New evidence for the Occurence of the Dice Snake, *Natrix tessellata* (Laurenti, 1768) on Cyprus

by Bayram Göçmen and Wolfgang Böhme

Abstract: Two subadult specimens of the Dice Snake *(Natrix tessellata),* collected already in 1960 at Gönyeli-Nicosia, northern Cyprus, were recovered from the Zoological Collection of the Aegean University at Bornova-Izmir, Turkey. They challenge the view that the only existing voucher specimen of this species from Cyprus could have wrong locality data or was brought to the island by man.

Kurzfassung: Zwei halbwüchsige Würfelnattern *(Natrix tessellata),* bereits 1960 bei Gönyeli-Nicosia, im nördlichen Zypern, gesammelt, wurden in der Zoologischen Sammlung der Ägäischen Universität, Bornova-Izmir, Türkei, wiedergefunden. Sie legen nahe, dass die Art tatsächlich auf Zypern vorkommt, und dass das einzige vorher bekannte Belegexemplar von dieser Insel nicht zwangsläufig als mit falschem Fundort versehen oder aber als anthropogen verschleppt gedeutet werden darf.

Key words: Water snake, *Natrix natrix cypriaca,* faunistics, zoogeography, Middle East.

Introduction

Water snakes of the genus *Natrix* on Cyprus have always had a very peculiar status. The Grass Snake *(Natrix natrix)* has been known from this island since UNGER & K0TSCHY *(*1865), and further records were mentioned by GÜNTHER (1879), BOULENGER (1888), CECCONI (1899), and BUCKNILL & BOULENGER (1913). Since then, no further records of Cypriot *N. natrix* have been published so that this species, which was described as an endemic subspecies *N. n. cypriaca* by HECHT (1930), was later believed to have been extinct on Cyprus since the 1930's (or at least since the 1960's) (SCHMIDTLFR 1984, DEMETROPOULOS & LAMBERT 1986, SCHÄTTI & SIGG 1989, OSENEGG 1989), until it was unexpectedly rediscovered again by WIEDL & BÖHME (1992; see also BÖHME & WIEDL 1994, BLOSAT et aI. 1996, BLOSAT 1998).

A second species of *Natrix,* viz. *N. tessellata,* which is much more abundant along at the opposite mainland coasts, was also recorded form Cyprus already by UNGER & KOTSCHY (1865) and was also listed for the Cypriot fauna by CECCONI (1899). This information was repeated without any additonal evidence by HECHT (1930: 315, "Griechischer Archipel mit Creta und Cypern") and by STEWARD 1979). SCHÄTTI & SIGG (1989) reported on a record from the Larnaca District, which was based on a photograph of a live specimen by a Dutch traveler (G. P. OXTOBY) made in 1986. Attempts by the junior author to contact this person were unsuccessful (BÖHME & WIEDL 1994), and it seems possible that this observation was based on a confusion with either *N. natrix* (BÖHME & WIEDL op. cit.) or even a young *Hierophis jugularis* (OSENEGG 1989).

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However, already CECCONI (1899) regarded *N. tessellata* on Cyprus as extremely rare ("rarissima"), and BOULENGER (1888) doubted its existence on the island, so that he omitted it completely ifrom his subsequent list (BOULENGER 1910). It is also not listed as a member of the Cypriot herpetofauna in any later publication. The only voucher specimen still available is that of CECCONI (1899), which is deposited in the in the Natural History Museum of Torino, Italy (under MCSNT 18024, see ELTER 1981). It was re-identified by F. KRAMER (cf. SCHÄTTI & SIGG 1989), and has been figured by BÖHME & WIEDL (1994). It was collected by TRUQUI in "Cipro" and does not bear specific locality data. The single individual was therefore "regarded as passively transported by man, i.e. not belonging to the established Cypriot fauna" (BÖHME & WIEDL op. cit.).

Result and discussion

Recently, the senior author was able to recover two further Cypriot voucher specimens of *Natrix tessellata* which formed part of the herpetological collection of the Zoology Department of the Aegean University at Bornova-Izmir, Turkey, where they are deposited under ZDEU 114/1960: 1-2. The two subadult individuals, a male and a female, were collected in the vicinity of Gönyeli Lakelet (Gönyeli-Nicosia), northern Cyprus. Their measurements and revelant scale counts are given below. They fundamentally change the situation described in the introduction above. They are two individuals of about the same age, from a locality in the interior of the island (not from the coast!), so that a recent, passive transportation by man from the opposite mainland is highly unlikely. It is more likely that they had hatched at the site where they were found, thus making a possible reproductive population of *N. tessellata* on Cyprus most likely. A search was conducted by the senior author between July/September, 2001, but it was too dry and hot, i.e., the search period was not suitable.

