

A new finding of *Rhynchocalamus barani*, Baran's black-headed dwarf snake (Reptilia, Colubridae), in the Mediterranean region of Turkey widens its distribution range

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Abstract. *Rhynchocalamus barani* Olgun, Avcı, Ilgaz, Üzümlü and Yılmaz, 2007 is a small colubrid snake previously known only from the type locality, 34 km east of Dört-yol, Hatay Province from Mediterranean Region of Turkey. A second new locality, Yayladağı, Hatay, Turkey, is reported here in the Mediterranean region of Turkey in this study. The new specimen corresponds fully in morphology, colouration and body scalation with specimens from the type locality.

Keywords. Reptilia, Colubridae, *Rhynchocalamus barani*, distribution, Turkey.

The genus *Rhynchocalamus* includes three snake species (*R. arabicus* Schmidt 1933, *R. melanocephalus* [Jan 1862] and *R. barani* Olgun, Avcı, Ilgaz, Üzümlü and Yılmaz, 2007), two of which occur in Turkey: *R. melanocephalus* and *R. barani* (see Franzen and Bischoff, 1995; Baran and Atatür, 1998; Olgun et al., 2007; Avcı et al., 2008; Gruber, 2009). *R. barani* is an endemic snake to Anatolia, firstly described by Olgun et al. (2007) on the basis of two specimens found 34 km east of Dört-yol, Hatay Province, Turkey. This newly described snake species, *R. barani*, differs from other *Rhynchocalamus* species in having a greater number of dorsalia, fewer ventralia, only one upper labial in contact with the eye and a characteristic color-pattern of the body (Olgun et al., 2007; Gruber, 2009).

During an expedition in 2009 to the Mediterranean region of Turkey, one specimen of *R. barani* was collected from Yayladağı, Hatay, Turkey (35° 53' 338" N; 36° 04' 396' 'E) on 22 May 2009 by C. Salih Demirci at an elevation of approximately 550 m. The specimen is currently deposited in the Zoology Laboratory of the Department of Biology at the Science and Arts Faculty, Adnan Menderes University, Turkey. It will later be incorporated into the collection of the Zoology Department, Ege University, Turkey (ZDEU 36/2009). The specimen was fixed in 96% ethanol then preserved in 70% ethanol as described in Başoğlu and Baran (1980). The color and pattern characteristics were recorded while the specimen was still

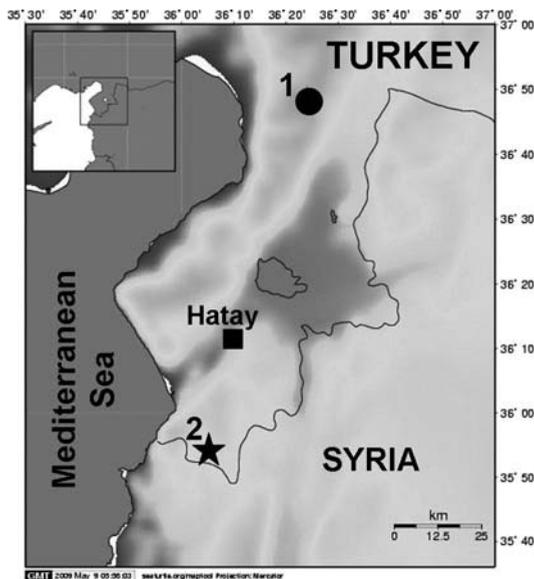


Fig. 1. Distribution of *Rhynchocalamus barani* in Turkey, showing the known distribution according to literature, with star for the new locality. 1: 34 km E of Dörtiyol, Hatay (Olgun et al., 2007), 2: Yayladağ, Hatay.

alive. Additionally color slides of living animals were utilized in the study. The ventral plates were counted using the Dowling (1951) system. The present paper describes the morphology, color-pattern and body scalation of the single *R. barani* specimen collected at Yayladağ, Hatay (Fig. 1) and compares it with the individuals described by Olgun et al. (2007).

The specimen was found under stones on a moist, stony slope with sparse cover of various grasses. The collection area was characterized mainly by tree *Pinus brutia*. The specimen was collected at day time (16:00) at an air temperature of 16 °C. The sympatric herpetofauna comprised only *Salamandra infraimmaculata* Martens, 1885.

The Yayladağ specimen is an adult female with 263.80 and 98.48 mm snout-vent length and tail length, respectively. The head is small, not distinct from the neck, with an oblique shape at the anterior side. The head scales between the rostral and posterior margin of the parietal area are not keeled like in temporals. The rostrum is curved towards the top of the head and intrudes between the internasals; it is bordered by two upper labials, two nasals and two internasals. The nostrils are situated on the contact zone of nasals and loreals on each side. The loreals are in contact with the 1st upper labials at either side. The eyes are small with circular pupils. The 3rd upper labials are in contact with the eyes on each side. Four pairs of lower labials touch the anterior chin shields at the left and right side. The scalation characters are summarized and compared with those of the Dörtiyol specimens (Olgun et al., 2007) in Table 1. The Yayladağ specimen has remarkable differences in terms of temporals and ventrals. It has more temporals and fewer ventrals compared to values that was given in Olgun et al. (2007).

