their lack of respect for the protected area. “It’s fenced off, but many of them jump out,” he comments angrily.

'Pitiüsa lizard, let's protect it', three award-winning images / MARTA TORRES MOLINAM. T. M.

His photography tricks are threefold: patience—"I can spend hours taking a photo"—knowing the park almost better than his hallway at home, and shooting in burst mode. "They're very fast," he points out. In fact, one of the photos in the winning series, the one showing the open mouth, is the only one of the dozens taken in just a few seconds that shows the lizard's gullet in all its splendor. Getting nine specimens to peer curiously out of the hollow in a wall took him "many days."

He relishes those moments. Many of them alone. "Being at one of the observation points in winter, with a radio or a newspaper, tripod, and camera ready is fantastic. It doesn't matter if they come or not in the end," he says. Neither the cold nor the rain deter him. On days when the humidity and the cold penetrate to the marrow, she hasn't hesitated to stay inside the car, next to one of those walls she loves so much, with the window down and her camera ready to shoot, explains Candela, who confesses how much she missed nature and walks in the protected area during the lockdown and also during the last few months before her hip surgery, when she could barely walk. The park was an important part of her recovery. "After the operation, they recommended I walk," she explains.

The Pending Photos

He doesn't always travel the trails alone. Sometimes he goes with his wife, Esther Guillem: "She's a very important part of my photos." Other times, he's also accompanied by Carme Torres and Pepe Bonet. They, along with biologist Maria Antònia Cirer, encouraged him to enter the competition organized by the Consell de Ibiza. The latter, with whom he has forged a good friendship, chose some of his photos for her book 'Lizards and Islands'. In addition to this volume, his images of lizards have been published in this newspaper and served as a Christmas card from the Institut d'Estudis Ibizasencs (IEE). He says he'd like to put on an exhibition of them, and he confesses that he looks "with a certain envy" at the images of

'Pitiüsa lizard, let's protect it', three award-winning images / MARTA TORRES MOLINAM. T. M.

photographic safaris in exotic and distant places and with a touch of nostalgia at the advertisements for these trips in agencies. In the current situation, he prefers not to travel too far with his camera. "I still have a lot of photos to take without leaving the island," he says.

Candela claims he barely retouches his photographs. "I don't know," he says. "I know the basics of Photoshop and LightRoom, a little contrast and a bit of color, but nothing more," he continues. "In fact, I don't like highly retouched photos," concludes the journalist, who just a few days before learning he had won the Premi Vuit d'Agost, won a "mini-prize" for another of his lizard photos published on his Instagram profile (@sebasibzcandela): the #salvemsasargantanapitiusa, organized by Amics de la Terra. His image of a lizard with its tail severed, captured on the Can Blai street, also in Ses Salines, earned him first prize: a "really good" Ses Cabretes cheese, of which not a single piece remains. And not because he shared it with the scaly models in his award-winning photos. To them, he explains with a mischievous laugh, he only brings the apples and bananas he steals from his wife.

The jury of the Premi Vuit d'Agost photography award highlighted the series 'Sargantana pitiüsa, protegim-la', presented by Sebastián Candela, "the author's timeliness and patience in each of the photographic captures and the vindication he makes of an element so representative of Ibiza's symbolism and so present in the island's ethnography."

DIARIO de IBIZA

Las serpientes llegan al Parque Natural de ses Salines de Ibiza y amenazan a aves y lagartijas

Snakes have arrived in Ibiza's Ses Salines Natural Park, threatening birds and lizards

A "large" snake, recently seen while sunbathing, joins another sighting near the DC-10, a dead one found on the road, and those captured at the airport, although "its density is not yet high."

A horseshoe whip snake captured in Santa Gertrudis. / J.M.L.R.

José Miguel L. Romero
Ibiza 25 ENE 2022 6:00 Actualizada 25 ENE 2022 8:18

Unstoppable, invasive snakes have already spread to the heart of one of the Pityusic' environmental treasures, the Ses Salines Natural Park. A week ago, a horseshoe whip snake (*Hemorrhois hippocrepis*) was spotted on the Can Blai road, a path that has been maintained and opened to hikers for a year. It starts near the Toro Mar and extends to the airport wall: "It was a sunny day. Now, with the cold, they're hiding, but when it clears up, they come out to warm themselves," explains Vicent Forteza, a technician at the Ses Salines Natural Park.

This wasn't the only snake sighting in this sensitive Ibizan ecosystem: "We have evidence of two other snakes detected near Sant Francesc de s'Estany in the last two years." One was found dead on the road in Ca na Maria. Another one was seen, in this case alive, just over a year ago in Can Mariano Fita, very close to the DC 10 nightclub, Forteza details.

"It's true that snakes are arriving at the Natural Park. For the past four years, I've been worried that they'll enter the wetland area, that we'll start seeing many sightings of snakes in those areas, and that they'll affect the nesting areas of aquatic birds. It's not just lizards that are threatened by snakes," warns the technician. Indeed, a private individual notified them a few

years ago that he had seen one near Sa Sal Rossa, in Sa Torre des Carregador, after which "the Natural Park managed five cages for a period." But none were caught.

The Cofib (Consortium for the Recovery of Fauna of the Balearic Islands) has installed sentinel traps around the perimeter of the Natural Park to detect them: "But with such low densities of snakes, the traps don't work as well as if they were high." Nor did any fall into those cages.

But they do exist. In addition to those sighted inside the Natural Park, some have even been captured within the airport, whose perimeter borders this protected area: "They're also trapping specimens there, as part of their wildlife control efforts. Some were on the runways. And during the recent construction work, when they brought in heavy machinery and dismantled walls, they pulled out some dead ones."

Sunbathing in Sant Francesc

Víctor Colomar, a veterinarian from Cofib and coordinator of the plan intended to halt the proliferation of snakes in the Pityusic Islands, confirms what Forteza said: "In 2021, there were some captures inside the airport [with cages provided by Cofib, but AENA didn't provide much information or explanation]. And about three years ago, a private individual saw one in the sa Sal Rossa area." More recently, he continues, "a very large snake was found sunbathing [sunbathing to thermoregulate] near Sant Francesc de s'Estany." They come out when the sun is out to warm up, but "not yet to eat, so it doesn't make sense to go after them yet," says Colomar, referring to setting traps to capture individuals of this invasive species: "When the campaign begins, this and other sightings will be taken into account. And since it's a Natural Park, special care will have to be taken."

Colomar points out that, while there are undoubtedly snakes in Ses Salines, their density is not yet high: "We installed a fairly large number of cages around that entire peripheral area of the Natural Park to control them, but no one was caught. Within Ses Salines and the peripheral area, there are definitely some snakes. But the fact that they haven't fallen into the traps means that their density in that area is very low... but they are there." They do exist, but not as exaggeratedly as in Sant Llorenç or Santa Gertrudis: "We haven't found many, nor that there is a density or population that is getting out of control."

For now, Colomar emphasizes, "there isn't an unstoppable number of snakes in Ses Salines. When this started in Santa Eulària [they were detected in 2003 and became a problem in 2010], the densities were extreme and they had already done a lot of damage. In the Park, the damage is currently potential." He also suggests not to overdramatize: "One swallow doesn't make a summer. Seeing a snake in Ses Salines Natural Park shouldn't make us tear our clothes, even if it worries us. We were already worried before they were seen there." If they were to proliferate, Colomar warns that "density can be contained, but not their expansion" with existing resources.

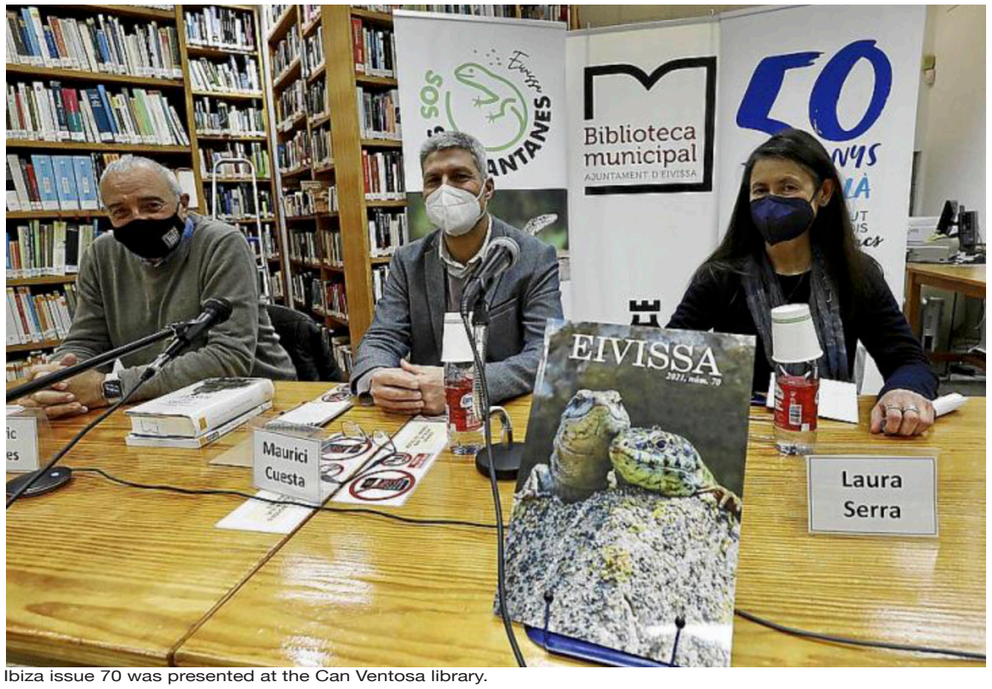
It's not just the lizards that are at risk

In addition to the lizards, if horseshoe snakes enter the Natural Park, "waterbirds such as sandpipers and woodcocks..." will be at risk, warns Víctor Colomar. "All birds that nest on the ground or in the small trees of Ses Salines are susceptible to predation. Especially eggs and chicks." The arrival of the snakes worries the Cofib because it threatens the diversity of Ses Salines.

PERIÓDICO de IBIZA Y FORMENTERA

'Sargantanes', cultura, política y mucha historia en el número 70 de la revista 'Eivissa'

Lizards, culture, politics, and a whole lot of history in issue 70 of 'Eivissa' magazine



Ibiza issue 70 was presented at the Can Ventosa library.

Manu Gon | Ibiza | 04/02/22 3:59

A new issue of the magazine Eivissa, published periodically by the Institut d'Estudis Ibizasencs, was presented on Thursday night at the Ibiza municipal library in Can Ventosa. This is the 70th issue of this third edition and is now on sale for €5 in bookstores and at the institute's headquarters on Via Púnica Street in Ibiza Town.

The first thing that catches the eye about this issue, once again edited by Enric Ribes i Marí, is the spectacular photograph illustrating the cover. It is one of the many images taken by former journalist Sebastián Candela of Ibizan lizards, whi ch he donated to the institute to support the SOS Save the Lizard campaign, which seeks to draw attention to the dire situation this animal faces in the face of the spread of snakes. A topic that is also covered in depth in the publication thanks to the article "El voluntariat SOS Salvem Sa Sargantana

Pitiüsa a l'Illa d'Eivissa" (The Volunteers' fund to save the Pityusic lizard on the Island of Ibiza), written by one of the leading experts on the subject, Antònia M. Cirer. This seven-page text talks about the network created in 2021 to manage traps for invasive snakes and carry out complementary work to that carried out by environmental technicians. It also includes three lines of action to safeguard native fauna and eradicate reptiles. According to Cirer, these are "continuing to call on politicians to find ways to control the entry of invasive species, continuing intensive predation through snake traps, and urgently establishing wildlife protection zones that are inaccessible to predators."

History Articles

As usual, the magazine includes other articles related to the history of the Pitiusas. The first is the one that opens this issue under the title "Isidor Macabich (1915-1931): Religious, Social, and Political Activism." This is the second part of Isidor Marí's extensive research on the biography of the well-known priest, historian, archivist, folklorist, and poet, focusing this time on the years leading up to the Second Republic. Through it, readers will discover how Macabich "opposed the spread of socialism" and how, for example, "he was a promoter of agrarian unionism in Ibiza through the National Catholic-Agrarian Confederation" or how, "when the Republic arrived, he promoted the creation of the Social Agrarian Party on the island in 1931."

Following the article on the sargantanas, the magazine continues with the extensive article "A proposal for Ibizan society for the effective and accurate protection of the microtoponymy of Ibiza and Formentera," written by Ángel Custodio, secretary of the Formentera Council and professor of Civil Law at the UIB; Bernat Joan's reflection, "Thinking about the Future of Europe," on the challenges facing the European Union, "such as managing immigration, climate change, education, the creation of a shared European culture, technological change, and managing the recovery from the pandemic"; and Bartomeu Ribes' personal perspective on writing and its relationship with work and the search for words, written under the title "Paraules d'amor a la faltriquera." Immediately afterward, the renowned historian Felip Cirer addresses the 18th of July in Ibiza in an article in which he also highlights the role of the secretary of the Ibiza Town Hall at that time, Luis Suvirón from Malaga. Thanks to his writings in the town hall's minutes book, we can discover precisely and from a different perspective everything that happened that day when the state of war was declared, as well as various aspects of daily life on the island of Ibiza that year.

The following texts are "Catalog and Commentary on the Studies on Folklore by Isidor Macabich in Ibiza," in which Joan Gomila addresses the contribution of the studies of this great Ibizan figure to folklore and ethnopoetics through the publication of Words of Good Christianity in 1918 and of Volume V of History of Ibiza in 1967; Two Memories of the Civil War in Ibiza, written by Luis Ruiz Val, discusses the figures of several people killed on the island during the conflict. He analyzes "how in all wars, including ours, there was repression and innocent victims on both sides." He also writes "with the intention of constructing a collective, inclusive memory that respects individual and family memories." Artur Pérez-Cabrero's The Tourist Guide, in which Laura Serra Suñer explains what the first guidebook on the life and customs of the Ibizan people was like in the late 19th and early 20th centuries.

Finally, the magazine concludes with a summary of the 2020 Curs Eivissa de Cultura, which included four lectures and a roundtable entitled Epidemics and Pandemics: Reflections from the Pitiusas, and the 2021 Manifesto for Sant Joan's Night.

22-02-2022 - Eugenio Rodríguez Martos - The environment Department requests the APB to create a quarantine zone to control their entry (politics)

DIARIO de IBIZA

Serpientes en Ibiza: Medio Ambiente reclama a la APB una zona de cuarentena para controlar la entrada

Snakes in Ibiza: The Environment Department requests the APB to create a quarantine zone to control their entry

Minister Miquel Mir explained in the Balearic Parliament that four meetings have already been held with the governing body of the port of Ibiza.

Environment Minister Miquel Mir during the presentation of snake-control traps. / VICENT MARI

Eugenio Rodríguez Martos
Ibiza 22 FEB 2022 10:28 Actualizada 22 FEB 2022 10:34

The Balearic Minister of the Environment, Miquel Mir, declared this morning in the Balearic Parliament the need for the Port Authority of the Balearic Islands to implement a quarantine zone in the port of Ibiza to prevent the entry of snakes into the islands, especially in ornamental trees. In response to a question from PP MP Virginia Marí, Mir pointed out that the Port Authority is working on the new special plan for the port, which has not yet been made public. "We will wait for it to be produced, review its content, and make any contributions we deem appropriate," said Mir, who also explained that four meetings have already been held with the governing body of the port of Ibiza, some of which were also attended by the Balearic regional councils, and that this issue has been addressed, not only in Ibiza but also in the port of Mallorca.

The PP MP emphasized that the "serious problem" of the snake invasion in Ibiza "continues to grow," to the point that they are now appearing in areas where "they had never been seen before," such as in the Can'Escandell area of Ibiza City and in the Ses Salines Natural Park. She also noted that in January 2021, the Department of the Environment of the Consell de Ibiza sent a technical report to the Balearic regional government "urgently requesting this quarantine zone." Marí stated that this measure is not only necessary to implement in Ibiza, but should also be implemented "in the ports of origin."

In his response, Mir indicated that not only will they insist on implementing this quarantine zone on the island of Ibiza, but they will also "find the legal mechanisms for the Spanish Government to control the ports of origin, especially those of ornamental trees, which are the source of the snakes."

He also said that if action had been taken in 2004, "when the entry of snakes into Ibiza was identified, the problem wouldn't be as large as it is." "I say this as constructive criticism," he pointed out, while explaining that since 2016, under the latest progressive governments, the number of people working exclusively in Ibiza to control the snake infestation has increased from one to eight, and the number of private cages has increased from 300 to 2,000, thanks to collaborative work with the hunters' association and the Consell.

17-03-2022 - Gisela Revelles - Ibiza is committed to saving the lizards and creating a reservoir in Puig des Molins (control)

PERIÓDICO de IBIZA Y FORMENTERA

Ibiza se vuelca en salvar a la 'sargantana' y crear un reservorio en Puig des Molins

Ibiza is committed to saving the lizards and creating a reservoir in Puig des Molins

The idea came from a group of vocational training students at Can Marines

Puig des Molins will host a reservoir for Ibizan lizards | Photo: Consell de Ibiza

Gisela Revelles | Ibiza | 17/03/22 15:40

Antònia Maria Cirer's fight for the preservation of Ibizan lizards is beginning to bear fruit. This was demonstrated yesterday with the presentation of the first reservoir created for these reptiles in Puig des Molins. Thanks to various institutions, they will be able to live and reproduce without the risk of predation that snakes currently pose on the rest of the island.

Cirer, through the SOS Sargantanes platform, has managed to bring the regional government, the regional council, and the Ibiza City Council together to launch this space. The project also involves the Archaeological Museum of Ibiza and Formentera, the UIB (University of Ibiza and Formentera), and, in the future, if the organization's managers agree, the Parador del Castillo.

The idea came from a group of vocational training students at the Can Marines center, led by Pepita Costa.

"Indisputable Native Value"

During the project presentation, which took place at the Consell d'Eivissa (Eivissa Council), Cirer made it clear that this is a "preventive conservation action." "It's about," she added, "preventing what we already have from disappearing." The professor, an expert on these reptiles, pointed out that the "native value" of the lizards "is indisputable." She recalled that this species is essential for maintaining the ecosystems of Ibiza and its islets and that, among its peculiarities, is that it is "one of the great examples of how evolution and adaptation work."

But the lizards are also part of the island's idiosyncrasy. Thus, Cirer pointed out, they have become a "cultural icon" that connects Ibiza's past with its present and future. "They are an icon of most of Ibiza's cultural activity," she stated, "and they are the image of the way we Ibizans see life."

This amazing animal, however, is currently in danger due to the snake invasion. A situation that has led experts like Cirer to launch various initiatives to prevent the disappearance of this species. "The snake is a very effective predator" that "competes with the lizards for shelters," Cirer recalled. Furthermore, while a family of lizards is capable of laying only one egg per year, the snakes themselves can lay that number tenfold. Therefore, it is "urgent" to take action.

In Cirer's opinion, Puig des Molins is the perfect place to create a genetic reservoir that will allow the lizards to remain on the island. It is a location protected from snakes by an "urban crown" and, furthermore, it is easy for citizens to observe these animals. Currently, it has "a high density" of lizards, and the fact that it is a publicly owned site somewhat guarantees the continuity of the project.

"It's the ideal place," Cirer asserted, "the best custodian for the reserve." A space that, moreover, has remained unchanged "since time immemorial" and is the same location as the Archaeological Museum, "custodian of the great values of Punic Ibiza."

The project's presentation gives an idea of its importance. In addition to Cirer herself and Pepita Costa, the President of the Consell, Vicent Marí; the Island Councilor for the Environment, Vicent Roig; the Director General of Vocational Training (FP) of the Government, Antonio Baos; and the Councilor for the Environment of Ibiza town, Jordi Salewski, among others, attended. And, in the words of María Antonia Cirer, the protection of the lizards must be "a project of all civil society."

18-03-2022 - Josep Àngel Costa - The Ibiza wall lizard is key to preventing micro-insect infestations (ecology)

DIARIO de IBIZA

Antonia Maria Cirer, herpetóloga: «La lagartija de Ibiza es clave para prevenir plagas de microinsectos»

Antonia Maria Cirer, herpetologist: "The Ibiza wall lizard is key to preventing micro-insect infestations"

Puig des Molins and es Soto have been symbolically declared "preventive reserves" for *Podarcis pityusensis* to ensure the continued existence of its population in Ibiza.

Image of the lizard endemic to es Vedrà. | J.A.RIERA / JOSEP ÀNGEL COSTA. EIVISSA

Josep Àngel Costa

Ibiza 18 MAR 2022 6:00 Actualizada 18 MAR 2022 8:00

A proposal from a group of vocational training students at Can Marines resulted yesterday in an institutional commitment to intensify the fight against the snake infestation in Ibiza, with a lavish presentation at the Consell headquarters. For now, both the island and regional governments, as well as Ibiza City Council, have taken up the student challenge and are proposing a "preventive reserve" of lizards in es Puig des Molins and es Soto, a symbolic declaration of intent to promote a plan to raise awareness, disseminate information, and safeguard the most emblematic species of the Pitiusas.

"It's the main vertebrate endemic to the Balearic Islands and was already present in Ibiza before Homo sapiens appeared in the world," recalled Antonia Maria Cirer, herpetologist and founder of the SOS platform "Save the Pitiusa Sargantana." Beyond its iconic value, the Podarcis pityusensis is a paradigmatic example of Darwin's theories, on par with the finches the English scientist discovered in the Galapagos Islands.

Example of evolutionary theory

"As each island has a separate population of lizards, with a different and unique evolutionary

history, this favored the discovery of what is known as a significant evolutionary unit on each island," Cirer explained. Thus, while on the mainland these small reptiles are insectivores, on the Pitiusas they are omnivores that feed on decomposing organic matter as well as flowers, fruits, or "any food source available on an islet."

They also devour small insects, so their omnipresence makes them a central element of the food web and ecosystems of Ibiza and Formentera. "Hence their great biological importance, because they play a preventive role against microinsect pests. These are bugs that we don't see until they are abundant, but if the lizards disappear, we will notice," the herpetologist warned.

Awareness

The awareness-raising and snake-trap installation work carried out by SOS Salvem sa Sargantana Pitiusa since last year has also extended to the educational field, as is the case with the Can Marines CIFP (Center for the Protection of the Land of the Agrarian and Maritime Fisheries) program. "We teach training courses for agricultural and maritime fishing families, which are closely related to environmental values," noted the center's director, Pepita Costa. "That's why it's also important to train citizens with positive attitudes that help improve the environment," she added.

As a result of this premise, the first-year students of Agro-ecological Production proposed in a tutorial that they participate in the mass distribution of snake traps and the breeding of mice as bait, as well as declaring the Can Marines estate a reserve for lizards. This latter plan was brought to Cirer, who, seeing a good idea, suggested seeking support from the Consell, so environmental technician Jaume Estarellas is one of the advisors for this reserve project.

The Ideal Area

"We have a proposal for a division of tasks, and we will ask the Government and Cofib [Consortium for the Recovery of Fauna of the Balearic Islands] to develop the biosecurity project to prevent snakes from entering the reserve. It's a commitment to create synergies, involve other administrations to monitor and oversee the lizard population in this area, and promote environmental education," Estarellas emphasized.

The technicians also realized that Can Marines was not the ideal location, although the center remains involved in the project as a driving force. Es Soto and es Puig des Molins are natural areas with a high density of lizards that, being surrounded by the urban center, have so far been spared from the snake infestation. "The reserve is a preventive conservation project, and it's not about doing anything, but rather trying not to lose what we already have," Cirer emphasized.

This ideal location facilitated the addition of the last necessary element to the reserve: the Archaeological Museum of Ibiza and Formentera (MAEF), which, thanks to the necropolis, boasts more than five hectares of protected and fenced nature. This will expand and strengthen the environmental work already initiated by biologist Olivia López, author of the inventory that compiled more than 150 species of flora and fauna in Puig des Molins.

"This reserve is like preventive conservation, one of the basic principles of archaeology. These are the measures we take to protect a site without disturbing it. When they are no longer sufficient to preserve it, restoration comes into play. This is what we want to avoid with the lizard," Bofill stated.

DIARIO de IBIZA

Una reserva para las lagartijas de Ibiza

A reserve for Ibiza's lizards

Opinión

Verónica Carmona Acedo

19 MAR 2022 6:00
Actualizada 19 MAR 2022 9:23

It wasn't unusual to see lizards inside the house. Sometimes they gave me a real scare. They took advantage of the fact that the front door was always open in the summer to sneak in and scamper across the floor in search of a crumb of bread or leftover food to eat. Sometimes they crept so far into the house that they appeared in the living room where we practice yoga and settled on the warm rug that covers the entire floor of that room. I wasn't amused when I started seeing the unmistakable mouse droppings. These also sneaked into the house at any time of year and once even made a litter.

But since a new neighbor moved in, there are no more mice or lizards on the stairs that connect the house to the unpaved area. Last summer I found one sunbathing in front of the door. It was a fairly large snake. Emboldened, we grabbed a hoe at home and left it near the stairs to hunt it down, but the truth is, it was always faster than us, and not everyone is good at killing, even though it's an invasive species and is wiping out the Pitiusan lizards. We bothered the snake so much last summer every time it came out to sunbathe that we thought it had already left.

But a few days ago, when the sun came out again, we saw it hadn't left. The fight against snakes now seems like a lost battle; now they're even planning a reserve for the Pitiusan lizards, which once populated the entire island.

DIARIO de IBIZA

La historia de las 'sargantanes' que cazan serpientes en Ibiza

The story of the 'sargantanes' which are hunt by snakes in Ibiza

Meritxell Rius Montcusí and Paquita Marí Bonet present the story "L'assemblea de les sargantanes."

Meritxell Rius Montcusí and Paquita Marí Boned, with a copy of the book. / MARTA TORRES MOLINA. IBIZA

Marta Torres Molina
Ibiza 29 MAR 2022 6:00

At twelve noon, under a blazing sun and at the foot of the Ses Portes tower, there gather "the fine lizards of Vila, their dark cousins from Sant Rafel, the emerald ones from S'Espartar, the turquoise ones from Sa Conillera, the large black lizards from Ses Bledes, the discreet ones from Punta des Trucadors, and the showy ones from Es Vedrá, always so attractive." The great council of the lizards of the Pitiusas, with a single objective: to prevent the snakes from eating them. Thus begins "L'assemblea de les sargantanes" (The Assembly of the Snakes) (Balàfia Postals), written by Meritxell Rius Montcusí and illustrated by Paquita Marí Boned, which will be presented on April 6 at eight in the evening at Sa Nostra Sala.

"I started writing it in 2016, while working on a project with third-year high school students about a Sioux people rebelling against an oil pipeline that crossed their sacred lands," the writer recalls. That project led to an exhibition that included a space about the lizards, and the threat they face made her decide she had to do "something."

On a boat trip, she wrote the entire story, except for the ending, which eluded her. "It stayed in a drawer, and I didn't finish it until last year, during one of the strong waves of the pandemic," she notes. However, at that moment, the ending flowed with the same ease with which she had written the rest of the story five years earlier. In January, she sent it to Neus Escandell, editor of Balàfia Postals, to whom she said she wanted Paquita Marí Bonet—"she

was perfect for this"—to add color and form to her rebellious lizards. Color, shape, and backpacks, bundles, caps, tail flops, peace symbol pendants, and even a float. Essential for traveling to the assembly from the more distant islands. Meritxell researched the different shades of these animals and even passed the text to expert Maria Antònia Cirer to ensure everything was correct.

Before putting her brushes to work, Paquita read the story a couple of times. "You start coming up with ideas, you see the personalities of the protagonists, and you let your imagination run wild," she explains. "I love the details," Meritxell comments as she turns the pages until she reaches one of the key scenes in the plan the little saurians devise to convince the snakes not to eat them. "They're fixing the snake's skin, and look at the one sewing, who's wearing sewing glasses, or the rag of one of the cleaners, which is dirty," she notes, admiringly. "I was working on a project of drawing a picture a day, and I think the more you draw, the more your creativity flows," notes the illustrator, who points out that combining the text with the illustrations has been the "most complicated" part of the process.

The aim of the story is to raise awareness among children about the danger lizards face and encourage them to come up with "imaginative" solutions. That's why, Meritxell explains, the ending is "intentionally open." "The Assembly of Lizards" has been in bookstores for a few days now. María, one of the first readers, sent Meritxell a voice note with her proposal for a solution to the serious problem. "She said why don't we put all the snakes on a plane, with food and well cared for, headed to Hawaii. I loved it. It's about getting them involved, contributing creative ideas, and then we'll refine them," says the author of the story, who hopes many children will make suggestions to prevent snakes from killing lizards.

"It's a serious problem. I recently spent a week walking around Sant Llorenç, every day, along different paths. In seven days, I didn't see a single lizard, but I did see three snakes," the writer notes. "I remember when we went to the beach and my father took a nap in the shade, they would run over his stomach," the illustrator notes. Given the current situation, and with the fear that future generations won't be as familiar with the lizards, Meritxell didn't plan a happy ending for her story. The presentation, which will also include the editor and actress Neus Torres, will include "surprises," they note mysteriously.

Two illustrations for the story; the 'sargantanes' arriving at the assembly (to the right). / PAQUITA MARÍ BONED

DIARIO de IBIZA

Sobre alguna afirmació errada referent a serps i sargantanes

About some incorrect statements regarding snakes and lizards

Opinión | Tribuna

Marià Mayans i Marí

02 ABR 2022 6:00

I would like to be able to convey some considerations about the article published in this newspaper under the title “No, snakes will not eat all the lizards of Ibiza before 2030”.

First of all, introduce the person who said this sentence as “The greatest expert on *Podarcis pityusensis*”, a statement that is obviously difficult to prove and refute, but that, based on his statements, I think that, at least on the ground, he does not deserve such a qualification. Cats cannot be implicated in the disappearance of lizards. There have been cats in Ibiza (as many or more than now) since time immemorial and they have never endangered lizards. It is true that cats, as hunters that they are, eat a lizard when they can, and also a sparrow, mice..., and now even snakes! But the amount of lizards that cats can eat has nothing to do with their disappearance. No cat has ever climbed into the cracks of a wall to reach lizard nests, as snakes do.

Mr. Valentín Pérez dares to say that we have a childish (and religiously mediated) vision of the animal world, where snakes are demonized animals and cats are idealized by the “Disney world”. Perhaps for some city dwellers who don’t know animals up close, this may be the case, but the generalization is false. In Ibiza, more or less, we know animals well enough to distinguish between a real cat and a stuffed or cartoon cat.

Urban planning and plastered walls are also a factor, which are obviously not a primary part of the problem. There are hundreds of kilometers of dry stone walls and nooks and crannies for millions of lizards to live in if no one eats them.

He says that it is not true that lizards have disappeared from all of northeast Ibiza. Well, I don't know how often Mr. Pérez comes to Ibiza and if he has a lot of visitors, but I'm there every day and I can assure you that at home (in the center of the island) you haven't seen a single lizard for years. There are plenty of snakes, on the other hand. Last summer I hunted twenty-three.

The statement that “just because you don't see lizards doesn't mean they don't exist” may be philosophically correct, but absurd in the practical and real realm. I also find it painful to disqualify the work of a colleague, such as Elba Montes.

Do you remember Perogrullo? When philosophers argued about whether movement was real or a simple illusion, he would take two steps and tell them “you donkeys, look: movement is demonstrated by walking.”

In this sense, Mr. Pérez could be a great philosopher on an abstract scale, but in practice, and allow me the truism: if there are no lizards, there are no lizards. At home, where I used to see dozens of them, I have stopped seeing them since the appearance of the first snakes. Denying the evidence makes no sense.

No one can really put an exact date on the disappearance of lizards in Ibiza, nor whether it will be total or if there will be a reservoir somewhere inaccessible to snakes (is there any place inaccessible to snakes?), but statements that minimize the problem and that can demotivate so many people as we are currently collaborating to prevent the expansion of snakes in Ibiza do not seem right or appropriate to me.

Thank you for your attention.

DIARIO de IBIZA

Lagartijas y serpientes, un problema muy grave

Lizards and snakes, a very serious problem

María D. Calvo Vila

Ibiza 05 ABR 2022 6:01

I read the article in the Diario de Ibiza newspaper on March 27 about Mr. Pérez Mellado's lecture on March 26 at Can Jeroni. I'm surprised by the headlines and the somewhat dismissive tone regarding some of the data. I don't know if it's from the journalist in charge of writing the article or reflects the one used by the speaker. 'No, snakes won't eat all of Ibiza's lizards before 2030.' So will it be in 2031 or 2040?

I live in the northeast part of the island, between Santa Gertrudis and Sant Miquel. I walk almost daily around the grounds of my house and around the area, and it's been four or five years since I've seen a lizard! The speaker says: "It's not because I don't see them that they don't exist," but before, we used to watch them with my children, sunbathing peacefully on the rocks. Now, we don't even see them running. With the same premise: I see snakes because there are snakes, I don't see lizards because there aren't any.

Cats, potential predators of lizards... (there have always been some in farmhouses). We don't have cats in our house, and even if we do, they don't crawl between the stones in the wall to rummage in lizard nests. Snakes can do that.

I don't know Elba Montes, but a thesis isn't done willy-nilly, nor are results obtained at random. The area I monitor is about 40,000 m2, and day after day I come to the same conclusion: there are no lizards in the NE area of Ibiza! The information about the new attempt to commercialize the lizard is interesting: I'm sure the relevant authorities will be attentive.

For now, here in Ibiza, the "Save the Snakes" project is working to raise awareness among public authorities and the public about the need to control the entry of snakes and to implement practical actions to prevent these predators from spreading and endangering the existence of our lizards. Participating in the issue of traps, snake/lizard sightings, and creating a refuge area for the latter in the southern region (where, according to data, snakes appear to have not yet spread) is a practical, real, and, I believe, effective way to prevent their disappearance. Hopefully, we can combine knowledge and practical work to achieve this.

DIARIO de IBIZA

Formación para capturar serpientes en Ibiza

Snake catching training in Ibiza

The 'Sargantanes or Serps' platform of Amics de la Terra and GEN-GOB is holding theoretical and practical sessions in Can Tomeu so that volunteers can learn how to prepare traps, care for mice, and manage invasive snakes they may capture.

This was the training for capturing snakes in Ibiza / VICENT MARÍ

Laura Amores
Ibiza 03 ABR 2022 6:00 Actualizada 03 ABR 2022 10:26

The "Sargantanes o serps" platform of Amics de la Terra and the GEN-GOB, with the support of Ibiza City Council and the Balearic Government's Cofib, launched its 2022 campaign yesterday to protect the Pitiusan wall lizard from foreign snakes. It did so with training at Can Tomeu, divided into three sessions: from 10 to 11:30 a.m., from 12 to 1:30 p.m., and from 1:30 to 2:30 p.m.

The session consisted of offering "minimal training for those who want to collaborate with snake capture and save the lizards," explained Hazel Morgan, president of Amics de la Terra. During the session, tips and guidelines were provided on caring for the mouse, protecting it from direct cold and heat to keep it alive, and finally, information on how to remove the snake from the trap once captured, how to handle it, and how to euthanize it by first rendering it unconscious. In this regard, Morgan indicated that the association has "volunteers who help with the slaughter of animals for those who, especially the first time, are unable to do so."

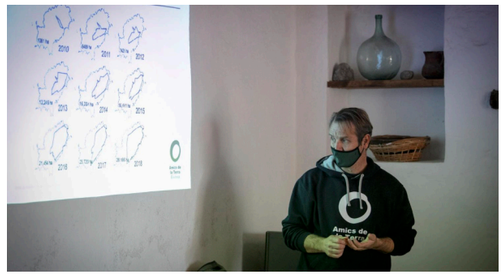
The training began with the screening of three educational videos guided by Juanjo Torres, from Amics de la Terra, which were complemented by explanations from Dean Gallagher, a campaign volunteer, who taught those interested how to manage the snake once it has been captured in the trap. Torres noted that the objective of the training was "to ensure that the distribution of traps among volunteers is successful, since the more snakes captured, the better."

Afterwards, to familiarize themselves with the invasive species, attendees had the opportunity to touch a ladder snake, which, along with horseshoe snakes, are the most commonly found on the island of Ibiza.

Finally, the volunteers prepared their own traps to take home. They used sawdust, straw for the mouse's nest, water, and a rodent (bred by Hazel Morgan for this purpose). Vicent Ribas was one of the ten who attended the 12-hour training session because, despite living in Sant Josep, the municipality on the island with the fewest snakes, he said he and his neighbors had already observed "the skins of these animals in the area." Therefore, he decided to prepare "to prevent them from destroying the lizards that can still be seen around my house." Ribas learned "how to set the trap, the importance of how to treat the mouse and the snake once captured, and how to slaughter it with respect," he added.

To purchase a trap, all volunteers had to do was leave a €20 deposit with Amics de la Terra to ensure its return when they were no longer using it, ensuring that the traps were not abandoned and thus ensure that they had a record of the registered traps, according to the association's president. Captured snakes were then recorded using the Línea Verde mobile app.

Volunteer Vicent Ribas picks up a ladder snake during training. / L. AMORES

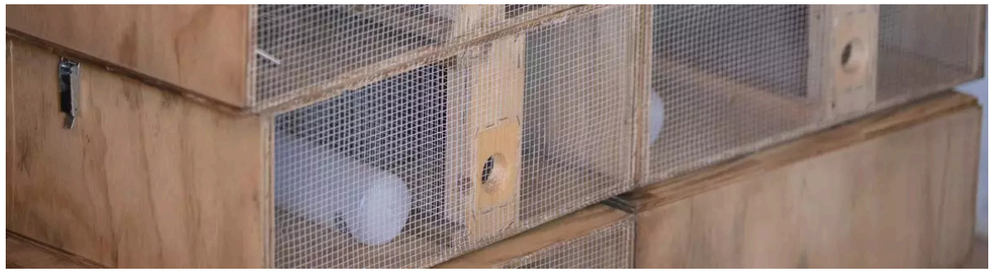


DIARIO de IBIZA

Cerca de 1.300 serpientes capturadas en Santa Eulària en 2021

Nearly 1,300 snakes were captured in Santa Eulària in 2021

Santa Eulària City Council allocates 5,000 euros to cat sterilizations and adoptions through the Sabine's Cats association.



Redacción
Ibiza 05 ABR 2022 16:05 Actualizada 05 ABR 2022 16:34

The Santa Eulària City Council held its Animal Welfare Roundtable this Tuesday, where the results of the 2021 campaigns and those planned for 2022 were explained, as well as the initial figures from the new contract for Animal Collection, Fostering, and Adoption after the first two months and the amendment to the bylaws to incorporate the new canine DNA collection service.

The first item on the agenda was to report on the first edition of the Junts per ses Sargantanes workshop, according to the City Council in a statement. In total, 416 traps were given to volunteers, and 1,278 snakes were captured. In this regard, the City Council's technical staff explained that the animals were euthanized due to the legal impossibility of returning them to their natural habitat. For 2022, the campaign will focus on hiring a professional to manage the traps, and new ones will be provided to volunteers who request them.

Sterilized Cats

Regarding the cat sterilization campaign, €5,000 was invested in sterilizations and adoptions through the Sabine's Cats association. This initiative resulted in 64 male and female cats being sterilized.

For this year, a smaller contract of almost €15,000 is being put out to tender to sterilize as many cats as possible. The contract will be finalized in the coming weeks, and animal welfare organizations working in the TM will be open to participation.

Can Dog

On February 2nd, the new Animal Collection, Fostering, and Adoption service began. It was awarded to Can Dog for two years and €309,000. At that time, there were 18 dogs in foster care, and so far, 51 animals have been adopted (7 cats, 43 dogs, and 1 pig).

In total, seven adoptions have been achieved (incentivized in the contract as this is the primary objective). There are currently 32 animals in foster care.

The City Council has hired a technician to monitor this contract, and unannounced inspections have been conducted to check the animals' condition "with very satisfactory results." In addition, the contracting company will be required, among other obligations, to organize awareness workshops and launch a website and social media profiles to promote adoption.

Before questions and requests, the final item of business addressed the amendments to the Animal Ownership and Protection Ordinance, which will incorporate changes that will enable the implementation of the new canine DNA registry, the mandatory carrying of bags for collecting feces and water bottles for urine, the regulation of dog access to beaches in winter, and other minor issues to correct and improve the text.

PERIÓDICO de IBIZA Y FORMENTERA

Se necesitan voluntarios para mantener la reserva de lagartijas desde Soto Fosc

Volunteers are needed to maintain the lizard reserve at Soto Fosc

Ibiza Town Council and SOS Salvem sa Sargantana Pitiüsa are organizing a day to find volunteers to maintain the lizard reserve at Soto Fosc

R.I. | Ibiza | 04/05/22 15:05

Ibiza Town Council, together with SOS Salvem sa Sargantana Pitiüsa, has organized a day to find volunteers interested in helping keep the lizard reserve in the es Soto and Puig des Molins area free of snakes. The event is open to all residents of the municipality, especially those living closer to the Puig des Molins area. The meeting will be held this Saturday, May 7, at 12 p.m. in the Reina Sofia Park.

In the municipality of Ibiza, a space has been established as a Sargantanes Reserve, specifically in the Puig des Molins necropolis area and in the Es Soto natural area. Therefore, and considering that snakes have already been recorded in areas near the city such as Jesús and Cas Mut, Ibiza Town Council will distribute free snake traps to volunteers who wish to manage them responsibly. The Department of the Environment has explained that the intention is for these volunteers to place traps in private areas where municipal workers cannot access them—houses, gardens, or ground-floor apartments with terraces.

On Saturday, members of the SOS Salvem sa Sargantana Pitiüsa will clear up any doubts and distribute snake-catching equipment, including traps equipped with mice, water bowls, and mouse food to make the task easier.

IBIZA KURIER
Die Lokalzeitung für Ibiza und Formentera in deutscher Sprache

Für Schlangen ist Ibiza ein kulinarisches Schlemmerparadies – Eine frisst etwa 500 Eidechsen

For snakes, Ibiza is a culinary paradise – One eats about 500 lizards

Private individuals and environmental groups raise the alarm

Timotheus Freytag has lived on Ibiza since 1984 and, like hardly any other island resident, is busy educating people about the local nature and wildlife.

According to his and many other environmentalists' assessment, this is threatened, especially endemic bird species, but also the cute lizards, the heraldic animal of Ibiza.

His special mission is to combat the snakes that have been spreading invasively across the island for several years. They have no natural predators to fear, and so the reptiles are spreading rapidly. A single snake can lay a good ten eggs per year. Ibiza is a true culinary paradise for snakes.

Over the past few years, Timotheus has gathered a variety of insights into how Ibiza's wildlife has changed since the arrival of the snakes. The first specimens were introduced in the root balls of olive trees imported to Ibiza from the mainland.

Twelve years ago, due to the increasing number of snake sightings and growing concern, he set up a Facebook page to translate relevant information from local news articles, such as those in the Diario de Ibiza , into English. He wanted to "raise awareness of the potential

threat." Even then, he knew that the island was heading "for an ecological catastrophe." Today, over a decade later, the Pityusic lizards are on the list of endangered species. Many islanders confirm that they rarely see the cute little creatures anymore. "Public interest grew, but unfortunately, the authorities largely ignored them," reports Timotheus.

Over the years, the snakes have spread across the island and are a threat to “our fragile ecosystem.”

The reptiles began arriving undetected on the island around 2001, mostly in the planters of trees and plants intended for garden centers and private and public landscaping projects.

"It wasn't until 2016 that the authorities woke up and realized they had to act." Since then, a unique "snake-catching experiment" has been taking place on Ibiza. The group "Snakes on Ibiza – No Thank You" grew and gained momentum.

The damage has long since been done: The number of snakes is growing exponentially. They feed primarily on the island's lizard population. These two reptiles, one small and naive, the other large and stealthy, are very unequal opponents, as evidenced by the snakes' deadly hunting patterns.

Their average lifespan is 20 years, during which time a single snake will consume approximately 500 lizards and, depending on their age and maturity, also eat eggs, rodents, birds, rabbits, and kittens. When fully grown, they can reach a length of up to 2.5 meters.

They are shy and reticent, usually moving unnoticed, and therefore difficult to stop: "People often think they don't have snakes, but in fact, they do. They just need to check if they have any lizards."

In the Mediterranean region, a snake gives birth to a dozen babies each September. They quickly adapt to the world and immediately begin hunting their own food, mainly insects.

Most species can produce offspring two years after birth.

In 2020, as a growing number of islanders reported sightings and called for help, Timotheus decided to "not only devote time to the issue, but also to physical engagement." But it may already be too late: "Pityusic lizards are now on the EU's endangered species list."

In recent years, he has not only provided information and advice to those affected, but also numerous traps and mice that serve as bait.

"I've spoken to hundreds of people and heard many personal stories. I've researched specific related topics. All of this paints a picture of where this story will lead if we don't act—far more far-reaching than we can currently imagine."

The motto is: "We must act now, and we must act together." Since he had little hope of support from the authorities, he quickly teamed up with a carpenter to design and build traps and make them available to those affected.

There is now a second carpenter on board who has volunteered his time to make snake traps at cost price.

They use leftover wooden boards, which they recycle "because the cost of new wood is considerable." Over the past two years, they have delivered around 220 crates to locations across the island. "Our group is now almost 100 trappers strong. We've set up chat groups to keep us informed. These are strictly managed for specific purposes, and we're now forming subgroups by region to allow for more precise organization."

The boxes contain bedding, mice, a water bowl, and food at the time of delivery – and are available at cost. He's not interested in making money; quite the opposite: "I pay for everything out of my own pocket," explains the snake hunter.

The exact number of snakes captured so far is unknown. Some traps catch none, while others catch 5 to 40 snakes per season. Because our traps are sent to people who have experience with snakes on their property, we can say that on average we have higher capture rates, perhaps 3 to 5 snakes per box. This means we have captured between 660 and 1,100 snakes per season. "Remember, each snake consumes 500 lizards and other wildlife—this equates to saving 330,000 to 550,000 lizards."

May, June and July are extremely important months for snake hunters because it is the time when the animals emerge from their winter hibernation and leave their hiding places in search of prey.

Timotheus and his team of volunteers currently have their hands full. The phone is constantly ringing. Calls come not only from private individuals, but also from hotel owners and businesspeople. Recently, a woman in a garden restaurant in Santa Eulalia had a large snake fall from a tree directly into her lap – and this in the middle of an urban area. Snakes have even been spotted on the upper floors of houses in the town center. Snakes are adept climbers, which makes it easy for them to reach bird nests. Snakes have even been spotted swimming in the sea. This poses a threat to the bird populations on the small rocky islets between Ibiza and Formentera, where the birds normally retreat to breed.

Timotheus used the winter months to breed nearly 300 mice. "I also showed others how to breed them. And made enclosures for them because they are an important part of our trapping process as bait."

Timothy spends many hours a day responding to calls, inquiries, and feedback. All this in addition to the time he spends on meetings, fundraising, and trap building.

He is proud of the redesign and development of a larger all-weather trap box: "Demand for the new box is growing, and the feedback is positive." Since mice are happiest in larger family groups, these boxes can house up to 30 mice. The formula for success is simple: "More mice, more scent, more activity – that means a higher chance of catching snakes."

