

THE LACERTID LIZARDS (PART THREE)

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This, the penultimate in a series of articles concerning Lacertid lizards - mainly from the viewpoint of the newly-acquainted vivarium keeper, but also hopefully, with some information of use to more experienced enthusiasts - looks at rearing of young, minor ailments, a brief look at outdoor enclosures and begins where the final part takes over, that is a few notes on selected individual species.

REARING OF YOUNG:

Unlike those who keep various other reptiles, particularly much larger species, the Lacertid specialist having successfully bred his animals has the hardest part still facing him i.e. rearing these often tiny individuals to adulthood. A few litters of juvenile lizards will test ones ability and dedication to the full. For that reason I strongly recommend parting with as many young as is not immediately required, at this stage. Many authors have commented on the use of plastic ice-cream tubs etc. as housing for young reptiles, these have obvious advantages particularly when large numbers of young are being raised. They should be set up in an environmental chamber, which is basically a giant vivarium with controlled heat and a plentiful supply of True-lite tubes spread over and close to the rearing containers. For preference don't use bottom heat (the young seem to do better and act more 'naturally' when heat is from above) overheating can also be a problem so heat the chamber with a relatively gentle source and incorporate one or more reliable thermostats (perhaps one of our more practically-minded members would care to give an ideal design in the HERPTILE).

As with adult lizards provision should be made for photoperiod adjustments, though at this age it seems harmless to give temperatures at fairly constant levels, though a drop at night would be ideal.

For substrate use very coarse gravel to avoid accidental ingestion during feeding, hides should be supplied in the form of cork bark, card etc. Water should be made available in small containers but be sure to give provision for young to climb out should they fall in. Food is as per the adults but obviously only very tiny livefoods will be taken, thus it is an advantage if you breed your own food items and can thus be sure of a regular supply. Regular supplies of sweepings will improve the wellbeing of your young. Feed the young 'by ear', i.e. keep them fairly plump but watch for signs of lack interest in food or obesity.

Food can be dusted with vionate etc. but be very sparing with supplements in drinking water. For the first month or so at least juvenile lacertids of most species seem to benefit from higher humidity levels than the adults prefer, (this probably corresponds with their being born in the wild at or during more humid periods of the year). This extra humidity can be taken care of by keeping the water dish topped up and the occasional 'damping down' with a mist sprayer. Under ideal conditions many lacertid species grow at a tremendous rate, probably much faster than in natural conditions, though I've heard of no evidence to suggest that these precocial young are in any way inferior to those grown at a slower pace I must admit to deliberately avoiding 'high speed growth' inducement: I keep mine at rather lower temperatures and with somewhat less food than do some enthusiasts. Even so, expect healthy young to be large enough to have to be placed one per container within a couple of months and to enter adult type accommodation within six to ten months, though adulthood may take a further year or more to attain. Whether or not you hibernate immature lacertids in their first year, depends on many things: size, weight, condition, versus availability of food and ability to maintain suitable temperature/photoperiod to ensure feeding throughout the winter months.

MINOR AILMENTS:

For the greater part it is true of all herptile ailments that prevention is better than cure. Preventive medicine means paying particular attention to the heat, light, humidity (or usually prevention of an excess) and feeding requirements of the species you keep. A varied diet will go a long way to prevent illness among lacertids. Internal parasites do not seem to cause much of a problem particularly if attention is paid to hygiene and when all your animals are captive born. External parasites can be eliminated with 'Vapona strip' - see Coote (1980) before use.

The most common problem I have encountered over the years has been that of fighting, in fact this along with accidents has been responsible for 100% of all adult deaths in my collection over the past 6 years (disregarding known old aged specimens). Even so this amounts to just a tiny number of lizards.

In most collections fighting can be fairly well prevented by paying careful attention to sizes and sex ratios of cagemates, I must admit that experiments in keeping large numbers together and similar risky exercises have caused most of my problems. Note, even females will fight particularly in the confines of a small vivarium. (see earlier comments on housing & general requirement, HERPTILE 8 (3)pp 92-93.)

Accidents can also be avoided, beware of loose rocks, accessible heat sources and badly designed/finished vivaria. With regards to treating injuries so caused, my first advice would be, depending on the extent of the injury, to seek qualified help.

I and many others have certain cures and remedies, some of which are more successful than others, but I feel that in the form of detail they would need to take in articles such as this they may cause as many problems as they are intended to rectify. Obviously, if an animal is very seriously injured it should be painlessly destroyed.