For general aspect, the color-pattern and head scalation of the new specimen are shown in Fig. 2A-D. The basic color of the head (from tip of the rostral to posterior mar-

Table 1. Pholidosis characters and morphological measurements of the three specimens of *Rhynchocalamus barani* Olgun et al., 2007 known from Turkey. ZDEU – Zoology Department of Ege University. [Sex, PO – Preocular, LO – Loreals, PTO – Postoculars, T – Temporals, PT – Posttemporals, UL – Upper labials, LL – Lower labials, GSI – Gular scales in a row between posterior inframaxillars, DST – Dorsals plus temporals scales surrounding the posterior margin of the parietals, V – Ventrals, DSM – Dorsal scale rows at mid-body, DSN – Dorsal scale rows on neck one head-length behind head, DSA – Dorsal scale rows one head-length anterior to anal, SC- Subcaudals, RH – Rostral height, RW – Rostral width, IN – Inter-nostril distance, DE – Diameter of eyes, SW – Supraoculars width, FW – Frontal width, FL – Frontal length, AIL – Anterior inframaxillar length, PIL – Posterior inframaxillar length, INS – Inter-nasal triangular (d) or trapezoid shaped (t), SLI/SLPF – Suture length of internasal much shorter (--), shorter (-), equal (=) or longer (+) than prefrontal suture, PL/RFL – Parietals shorter (◆), equal (■) or longer (◎) than the distance from posterior tip of rostral to the posterior tip of frontal, PLLA – Pairs of lower labials in contact with anterior chin shields, PL – Pileus length, PW – Pileus width, HH – Head height, SVL – Snout-vent length, TL – Tail length (All measurements are in mm)].

	ZDEU.122/2006-1 (Holotype)	ZDEU.122/2006-2 (Paratype)	ZDEU.36/2009	ZDEU.122/2006-1 (Holotype)	ZDEU.122/2006-2 (Paratype)	ZDEU.36/2009	
Sex	Female	Male	Male	IN	3.16	3.04	3.14
PO	1/1	1/1	1/1	DE	1.78	1.84	1.74
LO	1/2	Absent	1/1	SW	1.50	1.20	1.34
PTO	2/2	2/2	2/2	FW	2.60	2.52	2.62
T	1/1	1/1	2/3	FL	3.10	3.10	3.12
PT	2/2	2/2	2/2	AIL	2.42	2.64	2.62
UL	5/5	5/5	5/5	PIL	1.54	2.02	2.00
LL	7/8	7/7	7/8	INS	t	t	t
GSI	1	2	2	SLI/ SLPF	+	(=)	(=)
DST	13	11	12	PL/RFL	◆ (3.54-4.64)	◆ (3.60-4.42)	◆ (3.50-4.52)
V	173	163	156	PLLA	3/4	3/3	3/3
DSM	17	17	17	PL	9.00	8.22	8.72
DSN	17	17	17	PW	4.48	4.30	4.44
DSA	17	17	17	HH	4.04	3.70	3.80
SC	65/65+1	74/74+1	68/68+1	SVL	312.98	252.20	263.80
RH	2.06	1.64	1.66	TL	89.60	90.04	98.48
RW	2.66	2.48	2.46				