His greatest wish is for even greater public involvement. "We need individuals and companies to get involved, especially those with land." The areas around San Antonio, Santa Eulalia, San Mateo, San Juan, Portinatx, and Xarraca are currently of concern, "but San Lorenzo has

always been the epicenter." The first specimens were discovered there.

There are now other Ibiza organizations dedicated to this issue. Approximately 4,000 traps have been distributed by COFIB, the Asociacion de Cazadores, the SOS Sargantanes platform, Gen-Gob, and Amics de la Terra. Thanks to their efforts, a total of around 14,000 snakes have been caught. "But we need to do more, much more," emphasizes Timotheus.

"Wherever we clear an area of snakes, we witness the lizards returning," he says confidently. However, these areas cannot be left unchecked, because otherwise the snakes will return: "The reality is that there are far more snakes than we physically see."

Therefore, it is "important and urgent that we set up many more traps on properties as quickly as possible, as efficiently as possible, and as cheaply as possible." "My goal is to get the project fully funded. In that case, I would take on the task full-time for the next 5 to 10 years." A non-profit organization is currently being established, and the team is growing.

The environmental initiative COFIB is currently working on a prototype of a “snake barrier” that will function like a fence and turn the property into a “lizard-proof area.”

"We are actively researching concepts for snake barriers that extend over kilometers, cutting off snakes' access to certain areas and thus stopping their spread," explains Timotheus. Previously, snakes were found in larger numbers mainly in the north of Ibiza, "but now they are slowly moving south past the center of the island."

His greatest wish is to make Ibiza a snake-free island again, as it once was. "We know it's a huge task, but nothing is impossible if we tackle it together." Timotheus sees himself as a key figure capable of "moving and inspiring" people through positive logic, sound facts, and practical, common-sense thinking—not to mention thinking big and outside the box.

Setting up traps:

To cover material costs, small traps have a cost price of €35. The larger, new design, "Snake Trap 2.0 Reloaded," costs €90. Anyone who would like to donate to the initiative independently will actively help reduce snakes on Ibiza, as more traps can be set up and larger concepts can be implemented. For large villas, properties, and hotels/ agrotourisms, setting up four to ten standard traps plus one or two large traps is more successful than simply placing one or two.

Contact & Information
Timotheus Freytag Tel.: 696 197 372
Facebook groups for the exchange of affected people and tips:
StopIbizaSnakes
Snakes on Ibiza no Thank You – Serpientes en Ibiza no Gracias
Ibiza Snake Trappers Community

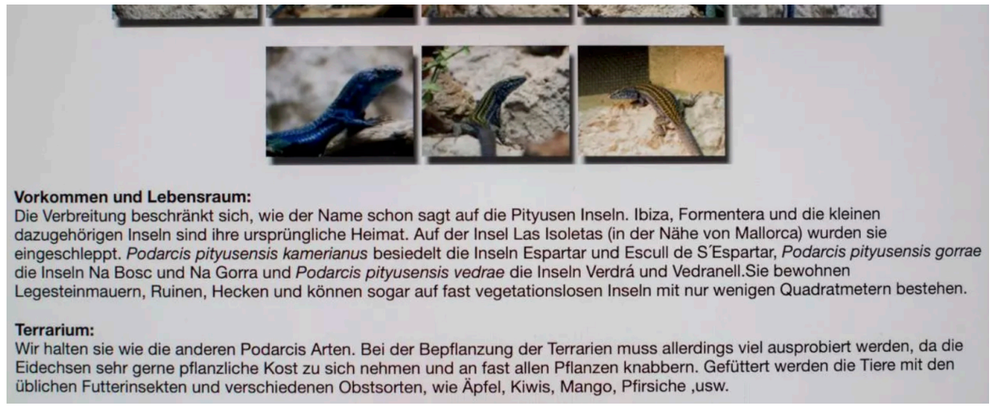
IbizaWildlifeProtection

DIARIO de IBIZA

Tráfico de lagartijas de Ibiza y Formentera en el Siglo XXI

Lizard trafficking from Ibiza and Formentera in the 21st century

The terrarium trade in the Netherlands and Germany continues to be one of the threats facing Ibizan lizards. Advertisements for sale and purchase can be found online, and some German breeders are trying to legalize their activity.



Vorkommen und Lebensraum:
Die Verbreitung beschränkt sich, wie der Name schon sagt auf die Pityusen Inseln. Ibiza, Formentera und die kleinen dazugehörigen Inseln sind ihre ursprüngliche Heimat. Auf der Insel Las Isoletas (in der Nähe von Mallorca) wurden sie eingeschleppt. *Podarcis pityusensis kamerianus* besiedelt die Inseln Espartar und Escull de S'Espartar, *Podarcis pityusensis gorrae* die Inseln Na Bosc und Na Gorra und *Podarcis pityusensis vedrae* die Inseln Verdrá und Vedranell.Sie bewohnen Legesteinmauern, Ruinen, Hecken und können sogar auf fast vegetationslosen Inseln mit nur wenigen Quadratmetern bestehen.

Terrarium:
Wir halten sie wie die anderen Podarcis Arten. Bei der Bepflanzung der Terrarien muss allerdings viel ausprobiert werden, da die Eidechsen sehr gerne pflanzliche Kost zu sich nehmen und an fast allen Pflanzen knabbern. Gefüttert werden die Tiere mit den üblichen Futterinsekten und verschiedenen Obstsorten, wie Äpfel, Kiwis, Mango, Pfirsiche ,usw.

A specimen from Formentera with the most sought-after hues. / BY CRISTINA AMANDA TUR @TERRITORIOCAT

Cristina Amanda Tur | **@territoriocat**

Ibiza 05 JUN 2022 6:00

When we talk about wildlife trafficking, the images and headlines that come to mind are those of African elephants slaughtered for their tusks, chimpanzees rescued by primatologist Jane Goodall, or perhaps news of small Galapagos tortoises wrapped in plastic and confiscated at an airport. Or we'll recall the case of the pangolin, considered the most trafficked mammal, a trade that could also be the source of the COVID-19 coronavirus.

Species trafficking—one of the greatest threats to the planet's biodiversity—affects so many taxa of flora and fauna that an inventory could fill a book. And the endemic lizards of Ibiza and Formentera are on that list. Although scientific collecting already endangered some populations, and two decades ago trafficking for terrariums was intense and some significant police interventions were recorded, greater and better controls have reduced the threat. However, at least minor, small-scale trafficking persists, which can still be detected by searching forums and websites for reptile and amphibian enthusiasts.

After spending a few hours searching in some depth, one comes to the first conclusion that it is on German pages where most endemic lizards and geckos are searched for, such as the Pitiusan lizard (*Podarcis pityusensis*) or the Balearic lizard (*Podarcis lilfordi*), the only two species from the islands –along with the ferreret (*Alytes muletensis*)– surviving from the Plio-Pleistocene fauna of the Balearic Islands.

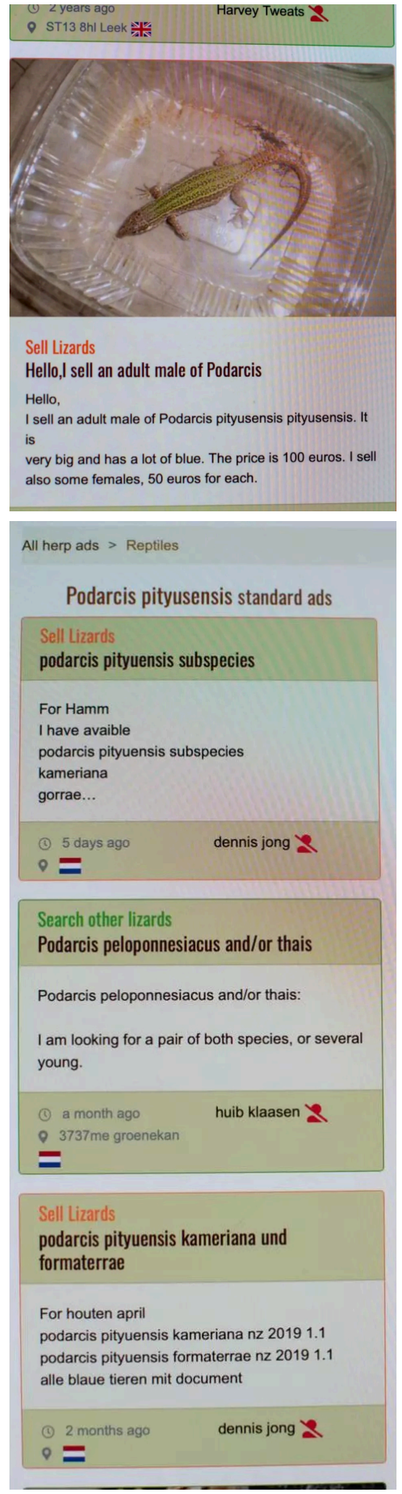
In an initial search in English, the first ad that catches the eye is located on a page intended to connect private sellers and buyers of all kinds of reptiles, amphibians, insects, spiders, and even some mammals to keep as pets in terrariums. A photograph appears of a male specimen, undoubtedly of the Pitiusan species, displayed in one of those Tupperware containers used to deliver Chinese food to your home. A man named Aitor Sancho, from Spain, advertises that he is selling the male, "very large and very blue," for 100 euros. He adds that he also has "some" females, which he sells for 50 euros.

The ad is two years old. On the same website, we find a man named Roger who wants to buy an Ibizan wall lizard. The ad is only a month old and is in German. We repeat the search by region—in Germany and also in the Netherlands—as the same website allows, and now also in German, and more cases appear. A certain Dennis, who appears with the Dutch flag, sells a specimen of the subspecies from the islet of s'Espartar and claims to have the Cites document, something very difficult because the Balearic Ministry of the Environment itself has confirmed to Cites – the International Convention on Endangered Species – that since the 1980s, since the entry into force of the law prohibiting the capture of lizards from the islands, no permit for captive breeding or authorization for the extraction of individuals from any island or islet has been granted.

And the truth is that the Government has had to report this because there is a project to legalize a Pitiusan lizard farm in Germany for the purpose of trading these animals. The farm is promoted by a team of reptile breeders who already have Pitiusan lizards—they explain this on a website—and who claim to have been breeding them for more than 40 years. Therefore, according to their version, the initial lizards were caught before the ban on removing them from their habitat. However, without any documentation to prove it and given suspicions that the specimens may have been captured illegally, it is difficult for CITES in Spain to authorize it (the Germans have requested it in their country through their Ministry of the Environment); The project also has an unfavorable report signed by the herpetologist Valentín Pérez Mellado, the researcher who currently best knows the situation of the lizards that exist throughout the Balearic archipelago and who, together with the researcher Ana Pérez Cembrano, carries out, among others, the monitoring of the populations of the reserves of es Vedrà, es Vedranell and els illots de Ponent.

The Most Wanted

Actually, this investigation found two websites belonging to two different groups of reptile breeders claiming to have Pitiusan specimens. Both are German. The second one reads: "We currently have three subspecies of the Pitiusan lizard: *Podarcis pityusensis gorrae, Podarcis pityusensis kamerianus*, and *Podarcis pityusensis vedrae*."



On top, an ad for the male in the image is selling for 100 euros. On the bottom, a seller even claims his lizards have legal documents. / BY CRISTINA AMANDA TUR @TERRITORIOCAT

Bottle Traps

University of Salamanca herpetologist Valentín Pérez Mellado offers further evidence that lizards continue to be illegally extracted from the islands, even from protected islets. The proof is that they have found traps for catching them on the Ponent islands: broken bottles that were not intended to capture the reptiles at the time, but whose purpose, without a doubt, was that. In other words, these broken bottles were upside down because they were not being used at the time. When these traps are set, they must be constantly monitored because the lizards quickly die if left trapped in a glass or plastic bottle, exposed to the sun and heat. This is something that must be taken into account to avoid accidentally leaving deadly traps for the animals in gardens or on terraces.

Continuing with some more advertisements found online, on another website, also in German, we found more terrarium enthusiasts looking for various lizards from the islands. A potential buyer specifies that he would like a blue and black specimen. The colors are important, because the varieties with the most striking colors—such as the turquoise blue or emerald green of some subspecies—are the most sought after and could fetch a higher price.

It should be noted, as a positive point, that occasionally forum participants or visitors to one of these sites intervene to point out that the reptiles they are seeking or selling cannot be kept as pets because it is illegal. In fact, one of the conclusions of this investigation—conducted for Nautilus, the science and environment program on IB3 radio—is that there is a significant lack of awareness about the illegality of removing these species from their habitat.

One last important detail is the doubt that arises from the fact that the first advertisement cited, the one showing a photo of a male in a Tupperware container, is from a seller in Vitoria, and in the same community, there is a location, San Juan de Gaztelugatxe, where the Pitiusa lizard is considered invasive. In other words, the question is whether there would be any difference if the specimen being trafficked was caught in its place of origin or in an area where it is an invasive species. Valentín Pérez Mellado clarifies this point and assures that the situation is the same. "Breeding them in captivity," he adds, "regardless of where they come from, only serves to encourage terrarium hobbyism and increase the demand for individuals from other populations. Environmental education must be done and people must understand that lizards, like any other wild species, should be free and not in terrariums."

The Largest Stash

Two of the largest seizures of lizards illegally extracted from the Pitiüs Islands were recorded in 1988. The first case was in February, when 400 lizards were discovered inside a suitcase at Heathrow Airport. In December, in an operation involving the UK Customs Service, Greenpeace, and the Government, with the collaboration of British Airways, another 450 specimens were rescued in Bristol. A more recent example is the case of the forty lizards seized in 2001 on the boat from Formentera to Ibiza, bound for Germany.

09-06-2022 - Verónica Carmona Acedo - This is how snake traps are used in Ibiza (control)

DIARIO de IBIZA

Así se usan las trampas para serpientes en Ibiza

This is how snake traps are used in Ibiza

Santa Eulària distributed a hundred of these traps last week during the ECOUC Medi Ambient Fair.

Snake traps. / M.C. MOLINA

Verónica Carmona Acedo | **Ibiza**

09 JUN 2022 10:51 Actualizada 19 FEB 2025 19:15

Last week, during the ECOUC Environment Fair, the Santa Eulària City Council distributed one hundred snake traps, out of the 400 it recently acquired to combat the snake infestation. People who picked up the trap also received a voucher for a mouse that could be collected at the Santa Eulària Countryside Cooperative.

The City Council also sent an email to the owners of these traps explaining their use, including three videos from Friends of the Earth, as well as instructions for registering captured snakes. Each box delivered has a number, and the location where it will be installed has been previously recorded.

Trap Position

The Ibiza snake trap has two compartments, one sealed for the mouse and another where the snake enters and cannot exit thanks to a one-way trapdoor. The box comes with a lock to prevent the rodent or snake from escaping. The mesh allows you to see what type of snake it is, so you can open the door or not.

The trap should be placed near a stone wall, for example. The scent of the mouse will attract the snake, which will circle the box until it enters through the trapdoor. Try to keep the box upright, not tilted backward to prevent rain or moisture from pooling at the bottom and leaving the trapdoor open. You can level it with stones. If it needs to be tilted, it's best to tilt it forward,

toward the mesh. If it tilts backward, the trapdoor will stay open and the snake could escape again, according to the instructions given by the expert in the Amics de la Terra video.

In summer, you should avoid leaving the box in the sun all day. You can find a tree for shade, and in winter, the opposite is true: find a sunny spot so the mouse doesn't die of either exposure to the cold or the heat. When it rains, you can place a piece of plastic secured to the ground with stones to cover the entire box except for the entrance. It's necessary to check the mouse's condition every two or three days. It's important to ensure the rodent is always in top condition.

Mouse Care

The mouse should be picked up by the tail and then held in one hand, with a glove if desired, to prevent it from getting nervous. Water should be provided using a hamster waterer or a dish with a rock, or a plastic bottle with holes and a couple of rocks to prevent it from drowning. The food you can feed it is commercial or pet food. Fruit or leftover food can cause diarrhea in the mouse, so it is advisable not to offer this type of food. To make the mouse more comfortable, you can use toilet paper or newspaper as a nest, especially in winter, as this will keep it warmer.

The mouse's items should be placed as follows: water in the front, and the nest and food in the back. If you place the food in the front, it may get wet with water and last less time. The mice used for this purpose are laboratory mice, not field mice; they're unfamiliar with snakes, so they aren't stressed. They can stay with the snake in the trap for a week and maintain their normal behavior, the expert explains in the Amics de la Terra video.

Snake Extraction

Once a snake has fallen into the trap, you must know what type it is before opening it: horseshoe or white, the common types on the island. You can wear gloves to feel safer, and it's advisable to wear long sleeves to protect yourself from bites. Once you know what type of snake it is, you can open the box. Then, you must pick up the snake from above by the head and grasp it by what would be the animal's neck. With your other hand, support the rest of its body and let it coil around a bit to prevent it from getting nervous.

Once caught, the way to sacrifice it is as follows: first, you must give it a sharp blow to the head to render it unconscious and then destroy its central nervous system (the top of the head) with a sharp object.

PERIÓDICO de IBIZA Y FORMENTERA

Las serpientes ya están presentes en toda Ibiza por culpa de la Movilidad humana

Snakes are now present throughout Ibiza due to human mobility

The situation in Formentera remains under control, while half of Ibiza's population is experiencing high numbers.

Several snakes inside one of the traps managed by Cofib

Isaac Vaquer Ferrer | 11/07/22 3:59

The snakes have already spread throughout Ibiza, and half of the island suffers from a high density of snakes.

This expansion was already anticipated, but Victor Colomar, a technician with the Consortium for the Recovery of Fauna of the Balearic Islands (Cofib), believes it is too rapid to be natural. He therefore believes they could be being transported by human means. This hypothesis is difficult to confirm with reliable data, but it seems the most likely theory.

These are some of Colomar's assessments at the midpoint of the 2022 snake population control campaign in the Pitiusas.

Increased Captures

So far this year, the Cofib has captured 1,600 snakes in Ibiza, to which the 500 captured by the hunters' association should be added. There is still no data from the "Sargantanes o Serps" campaign promoted by Gen-Gob and Amics de la Terra. In any case, these would be considerably more captures than at this point in previous years.

In Formentera, 400 captures have been reached, figures that are within expectations.

Colomar expresses concern for the largest of the Pitiusas, due to the aforementioned presence of snakes throughout the island and the fact that half of it is at a high density. The areas of Sant Joan, Santa Eulària, Roca Llisa, and the outskirts of Jesús up to Ibiza are said to be the areas with the highest density detected on the island.

The northeastern part of the island was the first affected by the arrival of snakes due to the importation of olive trees, and we can see how the settled population is declining southward, settling in the outskirts of Vila. "Especially in Sant Joan and the outskirts of Jesús and Vila, the density is especially high," Colomar explained. The outskirts of Vila are particularly noteworthy, where between last year and this year there has been an incredible change in density.

Each passing year presents a new situation as we better understand the species' expansion pattern. "In the 2016-2018 campaign, we could only theorize about how they expanded. Now that we are beginning to detect patterns, we are surprised by the population explosions of snakes in areas where we see an explosive increase in the population." There are areas where the opposite occurs in a way that has yet to be explained."

This data gives technicians an advantage in combating invasive species, but it is difficult to obtain, given that conclusions about expansion are drawn from observations over long periods.

Strategy

In addition to the usual resources, this year there is an increase in traps and personnel through the Sustainable Tourism Tax, which allows Cofib technicians to manage an average of 1,200 traps, with the possibility of increasing this number throughout the year in Ibiza.

Regarding the use of traps, Colomar explains that Cofib has around 2,000 cages that are in motion and are constantly being activated and removed. With this, Colomar indicates that the average number of active traps will increase over the coming weeks. In Formentera, there are 400 stabilized traps, which make up the effective control perimeter.

Depending on the density pattern, in the case of Ibiza, the traps are moved and reorganized. "Now, mid-season, we rethink our objectives. We remove traps from some locations and place them in others, so that the average number of traps remains stable but the trapping points increase," explains the technician.

Formentera

On Formentera, the snake population remains confined to the La Mola area, with occasional sightings in low-lying areas, which is normal. The Cofib technician indicated that there may be occasional sightings of snakes in other areas of the island, but that this is not a cause for concern. Despite this, he remains optimistic about the eradication, although he cannot set a date.

Colomar points out that the strategy is being effective, but the population is "very resistant to trapping." Many captures are being carried out consistently, but despite this, the population remains stable. "It's something we couldn't have known; there are no precedents for this type of strategy and campaign, and we can't know how long they will last. Their resilience is surprising, but the good outlook remains because they haven't left the established trap line."

Ibiza volunteers are bordering on professionalism in their trap control and management efforts

Cofib highlights the volunteers' work within the "Sargantanes o Serps" campaign, organized by several associations within Ibizan civil society.

"After more than 15 years working on invasive species control, I find it incredible. I think it's one of the cases in which a citizen initiative has been most effective and most professional. There are people in Ibiza who, independently and voluntarily, are developing professional capture strategies, managing a large number of cages that they handle as well as we do. It's one of the things that has surprised me most positively, and we are very grateful for these initiatives," said technician Víctor Colomar.

Therefore, he points out that, within the "disgrace" of the snake invasion in Ibiza, it is very positive that the involvement and mobilization of the population has been achieved, driven by many groups in Ibiza that have joined this task.

He warned, despite this arduous task, that "we will see an increase in the snake population for at least the next decade." This should not discourage the public and institutions and lead them to give up, but rather the opposite. It's time to maintain intensive campaigns; the results will take years to be seen, but they will be seen, according to this expert.

12-07-2022 - Isaac Vaquer Ferrer - Nearly 100 new volunteers join the fight against snakes (control)

PERIÓDICO de IBIZA Y FORMENTERA

Casi un centenar de nuevos voluntarios se unen a la lucha contra las serpientes

Nearly 100 new volunteers join the fight against snakes

The "Sargantanes o Serps" program of GEN-GOB and Amics de la Terra has more than 300 participants

Cofib technicians during the training of volunteers from the 'Sargantanes o Serps' on July 7 | Photo: GEN-GOB

Isaac Vaquer Ferrer | Ibiza | 12/07/22 3:59

On San Fermín Day, the final talk and snake trap distribution event for the 2022 "Sargantanes o Serps" campaign took place. It was the fourth of the year and exceeded expectations. A total of 52 people attended Can Casals, in the Cas Serres neighborhood of Ibiza, some with their own traps. The following day, two of the volunteers had already captured them.

In total this year, the campaign, promoted by GEN-GOB and Amics de la Terra, recruited 92 volunteers and distributed 128 traps. "It's truly an incredible achievement," celebrated Hazel Morgan, president of Amics de la Terra.

She believes one of the reasons for this increase is the rising density of snakes across the island, which the volunteers themselves note and encourages them to participate in the campaign. "We already know that they have spread to Cala Llonga, Talamanca, and Sant Rafel," she notes, while believing that the participation of more people in snake capture will

provide more data to understand expansion patterns and improve the capture strategy.

Independent Volunteers

'Sargantanes or Serps' has 302 active volunteers halfway through the campaign. Morgan points out that many of them are already independent and within the volunteer network simply need a replacement mouse.

In a survey conducted among volunteers to find out how many people needed help handling the snakes and how many handled everything themselves, they observed that "the majority manage the captures themselves. Some need help the first time, but then they manage the entire process," explained the president of Amics de la Terra.

On the other hand, it indicates that capture recording has been improved, now being done through the Cofib green line.

Campaign

Regarding this year's capture data among volunteers, there are no updated figures yet. However, the number of snakes killed by the Ibiza Hunters Association and Cofib technicians is known, totaling approximately 2,100.

Each annual campaign is divided into two parts: one until July 31st, which covers the snake mating season, when the most active season occurs and the bulk of the captures are made. At that point, halfway through the campaign, an initial count of trapped snakes is made.

The second part runs until the first autumn rains and the arrival of cold weather, when the traps are collected as the snakes begin their hibernation period.

At this point, almost all of the traps funded by public authorities have been distributed, and some people are waiting to participate in the next campaign.

Those interested in volunteering or needing mice for the traps they have can contact GEN-GOB or Amics de la Terra Eivissa on their respective websites.

There are practical videos and guides for volunteers, both for raising mice and for respectful handling of catches.

El apunte

La falta de Plan Especial retrasa la puesta en marcha de una zona de cuarentena

Isaac Vaquer Ferrer

One of the measures demanded by Ibizan institutions and civil associations to control the entry of snakes into the island is the creation of a quarantine zone in the port for goods likely to contain snakes, primarily olive trees. The Balearic Port Authority (APB) included the creation of this quarantine zone in the Special Plan for the Port of Ibiza, which is still being processed, according to the public authority. The Ibizan government announced that it is preparing a motion for the next plenary session to request that the implementation of this space be accelerated to prevent the increase in the snake population through imports.

PERIÓDICO de IBIZA Y FORMENTERA

Un nuevo hogar para las sargantanas en el CEIP Puig d'en Valls

A new home for sargantanas at the Puig d'en Valls Primary School

This school in the municipality of Santa Eulària is the first in Ibiza to build a reserve for these endangered animals.

Manu Gon | Santa Eulària | 15/11/22 13:45

The problem of lizards in Ibiza is increasing. They are increasingly at risk of disappearing forever due to the spread of snakes, so any help or awareness-raising action is positive, especially if it's working with students who, sooner rather than later, will be our future.

Based on this foundation, CEIP Puig d'en Valls has become a pioneer on the island in creating a lizard reserve on its premises. Located very close to the main entrance, on the right, it is delimited by several decorated murals and was built by all the school's students so that these small animals, native to the Pitiusas, can find a new home.

As Toni Marí, a sixth-grade primary school teacher and the school's environmental coordinator, explained this morning to Periódico de Ibiza y Formentera, this initiative emerged two academic years ago at the request of APIMA, although it was only implemented last year. "The main objective of this project is to raise awareness about this serious problem we have on the island because many people still don't know that if the lizards disappear, our very ecosystem is in danger, since everything in nature is directly related."

Everyone involved

The process of creating this lizard reserve hasn't been easy, "but it has been very satisfactory, since the entire educational community has done its part throughout the different stages."

In this regard, Marí recalled this morning the visit received by biologist and lizard expert Antònia María Cirer, who was given to the 6th grade students "to learn about these small animals, how they live, how they eat, and how to care for them." She also mentioned how some of the stones used to build the new gymnasium "have been used to create a dry stone wall where the lizards can enjoy their nooks and crannies." She also mentioned how specific snake traps have been created "following the advice of specialists from the Balearic Islands Wildlife Recovery Consortium (Cofib), which were then distributed throughout the playground."

They've even created a video to promote the project, and a panel has been set up next to the reserve to inform about its purpose and the area's location. This space also includes "very necessary plants to attract mosquitoes and insects that feed the lizards" and "a small recycling corner created by the students themselves."

Highly aware

The result of the initiative couldn't be more positive. Beyond the creation of the reserve at the entrance to the school, the 6th grade students have become strong advocates and promoters of the idea of keeping the Pitiusan lizard alive.

"We must take care of the lizards because they are in danger of extinction, because they are very important for our environment, and because if one day they disappear, everything could end up being destroyed," explained Carlos, one of the students, very seriously and conscientiously this morning, summarizing a widespread opinion among his classmates.

Therefore, as María and Idaira confirmed, "we built a house for all of them following Antònia María Cirer's advice, using the stones from the gymnasium construction" and achieving "little by little there are more lizards in the reserve, with beautiful colors like green or blue." In fact, they are all very clear that they need to send the message to the rest of their schoolmates "that they should be allowed to live in peace."

Furthermore, as Joel said, "the most beautiful thing has been seeing how all the work is starting to bear fruit and how Cirer herself congratulated us, telling us that everything was very well done and very well finished."

IBIZA KURIER
Die Lokalzeitung für Ibiza und Formentera in deutscher Sprache

Neophyten und Neozoen: Nutzen oder schaden die Neulinge?

Neophytes and Neozoans: Are the newcomers beneficial or harmful?

A controversial view of the snake plague and other “invaders”

No, this article won't be about the various groups of new immigrants to Ibiza. This time we want to focus on neophytes and neozoans.

Neophytes are newly immigrated or introduced plants, neozoans are newly settled animals.

But first, the question arises: where should the boundary between "new" and "old" actually be drawn? In ecological terminology, a distinction is made between neophytes that arrived in an area after 1500 and archaeophytes that arrived earlier. Accordingly, the boundary between archaeozoans and neozoans is set at around 1500, with the establishment of transatlantic contacts.

The carob tree, which is widespread in the Pityusic Islands, is an archaeophyte, and the genet, introduced by the Phoenicians, is an archaeozoan.

For several decades, the term "invasive neophytes" has haunted conservation movements. The most well-known of these "invasive neophytes" on Ibiza is the sulfur-yellow flowering nodding wood sorrel (*Oxalis pes-caprae*), which is spreading along roadsides and in fields – not only on Ibiza, but throughout the Mediterranean region and also on the Canary Islands.

Vegetable growers consider it a nuisance weed, which they remove whenever possible. This isn't done out of xenophobia; they do the same to archaeophytes and native plants when they become a nuisance in the field. The same applies to native snails and aphids.

The ecological significance of neophytes and neozoans is often hotly debated. Do they distort flora and fauna? Do they disrupt the ecological balance? Do they cause damage to native flora and fauna?

The decision as to whether something is good or bad is, as we all know, very subjective. Just as there is no objective answer to the question of whether German immigrants to Ibiza are good or bad, one cannot objectively say whether wood sorrel should be considered annoying or beautiful. It is rarely found in relatively untouched forests, practically only in biotopes heavily modified by humans.

Conservation activists often argue that these newcomers pose a threat to native ecosystems and must be combated. They displace native species. But if you ask which species they are actually displacing, you usually get only a confused shrug.

Ecologically trained people naturally view the arrival of newcomers in a more nuanced and generally less dramatic way. There are isolated cases in which animals introduced to islands, in particular, have a devastating effect on the native fauna. The best example is the snakes that have plagued Ibiza for several years. In most cases, however, the newcomers can barely hold their own against the native species.

Since the South African Cape region has a climate similar to that of the Mediterranean, newcomers from there often feel quite at home in the Mediterranean region. In addition, the region is very rich in unique species, making it a paradise for ornamental plant enthusiasts.

In addition to wood sorrel, we also find several ice plant species in the Pityusic Islands that have grown wild from gardens. On the beaches of Ibiza and Formentera, for example, *Carpobrotus acinaciformis* and *Mesembryanthemum cristallinum* are becoming increasingly common. Should we fight them as nuisances? Or can we enjoy them and view them as an enrichment to the flora? One thing is clear: getting annoyed with the newcomers doesn't solve any problems.

Fred Pearce's book "The New Wild Ones: How to Save Nature with Alien Animals and Plants" was published by Munich-based Oekom-Verlag. The author argues that newcomers are an asset and, in times of climate change, even represent the future. One doesn't have to accept all of his statements in their entirety, but he certainly deserves credit for offering something constructive and optimistic to counter the widespread hysteria against newcomers. According to his estimates, only one percent of newcomers are problematic, although he doesn't reveal how he arrived at this figure. One thing, however, is clear: We can't generalize; we must consider each case individually.

Now, ecosystems have always been in a state of constant change, whether with or without human intervention. Species have always migrated, and that in itself is nothing to worry about. Today, due to human activity, migrations are occurring more rapidly. But that shouldn't worry us either. Pearce says: "The resilience and self-healing powers of nature are not

recognized by most conservationists."

Human activity doesn't always have to be viewed in a one-sidedly negative light; otherwise, our logical goal would be to exterminate our own species. All too often, ecology is confused with misanthropy, and not just on Ibiza.

Over the centuries, human activity has also created valuable habitats on Ibiza, such as the garrigues and the walls, which are the result of extensive pastoral farming.

It is a fact that many introduced plants rarely or never grow wild. This applies to the vast majority of useful and ornamental plants, including archaeophytes. The carob tree (*Ceratonia siliqua*), which originates from the Orient, occasionally grows wild, but certainly not to a dangerous extent. The prickly pear cactus (*Opuntia ficus-indica*), native to Mexico and a neophyte, is also not often found growing wild here, unlike on La Gomera, for example, where it has found an ideal habitat (without displacing many native plants). The South American nasturtium (*Tropaeolum majus*), although it reproduces well in gardens, rarely spreads further.

Over the centuries, local varieties of the important American crops corn and tomatoes have been developed on Ibiza. Tomatoes only grow spontaneously where they face no competition; corn cannot self-seed and therefore cannot become invasive.

Recently, parrots, similar to those found in cities like Barcelona or Santa Cruz de Tenerife, have been spreading in Ibizan towns. It certainly can't be said that they are displacing native animals in cities to any significant extent. Rather, they are occupying habitats from which humans have displaced many native animals. The threat comes more from unrestrained development than from the parrots.

But what about the snakes that have been invading Ibiza for a few years? So far, they've been the ladder snake (*Rhinechis scalaris*) and the horseshoe snake (*Hemorrhois hippocrepis*). There are great fears that they will cause the Pityusian lizard (*Podarcis pityusensis*) and local bird species to disappear. Snakes have been introduced repeatedly for thousands of years, but they never survived for long.

Today, we no longer attribute this to the protective god Bes, as the Phoenicians once did, but rather to the hedgehog that kills snakes. Hedgehog numbers on Ibiza have been greatly reduced due to increasing road traffic. Perhaps it would be more honest to see the "danger" in car traffic rather than in snakes?

The Australian eucalyptus planted in some places is problematic because it absorbs a lot of water. In some areas, it was planted to drain swamps. This is undesirable on Ibiza, where water shortages are already increasing. Fortunately for the island's water supply, however, it is not spreading invasively.

This article isn't meant to be a license to introduce anything and everything without hesitation. Rather, it should enable us to view the newcomers without prejudice and allow us to recognize their beauty.

PERIÓDICO de IBIZA Y FORMENTERA

Las sargantanes cuentan ya con santuarios en la Necrópolis y en es Soto

The lizards now have sanctuaries in the Necropolis and in es Soto

Antònia Cirer points out that the species remains in an "emergency" situation.

From left to right, Vicent Roig, Antònia Cirer, Jaume Estarellas, Víctor Colomar, María Bofill and Jordi Salewski | Photo: Daniel Espinosa

Gisela Revelles | Ibiza | 14/12/22 12:29

The Archaeological Museum, the Can Marines Vocational Training Center, the Ibiza Council, the Ibiza Town Council, and the SOS Sargantanes organization presented this Wednesday the first sanctuary for Ibizan lizards, located in the Puig des Molins Necropolis. This is a specially protected area against the access of snakes and other invasive species at a time of "particular emergency" for the lizards, according to SOS Sargantanes coordinator Antònia Cirer.

The idea of locating a protected area for Ibizan lizards in the necropolis came from the students of the Can Marines Vocational Training Center, whose manager, Pepita Costa, conveyed it to the Council. The island institution accepted the proposal and involved the other administrations in its implementation, with the collaboration of the SOS Sargantanes volunteer association. The Minister of the Environment, Vicent Roig, stated that this Wednesday is "a day of joy" due to the presentation of the results of a project that has been in the works for "more than a year." Roig explained that various information panels will be installed in this first sanctuary, visible from outside the sanctuary, so that both visitors and those strolling around can learn about what is being done to protect the Ibizan wall lizard. "The main objective is to make people aware that the lizard must be cared for as much as possible," the Minister emphasized.

Antònia Cirer, for her part, indicated that the lizards remains in a very delicate situation because "it is increasingly retreating from the island due to the presence of invasive species." Cirer explained that it is necessary to look for places "where the snakes have not yet reached" in order to establish these protected areas. In the case of the necropolis, the situation is very positive because, in addition, the city itself acts as a protection belt to prevent snakes from entering. This area should also serve as an "example" so that those citizens who have country houses or houses with gardens can join a network of small sanctuaries where lizards can live safely, indicated the coordinator of SOS Sargantanes. "It's about seeing if, in the future, the situation can be reversed," added Antònia Cirer, who emphasized the need to "prevent snakes from reaching this area."

Vila's Environment Councilor, Jordi Salewski, explained that the City Council has joined the project by making the es Soto area available to its managers. Starting in January, he noted, a forest clearing will be carried out in this area and information panels will also be installed. The City Council has also distributed traps and plans to adapt similar spaces in Can Escandell and Can Misses.

Representing the Balearic Government, veterinarian Víctor Colomar emphasized "the need to create synergies to conserve native species and prevent invasive ones." In this regard, he supported projects like the one presented this Wednesday, which he described as "pioneering." The goal, he added, is "to try to ensure the maximum number of lizards in these protected areas."

Jaume Estarellas, a biologist with the Consell d'Eivissa (Eivissa Council), also warned of the need to "reverse the situation" facing the lizard in Ibiza by extending this project to other areas of the island. "Every country house," he noted, "can have its own small reserve of lizards."

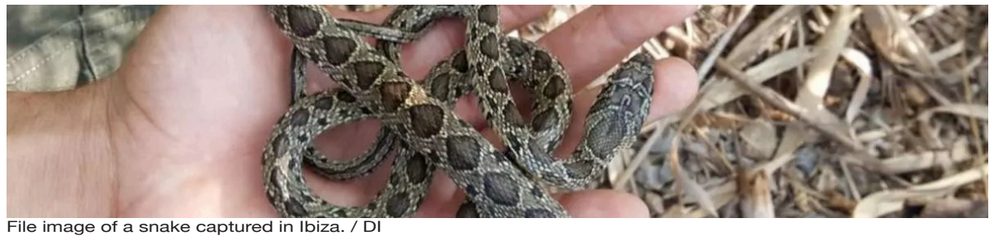
Finally, the curator of the Archaeological Museum, María Bofill, emphasized the need to "join forces to preserve a natural heritage that is under threat." "The necropolis," she added, "is an ideal place for this reserve because the lizards are already here naturally, and this is what must be preserved."

DIARIO de IBIZA

Control de serpientes en Ibiza: el Govern limita la entrada de olivos y declara a la lagartija especie vulnerable

Snake control in Ibiza: The Government restricts the entry of olive trees and declares the lizard a vulnerable species

The objective is to prevent the arrival of snakes to the Balearic Islands.



File image of a snake captured in Ibiza. / DI

Efe

Palma 30 ENE 2023 16:28 Actualizada 30 ENE 2023 17:09

As previously reported by this newspaper, the Governing Council approved this Monday a restriction on the entry of olive trees, carob trees, and ornamental holm oaks to prevent the arrival of snakes to the Balearic Islands, as well as declaring the Pityusic and Balearic wall lizards as vulnerable species, the Balearic government reported in a statement.

To this end, it has approved a Decree Law on extraordinary and urgent measures for the protection of the Pityusic wall lizard (*Podarcis pityusensis*) and the Balearic wall lizard (*Podarcis lilfordi*) and for the prevention and control of species of the *Colubridae* family sensu lato, i.e., snakes, in order to preserve the islands' endemic reptile species.

To this end, the entry of olive trees, carob trees, and ornamental holm oaks with a trunk circumference of more than 40 centimeters will be restricted during the egg-laying months until the snake species hatch and hibernate.

For the rest of the year, authorization must be requested from the Ministry of Environment and Territory and proof must be provided that control and biosecurity measures have been adopted to prevent the introduction of snakes, as well as the identification, origin, date of extraction, and traceability of the specimen.

Dates on which there will be no restrictions

The entry of these trees without restrictions will be permitted from April 1 to June 15 and from September 15 to October 15. Species introduced outside of this period will be quarantined in an enclosure impervious to snakes.

Likewise, nurseries, businesses, organizations, and individuals that sell, collect, or distribute ornamental trees will be required to set traps at least between April 1 and October 30.

Furthermore, the Pityusic lizard and the Balearic lizard are also included in the "Balearic Catalogue of Endangered and Specially Protected Species," classified as vulnerable for protection.

The Sustainable Tourism Tax (ITS) has funded the setting of 1,246 traps in Ibiza this year, and seven technicians have been working full-time on the island.

In Formentera, 394 traps have been set, and two technicians have been working full-time. In total, 1,640 cages have been set on the Pitiusas.

As for captures, 2,710 snakes were captured in Ibiza last year, more than double the previous year, and 664 in Formentera. In total, 2,834 specimens were recorded captured in the Pitiusas, 11,648 since 2016 (7,411 in Ibiza and 4,237 in Formentera).

The Decree Law will enter into force 11 days after its publication in the Official Gazette of the Balearic Islands, allowing businesses and individuals to adapt to the regulations.

DIARIO de IBIZA

Lagartijas a bordo

Lizards on board

"Surprising news: the discovery of several specimens of the Pityusic' endemic lizard on the Oliva coast"

Opinión | A pie de isla

Andrés Ferrer Taberner

06 ABR 2023 6:30

A few days ago, a Valencian newspaper reported surprising news: the discovery on the Oliva coast of several specimens of *Podarcis pityusensis*, the lizard endemic to the Pitiusas. Adding to the number of specimens that appeared on the coast of Denia a few years ago, this demonstrates the presence of this species outside its geographical area. Are these isolated cases, or does it mean that this small vertebrate is beginning to colonize, in some way, even by chance, the Mediterranean coast of the Iberian Peninsula?

Presumably, these lizards reach the mainland from the numerous boats that depart from the Pitiusas on their way back to Valencian ports, with nothing more to their luggage than the striking and unmistakable coloring of their scales that distinguishes them so much from their Iberian counterparts. The maritime flow between the two coasts—almost a bridge of lengths—is extraordinarily intense in summer, a circumstance these small reptiles take advantage of to sneak aboard and then disembark at the first opportunity. Swift, tiny, and always slipping through the shadows, no one ever witnesses their nautical adventures firsthand. Whoever takes a photo of them one day, catching them red-handed, will win a prize.

We are certainly not the only species driven by curiosity. Life, like the universe itself, tends to expand, to explore new paths to ensure its own survival, the first commandment of any brain, however primitive it may seem. "First me, then me, and always me," as the protagonist of the famous French novel "The Red and the Black" would say, is on the lips of every living being. The path of water is always to occupy the lowest levels; that of life is to occupy the empty spaces devoid of it, wherever they may be. Even if they are nowhere, as is the case with the "afterlife" concocted by humans, that's where we also want to be after our death. The instinct to remain in one way or another works miracles.

Obviously, the Pityusic lizards don't wonder what's on the other side of the sea; not even when they're drunk on the sun (nor am I so happy here at the expense of the island's blues). But since they're naturally restless and relentless, if they're given the opportunity to hop aboard a boat, they'll always find a spot, either there or anywhere else they fancy (one day I found one in the passenger seat of the car returning home from the port of Sant Miquel).

With the current bustle of ships up and down the river, they'll have plenty of opportunities. What they can never suspect is that when they disembark, they'll find themselves, to their surprise, facing new territories on the other side of the sea, all very much like Christopher Columbus. Their approach isn't new, although it is faster, traveling as stowaways on comfortable ferries. It's not new, I say, because in Polynesia, for example, there were a multitude of species that populated the different islands, clinging as best they could to trunks and branches drifting with the currents, especially during hurricane season. This is how fauna managed to spread across those latitudes, apart, of course, from those introduced by humans for their own benefit.

In the Mediterranean, there were also species that expanded in this way, although today the image is much less evocative. Instead of reaching the coasts on drifting branches or trunks, now they are on those small plastic islands that, with horror, we see floating at the mercy of the tides.

I am convinced that it hasn't all been ferries or dream boats; not even Robinson Crusoe rafts or small boats of friendly cuttlefish fishermen. More than one of our beloved Pityusic lizards has arrived on the Valencian coast from the clear plastic cover of a tangle of bags, let's say from the supermarket, conveniently crowded together by the random waves.

Andrés Ferrer Taberner | Writer

PERIÓDICO de IBIZA Y FORMENTERA

Desde el Consell reconocen que es imposible erradicar las Serpientes invasoras de Ibiza

The Consell (Eivissa Regional Government) acknowledges that it is impossible to eradicate invasive snakes from Ibiza

The Director of Agriculture for the Consell d'Eivissa, Joan Marí, is concerned about the large number of olive trees with snakes on the island.

File image of an invasive snake in Ibiza

Vanessa Hernández | Ibiza | 24/04/23 0:30

The Island Director of Agriculture for the Consell d'Eivissa, Joan Marí, expressed concern that it is impossible to eradicate invasive snakes from Ibiza due to their widespread spread across the island over the years. In this regard, he explained to the Periódico de Ibiza y Formentera that a series of lines of work are being developed with the aim of controlling this spread, or at least slowing it down "as much as possible."

"We are counting on the collaboration of all the municipalities and public and private administrations to control these snakes through traps," the Island Director noted, emphasizing that it is the Environmental Management Department of the Consell

d'Eivissa that is developing the management and control measures for snake species in Ibiza. "The snakes have caused real disasters on the island. "We have a major problem that affects all Ibizans because half the island of Ibiza is almost devoid of native lizards," Joan Marí pointed out, adding that there are areas like Sant Carles, the town where the first specimens were detected, that no longer see the presence of lizards because they have been swallowed by these snakes.

Insufficient

He also pointed out that the Balearic Government's approval of limiting the entry of olive, carob, and ornamental holm oak trees to prevent the arrival of snakes hidden in their roots from the Peninsula is insufficient because there are many olive trees planted on Ibiza. "Every day I see more olive trees on the island. We have a large number of these trees here," he noted with concern. In this regard, he also lamented that there are no predators on Ibiza that could threaten these snakes, and all these problems would mean, according to the island director, the possible extinction of the Pitiusan lizard in a few years.

Furthermore, he recalled yesterday that hundreds of traps were distributed, which, in just a few months, managed to capture hundreds of snakes. That is why the Consell d'Eivissa supports all active measures to try to eradicate these invasive snakes from the island, as they did in the past, demanding a quarantine zone in the port of Ibiza to prevent the arrival of these species. "We must not forget that the Consortium for the Recovery of Fauna of the Balearic Islands allocated more than €800,000 to combat snakes in the Pitiusas, and we know that various control measures are being implemented," he noted, while recalling that the Balearic Government has already included the native lizard as a vulnerable group in the Balearic Catalogue of Endangered Species and Species Requiring Special Protection.

PERIÓDICO de IBIZA Y FORMENTERA

Refugios en Santa Eulària para proteger a las 'sargantanes'

Shelters in Santa Eulària to protect the lizards

Students of the IES Quartó del Rei, together with the ecological entity GEN-GOB Ibiza, install houses to avoid predators

A moment of the day this Friday in Santa Eulària | Photo: Daniel Espinosa

Vanessa Hernández | Santa Eulària | 12/05/23 11:46 | Actualizado a las 18:08

The environmental organization GEN-GOB Eivissa continues working to eradicate snakes on the island, a very difficult goal considering the large number of invasive snakes found on Ibiza. That's why its main objective is to help the survival of the Pitiusan wall lizard by installing shelter boxes. To this end, this organization enlisted the support of the Santa Eulària City Council and the Consortium for the Recovery of Fauna and Flora (COFIB) this Friday, but above all, it counted on the special help of several first- and second-year secondary school students from the Quartó del Rei Secondary School. Very early in the morning, educators and technicians from GEN-GOB Eivissa, Balma Albalat, Jordi Serapio, and Teresa Marí, traveled with the students to the port of Santa Eulària to set up shelters for the protection of the wall lizards. The installation took place from the area surrounding the Conference Center to Río Street.

