Zitat / Citation:
Autumn activity in an introduced population of Podarcis muralis ssp. in Liechtenstein

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Abstract

While many reptile species are predicted to be threatened by the rising temperatures caused by the ongoing climate change we’re facing in the Anthropocene, certain genera have found these conditions to be advantageous. Some of these cases are represented by the genus Podarcis, a group of small and agile lizards, mainly native to Europe and northern Africa. 25 species are recognized and some of them have found their home far outside of their native range. We would like to give a small insight at an introduced population of the common wall lizard (Podarcis muralis) and their interesting pre-winter activity in the principality of Liechtenstein.

Zusammenfassung

Introduction

Winter activity in populations of *Podarcis muralis* inhabiting Liechtenstein has been well documented before (Kühnis & Schmocker 2008). While not being native to the small country, the species has found itself at home in various habitats and in many parts of the country (Kühnis 2006). Balzers is a small village in the south of Liechtenstein. Its exposition to the south makes it an ideal environment for thermophilic fauna and flora with the first official records of *P. muralis* in Balzers dating back to the summer of 2008 (Kühnis & Niederklopper 2010). Meanwhile, the population at the Castle Hill has grown to at least several hundred individuals. The inhabited area is characterized by vineyards, drywalls and bushy meadows, creating perfect habitat for the lizards.

Methods and Results

During November of 2019, the site was visited three times in order to observe the animals during their pre-winter behaviour. The following times and dates were chosen:

<table>
<thead>
<tr>
<th>Date Time</th>
<th>Temperature in °C / Weather</th>
<th>Number of individuals observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.11.2019 / 12.00 – 14.00pm</td>
<td>Approx. 9 °C / sunny &amp; calm wind</td>
<td>&lt;50</td>
</tr>
<tr>
<td>24.11.2019 / 13.30 – 15.30pm</td>
<td>Approx. 4 °C / cloud cover &amp; windy</td>
<td>2</td>
</tr>
<tr>
<td>26.11.2019 / 13.30 – 15.30pm</td>
<td>Approx. 9 °C / sunny &amp; windy</td>
<td>&lt;30</td>
</tr>
</tbody>
</table>

During days one (21st November) and three (26th November), several dozen individuals belonging to all classes of age were observed. When the sky slowly started to cover with clouds on day one, most animals retreated back into the walls right away. Between 13:30 and 14:00pm, very few individuals were observed. This same behaviour was also observed during day three. During day two (24th November) with lower temperatures, light cloud cover and a cold wind all saw a reduced activity in the lizards down to a minimum. During a time span of two hours, just two lone juveniles were seen.

Discussion

All individuals observed within these three days had a very dull and dusty appearance which is likely caused by the lizards spending a lot of time inside the walls at this time of the year. Individuals were barely ever seen further than a meter away from the next hole, presumably staying close to cover in the event of a predator entering the area. Activity was only observed on the lower walls of the hill, the upper part surrounding the castle was likely already too cold to sustain activity. The areas where activity levels are high during the summer were checked but these areas were deserted, again showing evidence that the *P. muralis* were preparing for the coming winter. The behaviour observed by the lizards is contrary to the warm summer months, where cloud cover often leads to more activity observed by the authors. Despite the small sample size, there is evidence to suggest that *P. muralis* is still active in this small population late into the autumn. Future work will continue to document the lizard’s behaviour and activity patterns throughout the winter to determine whether or not they are taking advantage of warmer days throughout the season.
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Fig 2. Common Wall Lizard (*Podarcis muralis*), male

Fig 3. Common Wall Lizard (*Podarcis muralis*)

References