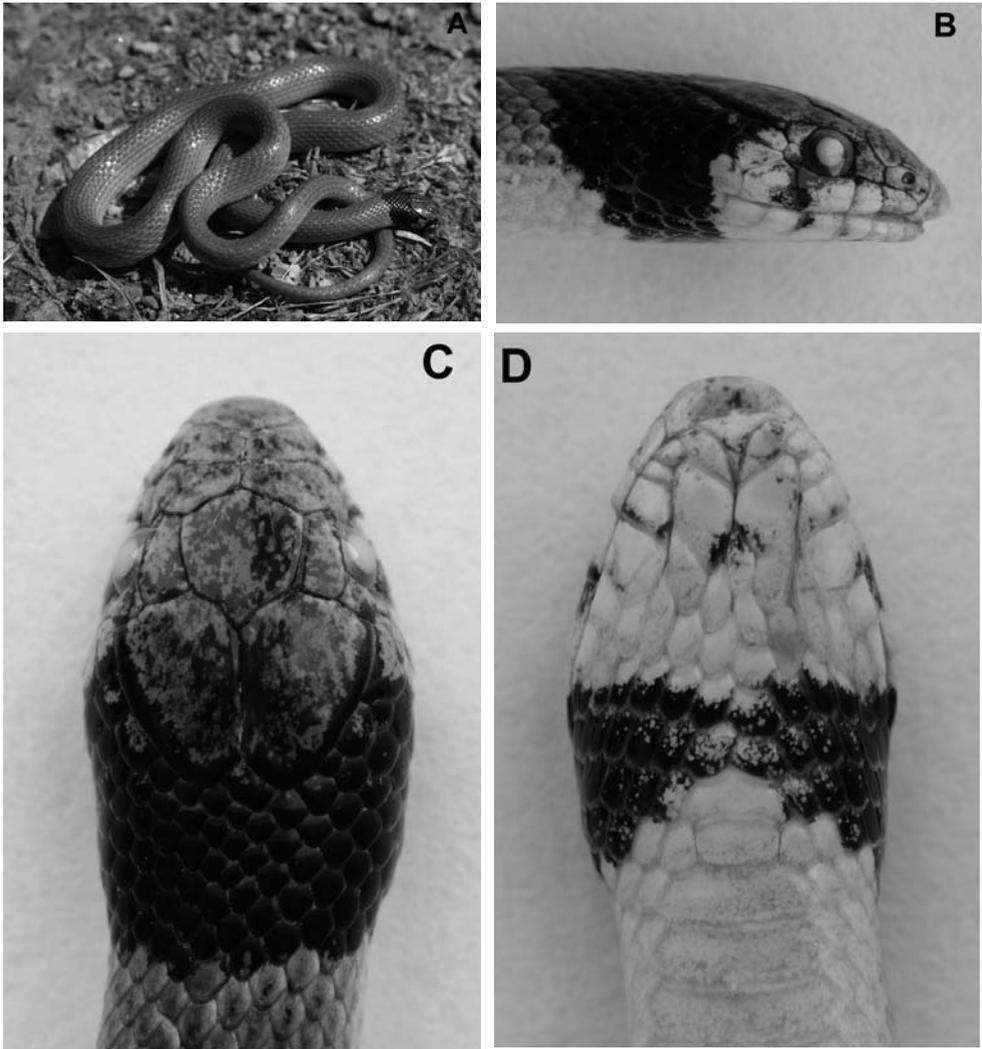


Fig. 2. General and head aspects of *Rhynchocalamus barani* specimen captured from Yayladağ, Hatay, Turkey (ZDEU. 36/2009) (A-D).

gin of the parietals) is ash-gray. This basic color extends to the first upper labial plate at the flanks of the head. A narrow black blotch extends from the lower part of the eyes up to the contact of the 3rd and 4th upper labials. The 2nd, 3/4 of 3rd, 4/5 of 4th and 2/3 of 5th upper labials are white. Other lower labials are also white except for the last lower labial which is black. The narrow black neck band extends along the upper part of the head, from the margin of the parietals to the top of the posterior margin of the temporals; in the gular region of the head the band is in contact with dorsals over a width of six scales. This band does not touch ventrals at the lower part of the head. The length of the head

patterns (from the tip of the rostrum), proportional to snout-vent length is 4.8 mm. Temporals are mostly white (ca. 75%) or otherwise black. The basic color of the dorsum is reddish brown without spots. The lower part of the head and ventral, separated by the black head band, are white without spots, except the connection site of the anterior and posterior inframaxillars. There is a small black spot at this site. The lower part of the tail is white, including the tail tip.

The new locality record extends the known range of the species about 110 km to the southwest as measured from the type locality. *R. barani* has been known only from the type locality up to now (Olgun et al., 2007). However, the new locality (Yayladağ) indicates a much wider distribution of the species within the Mediterranean region of Turkey and possibly northwestern Syria.

The Anatolian diagonal is an important barrier affecting the distribution of reptilian species such as *Apathya cappadocica* (Wertner 1902), *Anatololacerta danfordi* (Günther 1876) and *Eirenis* Jan 1863 species (Nilson et al., 1990; Sindaco et al., 2000). The Anatolian diagonal is a mountain range that extends from the region of Bayburt-Gümüşhane and the province of Erzurum in the northeast towards the provinces of Kayseri and Kahramanmaraş (Anti-Taurus) in the southwest. The range splits here and one branch continues further southwest towards Bolkar Mountain in the Cilician Taurus. The other runs more southwards through the province Hatay towards the direction of the Lebanon Mountains (Nilson et al., 1990). Amanos Mountain is situated southwards of the Anatolian diagonal and its altitudinal range extends from 1500 to 2600 m. We hypothesise that Amanos Mountain could be a barrier that prevents the extension of the distribution of *R. barani* to the West Anatolia.

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