"This area of the town is home to a large population of Pitiusas lizards. That's why we've installed the shelters here," Balma Albalat told Periódico de Ibiza y Formentera, highlighting that this native species is seriously threatened due to the proliferation of invasive snakes. The aim of the project is to prevent the extinction of the lizard and raise awareness among young people about the importance of these species within Ibiza's biodiversity. "Throughout the week, we built several shelters, a total of 30, to protect the different species. The goal was to promote the improvement of the natural heritage through the protection of biodiversity," emphasized the environmental organization GEN-GOB Eivissa, while the students placed the shelters to protect the lizards in the more landscaped areas of the Santa Eulària Seafront Promenade.

Great Involvement

"They've been very involved from the beginning," Balma emphasized, referring to the students. In this regard, she noted that both these awareness-raising activities and the training workshops held at the start of the project have been very well received by these secondary school students. "We held a debate and everyone collaborated. Furthermore, thanks to this initiative, many of the students have discovered other protected and unique species of the Pitiusas, such as the small ferradura ratapinyada," explained the environmental organization.

Without going any further, they indicated that during the week they also made shelters for the bird species. These shelters of various sizes, insulating against the temperature, were placed in the school's garden area. Regarding the materials used, they noted that the students used ceramic blocks and plant elements to give these native species the sensation of being in a natural environment.

Furthermore, the environmental organization emphasized that, once these shelters are installed, the most important thing now is to monitor these huts and observe the surroundings to learn about nature, since often "you don't need to see Australia's Great Barrier Reef or the Amazon rainforest to realize all the biodiversity that exists." "We have invited them to monitor the shelters installed outside the school, to visit them periodically, and to observe the surroundings and see if there are any remains," Balma Albalat pointed out.

Ibiza HEUTE

Ibiza schützt Eidechsen vor gefräßigen Nattern

Ibiza protects lizards from voracious snakes

Using clever ideas and computer technology to combat the snake plague: initiatives by schoolchildren and foundations are supporting conservationists' fight against the snakes that are decimating the native lizards on Ibiza and Formentera.

15. MAI 2023

Students install protective stones into which the lizards can retreat in a flash. Photo: Santa Eulària Town Hall

The Fundación IbizaPreservation is joining the fight against snakes on Ibiza to preserve the endangered Pityusian lizards. Since gardeners accidentally introduced horseshoe snakes to the island in plant pots over 20 years ago, and until recently, little was done about it, the animals have been multiplying rapidly. They feed on the lizards, among other things, and have already severely decimated their populations. In many parts of the island, the nimble brown or emerald-green miniature lizards are no longer seen.

IbizaPreservation supports the Consortium for the Conservation of Fauna in the Balearic Islands (Cofib) and the numerous volunteer associations working in the fight against the snakes. The foundation is building 100 smart traps for Cofib, which experts and students on Ibiza developed at the hackathon in October 2022 and which can be monitored by computer.

The foundation also developed 100 artificial protective stones for the lizards to shelter in. The stones have small holes through which the lizards can slip inside, protecting them from the snakes and the heat. GEN-Gob conservationists will place them in gardens. The initiative is funded by an environmental program of CaixaBank and Fundación Sa Nostra.

Loopholes for lizards: Students set up stones

Incidentally, around 200 students from the Quartó del Rei secondary school, with the participation of Erasmus students from Finland, also set up protective stones for lizards on the beach promenade in Santa Eulària on Friday. The boys and girls had built these "refugios" themselves. Lizards can indeed still be seen on the beach promenade between the river and the convention center.

In addition, insect hotels and bat boxes are intended to contribute to a healthy fauna.

A moment from this Friday's opening at Can Casals | Photo: Toni P.

PERIÓDICO de IBIZA Y FORMENTERA

El arte de Marta Torres como inspiración para salvar las 'sargantanes'

Marta Torres' art as inspiration for saving the lizards

Students from the CEIP Poeta Villangómez school hold an exhibition in defense of the lizards

A moment from this Friday's opening at Can Casals | Photo: Toni P.

Toni P. | Ibiza | 19/05/23 15:24

Fifth and sixth grade students at CEIP Poeta Villangómez inaugurated a charity exhibition this Friday in Can Casals featuring the works they have been creating over the past few months, inspired by Ibizan artist Marta Torres.

The proceeds from the sale of the paintings created by the students, in collaboration with the Vila Department of the Environment, will go to the "Sargantanes o serps" (Serpents or Serps) platform. A destination chosen by the students themselves.

As explained by the teacher in charge of the project, Nieves Vázquez, and the school's director, Antonia Corral, "48 students participated, divided into two different groups. Each group was inspired by a work by Marta Torres, for which we have been preparing for four months by studying the artist's life and work." However, Vázquez wanted to emphasize that the spirit of the project revolves around "students being able to help our flora and fauna firsthand. In a way, creating little activists who are directly and meaningfully involved in an educational environmental action through art. Letting art be our working tool to help and preserve our heritage."

The artist couldn't hide her pride "because the students have been inspired by my work." During the talk Torres held with the students attending the launch of her exhibition, she wanted to explain the meaning of the symbolism behind her work, which, "beyond representing Ibiza, there is a whole symbolism behind everything."

In the conversation the students had with the artist, Aurora approached Marta Torres to explain why she had chosen her work as a reference for their project: "We were inspired by your paintings because they represent the island of Ibiza so well, and lizards are a symbol of Ibiza that are in danger of extinction." Yasmine, for her part, explained that "my favorite paintings are those of Dalt Vila, with the bougainvilleas."

Torres took advantage of Yasmine's presentation to explain to her young guests the significance of this plant in her work while joking about her own dress. "Today I came dressed as a bougainvillea! It's a plant I love and has a whole symbolism behind it: The trunk represents our body, which is attached to the earth by its roots. The flowers, which look toward the sky, represent the states of the soul." With this explanation, Torres wanted to emphasize to his young audience that "whenever you look at a painting, you have to be aware that there's always something else behind it. Whenever you create a work, you have to capture your soul, your feelings, something that is uniquely yours."

In this way, Levin explained the meaning of his work, arguing that "it conveys that there is a lot of pollution on Earth and that we all have to contribute so that the 'sargantanes' or turtles don't die anymore." Pablo explained the significance of the peasant woman in his work, who "represents ancient Ibiza."

Agnés Vidal, representative of 'Sargantanes or Serps', wanted to thank the students for their sensitivity "when it comes to getting involved in projects of this type. It's incredible that the teachers are so involved with such multidisciplinary projects, which send a very important message that goes far and wide. Now you are ambassadors of this message in defense of the lizards, which is so important."

The exhibition can be visited, and you can contribute by purchasing one of their artworks for a minimum of ten euros, until next Sunday at Can Casals (from 5:00 p.m. to 7:00 p.m. on Friday and Saturday and from 11:00 a.m. to 1:00 p.m.), in the Cas Serres neighborhood. This is an opportunity, as the director of CEIP Poeta Villangómez points out, "to create a neighborhood around the school."

PERIÓDICO de IBIZA Y FORMENTERA

Sargantanes en el hotel

Lizards in the hotel

Ibiza hotels join the protection of the Pityusic lizard

A moment from the project presentation this Tuesday in Ibiza | Photo: Toni P.

Toni P. | Ibiza | 27/06/23 18:22

This Tuesday morning, the "Protegim Ses Sargantanes" project was presented at the Alua Soul Ibiza hotel in Es Canar. This project, promoted by IbizaPreservation in collaboration with GEN-GOB and Amics de la Terra, and with funding from CaixaBank and Fundació Sa Nostra, enables Ibiza hotels to join in the protection of sargantanes by installing shelters in their gardens for this endangered reptile throughout the island.

The initiative began last year with the installation of shelters on the Santa Eulària promenade and is expanding this season "not only with the installation of new sanctuaries, but also with new smart snake traps and mass trapping in localized areas such as ses Salines and ses Feixes de Talamanca," explained Inma Saranova, director of IbizaPreservation, who emphasized that this initiative aims to "support the work and initiatives already carried out by other organizations and initiatives such as SOS Sargantanes, Sargantanes or Serps, or COFIB."

Jordi Serapio, the coordinator of this project, explained that "this project makes sense within a context in which the Pitusa lizard is practically becoming extinct, especially in much of the rural areas of the island of Ibiza, especially in the northeast." However, Serapio emphasized that "it has been observed that there are urban and residential areas that have acted as a refuge for this species of reptile, which is more accustomed to human presence than its more elusive predators." The coordinator of Protegim Ses Sargantanes expressed his gratitude for the Hotel Federation's reception of the project: "The hotels have large garden spaces where a good population of lizards has been observed to survive," specifically highlighting the importance of the Alua Soul hotel, where the project was presented, "which is located in Es Canar, in an area where the lizard has disappeared from its entire periphery and which retains a population in its most urban area that could be key to the conservation of the species."

In this way, 44 hotel establishments have joined the initiative, which plans to install up to 100 shelters. These shelters consist of a type of artificial rockery that serves "as a habitat to promote and improve this lizard population. At the same time, we offer information and recommendations for managing these spaces in a more species-friendly way, promoting the presence of native plants that also contribute to more efficient water management."

The director of the Alua Soul Ibiza hotel, Nuria Anuncibay, emphasized, as Serapio explained, that "we have a large presence of Pitusa lizards in our facilities, and with the installation of these shelters, we hope to contribute to halting the extinction of this species, while promoting biodiversity and sustainable tourism based on the protection of the territory's biodiversity."

PERIÓDICO de IBIZA Y FORMENTERA

Paso a paso gratuito para cazar serpientes y salvar las 'sargantanes'

Free step-by-step guide to hunting snakes and saving the lizards

The IEE is organizing a series of talks on the use of snake traps

The audience listened attentively to Antònia Maria Cirer's explanations | Photo: Toni P.

Toni P. | Ibiza | 03/07/23 21:35

This Monday, the IEE launched its series of free workshops aimed at the fight for the conservation of the Ibizan lizard and the understanding of snake behavior, which is responsible for the threat of extinction of this native reptile of the Pitiusas.

The workshop leader is Antònia Maria Cirer, who emphasizes that "the workshops cover three different levels of knowledge and experience on this topic." Thus, the workshop held this Monday afternoon before a dozen participants at the IEE headquarters was aimed at the most basic level. This Thursday at 7:00 p.m., the workshop will be aimed at "those with more experience, and in which we will delve into how to get the most out of traps and explain the biology of these reptiles, which have nothing to do with mammals and about which there is a profound lack of knowledge," explained Cirer, who also added that "we will also teach how to train

dogs to help us hunt snakes." The third of the workshops, scheduled for Saturday at 11:00 a.m., as Cirer noted, "will be a UOM-level conference on snake biology."In the first workshop, the biologist explained how snake traps work, which "are based on a box with two separate compartments. One of them has an entrance-only door through which the snake enters and becomes trapped." The second compartment of this trap houses the most important piece of the device: the mouse, "which is what really does the work." In this regard, Cirer explained to the audience a series of basic tips for caring for the mouse, such as "always keeping it well-fed, preferably with dry food, for example, for rabbits, and ensuring it has plenty of water, as well as providing straw or sawdust, toys, and items for its entertainment, such as a piece of brick to play with in its holes or old children's toys. A depressed or sick mouse doesn't attract the snake's attention; on the other hand, a happy mouse can become a 'champion' that catches several." Cirer also highlighted a series of tips and precautions to keep in mind, such as "never cleaning the mouse compartment. Cleaning it will eliminate the mouse's scent, which is one of the things that attracts snakes. The mouse itself is responsible for managing this," as well as "being very careful when making the hole to place the mouse's waterer. Keep in mind that if we make it too big, the snake could get in. Just enough for its head to fit through it for it to squeeze through."

Regarding the location of the trap, Cirer explained that "it must be placed in a place where we think there might be snakes, and always horizontally or at a slight angle so that the entrance door always remains closed." Once the snake has fallen into the trap, as the biologist explained, "we can remove it with tweezers or with gloves to avoid bites, which are not poisonous but are annoying."

IBIZA KURIER
Die Lokalzeitung für Ibiza und Formentera in deutscher Sprache

Eidechsen-Hotels zum Schutz der bedrohten Art – Workshop-Teilnehmer lernen, Schutzräume zu basteln

Lizard hotels to protect the endangered species – workshop participants learn how to build shelters

Workshop Participants Learn How to Build Shelters

Over two dozen people participated in the GEN-GOB workshop, where they learned how to build shelters for lizards. As part of the "Sargantes o Serps" ("Lizards or Snakes") project in Can Casals, participants built small houses out of bricks and mortar for the cute reptiles, whose populations have been severely decimated since the introduction of snakes to the island.

Over 40 hotels in Ibiza have also joined the initiative to build shelters for the Pityusic lizards on their properties. The shelters are set up in gardens and near stone walls, where the lizards like to live, but which have also become a favorite hunting ground for snakes.

The first shelter was inaugurated at a hotel in Es Canar. Inma Saranova of the Ibiza Preservation Fund (IPF) is pleased that many other hotels are willing to join the initiative. In collaboration with GEN-GOB and Amics de la Terra, and with funding from CaixaBank and Fundació Sa Nostra, it is part of the new project "Protegim Ses Sargantanes."

"It is a proven fact that the lizard has already been eradicated in a significant part of the island, and the rapid spread of the snakes raises fears that they will colonize the entire island in a few years," warns Jordi Serapio, project coordinator. According to him, urban areas serve as a "barrier" for the snakes, allowing small lizard populations to survive.

For this reason, the project aims to make urban spaces more lizard-friendly. The boxes, which serve as refuges and can be of "great importance for their conservation," Serapio emphasizes, play an important role in this. The IPF plans to build 100 shelters over the course of the year and is therefore seeking the participation of hotels and resorts on both Ibiza and Formentera.

DIARIO de IBIZA

El futuro de la lagartija pitiusa en manos de todos

The future of the Pityusic lizard is in everyone's hands

The conservation challenge for this species is enormous, but the seriousness of the situation should not discourage us from our efforts, but rather encourage us to redouble our efforts.

Specimen photographed more than 10 years ago in Pou des Lleó. Currently, this population appears to have completely disappeared due to snakes. Jordi Serapio / INMA SARANOVA

Inma Saranova
17 SEPT 2023 6:00 Actualizada 17 SEPT 2023 16:59

The preservation of the Pityusic wall lizard is surely one of the greatest and most urgent environmental challenges we currently face in Ibiza and Formentera, given the delicate situation of this emblematic species two decades after the first invasive snake was discovered on the island of Ibiza.

The proliferation of snakes is a challenging problem, and for this reason, this year the environmental foundation IbizaPreservation has focused on improving the situation by launching its project 'Protegim ses sargantanes' (Protect your lizards). This project seeks to support the actions initiated by other stakeholders in the preservation of lizards through a multidisciplinary approach based on improving the resilience of lizard populations on the one hand, and simultaneously containing the snake invasion on the other.

Thus, to date, thanks to a grant from Caixabank and Fundació Sa Nostra, Ibiza Preservation has built, in collaboration with GEN-GOB, one hundred artificial lizard sanctuaries, the majority of which have been installed in hotel gardens. The main objective of this initiative is to improve the ecological conditions of the species in urban and residential areas, as this habitat can be crucial for its conservation in the current context of lizard extinction in rural areas. This initiative is based on scientific evidence obtained last year by researchers from the CREAF Institute (affiliated with the Autonomous University of Barcelona), which suggests that urban and residential areas act as reserves for the species. Furthermore, the creation and installation of these sanctuaries also seeks to obtain data on the presence of lizards in urban areas, as well as the involvement of the tourism sector in this

The Cap de Barbaria area, like the rest of Formentera, is currently home to well-preserved lizard populations. Jordi Serapio / INMA SARANOVA

conservation challenge. In this regard, the sector's response has been very positive, with more than 40 resorts participating.

IbizaPreservation has also produced 100 smart traps, an initiative focused on producing a new prototype of selective traps that are useful for use in areas where the presence of lizards is still high. Part of this production will be donated to the Consortium for the Recovery of Fauna of the Balearic Islands (COFIB) to support its trapping campaign, while the remainder has been installed in the same hotels selected as sanctuaries.

Likewise, at the end of May, IbizaPreservation launched its own pilot project, focusing on intensive snake trapping in the protected natural areas of Ses Salines Natural Park and Ses Feixes de Talamanca. This project involves managing a large number of traps in a small area. With this initiative, the foundation seeks to enhance the eradication efforts carried out by COFIB in these areas. Both sites are important biodiversity hotspots, but their current snake infestation status differs substantially.

While Ses Feixes is home to a high density of horseshoe snakes and there is still a small population of lizards that require conservation, in Ses Salines, on the other hand, the current presence of snakes appears to be still low, while the lizard density remains at normal levels for the time being. Currently, a total of 50 traps are being managed across both areas (20 in Ses Feixes and 30 in Ses Salines), and despite the small number, significant results have already been recorded. As of August 31, the total number of captures has been 75 (69 snakes in Ses Feixes, six in Ses Salines), a number that is expected to continue to increase during September and October.

These first preliminary results in Ses Feixes confirm a high density of snakes in the area. Therefore, preventing their spread to other areas and keeping predator pressure on lizards and other vulnerable wildlife low are the main objectives. Regarding Ses Salines, although only a few specimens have been removed there, the results obtained are especially beneficial for curbing the local establishment of snake populations in this recently invaded area. We could say that a single snake captured in Ses Salines is worth ten captured in Ses Feixes in terms of protecting the lizard populations in the natural park, since the data indicate that it is still possible to contain the snake invasion there and therefore protect the remaining lizard populations.

But all these efforts by the foundation, as well as those made for years by other entities on the island such as COFIB itself, 'Sargantanes o Serps' (Sargantanes or Serps) —formed by Amics de la Terra and GEN-GOB— or the Institut d'Estudis Eivissencs, will be in vain if the necessary biosecurity protocols are not effectively activated to prevent invasive snakes and other potentially dangerous species from continuing to reach the islands, something that, for the moment, is not being fulfilled, as well as to avoid impacts on other fauna groups in this natural area of high value. Although the Government Council approved the Decree Law on extraordinary and urgent measures for the protection of the Pityusic wall lizard (*Podarcis pityusensis*) last January, which established biosecurity measures to prevent the entry of snakes into the Balearic Islands and preserve the endemic lizard species of the Balearic Islands, the

Lizard sanctuaries installed at the AluaSoul hotel in Es Canar, one of more than 40 resorts involved in the initiative. IP / INMA SARANOVA

truth is that, eight months later, no quarantine zone has yet been established to prevent the entry of invasive species into the trunks of trees that could harbor snakes or snake eggs.

Invasive snake species are preying on native species such as lizards because they have no natural predators on our islands, and this can have a cascading effect on the entire ecosystem. In fact, these snakes are also a threat to the island's small rodents and to various bird species and their offspring. This means that the introduction of this new species could alter the structure of the Ibizan ecosystem, modifying biological patterns and the overall dynamics of the environment.

The situation in Ibiza demonstrates that, once invasive snake species establish themselves and spread in an island territory like ours, it is extremely difficult and costly to control their population and mitigate their impacts. Therefore, initial prevention is much more effective and cost-effective than subsequent control efforts. For this reason, IbizaPreservation wants to begin working on biosecurity in Formentera, where the situation is not yet as serious as in Ibiza but could undoubtedly become so.

The main naturalized species in the Pityusic Islands today is the horseshoe snake. This species is less aggressive and does not pose as great a threat to the endemic lizard population. Furthermore, according to current data, it appears to be restricted to the La Mola area. However, the consequences of a possible naturalization of the horseshoe snake for Formentera's biodiversity, and especially for its lizard populations, would be disastrous (as is currently the case in Ibiza). For this reason, a biosecurity protocol is necessary for the port of the Pityusic Islands based on early detection and rapid response systems to minimize the risk of accidental introduction of these snakes from Ibiza. Thus, IbizaPreservation has already made itself available to the Formentera Council to help promote this protocol.

This does not, under any circumstances, mean losing focus on the urgent problem we face in Ibiza. Therefore, an increase in snake eradication efforts by all stakeholders and an improvement in trapping seem necessary, a task that IbizaPreservation will also focus on, even though there is no guarantee of success. A scenario in which the total eradication of invasive snakes seems unrealistic, as external experiences invite pessimism, as was raised at the Herpetology Congress held in April in Santa Eulària. According to experts, to date, nowhere in the world has there been successful eradication of snakes in areas larger than one hectare.

Despite this, we cannot give up on our efforts to conserve our most emblematic species, which is why IbizaPreservation insists that a multidisciplinary effort can and should be made to support public projects and any other private initiatives aimed at this end.

DIARIO de IBIZA

Yincana en Ibiza: Conocer los secretos de las lagartijas tiene premio

Treasure Hunt in Ibiza: Discovering the secrets of lizards has its rewards

Santa Gertrudis hosts a recreational sporting event organized by IbizaPreservation, in collaboration with Ibiza Blue Challenge, dedicated for the first time to the Pitiusan snail and its habits.

Yincana Ibiza Preservation in Santa Gertrudis / TONI ESCOBAR

Bea Roselló

Santa Gertrudis 05 NOV 2023 18:01 Actualizada 05 NOV 2023 18:13

What lizards eat, where *Podarcis pityusensis* specimens can be found, when they mate, and what habitats are best for these reptiles were some of the ten questions that the more than 100 teams that registered yesterday for the second edition of the IbizaPreservation scavenger hunt had to answer.

It was just after 10:00 a.m. and the surrounding area of Santa Gertrudis was already welcoming the first teams participating in the sporting, fun, and educational event organized by the IbizaPreservation Foundation in collaboration with Ibiza Blue Challenge.

From 10 a.m. to 1 p.m., participants were able to solve the ten questions they would encounter along the route, which ran through the surroundings of Santa Gertrudis. The goal was to raise awareness about the importance of this reptile and promote its conservation.

The teams, mostly made up of one or two adults and several children, arrive at the start in stages. Juanjo Serra, from Ibiza Blue Challenge, tirelessly explains the game's methodology to each participating team. This is also done in English, for foreign families.

The director of IbizaPreservation, Inma Saranova, is pleased with the high participation in this second edition, the first dedicated exclusively to lizards.

Knowing the secrets of lizards has its rewards | / BEA ROSELLÓ

Javi crosses the starting line with his son Edgar. Minutes before, his wife and daughter did the same. In the end, this is an activity that serves not only to learn but also to entertain the little ones in a fun way. This isn't the first time Javi has participated in one of these scavenger hunts. He knows how it works, but Juanjo reminds him that answering incorrectly or leaving answers blank results in penalties.

David is also about to cross the starting line with his mother, Sandra. They are participating for the first time, but David has no doubt that he will do well and, in fact, he has no doubt that he will win. He has every reason to: "Today [yesterday] my lucky bracelet broke, and that means I won't need any more. Also, I wear number six and I'm six years old," he says.

Just after eleven in the morning, the group consisting of Carlos, Belén, and Nacho, the youngest, recharges at one of the tables. They were the first to cross the finish line, but they don't know if they've won because it's not just the time spent finding the clues and answering the questions that counts, but also whether the answers are correct.

Meanwhile, Claudio is ready to begin the test with four little companions: Lucía, Julia, and Elena. The fourth, a doll riding in a toy car, doesn't yet have a name.

Knowing the secrets of lizards has its rewards | / BEA ROSELLÓ

DIARIO de IBIZA

Un proyecto piloto de trampeo intensivo captura 93 serpientes en ses Salines y ses Feixes

An intensive trapping pilot project captures 93 snakes in Ses Salines and Ses Feixes

The Protegim ses Sargantanes initiative is promoted by IbizaPreservation.

File image of a snake captured by a volunteer / DI

efe. Ibiza

23 NOV 2023 6:00 Actualizada 23 NOV 2023 8:46

The intensive trapping pilot project developed by Ibiza Preservation has concluded with 93 snakes captured in two protected areas of the island, the environmental organization reported yesterday in a statement.

The project, called Protegim ses Sargantanes, focused on the Ses Salines and Ses Feixes de Talamanca Natural Park, where 20 traps were placed along transects of approximately 250 linear meters, with weekly checks to remove any captured snakes.

In Ses Feixes, between May 22 and November 6, a total of 87 horseshoe snake captures were recorded, with an average of 3.6 per week, demonstrating the "enormous density" of this species in an area where a population of native lizards still exists, according to Ibiza Preservation.

In Ses Salines, between June 13 and November 6, six specimens were captured. The technician responsible for setting and checking the traps, Inés Roig, explained that, "although the number has been lower," this is an area where the snake population is not yet "as established" as in Ses Feixes.

"Therefore, these captures, even if they are few, can be key to protecting the emblematic Pityusic lizard and maintaining the biodiversity of this natural park in general," she emphasized.

In fact, according to the director of Ibiza Preservation, Inma Saranova, the objective in Ses Salines Natural Park is "to prevent snake colonization of this territory, where there is still room for maneuver."

Saranova also noted that they are studying the results of this pilot exercise to expand it next year and maximize trapping efforts in the island's protected areas.

PERIÓDICO de IBIZA Y FORMENTERA

El conseller Simonet ve muy complicado erradicar la plaga de serpientes en Ibiza

Minister Simonet believes it will be very difficult to eradicate the snake infestation in Ibiza

The Government intends to launch the Sa Rota irrigation pond in early 2024.

Simonet visited the Sa Rota irrigation pond yesterday with the president of the Ibiza Council, Vicent Marí, and the mayor of Santa Eulària, Carmen Ferrer | Photo: CAIB

Juan A. Torres | Ibiza | 14/12/23 0:31

The Balearic Government believes that eradicating the snake infestation on the island of Ibiza is "very complicated." This was stated yesterday by the Balearic Minister of Agriculture, Fisheries, and the Natural Environment, Joan Simonet, on the TEF program "Bona Nit Pitiüses." However, Simonet noted that his department will maintain the campaigns it has launched to control this snake infestation that has threatened the Ibizan wall lizard. "I don't dare say it can be eradicated, so the important thing is to keep the populations under control, see how they are moving, and make progress in improving management," Simonet stated.

Another epidemic that also concerns the Government is that of the pine processionary caterpillar. In this regard, the Ministry of Agriculture has carried out aerial spraying in the northeast of the island this year. Simonet announced that this treatment will continue in 2024 "because an expansion has been detected." It's a danger to forests because it weakens them and, in the event of a fire, causes much more damage. We need to reduce forest cover in Ibiza because it's a risk, and there are many people living near forests."

Irrigation

Another announcement Simonet made on the TEF political news program was the launch of the Sa Rota irrigation reservoir in Santa Eulària in early 2024. Joan Simonet, who visited the facility this morning with the president of the Ibiza Council, Vicent Marí, and the mayor of Santa Eulària, Carmen Ferrer, emphasized that, now that the works are complete, "we are in the process of completing the administrative procedures between the regional government, the irrigation association, and Abaqua to be able to inject desalinated water. In this way, we are confident of being able to supply it to farmers as soon as possible so they can use it for all their crops."

The Minister of Agriculture explained that the reservoir will need desalinated water because the treated water becomes saline when it enters the urban water system and is unsuitable for irrigation. "While Abaqua and the local authorities work to prevent this salinization, we will purchase desalinated water to mix with the treated water and reduce the salinity," Simonet noted.

Regarding the Formentera irrigation reservoir, the Minister of Agriculture explained that the construction part is already complete, "and now we need to obtain the concession for desalinated water. The problem is that the water flow is so low in winter that the reservoir never exceeds 25 or 30% of its capacity, so we find ourselves at the beginning of the season when farmers start irrigating and have to stop a month later because there is no more water." The Government's plan is to begin the irrigation season with the reservoir level at 80%, "because what farmers want is to be sure they will have water," Simonet noted.

Drought

Minister Simonet also spoke about the problems caused by the lack of rainfall for crops. "We will have more and more problems in this regard," noted Joan Simonet, who advocated optimizing the water already used for agriculture, investing in new crop varieties that adapt to situations of water scarcity, and reusing existing resources, such as the aforementioned irrigation ponds.

Sector Demands

Simonet explained the demands that Ibizan farmers send him every time he visits the island. "They tell me about the need to implement irrigation ponds, the need for investment aid, and the streamlining of this aid so that it is distributed on an appropriate schedule and is paid quickly," emphasized the Minister of Agriculture.

Other requests they convey to him are "the difficulties of installing agricultural facilities such as water tanks, the possibility of selling their produce directly, or the availability of agro-ranches."

Regarding the wood pigeon infestation, Simonet explained that this issue does not fall under his department but rather under the jurisdiction of Hunting, a responsibility that has been transferred to the island councils. "This must be regulated through hunting activities, and if we have to act as the Department of Natural Resources, we'll see about it," Simonet stated.

The fishing sector has expressed to the Balearic regional minister the need for more promotion, also complaining that "they are being criminalized when they are the most conservative. The primary sector must be structured and powerful. We must escape the paternalism of the Regional Ministry and ensure that they believe they are a sector and that, for example, they can process their grants."

Simonet also visited the s'Escorxador facilities yesterday. A few weeks ago, the Government, through the Balearic Islands Agricultural and Fisheries Guarantee Fund (FOGAIBA), approved direct aid of €500,000 to the Association of Island Public Services for the slaughterhouse renovation works. In this regard, it should be noted that the renovation and modernization project has a total budget of €1,385,153.55.

PERIÓDICO de IBIZA Y FORMENTERA

Organismo autóctonos se vuelcan en un bioprotocolo para controlar la entrada de serpientes en Formentera

Local organizations deploy a bioprotocol to control the entry of snakes into Formentera

IbizaPreservation has brought together eight public and private entities to collaboratively launch an ambitious project that seeks to minimize the infestation and define strategies.

R.I. | 21/12/23 16:48

The environmental foundation has brought together eight public and private entities to collaboratively launch an ambitious project that seeks to minimize the possibility of snakes being introduced from Ibiza and define strategies for their early eradication in the port of La Savina.

The situation of the Pityusic wall lizard (*Podarcis pityusensis*), a species endemic to Ibiza and Formentera, has been critical since the first specimen of an invasive snake was found in Ibiza two decades ago. Therefore, IbizaPreservation launched its "Protect Your Snakes" project earlier this year. Among other things, it seeks to ensure that the situation of the invasion of non-native snakes in Formentera does not become as critical as it currently is in Ibiza, where the lizard has already become extinct in some areas in the northeast of the island.

To this end, thanks to financial support from CaixaBank and the Sa Nostra Foundation, as part of its Environmental Call, IbizaPreservation has launched a project that seeks to combat the proliferation of snakes belonging to the Colubridae family sensu lato in the southern Pitiusa region by establishing biosecurity measures in the port of La Savina in Formentera to minimize the possibility of access by these snakes from Ibiza, where the current density is particularly high. To this end, the environmental foundation has called on all the administrations, social agents, and public and private entities capable of doing their part to collaboratively undertake this ambitious mission.

The reception, according to Inma Saranova, director of IbizaPreservation, has been very positive:

"We are very happy to see that all the doors we have knocked on have been opened and that all the entities capable of participating in the development of a biosafety protocol in the Port and implementing the resulting measures are fully committed to this goal."

In fact, last week, a first meeting was held at the Formentera Nautical Sports Center. In addition to representatives from IbizaPreservation, representatives from the Balearic Government's Species Protection Service, the Consortium for the Recovery of Fauna of the Balearic Islands (COFIB), Formentera Civil Protection, officers from the Formentera Port Police, representatives of the main shipping companies operating in the port, environmental experts from the Ibiza and Formentera Councils, as well as the environmental councilors of both island institutions, were also present.

The objective is to develop a working process with the various relevant stakeholders to identify early eradication and biosecurity measures that minimize the entry of snakes from the port of La Savina and their spread to the entire island. To this end, several working meetings will be held between all these stakeholders in 2024, culminating in the creation of the aforementioned protocol.

The ultimate goal is to reduce the impact of the snake invasion on Formentera and protect the population density of the Pityusic wall lizard in an area of high ecological value such as the lesser Pitiusa.

DIARIO de IBIZA

Las 798 lagartijas de Ibiza del Museo de Ciencias Naturales

The 798 Ibizan lizards at the Museum of Natural Sciences

The skeleton of a 21-meter-long fin whale, an African elephant, the skeletal remains of a Megatherium americanum, meteorites... Madrid's Natural Sciences Museum houses astonishing, and in some cases colossal, objects, but also some of the smaller gems of the Ibizan animal kingdom. It houses 1,044 Ibizan amphibians and reptiles, including around 100 calàpets, 33 dragons, and almost 800 Ibizan wall lizards, most of them belonging to the collection captured by zoologist Alfredo Salvador almost half a century ago.

Three lizards that are part of Alfredo Salvador's collection. / J.M.L.R.

José Miguel L. Romero

Ibiza 25 FEB 2024 6:00 Actualizada 25 FEB 2024 10:29

In the heart of Madrid, between Vitruvio and Paseo de la Castellana, a space has been reserved for decades for one of the icons of the Pitiusas: its lizards. Between these two well-known Madrid streets is the Madrid Museum of Natural Sciences, a striking building with a brick and iron structure, cast iron columns, metal joist floors, and Polonceau-style roof trusses. Construction began in 1882 as the Palace of Arts and Industry and was adapted for its current function between 1909 and 1910. In its basement, right in the anteroom of the 19th-century Royal Cabinet and behind a metal hatch over which two stuffed crocodiles (one enormous) hang, lies the Ibizan treasure cave: there are 798 *Podarcis pityusensis* from all corners of Ibiza, placed in 79 airtight jars filled with alcohol for preservation. Of these, almost all (749) belong to the collection compiled almost half a century ago by the herpetologist Alfredo Salvador Milla (Madrid, 1950), whose work "underpins modern Spanish herpetology," as stated in the Enciclopèdia de Ibiza i Formentera. Following the research carried out by Eduard Boscà almost a century earlier, Salvador was the first scientist to compile an Iberian herpetological guide, which includes the reptiles and amphibians of our islands.

Salvador's Collection

On the museum's main floor, upon entering, visitors encounter two colossi: the complete skeleton of a fin whale, 21 meters long, hanging from the building's ceiling, and a huge naturalized African elephant. But one floor below, hidden from view and subject to strict temperature and humidity control (currently, the temperature in the facility is 21.2 degrees Celsius and the humidity is 38%), are the tiny *Podarcis pityusensis*. Marta Calvo Revuelta, curator of the herpetology collection at the Museum of Natural

Three jars with lizards from different islets and areas of Ibiza. / J.M.L.R.

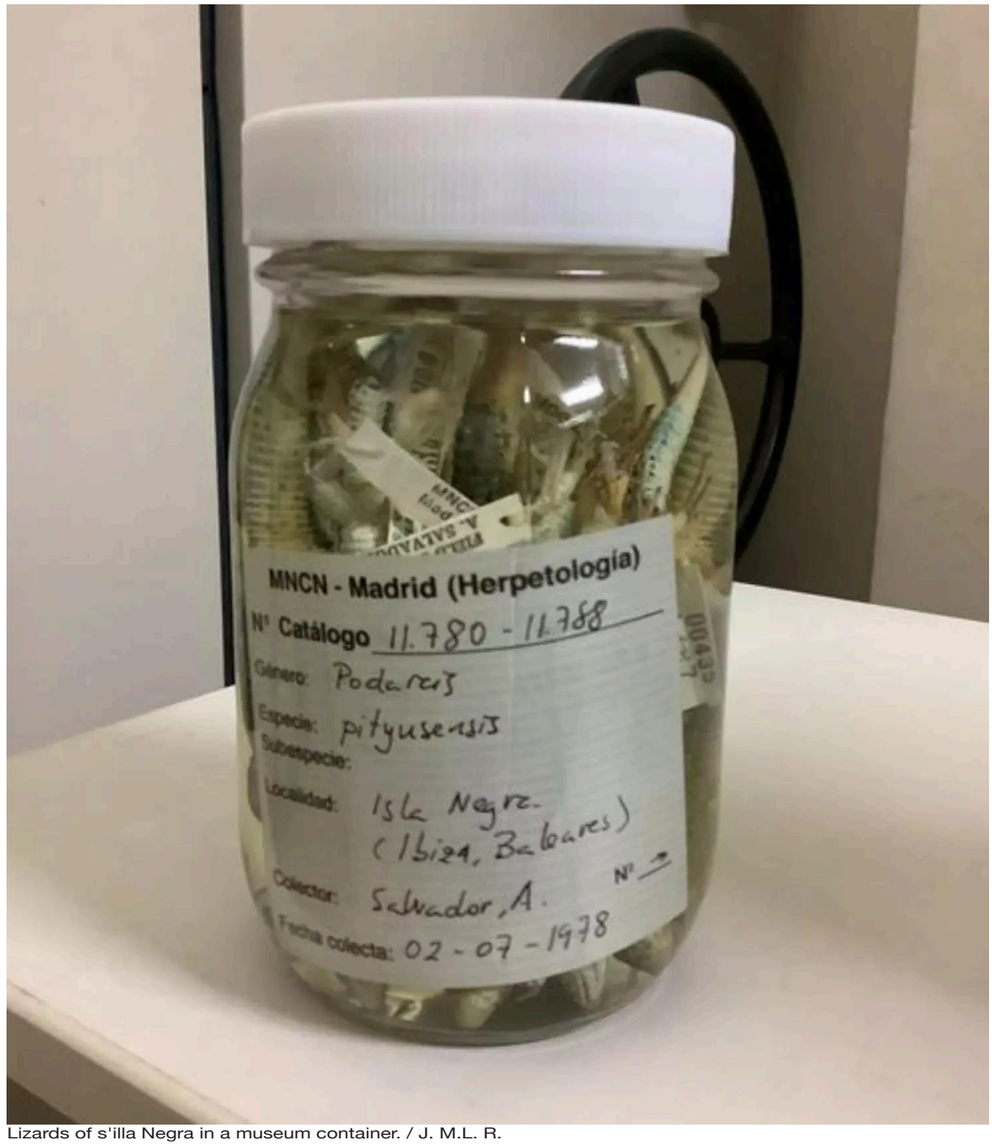
Sciences, and Alberto Sánchez, also a curator, open the heavy door behind which, on the shelves of compact cabinets, are hundreds of jars containing reptiles from all over Spain, including those from former colonies, arranged taxonomically by family, genus, and species. This is the room of the Applied Zoological Unit (UZA). Of these containers, 79 correspond to the 749 Ibizan lizards collected by Salvador between 1977 and 1978. Calvo turns a crank to move the heavy cabinet assigned to the lizards and allow access to its shelves. Then, after climbing a portable ladder, he searches the upper shelves, on the front of which are several blue labels identifying the Ibizan *Podarcis*: *Podarcis pityusensis negrae, Podarcis pityusensis vedrae, Podarcis pityusensis muradae*… He begins to pass Sánchez containers filled with clear alcohol, inside which there are anywhere from a couple to countless lizards, tightly packed and stretched out.

30 subspecies in jars

Although half a century has passed since they were introduced there, they still retain their vivid blueish or greenish colors, depending on the islet they come from. Some even retain orange touches on their backs. The enormous ones from Sa Bleda Plana are an intense black color, even more so than when alive; likewise, their bellies, normally indigo blue, have become sooty. The curator removes from the shelves containers filled with reptiles from the island of Penjats (in Es Freus), the island of Cala Salada, the island of Es Canar, Sa Conillera, S'Espardell, S'Espartar, the island of Gastaví, Ses Margalides, Sa Murada, Es Vedrà, and Es Vedranell… From a total of 30 Pitiusan subspecies.

The bottles have double-sealed lids to prevent the alcohol from evaporating, keeping them almost intact. "Old-fashioned blown glass bottles are very beautiful, but the alcohol disappears more easily in them," explains Marta Calvo. As soon as they notice that one of the bottles they're handling has lost some liquid, they immediately refill it.

Each container bears a large label identifying the corresponding catalog number, its genus (*Podarcis*), its species (*pityusensis*), its place of origin, and the name of its subspecies or taxon. It also indicates the collector (Salvador A.) and the date of capture. Each lizard is identified by a pair of labels attached to its legs: one with the museum's catalog number (MNCN Madrid, printed on them) and another with the field number (the collector's, A. Salvador in this case). Tails, legs, and heads are interspersed inside the jar with numbered strips, two per reptile. Some *Podarcis* have their bluish bellies slit: they were gutted to study their diet.



Lizards of s'illa Negra in a museum container. / J. M.L. R.

Marta Calvo preserves another treasure from Alfredo Salvador's legacy: a copy of his field notebook, written and drawn in his own hand. On August 21, 1979, she captured specimens there weighing up to 12 grams: "Center of the belly sky blue and the sides of the belly [illegible]. Light cobalt blue sides. Yellowish green back," she describes one of them. The day before, she had been in Sa Bleda Plana, where the largest weighed 17 grams: "Dark ultramarine blue belly. Greenish back. Bluish sides." That month he also visited s'Escull de s'Espartar ("light green back. Grey sides with brown reticulation and green and blue ocelli. Cobalt blue markings on the external ventral wings"), es Vedranell ("Same colouration but slightly darker than those of es Vedrà") and Malvins ("brick-red belly, throat with reticulation the colour of the belly"). In January 1976 he visited sa Conillera: "Under the stones there are many lizards, asleep but not in torpor. Between one and five lizards were found under each stone," the zoologist wrote about it five decades ago.


They fill a container in which some of the alcohol had evaporated. / J.M.L.R.

Their legacy remains intact in Madrid. Who knows, maybe in a few years, due to the proliferation of snakes, we'll have to go to this museum's collection (or the one in Berlin) to learn what the Pityusic lizards were like.


The entrance to the room where the Ibizan lizards are kept is in the basement, next to the Royal Cabinet. / J.M.L.R.

DIARIO de IBIZA

Una ‘lacerta’ y 176 ‘calàpets’ de Ibiza de 1882

A 'lizard' and 176 'calápets' from Ibiza from 1882

The other 'Ibicencos' of the Natural Science Museum

A 'lizard' and 176 'calápets' of 1882

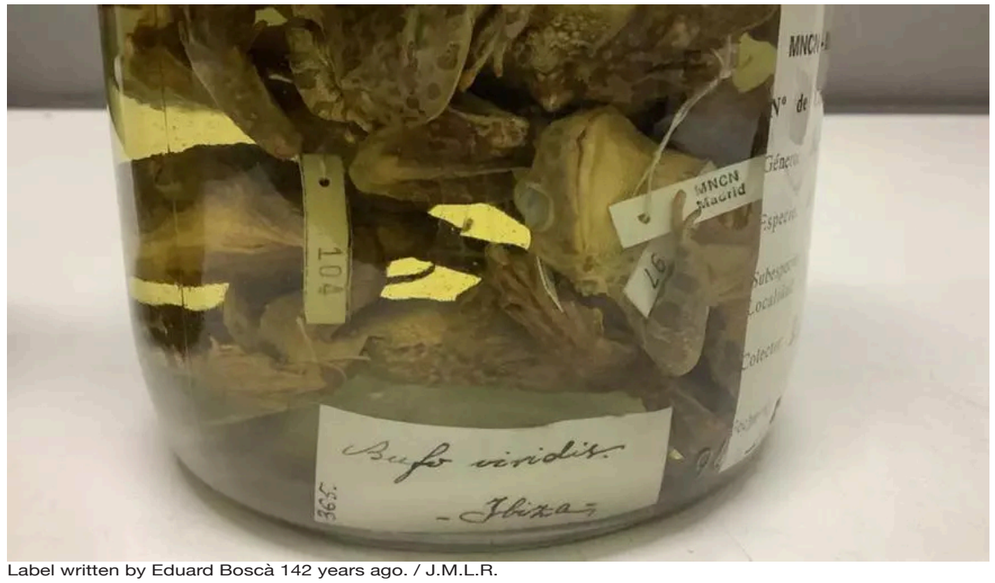
25 FEB 2024 6:00
Actualizada 25 FEB 2024 10:37

The Natural Sciences Museum in Madrid isn't just home to Ibizan lizards. There are also geckos (*Tarentola mauritanica*) and balearicus (*Bufote balearicus*), some of which were captured almost a century and a half ago. In the compact cabinets of the amphibian room (also located in the basement), there are up to 12 jars filled with balearicus. Their number suggests that they were not difficult to find at that time. They are currently in danger of extinction on the island of Ibiza. These containers contain 176 specimens, 35 of which were captured between 1881 and 1882 by Eduard Boscà, a physician and doctor of natural sciences considered the driving force behind Spanish herpetology.

Strips written by Boscà

Inside each jar is a strip of paper written by Boscà himself: on one side, with his name (twice, as a collector and as a collection), and on the other, with the name of the species (*Bufo viridis*) and its place of origin (Eivissa). The back of the calàpets specimens is brown, with even darker specks of the same color, and the belly is whitish, although it is possible that after 142 years its color bears little resemblance to the original. They have numerous blister-like bumps.

Marta Calvo shows another gem from Eduardo Boscá's legacy that she treasures: the file on 18 Lacerta muralis specimens, lizards captured at the "Castillo de Eivissa" in March 1882 and donated by the scientist to the Museum of Natural Sciences in 1914. *Lacerta muralis*? But aren't the ones from Eivissa



Label written by Eduard Boscà 142 years ago. / J.M.L.R.

Podarcis pityusensis? "In the 19th century, even up until the 1920s, all the lizards in Western Europe, including the *Podarcis*, were within a single species: *Lacerta muralis*. There are historical reasons, such as the influence of Darwinism. Starting in the 1930s, the trend toward dividing species began. That's where we are today," explains Valentín Pérez Mellado, professor of Zoology at Salamanca.

They also keep eight containers with Ibizan geckos in the same room as the Pitiusan podarcis. One of them is a pink gecko (*Hemidactylus turcicus*), with a single specimen. The rest are common geckos

Three calàpets from the Boscà collection. They've been in a bottle of alcohol for almost a century and a half. / J.M.L.R.

DIARIO de IBIZA

Cuando se capturaban las lagartijas de Ibiza a gomazos

Nature: The 798 lizards of Ibiza at the Museum of Natural Sciences

When Ibizan lizards were captured with rubber bands

In the 1970s, they were trapped, sacrificed, and each specimen was injected with a fixative solution of formaldehyde and ethanol.

Maera Calvo and Alberto Sánchez in the herpetology laboratory of the museum. Below, card of '*Lacerta muralis*' caught by Eduard Boscà in 1882 in Ibiza. j.m.l.r. | J.M.L.R.

25 FEB 2024 6:00
Actualizada 25 FEB 2024 10:37

Valentín Pérez Mellado, professor of Zoology at the University of Salamanca and the foremost expert on *Podarcis pityusensis*, participated 46 years ago, alongside Alfredo Salvador, in the campaign to capture Ibizan wall lizards. Salvador was his friend, a classmate and classmate, but also his thesis advisor: "What happened was that he completed his thesis in a dazzling fashion, in two years, in the United States, and during those two years, I spent 14 months in the military and the rest in a Reserve in Salamanca as a contracted employee. When I began my thesis, he was already a doctor." Salvador began working in the Zoology Department at the University of León as a contracted assistant and suggested Pérez write his thesis on herpetology: "He would direct it for me, he told me. Great, I thought." They were very good friends. In Ibiza, they went from islet to islet aboard a Zodiac in search of reptiles.