The measurements and scale counts were as follows (all values in mm, scale counts left/right; first value refers to ZDEU male, the second to the female): head length 11.2/11.1; head width 4.0/3.9; head-body length 261.0/238.0; tail length 66.0/56.0; frontal length 3.5/3.4; rostral height 1.5/1.4; rostral width 2.4/2.2; preoculars 2/2 - 3/3; postoculars 4/4 - 4/4; supralabials 8/8 - 8/8; sublabials 10/10 - 10/10; temporals 1/1 - 1/1; posftemporals 2/2 - 2/2; veutrals 175/177; subcaudals 72/62; supraoculars 1/1 - 1/1; frenals 1/1 - 1/1; nasals 1/1 (semidivided) - 1/1; gulars 4/4; anal 1/1 - 1/1; dorsals around midbody 19/19.

The scalation characters fall within in the range of variability in *N. tessellata* populations from the Near East (GRUSCHWITZ et al. 1999), the MCSNT specimen being a male and having 166 ventrals and 70 subcaudals (SCHÄTTI & SIGG 1989). The colour pattern is peculiar in that both individuals show the tendency for the ventral spots to be arranged in a double row, particularly on the underside of the tail. However, many additional specimens will be necessary to see if any differentiation of Cypriot *N. tessellata*, comparable with that of *N. natrix cypriaca* could exist.

The fact that there were no undoubted earlier records of the Dice Snake from Cyprus does not argue against its continuous but cryptic existence on the island. Also *N. natrix* was also not found for many decades and was consequently believed to be extinct (see above). It must also be borne in mind that the only undoubted endemic snake species on Cyprus *(Coluber cypriensis),* though not too rare, was not recognized until it was discovered by SCHÄTTI (1985). *Coluber najadum,* which was not known from Cyprus until its discovery by GÖÇMEN et al. (1996; at Lapithos, Kyrenia, northern Cyprus), is a similar case.

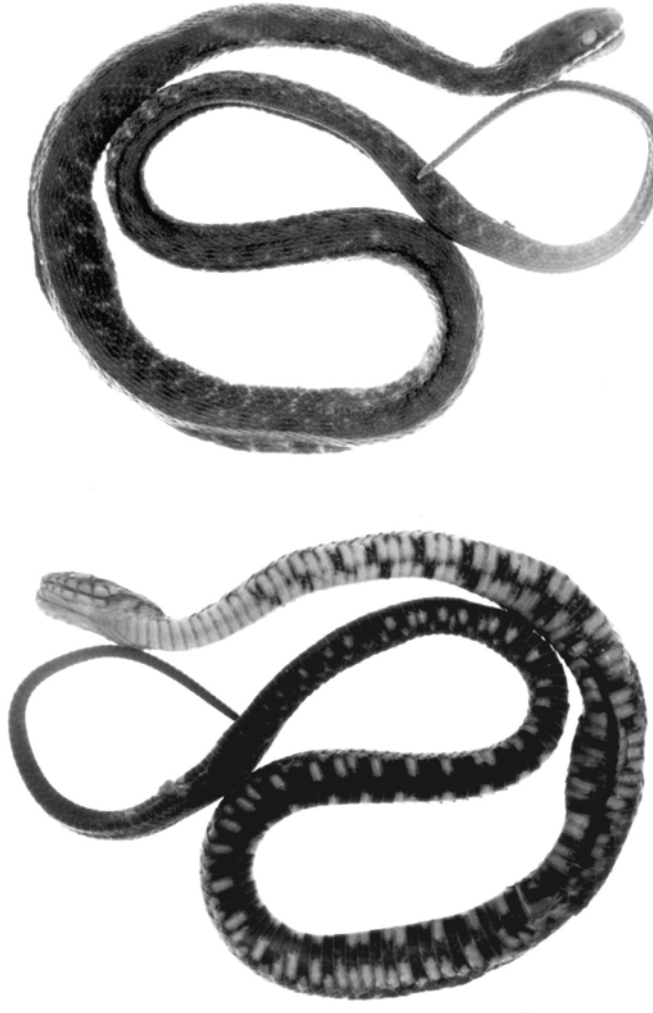

Fig. 1. Dorsal (above) and ventral view of a subadult male (ZDEU 114/1960:1) of *Nalrix tessallata* from near Gönyeli Lakelet, northern Cyprus.

