

Cork Oaks, *Quercus suber*, as hibernation choice of the Southern Spanish Wall Lizard, *Podarcis hispanica*

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INTRODUCTION

The results of comparative genetic research on *Podarcis hispanica* from different areas of their extensive Iberian and North African distribution range indicate that in this taxon two species complexes occur: that of the Spanish Wall Lizard (*Podarcis hispanica*) on the Iberian Peninsula and *Podarcis (hispanica) vaucheri* in southern Spain and northwestern Africa (cf. HARRIS et al., 2002; HARRIS & SÁ-SOUSA, 2001, 2002; OLIVERIO et al., 2000).

Until the end of the last century the populations in Portugal were classified as a northern (*P. hispanica hispanica*) and a southern (*P. hispanica vaucheri*) subspecies. But since the southern form did not appear to belong to *vaucheri*, SÁ-SOUSA (2000) grouped both forms in two morphotypes

with an unclear taxonomic status: *Podarcis hispanica*₁ (the northern form) and *Podarcis hispanica*₂ (the southern form).

HABITAT

Both forms of *Podarcis hispanica* occupy a wide range of rocky areas (FERRAND DE ALMEIDA et al., 2001; MALKMUS, 1995, 2004; SALVADOR & PLEGUEZUELOS, 2002; SÁ-SOUSA, 2000). Rocky structures are lavishly available in almost all of the range of *P. hispanica*₁. In contrast, on the plains of the lower courses of the rivers Tejo and Sado (provinces Ribatejo and Alentejo), with mainly Quaternary-Pleistocene sands and rubble, which is a large part of the area of distribution of *P. hispanica*₂, no natural rocky areas are found. The rock-like structures in their habitat, which *P. hispanica*₂ frequently occupy, are exclusively man-



Male *Podarcis hispanica*₂ (Serra de Sintra).

made, quite scattered and often isolated, and include, e.g. ruins, walls, wells, bridges, and dams.

PODARCIS HISPANICA₂ AS TREE DWELLER

It is well known that *Podarcis hispanica*_{1,2} in Portugal can climb trees to a height of five meters to bask (MALKMUS, 1995, 2003a; MALKMUS & SCHWARZER, 2002). I found eight specimens under the bark of a *Pinus pinaster* (Maritime pine) in the Serra de Sintra at the end of September 1976; in November of the same year I discovered the quarters of three lizards in a little hole at a height of 1.3 meter in a *Cupressus sempervirens* (Common cypress) in the park of the Estoril casino. Later I noticed two specimens in cracks of the trunk of a *Schinus molle* (California pepper tree) tree at a height of about one and a half meters in the city park of Ponte de Sôr (Alto Alentejo). GONZÁLEZ DE LA VEGA (1988) reported that *Podarcis hispanica*₂ chooses trees with good hiding places as residence in the southwestern Spanish province of Huelva (olive trees, horse chestnut trees, and palms). None of these reports document the length of time these lizards stay on or in the trees. Guide books, e.g., those of BARBADILLO et al. (1999) and SALVADOR & PLEGUEZUELOS (2002) are equally unclear about this aspect of the lizard's behaviour.

In the first week of December 2003 I was on the plain between the Rio Tejo and the storage reservoir of Montargil. Not far from the little town of Foros do Arrão (120 m above sea level) in the extreme west of the district Portalegre in the province Alto Alentejo, on the flat banks of the wide bed of a tributary of the Rio da Erra, I discovered a cork oak (*Quercus suber*) of which on the west side a large rectangular piece of 0.5x2.5 meter of the bark was missing (see picture). On this portion of the tree there were about sixty, mainly round, holes with a diameter of about 4-15 mm. These holes were the exit points of insect larvae boreholes of a maximum depth of 14 cm. Two of these tunnels, at 0.6 and 2 m high, were probably made by larvae of Cerambycidae beetles and were each occupied by a *Podarcis hispanica*₂. The lizards poked their heads out when the weather was favourable



Insect boreholes in a Cork Oak, hibernation site of *Podarcis hispanica*₂.

(sunshine, no wind, and some cloud cover at a temperature of 12°C) and left their quarters occasionally to bask on the warmed wood. Winter month activity is not remarkable for this lizard as it has been observed previously in *Podarcis hispanica*₂ in the major part of their distribution (MALKMUS, 2003). What is unique in this situation is the fixed place of residence. At night and during less favourable weather (rain, strong wind) each lizard retreated completely into its hole in the tree.

During the week I observed them, both lizards kept strictly to 'their' hole and I suspect that this is their home in the winter months and possible also during other periods.



Insect boreholes in a Cork Oak, hibernation site of *Podarcis hispanica*₂.

SUMMARY

In the western part of Alentejo (Portugal) *Podarcis hispanica*₂ was observed in a Cork Oak (*Quercus suber*) using passages created by boring insects as their winter quarters.

ZUSAMMENFASSUNG

Im westlichen Alentejo (Portugal) wurde *Podarcis hispanica*₂ beobachtet die Frassgänge von Insektenlarven in einer Korkeiche (*Quercus suber*) als Winterquartier nutzt.

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