Alfredo Salvador, explains Pérez Mellado, "was a March Foundation fellow, with whom he conducted a systematic review of all the subspecies of Ibiza. This collection is the one cared for by the Museum of Natural Sciences in Madrid. It's the most important collection of Ibizan lizards, the *pityusensis*, in the world." He asserts that it is "magnificent material," a "reference," with "very well-prepared" specimens.

What was done back then, no one even considers now: "It was a time, the 1970s, when everything was still collected and everything was slaughtered. I've never done anything like that again." Now, they are collected gently (with a lasso) and examined quickly on-site so as not to stress the animal. Then they

Jars with lizards from the Alfredo Salvador collection. / J.M.L.R.

are deposited back in the same place where they were collected. Not a meter further.

But in the 1970s, "they were caught and sacrificed." Each specimen was then injected with a fixative solution containing formaldehyde and ethyl alcohol (ethanol). They were then placed "in containers and left there until they dried and became like rocks, stretched out." They were later labeled, "to be studied later, with plenty of time in the world, in the laboratory," explains Pérez.

The way they captured the lizards was also peculiar: they used a wide, flat, closed rubber band, a centimeter and a half long, brown, which in the 1960s and 1970s students used to hold several books together or to keep folders, many of them made of cardboard, closed. "It was used," the zoologist explains, "like a slingshot, from a distance of about two or three meters. You put it on your left thumb

Lizards of es Porcs. / J.M.L.R.

Lizard of es Malvins. / J.M.L.R.

and stretched it out with your right hand to throw it. They were stunned or killed. With that system, I've even caught ocellated lizards [which can measure up to 70 centimeters]. We had great aim and skill. But that's history. I don't even like baiting them to catch them. I catch them with the lasso and then, after examining them, I return them alive to the place where I caught them. I've become increasingly purist about this."

A Decision

Salvador suddenly made a decision that affected his career and that of Pérez, according to Pérez: "His wife, a high school teacher, lived in Santander. They wanted to get together. He was fed up with traveling, moving from island to island, from one side of the Peninsula to the other. And in the end, they did it: they stayed in Guadarrama, near Madrid. And he said he'd never move from there again. He never returned to the Balearic Islands again. I told him I wanted to continue researching on the islands: 'Work whatever you want there. I don't want to know anything more about the Balearic Islands,' he told me. He stayed in the Guadarrama mountains and retired there. He didn't do anything else."

DIARIO de IBIZA

Los datos del Govern confirman que «las serpientes han Colonizado prácticamente toda Ibiza»

Government data confirms that "snakes have colonized practically all of Ibiza."

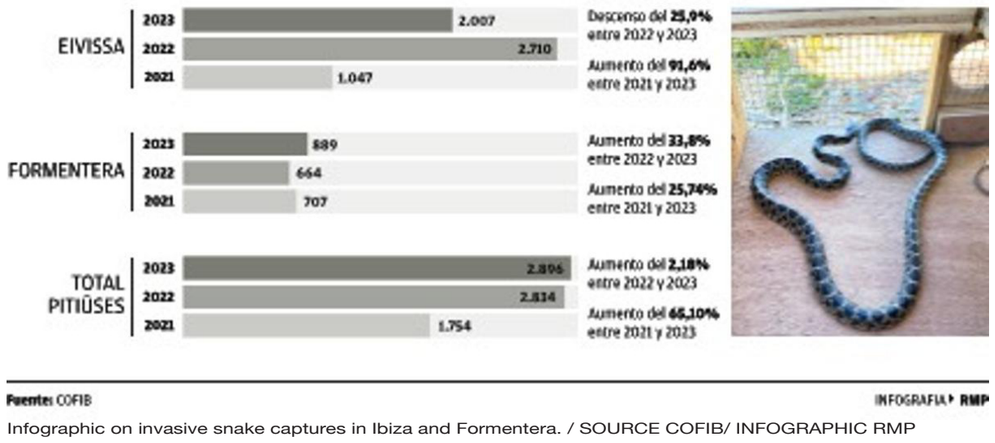
The Directorate General for the Natural Environment and Forest Management presents the results of the 2023 snake control campaign, in which 2,896 specimens were captured, 2,007 in Ibiza and 889 in Formentera.

Moments before the start of the technical meeting at the Ibiza Council. / TONI ESCOBAR

Maite Alvite
Ibiza 11 MAR 2024 20:32

The Regional Ministry of Agriculture, Fisheries and the Natural Environment of the Government is increasingly clear that "snakes have arrived in the Pityusic Islands to stay, especially in Ibiza" and, given this reality, the only option left is to increase efforts to "ensure that their negative impact on biodiversity is as minimal as possible." This was stated this morning by the Director General of the Natural Environment and Forest Management, Anna Torres, at the Consell de Ibiza, following a technical meeting in which the results of the 2023 snake control campaign in the Pityusic Islands were presented.

According to data provided by the Consortium for the Recovery of Fauna of the Balearic Islands (Cofib), during the eight months of operation of the project (from April to November), 2,896 invasive snakes were captured in the Pityusic Islands, which represents a small increase of 2.18% compared to 2022. In the specific case of Ibiza, 2,007 specimens were caught (61 white snakes and 1,946 horseshoe snakes), almost 26% less than the previous year. In Formentera, 889 were captured in 2023 (888 white snakes and one horseshoe snake), 33.8% more than in 2022.



Infographic on invasive snake captures in Ibiza and Formentera. / SOURCE COFIB/ INFOGRAPHIC RMP

Control, not eradication

As Torres pointed out, these figures confirm that the horseshoe snake (*Hemorrhois hippocrepis*) has colonized practically the entire territory of Ibiza and also reveal that the white snake (*Zamenis scalaris*) has been detected, which is also present in Formentera. In this regard, the manager of the Cofib, Lluís Parpal, provided more information, explaining that the snakes have been expanding "from the northeast of Ibiza to the southwest of the island, reaching Sant Antoni and Sant Josep." The fact that the invasion has progressed so far means, in the words of the Director General of the Natural Environment, "that eradication on the island will be very complicated" and, therefore, "what we are trying to do is control it so that the snake population does not continue to grow." "None of the species detected is dangerous to people; however, there is concern about the effects they may have on the islands' ecosystems," she noted.

Torres was more optimistic about Formentera: "We have the most localized snake population there, and therefore, both human and material efforts will be made to try to eradicate this invasion; although we cannot yet guarantee that this will be possible, it will require continued efforts over the years."

Technical Reinforcement

The director of Cofib explained that seven technicians worked in the 2023 snake control campaign in Ibiza and "1,360 traps were in operation." In Formentera, they had "two technicians with occasional support from Ibiza and 350 cages." The intention for 2024, he announced, is to reinforce the staff with "two more technicians in Ibiza and one more in Formentera."

"Capture yields have decreased compared to 2022 for various reasons, but what's important to note is that the efforts being made with this project are paying off because researchers tell us that wherever work is being done to trap snakes, the density of lizards remains the same or they are returning to the area," he noted as a positive fact.

He also praised the measure the Government implemented last year to limit the entry of olive, carob, and ornamental holm oak trees to prevent the arrival of snakes to the Balearic Islands, "which seems to be working because most importers of these trees to the islands are asking the Administration about when and how they can transport them to the Community without problems." He acknowledged, however, that "a little more work needs to be done on the inspection protocols that must be carried out when the ornamental trees arrive at the port."

A moment from the technical meeting. / TONI ESCOBAR

Planning for 2024

At the technical meeting, in addition to presenting last year's results, the planning for this season was outlined. The Government's intention is to "continue the snake control project in the Pitiüses, which has been funded through the Sustainable Tourism Tax (STT) and ends in May 2024, and to launch a new plan with STT funds to finance all actions in the coming years." Parpal explained that "the new STT project being worked on will be four years in duration and will involve an investment of almost two million euros, three-quarters of which will be allocated to controlling invasive species in Ibiza and Formentera."

Regarding new strategies to curb the spread and density of snakes in the Pitiusas, Parpal explained that "we are working, in collaboration with the Canary Islands government, on a passive control system, looking for some type of cage with a product or scent that attracts snakes and that doesn't require a mouse inside as a lure or constant monitoring by technicians."

The Cofib manager and Torres also spoke about the importance of "informing, raising awareness, and encouraging citizen collaboration" to address this problem.

In addition to the Director General of Natural Environment and Parpal, today's meeting was attended by the Minister for Environmental Management of the Ibiza Council, Ignacio José Andrés; the Minister for Environmental Management of the Formentera Council, Verónica Castelló; representatives of the island's local councils; environmental agents (AMA), and researchers who have participated in studies monitoring the snake population.

The environmental foundation IbizaPreservation has reiterated its commitment to conservation initiatives for lizards, an endangered species in Ibiza, with the launch of a new project that seeks to protect populations of the Podarcis pityusensis snake by installing traps to capture them on agricultural land. The project was announced this Monday in honor of Earth Day.

According to the organization in a statement, the initiative launched a few days ago with the placement of eight traps in the garden of the House of WOW restaurant and plans to install a total of 250 on approximately 20 farms over the coming months.

Thus, the foundation aims to link the objectives of its Protegim Ses Sargantanes program with those of

Ibiza Produce, another IbizaPreservation program that promotes organic and regenerative agriculture.

According to Jordi Salewski, coordinator of Ibiza Produce, “The lizard is not only very important for biodiversity, but also plays an important role in maintaining crop health, providing natural pest control and contributing to the soil's nutrient cycle. Thus, by participating in this new initiative, the island's farmers are increasingly committed to sustainable and regenerative management of their farms, thus simultaneously improving the quality of their produce and the island's environment.”

Most of the traps will be installed as part of Ibiza Produce's Eivissa Sembra Futur program, under which the 12 farms selected to receive aid totaling €7,000 for the planting of more than 200 organic fruit trees of local varieties will also participate in this trapping initiative.

Furthermore, within the framework of its Protegim Ses Sargantanes program, IbizaPreservation will also expand its intensive trapping project this year in protected natural areas on the island of Ibiza, specifically in the Ses Salines Natural Park and Ses Feixes de Talamanca, with 80 traps between the two locations, thus doubling the number deployed in 2023, when around 100 snakes were captured with just 40 strategically placed traps.

Jordi Serapio, the program coordinator, highlights the challenges that this and other Ibizan environmental organizations face in preventing the extinction of this endemic lizard: “It is becoming increasingly clear that horseshoe and ladder snakes are here to stay, as has happened with many other invasive species around the world. However, it is essential that efforts continue to control their populations and minimize the negative effects they have on local biodiversity as a whole.”

In this way, IbizaPreservation seeks to improve its impact on the capture of invasive snakes and the enhancement of native lizard populations in various ecosystems on the island of Ibiza.

The foundation seeks synergies between its Protegim Ses Sargantanes and Ibiza Produce programs to promote the protection of the emblematic Pitiusan lizard. / IBIZAPRESERVATION

03-05-2024 - R.I. - Sant Antoni donates 25 snake traps to the municipality's Hunters' Society (control)

PERIÓDICO de IBIZA Y FORMENTERA

Sant Antoni cede 25 trampas para serpientes a la Sociedad de Cazadores del municipio

Sant Antoni donates 25 snake traps to the municipality’s Hunters’ Society

Sant Antoni donates 25 snake traps to the municipality’s Hunters’ Society

R.I. | Ibiza | 03/05/24 14:08

The Sant Antoni de Portmany Town Council has donated 25 snake traps to the Sant Antoni de Portmany Hunters' Association for snake control in the municipality.

The Councilor for the Environment, Beaches, Cleanliness, and Animal Welfare, Pepita Torres, delivered the cages, which aim to eradicate or reduce the number of snakes present on our island.

The Town Council has received the traps from the General Directorate of Natural Environment, through COFIB (Balearic Islands Wildlife Recovery Consortium), which plans to deliver a total of 100 traps to each municipality. The first 25 have been donated to the Sant Antoni Hunters’ Association, which will be responsible for their distribution and management.

Public institutions are working on a joint strategy and protocols to eradicate or reduce the number of exotic species on the islands through various actions, which are prioritized in areas where there is a greater risk to the conservation of threatened fauna, flora, or native habitats.

"Setting traps is a safe and selective method that guarantees the capture of only snakes, which is why the cages provided are specifically designed for this purpose," stated the Sant Antoni City Council.

07-05-2024 - Redacción Digital - Snakes in Ibiza: the plague that has won the battle (control)

DIARIO de IBIZA

Serpientes en Ibiza: la plaga que ha ganado la batalla

Snakes in Ibiza: the plague that has won the battle

IEE calls for "widespread and strategic trapping operations throughout the territory" of Ibiza.

A snake captured in Ibiza. / JOSÉ MIGUEL L. ROMERO

Redacción Digital

Ibiza 07 MAY 2024 14:00 Actualizada 07 MAY 2024 15:39

All the campaigns to combat them and save the Ibizan wall lizard have been in vain. The snakes have won the battle, and according to the Institute of Ibizan Studies (IEE), the situation is "practically unresolvable." The IEE regrets that, despite the "multiple voices that have supported us in these requests and the more than 500 volunteers involved in the enormous task of eradicating an invasive species, we believe that the measures taken by public agencies (...) have not been sufficiently successful."

In fact, they point out that according to all the studies and statements from the islands' political leaders, it is "impossible to eradicate" this invasive species and we must consider that the snakes are here to stay. For this reason, the IEE believes that a scenario of "containment" has shifted to one of "pest control."

"It is now clear that the horseshoe snake (*Hemorrhois hippocrepis*) is now present throughout the island." Therefore, they urge the authorities to act from three different perspectives.

First, something that is already being done in theory, "closing the gateway to invasive species through port controls." This has been resolved "in part," the IEE points out, but nonetheless criticizes: "But it is twenty years late and with little guarantee that it will be enforced."

Second, it calls for "widespread and strategic trapping throughout the territory" of Ibiza, "with massive distribution of free traps and mice (which act as bait)."

Finally, they urge the creation of "Noah's Ark-type lizard reserves in different parts of the island." "We still have time to do this and not lose the biodiversity heritage that the lizard represents," they warn.

08-05-2024 - S. Ribas - Snakes in Ibiza: "It's possible that in 10 or 20 years we'll be able to implement a program to eliminate them." (control)

PERIÓDICO de IBIZA Y FORMENTERA

Serpientes en Ibiza: «Es posible que en 10 o 20 años sí podamos afrontar un programa para eliminarlas»

Snakes in Ibiza: "It's possible that in 10 or 20 years we'll be able to implement a program to eliminate them."

The IEE will host the presentation of "Els rèptils dels Països Catalans" this Thursday at 7:00 p.m., featuring Antònia Maria Cirer.

The doctor in Biological Sciences Antònia Maria Cirer, yesterday, at the headquarters of the Institute of Ibizan Studies | Photo: ARGUI ESCANDON

S. Ribas | 08/05/24 0:30

Many students and nature lovers will now be able to use the scientific guide "Els rèptils dels Països Catalans" (Reptiles of the Catalan Countries). This Thursday at 7:00 p.m. the book will be presented at the headquarters of the Institut d'Estudis Ibizas (IEE). Antònia Maria Cirer, PhD in Biological Sciences (Ibiza, 1957), is one of the co-authors of this major work, coordinated by Albert Montori.

—How did this interesting project, in which up to ten authors collaborate, come about?

—It's a project promoted by a Catalan publishing house that has prepared a collection called "Maluquer," after a great Catalan naturalist who also visited Ibiza. In fact, the first subspecies of lizard—the black lizard that lives in Ses Bledes—is called "Podarcis pityusensis maluquerorum." The publisher promoted this project to create a field guide to both the flora and fauna that inhabit the Catalan Countries. Its importance lies in the fact that, for the first time, they're not just focusing on the peninsular area where Catalan is spoken, but also including the islands, which is a deference and a sign of respect because in the Balearic Islands, we always tend to be neither one side nor the other when it comes to natural sciences. The beauty here is that they include us in every project. Specifically, when it comes to reptiles, instead of choosing a Mallorcan scientist—which would be the easy way—they've chosen an Ibizan scientist, and this underscores the importance of our reptiles, specifically the lizards. From the outside, everyone is clear that the most important reptiles in the Balearic Islands are the Pitiusan lizards. Everyone is crystal clear about this, but in Ibiza, they seem to be asleep, looking the other way, and we don't want to realize that we're losing an incomparable and invaluable treasure.

—Through your participation in the book, you detail the characteristics of the species found in the Pitiusas.

—It's a scientific work that discusses each and every species we'll find in any Catalan-speaking corner of the world and will be useful for anyone's study. Furthermore, the introduction explains very well what reptiles are like and their biology and ecology. I've often complained at conferences that people confuse a reptile with a mammal, and therefore, this book, in its first 100 pages, serves to study these things and to provide examples of specific reptiles that can be found where you live, because sometimes books on these topics talk about tropical boas or iguanas. It also includes a very interesting chapter I wrote on invasive species, the problems they cause for other species and for the invaded area. Regarding the Balearic Islands, there is a table that confirms that the vast majority of invasive species are introduced by humans, who have had a great impact on the islands' fauna. That's why each one has such different faunal conditions, although in Mallorca they've always overlooked this and don't want to see that in Ibiza we have different conditions because we have a different human history.

—Are invasive species a common problem in the rest of the Catalan Countries?

—It's completely different. On the Peninsula, there are always border zones for species, and this issue of invasions is more a matter of border confrontation, something that has always happened. On the islands, however, it's where the problems of invasions themselves arise because there's a barrier: the sea, and species can't overcome it unless they enter fortuitously, transported by humans. Then, it's the process of a new species arriving, like the "Normandy Landings": it first occupies a small area, expands when it has a bit of stability, and if it's successful, it reaches an explosive moment, just as happened in Ibiza with the snakes.

—And in these places, there are also species in danger of disappearing?

—Yes, almost all reptiles suffer from it because they have very limited, very specific habitats, and many predators. Therefore, most lizards on the Peninsula face survival and extinction problems, as do turtles, whose populations are truly in danger. The problem is that the tactics

and strategies that should be implemented with wildlife are completely different from those implemented in an archipelago, where each island is a specific, individual refuge, distinct from the next, including the islets. Unfortunately, the Balearic authorities, even though they are islanders, don't take this into account. They just steamroll over things, and what works for Mallorca works for Ibiza, and what works for Ibiza, they'll also apply to Formentera.

—In fact, the book launch coincides with a harsh statement from the IEE criticizing the lack of decisive action by the Administration to combat snakes.

—And this has been the big problem: the serious shortsightedness that Mallorca has when it comes to addressing Ibiza's problems. Every time environmental issues need to be discussed, Mallorca has a completely distorted view. They don't focus well, and because they don't, in the Pitiusas they push through completely ill-advised decisions.

—In the statement, they demand issues such as the control of goods entering through the port, something that was contemplated by law.

—The fact is that we don't know anything about the issue. In fact, control could also be carried out at origin or destination. There are various methods, but we have no news of how Law 1/2023 is being applied. When I know, I will assess it, but they haven't informed the public about its application, and when we've asked, there's been total secrecy. We have no guarantees as to whether it's being applied or not.

—How will the snake invasion be this season?

—Formentera is going in a different direction, and everything I've said about short-sightedness when looking at another territory, we must be very clear about when talking about this island, which has a different faunal structure than Ibiza, and therefore, I won't go into an assessment of the situation. In Ibiza, today, snakes have reached every corner of the island. I'd bet that if we went up to Sa Talaia, there would still be lizards, and I'm not sure if the snakes have reached there. There are areas of Sant Agustí or Sant Josep, the last parish where they have arrived, where refuges could be created to safeguard lizards. If we divided Ibiza's territory 10 kilometers by 10 kilometers, every square would have snakes. In Ibiza, we can't talk about eradicating them, but that doesn't mean we should abandon trapping.

—What would happen if we abandoned this mass trapping?

—Since there's a population boom, if we don't set traps to achieve the effect that a natural predator would have, the disaster for the Ibizan ecosystem would be enormous. We must ensure that the problem, even if we can't stop it, is as mitigated as possible, and we must try to prevent it. We can't talk about eradicating snakes now, but it's possible that in 10 or 20 years we could undertake a program to eliminate them and return to the previous situation, although to do so, it's extremely important that we preserve lizards in an area well surrounded by snake-proof fences, like a 'Noah's Ark'. Sometimes I think about koalas. If it weren't for zoos that preserved them, their reintroduction into their natural habitats wouldn't have been possible. Snakes are currently experiencing a population boom, and it's like trying to swat flies, but this boom will subside, and we must wait.

DIARIO de IBIZA

Serpientes, lagartijas, ratas y platos sucios

Snakes, lizards, rats and dirty dishes

Opinión

Verónica Carmona Acedo

10 MAY 2024 6:37
Actualizada 10 MAY 2024 14:30

In 2003, the first invasive snakes were detected, arriving as stowaways hidden in the centuries-old olive trees brought from the peninsula, which now adorn so many villas on our island. Measures to prevent the spread of the pest arrived late to Ibiza, both in port control and the installation of traps. By 2014, the horseshoe snake had colonized half the island. Ten years later, this snake is now present throughout the island.

For just over a year, I had one of these traps in a country house in Santa Gertrudis. Snakes kept falling in. My partner was in charge of catching and killing them, because if it were up to me, the poor creatures would have died of thirst and hunger before I could have mustered up enough courage to grab any of them and crush their heads, just as they explained I should do to end their lives quickly.

The trap also arrived late to my home. During the previous four years I lived in that house, I remember how the lizards constantly sneaked inside. I even found them in the bedrooms. They scampered everywhere. It was so easy to see them. But little by little, just as love disappears amid dirty dishes and an uncreased bed, they stopped coming. I don't know how or when, but one day they were gone, and I didn't realize until a large snake appeared near the front steps. We placed a hoe near where we had seen it to kill the animal on its next visit. But either it was very quick, or we were very cowardly, because we never caught it. We had the tool, but not the courage.

Only small snakes fell into the wooden box. I suppose that enormous reptile devoured almost the entire colony of lizards that inhabited the small fenced area of the property.

Shortly after, we abandoned the house, where, paradoxically, we had mice until the very end. Even a rat that came to eat the last remnants of the home that remained.

IBIZA KURIER
Die Lokalzeitung für Ibiza und Formentera in deutscher Sprache

Den Schlangen geht es ans Leder – Tot oder lebendig: Bis zu 30 Euro gibt es pro Fang

The snakes are in for the kill – dead or alive: up to 30 euros per catch

Ibiza-based entrepreneur Julien Cosson wants to tackle the island's snake problem in his own way.

He plans to market fashionable snakeskin accessories under the name "Ibiza Genuine Snakeskin." He is founding a non-profit organization for this purpose. The skin of the reptiles caught by volunteers will be used for bags, belts, and jewelry.

"We must solve the terrible problem of invasive snakes on the island," Julien writes in a social media appeal. The campaign is intended to help protect Ibiza's endangered native animals. These include lizards (which make up about 60% of the snakes' diet), birds, and genets. "Snakes have no natural predators on the island, so their population is booming and uncontrollable."

Basically, anyone who lives on Ibiza and wants to participate in the trapping campaign can participate. "We pay between 10 and 30 euros in cash per snake, dead or alive. We also come and pick them up. If you catch ten snakes, that's a nice 300 euros in cash in your pocket."

Cosson plans to discontinue the project after a maximum of 24 months. This period should be sufficient to contain the snake population and reduce it to fewer than ten snake sightings per month.

He hopes that the lizard population on Ibiza will return to normal levels in two to five years. Anyone who wants to participate, has leather craftsmanship skills, or would like to sell the accessories at the market or in their shop can contact Julien Cosson on Facebook, Instagram, or LinkedIn.

PERIÓDICO de IBIZA Y FORMENTERA

Ya se han capturado 500 serpientes en Ibiza y Formentera este año

500 snakes have already been captured in Ibiza and Formentera this year

The regional government has activated 10 snake shelters in Ibiza, some of them in the heart of the city.

The Government has activated 10 shelters for sargantanes in Vila, some of them in the city center.

Gisela Revelles | Ibiza | 17/05/24 20:27 | Actualizado a las 22:17

Between January and May, a total of 460 snakes were captured on the islands of Ibiza and Formentera in traps set up to combat an invasive species that is seriously affecting the lizards on both islands. On Ibiza, 300 snakes were captured during this period, while on Formentera, 160 were captured. Last year, 6,500 specimens were captured on the two islands, according to Anna Torres, Director General of the Natural Environment of the Catalan Government.

Torres reported this data during the presentation of the snake shelters installed at various locations in Ibiza Town. The presentation took place in the gardens of Abel Matutes Boulevard, where these reserves have been created. These reserves are financed with European funds earmarked for the fight against invasive species in a project involving the Government, the regional councils of both islands, the town councils, and COFIB. "The snakes," Torres recalled, "are harming an emblematic species for the Pitiusas: the snakes."

These shelters aim to protect the snakes from both snakes and cats in a habitat created especially for them in these garden areas. Thus, the snakes can "live, breed, and hide" in these shelters, which are also surrounded by native vegetation. This vegetation is part of these animals' diet and also attracts insects, which are also part of their regular diet.

Along with the shelters, the Directorate General for the Natural Environment has launched an information campaign aimed at encouraging citizens to participate in the protection of the lizards. This invitation is also extended to businesses such as hotels and restaurants that have gardens where these shelters can be installed.

The lizards, Anna Torres pointed out, are currently in a "risk situation" because they are the main food source for snakes, an invasive species that arrived years ago in both Ibiza and

Formentera and has particularly affected these animals. In the fight against this species, the traps installed in numerous locations on both islands to control the snake population are notable, and so far they are yielding positive results. However, Anna Torres pointed out that it is necessary to achieve "a balance" that allows the lizards "to learn to defend themselves against these predators."

Initially, the largest snake population was located in the Santa Eulària area, but now, according to Torres, these animals have moved to the south of Ibiza. Hence the importance of projects like the shelters, in which a budget of nearly €100,000 has been invested. In total, 10 reserves will be established on Ibiza and one on Formentera.

DIARIO de IBIZA

Impulsan la creación de reservas urbanas en Ibiza para proteger a la lagartija ibicenca

They are promoting the creation of urban reserves in Ibiza to protect the Ibizan wall lizard

The General Directorate of Natural Environment and Forest Management, through COFIB, has also developed a video and a manual of good practices to raise awareness of the importance and value of this native and endemic species.

The lizard enjoys its first urban refuge in Ibiza / TONI ESCOBAR

Redacción Digital

Ibiza 17 MAY 2024 12:16 Actualizada 18 MAY 2024 8:48

The Ministry of Agriculture, Fisheries, and the Natural Environment, in collaboration with the city councils of Ibiza and Formentera and with the support of the island councils, has promoted the creation of urban reserves to conserve and protect the Pityusic wall lizard (*Podarcis pityusensis*). With this initiative, the Directorate General of the Natural Environment and Forest Management, through the Consortium for the Recovery of Fauna of the Balearic Islands (COFIB), aims to establish measures to increase the density of this species and minimize the risks of predation it faces. During the presentation ceremony, which took place in Antoni Albert i Nieto Square in Ibiza, the Director General of the Natural Environment and Forest Management, Anna Torres, presented an example of an urban reserve, similar to the one that will now be available in all municipalities of Ibiza and Formentera.

In this regard, Torres emphasized that one of her goals "is to raise public awareness of the lizard and involve society in the understanding and conservation of this emblematic species." The Director General noted that the Pityusic lizard is a native and endemic species; that is, native and exclusive to the islands of Ibiza and Formentera. "It plays a crucial ecological role in insect control and also in seed dispersal. Furthermore, it has become a symbol of the coexistence of nature and human activities," Torres stated.

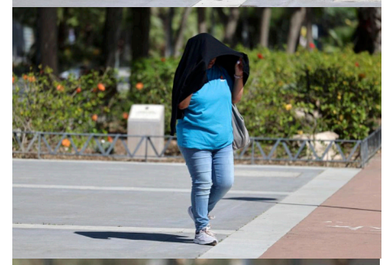
The Director General of the Natural Environment also explained that the lizard faces predation by introduced species, especially snakes, which eat them. Therefore, she insisted, "protecting them is essential to maintaining the natural balance and preserving the unique biodiversity of the Pityusics."

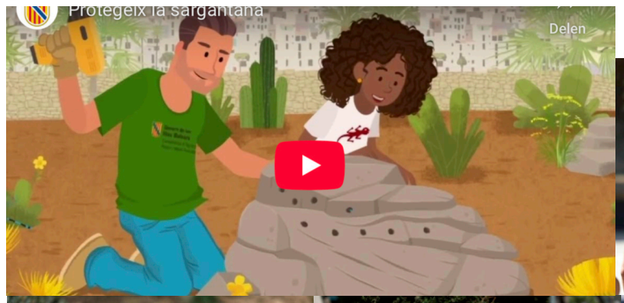
To carry out this project, the most suitable municipal parks have been identified, and the necessary and specific measures have been designed for each to support the biological requirements of the Pityusic wall lizard. Specifically, actions are being taken to increase safe refuges and the diversity of native vegetation; generate varied and attractive substrates; and enhance local biodiversity, especially that of invertebrates. Hazards to avoid have also been identified, such as waterlogged areas due to overwatering or pitfall traps where they can die (such as sinks or buckets), and the presence of predators such as snakes and cats.

Video and best practices manual

This methodology for protecting this species has been compiled in a best practices manual for the conservation of the Pityusic wall lizard in parks and gardens. Likewise, and for the first time, a video (and a short brochure) will be distributed to raise awareness of the importance and value of this species and to encourage private garden owners in urban areas, hotels, and schools to implement measures to protect the lizards.

These actions and the material to be disseminated are part of the Project to control and eradicate different invasive species in different habitats and geographical locations, which is funded by the PRTR-MRR through the Next Generation EU Funds, between 2022 and 2025. Furthermore, these lizard reserves contribute to the Urban Greening Programs of the European Biodiversity Strategy 2030, thereby providing gardens and parks with added nature conservation value.





PERIÓDICO de IBIZA Y FORMENTERA

La plataforma 'Sargantanes o Serps' forma a unos 400 Voluntarios participantes en campañas contra las serpientes

The 'Sargantanes or Serps' platform trains around 400 volunteers participating in anti-snake campaigns

The 'Sargantanes or Serps' platform has highlighted that its network of volunteers now reaches every corner of Ibiza | Photo: Archive

Europa Press | Ibiza | 20/06/24 16:00

The 'Sargantanes o Serps' platform has provided assistance and training over the past three years to approximately 400 volunteers participating in snake-catching campaigns, delivering approximately 250 traps.

In a statement, the 'Sargantanes o Serps' platform emphasized that its network of volunteers now reaches every corner of Ibiza, currently focusing on the municipalities of Sant Antoni and Sant Josep, where the most captures are being recorded.

Among other activities, the group has promised to train and advise volunteers who want to collaborate in the campaign.

It is also carrying out activities to manufacture and distribute shelters for lizards and is collaborating on studies on the current status of the species in the Ses Salines Natural Park.

Regarding this last task, the platform has noted that it is "very important" work, providing data on lizard populations and their status. Last year, a species monitoring project was launched to accurately determine changes in the number of specimens.

For this work, areas such as the Camino de Can Blai, the Torre de sa Sal Rossa, and Cap des Falcó were explored.

Ibiza HEUTE

Ibiza: Viele Nattern und wenige Eidechsen

Ibiza: Many snakes and few lizards

Attempts to protect lizards on Ibiza and eradicate snakes continue. Various initiatives are fighting the spread of horseshoe snakes and ladder snakes. But the number of these lizards, once a symbol of the Pitiusas, is declining dramatically, at least on Ibiza.

24. JUNI 2024

The lizards typical of Ibiza are being decimated by the snakes. Photo: Rüdiger Eichhorn

Attempts to protect lizards on Ibiza and eradicate snakes continue. Various initiatives are fighting the spread of horseshoe snakes and ladder snakes. But the number of these lizards, once a symbol of the Pityusic Islands, is declining dramatically, at least on Ibiza.

Platform offers courses

One of the platforms that trains volunteers to set traps is "Sargantanes o Serps." Its members are environmentalists from "Amics de la Terra" and "GEN-Gob." Over the past three years, they have offered courses to 400 volunteers and distributed 250 traps to catch snakes.

This is how the trap works: The mouse lives in one part of the box. If the snake slips into the trap in search of prey, it can't get out. The mice are supposedly fearless. Photo: MBA

Protecting the Salines Natural Park

Currently, they're finding the most snakes in Sant Antoni and Sant Josep, but the snakes are found all over the island. Conservationists are trying to keep them away from the Salt Pans Natural Park. Many birds nest there, and the voracious snakes don't even stop at chicks.

What can you do?

What can you do? Anyone who wants to get involved can pay a deposit of €20 and receive a trap, mouse, food, a water dispenser, and, most importantly, a short training course. Here are the addresses: Amics de la Terra, Tel. 971 317 486 or WhatsApp 669 415 279. Hazel is English. info@amicsdelaterraeivissa.org, GEN-Gob phone: 971 390 674.

PERIÓDICO de IBIZA Y FORMENTERA

Aumenta el riesgo de extinción de la 'sargantana' pitiusa

The risk of extinction of the Pityusic lizard increases

International experts warn of the danger facing this endemic species

A 'sargantana' of the Pitiusas | Photo: R.I. - Archive

R.I. | Ibiza | 27/06/24 16:42

The Pityusic lizards have been under constant threat for years from the emergence of invasive species such as the horseshoe snake, which arrived from the Iberian Peninsula and has reproduced rapidly. Now, the International Union for Conservation of Nature (IUCN) has warned of the growing danger of extinction they face due to predatory activity on the islands.

In its Red List of Threatened Species, published this Thursday, the IUCN downgraded the status of the lizards endemic to Ibiza and Formentera. The lizard (*Podarcis pityusensis*) has dropped from "near threatened" to "endangered" after losing half its population in 2010.

IUCN experts point the finger directly at invasive species, naming the horseshoe snake. Snakes are thriving in Ibiza and Formentera due to the lack of predators to hunt them. This morning, news broke of a man with a nearly two-meter-long female snake in his home in Sant Joan.

DIARIO de IBIZA

Aumenta el peligro de extinción de la lagartija de Ibiza y Formentera

The Ibiza and Formentera lizard is becoming increasingly endangered

The IUCN publishes the annual update of its Red List of Threatened Species, which classifies them according to their greater or lesser risk of extinction.

The threat to the Ibizan wall lizard is increasing. / J.A. RIERA

EFE

Madrid 27 JUN 2024 13:57 Actualizada 27 JUN 2024 21:19

The Pityusic wall lizard, native to Ibiza and Formentera, is in increasing danger of extinction due to predatory activity by invasive species on those islands, the International Union for Conservation of Nature (IUCN) warned. The large lizard of Gran Canaria, the Gran Canaria smooth lizard, is also in danger.

The IUCN published this Thursday the annual update to its Red List of Threatened Species, which classifies them according to their greater or lesser risk of extinction. The status of the three species has worsened due to their habitual food supply for snakes not native to the Canary Islands or the Balearic Islands, which have decimated their populations.

In the case of Gran Canaria, the great lizard (*Gallotia stehlini*) has worsened its status from "minor caution," the lowest threat level, to "critically endangered," the lowest classification before being considered extinct in the wild.

PERIÓDICO de IBIZA Y FORMENTERA

Los jardines públicos de Sant Josep, para el refugio y reserva de 'sargantanes'

The public gardens of Sant Josep are a refuge and reserve for lizards

Most of the municipality's green areas are suitable refuges for this endemic species.

Image of the Sant Josep Plenary Session this Thursday | Photo: Sant Josep City Council

R.I. | Ibiza | 27/06/24 17:15

The Sant Josep de sa Talaia City Council Plenary Session today unanimously approved declaring the municipal public gardens a refuge and reserve for lizards. The institution itself seeks to implement the necessary measures and actions to promote the presence and guarantee the protection and conservation of this native species.

The conservation of the Pitiusas lizard, a native and endemic species of our islands, is threatened by several factors, the City Council indicates. The disappearance of its natural habitats, climate change, territorial fragmentation, and the introduction of invasive species and predators can all affect its conservation status.

In fact, the accidental introduction of snakes led to the approval of Decree Law 1/2023, of January 30, on extraordinary and urgent measures for the protection of the Pitiusas wall lizard (*Podarcis pityusensis*) and the Balearic wall lizard (*Podarcis lilfordi*) in 2023. Among other measures, the decree establishes restrictions on the entry of certain trees into the Balearic Islands, in order to minimize the accidental arrival of snakes while they winter inside the trunks. It also classifies the Pitiusas wall lizard as threatened, in the "Vulnerable" category, although this morning the International Union for Conservation of Nature classified the Pityusic wall lizard as an "endangered" species.

The Sant Josep de sa Talaia City Council has joined the effort to protect the Pityusic lizard, carrying out several initiatives. One of these initiatives is collaborating with the Sant Josep Hunters Society to install snake traps in various locations throughout the municipality and distribute them to the public in recent years. At the same time, the city is in contact with several organizations that have joined forces to protect the Pitiusa lizard, such as the initiatives Sargantanes o Serps, SOS Salvem sa Sargantana Pitiüsa o Protegim ses sargantanes.

Recently, the City Council has been collaborating with the Species Protection Service of the Balearic Islands Government (COFIB) to create lizard refuges in public gardens and parks. To date, work has begun on three lizard refuges in the municipality's public gardens (in the areas of Can Raspalls, Caló de s'Oli, and Port des Torrent).

Future Vision

Additionally, the municipal green areas maintenance contract, which is currently being put out to tender, already includes the possibility of installing 80 lizard refuges and vegetation that favors this species, as well as the possibility of expanding to more units if necessary.

Even so, it has been found that most municipal gardens located on public roads, as well as the gardens and green areas of municipal or public facilities (schools, health centers, sports centers, etc.) are suitable locations that can act as lizard refuges. In some cases, small improvements can be made to incorporate more suitable vegetation or refuge areas.

For this reason, the gardens and public green areas of the municipality of Sant Josep de sa Talaia are considered to have great potential to become refuges and reserves for lizards. Many of the green areas would not require any changes or adaptations, but in some cases, it is anticipated that during 2024 and the following years, actions will be carried out to improve their condition to benefit the species and ensure its maximum protection and conservation.

DIARIO de IBIZA

Las serpientes han colonizado ya los islotes de Santa Eulària

Snakes have already colonized the islets of Santa Eulària

The lizard population of S'illot de S'Or may have disappeared and that of S'illa de Santa Eulària has been reduced.resampling of lizards in Ibiza and Formentera.

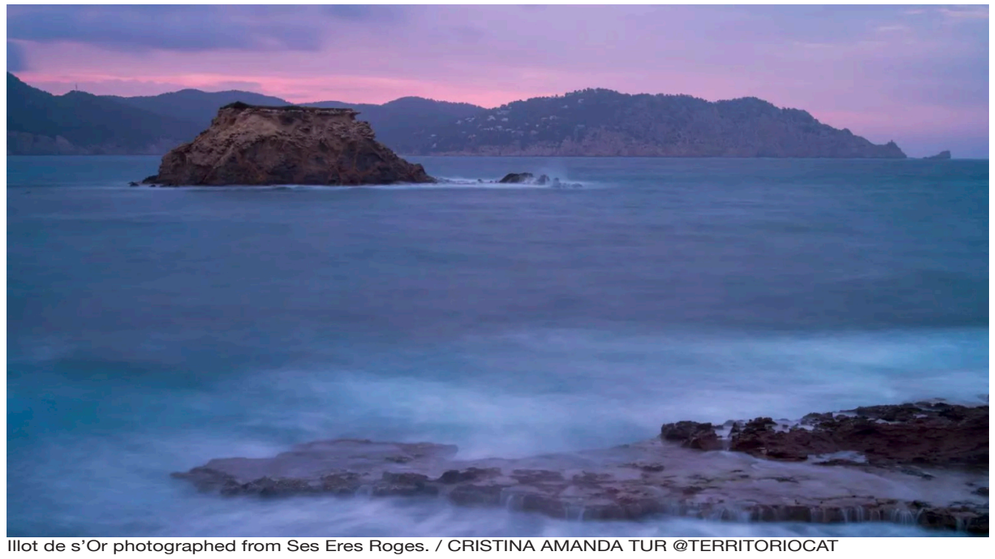
S'illa de Santa Eulària from Caló des Gat. / CRISTINA AMANDA TUR @TERRITORIOCAT

Cristina Amanda Tur
07 JUL 2024 6:01 Actualizada 07 JUL 2024 9:00

The worst predictions have come true. Snakes have reached some of Ibiza's islets and threaten the survival of the unique populations of endemic lizards that inhabit them. Not only that, but they also endanger the colonies of seabirds that nest on these small islands, as they can prey on their eggs and chicks. This is the latest in the chronicle of an invasion.

Snakes—specifically the horseshoe snake (*Hemorrhois hippocrepis*)—arrived a few years ago on S'Illot d'Or (S'Hort or S'Ora), and this small area, northwest of Tagomago, could be the first satellite island of Ibiza where we can declare a unique population of the Pityusic wall lizard (*Podarcis pityusensis*) extinct. "We have data on excellent abundance in 2017. In 2019, we returned to the islet, in very good condition, and we didn't see any more. We've been back a couple of times since then and haven't found a single lizard again. Neither time. And on that islet, the Cofib (Balearic Fauna Recovery Consortium) captured some snakes." This is explained by herpetologist Valentín Pérez Mellado, professor of Zoology at the University of Salamanca, who for decades has led work related to monitoring lizard populations in the Pityusics, Mallorca, and Menorca.

In an interview on IB3 radio's science and environment program, Nautilus, the specialist emphasized that the disappearance of the islet populations, which constitute what are known



Illot de s'Or photographed from Ses Eres Roges. / CRISTINA AMANDA TUR @TERRITORIOCAT

as significant evolutionary units, represents a true tragedy for conservation. "It's extremely serious because these units are irreplaceable; they are evolutionary phenomena that have existed for hundreds, thousands of years in some cases, and the isolation in which they evolved has disappeared."

The next islet whose situation needs to be reported in this particular war report is Santa Eulària, a small island measuring 46,772 square meters located south of Punta Arabí. In this area, the Cofib has already carried out snake trapping operations. Recently, a team of researchers led by the Animal Demography and Ecology group at Imedea (Mediterranean Institute for Advanced Studies) visited the islet while monitoring gull populations and found three snakes there. "Just as we were there, we saw one swimming in," said researcher Ana Sanz Aguilar on the Nautilus. And she expanded the list of victims of the serpentine invasion with her experience: "They have also entered Malgrats (Calvià), and we have seen remains of storm petrels (*Hydrobates pelagicus*) in the stomachs of snakes captured on these islands. "It is a very serious threat to all the diversity of fauna we have on the islets."

Although the snakes are dispersing to islets in the east and north of Ibiza (some close to Portinatx), the first indication of the possibility of them colonizing the islets was recorded to the west, when a molt appeared on S'Espartar a few years ago. "Measures were immediately taken and traps were set," the herpetologist explains. "Annual monitoring is carried out on those islets, and the islet is rechecked year after year, and no further sign of a snake has appeared. We don't know if an individual actually crossed and then died there, but I've been there several times since that snake shirt was found and nothing else has been seen."

And it's no coincidence that the eastern islets are now being invaded by snakes. "The population has grown a lot, and that increases the chances of a snake reaching a beach, of a snake entering the water, and of it reaching an islet." Regarding this increase, Pérez Mellado's information on the situation in the Santa Eulària area and surrounding areas is also worrying: "In 2017, we sampled the entire island, and there were wonderful populations of lizards there. Those populations have literally disappeared today; in other words, not a single specimen can

be seen." And if the lizards have disappeared, it's because there are a large number of snakes, "and that has increased the chances that the islets visited were those in that area and not those in the western part."

However, despite all this, the fact that the snakes venture into the sea to reach the islets "is totally surprising." The horseshoe snake is a continental species, present in North Africa and the Iberian Peninsula, "and there, there was no evidence that it could swim to the islets, especially in the sea, in salt water. And yet, this phenomenon is occurring in Ibiza and Mallorca." At least for now, this dispersal can only be explained by a dramatic increase in the snake population on the main island.

Initially, when snakes began to be seen on the islets or in the water, experts thought they were perhaps sleeping in small boats on the shore and then, when they emerged from their hiding places, they vaguely jumped into the water to reach the smaller islands, which were closer. However, it has now been confirmed that these snakes arrive directly from the mainland.

And, at this point in the war report, it's worth highlighting that, although the invasion began with three different species of snake, the Montpellier garter snake (*Malpolon monspessulanus*) has not prospered, and the ladder snake (*Zamenis scalaris*) does not appear to pose a serious problem for the lizard populations. In other words, the horseshoe snake is the main concern. Valentín Pérez Mellado believes that the fact that Formentera still has very high densities of lizards is due—in addition to the intensive capture campaigns—to the fact that the white snake is the most prevalent on the smallest of the Pityusic Islands. "It seems to be a more crepuscular snake [more active at dusk] and is probably for that reason less inclined to hunt lizards."

Supporting this hypothesis that this species of snake is less harmful to other snakes, the herpetologist also points out that the snake has been present on the island of Menorca since time immemorial, where it coexists with the Italian wall lizard (*Podarcis siculus*) without any apparent problems. Furthermore, it also coexists with the Balearic wall lizard (*Podarcis lilfordi*) on l'Illa d'en Colom, northeast of Menorca, and there is no interaction that is harming either of the two reptiles. What's more, Menorcan wall lizards share territory with another snake, the hooded snake (*Macroprotodon mauritanicus*), which does capture lizards, but "doesn't seem to have been a problem for the Menorcan populations either."

In other words, if they were going to import a snake from the Peninsula, it seems that Ibiza has managed to bring in the one that could cause the most harm to its endemic and emblematic lizards.

And in this whole panorama, there's another factor to consider: the horseshoe snake, a snake of North African origin, has benefited from the high temperatures recorded in recent years. "It occupies a large part of the Iberian Peninsula, but especially the Mediterranean areas, although it is increasingly moving further north as a result of climate change. Global warming favors a thermophilic species like this," adds the herpetologist, who associates this snake with warm places and points out that with high temperatures "it can be active practically all year round, which means its metabolism is faster and it needs more food."

We mustn't forget that the fate of the hundreds or thousands of snakes caught in Ibiza and

Formentera is immediate death, eliminated by clubbing or a blow to the head. It's fair to wonder if, in the 21st century, a less archaic way to end a biological invasion couldn't be found. In this regard, Valentín Pérez Mellado asserts: "It's a delicate matter. The solution would be to catch the snakes alive, keep them alive, and then release them on the Peninsula, but we have to consider what this entails logistically, organizationally, and costly, and consider whether that's feasible when hundreds and hundreds of snakes are being captured in Ibiza each season. We have to take that into account. This is a species protected by state law, and of course that would be desirable, but putting it into practice is very complex." The feasibility of relocating the snakes could have been studied when the invasion was in its early stages, but this aspect of the issue can also assess the response capacity of the crisis managers, who were already aware of the arrival of the first snakes in 2003 and have witnessed their formidable expansion, especially since 2010. In all these years, no biosecurity strategy has been established to stop the entry of olive trees and nursery plants, which continue to bring in snakes and reinforce the populations of those already born in Ibiza.

