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MILAN VOGRIN

ANDREJA MIKLIC

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The Turkish Gecko *Hemidactylus turcicus* Prefers Vertical Walls

Milan VOGRIN

Zg. Hajdina 83c, SI-2288 Hajdina, SLOVENIA
E-mail: milan.vogrin@guest.arnes.si

Andreja MIKLIC

University of Ljubljana, Biotechnical Faculty, Groblje 3, SI-1230 Domzale
E-mail: andreja.miklic@bfro.uni-lj.si

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Abstract: In summer 1997 on the island of Pag in Croatia, we studied a selection of perching sites of the Turkish gecko *Hemidactylus turcicus*. With the transect sampling of 1 hour in 2 days we found 102 geckos. Adults as well as juveniles were found mostly on vertical walls.

Key Words: Turkish Gecko *Hemidactylus turcicus*, vertical walls, Croatia

Introduction

The Turkish gecko *Hemidactylus turcicus* is widely distributed in southern Europe, North Africa and the Middle East (Salvador, 1981; Gruber, 1996). It inhabits bark, tree trunks, agaves, rocky outcrops and human habitations. It is mainly nocturnal and feeds mainly on insects and spiders (e.g., Capula and Luiselli, 1994; Turgay and Atatür, 1994; Vaughan et al., 1996), however, the ecology of this species in Europe is poorly known.

In Croatia, *Hemidactylus turcicus* lives in coastal areas, including islands (Breljih and Dzukic, 1974). In this note we provide preliminary information about the selection of perch sites on the island of Pag in Dalmacia (Croatia).

Materials and Methods

The research was conducted in August (5th and 6th) 1997 in the town of Novalja on the island of Pag, where *Hemidactylus turcicus* is a very common lizard (pers. obs.). The island is in north-western Dalmacia, where the climate is typical Mediterranean with hot summers (Bognar, 1996).

Both days in the evening (after sunset) transect sampling (Jaeger, 1994) was performed for 1 h. Geckos were searched in the old part of the town. Animals on high buildings were observed by binoculars and through a 600 mm camera lens. Geckos were located above

ground, often in the vicinity of artificial lights. They were climbing on outer vertical walls and on horizontal ceilings.

For a statistical comparison we divided the data into 2 groups: geckos climbing on vertical walls and those climbing on horizontal walls. The geckos were also classified into 2 groups: adults and subadults (> 5 cm) and juveniles (< 5 cm). Since both groups were counted by the same method, we estimated that the possibility of counting any specimens (adult and juveniles) are reasonably equal. All Chi-square test comparisons with 1 *d.f.* include Yates' correction and were performed with SPSS 8.0 statistical package.

Results and Discussion

On the first day (5th August) in 1 h of transect sampling we found 52 geckos. 34 adults and 18 juveniles. The difference was significant (Chi-square test = 4.9, *df* = 1, *P* < 0.05). Second day we found 50 geckos in one hour. Twenty specimens were adults and 30 were juveniles however, the difference between the groups was not significant (Chi-square test = 2.0, *df* = 1, *P* > 0.05). Forty-one (82%) specimens were found on vertical walls and only 9 on ceilings (Chi-square test = 20.5, *df* = 1, *P* < 0.0001). Nineteen adults were found on outer vertical walls and only 1 was found on a horizontal ceiling. The difference was highly significant (Chi-square test = 16.0, *df* = 1, *P* < 0.0001). Among the

juveniles, 22 specimens were found on vertical walls and 8 were found on horizontal walls. The difference was significant (Chi-square test = 6.5, $df = 1$, $P < 0.01$).

From these preliminary results it is obvious that *Hemidactylus turcicus* prefers vertical walls. The results obtained by Capula and Luiselli (1994) for *Tarentola mauritanica* were similar to those for *Hemidactylus turcicus*. Almost the same percentage (83.9 %) of *Tarentola mauritanica* (as we observed for *Hemidactylus turcicus*) was seen while climbing on vertical surfaces

(Capula and Luiselli, 1994). However, the authors do not provide any further comments on such results. In North America, where *Hemidactylus turcicus* was introduced, geckos also occupied vertical walls more frequently than others (Vaughan et al., 1996).

The reason for such behaviour is not entirely clear, but it seems that one reason is the lights on the walls, which attracted various insects. In any case, further studies about the microhabitat selection of *Hemidactylus turcicus* should be performed.

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