It is clear from the data discussed above that Cyprus is still underexplored faunistically and further discoveries can be expected when searches are intensified. Another problem concerns autochthony vs. allochthony of the Cypriot fauna. The geological history (see the summaries by OSENEGG 1989, BÖHME & WIEDL 1994, BLOSAT 1998) still tells that the last connection between Cyprus and the mainland dates back to the Miocene salinity crisis, which would lead us to expect many more endemics as than we actually know. But the earlier rich endemic fauna (including pygmy hippos and pygmy elephants) became extinct at the

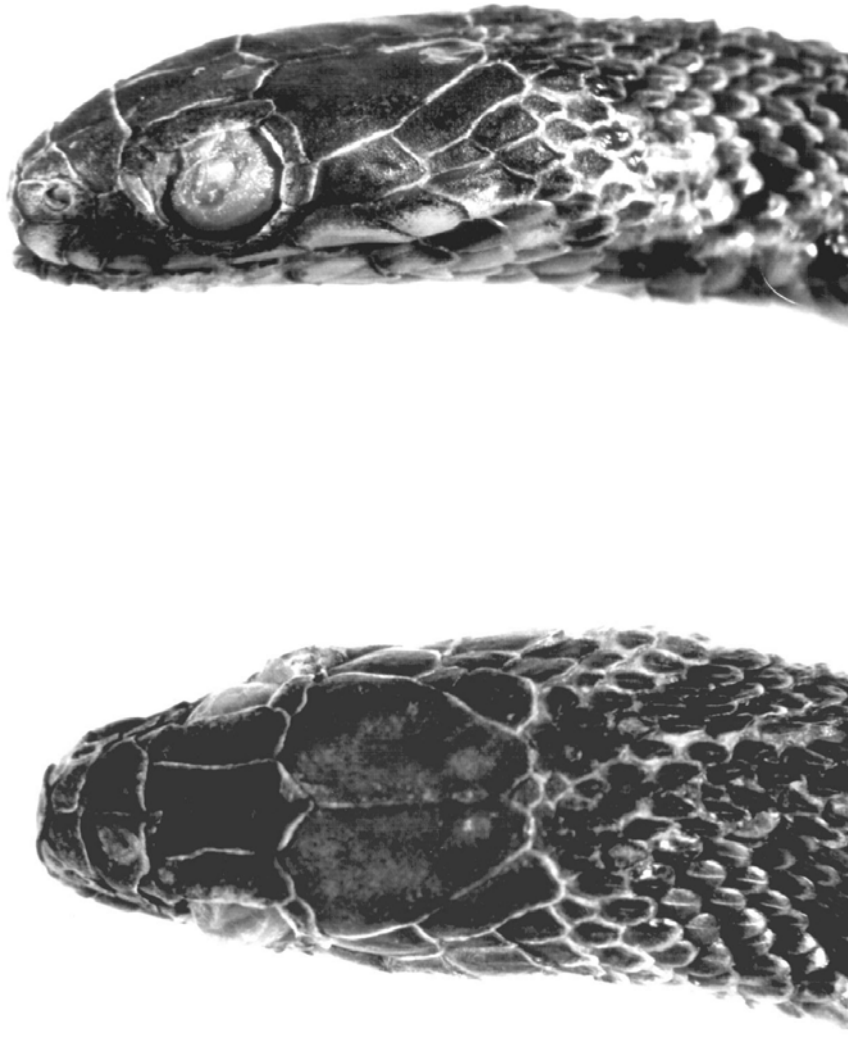

Fig. 2. Lateral (above) and dorsal view of head of a subadult female of *Natrix tessellata* (ZDEU 114/1960:2) from Gönyeli Lakelet, northern Cyprus.

end of the Pleistocene (BAILON 1999). On the other hand, human settlements are known from 10.000 years b.p., so that many modern species of the Cypriote fauna may be anthropogenic arrivals on the island. This does not at all affect their claims to be protected (BÖHME 2000).

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