Experts believe that the possibility of eradicating snakes from Ibiza is fading away by the day, and the only hope is to control their populations. And Pérez Mellado affirms that we will only have a chance of achieving this control and saving the lizards if individuals from the Iberian Peninsula stop entering olive trees and ornamental plants, as they represent a "constant reinforcement" of the populations already born on the island. If legislation favors free trade over conservation, we must reconsider the planet's current priorities.

Regarding the possibility of restocking lizards on islands that lose their populations in the future, herpetologist Valentín Pérez Mellado emphasizes that these populations are irreplaceable. "The goal of conservation biology is to preserve evolutionary processes, and if the original population has disappeared, the evolutionary process has died. There's no point in reinforcing that population. It would mean starting from scratch, and with no guarantee of success, either.

PERIÓDICO de IBIZA Y FORMENTERA

Revientan jaulas para cazar serpientes en Ibiza

Snake cages burst open in Ibiza

Sant Josep City Council warns it will take action

One of the vandalized snake traps | Photo: Sant Josep City Council

Juan Gordillo Tur | Ibiza | 11/07/24 16:54 | Actualizado a las 18:15

Several snake traps have been vandalized in the municipality of Sant Josep, with their metal grilles broken and rendered completely unusable. The Sant Josep City Council condemns these acts, which endanger the snakes.

"This is an irresponsible act that we cannot allow," the council states on its Instagram account. The Sant Josep City Council warns that it will be vigilant against any such acts of vandalism through increased surveillance. It also reminds everyone that breaking the snake traps carries penalties.

Some users point out that the motivation behind these acts could be a desire to free the mice in the cages. However, it's worth remembering that the rodents are in a separate compartment, safe from the trapped snakes, and serve as bait to lure the snakes into the trap.
Its release, as the Sant Josep Hunters' Society pointed out after discovering a venomous Montpellier garter snake, involves providing more food for the snakes, encouraging them to survive and reproduce.

The Camí de sa Talaia, as another user points out, is reportedly full of vandalized cages.

The Government echoes this sentiment

The Regional Ministry of Agriculture, Fisheries, and the Natural Environment has expressed concern about this incident on social media, joining the Sant Josep City Council's awareness campaign. "The conservation of the Pityusic lizard is everyone's responsibility," the Regional Ministry states.

It also indicates that the emblematic species of Ibiza and Formentera "is facing predation by introduced species" on the islands, "especially snakes." "For these reasons," the Ministry concludes in its publication, "it is essential that the measures intended to protect" the lizards be respected.

PERIÓDICO de IBIZA Y FORMENTERA

Un vecino de Ibiza lanza un 'crowdfunding' para salvar a la 'sargantana' ibicenca

An Ibiza resident is launching a crowdfunding campaign to save the Ibizan lizard

Image of a 'sargantana' | Photo: Gisela Revelles

Agencias | Ibiza | 24/07/24 16:21

An Ibiza resident has decided to join the numerous efforts being undertaken by organizations and authorities to save the Ibizan wall lizard by launching a crowdfunding campaign.

In a statement sent this Wednesday by the Go-fund-me platform, which collects donations, the resident, named Mike, pointed out that this native species is threatened by the invasion of snakes introduced to the island through the importation of foreign trees.

Faced with this critical situation, Mike has launched an initiative to raise funds and purchase state-of-the-art traps with the goal of eradicating the invasive snakes.

He explains that with his group of more than 1,700 members, he takes weekly walks around the island while setting and collecting these traps to protect the Ibizan wall lizard and preserve Ibiza's biodiversity.

In the statement, he explains that the "lack of free outdoor recreational activities" on the island led Mike to start the hikes, which have become a way to "connect" with nature and "raise awareness" about the importance of protecting native species.

Mike called for "solidarity and donations" to support this "urgent" cause and emphasized that community unity around this cause "is key" to saving the Ibizan wall lizard and ensuring the island's natural wealth for future generations.

PERIÓDICO de IBIZA Y FORMENTERA

Una experta aboga por sacar a las 'sargantanes' de Ibiza para conseguir que sobrevivan

An expert advocates removing the lizards from Ibiza to ensure Their survival

Elba Montes expresses her deep concern for the survival of the Ibizan lizard

Elba Montes, snake expert, shows one

Gisela Revelles | 04/08/24 0:30

If anyone knows snakes very well, it's Elba Montes (Santiago de Compostela, 1983). With a PhD cum laude in Biodiversity, she was one of the first experts to work against the invasion of these animals in Ibiza from the Consell (Spanish Consell). She did so alongside Jaume Estarellas during 2019 and 2020, when the regional government had not yet taken any action against these predators that have jeopardized the survival of the lizards. Montes, deeply concerned about the bleak future of Ibizan lizards, now works for the Spanish Herpetological Association, where she is a member of its board of directors and in charge of biological invasions.

— What are biological invasions?

— It's something that happens because of humans. Voluntarily or involuntarily, we move organisms into territories that are not necessarily their natural range. This causes problems. For an animal or plant to be considered invasive, it must not only have reached that point, it

must have established itself, reproduced, and caused harm to biodiversity or the economy.

—At the national level, are there serious situations due to these biological invasions?

—Yes, we have, for example, the zebra mussel in the Ebro Delta, the water hyacinth in the rivers, the reeds... They cause many problems for biodiversity, for agriculture, for the economy...

—But there are cases in which they do take advantage of them, like crayfish or blue crabs.

—Yes, sometimes this economic profitability is achieved. But, although some cases are economically profitable, we can't forget that we are destroying the ecosystem. And that, in the end, means we lose a treasure that may only exist in that place. This is what we're seeing with the sargantans. They've already disappeared from an islet and they're not going back.

—In the case of Ibiza, the Montpellier snake has now been added to the other two types of snakes that had been detected. This has raised even more alarm bells.

—We must remember that this snake was already in Ibiza between 2003 and 2010. After that, it stopped being seen, and it seems there weren't enough specimens to establish a population. Now a new specimen has appeared, and we don't know if it's a one-time occurrence or if there is a population and more of them will start to be seen. It's a snake, not a viper. It's an opisthoglyphous snake, meaning it has fangs in its throat that help it finish off its prey. Those fangs are capable of injecting venom. If you were to pick up one of these snakes and stick your finger all the way into its mouth, it could inject that venom into you.

—You have to be a little bit clever to do something like that…

—Yes [laughs], but if someone were to do it, the sting would be similar to that of a wasp. We're not talking about the venom of a viper, which can cause serious problems. The viper, moreover, is a very large snake, with males reaching up to three meters long. But it's harmless as long as you don't confront it and start acting like a barbarian.

—Why aren't there usually snakes on island territories?

—It depends on the territories. In the case of the Mediterranean islands, when they were formed there was no connection to the mainland, and no snakes ever crossed. There have been historical introductions. It is known that, in Roman times, snakes moved between territories and were introduced to some Mediterranean islands. In the case of Ibiza and Formentera, this was not the case, and it's not entirely clear why. Legend has it that Pliny the Elder said the soil of Ibiza was sacred and repelled vermin. Perhaps that's why they weren't introduced. However, it seems that a dwarf viper arrived on Ibiza through the sediments that came from the Peninsula. But it's not entirely clear when this might have happened. There are indications that these vipers disappeared with the arrival of humans and the introduction of the garden dormouse, an animal that can eat them because it is resistant to viper venom.

—And at what point do they arrive now and become a problem?

—The first time was in 2003. It's the first snake recorded in a report by the Government's Environmental Agents. But some had already been seen in 2000. This coincides with the boom in the movement of olive trees from the south of the Peninsula. At that time, it wasn't known if they had already become an invasive species, if there was an established population, or if they were causing any harm. It was in 2010 that the boom began. They began to be seen everywhere, and farmers reported seeing fewer lizards. That's when we already saw the tangible impact of this invasion. In my thesis, I was able to study that where there are many snakes, there are no more lizards. Not only because they eat them, but also because the lizard

population is declining because they don't reproduce at the same rate.

—Do they eat the eggs?

—No, they eat the lizards very quickly. There are a lot of snakes, they eat quickly, and they wipe out the population.

—Without lizards, how serious would the appearance of snakes be in Ibiza and Formentera?

—It's hard to say. Snakes are surviving here because they feed on something. If there weren't lizards, they would feed on mice, rats, birds... Which species would fare worse? No way of knowing. They could go after the virot, the Balearic warbler...

—You're an expert on snakes, and I understand you like them. You must see something positive in a creature that most of us don't see any charm in.

—That's a very good question. The snake has the bad luck of having a very bad reputation. It's an animal that humans don't like. If we were talking about a beautiful and adorable mammal, everyone would scream if we said it should be killed. In Australia, for example, the rabbit was introduced, which is a little animal that everyone likes, but it's causing tremendous problems there. In the case of snakes, people don't like them, and it's easier to fight the invasion because we have everyone's help. However, the snake isn't to blame for anything. It's an animal that has a function in its native ecosystem and eats, for example, mice. With respect to humans, that is its most important function. But in its native habitat, it eats other types of animals and plays a role in the food chain of that ecosystem. Obviously, I like snakes; they're beautiful animals, and they're not to blame for anything. It's been very difficult for me to complete my doctoral thesis, which revolved around killing animals, and that's not pleasant at all.

—It's understandable that you like them enough to dedicate years of your life, effort, and work to studying them, and it seems contradictory that we're now seeking you out as an expert on how to eliminate them.

—Yes, it's contradictory, and it's sad that we have to deal with this now. I insist, since they're animals that people don't like very much, citizens get involved. That wouldn't happen with other animals. For example, cats cause a brutal amount of havoc to the biodiversity of the islands. Measures should be taken, but who dares?

—Another animal that generates a lot of disgust is cockroaches, and nothing is done about them.

—[Laughs] You're right. It's an animal that not even I like.

—There are places that invest huge amounts of money and resources to fight the snake invasion. Should we do the same in Ibiza?

—I was lucky enough to be able to go to Guam, a Pacific island belonging to the US that has the same problem as Ibiza. Snakes arrived there during World War II, and they didn't realize it until the 1990s. It's been a disaster because they've wiped out a lot of endemic species. You walk through the forest there and you don't hear any birds. It's incredible. The US spends a lot of money fighting this invasion. Plus, they're tree snakes that climb power lines and cause many power outages. The economic damage is significant, which is why they spend more money. There have even been cases of babies bitten. But the point is that they take it more seriously there than in Spain and the Balearic Islands. It's a matter of political priorities. The role of the media and scientists is to warn about what's happening and the seriousness of the issue, and the role of society and politicians is to say that this is a priority. We can't do

more.

—As an expert, what do you think would be the most effective solutions to eradicate snakes in Ibiza?

—Trapping efforts must increase and cannot stop. Although snakes can no longer be eradicated from the island, these efforts must be maintained and increased because it's the only way for snakes and lizards to coexist. There must be few snakes for the lizard populations to survive. On the other hand, in the past it would have been necessary to protect areas where there were no snakes, establishing action protocols that would be quickly activated at the slightest sighting. This wouldn't make much sense today because they're already everywhere. On the islets, things are getting out of hand because so many snakes are arriving.

—How do they arrive?

—By swimming. Snakes are animals perfectly designed for swimming. Their natural movement on land is perfect for swimming. The horseshoe snake, in particular, swims very well. On the islet of s'Ora, a subspecies of lizards had already become extinct. And it seems the same thing is happening on other islets as well.

—And what can be done?

—Seeing all this, the only thing left for us right now is ex situ conservation, that is, collecting lizards and placing them somewhere else off the island or in facilities that are equipped to preserve their genetic biodiversity. Otherwise, they'll disappear at an unknown speed. We're going to run out of them. Now we need to monitor all lizard populations and see what's happening in real time.

—They're also building shelters for lizards all over the island.

—Yes, and I think that's great. But we have to consider that snakes can also get there. We're not really protecting the lizard with this shelter if a snake can get in. We're protecting it a little, yes, but we're not doing much.

—On Guam, walls are built to make it difficult for snakes to get in. Should something like that be done here around the shelters?

—Indeed. And yes, it should be done. If you build a shelter for lizards, it has to be snake-proof. In Guam, they build walls with metal bars, and in ports and airports, they build quarantine areas surrounded by walls that end in overhangs that make it very difficult for the garter snake to get in. You have to keep in mind that snakes like the horseshoe snake are very good climbers. And we need to build protected enclosures with traps inside. Furthermore, the entry of olive trees in Ibiza should be controlled; it's essential. It should have been cut down years ago, at least during the times of year when we know that snakes can hibernate inside or that there may be eggs in those olive trees. I proposed it years ago, that olive trees could only be allowed in during spring, and they would have to spend a quarantine period in a snake-protected area filled with traps. They should be there as long as necessary.

—But it's something that depends on the State because the port and the airport are its responsibility.

—There's a Government regulation that stipulates that olive trees can only arrive in spring, but I don't know if it's being controlled. Without doing this, what we're seeing with the Montpellier garter snake will happen. And it could happen with other species like vipers or scorpions.

—Are these measures implemented in other parts of Spain?

—In the Canary Islands, they have a similar problem with a California garter snake. Someone had them in a terrarium, and it's unknown if they released them or if they escaped. They have a serious problem in Gran Canaria and have requested funding for a Life Project, and they carry out much more thorough captures than they do in Ibiza. I get the feeling they take it a little more seriously there.

—Here, in the end, it all depends on the volunteers.

—Look, the species protection service may have limited resources. The government does what it can. And the role of volunteers shouldn't be underestimated. Social involvement is very good and very important for cohesion in a project to eradicate an invasive animal. But that doesn't mean the administration doesn't take things more seriously.

—The COFIB has recently reported the vandalism of snake traps: they remove the mice, move the boxes, and even release the snakes. What can be done?

—Animal rights activists do this. I feel sorry for what's happening. Those mice live very well. They're separated from the compartment where the snake enters, they have food and water, they're cared for... I can think of few circumstances in which a laboratory mouse lives so well, really. It saddens me because the COFIB and the volunteers are doing extremely important work to try to save the biodiversity we have in Ibiza, which is unique in the world, and I don't know what they imagine the mouse is suffering. I'm very sensitive, and I see that the mouse is doing very well.

—What future awaits the lizards as things stand right now?

—Very bleak. That's all I can tell you. Furthermore, it's being proven that wherever snakes arrive, they wipe out the lizards more and more quickly. As the invasion advances, they eat them faster. So, we're at a point where we need to take much more forceful measures because, otherwise, we'll run out of lizards. And I wouldn't stop doing ex situ conservation, whether in Ibiza or off the island, somewhere they have experience with these types of measures. It's about having a lizard reservoir in a place where snakes can't enter.

—Finally, there's constant evolution in the animal world. Could lizards be destined to disappear due to the arrival of a stronger species and their inability to adapt?

—It's a question I like. There's an animal rights movement that thinks this way, that believes that humans are part of nature and that if they move animals, it's a natural process. The question we must ask ourselves, then, is whether genocide is also part of nature and, therefore, should be allowed to happen. This example opened my eyes a long time ago. I also thought that everything was part of nature. But humans have a conscience and responsibility. If, because of us, a species is disappearing that otherwise wouldn't be disappearing, I understand that we have a responsibility to repair that damage, or at least to try. It's a question of responsibility. If we think everything is a natural process, then we don't do anything and we don't worry about anything.

—I understand what you're saying, but perhaps we're fighting against the impossible, given that the lynx isn't capable of evolving in the face of this threat.

—But we have the example of the Iberian lynx. It was on the verge of extinction, and now we have established populations. This wouldn't have happened if humans hadn't intervened. In other words, we're taking actions that harm many species, and the least we can do is try to make up for it a little.

IBIZA KURIER
Die Lokalzeitung für Ibiza und Formentera in deutscher Sprache

Der “hypothetische Schaden nach einem Biss” ist bei jedem Körper anders

The “hypothetical damage after a bite” is different for each body

The horseshoe and ladder snakes are joined by the Montpellier garter snake

Cala Tarida – Until now, it was always said that the snakes in Ibiza are not poisonous – apart from the allergic reaction that their bite can trigger. Now a specimen of a species has been caught whose bite can cause certain health problems, although not life-threatening.

In fact, all snakes have some venom in their fangs. However, the amount is usually so small that it has no significant impact on humans. Until a few years ago, snakes were not found on Ibiza. They arrived on the island hidden in the root balls when olive trees were imported from the mainland. Since then, they have been happily reproducing, as Ibiza has no natural predators. The problem they pose to the native birds and lizards has become massive.

Since this summer , the horseshoe snakes (*Hemorrhois hippocrepis*) and ladder snakes (*Zamenis scalaris*) have had a new companion on Ibiza: Montpellier garter snake (*Malpolon monspesulanus*). Hunters from the Sociedad de Cazadores de Sant Josep, who are responsible for controlling over 200 traps to combat the snake plague, discovered a specimen of this species measuring over 120 centimeters in length in the Cala Tarida area, which they had never seen before.

Antònia Maria Cirer, a doctor of biological sciences and known for her tireless efforts in combating the snake plague that plagues Ibiza, explained that since 2010 it was assumed "that there were no snakes here". Unlike horseshoe and ladder snakes, the bastard field snake is venomous: “It has a fang on the underside of its mouth, which serves to immobilize prey when it bites it.” However, the experienced herpetologist gives the all-clear: "You'd have to put your finger in the reptile's mouth for its venom to affect a human," and that "the hypothetical damage after a bite is different for every body." But: "There are people who die from a bee sting."

There are now several groups and organizations on Ibiza setting up traps to combat the plague. The Sant Josep Hunting Association complains, however, that it repeatedly happens that unknown individuals open the traps to release the mice living inside (their scent serves as bait, but they are shielded from the area where the snake enters), supposedly to protect the animals.

DIARIO de IBIZA

Las ‘sargantanes’ de Ibiza tienen 30 nuevos refugios antiserpientes

Ibiza's lizards have 30 new snake shelters

The City Council highlights that they have received reports of snakes in Can Misses, ses Figueres and Platja d'en Bossa

Several lizards, on a wall. | SEBASTIAN CANDELA

efe

Ibiza 26 AGO 2024 17:56 Actualizada 26 AGO 2024 17:57

Lizards have around thirty new shelters in Ibiza town. This was announced this Monday by the Ibiza City Council, which has installed 30 protected areas for specimens of this native species. This action aims to preserve and promote the reproduction of the species, which is currently in a delicate population situation due to the arrival of snakes from the Peninsula in ornamental trees imported for the gardening sector, the City Council notes.

The first shelter was created by the Ministry of Agriculture, Fisheries and the Natural Environment in the gardens of Abel Matutes Boulevard, the City Council explains, and has now installed another 30 shelters spread across various green areas of the city.

Specifically, the shelters are located: two in the gardens of Plaza España, in Dalt Vila; one in es Revellí, another in sa Carrossa, two in the Parque de la Paz, three in the Parque Poeta Villangómez, two in the Parque Reina Sofia, another two in the gardens in front of the Can Misses aqueduct, four in the landscaped areas of the Paseo Marítimo (Juan Carlos I), two in the gardens of the recently renovated Plaza Bob Marley (formerly the bullring), six on Abel Matutes Boulevard, one in the recently planted olive tree in Vara de Rey, and four in the beachfront gardens in Platja d'en Bossa.

Likewise, the town hall-owned farmhouse has snake traps and has been monitoring them for months. The Consortium for the Recovery of Fauna of the Balearic Islands (COFIB), as well as volunteers and residents of Ses Feixes de Talamanca, are also carrying out captures in the wetland. Reports of snake sightings have also been received in areas such as Talamanca and neighborhoods such as Ses Figueres, Can Misses, Platja d'en Bossa, and even in the Peace Park.

Finally, with the support of COFIB, the City Council is preparing a campaign to distribute more than 200 snake traps, in addition to continuing the installation of urban shelters for lizards.

Ibiza HEUTE

Ibizas Hauptstadt schützt Eidechsen

Ibiza's capital protects lizards

Ibiza Town Hall has installed 30 protective stones for lizards so that they can seek refuge from snakes in case of emergency and reproduce again. The horseshoe whip snake has massively reduced the number of lizards on Ibiza.

Lizards fit into these stones, but not snakes. Photo: Ibiza Town Hall

In squares and green spaces

The stones can now be found in many squares and green spaces throughout the capital. Among them are the olive tree recently planted on the Vara de Rey, the Juan Carlos I waterfront promenade, the Parque de la Paz and Parque Reina Sofía, the Old Town Hall in Dalt Vila, and the Es Revellí park opposite.

Snake Hunting in Ses Feixes

The town hall and the wildlife conservation agency COFIB will distribute 200 traps to encourage residents to catch snakes. Conservationists and volunteers will be conducting targeted hunts in the Ses Feixes de Talamanca wetland.

Ibiza HEUTE

Pityusen: Schlangenplage weitet sich aus

Pityusic Islands: Snake plague spreads

The snake plague on Ibiza and Formentera is spreading. Now the creatures have also discovered the small offshore islands as their habitat. But the government is not idle in its efforts to combat the invasion of these unwelcome guests, who are killing the native Pityusic lizards.

10. SEPTEMBER 2024

Ibiza's brown, green, and blue lizards used to be everywhere, but now they are food for snakes and are decimated. Photo: GOIB

New boat purchased with EU funds

A new motorized inflatable boat has now been purchased with European Union funds and will be made available to the species protection agency COFIB.

The agency will continue to intensively monitor the lizard population, detect and, if necessary, combat invasive, exotic species. These cause significant damage to the ecosystem on Ibiza and Formentera. The new boat will also be able to better reach the hard-to-reach islets.

Snakes already on eight "islotes"

Snake traps will now be set up on 16 of these offshore "islotes" off Ibiza and Formentera. "We have already discovered adders on half of these islands," said Miquel Puig, head of COFIB. "And on the other islets, we have found the reptiles' shed outer skins, which the animals leave behind when they shed their skin. But until we have actually caught a snake, we cannot confirm with certainty its presence there."

DIARIO de IBIZA

La procesionaria avanza en Ibiza gracias al retroceso de las 'sargantanes'

The processionary caterpillar advances in Ibiza thanks to the retreat of the lizards

The Balearic Ministry of Agriculture, Fisheries and the Environment has contracted a fumigation plan for the next four years at a cost of nine million.

File image of pine processionary caterpillars. / CIF

David Ventura
Ibiza 17 OCT 2024 18:12 Actualizada 17 OCT 2024 20:17

Where the lizards retreat, the pine processionary caterpillars advances. *Thaumetopoea pityocampa*, the stinging and unpleasant processionary caterpillar that lays its characteristic gray bag-shaped nests on pine branches, continues its advance across the island of Ibiza, although, unlike Formentera, it cannot yet be considered a pest. One of the reasons for this advance was explained this Thursday by Luis Núñez, head of the Forest Health Service of the Department of Agriculture, Fisheries and the Environment of the Balearic Government: "The maps of processionary moth captures clearly coincide with the areas with the highest incidence of snakes on the island."

The more snakes there are, the fewer lizards, the more processionary moths. This is because the lizards are the natural predators of the processionary moth larvae. This lepidopteran, which nests in the treetops during the months of December and February, descends to the ground to bury itself. There, they first become larvae, then chrysalises, and in May, they hatch into butterflies. And it's during these nearly three months of nesting on the ground that they are usually devoured by the lizards. "They are what have allowed us, so far, to prevent it from becoming a plague. Consider that each butterfly lays up to 200 eggs. Their range is the center of the island, the area of Santa Eulària and Es Amunts. This is a replica of where the lizards have been declining due to the presence of snakes," explained Núñez.

To address this increase in the presence of the processionary caterpillar, the Balearic Regional Minister

of Agriculture, Fisheries, and the Environment, Joan Simonet, has announced that this year a total of 18,500 hectares of forested land will be sprayed with a biological product, Belthirul-F, a biological insecticide that, he claims, attacks the processionary caterpillar larvae but is harmless to bees and compatible with organic farming.

"It is sprayed with a bacteria called *Bacillus thuringiensis*, which kills the larvae. It is a natural product, a microorganism," Simonet explained, adding that this biological pesticide is widely used to combat pests: "I myself, in my small vegetable garden at home, spray this product on my tomato plants twice a day."

With all possible resources

The regional ministry is strongly committed to this method and has announced an investment of nine million euros to carry out the fumigation campaigns over the next four years. The area targeted for action—18,500 hectares—represents, according to the regional ministry, an increase of 12,500 hectares compared to 2023. According to the yearbook of actions against the processionary caterpillar presented by the regional minister at the regional government headquarters, last year the helicopters carried out a total of 90 double-pass flights and released a total of 50,650 liters of Belthirul-F.

The use of this pesticide will be combined with population control of male caterpillar butterflies through the use of pheromone traps and the physical elimination of processionary caterpillar nests by cutting them down or using shotguns. Regarding pheromone traps, 8,180 were distributed throughout the island this summer, and the catch count is still pending. These traps attract male butterflies, confusing them into believing they can fertilize a female. In 2023, 35,123 butterflies were captured in the 8,299 traps installed.

Regarding the physical removal system, 25,500 processionary caterpillar bags were destroyed between January and March of this year, compared to 16,309 in 2023. Of these, 64% were cut and the rest were eliminated by shooting.

This figure marks a new record for bag removal and reflects the steady increase in the presence of these lepidopterans. According to data from the Ministry of the Environment, since the reappearance of the processionary caterpillar was detected in 2016 and 125 bags were removed, their number has steadily increased. Thus, 1,107 bags were removed in 2020, 4,813 in 2021, 7,957 bags in 2022, and 16,309 in 2023.

The Processionary Moth, the Other Threat

Along with the processionary moth, the other animal that worries the Government's Forest Health Service is the processionary moth, the destruens, a beetle that, like the red palm weevil, bores into pine trunks. "Unlike the processionary moth, the destruens is native," Simonet noted. This insect wreaks havoc by attacking pines weakened by drought and boring into them. If it detects an affected pine, the Ibanat cuts it down and removes it. It also removes pines killed by the destruens, not because it helps control the pest, but so that they don't become fuel for a potential fire.

"It's not our responsibility," is the repeated response from the Balearic Islands' Ministry of Agriculture, Fisheries, and the Environment and the Port Authority when asked how the control and surveillance of olive, carob, and holm oak trees with a trunk circumference greater than 40 centimeters in Ibiza, which could harbor snakes or their eggs, is carried out. When asked about the outlying Civil Guard Office in the Balearic Islands, they recommend speaking with the Nature Protection Service (Seprona) in Ibiza, which states that they are not responsible for controlling and monitoring the entry of these trees.

The entry of olive trees, carob trees and holm oaks into the Balearic Islands is limited to the periods between April 1 and June 15 and between September 15 and October 15, taking into account that during these periods there is no egg-laying, hatching or hibernation of invasive snakes that have threatened the survival of the Pityusic wall lizard and the Balearic wall lizard for years, but no one controls their entry during these periods.

Who exercises control?

These measures are established in Decree Law 1/2023, which also establishes that the Environmental

Administration and the Administration in charge of port infrastructure in the Balearic Islands are responsible, "in collaboration and coordination," for promoting "appropriate formulas" to ensure compliance with control and inspection measures.

How they do this is the big question. The regional government's department points out that the control and surveillance of entry points "is carried out by the Port Civil Guard in coordination with the Balearic Islands Port Authority (APB) and the Environmental Agents Service."

For its part, the Consortium for the Recovery of Fauna of the Balearic Islands (Cofib) indicates that its work in this area consists of distributing cages to nurseries so they can assist in capturing snakes, in addition to disseminating information and answering questions. Regarding these issues, since the regulations came into force, Cofib has only received one request for information from a landscaper interested in bringing in a large number of these types of trees outside the timeframes allowed for the delivery of a landscaping project to a villa in Ibiza.

Apparently, the professional never submitted the request because, to date, the regional government has not received "any request for the entry of these trees outside the authorized period, nor any communication from the APB or the Civil Guard regarding irregular entries," explains Tomàs Bosch, head of the Government's Species Protection Service, who insists that they would act if they received a warning. The regional government's communications department concludes that since they have received neither warnings nor requests, "for the time being, the Decree Law is being respected and has achieved its intended purpose, which was to channel all imports during the months when there is no risk of snake entry."

How is this being done?

Unfortunately, it is unclear whether this is actually being done, because the APB also states that it has no authority over control or surveillance and that this task falls to the Civil Guard or the Seprona, "just as they have authority over the control of hazardous substances." For its part, the APB states that it would be responsible for reporting any unusual activity or would provide a space for the authorities if they requested it to conduct an inspection.

How this would actually happen remains unclear because when the Civil Guard is asked how control and surveillance of the entry of the aforementioned ornamental trees is carried out, it refers to the Seprona, which responds that they are not responsible. None of the authorities have been able to provide an answer as to how this surveillance is carried out or what devices are available for this, such as specialized canine units, as provided for in the Decree Law. Nor has there been any response as to how to proceed if one of the aforementioned trees is detected being brought in outside of the permitted periods, whether any such cases have occurred, and, if so, whether the tree contained snakes or their eggs.

Waste of Paper

For environmental associations in Ibiza, which have been criticizing the delay in responding to the snakes' spread for years, the lack of control is due to the lack of precision in the 2023 decree.

"It's a minimal regulation, and if it had been more ambitious, it wouldn't have been approved," says Jordi Serapio, coordinator of the Protect the lizards project at IbizaPreservation. "No one is ordered to control it," comments Joan Carles Palerm, president of the GEN of Ibiza, the association that promoted the Sargantanes or SERPS platform together with Amics de la Terra. Palerm also adds that the association has verified that no one exercises control after asking the Civil Guard when they have seen that "a large tree has entered outside the period," and they have not responded.

He appreciates the fact that this decree was passed, as does Antònia Cirer, a doctor in Biological Sciences and expert on Ibizan lizards, who indicates that the regulation had good intentions. However, Cirer also agrees: "A law that doesn't make it clear who has to do what is a dead letter."

The Ibiza Council also does not monitor or control the entry of the aforementioned trees, stating that "it is the responsibility of the competent authority."

Ibiza HEUTE

Pityusen: Kampf dem Prozessionsspinner

Pityusic Islands: Fighting the Processionary Moth

The processionary moth caterpillars, with their stinging hairs, are a plague on Formentera and widespread on Ibiza. The Balearic government is spraying a bio-poison from the air.

22. OKTOBER 2024

The caterpillars move through the area in long chains, like processions. Photo: GOIB

Lizards are missing

Where there are many snakes, processionary moth caterpillars are also more common. The reason: The snakes have consumed the lizards, and the lizards used to eat the pests' larvae. This is explained by Luis Núñez, head of the Forest Health Department at the Balearic Ministry of the Environment. On Ibiza, processionary moths are appearing more frequently in Santa Eulària and Es Amunts.

Biotoxin and Hormone Traps

The cost of eradication over four years is now estimated at 9 million euros. The Ministry of the Environment is having 18,500 hectares sprayed with the bacterium from the air using helicopters. The biotoxin is harmless to bees, explains Núñez.

At the same time, the Forestry Office has installed hormone traps to catch the male moths. The clearly visible nests are removed or, if they are too high, shot down. If the cocoon breaks, the insects freeze to death. This happens from January to March.

Santa Eulària Begins

The Santa Eulària Town Hall announced on Monday that the control campaign is beginning. The pine trees are being sprayed from small planes and helicopters. The city hall also states that the bacterium is harmless to humans and animals, including bees. Nesting boxes are also being installed for bats and

birds to settle in and catch the moths.

Formentera also sprays

On Formentera, the processionary moth caterpillars were declared a plague in 2017. For a time, the previous island and Balearic governments rejected aerial spraying. Luis Núñez is now again including large-scale spraying in the control campaign.

Helicopters will spray 2,500 hectares of pine forest twice in October, November, and early December. The cost for 2024 is €555,000. The organic product is also being used here. More information: www.caib.es/sites/sanitatforesta

German Discovery

Bacillus thuringiensis was discovered by the German biologist Ernst Berliner around 1911. The original pathogen originated from a mill in Thuringia, hence its name. The "Kurstaki" variant does not harm bees and is permitted in organic farming.

Dogs at Risk

The insects were first discovered on the Pityusic Islands in 1975; they presumably arrived on the islands with ornamental plants. The caterpillars' fine, poisonous hairs can cause severe discomfort in humans and animals, such as dogs, if they come into contact with mucous membranes. They also damage trees.

Mediterranean pine shoot beetle

A second concern on the islands is *Tomicus destruens*, a native pine shoot beetle that bores into pine trunks and causes them to dry out when they are weakened by drought.

A nest in a pine tree on Ibiza. Photo: MBA

PERIÓDICO de IBIZA Y FORMENTERA

Las ‘sargantanes’ de Ibiza estrenan casitas seguras en Sant Josep

Ibiza's lizards open safe houses in Sant Josep

These are the first three such facilities in the municipality.

One of the information signs | Photo: Sant Josep City Council

R.I. | Ibiza | 20/11/24 11:08 | Actualizado a las 12:58

The Sant Josep City Council, through its Department of Environment, Sustainability, and Coastline, presented this Wednesday the new lizard refuges and reserves located outside the Caló de s'Oli auditorium. This is one of the three spaces chosen to launch this initiative in the municipality, in addition to those located in Can Raspalls and Port des Torrent.

The Balearic Ministry of Agriculture, Fisheries, and the Natural Environment, through the Consortium for the Recovery of Fauna (COFIB), in collaboration with the municipalities of Ibiza and with the support of the Consell, has promoted the creation of urban reserves to conserve and protect the Pityusic lizard.

With this initiative, the General Directorate of Natural Environment and Forest Management, through COFIB, "aims to establish measures to increase the density of

this species and minimize the risks of predation it suffers," the Josepí City Council stated in a statement.

"As is well known, the Pityusic lizard is a very vulnerable creature, especially after the appearance of snakes, which pose a major threat, among other predators, and seriously endanger the survival of the species if we do not act decisively," explained Felicia Bocú, Councilor for Environment, Sustainability, and Coastal Affairs.

For his part, Víctor Colomar, a member of COFIB, defined these refuges and reserves as "the lizards' homes and neighborhoods," where "they have their own ecosystem, where they can hide and protect themselves from adverse temperatures and their predators." Among their characteristics, "most of them are made of straw and wood, which meet suitable climatic conditions and are lined with stone to make them resistant and waterproof."

It is worth remembering that last June, the ordinary plenary session unanimously approved declaring the municipal public gardens as a refuge and reserve for lizards, committing to implement measures to guarantee the protection and conservation of this native species. These garden areas, located in municipal office buildings, educational centers, health centers, and sports areas, are considered suitable habitats for lizards, with improvements planned for 2024 and the following years.

In fact, the municipal green areas maintenance contract, currently being put out to tender, provides for the installation of 80 additional refuges and more vegetation suitable for lizards. The ultimate goal is to promote the protection and conservation of the Pityusic lizard throughout the municipality of Sant Josep, according to the City Council.

Raül Luna, Environmental Officer for the Sant Josep City Council, emphasized that "to promote the presence of the lizard in our municipality, we are working to ensure that the garden areas, with native flora, meet the best conditions, both for its protection and for its feeding and, of course, reproduction."

These actions and the material that will be distributed are part of the project to control and eradicate various invasive species in different habitats and geographical locations, which is funded by the PRTR-MRR through the Next Generation EU Funds between 2022 and 2025.

Furthermore, these lizard reserves contribute to the Urban Greening Programs of the European Biodiversity Strategy 2030, providing gardens and parks with added nature conservation value.

At the same time, the Sant Josep City Council has joined the protection of the Pityusic lizard by carrying out other actions. One of these initiatives is the collaboration with the Sant Josep Hunters Society to install snake traps in several locations throughout the municipality and distribute them to the public in recent years. We are also in contact with some of the organizations that have joined forces to protect the Pityusic lizard, such as the initiatives Sargantanes o Serpientes, SOS Salvem la Sargantana Pitiusa o Protegim les sargantanes.

18-02-2025 - IbizaHEUTE - Ibiza: Nobody controls “snake trees” (control)

Ibiza HEUTE

Ibiza: Niemand kontrolliert „Schlangen-Bäume“

Ibiza: Nobody controls “snake trees”

18. FEBRUAR 2025

Sometimes a trip to the supermarket is an adventure, and not just because of the high prices: A horseshoe whip snake was spotted very close to a large supermarket in Ibiza (archive photo). Photo: Pixabay

No authority controls the import of trees to Ibiza and its sister islands in which snakes could potentially hide. Neither the government nor the port authorities monitor holm oaks, olive trees, or carob trees with a trunk circumference of more than 40 centimeters, in which reptiles or their eggs could be hidden.

"Not responsible"

"We are not responsible for that," says the administration. Even the nature conservation agency Seprona states that it does not monitor the introduction of such trees to the island.

At the same time, the snakes are spreading further and further on Ibiza. The problem is: the reptiles have no predators and find plenty of food on the island. They have a particular appetite for the native Pityusian lizard.

Will the Pityusian lizards survive?

This poses a massive threat to the population of this species. Some experts even believe that there may be no more of these lizards by 2030.

Since horseshoe snakes were introduced approximately 20 years ago, they have managed to spread throughout the island. The measures taken so far to contain the plague have not been sufficiently successful, according to the Institut d’Estudis Eivissencs (IEE).

In addition to the authorities, more than 500 volunteers have attempted to contain the invasive species, for example, through trapping campaigns.

DIARIO de IBIZA

Lucha contra las serpientes en Ibiza: «Si se nos deja trabajar, en 2040 habrá más lagartijas que ahora»

Fighting snakes in Ibiza: "If we're allowed to work, there will be more lizards in 2040 than there are now."

The Government official responsible for the fight against snakes "disagrees" with those who claim that *Podarcis pityusensis* is becoming extinct and asserts that its population in Formentera "has not decreased."

In the center, Víctor Colomar, and on the right of the image, Minister Joan Simonet, at a press conference yesterday. / MARCELO SASTRE

José Miguel L. Romero
Ibiza 19 FEB 2025 20:00

They are neither becoming extinct nor, as has been said, will the *Podarcis pityusensis* disappear by 2030. This is what Víctor Colomar, veterinarian and coordinator of the Consortium for the Recovery of Fauna of the Balearic Islands (Cofib), who has been leading the fight against snakes in Ibiza and Formentera for years, assures: "It was said that by 2030, if nothing was done, there would be no lizards left. By 2030, all the Cofib technicians have a personal commitment to ensuring that there will be more lizards. And by 2040, if we are allowed to work, there will be more lizards than now," he stated this Wednesday during a talk given at the Consell headquarters.

And what does he mean by letting them work? Colomar responded to this question shortly afterward during the press conference in which Joan Simonet, Balearic Minister of Agriculture, Fisheries, and the Environment, provided details of the snake

control campaign in the Pityusic Islands during 2024: "I mean that for us, for Cofib, technical opinion is very important. Often, there is a public opinion that proposes voluntary and well-intentioned lines of work, but they may not be the most appropriate or the most efficient in terms of budget. We have to let people who have specifically studied these specific cases, which are very difficult to resolve, work. They have to let us try it our way."

Colomar, despite having Minister Simonet at his side, didn't mince his words and added that letting them work also means having the equipment they request: "For example, the boats we request [to access the islets], or the traps we're requesting. And our opinion must be above that of other, less qualified, less experienced opinions," he reiterated. Colomar emphasized in this regard that "many times" things are requested that are "outside the budget or capacity."

"As a councilor," Simonet commented immediately, "I may know something about agriculture, but I don't understand snakes. More than ever, we must listen to the experts and their demands." The head of the Natural Environment recalled that a budget of 1.5 million euros has been approved for the coming years through the Sustainable Tourism Tax (ITS) funds "specifically for the fight against the snake plague in Ibiza. With this money, he indicated, "more traps" can be purchased and there can be "more technical support, whatever they [from the Cofib] ask for." "Last year," he clarified, "we provided the boat, and there are also staff allocations to reinforce the efforts." The boat allows access to the islets without having to depend on other entities, such as the Es Vedrà Nature Reserves or the Ses Salines Natural Park.

"The battle is not lost"

Regarding the more alarmist views of the situation, Colomar, without downplaying the seriousness of what is happening, assures that "the battle is not lost; there are still lizards. In S'Espardell, there are so many that they are even annoying. You go to some places in Formentera and it's a pleasure to walk and hear the noise the lizards make in the countryside, something that has been lost in Ibiza but can be recovered."

In his opinion, "it's becoming clear that there are areas where lizards are becoming safe from snakes." For example, in Santa Eulària, "which was the epicenter" of this initial snake expansion: "There are still some viable lizard populations within that municipality. That means there hasn't been an extinction there."

"They're not becoming extinct."

In this sense, he rejects the idea that the *Podarcis* are on the verge of extinction: "When people say the Pityusic lizard is becoming extinct, I disagree. The Pityusic lizard isn't becoming extinct: populations are being lost. That's different." He urges people to "use terms carefully" and reminds us that "es Vedrà, s'Espartar, ses Bledes, sa Conillera, Tagomago... all these islets are home to thousands of specimens of this species. And on Formentera, their populations haven't declined, even despite the snakes."

DIARIO de IBIZA

El Govern controlará los viveros de Ibiza para evitar la llegada de más culebras

The Government will monitor Ibiza's garden centers to prevent the arrival of more snakes

COFIB prefers "to allocate personnel to trapping snakes rather than monitoring the likelihood that a truck carrying trees that could contain snakes could enter."

Joan Simonet during the press conference. / MARCELO SASTRE

José Miguel L. Romero
Ibiza 19 FEB 2025 20:00

Is Decree Law 1/2023, of January 30, on extraordinary and urgent measures for the protection of the Ibizan wall lizard, effective? Is it useful or is it a loophole because no one effectively controls the arrival of trucks loaded with olive trees to Ibiza? Víctor Colomar, head of the Ibiza Consortium for the Recovery of Fauna of the Balearic Islands (COFIB) in the fight against snakes, recalls that COFIB collaborated in the drafting of this decree, with the direct involvement of himself and the former manager, Luis Parpall: "It's a very good decree. From my point of view, it has allowed olive trees to legally enter a 'low concern' range [the entry of olive, carob, and holm oak trees into the Balearic Islands is restricted to the periods between April 1 and June 15 and September 15 and October 15, taking into account that during these periods, snakes do not lay eggs, hatch, or hibernate]. Nursery growers can continue to market ornamental olive trees, and there have been no mass entries during the snake hibernation periods, basically because nursery growers have preferred to wait 15 or 20 days rather than carry out all the necessary bureaucratic procedures to do so sooner.

Regarding the inspection of trucks loaded with olive trees, he points out that the COFIB lacks the "technical capacity to monitor" each vehicle that unloads on the islands: "We prefer to allocate personnel to trapping snakes rather than monitoring the likelihood that a truck with trees that may contain snakes could enter." One of the reasons is that many nurseries on the Peninsula already carry out their own sanitation of ornamental trees and quarantine them before shipping them to Ibiza, he comments. In this regard, Simonet, who noted that neither his regional ministry nor the Consell "have the authority to enter ports and monitor incoming shipments," announced that this year "a campaign will be launched to monitor compliance with snake regulations in the nurseries on the islands, carried out by environmental agents." Traps will also be provided to these gardening businesses to place on their premises.

Pioneer

The COFIB technician responsible for the fight against snakes in Ibiza also states that the decree "is a pioneer in Europe" and that they have received "congratulations at international conferences for this legislative initiative." He notes that it was "difficult to get it approved unanimously in Parliament, without political disagreements," and attributes the delays in drafting it "to the difficulties that arose from the lack of a reference."

PERIÓDICO de IBIZA Y FORMENTERA

Cazadas casi 4.000 serpientes en Ibiza y Formentera: «La 'sargantana' no se extinguirá»

Nearly 4,000 snakes hunted in Ibiza and Formentera: "The lizards will not become extinct"

"The Pityusic lizard is not becoming extinct," say snake control experts.

Joan Simonet during his press conference on Wednesday | Photo: CAIB

Juan A. Torres | Ibiza | 19/02/25 12:21 | Actualizado a las 21:54

The 1,564 traps installed on the island of Ibiza, 201 more than the previous year, have led to the capture of 3,072 invasive snakes on the largest of the Pityusic Islands, which represents an increase compared to 2023 and 2022, when 2,007 and 2,710 specimens were captured, respectively. These figures were provided this Wednesday in Ibiza by the Regional Minister of Agriculture, Fisheries, and the Natural Environment, Joan Simonet, accompanied by the Director General of the Natural Environment and Forest Management, Anna Torres. "The problem of pressure on the lizards is serious and worrying, we are aware of this," Simonet noted.

On Formentera, snake captures have decreased, and in 2024, 806 specimens were captured in the 364 traps installed. Last year, there were 888 captures in 323 traps, while in 2022, 664 snakes were caught in the 394 traps installed.

To these more than 3,800 captures, we must add 400 more reported by individuals and hunters.

Simonet explained that in 2025, there is a 1.5 million euro ITS fund allocated to combat the snake infestation in Ibiza and Formentera, which will be used, among other things, to increase the number of traps distributed throughout the territory.

Territory

The main focus of snake presence in Ibiza is the Sant Antoni area. "The density of snakes in Santa Eulària and Sant Joan is lower and they are smaller, we assume due to the lack of food. They are advancing towards Sant Antoni. That's where the fight is, the front of their advance, while the southwest area is where there are fewer," Simonet noted. The councilor insisted that the situation in Ibiza "is serious; efforts must be strengthened with captures," and announced that "trials will be carried out to reintroduce lizards in Santa Eulària and Sant Joan to restore a certain balance."

Víctor Colomar, coordinator for Ibiza and Formentera of COFIB, the entity in charge of the campaign to control invasive snakes in the Pityusic Islands, pointed out that while in Ibiza the vast majority of captures are horseshoe snakes (*Hemorrhois hippocrepis*), in Formentera the ladder snake (*Zamenis scalaris*) is the predominant one, with the main focus in the La Mola area. However, last year four horseshoe snakes were captured in La Savina, so the plan is to "set up 300 traps around the port" to prevent another outbreak on the island, Simonet emphasized.

Contrary to more catastrophic voices, Colomar asserted that the Pityusic lizard is not becoming extinct, but rather is losing population. It is being shown that there are areas that are becoming safe from the snakes, and despite Santa Eulària being the epicenter, there are still some viable populations of lizards.

The head of the COFIB in the Pityusic Islands also noted that "if they let us technicians work, there could be more lizards in 2040 than we have today."

Another added problem is the snakes' excellent swimming ability, which has led to their presence being detected on islets such as Santa Eulària, where 43 horseshoe lizards have been captured, and on s'Illa Murada, in Sant Miquel, where four more were caught. "We have to be realistic, and the species' swimming ability is serious; the sea is no defense against snakes," Colomar noted. However, he noted that "es Vedrà, s'Espartar, ses Bledes, and Tagomago are home to thousands of lizards, while in Formentera they have not decreased despite the snakes." For the first time, the COFIB has had its own boat to visit the islets.

Collaboration with local councils has allowed the establishment of eight urban reserves for the Pityusic lizard, where the presence of snakes is less common. However, the danger in these areas is posed by cats, so Simonet called on local councils to do their part and intervene.