OUTDOOR ENCLOSURES:

An outdoor enclosure is the ideal place to keep many lacertid species: while non-hibernators will benefit from a spell outside during the warmer months the hibernators can quite safely remain outside all year round. The list of species that have been successfully bred to a number of generations when kept outdoors and exposed to all aspects of our northern climate, is extensive. Some make use of glass-covered enclosures, though I'm sure in the case of almost all lacertids open-air designs are superior allowing direct access to the sun's rays as well as making the addition of food a purely supplementary exercise. Mr George Webster of Essex, has had notable success in keeping lacertid species in this way, particularly noteworthy has been his breeding of the green lizard and the eyed lizard (*L. viridis* and *L. lepida*), to numerous generations in open air enclosures. The lizards remain outdoors all year and in most years the *L. viridis* eggs hatch successfully when left in situ. *L. lepida* eggs require much longer to hatch and so are removed and incubated artificially. Many people are surprised to hear of the success of such actions where warm-climate species are involved and I am often reminded of the general lack of success in such species being established wild in this country. My own opinion is that factors other than climate are responsible for past unsuccessful introductions, (it is now illegal to set free alien species in the UK), these factors are probably numerous but would likely include: failure of the 'immigrants' to find and exploit a suitable ecological niche (this would include competition with native fauna); the age - structure of the specimens (anyone who has introduced native herptiles into their own garden will know that such introductions are more rapidly successful when a wide range of ages are represented among the 'pioneers' - this would include eggs and tadpoles in the case of amphibians). Also dispersal of the specimens when placed in a strange environment is likely, this would have detrimental effects on both individual survivorship and breeding success.

I therefore strongly recommend anyone with doubts about building a reptillary to 'get on with it'. My own enclosure, has only been completed relatively recently and I hope to be able to report on it's design, construction and (hopefully) success over a couple of years, in a future HERPTILE.

THE SPECIES:

(a) Britain & Northern Europe

Lacerta vivipara (Viviparous or Common lizard):

Not often kept (nil rarity value?), but an interesting species particularly outdoors. Unusual amongst lacertids in giving birth to live young and tending to prefer cooler temperatures than most, it also takes much smaller prey items than even similar sized species. Don't attempt to keep it in small vivaria with larger *Podarcis* spp., these will often kill *L.vivipara*. Young are very tiny (30-40mm incl. tail), very difficult to feed more than 2 or 3; unless you have plenty of time it's best to release the young in a suitable spot immediately they are born. Contrary to popular opinion this species exhibits a wide range of often beautiful colouration and markings, I know of localities where all black (melanistic), and beautifully marked bright green specimens occur. (The latter bear some resemblance to *L. agilis*, the sand lizard, and such animals may have been involved in mistaken records of that species in the past).

Podarcis muralis (Wall lizard):

Another variable species but this time with numerous recognised subspecies some of which are very heavily marked and/or much larger than the type form. A particularly noteworthy variety being *P.m. nigriventris* from the Rome area. This is very heavily marked (particularly in males), and does well outdoors. *P.m. muralis* is a tough species, often dominant in a mixed collection of similarly sized lacertids. Average clutch sizes I have recorded are 4-5 eggs twice per year, (depends on subspecies' origin).

Almost exclusively a live - food specialist, though some insular subspecies are an exception. Relatively recently nearly all the so called wall lizards were assigned to *P. muralis* subspecies, we are beginning to understand the evolutionary and phylogenetic relationships of these lizards and as a result many of these '*muralis* ssp' have been afforded full species status. Though there is much work to be done in this field so don't be too surprised if the scientific names of your lizards change over the years.

Lacerta viridis (Green lizard):

Though this species has a somewhat restricted distribution in "northern" Europe it does survive on certain of the channel islands and does extremely well in outdoor enclosures in the southern part of the UK. It has a great requirement for ultra-violet light and dwindles rapidly without it. I have never reared young of this species without either natural sunlight or a suitable substitute even when they were supplied with a varied diet and vitamin supplements. The first sign of such deficiencies is marked by a weakness of the bones

particularly in the lower jaw and results in an inability to capture prey which escalates the situation.

It is probably no coincidence that those lacertid species with the highest u-v requirement are green in colour, such colouration could well serve to aid in light reception by the skin.

My average clutch figures are 13 eggs twice per year, again if the female has not had access to u-v the eggs will fail to hatch successfully or else the young will be weaklings. Has hybridised with other species, producing sometimes attractive but invariably infertile young.

REFERENCES:

Coots J (1980) Clarification of the use of Vapona, for the control of mite in reptiles. HERPITLE 5 (1) pp 36-38.

also of use

Reichenbach-Klinke, H + Elkan E (1965) Principal diseases of lower vertebrates - Part III Diseases of reptiles. TFH publications.