DIARIO de IBIZA

Radiografía (a la espera) de los efectos de la invasión de serpientes en Ibiza

X-ray (pending) of the effects of the snake invasion in Ibiza

Valentín Pérez Mellado is waiting for the Balearic Government to commission them to carry out the complete resampling of lizards in Ibiza and Formentera.

Ana Pérez and Valentín Pérez Mellado during a visit to an islet in Es Freus. / J.M.L.R.

José Miguel L. Romero

Ibiza 20 FEB 2025 18:36 Actualizada 21 FEB 2025 6:01

The research team formed for years by Pérez Mellado and Ana Pérez Cembranos, a doctor and professor at the University of Salamanca, is waiting for the Balearic Government to entrust them, within the framework of the so-called Boscà Plan, with the complete resampling of lizards in Ibiza and Formentera—which was halted a couple of years ago pending that decision—in order to "diagnose the real situation" of these reptiles.

The regional Boscà Plan aims to recover and conserve amphibians and reptiles in the Balearic Islands: "One of the most important aspects is studying the conservation status of the two endemic lizard species, those of the Balearic Islands and those of the Pityusic Islands. In principle, we would be responsible for this study, because it's ultimately a follow-up that continues what we've been doing for 30 years. The issue is that we're not just investigating Pityusic lizards, but also birds, *Posidonia* meadows ... there are 80,000 things. It's extremely ambitious, with a very high budget and many ramifications, and it's taking a long time to get off the ground." They hope it will be ready soon so they can begin sampling this spring and summer.

They are based on knowledge accumulated over 30 years and data from "dozens of locations across all the island's grid cells" obtained "on two different occasions and with two very different results." The first result "was very good, and the second, very bad." A third study would provide insight into the real situation and the current evolution of the populations: "The first good data is from 2017. At that time, there were lizards all over Ibiza and in all the coastal towns on all the islets."

The second piece of data was obtained between 2019 and 2021: "In that second study, we observed the absence of lizards on islets such as s'Illot d'Or (also called illot de s'Hort or s'Ora) or Portinatx, where there used to be magnificent populations." They initially studied the islet d'Or in 2013-14, sometimes swimming to it from the coast of es Figueral, which is just 200 meters away: "There was a population there, even the densities of which we had calculated. It was a magnificent site where, in addition, there is a described subspecies endemic to that islet. We returned in 2017, and that population had disappeared. We went back three or four more times and saw that nothing remains."

In Portinatx, there's a small islet "very, very close to the coast" (almost an isthmus) where they once calculated lizard densities: "We also stopped seeing them. The same thing happened to us on the main island, in areas like Balàfia, where there were excellent transects; but now you do them and it's not that you can't calculate densities, it's that you don't see a single creature, it's that nothing comes out. There aren't even one, in the middle of spring, a magnificent time of year. In Santa Eulària, it's the same. There are only lizards in the gardens there. They've also disappeared on the islet of Santa Eulària."

He admits that five years ago, "I didn't have such an extreme opinion" as I do now: "Now I have a truly grave concern. This is very serious. Above all, we must prevent the 're-feeding' of this snake population. If it continues to 'feed' from the Iberian Peninsula with the arrival of more olive trees, there's nothing we can do. Eradicating a population that only grows on its own is relatively feasible; but eradicating a population that is constantly feeding on individuals that keep coming in is impossible."

DIARIO de IBIZA

Las serpientes de Ibiza son más sauriófagas que en la Península

Snakes in Ibiza are more sauriophagous than those in the Peninsula

A lizard from Sa Bleda Plena after being examined by herpetologists. / J.M.L.R.

José Miguel L. Romero

21 FEB 2025 6:00 Actualizada 21 FEB 2025 6:01

The volume of horseshoe snake captures (*Hemorrhois hippocrepis*), almost 4,000 in 2024 in Ibiza, "is unparalleled," says zoologist Valentín Pérez Mellado, the leading expert on the Pityusic lizard (*Podarcis pityusensis*): "More have been captured than there are in all the scientific collections in the world, those in Berlin, Frankfurt, Bonn, Spain, London... If you add them all up, there might be 300, 400 snakes... I've seen in Ibiza, in a single season, 50 times more horseshoes than I've seen in my entire life, and I'm over 70 years old. In the Iberian Peninsula, and I say this as a herpetologist, not as an amateur, it's a creature that you see every so often there. In places where it's very abundant, if you see one in a week, then you've already seen enough. What's happening in Ibiza is incredible."

In Formentera, the problem isn't as serious: "In the last survey we conducted there, in 2022, the snakes were present only in the La Mola area, where there was a magnificent density of lizards. In other words, it's not a problem. The snake can be eradicated there because, fortunately, it's an animal that hasn't adapted as well as the horseshoe snake."

In this regard, he points out that the ladder snake (or white snake, *Zamenis scalaris*), the most common (99%) in Formentera, "is not as sauriophagous, that is, it doesn't attack lizards as much or feed on them as much." In the Iberian Peninsula, he states, "neither the ladder snake nor the horseshoe snake (the most common in Ibiza) are very sauriophagous:" Neither of the two feeds much on lizards. But here they are in the snakes' diet, when it's not their usual prey. Both are much more likely to feed on small birds in nests and mammals. But when they arrived in Ibiza, they found the poor lizards to be a bargain."

Ibiza HEUTE

Editorial von Dieter Abholte: Wie ich es sehe…

Editorial by Dieter Abholte: How I see it...

23. FEBRUAR 2025

The editor-in-chief of IbizaHEUTE looks at the issue of snakes on Ibiza and Formentera, which have already wiped out almost all of the cute native lizards. The fact that things have come to this is largely due to political failure...

Dieter Abholte

Dear Readers,

It's not often that I'm at a loss for words. But with the latest news, I really can't think of anything else. It's about the snakes on Ibiza. Everyone knows that years ago, they came to the islands from the mainland on old olive trees. The reptiles had hidden in them or laid their eggs. By now, every reasonable person, including every politician, should recognize the danger that more and more snakes are coming from the mainland in vans to Ibiza or Formentera. That's right, it's the import of old trees, whose sole purpose is to beautify the grounds of villas and hotels. And then the logical conclusion would have to be drawn. And that is: Ban the delivery of old olive trees from the mainland – or at least inspect the trees for snakes or snake eggs.

But that's not happening. For years, such trees have been coming to Ibiza unchecked – and with them, more snakes. Imports are only prohibited twice a year. From April 1st to June 15th and from October 15th to November 15th. Why these import bans? Probably because snakes hatch from their eggs in spring. And there are many of them. A female ladder snake, of which there are now hundreds of thousands on Ibiza, lays between 5 and 25 eggs. No wonder Ibiza and Formentera are teeming with snakes. Believe me, that's not an exaggeration.

We at IbizaHEUTE have been calling for a ban on the import of ancient olive trees from the mainland for years. We're probably not alone in this. Nothing has happened. The authorities declared: We're not responsible for this! And while politicians complained about the snakes, they also remained inactive. Instead, the students learned how to catch snakes and also built protected areas for the last lizards that hadn't been eaten by the snakes. For this purpose, property owners can obtain – often for free – snake traps in which a mouse serves as bait. The mouse is protected from the snake by a wire mesh, and experts assure that the mouse is stress-free and unafraid when the snake comes. Sorry, I can't imagine that. I think the mouse is under constant stress when the snake opens its mouth, protected only by a thin wire mesh. The fact that the mice are locked in a confined space for days and weeks, and have to be provided with drinking water and food, doesn't make the animals' lives any easier.

The fact is: There are hardly any lizards left on the island, but there are more and more snakes. I remember that just years ago, dozens of pretty green lizards would scamper across our natural stone walls, many of them arriving just in time for breakfast. They especially loved bouncing on melon rinds and licking the sweet juice. We gave the particularly beautiful and large lizards names, and they were so trusting that they came onto our hands. The smaller ones, too. There haven't been any lizards on my property for two years, but there are snakes. I've seen two. There must be more. Or they've moved away because they've eaten all the lizards and small birds. The situation is similar with neighbors and friends.

I spoke to an expert a few weeks ago. Her opinion: "The snakes will continue to multiply rapidly over the next ten years. Then the population will decline because they won't find anything to eat!" Great prospects – but probably the truth. And because that apparently isn't enough, more snakes are being caught in the imported old olive trees for every laboriously captured one. What could help? Of course, only an absolute ban on the import of old olive trees. That should have been in place when the first snakes appeared, which was in the north of the island.

Now, a renowned scientist, Professor Valentín Pérez Mellado, zoologist and Pityusic expert, has spoken out and pointed out the politicians' shortcomings. We wrote about it here in IbizaHEUTE-Online on Friday. The expert on native lizards says: "If we want to contain the snake plague on Ibiza and Formentera and ensure the survival of the Pityusic lizard, we must stop importing olive trees, St. John's trees, and holm oaks to the islands." He also calls for a general ban on the import of such trees. The scientist says: "If a complete import ban isn't imposed, the snake problem will never be solved. Political action is needed here."

Now, no tourist needs to fear snakes slithering into their hotel room. The ladder snake, which is prevalent here, tends to be found where it finds food—i.e., in the countryside. It's also not venomous, so it's relatively harmless to humans. Unfortunately, it is for the friendly lizards. And as long as trees continue to arrive from the mainland, there will be no shortage of snakes. Nature lovers can catch as many of these reptiles as they want...

A decree from the Balearic government would suffice, stating: "The export of trees from the mainland to Ibiza and Formentera is prohibited!" It can't be that difficult, surely...

Best regards, Dieter Abholte

25-02-2025 - Ana Bianco - This is what would happen in Ibiza if snakes wiped out lizards (ecology)

DIARIO de IBIZA

Esto pasaría en Ibiza si las serpientes acabasen con las lagartijas

This is what would happen in Ibiza if snakes wiped out lizards

The uncontrolled proliferation of the horseshoe snake endangers the island's ecosystem and its most emblematic species.

The Pityusic wall lizard is unique in the world / SEBASTIÁN CANDELA

Ana Bianco
25 FEB 2025 5:01

Ibiza faces a new threat: the proliferation of snakes. The horseshoe whip snake, an invasive species, has spread throughout the island, endangering its native fauna, especially the Pityusic wall lizard, a symbol of Ibiza and a key element of its ecosystem.

The horseshoe snake is a voracious snake that feeds on small reptiles, such as lizards. The lack of natural predators in Ibiza and its high reproductive rate have led to a population explosion of this species, decimating the Ibizan lizard population.

What would happen if the lizards disappeared?

The disappearance of the lizards would have devastating consequences for Ibiza's ecosystem. These small reptiles play a fundamental role in controlling insect pests and dispersing seeds. Their disappearance would alter the food chain and could cause an irreversible ecological imbalance.

Furthermore, the Pityusic wall lizard (*Podarcis pityusensis*) is a symbol of Ibiza and a tourist attraction. Its disappearance would represent an irreparable loss to the island's natural and cultural heritage.

What is being done to solve the problem?

Authorities and environmental organizations have launched various initiatives to control the horseshoe snake population and protect the Pityusic wall lizard. Traps have been set up and snake-catching campaigns have been carried out. Efforts are also being made to raise public awareness about this problem and promote preventative measures.

DIARIO de IBIZA

Adiós, lagartijas

Goodbye, lizards

Opinión | Para empezar

Laura M. Expósito

27 FEB 2025 6:01
Actualizada 27 FEB 2025 9:55

I remember when I came to Ibiza for the first time. It was 2013. I had heard about the many wonders of this island and how beautiful it was. At that moment, I fell in love. The landscapes, the nature, the "Ibiza blue" sky, and, of course, its lizards. The ones that were on the sarongs, mugs, and keychains that people bought as souvenirs were also everywhere.

I was surprised to see how many there were. Of different colors and sizes. Back then, I would cross Ses Feixes after leaving my car in the park-and-ride parking lot, and they would cross right in front of me. Quickly, but fearlessly, letting themselves be photographed. They would also appear unexpectedly when we were preparing a picnic and eating on one of the island's typical piers.

It's been 12 years. Back then, my Ibizan, who used to tell me about some purple lizards that used to be found at his grandparents' house in Santa Eulària, was already telling me that snakes were eating them, and that what surprised me was nothing like what we'd seen years before.

How is it possible that nothing was done until just four or five years ago? In a decade, the lizard population has been cut in half. I can't imagine how much the snake population has grown.

Now, snakes are everywhere. The ones you come across on a walk in the countryside, they get into houses, and they swim in the sea. I can't remember the last time I saw a lizard cross my path or come to share my picnic.

The creation of platforms like 'Sargantanes o serps' demonstrates the public's interest in trying to reverse this situation. However, it's unacceptable that there is still no effective control of the trees that come from outside. The only animal endemic to these islands is disappearing. Who will take the blame and all that it entails?

Ibiza HEUTE

Brite in Aufregung: Schlange im Dachgeschoss

Brit in agitation: Snake in the attic

Uninvited lodger in Jesús. Photo: private

Briton Dean Gallagher won't soon forget this encounter in his Ibiza apartment: A "nearly 1.5-meter-long reptile" had nested between the roof beams of his laundry room. Only after a brief struggle, during which the island resident had to climb onto a washing machine, was the snake captured.

This isn't an isolated incident, reports Gallagher, who volunteers to combat the snake plague: "With the rise in temperature, the snakes are already becoming more active and emerging from hibernation." The animals' new tendency to move up to the upper floors of houses is worrying.

"Once they've finished with the lizards on the ground, they search for other food higher up," explains the amateur snake catcher. "Snakes seek these moist, warm areas both as hunting grounds for geckos and as shelter." In addition to roof beams, pool equipment rooms are also popular hiding places. The tricky part: "Even if you don't see any, that doesn't mean there aren't any," warns Gallagher.

Mice attract snakes

The Briton welcomes the preventative measures now in place across the island: "The sooner we set traps and take measures against mice, the better." The rodents attract snakes with their smell, he says, and they're at the top of their menu. Gallagher's tip: "All homeowners should have traps installed by the beginning of April at the latest."

Gallagher himself says he's set a good example. He claims to have taken appropriate precautions in his apartment – but apparently, it couldn't prevent the snake from entering.

DIARIO de IBIZA

Lagartijas azules (casi negras) de Ibiza en Berlín

Ibizan blue (almost black) lizards in Berlin

The Natural History Museum (Naturmuseum) houses a magnificent collection of Ibizan lizards collected by Martin Eisentraut 97 years ago.

SERGIO G. CAÑIZARES

José Miguel L. Romero

Berlín 30 MAR 2025 6:00 Actualizada 30 MAR 2025 13:57

Frank Tillack stops at the thick double gate and sets his cart aside. He becomes more serious (even more so than he already was) and looks at me intently:

Only accredited researchers are allowed in here. [For a moment I think I'm going to be left out.] But you can come in with me. Phew. Instructions. In this warehouse—he continues—only two people are allowed in at a time. You only enter here two at a time. If the alarm goes off, we have 30 seconds to escape before the door closes hermetically. Why only two at a time? For safety. And why can't just one person go in? So that if one of us gets into trouble, the other can drag us to the exit. But in that case, I remind you that you'd only have 30 seconds to get out. And then? You should wait inside to be rescued, but chances are you'll never get out of here alive. Needless to say, the white coat you just handed me is not fireproof.

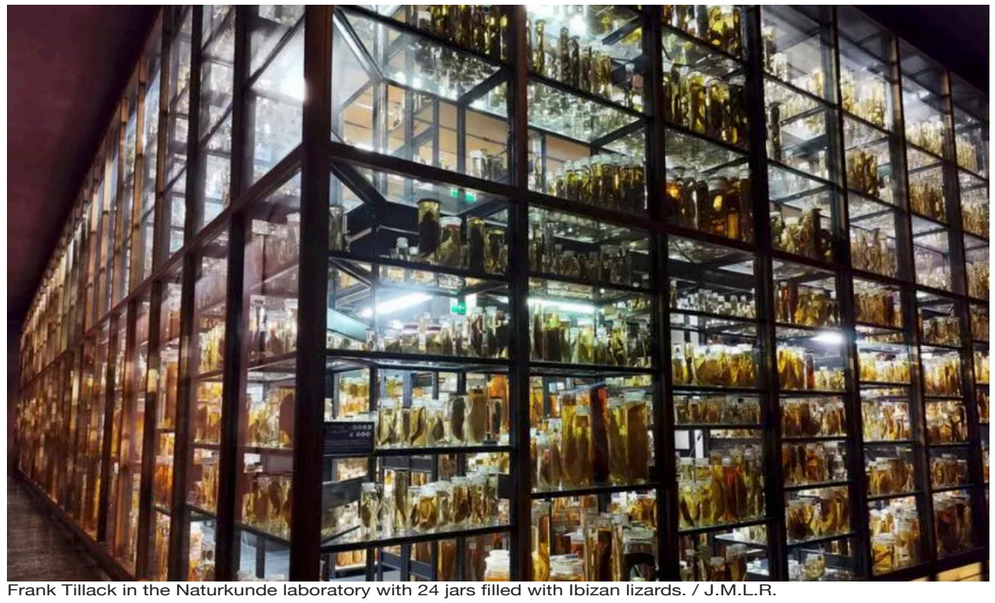
When he opens the gate wide, I understand everything. Inside is the herpetological and amphibian collection of Naturkunde, Berlin's Natural History Museum, founded 215 years ago and home to gems like the remains of a Brachiosaurus brancai, the largest dinosaur skeleton in the world (it stands 13 meters tall), and an Archaeopteryx specimen, one of the most famous fossils. But what interests me isn't the sauropod or that prehistoric bird, but the dozens of lizards that the German naturalist Martin Eisentraut collected between 1928 and 1930 in the Pitiusas. They remain, 97 years later, housed in that museum. And they're there, right in that room, inside glass jars that the zoologist himself sealed with frosted stoppers after smearing the edges with Vaseline to prevent the alcohol from evaporating.

And such caution is precisely because of those alcohol fumes. Upon entering, I understand why Tillack, who is responsible for the Naturkunde's amphibian and reptile collection, is so concerned about security. In the room, there are thousands of jars containing all kinds of bugs, filled almost to the brim with 75% alcohol: "If the security systems 'smell' the ethanol, the alarm would go off and the gates would seal shut. And if a spark were to fly, boom," he explains without flinching. I'm sure he heard me gulp. To avoid that mishap, he wears special anti-static safety shoes. He's strapped cumbersome

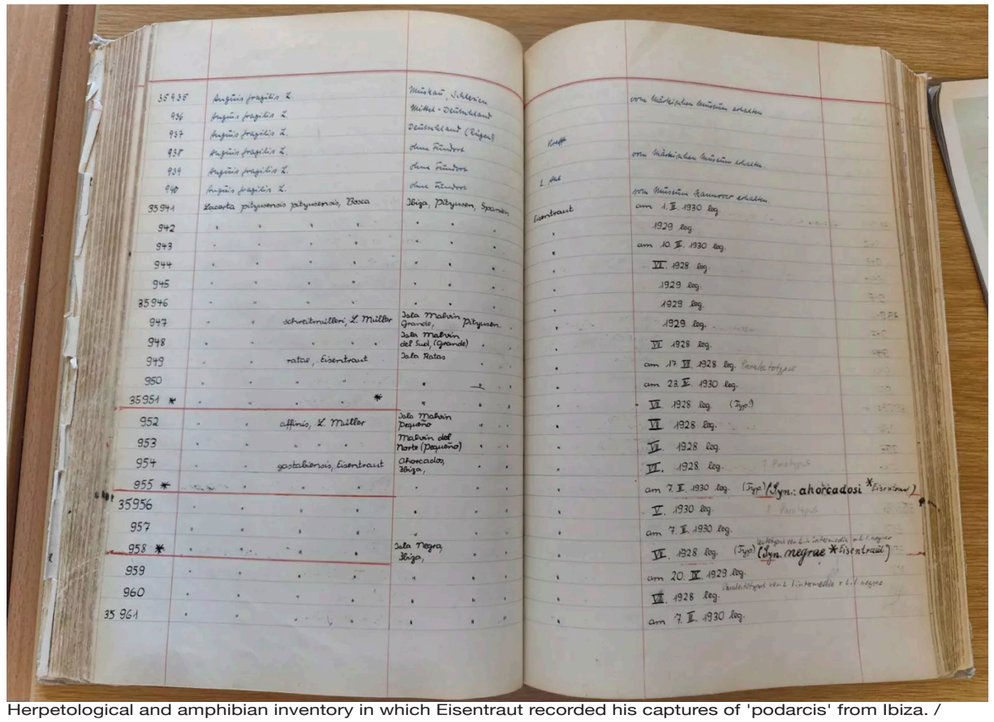
Frank Tillack in the Naturkunde laboratory with 24 jars filled with Ibizan lizards. / J.M.L.R.

straps around my feet that serve the same purpose. And for that very reason, you can't even enter with a cell phone, so you can't photograph the cabinets where the dozens of lizards Eisentraut captured in Ibiza and Formentera have been resting for almost a century.

All this material, along with the rest of the amphibians and reptiles, has been stored there "since the summer of 2010," explains Tillack: "It's a state-of-the-art, fully climate-controlled collection warehouse." And insulated. The floor is perforated, so you can see the lower floor, also filled with cabinets containing thousands of jars of species (in this case, snakes and large lizards: the crocodiles are in special tanks) that withstand the test of time soaked in alcohol. Tillack says that the museum



Frank Tillack in the Naturkunde laboratory with 24 jars filled with Ibizan lizards. / J.M.L.R.



Herpetological and amphibian inventory in which Eisentraut recorded his captures of 'podarcis' from Ibiza. / J.M.L.R.

houses one million species housed in some 233,000 jars and submerged in some 80 tons of alcohol. In the herpetology section, Tillack estimates there are about 160,000 specimens. The public can only see 1% of this immense collection, which has been organized taxonomically.

The Pityusic lizards are near the entrance, on the first shelves in the first aisles (there are a total of eight, each about 50 meters long). But before entering them, Tillack shows me one of the creatures that fascinates him most, a huge *Conraua goliath* frog, which is in danger, he says, because in Cameroon the females are indiscriminately hunted to eat them, to race them, or to sell them to collectors.

Soaked in Alcohol for Nine Decades

And there, placed on one of the upper shelves, are, almost all upside down, the Ibizan lizards that Eisentraut brought to Berlin almost a century ago. The earliest ones I see are those he collected on the island of Penjats in 1930. The jar has two labels. On one is written (Tillack believes it is Eisentraut's handwriting) "Isla Ahorcados Ibiza Spanien Eisentraut leg." On the other, placed almost at the base, "*Lacerta* [at that time, Pityusic lizards were still included in the genus *Lacerta*] *pityusensis gastabiensis*, Eisentraut," along with the location (also in Spanish) and the date ("5 [May] 1930"). In 'Contribution to the lizard fauna of the Pityusic Islands and Columbretes' ('Beitrag zur Eidechsenfauna der Pityusen und Columbreten', which appears in 'Mitteilungen aus dem Zoologischen Museum in Berlin'), Eisentraut speaks specifically of them: "During my first stay in Ibiza in the summer of 1928, I had the opportunity to catch lizards on the small, elongated lighthouse island of Ahorcados, to the south, between Espalmador and Ibiza. Although the four animals captured at that time presented characteristic features compared to the other neighboring races, I did not yet dare to establish a new race due to lack of material, but placed them with the *L. lilfordi negrae* Eisentraut, from the nearby Negra Island. After capturing another 26 specimens [in 1930] and comparing them with 13 fresh specimens from Negra, I would now like to identify the Ahorcados lizards as a new race. He named it *Lacerta pityusensis ahorcadosi* subsp. and explained that, compared to those from Ibiza, those from Penjats were darker: "The upper part varies from dark green to dark brown. However, the brown is not as dark as in the case of the lizards from s'Espardell," of which he had eight samples. "Some animals," he commented at the

time, "bear a certain similarity to those from Tagomago." And unlike those from Negra Island, "in which the markings on the upper part are very clearly resolved, the Ahorcados lizard still presents clear longitudinal stripes, although more or less interrupted."

The Proof of Difference

He had before him those *Podarcis* that Eisentraut had described 95 years ago, inert but with all their characteristics intact. Time stopped in their small bodies a century ago thanks to the alcohol. Ever since. The ten inside the jar remain in the same position (upside down), some with their mouths open, pierced by the tail of another.

There is the evidence collected by Eisentraut over three years that, as he emphasized in that scientific publication, demonstrated that the Pityusic lizards were different from those of the rest of the Balearic Islands: "During my trip to Spain this year [1930], which was mainly dedicated to studying the variation of lizards on small islands, I had the opportunity to collect specimens on some islets where little or nothing was known about their lizard populations. These are some islands located to the west and south of the large Pityusic island of Ibiza, and also the Columbretes, which form an independent group." All of them, he specifies in that text, "are found in the Zoological Museum of the University of Berlin," the Naturkunde. In his opinion, the lizards of the Balearic Islands and the Pitiusas form "two morphologically easily distinguishable groups." The Balearic ones have "small, unkeeled scales," among other characteristics. The Pityusic, however, have "large, keeled scales." There are also, he emphasizes, differences in the shape of the head: those from Ibiza have "significantly more blunted than those from the Balearic Islands."

Eisentraut uses this detailed description to contradict herpetologist Lorenz Müller and establish, for the first time, that the Pityusic lizard was very special and different from the Balearic one: "[Müller] does not consider these differences sufficient to justify a separation of species. While I initially also united both groups under the common species name *Larcerta lilfordi*, I would now like to advocate separating the two into species, in view of the considerable differences, as has been done previously," he suggests.

Valentín Pérez Mellado, professor of Zoology at the University of Salamanca and the leading expert on *Podarcis pityusensis*, recounts that at that time there was "a real race" to describe the Pitiusan subspecies: "Eisentraut, who used to work in the tropics, saw at one point that it was a gold mine and competed directly with the herpetologist Lorenz Müller, although they had great mutual respect." He had to deal with the physiologist Karl F. Buchholz, who was "very aggressive and accused Eisentraut of being a Lamarckian, which is not strictly true." Everyone was fighting to establish and describe subspecies, and anything went to be the first, to go down in history: "The race was so brutal that they began to publish their descriptions in third-rate journals as long as they would be published quickly and thus be the first. They were magazines for aquarium hobbyists (like 'Aquarium') and terrarium hobbyists. There were populations of *Podarcis* from Ibiza that were published three times in the same year, in three magazines and by three different authors.

On the shelves of the herpetological collection at Naturkunde, where jars Eisentraut filled with Ibizan lizards mingle with others from other parts of the Balearic Islands, there are also several containers containing bugs from es Vedrà and es Vedranell. And the word "bugs" is because that word describes them perfectly: in both cases, they are so enormous, so thick, with such marked gigantism, that Eisentraut only put one specimen (a male, very dark, with a dark blue, almost black belly) of es Vedranell in a jar, in this case longer than it is wide. They can't fit any more in there.

Pulse with Müller

Eisentraut used that magnificent reptile he captured on es Vedranell in 1928 to contradict Müller: "In the brochures for terrarium and aquarium science, Müller describes the lizards from the island of es Vedranell, near es Vedrà, as a new race *vedranellensis*, characterized by lighter colors than those of the Vedrà race, not only on the upper part but also on the underside. During my first stay in the Pitiusas, I was able to visit the islands of es Vedrà and es Vedranell and collect lizard material, although only one adult specimen of the latter [the colossus that still rests in a jar in the Naturkunde]. The underside of this animal was much darker than that of the es Vedra animals I had at the time for comparison. "During my current visit [back in 1930] to both islands, I captured five specimens on each, two of which were juveniles. It now also turned out that the lizards from es Vedranell were slightly darker than the

Two giant specimens of ses Rates and es Vedranell. / J.M.L.R.

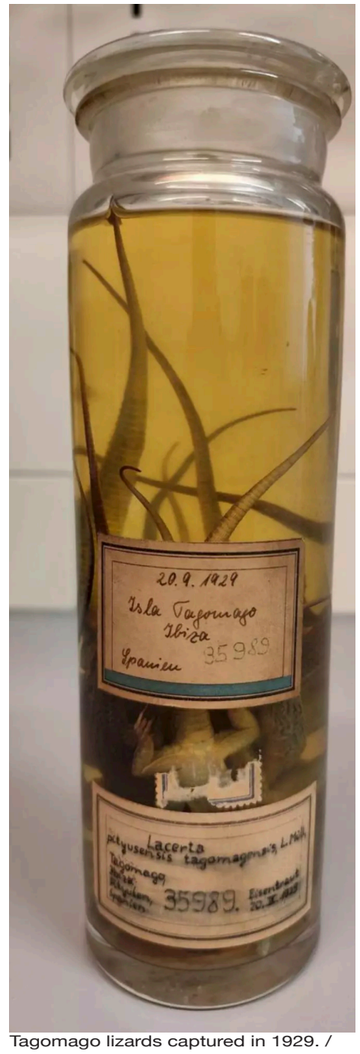
comparison animals captured on es Vedranell, i.e., exactly the opposite of the information provided by Müller," Eisentraut noted in his report. He caught those lizards on February 26, 1930, as he noted on one of the jars, which contains several small reptiles, not as enormous as the one from 1928. The naturalist warns in that publication that "apart from the fact that the color difference between the two populations of lizards [that he himself captured] is exactly the opposite of what L. Müller stated," he does not consider "a distinction in nomenclature" between the two lizards to be appropriate, "especially because of the considerable range of variation in the lizards from es Vedrà," where he compared "more than 100 specimens." "If you combine the findings I made on the lizards from es Vedranell (generally darker shades) with Müller's findings (generally lighter shades), it becomes clear that those from es Vedranell also vary from lighter to darker shades. Therefore, I would like to consider the reptiles of both islands as a single race, L. pityusensis vedrae," he explains.

From that warehouse, we extracted 24 of the containers filled with lizards brought by Eisentraut to Berlin. There are many more scattered on those shelves. Tillack doesn't know the exact number of jars because they aren't organized "according to collectors, collecting events, or expeditions, but rather in a scientifically systematic manner." How many did

Specimens that have been submerged in alcohol since 1928. / J.M.L.R.

the German biologist bring back? He also doesn't know because, "unfortunately, this part of the collection (Lacertidae) has not yet been digitized." He believes that the collection "contains approximately 450 specimens of *Podarcis pityusensis*," of which Eisentraut collected "at least 160 (probably more)," he indicates.

We put them in the cart and head upstairs (we have to take a long detour because it's under construction), where Tillack has his office, where two turtle heads and several snake prints hang, and which he shares with a live rhinoceros snake (*Gonyosoma boulangeri*) slithering in a terrarium: "I'm a snakeman." He calls himself that because he loves snakes, of which he has described numerous specimens during his career, many of them from Southeast Asia and the Himalayas. He's also just described a gecko from Nepal: "Don't worry, it's not dangerous, it's not poisonous," he says about his pet. He hasn't given it a name ("never"), but it's his pet. There, peacefully and without fear of the ethanol turning us into barbecues, you can closely observe (part of) Eisentraut's incredible collection, such as the lizards he collected on the islet of Ses Rates (there is a single gigantic one in a jar that he captured in 1928 and which has a light blue belly). There are some from es Malvins (1929), from the islet of Cala Salada (caught in October 1928 and March 1930), from es Canar (September 20, 1929), from Murada (1928 and 1929), from sa Conillera (September 1929), from s'Espartar (July 1928) and from the Escull de s'Espartar, from na Gorra (1929, indigo blue, almost black), from Tagomago and from es Trocadors (very light, caught in Formentera in July 1928).



Tagomago lizards captured in 1929. / J.M.L.R.

"Announcement of Experiments"

And Eisentraut not only conducted research on each islet, but also did something that is strictly prohibited today: he conducted experiments on them. That 1930 publication contains a chapter entitled "Announcement of Some Natural Experiments." It is a public warning about the experiments he conducted on islets "with sparse vegetation" and which he believed did not harbor lizards. He conducted them, for example, on "the Escull de Tramontana rock, the northernmost of the ses Bledes group; on the high triple rock of Vechell [es Vaixell], between Gorra and es Bosc (...); on the elongated rocky islet of sa Galera, north of es Vedrà; in the southeast, on the Daus Gross rock, which is located in the port of Ibiza and has a separate lighthouse, and on the islet of Negra." On these small islands, "several breeds of lizards were released for experimental purposes," he specifies. For example, "lizards from Ibiza [the main island] on the first three islands mentioned (24 of them in Escui de Tramontana; 51 in es Vaixell, and 20 in Galera), 50 in Negra (...) and, finally, in es Dau Gross, eight males from Escull Vermell and 20 females from Ibiza [on the main island]." He announced these "natural interventions" in order to "avoid mistakes," that is, so that other researchers who saw these creatures scurrying around those islets would not believe that they had just discovered some new subspecies.

On es Vaixell, he made a mistake: there was indeed a native population, as Pérez Mellado demonstrated nine decades later after conducting genetic studies. The pairs Eisentraut released didn't thrive there, probably because he left them at the bottom, where the sea hits, not at the top of the islet. And perhaps for that reason, because he hadn't climbed to the top (something that requires ropes and alpine climbing methods), he didn't know that an endemic lizard already resided there. On es Dau Gross, he did succeed, and the resulting population, as the Salamanca zoologist recently confirmed, is, genetically, a mix of those from the northern islets and those from Ibiza, although the dark blue of the former prevails.

A giant *Podarcis* of Tagomago. / J.M.L.R.

Tillack believes the jar labels were written by Martin Eisentraut because that handwriting matches the one appearing in the inventory from that period ('Reptilien-Amphibien-Katalog Band 5'), which he presumably filled out with his own hand and quill. That book also displays the handwriting of many other scientists who duly attested to their catches. He treasures it, and no wonder those eight pages describe in detail Eisentraut's forays through the Ibizan islets (Rodona, s'Espardell, Portinatx, ses Margalides...), but also his trips to Menorca (Colom, Isla del Rey), Cabrera, Mallorca (Islet de los Frailes, Dragonera), and Columbretes. A legacy of a fascinating era that Naturkunde treasures like gold, and that has survived the historical vicissitudes it has endured.

From es Pouàs to Naturkunde: the lizard's bite 16,000 years ago

The importance of the Pityusic lizards preserved in Naturkunde lies in the fact that they are the types and holotypes of *Podarcis pityusensis*. That is, they are the original specimens with which Eisentraut described the subspecies of the Pitiusas. "Each type," explains Valentín Pérez Mellado, "is exactly the physical specimen with which the author made his description." This is the standard against which other models are compared: "When you describe a new subspecies, you are obliged to designate one specimen as the type. And a series (the specimens captured to make that description) as paratypes." Some jars in the collection contain precisely these designations, written in red. And several researchers are currently turning to that collection, such as Steffi Woodgate, a biologist at the University of Oxford who is preparing her doctoral thesis with Johannes Müller, a professor of Paleozoology who works on Naturkunde. Pérez Mellado and Dr. Ana Pérez are collaborating on that thesis: "It compares the current populations of Pitusa lizards with how they were 16,000 years ago. To do this, they are using, in collaboration with Josep Antoni Alcover, a paleontologist at Imedea, the remains from the s'avenc des Pouàs site," explains Pérez Mellado.

They are studying, for example, "the morphological characteristics of the lizards' jaws and skulls, which indicate, with a series of stable isotope data, what they ate in es Pouàs 16,000 years ago. And they compare that with what they eat and what lizards are like now in Ibiza, on the main island and on some islets." The result will give "a vision of how lizards have evolved over thousands and thousands of years." The lead researcher is Johannes Müller. He's the one who "coordinates everything." "They investigate," explains Pérez Mellado, "what the bite force was like in lizards 16,000 years ago. And they do this based on the morphology of the fossil bones they find, which they compare with X-rays and CT scans of modern lizards."

01-04-2025 - IbizaHEUTE - Free ride for olive trees – and snakes? (control)

Ibiza HEUTE

Freie Fahrt für Olivenbäume – und Schlangen?

Free ride for olive trees – and snakes?

A magnificent olive tree. Photo: GOIB

The quarantine for tree imports to the islands has been lifted as of today, April 1st. No joke. Olive trees, carob trees, and holm oaks with a trunk diameter of 40 centimeters or more can be brought to the islands from April 1st to June 15th and from September 15th to October 15th.

Snakes in the Root Balls

Imports are prohibited for the rest of the year because the root balls may contain snakes or their eggs. However, the Ministry of the Environment issues special permits outside of these times if it can be proven that transport poses no danger.

The import ban to the islands only applies to the three tree species mentioned and only if the trunk measures 40 centimeters in diameter. Thus, even 38 centimeters are allowed.

To protect the lizards

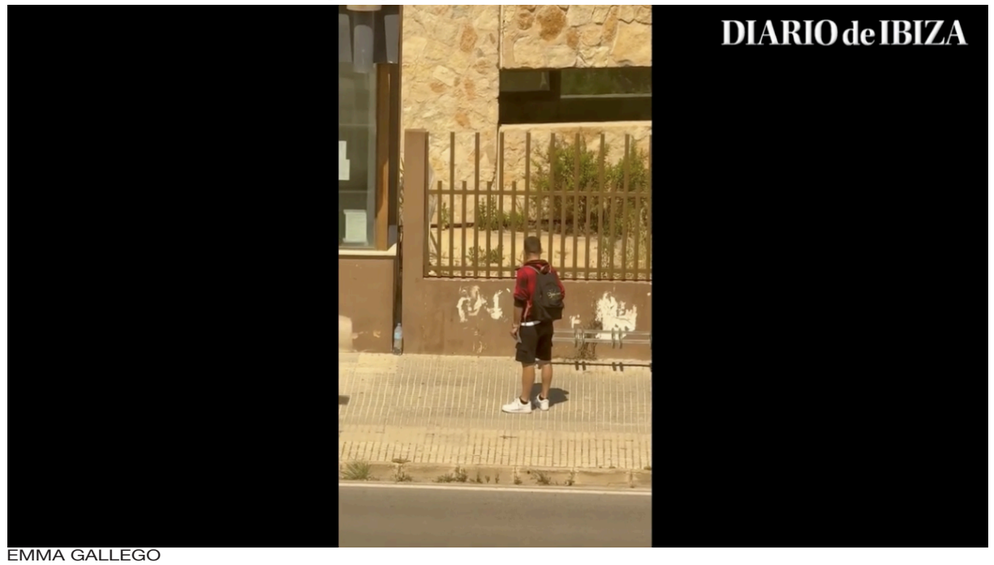
The Balearic Ministry of the Environment wants to protect the Pityusic lizard and the Balearic lizard. The import of decorative trees has been their downfall. The voracious snakes first arrived on Ibiza and Formentera 25 years ago with the import of old olive trees. They are multiplying rapidly and have almost wiped out the native lizards in many areas of the islands.

DIARIO de IBIZA

Una vecina: "Me ha sorprendido mucho ver una serpiente en pleno centro de Ibiza"

A neighbor: "I was very surprised to see a snake in the center of Ibiza."

The woman recorded a snake walking along the sidewalk.



EMMA GALLEGO

Redacción Digital

Ibiza 27 MAY 2025 16:58 Actualizada 27 MAY 2025 17:22

An Ibiza resident filmed a snake walking along the sidewalk on Avenida de la Pau, right in the city center, on Tuesday. "I was very surprised to see it right in the city center," she told Diario de Ibiza.

It's a horseshoe snake (*Hemorrhois hippocrepis*), an invasive species that is seriously affecting the local fauna, especially the lizards. In 2024, around 4,000 specimens were captured on the island.

This type of snake is larger here than on the mainland, as its natural predators don't live on the islands. Species measuring 188 centimeters have been captured.

Right now, both the island's institutions and many associations, such as Amics de la Terra, Gen-Gob, and IbizaPreservation, are distributing traps to try to control these reptiles and save the native lizards, but more is needed. *Podarcis pityusensis* is a species endemic to Ibiza and Formentera, with 23 subspecies described. It is a true biological gem that is also a traditional icon of the islands.

DIARIO de IBIZA

Un excursionista en Ibiza: “No sé qué es peor: la invasión de serpientes o la invasión de estúpidos humanos”

A hiker in Ibiza: "I don't know what's worse: the invasion of snakes or the invasion of stupid humans."

A man is stunned when he finds a jug of water in the forest to keep the snakes from going thirsty.

Photograph of the branch with the message in the Torres d'en Lluc area / JOAN MICOLAU

Marta Torres Molina

Ibiza 29 MAY 2025 13:27

“We found this today near Ses Torres d’en Lluc,” says Joan Micolau, surprised by the sight he encountered this Wednesday while walking through this wooded area near Cala Aubarca. In the image, which he shared on his social media, you can see the cut-out end of a water jug on the ground, on the pine needles, and above it, two messages.

The first, carved with a knife or other sharp object on the lower branch closest to the jug: “Keep water for snakes.” The second, written on a note, also in English, carefully balanced on the same branch, explains that it is summer and that these animals need water.

The worst part of the article, if Joan Micolau wasn't already sufficiently amazed, is that it describes them as "native animals." In other words, while most of Ibiza is in the midst of fighting snakes, an invasive animal that, according to experts, is decimating the lizards, a truly native animal of the Pitiusas, there are people calling for the snakes to be protected. All they need to mention in the article is that they are also "beings of God."

The worst part isn't just that, but everything surrounding the snake trough: "Nearby, the remains of a bonfire in a highly vulnerable area with no protective measures," describes Joan, who can't help but add a comment to the story: "I don't know what's worse now, the invasion of snakes or the invasion of stupid humans."

Photograph of the branch with the message in the Torres d'en Lluc area / JOAN MICOLAU

DIARIO de IBIZA

Guerra contra las serpientes en Ibiza

War on Snakes in Ibiza

Experts warn that the island is experiencing the peak of the snake infestation, with its spread to Vila-real, Sant Antoni, and Sant Josep.

Gallery: Snake trap distribution in Can Tomeu / VICENT MARÍ/J.À COSTA/ IBIZA CITY COUNCIL

Josep Àngel Costa

Ibiza 31 MAY 2025 20:00 Actualizada 31 MAY 2025 20:06

The rivalry between Pep Ramis and his neighbor should be widely imitated. The two challenge each other to see who can catch the most snakes, a healthy confrontation to combat the snake plague in Ibiza. Therefore, Ramis didn't hesitate for a second to show up at the Can Tomeu municipal property in the Ca n'Escandell neighborhood to get his hands on one of the 190 traps distributed by Ibiza City Council. The day also includes an informative talk on how to maximize the results with this equipment.

Sofía López, a biologist with the Balearic Fauna Recovery Consortium (Cofib), made it clear to everyone present that their role is fundamental. Although this regional government agency manages 1,500 traps in Ibiza and another 400 in Formentera, they face a major obstacle: "We have a limit on private property," she warns. Hence these calls for citizen participation, even more so in the midst of the snake expansion.

The first sighting on the island occurred in 2003, of a reptile hiding in an olive tree trunk. For more than two decades, these ornamental trees imported from the Peninsula have been the entry route for this invasion. Nevertheless, their importation is still permitted. The only measure taken to reduce their impact is to establish a schedule to prevent the entry of olive, carob, and holm oak trees into the Balearic Islands during periods of hibernation, laying, or hatching.

Initially, the snakes spread through the northeast and center of the island, known by experts as the "core zone," where they seemed to remain confined for a long time. But the situation worsened a couple of years ago.

Volunteers carry snake traps. / V.M.

"In the core zone, the nucleus where it all began, the snakes have already eaten almost all the lizards, and fewer and fewer small mammals are being seen. "So, now they're spreading south and west, and in fact, the area where we've found the greatest number of captures is in Sant Antoni," explains the Cofib biologist.

As if that weren't enough, the snakes are surprising the scientific community in Ibiza with their swimming ability. They have already been captured on three islets, but evidence of their presence has been found on five. "There are other islets where we haven't detected any evidence of their presence, but where, from one year to the next, the lizard population has declined," laments López.

Annual Records

To make matters worse, last year records were broken, with 3,072 specimens trapped in Ibiza and 806 in Formentera. Could a more bleak picture be possible? From another perspective, the fact that more and more are being caught demonstrates that trapping works. Furthermore, the case of Formentera has yielded more positive results. There, so far, only one species has expanded, the ladder snake (*Zamenis scalaris*), while Ibiza is also being hit, mainly by the ladder snake (*Hemorrhois hippocrepis*).

On the smaller of the Pitiusas, the population has been limited to La Mola. "The invasive snake in Formentera behaves much less aggressively toward the lizard," explains the Cofib biologist. Nevertheless, the guard is not lowered and special attention has been paid to trapping the La Savina area. This is a preventative measure in case any reptiles are hiding in vehicles unloading at the port.

Lack of Traps

Recently, the environmental organization Amics de la Terra expressed its criticism on the occasion of European Natura 2000 Day, warning that "there aren't enough snake traps." Mariano Tur and Nieves Ribas, two residents of Sant Josep who came to Vila to take advantage of this opportunity, can confirm this.

"We've been on the waiting list for a year to get one from the Sant Josep City Council. It's unacceptable," they resign themselves. Even without traps, Tur has caught "five or six" snakes in the last year. "These don't appear in the records," he jokes.

Like them, they emphasize that everyone living in the countryside should collaborate in controlling the infestation, especially if, as in their case, they live surrounded by dry-stone walls, an ideal refuge for reptiles. "The worst thing is that no lizards appear there anymore. Before, we used to leave water for them to drink and we always saw them," Ribas laments.

Is there a shortage of these traps? For López, "the magnitude of the problem is so large and complex that there will never be enough." She gives a simple example: one of her colleagues, who is in charge

of a group with 80 traps, removed "93 specimens in one morning" the other day. "There were boxes with more than one snake," she comments, surprised.

"This biological invasion is in the exponential growth phase. We can say that, right now, we are at the crest of the wave," López concludes. If it's any consolation, the stabilization phase would be next, "when the population has to stabilize because the snakes no longer have food resources."

The Can Tomeu estate itself, where the distribution takes place, is a clear example of the growing problem. "Ca n'Escandell is a neighborhood that borders the forest, so it has become the entry point into the municipality," recalls the Councilor for Gardens, Manu Jiménez Roig.

The City Council itself has distributed eight traps throughout this area, which includes several urban gardens for use by residents and civic organizations. "Last month, 14 were caught," explains Jiménez.

Vila has purchased 150 traps this year to distribute to individuals, in addition to another hundred donated by Cofib. "We will buy another batch to continue distributing to citizens and businesses that want to collaborate in stopping this spread of snakes."

In addition to country houses, the problem already affects urban areas like Can Misses. José Antonio López lives in a residential development in this neighborhood, where the community of owners has been committed for the past few years to trapping the gardens and the area around the pool. Just in case, he is taking some more to install there and also for a family home in Sa Coma.

The Bet

Although Pep Ramis doesn't live in Vila, he realized last year that the invasion had reached the city. "I was walking down the street that runs through here [in front of Can Tomeu] and saw a snake. I ran over it, reversed to finish it off, and it still escaped," he recalls.

However, he has never seen a single reptile running free at his country house in Can Frígoles, very close to an area as sensitive as the Ses Salines Natural Park: "I realized there were snakes because I was seeing fewer and fewer lizards."

So last year he decided to set the first traps, one with a mouse and the other without animal bait, the same models now distributed in Can Tomeu. "I left them outside and they got ruined," he explains. Now he's looking for replacements to confront his neighbor again: "Last year, I caught thirteen. He beat me by one."

A moment during the briefing, with Sofía López flanked by councilors Manu Jiménez and Jordi Grivé. / J.A.C.

PERIÓDICO de IBIZA Y FORMENTERA

La necrópolis, patrimonio de la sargantana

The necropolis, heritage of the Pityusic lizard

The Puig des Molins Museum celebrates Environment Day with art and conservation of the Pityusic lizard

Among the artistic offerings, the pop-up exhibition organized by the Art amb B collective in collaboration with Baleària and Can Púnic stands out | Photo: Toni P.

Toni P. | Ibiza | 02/06/25 15:06 | Actualizado a las 21:41

The es Puig des Molins necropolis will become the epicenter of the commemoration of International Environment Day. The Archaeological Museum of Ibiza and Formentera (MAEF) and its association of friends (AAMAEF) have prepared a program of activities that combines outreach, biodiversity conservation, and artistic offerings, with the Pityusic lizard as the absolute protagonist.

This reptile that characterizes the Pitiusas, *Podarcis pityusensis pityusensis*, has had a reserve at the site since 2021, which has been identified as an ideal habitat for the species. "Since 2021, the necropolis has been a lizard reserve. It's a perfect environment for this type of preventive conservation action, as it already had a significant lizard population," explained Maria Bofill, curator at the MAEF, during the presentation of the activities. "The commemoration of International Environment Day seemed to us the most appropriate context to explain the conservation efforts of the Necropolis's natural environment."

Among these efforts, the monitoring and population study program for the lizards stands out, directed

since 2024 by biologist Olivia López, who had previously participated in the development of the catalog of the site's fauna and flora. "In the catalog, we have compiled some 200 different species of fauna and flora," the biologist noted. Regarding the sargantana, her assessment is optimistic: "We have detected areas with a considerable population concentration. The density, pending completion of this year's study, is stable and the population is healthy. We can find large, adult males with good coloration, and we have confirmed that reproduction is taking place; we have seen both eggs and young."

Heritage

The necropolis, declared a World Heritage Site by UNESCO as part of the "Eivissa. Biodiversity and Culture" property, is home to a surprising biodiversity right in the heart of the city. Birds such as teulats, xoriguers, and torcades, arthropods, hedgehogs, and even plant species linked to local folklore such as figueres de pic (a type of snail) and frigolars (a type of snail), coexist among the hypogea. But there are also threats, especially to the lizard. One of these is the entry of snakes, which has been combated since 2022 with the annual placement of traps. "Together with Cofib, we set up about 15 snake traps each year, however, we only captured one in 2023," stated Bofill. Another threat is urban cat colonies. "More awareness-raising work is needed," added López, noting that their presence can seriously disrupt the ecological balance of the area.

Art

Among the artistic offerings, the pop-up exhibition organized by the Art amb B collective in collaboration with Baleària and Can Púnic stands out. It will only be open to visitors on June 5th, from 9 a.m. to 3 p.m. Curated by artist and cultural manager Antoni Torres, the exhibition features 70 metal snails and 12 metal ants, created by local artists and artists from the eastern Iberian Peninsula. "We have selected artists including Ibizan artists Aphon Hengcharoen, Marga Guasch, Marga Juan, Aïda Miró, Toni 'Tirurit', José Fina Torres, and Ángel Zabala, as well as myself," explained Diana Bustamante, one of the participating artists.

The day will conclude with a children's painting workshop at 6 p.m., in which 15 children will decorate their own metal snails. This proposal, also conceived by Bustamante from Can Púnic, seeks to introduce children to the ecological and symbolic value of this reptile.

Photography

On Friday, June 7, photography will take center stage with a youth gymkhana led by photographer María José Guerra and educator Xavier Durán. "Xavier will begin the day by giving a talk on photography, then different groups will be formed around a topic and will go out to take photos with the cameras we will provide," Guerra explained in the presentation. After the photo outing, participants will share breakfast and analyze their images with a critical and constructive eye. The activity will culminate with a selection of images for a virtual exhibition.

The program will conclude on June 14 with a guided tour with biologist Olivia López, "who knows best where to go," who will show the public areas normally closed to the public and explain the biodiversity that inhabits this unique space. The activity, with free admission, will allow you to discover how archaeology and nature coexist in harmony in Puig des Molins, and how this historic site becomes a "natural island" within the city.

"The Necropolis is a privileged space for lizards," summarizes Maria Bofill. This June, it will also be a privileged space for art, environmental education, and ecological awareness.

DIARIO de IBIZA

Serpientes en Ibiza: esta es la razón por la que se meten en las casas

Snakes in Ibiza: This is why they get into homes

Many island residents have encountered this snake, both in their gardens and inside their homes.

NICOLÁS NORIA / CANDELA CARRASCO

Ana Bianco

Ibiza 03 JUN 2025 14:44

The proliferation of snakes in Ibiza is undeniable, and in addition to their growing size and their sudden ability to swim long distances, another striking feature is their lack of fear of humans and their interest in entering urban areas, especially homes and gardens.

The most common snake on the island is the horseshoe snake (*Hemorrhois hippocrepis*), and here it has found a habitat it will not abandon because it seeks warmth as its lifeblood. It is almost impossible to find it in regions with cold nights or harsh winters. It prefers sunny days and high temperatures to carry out its activity, which usually occurs mainly during the day. However, when summer reaches its peak, it is not uncommon to see it moving around at dusk or even at night. Its activity schedule is strongly influenced by the climate: while in much of the Iberian Peninsula it remains active between March and November, in the southern and eastern coastal areas it can be active year-round thanks to the mild winters.

Agile and swift, this snake is an expert climber. It scales walls, cliffs, and tree trunks with surprising skill, using crevices and overhangs as footholds. Although it usually avoids direct confrontation, if it feels cornered, it adopts a defensive posture: it coils,

widens its head, emits a threatening hiss, and, if necessary, attacks without hesitation. It is also capable of releasing a foul-smelling liquid as a deterrent. In extreme situations, it can even detach part of its tail to escape a predator.

Regarding its diet, this snake demonstrates great adaptability. It is an active hunter, exploring crevices and hiding places in search of food. Despite not being venomous, it captures and kills its prey by constricting its prey. Juveniles feed primarily on insects and small reptiles, while adults prefer warm-blooded animals such as rodents and birds. Its climbing ability allows it to access places inaccessible to other predators, making it an effective threat to lizards and geckos.

Why it gets into homes in Ibiza

The horseshoe snake isn't too particular about its habitat, as long as the environment offers warmth and plenty of sunlight. Open areas with sparse scrub or cultivated fields are fine for it. Thanks to its cliff-dwelling habits, it feels especially comfortable in rocky environments, stone walls, ruins, or old buildings. In fact, it has adapted well to living near humans, taking advantage of artificial structures that provide both shelter and food, making it a distinctly anthropophilic species.

This means they are capable of living very close to humans, even coexisting. That's why they often decide to enter homes, looking for nooks and crannies to hide inside.

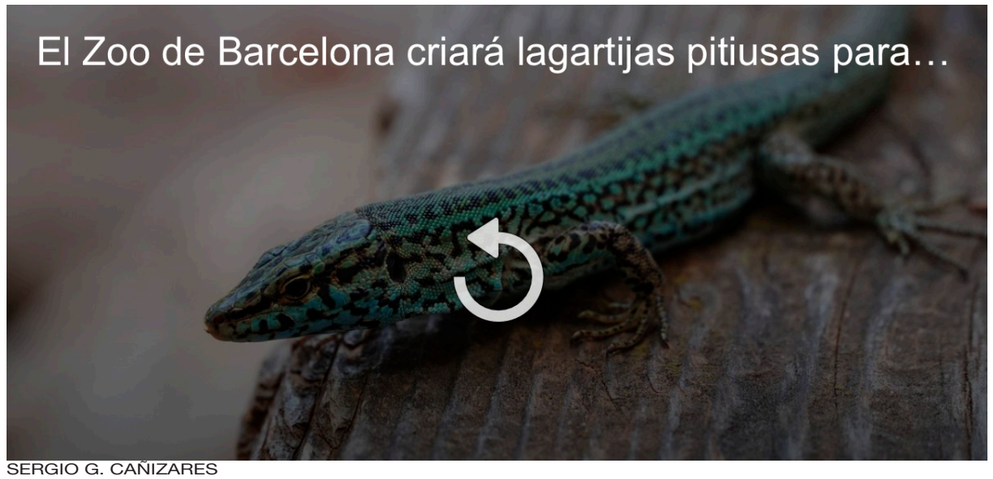
EMMA GALLEGO

DIARIO de IBIZA

El Zoo de Barcelona criará lagartijas pitiusas para protegerlas de las serpientes

Barcelona Zoo will breed Pityusic lizards to protect them from snakes

A total of 17 healthy and genetically different specimens (ten from Ibiza and seven from Formentera) have been captured and taken to the zoo.



SERGIO G. CAÑIZARES

EP

04 JUN 2025 15:06 Actualizada 05 JUN 2025 13:09

The Ministry of Agriculture, Fisheries, and the Natural Environment and the Barcelona Zoo have launched a pilot breeding project for the Pityusic wall lizard, creating three populations outside their natural habitat to ensure the survival of this endemic species.

Specifically, according to the Ministry, 17 healthy and genetically different specimens (ten from Ibiza and seven from Formentera) have been captured and transferred to the Barcelona Zoo. They will constitute the first breeding stock for the ex situ populations.

The Ministry of Agriculture, Fisheries, and the Natural Environment and the Barcelona Zoo have launched a pilot breeding project for the Pityusic wall lizard, creating three populations outside their natural habitat to ensure the survival of this endemic species.

"Furthermore, to reverse the current trend, we will continue promoting actions to combat invasive snakes, which, without a doubt, currently constitute the most serious threat to lizards," she explained.

The project is part of the collaboration agreement between the regional government and the Barcelona Zoo Foundation for the conservation of protected wildlife on the islands, signed in 2024.

According to the director general, the initiative is based on the commitment of both

institutions to the conservation and preservation of the archipelago's native fauna for future generations.

Specifically, according to the Ministry, 17 healthy and genetically different specimens (ten from Ibiza and seven from Formentera) have been captured and transferred to the Barcelona Zoo. They will constitute the first breeding stock for the ex situ populations.

This adds to the ex situ breeding project for the ferreret, which Barcelona Zoo has been developing for years in collaboration with the regional government. "It has allowed for the creation of new populations in the wild, contributing to improving the conservation status of this endemic amphibian, classified as endangered," Torres explained.

"Within the framework of the new project, scientific studies will also be conducted to deepen our understanding of the ecology, genetics, and conservation needs, while also working on the viability of restocking in the wild, in order to ensure informed and effective management of the project," according to the regional government.

> “ The Balearic lizard project, like the ferreret project, exemplifies how the zoo is going beyond its boundaries to become directly involved in the protection of endemic species in the Mediterranean ecosystem.
>
> Sito Alarcón, director of the Barcelona Zoo.

For the director of the Barcelona Zoo, Sito Alarcón, "it is an honor and a great responsibility to continue collaborating with the Government." In his opinion, projects like this are essential within the framework of the zoo's goal of preserving biodiversity and contribute to consolidating its position as a benchmark in the conservation of Mediterranean fauna, which is particularly vulnerable to climate change.

"The Balearic lizard project, like the ferreret project, exemplifies how the zoo goes beyond its limits to become directly involved in the protection of endemic species of the Mediterranean ecosystem," Alarcón emphasized.

The project involves the collaboration of herpetology experts from the Spanish Herpetological Association (AHE) and the Center for Ecological Research and Forestry Applications (CREAF). Also participating are technicians from the Government's Species Protection Service, the Barcelona Zoo, and the Consortium for the Recovery of Fauna of the Balearic Islands (COFIB).

The regional government has emphasized that the lizard is one of the most emblematic species of the Pityusic Islands and that invasive species such as snakes currently threaten its survival. In 2023, the two species of lizards found in the Balearic Islands and the Pityusic Islands, were included in the Balearic Catalogue of Endangered Species under the Vulnerable category.

DIARIO de IBIZA

«Las lagartijas de Ibiza están cambiando de comportamiento donde hay culebras»

"Ibiza's lizards are changing their behavior where snakes are present"

The Ibiza Council brings together some of the leading experts to evaluate conservation measures for the

Pityusic lizards. / SEBASTIÁN CANDELA

Josep Àngel Costa

Ibiza 04 JUN 2022 6:00 Actualizada 04 JUN 2022 17:08

The Ibiza Council celebrated World Environment Day yesterday with a day dedicated to the *Podarcis pityusensis*, given "the social and environmental concern over the effects of the snake invasion on their populations," according to the Councilor for Environmental Management, Vicent Roig. One of the invited scientists, Oriol Lapiedra, revealed that this endemic species is changing its behavior, and possibly its diet, in areas where it coexists with garter snakes, while Professor of Zoology Valentín Pérez again warned that rigorous studies on the effects of snakes on the decline in lizards are lacking.

At the opening conference, the head of the Balearic Islands Species Protection Service, Ivan Ramos, veiledly criticized the central government for its lack of involvement in the snake infestation. The Balearic government is preparing regulations that "allow for the restriction of the entry of trees" that, like olive trees, can harbor snakes. The goal is to find "legal loopholes" in a problem arising from the free movement of goods within the EU. "In meetings with the Ministry of Ecological Transition, they offer us their congratulations, but no support," he lamented.

Likewise, the State claims there is no space in the port of Ibiza town to quarantine the trees. "It would only be necessary during the hibernation period," he recalled. Other methods attempted by the Ministry of the Environment, such as training dogs to detect snakes dormant in the pots, have not yielded results.

Vicent Roig presents the day at the headquarters of the Ibiza Council. / V. MARI

Mediterranean Alliance

The driving force behind the citizen mobilization to protect the native lizard, Biology Professor Antònia Maria Cirer, advocated for an alliance between the Mediterranean islands, as they share pests resulting from free trade. Cirer focused on the preventive reserve project in Es Molins to safeguard "the most powerful symbol of the biodiversity of the Pitiüses."

"55% of the snakes' diet is lizards," she explained. This threat is further aggravated by the fact that both reptiles share refuge among the stone walls.

During the public question period following Cirer's intervention, the proposal by Unidas Podemos Minister David Álvarez was surprising. Just as "one nail drives out another," the politician inquired about the effectiveness of introducing a snake predator to the Pitiüses.

The herpetologist gave the example of Australia, where, to curb the rabbit plague, predators such as dogs and foxes were introduced. "They ignored the rabbits," she recalled, after finding other prey that provided much more food: "Then they had to protect the kangaroos with tremendous barriers all over Australia."

The GEN example

Balma Albalat, a conservation programs technician with the Grup d'Estudis de la Naturalesa (GEN-GOB), outlined the results of the monitoring carried out at Can Toni Jaume Negre, in Sant Llorenç. GEN manages this estate under a custodianship regime and in 2012 launched a lizard counting campaign, along four one-kilometer transects per year, between April and June.

This method provides them with the minimum population within that perimeter, which, before snakes had yet been detected on the estate, was between 70 and 80 individuals per survey. The first snake was sighted in 2015, and a year later, the lizard count had dropped by 40%.

The population then stabilized, likely due to the installation of snake traps, Albalat said. But

in 2020, due to COVID-19, it was not possible to monitor or set the traps. A year later, only one lizard was detected, the same number as in the two surveys carried out in 2022.

Elba Montes, a doctor in Evolutionary Biology, is the author of a thesis on the impacts of the snake plague, which warned that, in 2018, the lizard population had become extinct on half the island. Furthermore, by comparing the horseshoe snakes captured in Ibiza with those on the Spanish mainland, Montes found that they develop a "tendency toward gigantism."

Too big

Thus, numerous specimens reaching two meters are being found, far exceeding the peninsular average. This factor is compounded by the fact that, compared to the seven natural predators they have on the mainland, the only enemies on the island are the kestrel or cats. But neither of these two species can hunt a two-meter snake, Montes explained.

Her thesis predicts that, if the rate of recent years continues, the snakes will have spread throughout the island by 2028. He also noted that a snake was found swimming just 20 meters off s'Illot de s'Ora, near es Figueral. He then noted that the lizard population on that islet "had become extinct," but stressed that it cannot be determined whether this was due to the invasive species.

The behavior of the *Podarcis pytiusensis* may also be affected by the presence of snakes, according to recent research led by Oriol Lapiedra of the Center for Ecological Research and Forestry Applications (CREAF). The lack of efficient predators has historically favored the native lizard's development of "island tameness, as it takes many risks."

Now, in the areas where they coexist with snakes, Lapiedra has found "a pattern of new, much more cautious behaviors." Likewise, in these areas, he observes signs of changes in their diet. In contrast, where there are no lizards, he notes a significant increase in the number of arthropods, their main food source, which led him to wonder if this phenomenon will favor the emergence of mealybug or beetle infestations.

Studies Lacking

The session concluded with the videoconference "Past, Present, and Future of the Pityusic Lizard," on the studies carried out by Ana Pérez and Valentín Pérez Mellado, although it was the latter who led the discussion. Despite the technical problems that made his talk difficult to follow at various points, Pérez Mellado made it clear that in-depth studies are lacking to demonstrate the effects attributed exclusively to snakes.

The zoology professor criticized categorical statements in Montes's thesis, such as "stating that the lizard will be extinct by 2030." Regarding s'Illot de s'Ora, he noted that he didn't see any specimens on two of his five visits to the islet, so its population shouldn't be considered extinct after a single visit.

"We can't blame the decline in lizards exclusively on snakes," Pérez Mellado added, recalling that in a 1984 study he had already established that the presence of *Podarcis pytiusensis* was much lower in the northeast of Ibiza. The expert emphasized that measures must be taken to address other threats, such as wild cats. He also noted that collectors continue to pose a major threat, reporting that three lizard traps were found last year on the islet of Na Bosc.

05-06-2025 - IbizaHEUTE - Barcelona Zoo breeds Ibiza's lizards (conservation)

Ibiza HEUTE

Barcelonas Zoo züchtet Ibizas Eidechsen

Barcelona Zoo breeds Ibiza's lizards

Pityusic lizard in good hands. Photo: GOIB

A promising pilot project aims to prevent the extinction of the Pityusic lizards (*Podarcis pityusensis*). The Barcelona Zoo Foundation and the Balearic Ministry of the Environment are beginning to breed them "ex situ" in terrariums at the zoo. The experiment will begin with 17 healthy and genetically diverse specimens: 10 lizards from Ibiza and 7 from Formentera.

Good research work

At the same time, the Director General of the Environment, Anna Torres, wants to intensify efforts to combat the snakes, which are now the main predator of the lizards in the Pityusic Islands. And in Barcelona, the nimble Ibizan mini-dragons are being studied in depth to preserve their enormous genetic diversity. The zoo is known for its excellent research work.Scientists have already achieved considerable success in breeding the endemic Mallorcan midwife toad (*Alytes muletensis*). New populations of the endangered ferreret, as the toad is known on the islands, are now populating the wild.

Endangered Population

The Balearic (*Podarcis lilfordi*) and Pityusic lizards were listed in the Balearic Catalogue of Threatened Species in 2023 as "endangered." The inadvertent introduction of snake eggs and adders in plant pots 25 years ago triggered a plague on Ibiza and Formentera. The number of lizards is declining dramatically, especially on Ibiza.

Reader Nicole Strzysz sent this magnificent lizard photo from Formentera to IbizaHEUTE.

EL PAÍS

Ibiza's iconic wall lizards are being wiped out by an invasive snake that's already on 90% of the island

The rapidly advancing predator is a good swimmer and has also colonized Formentera and satellite islets in the Mediterranean. Scientists warn other micro-mammals that control the insect population are also disappearing.

Two Ibiza wall lizards with their characteristic color. GUILLEM CASBAS

ESTHER SÁNCHEZ

Madrid - JUN 06, 2025 - 16:38 CEST

There once used to be thousands of endemic lizards from the Pitiusas – a name for the Spanish islands of Ibiza and Formentera and their satellite islets. The species (*Podarcis pityusensis*), more commonly known as the Ibiza wall lizard, is unique and a a cherished icon of its privileged environment in the Mediterranean. But now an invasive predator, the horseshoe whip snake (*Hemorrhois hippocrepis*) is eating the lizards, especially in Ibiza, where the snakes have already made their way across almost 90% of the territory; only 30% of the island still has wall lizards left. The islets are not safe either, as the snakes have managed to swim and colonize those, too. Scientists estimate that in two years, these snakes will have a presence across the entire island of Ibiza.

The first of these invasive snakes were detected in 2003, in a plant nursery where they arrived incognito in the roots or trunks of ornamental olive trees. The danger was underestimated; they left the nursery and began to spread across the island. In 2024, 3,072 snakes were captured on Ibiza in the traps distributed by the Balearic authorities. The numbers have been multiplying since 2016, when traps began to be laid. In 2023 2,007 were caught, and in 2022, 2,710. The largest of these snakes are bigger than those on the peninsula: upwards of 180 cm (nearly six feet). "That's because they have a lot of food. As far as they're concerned, this is an all-you-can-eat buffet," explains Oriol Lapiedra, head of the research group at the Center for Ecological Research and Forestry Applications (CREAF), who has been studying their colonization for the past five years.

A horseshoe snake in Ibiza. GUILLEM CASBAS

"They advance as if they were on the front of a battle zone," says Lapiedra. "You have to imagine the snakes as if they were an actual wave, devouring what they find." As time goes on, this front becomes stronger, and more snakes accumulate at an ever-increasing rate, making the lizards disappear. "There are very few strongholds left, the situation is dramatic," he says. The snakes have also entered the island of Formentera, and work is being done to control them with traps which caught 806 snakes last year. The ladder snake (*Zamenis scalaris*) predominates there, although some horseshoe snakes have also been caught.

The focus is on the Ibiza wall lizard because it is the only endemic vertebrate on the island, as well as being "a cultural icon." But there are other micro-mammals that have become extinct locally in areas where there are snakes, such as field mice, shrews and geckos. "We have found that their presence also affects bats and small birds such as sparrows, goldfinches, greenfinches," says Miquel Puig, manager of the Consortium for the Recovery of the Fauna of the Balearic Islands (COFIB).

The disappearance of these animals has a knock-on effect and can lead to other extinctions, because the ecosystem is made up of species, each with an essential role to play, "and when one arrives at the top of the food chain, this hierarchy is totally destabilized," Lapiedra adds. The mouse, for example, is eaten by owls or kestrels, which disperse seeds. The lizard pollinates many species of plants, especially on islets, "so if they disappear, you are also

X-ray of an Ibiza snake after eating a lizard. GUILLEM CASBAS/ORIOL LAPIEDRA

killing plants that have evolved along with them," says Puig. The disappearance of species that previously fed on insects can also trigger an explosion of pests that affect agriculture, leading to the use of more chemical substances.

The problem has become worse because snakes are colonizing the islets and, these islets being smaller, "a single specimen can wipe out an entire community and each one is unique because they have evolved in isolation," warns Lapiedra. To the surprise of the researchers, the snakes can swim to the islets. "There are islets 30 to 40 meters from the coast, but others are hundreds of meters away and we know that they can swim in the open sea and cover great distances," explains Puig. Some snakes have been found a mile from the coast.

What will happen next? "There will come a point where, sadly, the snakes will have eaten almost everything on the island and there will no longer be room for more snakes, so their numbers could decrease," Lapiedra says. But "biology is full of surprises; snakes can survive in situations with very little food – they can feed only once every few months," he adds. This

is what has been happening in parts of the island that have been invaded for years, where the snakes are snatching birds or rifling their nests, taking what they can. "Some have been seen trying to eat a rabbit, which is difficult for them because of their size."

The possibility of eradication

What is essential is to reduce the number of snakes, "to seek a coexistence between both species, because eradication is almost impossible with the numbers that exist now," says Puig. It is not uncommon to spot them on a wall sunning themselves. "They are not dangerous or poisonous. They usually escape if they hear someone and only become aggressive if they feel attacked," says Puig who also clarifies that we should not be influenced by the typical negative perception of snakes. "It's not their fault. They are simply fulfilling their function, which is to eat and reproduce – the more the merrier. The problem is that we have brought them onto islands where previously they did not exist."

Snakes and lizards do coexist on mainland Spain. They have evolved together and the lizards have developed the mechanisms to escape from the snake. But the Ibiza wall lizard has not had any predators for thousands of years, and it is impossible for it to develop such mechanisms in the space of two decades. The lizard needs help from conservationists, to allow time for that balance to be produced, because "eradicating the snake is a utopia, though I hope I am wrong," says Puig.

The Ministry of Agriculture, Fisheries and the Natural Environment and the Barcelona Zoo have promoted a pilot project for the breeding of *Podarcis pityusensis*. After a genetic study carried out by CREAF, 17 healthy and genetically different specimens were captured – 10 in Ibiza and seven in Formentera – and transferred to the zoo. "The real objective is to see if they can be bred in captivity to maintain a gene pool while other measures are developed on a larger scale, such as creating refuges in Ibiza and trying to repopulate the islands with the specimens that are there," says Lapiedra.

DIARIO de IBIZA

Sofía López, bióloga: «Me estalla la cabeza pensar que una serpiente se lance al mar a buscar un islote»

Sofía López, biologist: "It blows my mind to think that a snake would jump into the sea to seek out an islet."

The Balearic Islands Fauna Recovery Consortium (COFIB) has been working at full capacity these months, managing more than 1,500 snake traps in Ibiza and another 400 in Formentera. Cuenca biologist Sofía López has been working with this regional organization for three years to try to curb this invasion of snakes, which arrived in 2003 hiding in ornamental olive trees and have managed to reach islets such as S'Illa Murada and S'Illa de Santa Eulària.

Biologist Sofía López, in the gardens of Diario de Ibiza. | V. MARÍ

Josep Àngel Costa

Ibiza 08 JUN 2025 6:01 Actualizada 08 JUN 2025 9:02

Can we say that we are in the middle of peak snake season?

That's right. Every year we gain more information, more experience, and our technicians are going one step further. In this campaign, we're greatly helped by the information from Oriol Lapiedra's group at CREAF [Center for Research in Ecology and Forestry Applications] at the Autonomous University of Barcelona. We share our data with them, and they perform statistical analyses of the dispersal zones. They're studying the areas where the Pityusic lizard [*Podarcis pityusensis*] is present and share it with us. It's going very well because we have firsthand information about the snakes' advance front so we can set traps.

What is the snakes' advance front right now?

It descends from the Sant Antoni area and forms a strip through Sant Josep to the vicinity of Ses Salines. We're mapping an area where snakes and lizards now coexist, in the southwest of the island. The question now is what will happen when the snakes reach the sea. Are they going to regress, or what will happen next? There are no studies. In each place, circumstances are different, each

population and each species has different behaviors. How long does it take for the Pityusic lizard to adapt to the presence of snakes, and can there be coevolution between the two species? We don't know. The main problem for the Pityusic lizard is that it had no predators; it's centuries of evolution without pressure. In other words, escape behavior wasn't part of its needs to continue living and evolving. On the Iberian Peninsula, there are lizards, and you hardly ever see them because they flee, as they're used to a multitude of predators.

The threat this plague poses to lizards is clear, but is there too little talk about the problem posed by wild cats?

Much more should be said. Wild cats cause tremendous damage to the environment, not only to lizards, but also to endangered bird populations, such as the Balearic shearwater and the Cory's shearwater. When we talk about this topic, people's response is usually that the cats were here before and the lizard was fine. The number of cats that were here 15 years ago isn't the same as it is now. Feral cat populations have skyrocketed, and everywhere. They're a public health problem and also impact lizard populations and the rest of the ecosystem. It's also very common to hear people say, "My cat is fed at home and doesn't need to hunt lizards." A cat doesn't hunt out of hunger; it hunts and brings you a mantis or a lizard as if it were game or a trophy.

Just as there is a front of snake advance, are there areas where their expansion began and where their presence has now declined?

Yes, we are detecting that in the areas where the invasion began, and where we have been trapping for many years, captures have been greatly reduced because they have devoured everything there. The snakes arrived there and had all the food they wanted in the form of lizards and small mammals, which have declined or almost disappeared. The behavior of these snakes is very voracious and aggressive. Oriol Lapiedra's team has also begun to study what is happening to the populations of these small mammals, such as mice and rats.

And are the lizards reappearing in these areas?

They are not reappearing because they cannot cross the snake barrier. The possibility of trying to transport lizards from one part of the island to another is being studied, but these are complex issues that are not up to COFIB to decide. But there are specific cases, such as the Santa Eulària Seafront Promenade, where lizards remain due to the city's barrier effect. Snakes don't cross the road as easily, because cars and pedestrians are waiting for them, and this stable population of lizards remains.

Are the urban shelters that have been promoted for the past two years being effective?

We've set up these shelters in urban areas, but also in high schools and colleges as an environmental education resource. At IES Xarc, the teacher wrote to me on Thursday because he had captured a snake, and said they have seven lizards in the garden. It's a good sign, and they may be finding a way to spread there. We've currently created nine shelters in parks, one of them in Formentera, and another nine in schools.

Is it essential for individuals living in the countryside to distribute traps on their land?

I think we're very fortunate, because we all adore and love the lizard as an icon of the Pitiusas. In the Canary Islands, they're suffering a similar invasion with the king snake, but the target species they're eating is quite hated. It's a lizard that affected the crop fields. On the other hand, here, citizens are very involved with the lizard, and it's wonderful. We need to work together across public organizations, entities, and individuals. The more people trapping, the more effective we can be against this invasion.

More snakes are caught every year. In 2024, there were more than 3,000 in Ibiza and 800 in Formentera. Although it's a tragedy, can there be any positive interpretation of these figures?

We can see that efforts are increasing, that experience supports us, and that we're improving our trapping. We hope we're doing a lot of damage to the snake population and creating some opportunity for the surviving *Podarcis pityusensis* to develop these escape behaviors. On the Iberian Peninsula, they have *Podarcis muralis* and *Podarcis liolepis* that coexist with snakes. But of course, they escape quickly, while ours is trusting.

In Formentera, only the ladder snake [*Zamenis scalaris*] has spread. Has the infestation been controlled there?

Sofia Lopez. / Vicente Mari

Its behavior is much less aggressive toward lizards than the horseshoe snake [*Hemorrhois hippocrepis*] in Ibiza. In La Mola, where the snake population is concentrated and all the traps are distributed, many lizards are seen. However, we are very concerned that, due to the number of vehicles moving between the Pitiusas, especially in summer, some *Hemorrhois* may sneak in. We have already had some captures, so we are preventing incidents by placing traps around the port of La Savina, among other locations.

What guidelines should individuals follow to maximize the results of traps, with and without bait?

Mouse traps should be properly placed facing the wall, and check that the trapdoor and doors are closed. Often, if the floor isn't flat, they'll be tilted with the trapdoor open, allowing the snake to enter and exit. Double-funnel traps should be placed right against the edge of the wall. If someone has seen snakes, sets a trap, and doesn't catch them within a week or two, it's advisable to move it and experiment. We know that snakes move a lot along the edges of walls and stone walls, but we don't fully understand their ethology.

The invasion began in 2003, which is too short a period for scientific research. Can we draw on the experience of other places? The case of Gran Canaria dates back to before that.

In the middle of the Pacific, we have the island of Guam, which is part of the Marianas. The tree snake arrived there during World War II, because all the US freighters stopped there. It wiped out many species of reptiles and birds. The United States government is investing and continuing to fight to control its invasion, because it's a heavily forested island and it's difficult to control as it's an arboreal species. In the Canary Islands, the king snake is completely different. It moves very slowly, and technicians pick it up by hand. The involvement of public organizations and the population is very different there, because eating lizards is frowned upon there. There are other areas where snakes are invasive, but the impact and management are completely different. We're constantly testing and innovating.

For example, has the horseshoe snake's ability to move through the sea baffled scientists?

Personally, it has been a huge surprise to me. Some videos have been recorded, and it's incredible. Their respiratory system is distributed along almost their entire body. They have a lot of air and float, they lift their little heads, and because it's fusiform, it generates less resistance when swimming. What makes my head explode, apart from them swimming, is thinking about the moment the snake reaches the cliff or the beach and dives into the sea, looking for an islet. Are they aware that there's an islet there? Do they see it? Do they sense it through their tactile sense? Why on earth do they dive into the water? And that they know there's land and food there. There's no answer; I haven't read about any other place where the invasion is affecting other islets.

Last year, they carried out surveys on 16 islets. How many showed signs of snakes?

Now, we're doing quite a few more. In Ibiza, we have 64 islets, but some are just large rocks without vegetation and with no chance of supporting a lizard population because, in stormy weather, the sea passes over them. We're currently trapping on six islets: on three of them, such as s'Illa Murada and s'Illa de Santa Eulària, we've also detected molting or a decline in the lizard population on three others.

In the Ses Salines Natural Park, some snakes have been caught, but lizards are still abundant. Is it under control so far?

There were sightings, but we haven't seen any last year or this year. In Sa Revista, residents have reported seeing them, and we're also seeing some captures near the airport, near the entrance to Ses Salines. There, we've set up a whole line of traps to try to stop them. However, in Ses Salines, they're already suffering from the cat problem, which is extremely serious for all birds and their chicks.

Aside from their swimming ability, have you been surprised by any other peculiarities that snakes have developed in the Pitiusas?

It's becoming clear that the snakes here are considerably larger than on the Iberian Peninsula. They're experiencing what in biology we call the island effect. It's a tendency for large animals to become smaller and small animals to become larger.

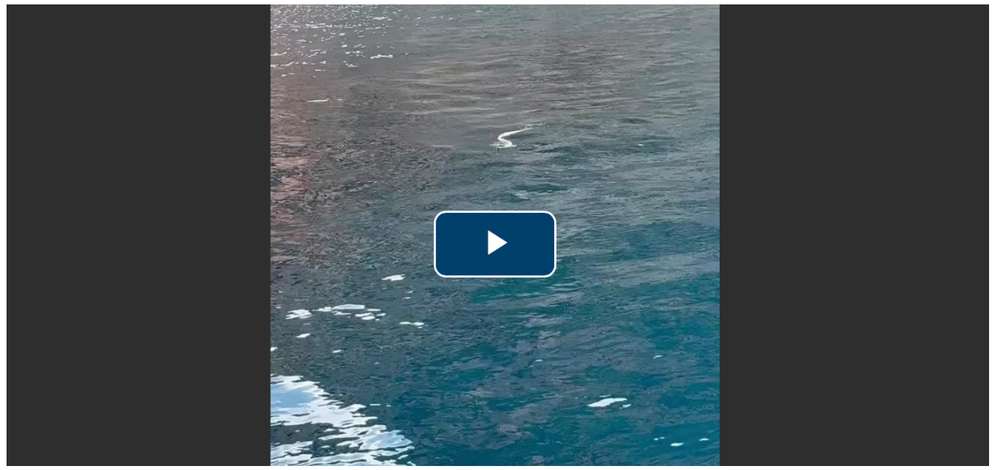
Is there any clue as to how long this phase of exponential growth in snakes might last?

I couldn't tell you, but I can sense that when the invasion that began in Santa Eulària reaches the sea from the southwest, they won't be able to advance further and won't have as many lizards or small mammals to feed on. We have a large number of traps to reduce the impact of this wave, although it's inevitable that it will continue to advance. That's our goal and what the Government expects of us. We're doing everything we can, but this species is truly complex and very well adapted.

PERIÓDICO de IBIZA Y FORMENTERA

«Decían que salir en barco en Ibiza era buena idea... hasta que te encuentras una serpiente nadando»

"They said going out on a boat in Ibiza was a good idea... until you find a swimming snake."



M. J. Real | 08/06/25 22:49

Stefanie Daub felt stupefaction on what seemed like it would be a relaxing and peaceful boat trip around Ibiza and Formentera. At one point during the trip, they looked out to sea and saw a snake swimming swiftly and swiftly, as if it were just another swimmer.

Stefanie recorded this unusual moment and shared it on the Facebook group "Ibiza Winter Residents," where she explained that the swimming snake was discovered in the Ses Balandres area.

"They are swimming the 700 to 1,000 meters toward Ses Margalides Island to eat lizards and peregrine falcon eggs. I pray that the birds on the islands protect themselves from the swimming snakes. Horrible," Timotheus Freytag expressed in a comment on this video.

Other users were amazed to see that snakes can swim: "Since when do snakes swim? How dangerous," comments Ana Belén. Other users declare that they will never "go into the water again."

The presence of the swimming snake has also prompted more humorous comments, such as "they are travelers on their way to the dance floor."

It's worth remembering that the most common types of snakes in Ibiza are the ladder snake and the horseshoe snake. Snakes in general, and especially the horseshoe snake, are excellent swimmers and can even cross large expanses of water, even colonizing islets. At this point, it's important to note that they are not venomous, but they can bite if attacked.

If you find a snake, whether on land or at sea, you can safely proceed to kill it, as it is considered an invasive species in the Pitiusas, islands where it continues to spread unchecked despite the proliferation of traps used to catch it.

PERIÓDICO de IBIZA Y FORMENTERA

Serpientes nadadoras en Ibiza acaban con subespecies de largatijas de islotes

Swimming snakes in Ibiza wipe out subspecies of island lizards

"Snake species have always been swimming, and some specimens are adapted to living in water," explains

The snake spotted in the waters of Ibiza and Formentera

S. Ribas | Ibiza | 10/06/25 4:00

For some years now, the arrival of snakes on certain islets of Ibiza and Formentera has become increasingly common. However, the fact that they have reached these areas does not mean they have colonized them, although they have most likely caused harm to other species that usually inhabit those territories, as explained yesterday by Doctor of Biological Sciences Antònia Maria Cirer.

Among the islets where the presence of snakes has been confirmed, the most notable is s'Illot de s'Ora, between es Figueral and Pou des Lleó, where snakes have wiped out the entire lizard population, even causing the disappearance of a subspecies that was only found in this area.

In the case of s'Illa Grossa de Santa Eulària, the presence of snakes was detected at one point, as well as on the islet of s'Espartar, where the molt of a snake measuring more than one meter was found. Cirer noted that there have also been sightings on s'Illa Murada and did not rule out the possibility that more specimens have been seen on other islets in the Pitiusas.

Regarding the images circulating on social media in recent days showing a snake swimming in the Ses Balandres area, Cirer emphasized once again that it is not unusual for snakes to move in the marine environment. "A snake has a very long body, and when it falls into the water, it raises its head. This allows it to move in a zigzag pattern with a hydrodynamic proportion that allows it to swim much more effectively compared to other mammals," she explained.

Cirer reiterated that all snakes, "as always," can swim, and some are even perfectly adapted to living in the water. The doctor in biology insisted that in other parts of the country it will be more difficult to see them in the water, but not in places like Ibiza, where they often end up taking refuge on boats on land in winter.

"When the boat is later returned to the sea, the snakes come out and swim until they reach the nearest land. It's their instinct. This situation is causing widespread alarm throughout the territory, and we can't focus on it," she stated.

Another point the expert wanted to clarify is that "a snake has no willpower and, therefore, doesn't decide to explore a territory. It also doesn't know if there will be lizards on an island to prey on." Therefore, with its "reptilian brain," it will simply follow its instinct in search of food or shelter.

Thus, she denied that the snake recorded near Ses Balandres specifically headed to one of the islets to eat falcon eggs or lizards. "If they find them, they will logically eat them. But they won't go looking for them. Snakes eat what they easily catch, in this case, baby birds or lizards, which also don't interpret a snake as a predator," she concluded.

11-06-2025 - Jorge Montojo - Electronic soap opera (opinion)

PERIÓDICO de IBIZA Y FORMENTERA

Culebrón electrónico

Electronic soap opera

Jorge Montojo | Ibiza | 11/06/25 4:00

I remember a Norwegian couple who stormed the Peponi bar in Lamu, thirstier than a Viking horde. After the fifth bottle of vodka, they were able to explain themselves. They had sailed their beautiful dhow for three days and three nights in the unsettling company of a six-meter-long python. Apparently, the snake occupied their bathroom (dhows don't usually have bathrooms; you just balance on the side of the boat, but this one was a luxurious gem straight out of Arabian Nights) and, in a sort of boat-hitch, used them to change islands in the Indian Ocean. The python was very considerate and didn't devour them, but neither the Norwegians nor the Chihuahua nor the two Omani crew members slept a wink until they smelled land and saw the python leap into the water and swim like Esther Williams.

This is already happening in the Pitiusas, thanks to the impressive negligence of those in charge of the eco-friendly business for more than twenty years. The cool invasion was known, but nothing was done. They preferred to set up a goat safari in Vedrà. Today, the lizards are paying the price, as the creatures are now proliferating as much as the clubbers. It's a soap opera.

While Formentera was known as Ophiussa (land of snakes), in Ibiza, the horny god Bes, the same one who gives the island its name and encourages the al·lotas to find a worthy lover, exterminated the poisonous animals. His blessed fame was such that Carthaginians and Romans loaded their ships with immense amphorae brimming with a sacred earth that they revered for its poison-killing properties. This saved them many drachmas and sesterces on long-suffering tasters. Today, it's essential that someone bring Ibizan soil to the poisoned Congress of Deputies, the accused and the defiled.

PERIÓDICO de IBIZA Y FORMENTERA

El Parlament pide recursos al Gobierno para controlar la entrada de serpientes invasoras en Ibiza y Formentera

The Parliament requests resources from the Government to control the entry of invasive snakes into Ibiza and Formentera

It calls on the Government to strengthen its support for agricultural insurance to ensure its effectiveness in addressing climate change.

Meeting of the Parliament's Economic Commission this Thursday | Photo: Parliament

Europa Press | Ibiza | 12/06/25 14:45

The Parliament unanimously urged the Ministry of Ecological Transition to support control efforts to prevent the entry of invasive snakes into Ibiza and Formentera by providing technicians, vehicles, and cages.

The Economic Commission of the regional Parliament approved at its meeting this Thursday a non-legislative motion (PNL) championed by PP MP Jacobo María Varela regarding the control and eradication of invasive species.

Thus, the MPs called on the Government to support compliance with the decree on measures for the protection of the Pityusic and Balearic lizards against snakes of the Colubridae family.

Specifically, the Parliament requested that the import of olive trees and other large plant species to the Balearic Islands be controlled by conducting inspections at the ports of origin; that coordination with the competent authorities be promoted; and that random inspections be encouraged on trees likely to transport reptiles, so that they can be quarantined if necessary.

He also called on the Government to provide technical support for snake control and eradication efforts in the Pitiusas, complementing those already carried out by the Ministry of Agriculture, Fisheries, and the Environment. Specifically, he requested that it fund a team of five technicians and two vehicles, as well as the purchase of 500 cages per year, for a period of two years.

Finally, it urged the central government to collaborate with the five municipalities of Ibiza and Formentera by providing 600 cages annually (100 per municipality) for the capture of invasive snakes, which can then be given to citizens and volunteers.

Boosting agricultural insurance

The Commission also debated another PNL this Thursday, this one championed by the Socialist Pilar Carbonero, regarding the promotion of agricultural insurance in the Balearic Islands. Its three points were approved with the votes of the PP and the left-wing parties, and were rejected only by Vox.

Thus, the regional parliament urged the government to strengthen support for agricultural insurance to ensure that it is truly useful and effective in the face of the effects of climate change and adverse weather conditions.

It also calls for specific measures to be implemented to ensure that the maximum number of agricultural and livestock farms can apply for the insurance through awareness campaigns, technical advice, and the provision of additional assistance to existing policies.

Furthermore, the Parliament has asked the Government to study the incorporation of more specific coverage for Mediterranean island regions that take into account their specific agronomic and climatic characteristics and to facilitate collaboration between Agroseguro and the Autonomous Communities to promote modules tailored to each territorial situation.

PERIÓDICO de IBIZA Y FORMENTERA

La prensa británica ya alerta sobre la «invasión» de serpientes en Ibiza

The British press is already warning about a snake "invasion" in Ibiza

María José Real | Ibiza | 15/06/25 13:06 | Actualizado a las 13:39

The Mirror has published a story stating that Ibiza, one of the main holiday destinations for Britons, is experiencing a "snake plague" that has even led tourists to reconsider their vacations.

According to reports collected by this newspaper, several visitors say they are "too terrified to swim" after spotting snakes up to 1.8 meters long in Ibizan waters.

One of the most striking incidents occurred this week in the waters off Portinatx, in the north of the island. Two people out sailing in an inflatable boat were greatly surprised when they came across a snake measuring approximately 1.70 meters in length slithering through the sea.

The truth is that snake sightings are increasingly occurring in different parts of Ibiza, both in rural and coastal areas. In this regard, at the beginning of June, Andoni Valencia, a member of the AD Ibiza Half Triathlon club, encountered a snake approximately two meters long while cycling along the road between Sant Rafel and Santa Agnès, near Bucastell.

Another striking case was that of Manuel Ehrensperger of Ibiza Hike Station, who contacted Periódico de Ibiza y Formentera to show the enormous snake, measuring more than 1.5 meters, that he found during a day hike on the Corona coast, near Sa Penya Esbarrada. "I've been seeing a lot of snakes on our hikes for about two years now; they bask in the sun. I see quite a few in the northern region, especially around Cala Aubarca, Santa Agnès, Xarraca, Cap Mosson, and Cap Rubió," he explained to this newspaper. In the case of the snake in this video, "we were surprised by its size; it was very large."

Pep Ramis, a resident of Sant Josep, also told this newspaper that he is very used to finding snakes near his home. In fact, neighbors hold competitions to see who can find the longest snake. His surprise came at the beginning of June when he found a shed snake measuring almost two meters.

But why are snakes getting bigger and fatter in Ibiza? Basically, because they have no natural predators, as Antònia Maria Cirer, a doctor in Biological Sciences, explained to this newspaper.

What should you do?

If you find a snake, if you dare, you should catch it and kill it. Hitting it on the head with a rock is usually effective. If you don't dare, call 112.

The most common snakes in Ibiza are the horseshoe and ladder snakes, which, while not venomous, can bite.

If you find a snake in Ibiza or Formentera and want to share your experience, you can email redaccion@periodicodeibiza.es.

PERIÓDICO de IBIZA Y FORMENTERA

La prensa italiana da la voz de alarma sobre las serpientes nadadoras en Ibiza

The Italian press is sounding the alarm about swimming snakes in Ibiza

They report that "more and more tourists say they are 'too terrified to swim.'"

Jerónimo Marín | Ibiza | 16/06/25 20:32

The news of the swimming snakes in Ibiza, first reported by Periódico de Ibiza y Formentera, has already reached Italy, where the media is already warning of the danger they pose and delving into the causes of these reptiles' invasion and why they are becoming larger.

While yesterday we reported how the British press echoed the news and alerted its readers to this new ability that horseshoe snakes seem to have acquired, today it's the turn of the Italian press, one of the main nationalities of origin of tourists visiting the island as well as residents.

The article, titled "Ibiza, between crystal-clear waters and giant snakes: the island facing an ecological emergency," was published by the Turin-based media outlet La Stampa. In its nearly 800 words, it details step by step how the snake invasion came about, why they are getting bigger every day, how it threatens the survival of the Pitiusan wall lizard, what measures are being taken to reverse the situation, and what tourists' reactions are to the news.

For its part, the Roman newspaper La Repubblica echoed the news published by Periódico de Ibiza y Formentera and on its social media, they titled the video of the swimming snake: "Ibiza is invaded by the horseshoe snake. After sightings of the snake, also in the water, terrified tourists are no longer swimming." They claim in the post that "Ibiza [...] is today at the center of an ecological emergency. More and more tourists are saying they're 'too terrified to swim' after numerous sightings of enormous snakes—up to 1.8 meters long—swimming in the waters off their coast. They report the snake invasion, adding: "What started as sporadic sightings has become an out-of-control phenomenon. And now, they're swimming too."

The comments on the post have spiraled out of control. "It's not the snake that's infesting Ibiza, it's the tourists," "Showing the average Ibiza user that you can swim without becoming hysterical must be fun," and "Oh, but ... do they go swimming there?!" were some of the most liked comments. Other users, on the other hand, have left aside the sarcasm and responded honestly: "Harmless or not, I could die if I saw it," "It might be harmless, but I'd be dead if I saw it while I was in the water."

18-06-2025 - Vanessa Hernández - Ibiza Marina becomes a special refuge for native lizards (control)

PERIÓDICO de IBIZA Y FORMENTERA

Marina Ibiza se convierte en un refugio especial para sargantanas autóctonas

Ibiza Marina becomes a special refuge for native lizards

The marina is promoting a pioneering project to protect this endemic species in collaboration with the Consell and the City Council of Ibiza, and IbizaPreservation.

Marina Ibiza becomes a special refuge for native lizards

Vanessa Hernández | Ibiza | 18/06/25 10:43

In 2025, Marina Ibiza launched a new environmental project to establish itself as a safe haven, and a very special one due to its characteristics, for the lizard, the emblematic Pityusic lizard. The initiative, developed in collaboration with the Consell and the City Council of Ibiza, along with IbizaPreservation, reflects the marina's commitment to local biodiversity and the conservation of protected species in danger of extinction due to the threat of invasive snakes.

Currently, a significant population of lizards inhabits the marina's stone walls, planters, and other structures, which, unintentionally, have become a truly useful refuge for this endemic vertebrate species, the last remaining representative of the native Pitiusan fauna prior to the arrival of the human population, a time when all other vertebrate species became extinct. Given its ecological importance and its status as a protected species in the Balearic Islands, Marina Ibiza has designed an action plan that includes active conservation measures.

The Pityusic lizards have truly spectacular colorations. Some are completely green in all their varieties to blend in with the vegetation, but there are also populations with light beige colors. These have evolved to blend in with the sandy substrate.

Compared to other lizards found elsewhere, they are very large and robust, with a broad, tall head. Males can measure up to 20 cm from head to tail.

The initiative promoted by Marina Ibiza includes the installation of specific traps to capture snakes, the main threat to the lizards, in order to reduce their impact on the local population. These small shelters of stone and vegetation, located at different points in the marina, create safe spaces that favor the survival, growth, and reproduction of specimens in the area. The project also includes an awareness campaign aimed at customers and visitors, which seeks to inform about the presence of this species and promote responsible behavior to avoid disturbances or damage, such as accidentally stepping on them or altering their habitats, since any threat, including human threats, could lead to the escape of these animals so authentic to the islands.

This intervention takes on even greater relevance in a critical context for local wildlife. In recent years, Ibiza has seen an alarming increase in invasive snakes, especially the horseshoe snake (Hemorrhois hippocrepis), accidentally introduced with ornamental olive trees from the mainland. These snakes are currently estimated to occupy a large part of the island's territory, including several islets.

This situation seriously threatens the Pityusic wall lizard, which only inhabits Ibiza and Formentera, as well as some islets in the archipelago. Marina Ibiza's action, therefore, represents a direct response to a real and urgent environmental problem and an active contribution to halting the decline of this species. With this initiative, Marina Ibiza reaffirms its commitment to protecting native wildlife and promoting sustainable practices that enrich both the natural environment and the experience of those who visit the marina.

DIARIO de IBIZA

Marina Ibiza se convierte en refugio para 'sargantanes'

Ibiza Marina becomes a refuge for lizards

The marina is promoting a pioneering project to protect this species in collaboration with the Ibiza Council and City Council and IbizaPreservation.

A significant population of Ibizan lizards has found refuge in Marina Ibiza. | GROUP IPM

Redacción Ibiza

Ibiza 19 JUN 2025 6:00

In 2025, Marina Ibiza launched a new environmental project to establish itself as a safe haven, and a very special one due to its characteristics, for the Pityusic lizards, in collaboration with the Ibiza Council and the City Council of Ibiza, along with IbizaPreservation.

As explained by Marina Ibiza in a press release, "Currently, a significant population of lizards inhabits the stone walls, planters, and other structures of the marina, which, unintentionally, have become a truly useful refuge for this endemic vertebrate species, the last remaining representative of the native Pitiusan fauna prior to the arrival of the human population, at which point all other vertebrate species became extinct." Given its ecological importance and its status as a protected species, Marina Ibiza has designed an action plan that includes active conservation measures.

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The project also includes an awareness campaign aimed at customers and visitors, seeking to inform them about the presence of this species and promote responsible behavior to avoid disturbances or damage, such as accidentally stepping on them or disturbing their habitats, since any threat, including human threats, could cause these reptiles to flee.

This intervention "takes on even greater relevance in a critical context for local fauna," emphasizes Marina Ibiza, who points out that, in recent years, Ibiza has seen an alarming increase in invasive snakes, especially the horseshoe snake (*Hemorrhois hippocrepis*), which is estimated to now occupy a large part of the island's territory, including several islets. Marina Ibiza's action, therefore, represents "a direct response to a real and urgent environmental problem, and an active contribution to halting the decline" of Ibizan lizards, the note emphasizes.

DIARIO de IBIZA

"Se cruza con una serpiente nadando en Benirràs: "Son señal de que debes repensar tu camino"

She comes across a snake swimming in Benirràs: "It's a sign that you need to rethink your path."

"Wonderful, aquatic medicine," one user responds to a video shared on social media.

The snake, swimming in Benirràs / A. NAGEL

Marta Torres Molina

Ibiza 24 JUN 2025 11:21 Actualizada 24 JUN 2025 11:22

"When snakes cross your path, it's usually a sign that you need to rethink the path you're currently taking." That's what Andreas, who describes himself as a "life coach" and "spiritual healer," thought when he encountered a snake while swimming in the waters of Benirràs. These are, in fact, some of the words he wrote when he shared the video on Instagram, in which the snake is perfectly visible.

The animal boasts excellent swimming skills and isn't afraid of people who, upon seeing it, surround it. It's like the Esther Williams of snakes. In the images, the snake is seen poking its head out of the water, held very high, as it snakes closer to the shore, where several people are watching the animal.

One of these people, with his cell phone practically at sea level, films it approaching and turning around to continue swimming parallel to the shore. At that moment, he raises the camera, and you can see the reptile from above, appreciating its size: very long and well-fed.

"Snakes are a symbol of transformation, wisdom, warning, and healing," continues the text accompanying the video. "Aquatic medicine," replies one follower regarding the images of this snake, which doesn't seem to frighten either the swimmers, the filmmaker, or the commenters.

DIARIO de IBIZA

La necrópolis de Puig des Molins, una «burbuja de biodiversidad»

The Puig des Molins necropolis, a "biodiversity bubble"

Biologist Olivia López considers it "a real privilege" to have a space like the Puig des Molins necropolis in Ibiza due to the wide variety of fauna and flora it houses, and she conveyed this yesterday to the people who attended the awareness and environmental education visit organized by the MAEF and Aamaef.

Visit to the Puig des Molins Museum with biologist Olivia López / J.A. RIERA

Maite Alvite

Ibiza 15 JUN 2025 6:01 Actualizada 15 JUN 2025 9:07

The historical and heritage value of the Puig des Molins necropolis is well known, but not so much the environmental wealth it houses. That's why initiatives such as the awareness-raising and environmental education tour that biologist Olivia López will offer in a few minutes to show the public the wide variety of fauna and flora that inhabit this five-hectare space located in the heart of Vila de Vila are so important.

This educational tour, he explains, is part of the program of activities designed by the Archaeological Museum of Ibiza and Formentera (MAEF) and its Friends Association (Aamaef) to commemorate International Environment Day, which was celebrated on June 5.

As this scientist says, to love and care for something, you must first know it, and with that goal in mind—to discover the environmental values of this area of Puig des Molins—Marta Pons and four friends signed up for the itinerary: Elise Gauthier, Andrea Floriach, Belinda Condado, and Encarna de las Heras. The popular storyteller, who is a member of Aamaef, was the one who suggested this original weekend plan to the rest.

The visit begins inside the Puig des Molins Monograph Museum, where Olivia López and MAEF curator Maria Bofill welcome the group. After welcoming them, the archaeologist introduces them to the biologist, who has been collaborating with the museum for five years to study in detail "the invaluable natural heritage" of the necropolis and to raise awareness about it through outreach activities like this visit. Since 2024, he notes, their work has also focused on conducting a census of the Pityusic lizard, *Podarcis pityusensis*, in this emblematic site.

A moment during the educational route on flora and fauna offered by biologist Olivia López at the Puig des Molins necropolis. / J.A. RIERA

"Given the great threat posed to this species by the entry of snakes into Ibiza, a collaborative project was launched in 2021 between the MAEF (Spanish Ministry of Environment), the Ibiza Council, the Can Marines training center, and biologist Antònia Cirer, through which the Puig des Molins necropolis was declared a lizard reserve, due to the ideal conditions it offers for their habitat and reproduction," says Bofill. What the museum has done, he continues, is launch "a preventive conservation program" that includes environmental education initiatives like this one, which is carried out annually; the installation of snake traps at different points in the necropolis managed by the Cofib; and the population study of *Podarcis pityusensis* that López is conducting.

The Itinerary

Before beginning the tour, the biologist explained to Diario de Ibiza that, for now, she cannot provide data on the approximate number of lizards that may be present in this area and that "we still need to continue collecting information for two more years to assess whether the *Podarcis pityusensis* population is growing, decreasing, or stagnating."

The information she does provide, later in the tour, is that in all this time, only one snake has been captured within the necropolis grounds, in 2023.

The group leaves the building to begin the educational walk through the necropolis. López shows the route they will follow on a map, which begins at the so-called "mule hypogeums" and includes, at the highest point of the hill, the area surrounding the Es Porxet farmhouse. She also points out that they will pass through areas of the necropolis that are not normally open to the public, such as the space where some powder magazines, a sentry box, and structures from what was once the military sector are still preserved.

The first animal species they encounter is a *Podarcis pityusensis* basking in the sun on the wooden walkway, a place that, according to the biologist, these reptiles really like because "it maintains the temperature well" and provides them with a hiding place. López takes the opportunity to share some details about how she's conducting the census of this species. "Since 2024, I've been coming to the necropolis once a month, except in winter. I come on sunny days and during certain time slots when I know I'll be able to locate them easily, because lizards are ectotherms, meaning their body temperature depends on the ambient temperature," she explains.

Olivia López shows the image of different species of Balearic orchids that can be found in the area. / J.A. RIERA

Birds and Butterflies

She then distributes two sheets to the attendees on which they have to write down the animal species they find. One has images of 22 types of birds that can be seen in this necropolis. The other contains almost thirty different butterflies from the Balearic Islands, some of which can be seen in this space, such as the King Butterfly, the Common Butterfly, the Common Butterflies, and the Cabbage White, which they locate along the way.

While they don't see many butterflies during the activity, they do spot a few birds, such as the kestrel, several swifts, sparrows, greenfinches, seagulls, and the occasional wood pigeon, the kind that drives Ibizan farmers crazy.

From Olive Trees to Orchids

The plant diversity is important, as demonstrated throughout the educational route. The biologist recalls that this area was once used for agricultural and livestock farming, and to illustrate this, she shows an image from Diario de Ibiza from the 1930s showing sheep in the necropolis. This is why there are many olive trees here, as well as some almond, carob, and fig trees. Along the way, they encounter some of the herbs traditionally used in the herbes of Ibiza, such as fennel; thyme, now in bloom; rue; and the herb of Sant Ponç. They also see St. John's Wort, many capers, asparagus, castor oil plants, and species considered invasive, such as the fig tree, the agave (American agave), and the lantana (Spanish flag). In the more wooded areas they visit, they observe how pines, olive trees, junipers, and shrubs coexist in harmony. The biologist then displays a photo of five types of orchids native to the Balearic Islands, which can be found at this site starting in autumn.

After this educational tour, it's clear to all the members of the group that having a space like the Puig des Molins necropolis right in the city of Ibiza "is a privilege." And it is, as Olivia López emphasizes, "not only because of its great historical and cultural value but also because of its environmental value." This space, she says, "is a bubble of biodiversity" that offers multiple benefits: "It improves air quality; it provides protection, food, and rest for a wide variety of animals," and, if that weren't enough, "it acts as a natural barrier against noise pollution."

21-06-2025 - Naroa Sánchez - Milka, the dog trained to fight against the invasion of snakes in Ibiza (control)

PERIÓDICO de IBIZA Y FORMENTERA

Milka, la perra adiestrada para luchar contra la invasión de serpientes en Ibiza

Milka, the dog trained to fight against the invasion of snakes in Ibiza

This 13-month-old Belgian shepherd detects hidden reptiles in houses and gardens.

The dog Milka and Alejandro Vives, technical supervisor of Goldservice and responsible for Milka | Photo: Alejandro Mellon

Naroa Sánchez | Ibiza | 21/06/25 4:00

With the arrival of the heat, the alarm calls for the sighting of snakes have gone off in Ibiza. Every day, neighbors find snakes in gardens, swimming pools and even inside their houses. Faced with "the lack of effective institutional measures", the Ibizan company Goldservice has taken a step forward by training a dog to detect these reptiles.

Her name is Milka, she is less than a year old and she is the only dog in the peninsula and in the Balearic Islands dedicated to detecting snakes. She is a Belgian Malinois shepherd who works for Goldservice, a company specializing in pest control for more than 30 years. His training began when he was just three months old and has continued since then with weekly sessions at a high performance training center. Its genetic line comes from breeders who work with state security bodies in explosives and drug detection work.

Alejandro Vives, technical supervisor of the company and head of Milka, explains that the idea arose out of sheer necessity. "Snakes are a very serious problem on the island. It all started when he saw that in many homes the use of traps was not viable or not very effective and a more precise solution was needed," he says.

The dog detects snakes by smell, which it associates with a reward. He does not attack or bite them: he simply marks them with his body language, which allows the technician to act. "So far this season, he has already located several snakes. Every day we receive between 20 and 30 calls from individuals about sightings", adds the technician.

The massive presence of these reptiles, especially the horseshoe snake, represents a real threat to the Pityusic lizard, an indigenous symbol, as well as being a protected species. The lack of natural predators in Ibiza, such as foxes or snake eagles, aggravates the problem. In addition, the snakes detected on the island usually reach larger sizes than those found in the rest of Spain precisely because they have no natural predators. Snakes over one and a half meters long have already been caught this year.

The service with Milka has been active for a month and has already established itself as an effective tool for locating snakes. The company does not rule out expanding the canine team. It is already providing services to hotels, large facilities, and private homes.

"Milka loves her job, because for her it's like a game and the more complex the environment, the better she does it", concludes Alejandro, with the satisfaction of knowing that, this time, the solution to an environmental threat has come with four legs and a really prodigious sense of smell.

Despite the magnitude of the problem, there is still no clear institutional strategy to stop it. Apart from some trapping campaigns, there is no coordinated action to contain the expansion of snakes on the island. Most of the notices end up being attended by private companies, which try to cover the demand with their own resources.

26-06-2025 - Marta Torres Molina - "Snakes deserve to die with respect, not like some people are killing them in Ibiza." (opinion)

DIARIO de IBIZA

"Las serpientes merecen morir con respeto, no como algunas personas las están matando en Ibiza"

"Snakes deserve to die with respect, not like some people are killing them in Ibiza."

An Argentine influencer explains in a video from Ibiza that these animals are a threat to the island's ecosystem, but not to humans.

Belén Guerra, in the video recorded in Ibiza about snakes / @VIAJERA_INDEPENDIENTE

Marta Torres Molina
Ibiza 26 JUN 2025 11:49

"I don't like snakes, but they are animals and they deserve to die with respect and care, not like some people are killing them." This is the statement made, both in writing and verbally, by Belén Guerra, a travel influencer on her Instagram profile. In one of her videos, published a few days ago, the young woman attempts to briefly address the "snake plague," as some British and Italian newspapers have dubbed the proliferation of these animals on the island.

"Someone at work asked me the other day if it was real that there was a snake plague in Ibiza," the Argentinian content creator comments before admitting that she had "no idea" what was happening, so she started looking for information. Yes, she explains that before being asked the question, she had had an encounter with one of these snakes: "It happened to me while trekking, I saw a snake and had to run away because I was really scared. But it was in the middle of the mountains."

The influencer explains that these reptiles were imported to the island via olive trees. She claims this happened a year ago, a mistake she later clarifies in the text accompanying the video, where she explains that it was more than a year ago but that they are now proliferating.

As much as she was frightened when she came across one, Belén is opposed to the way some people are killing them: "What they're doing to these little creatures is disgraceful; they're killing them in an ugly way." "These snakes aren't a threat to humans," she says, before emphasizing that they are a "significant threat to the island's terrestrial and marine ecosystems."

DIARIO de IBIZA

Una vecina de Ibiza: "Intentamos salvar crías de pajarito, pero muchas no sobrevivieron después de estar en la boca de las serpientes"

A resident of Ibiza: "We tried to save baby birds, but many didn't survive after being in the snakes' mouths."

The woman, from Santa Agnès, tells how snakes have destroyed many bird nests and caused the lizards to disappear from her home.

Sofia with one of the snakes found in her home / SOFIA

Arual Martínez

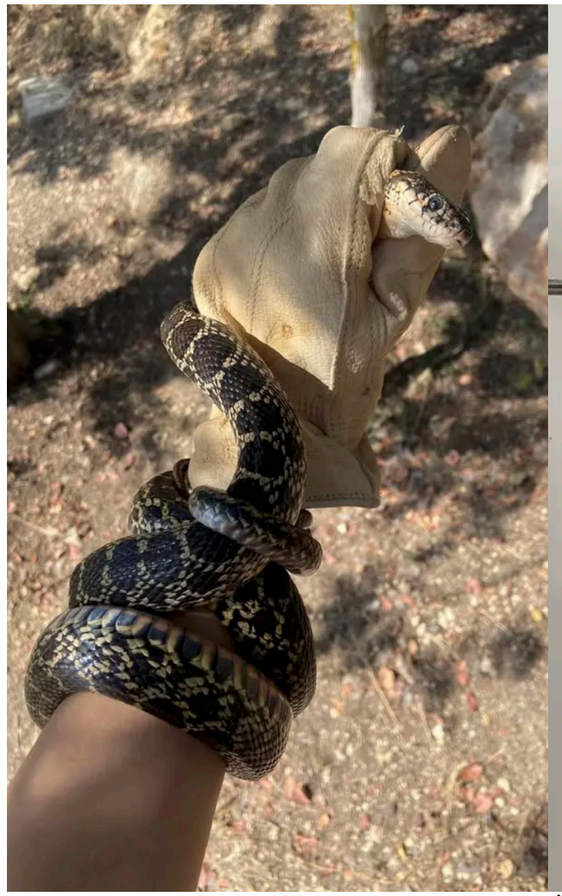
Ibiza 29 JUN 2025 12:04 Actualizada 29 JUN 2025 12:15

"We catch snakes frequently," a resident of Santa Agnès told Diario de Ibiza. Sofía lives in a house surrounded by nature. Before, it was common to see lizards wandering freely in her garden, "but they've almost disappeared. There used to be so many of them and they were very friendly," she says.

This family has two snake traps set up on their property, but they still manage to catch more snakes on their own. "We've caught them in the garden, near the house, and also a couple of times inside," Sofía says. The last two, caught this week, measured 1.20 and 1.60 meters.

The proliferation of these snakes in the area has caused not only the disappearance of lizards, but also birds. "They still fly, but they don't build nests in the walls of the house like they used to, because last summer the snakes destroyed many nests," this neighbor explains. "We tried to save baby birds, but many didn't survive after being in the snakes' mouths," she explains.

She says they have managed to rescue numerous geckos, birds, and lizards before they were devoured by these snakes. Snakes search for food everywhere, and now that there are fewer and fewer lizards, they try to hunt other animals.



A snake caught in her garden / SOFIA

A snake inside Sofia's house / SOFIA

The horseshoe snake (*Hemorrhois hippocrepis*) has become a threat to the environment and the ecosystem, as it is endangering an endemic species, the Pityusic wall lizard (*Podarcis pityusensis*), which is an icon of Ibiza and Formentera.

The fact that they have no predators on the island allows some snakes to reach much larger sizes than they do on the Peninsula. Here, they have plenty of prey and food and aren't worried about saving their lives from the threat of other species. According to experts, these snakes' strategy is based on intraspecific competition, growing larger to fight off their peers and hunt more prey.

DIARIO de IBIZA

Serpientes en Ibiza: de la trampa al saco

Snakes in Ibiza: From Trap to Sack

A group of enthusiasts designs a new type of snake trap with an exterior door that leads the snakes directly into a sack.

File image of a horseshoe snake. | DI

Aarón Benet

Ibiza 30 JUN 2025 18:54 Actualizada 01 JUL 2025 9:07

"We are a group of enthusiasts concerned about the snake problem in Ibiza." Toni Villalonga, despite admitting "not being an expert on the subject," is seeking measures to put an end to the "serious environmental consequences" caused by the increase in snakes on the island. In response, Villalonga and a group of friends have designed a new trap to catch these types of reptiles.

Villalonga speaks about the need to address the snake problem: "They are animals that kill lizards [an endemic species] and, furthermore, they can pose a risk to human health." Similarly, he is convinced that "it is a problem that will only get worse, as it was detected too late." This is why Villalonga indicates that "traps should be provided to all residents who request them." Although he defines himself as "simply a person concerned about the reality of snakes," Villalonga dares to predict that "at least 1,000 traps are needed."

Trap with an Exterior Door

The snake traps provided by the Ibiza Council are designed as a closed box. The traps created by Villalonga, on the other hand, operate differently: "The snake enters the trap to

Image of the design conceived by Toni Villalonga. | TONI VILLALONGA

catch the mouse, but since it can't eat it, it goes outside, unlike the ones provided by the Council, and enters a sack placed just outside the box. Afterwards, you must ensure that the snake is inside the sack."

Villalonga states that the trap's exit through the exterior door is intended to "prevent people from having direct contact with a dangerous animal such as snakes." He explains that "although the species of these reptiles found in the Pitiusas are not poisonous, they can cause harm due to their bites."

The injuries that snakes can cause to people means that "many residents choose not to buy traps for fear of having to touch them," says Villalonga, adding, "We consider this factor to be an advantage."

"So far, they're working well."

As a group of hobbyists, Villalonga explains that "they are open to comments and criticism." He also explains that they are "incorporating small improvements to the designs, as it is not yet a completely final project."

The traps cost 30 euros each. Villalonga confesses that the purpose of this project is "not" to make a profit: "We set a price, since making the traps takes time, and the materials to build them also cost money. The most important thing is to encourage people to get traps, since they are so necessary."

Aside from selling traps, Villalonga, along with his group of friends, manages the Facebook account @capturaserpientesibiza. They also publish information on the current snake situation in Ibiza. In addition, Villalonga announced one of the posts they will publish on the account soon: "We will publish the design plans for our traps, which have worked in the various tests we have conducted. This decision is due to the fact that we want to encourage people to build traps in their own homes."

DIARIO de IBIZA

El hombre que susurra a las serpientes en Ibiza

The Snake Whisperer of Ibiza

Half English, half Australian, and now half Ibizan, Dean Gallagher has become Ibiza's most famous snake hunter. An English teacher and former nightclub host who specializes in calming drunks and drug addicts, he talks to the snakes before finishing them off: "I apologize, I tell them it's not their fault, I'm sorry..."

Dean Gallagher at the Ibiza Diary headquarters. / TONI ESCOBAR

José Miguel L. Romero
Ibiza 06 JUL 2025 6:01 Actualizada 06 JUL 2025 9:30

He wears a beaded necklace around his neck, not one with sharp alligator (or poisonous snake) teeth, which is what I expected from Dean Gallaguer, the Ibizan Crocodile Dundee. Nor does he carry a machete or a wide-brimmed Australian hat, although he does sport one in his WhatsApp profile picture. He wears RayBans and a tuxedo that, judging by the volume of his biceps, shows that he must have been impressive when he was a nightclub bouncer, a time when his nasal septum surely transformed into his current appearance. But the local snake hunter, the Frank de la Jungla of Ibiza, the Tarzan who selflessly captures horseshoe snakes (mostly), the Englishman who feels Aussie and received the 2021 Amic de la Terra Award given by the Amics de la Terra for his work against invasive snakes, also has a candid side. Although he has a rough appearance, his sensitive and good-natured side emerges in conversation.

Among other things, because he talks to the snakes before killing them, an act he performs with a precise blow to the head to stun them, first, and render them unconscious before finishing them off with a rock. But beforehand, he unburdens himself to them, asking for their forgiveness in whispers: "I like talking to the snake, even though I know it doesn't understand me. I notice it calms down, and it calms me down too. That makes the job much easier. I apologize, I tell them it's not their fault, that I'm sorry..." And as he tells this to this editor, the executioner, a wardrobe with a deviated nasal septum, is moved, his eyes moisten.

—Do you apologize in Spanish or English?

—Sometimes in Catalan.

As a child in Melbourne, with a python. / DEAN GALLAGHER PERSONAL ARCHIVE.

“Unfortunately, I was born in England,” he says. He was a baby when his family emigrated to Australia, to Victoria, on the coast of Melbourne: “To the Great Ocean Road.” Beautiful landscapes. To a town called Warrnambool. “I grew up there, always thinking I was Australian. Until one day my mom told me, no, you're English. You were born in England. I'm a mix of British, Australian, and Ibizan.”

Life-saving lessons for Australian children

It was at school that he had his first contact with snakes: "They taught us how to deal with them. And with all types of animals, like scorpions and things that can sting you and cause harm. For example, if a copperhead crosses your path, the advice is to take slow steps. Don't scare the animal. You have to respect the animals." He was eight years old when he grabbed the first one, of that very species: "It was under my bed. I grabbed a towel and grabbed the snake's tail with it. Then I threw it at the neighbor's house. My dad, who was there smoking a cigarette and drinking a beer on the terrace, said to me, 'Why did you do that? Are you crazy? What if it bites you?' Because I thought it was a harmless snake, but no, it was a Lowland copperhead (*Austrelaps superbus*)." Which is like a crawling bomb with poison, in this case neurotoxic and capable of killing an adult (it would definitely kill a child).

He first visited Ibiza in 1998. The typical holiday trip of "a young fool who went out to party and danced until seven in the morning at Amnesia with fluorescent lights in his hands." He had long since returned to England with his family, where, in London, he worked as a nightclub bouncer and DJ. As a nightclub bouncer and member of St. John Ambulance ("which is like the Red Cross here"), he specialized in caring for those suffering from fainting spells and "calming down drunks and drug addicts": "I was sent to give first aid, to stabilize those unconscious from drug or alcohol overdoses. And on top of that, as a bouncer, I had to calm people down in difficult situations." Sometimes they tried to hit me... Well, sometimes they succeeded, sometimes I came home with black eyes. But 90% of the time I used brainpower, not force." He always carried a pack of gum and another of tobacco with him, with which he calmed and attracted those who were overexcited by drugs or alcohol. The gum was for drug addicts: "To chew." It was his way of getting them out of the club without using force: "With a little psychology."

How to learn Andalusian in Torremolinos

He was even close to working as a bobbie for the Metropolitan Police: "But just as they were taking my uniform measurements, I decided to go to Spain to learn Spanish, because I thought a Spanish-


"Can Dog's (former) owner trying to scare me with a python," he explains about this photo.

speaking police officer in London would have a lot more responsibilities and perhaps more money." And he went to Andalusia to learn Spanish: "Well, Andalusian. I went to Malaga. I met some people at the airport who told me, 'Come with us to Torremolinos, you'll find a job easily.' But what I found in Torremolinos was a bunch of English bars. I hadn't come to Spain for that. And, just one day, I was having a drink in Torremolinos when a pretty big fight broke out between two guys. When I saw that no one was doing anything, I jumped in and broke them up. The manager of that bar, who was Spanish, seeing what I did, offered me a job as a bouncer. He convinced me because most of his customers were Spanish, from Malaga. It was better for me, because that way I learned Spanish." I did it very, very quickly, although the Andalusian accent is a little difficult to understand."

It was shortly after that he ended up in Ibiza, invited by a friend to oversee the construction of a villa he had just bought: "I thought they were trying to scam him." At the airport, a woman who owned a handling company offered him a job the very day he arrived: "I had contracts with EasyJet, Britannia, Jet2... so I had to change my tie sometimes five times a day." In the winter, he worked as an English teacher.

A fight to the death between a cat and a snake

And how did he become Ibiza's snake hunter? "It was 12 years ago. I was in a villa, working on its maintenance, which is my job, when I heard a commotion. I saw the neighbor's cat, with its paws in the air, twirling around with a large snake wrapped around its body. The cat was trying to bite it, and the snake was trying to bite the cat." He didn't know what to do. In a surreal scene, while the cat was fighting for its life, he called the Consell (Spanish regional government) for advice. They ignored him and weren't even moved when he warned them that the snake was trying to kill the cat. So he had no choice but to intervene for the first time: "I put on my gardening gloves and managed to separate them."

From that day on, he began to take an interest in the consequences of the snake invasion and noticed that there weren't as many lizards and geckos in his house as before: "Like when, in the morning, one would climb up my pants so I'd feed it while I ate breakfast." He began volunteering to capture snakes that snuck into homes or those caught in traps that, out of aversion, few dared to remove: "Many of them panic, they get nervous, they're terribly afraid. Don't worry, I'll get there, I tell them." He says he was influenced by his father, Allan: "He was very altruistic. I like to help people in difficulty; it's part of my nature... thanks to him."

He doesn't enjoy killing snakes; on the contrary, he claims it causes him a moral and spiritual "conflict": "But there's no other legal way to do it. I don't get pleasure from slaughtering them. In fact," he explains, "it causes me trauma because it's an animal that has its rights and is not to blame for this situation. But we have no other option. I prefer to do it right, so the animal doesn't suffer, properly, following the veterinarians' advice, and not, as some do, cutting their bodies in half with gardening tools, or their heads with a knife. That way, the animal suffers, when it's not necessary." He would also prefer to "rescue" them and transport them to the Peninsula, "but it's not possible, according to the authorities."

—"How many have you caught since you started?"

—Hundreds and hundreds.

—And this year?

—Two or three a day. The other day, seven. Five in a single trap. Big, very big.

Reptilian Orgy

One, over two meters long: "I opened the trap. Inside, it looked like a plate of spaghetti. Where am I going to start?" I asked myself. I had to find the head of the largest one. I pulled out the first one, struggling. I pulled out a meter of it first, then another... It was two meters long. Another, 1.75 meters." There was a female accompanied by males, all in heat. A full-blown reptilian orgy.

Her arms are covered in bites from horseshoe snakes, wounds still healing, not a big deal, although they've left their mark. One has even left a tooth inside her left hand. She explains that if they bite and remain attached to the skin, you shouldn't pull on them, or they would lose their teeth. You have to open their mouths slowly. And if they still remain stuck, you have to remove them with tweezers: "They're very, very thin, like fish bones."

He's decided to start charging—"with an invoice and everything, VAT included"—for capturing them due to the expenses incurred by traveling all over the island, including tires, engines, gasoline, and so on: "Some clients are very understanding and help me with the costs, but there are many people who aren't; they don't understand; they think I'm a civil servant for the Catalan government or the Consell." The fee will be around 40 euros per visit: "But only to those who can pay, not to those with financial problems or the elderly. I won't charge the people of Ibiza, only the wealthy villa owners. A villa owner, for example, shouldn't have any trouble paying. I don't want to take advantage financially, because money isn't the reason I do this. I do it because I want the lizards to return and to protect nature."

Music and wine. Beyond snake hunting

DJ, viticulturist, and trap designer with a "panic room"

When he's not hunting snakes, Dean Gallagher pursues two of his passions. One is creating his own wines: "I release a few barrels of wine in September with the Monastrell grapes left for me on a farm in Talamanca. When I go back to see my family in Australia, I also do the same with my brother. He works in a vineyard. There's good wine in Victoria thanks to the soil, full of minerals. And because of its climate, which has winters like those in Europe and very dry summers."

And then he has a vinyl collection that he plays, for example, at The Standard hotel: "Old school, R&B, rhythm and blues, funky house, Joyce Sims ('Coming to My Life')..." He says he does it for fun. He'll soon do a session at The Garage "to make a little money." He's also designed a special snake trap, with a "panic room" for the mouse, so it doesn't get stressed when the snake is in front of it: "In this trap, the snake sees the rodent through a tiny window, but it can't get to it or eat it. And the mouse, if it really panics, as animal rights activists say, which I doubt, can hide behind the window and not see it. And that's it. There's its nest, its things, its water."

07-07-2025 - S. Ribas - The Government controls the presence of snakes in the Pityusic islands with active trapping in six enclaves (control)

PERIÓDICO de IBIZA Y FORMENTERA

El Govern controla la presencia de serpientes en los islotes pitiusos con un trampeo activo en seis enclaves

The Government controls the presence of snakes in the Pityusic islands with active trapping in six enclaves

From now on, citizens will be able to ask COFIB technicians to kill the specimens they have captured in their private traps.

Map of the traps in Ibiza

S. Ribas | Ibiza | 07/07/25 4:00

The Balearic Ministry of Agriculture, Fisheries and Natural Environment has intensified this season its efforts to stop the expansion of snakes towards the west of the island. To achieve this objective, he has installed a greater density of traps in the area between Santa Agnès de Corona and the municipality of Ibiza itself. In Formentera, the actions are concentrated in La Mola.

According to Ministry sources, this year the Pitiusas will have 2.5 million euros - of which 1.9 million come from the Sustainable Tourism Tax - to fight the invasion of reptiles. Between the years 2020 and 2023, these items amounted to 853,000 euros. A total of 13 COFIB technicians will be dedicated this season exclusively to snake population control.

Among the key actions to reinforce this fight, the Ministry has installed a total of 2,611 traps this year in Ibiza and Formentera, 35% more compared to 2024, when 1,928 cages were placed. Government sources say that if the data is compared with the 2020 exercise, the increase is 350%.

In addition, and for the first time, not all traps will be removed at the end of the season, but some will be left in place throughout the winter. Some factors have caused the ophidians to modify their biological cycle, even eliminating or shortening the hibernation period. Therefore, the technicians will leave sentinel traps installed throughout the year to test this hypothesis.

Among other striking measures, from now on individuals who catch a snake in Ibiza on their own will be able to take the trap to the facilities in Sant Antoni of the COFIB (Consorcio para la Recuperación de la Fauna de les Illes Balears) and the technicians will be in charge of euthanizing the reptile.

Captures

As highlighted by the Ministry, so far this year more than 2,000 specimens have been caught in Ibiza, which indicates the population volume of this species.

Aware of its presence in numerous islets of Ibiza, the Balearic Council has also chosen to increase activities in these enclaves. In 2024, lizard populations were monitored in 16 islands, also trying to confirm the presence of snakes in these territories. As a result of these works, protocols were activated in three of these enclaves capturing a total of 48 horseshoe snakes: 44 on Santa Eulària Island and four more on Murada Island.

In relation to this summer, 24 islands have already been prospected, with the technicians carrying out an active snake trap in six of them, those in which populations of lizards with very low densities were detected or in which the presence of snakes was found. At the moment, 52 traps have been set up on these islands, capturing around 20 horseshoe snakes in places like s´Illa Rodona, s´Margalides or s´Illa des Canar.

Map of the traps in Formentera

PERIÓDICO de IBIZA Y FORMENTERA

«La erradicación total de las serpientes en Ibiza, hoy por hoy, es inviable»

"The total eradication of snakes in Ibiza, today, is unfeasible"

The management of the inheritance of invasive exotic species is one of the priority axes of the General Directorate of Natural Environment and Forest Management.

The Ibizan Anna Torres is the general director of the Government's Medio Natural y Gestión Forestal.

S. Ribas | 07/07/25 4:00

The director general of Medio Natural y Gestión Forestal is the Ibizan Anna Torres (Sant Francesc de ses Salines, 1972). This year, the Government is allocating more economic resources than ever to combat the invasion of snakes, with a total of 2.5 million euros. Also, more human resources with 13 technicians from the Consortium for the Recovery of the Fauna of the Balearic Islands (COFIB) dedicated exclusively to the control of these reptiles.

—Does the fight against snakes mainly focus its activity on the General Directorate?

— The management of invasive exotic species is, without a doubt, one of the priorities of this Directorate General. Among them, the fight against the ophidians, especially in the Pitiusas, has an outstanding relevance. However, our work covers many more areas and the seven services that make up this Directorate General work in key areas such as the conservation of natural spaces, environmental education, species protection, health and forest management and we also work on the prevention and extinguishing of fires.

— The Government has introduced important novelties this season in the fight against snakes and, among other things, will leave a large number of traps installed all year in Ibiza.

—We find ourselves in a scenario in which the behavior of snakes differs markedly from that of their places of origin. Factors such as the abundance of food, the absence of competitors and natural predators and certain climatic conditions, could be causing them to modify their biological cycle, even going so far as to eliminate or shorten the period of hibernation. Therefore, sentinel traps will be installed throughout the year to test this hypothesis.

- Will it be in some specific areas?

—Yes, they will be placed primarily in the areas with the highest population density of snakes. The objective is to verify if they have really stopped hibernating or if their lethargy has been reduced. We try to anticipate and have operational traps when they re-emerge after the winter.

-Another novelty is that individuals who capture a snake with their own trap can go to the COFIB facilities in Ibiza so that the technicians annihilate the reptile. What motivated you to introduce this possibility?

-Citizen collaboration is essential in this fight. We know that many people have reservations when it comes to euthanizing an animal, especially if it is a snake that can measure up to two meters. Therefore, we offer you the possibility to hand over the specimen caught in your trap and our COFIB technicians will be responsible for its management in an ethical and safe manner.

—Are you worried about the impact that the presence of snakes in Ibiza is having in international media?

—The introduction of invasive species by human action is a phenomenon inherent in globalization, but always worrying. Cases like that of the snakes in Ibiza serve as an example to sensitize citizens to the risks involved in certain practices. It is vital to avoid actions that could facilitate the establishment of invasive exotic species, especially in ecosystems as fragile as island ones.

—In the port of Ibiza there was talk of building a quarantine zone for merchandise, although it still hasn't been created. How then can you limit the entry of certain elements that can introduce invasive species?

—The limitation is contemplated in Decree-Law 1/2023, of January 30, which establishes extraordinary measures to protect the Pityusic lizard and the Balearic lizard. The introduction of ornamental trees capable of carrying ophidians is only allowed between April 1 and June 15 and between September 15 and October 15. Outside of these periods, it will be necessary to comply with at least one of the three established requirements, including the monitoring of a quarantine. Therefore, it is one of the authorized measures, but not the only one.

—In places like the Ibizan islands, is it time to end the invasion?

— Eradication in the islands is more feasible due to their smaller surface area, although access is usually more complicated. Once the presence of reptiles is detected, intensive trapping is carried out to attempt their total elimination. However, this does not guarantee that they will not be able to

recolonize these spaces in the future since the snakes are able to swim up to them.

—They are planning to build up to four lizard shelters in Ibiza soon.

- That's right. We are going to create four completely inaccessible shelters for snakes that will function as reservoirs for lizards. In these spaces, specimens bred 'ex situ' will be moved thanks to the agreement with the Barcelona Zoo Foundation, as well as others captured on the island. The objective is to ensure the conservation of the species in places free of predators.

—How do you think your battle against the snakes in the Pitiusas will evolve? Are they confident in reducing or even eliminating populations?

— The total eradication of snakes in Ibiza, today for today, is unfeasible. Our objective is to reduce their populations to levels compatible with the survival of lizards and other prey species, avoiding significant changes in ecosystems. In Formentera, on the other hand, we do contemplate the real possibility of eradication. In addition, we trust that the lizards develop defense mechanisms against snakes since they are not currently identified as predators. We hope that, with time, they adopt escape behaviors in his presence.

09-07-2025 - Europa Press - Historical: the first 'lizards' of Ibiza were born outside the island (conservation)

PERIÓDICO de IBIZA Y FORMENTERA

Histórico: nacen fuera de la isla las primeras 'sargantanes' de Ibiza

Historical: the first lizards of Ibiza were born outside the island

First hatchlings of Pityusic lizard | Photos: CAIB

Europa Press | Ibiza | 09/07/25 11:19

The first Pityusic lizard ('*Podarcis pityusensis*') hatchlings have already been born as part of the 'ex situ' breeding pilot project promoted by the Regional Ministry of Agriculture, Fisheries and the Natural Environment in collaboration with the Barcelona Zoo.

As reported by the Ministry in a press release, these are 12 specimens, from five different plants, incubated for 42 days. They are the first captive breeding groups of this endemic species of Pitiusas.

This initiative seeks to guarantee the conservation of the Pityusic lizard, whose survival is threatened by the introduction of invasive ophidians. The objective is to create stable populations outside their natural habitat and thus preserve the biodiversity of the Balearic Islands.

For this, 17 healthy and genetically diverse specimens were captured last month (ten from Ibiza and seven from Formentera) which were transferred to the zoo to start the breeding program.

The general director of Natural Environment and Forest Management, Anna Torres, has stressed that "initiatives like these allow us to work on the viability of repopulations with this species", within the global strategy against invasive species.

Torres has announced that this year the creation of four refuges in the Pitiusas is foreseen, where the specimens bred in captivity will be introduced. These spaces will be protected against snakes and will have the necessary resources to ensure the development of the lizards.

The hatchlings, which weighed between 0.6 and 0.8 grams at birth, have been identified by Barcelona Zoo's technical staff and transferred to adapted terrariums. According to Tomàs Bosch, head of the Government's Species Protection Service, they have shown 'a quick adaptation to the environment and a good general state of health'.

This project is part of the agreement signed in 2024 between the Conselleria and the Barcelona Zoo Foundation and joins other similar initiatives such as the captive breeding of the 'Ferreret' ('*Alytes muletensis*'), another Balearic endemic.

In addition, the initiative includes scientific studies to deepen knowledge of the ecology, genetics and conservation of the species, with the participation of the Spanish Herpetological Association (AHE), the Center for Ecological Research and Forestry Applications (Creaf), Cofib technicians and specialists from the Government and the Zoo.

The Pityusic lizard, symbol of the fauna of Ibiza and Formentera, was included in 2023 in the Balearic Catalog of Threatened Species in the category of 'vulnerable', together with the Balearic lizard ('*Podarcis lilfordi*'), due to the pressure of invasive species such as snakes.

PERIÓDICO de IBIZA Y FORMENTERA

La Línea Verde de Sant Josep ya incluye una categoría para comunicar la presencia de serpientes invasoras

The Línea Verde of Sant Josep already includes a category to report the presence of invasive snakes

This new functionality was born with the objective of improving the detection and monitoring of the distribution of these reptiles in the municipality.

R.I. | Ibiza | 10/07/25 15:30

The City Council of Sant Josep has become the first municipality on the island to enable a specific category within the Línea Verde application to report the presence of invasive snakes in the territory.

This new functionality has been created in collaboration with the Consortium for the Recovery of the Fauna of the Balearic Islands (COFIB), with the objective of improving the detection and monitoring of the distribution of these reptiles in the municipality. Notices sent by users through this new category will go directly to COFIB, facilitating a more efficient response and better coordination between administrations.

This pioneering action complements the set of measures that are already being carried out both at municipal and island level to control the proliferation of invasive species, such as now:

Massive traps carried out by the COFIB throughout the municipality

Collaborative traps between the City Council and the Society of Hunters of Sant Josep

Distribution of traps by the Consistory: 80 traps were distributed in 2024 and it is expected to maintain this figure for the year 2025

Creation of shelters for lizards in municipal gardens, some in collaboration with COFIB and others within the municipal gardening service

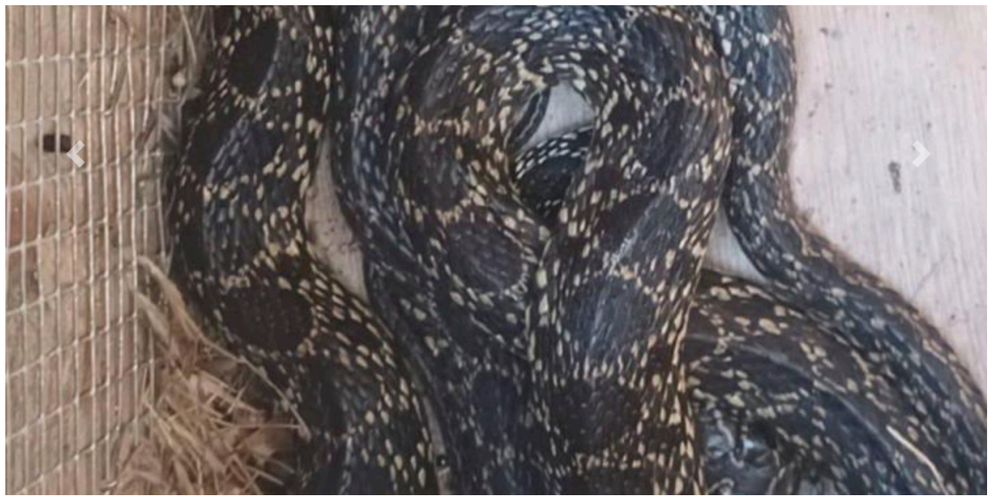
Likewise, the City Council wanted to express its gratitude to the private initiatives that offer traps at affordable prices, thus promoting better citizen involvement and reserving free traps for those with less resources.

To report the presence of snakes, all you have to do is download the municipality's Línea Verde application on your mobile or access the website www.liniaverdasantjosepdesatalaia.com and select the option 'Invasive snakes' in the incident notification section.

PERIÓDICO de IBIZA Y FORMENTERA

Capturan una decena de serpientes en una propiedad de Santa Agnès

They capture a dozen snakes on a property in Santa Agnès



R.I. | Ibiza | 10/07/25 14:36

The Facebook profile Ibiza Snake Trappers Community has echoed the latest captures of Stop Ibiza Serpientes Jos Kleissraps. In the publication this Wednesday afternoon, the social network account shared a total of 14 images of snakes that had been captured in a property located in Santa Agnès de Corona.

As they continue to explain, Jos Kleissraps has become a key figure in this "cleaning" of snakes in the area, managing to capture around 200 specimens since last March.

From the account they recommend to the neighbors who live in the south of this area of the municipality of Sant Antoni de Portmany to urge "the City Council to put up fences and special barriers against ophidia, if they still have lizards in the area" and that "they give more traps to the owners of large land".

Ibiza Snake Trappers Community states that "the snakes are moving from Sant Mateu and Santa Gertrudis and before they did so from the municipality of Sant Joan" and warn that "they will continue to move".

On the other hand, this Facebook community explains that ophidians stay away from properties that are under construction. "It is at the moment when the machines are removed that the traps begin to hunt again".