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**CONTRIBUTIONS TO THE KNOWLEDGE OF THE
DISTRIBUTION AND THE BIOLOGY OF *MYOTIS
CAPACCINII* (BONAPARTE, 1837) (CHIROPTERA:
VESPERTILIONIDAE) IN ROMANIA**

NĂSTASE RĂDULET

On signale pour la première fois la présence de l'espèce *Myotis capaccinii* (Bonaparte, 1837) dans le sud de la Roumanie (Dobroudja).

The range of *Myotis capaccinii* covers the mediterranean part of Europe, north-west Africa, southern Minor Asia (Israel), south of Irak, Iran and Uzbekistan (Honacki et al., 1982).

In Romania, its presence was mentioned in several localities (Fig. 1): Băile Herculane (Miller, 1912; Călinescu, 1931; Dumitrescu et al, 1962 - 1963); Gaura cu Muște Cave, Coronini village (the ancient name of Pescari village). Caraș-Severin Department (Călinescu, 1931; Dumitrescu et al., 1962-1963); Plavișevița Cave, Mehedinți Department (Călinescu, 1931; Dumitrescu et al., 1962-1963); Fușteica Cave, Isvarna village, Tismana commune. Gorj Department (Dumitrescu et al., 1962-1963; Burghel-Bălăcescu, Avram, 1966); Topolnița Cave, Cireșu commune, Mehedinți Department (Dumitrescu et al., 1962-1963); Ungurului Cave, Pecenișca commune. Caraș-Severin Department (Dumitrescu et al., 1962-1963); Veterani Cave, Dubova commune, Mehedinți Department (Dumitrescu et al., 1962-1963); the cave from Cheia Valley, Băița commune, Hunedoara Department (Dumitrescu et al., 1962-1963); Racoviță Cave, Iabalcea village, Carașova commune. Caraș-Severin Department (Negrea and Negrea, 1971); the cave no 2 Crno-Pole, Iabalcea village, Carașova commune, Caraș-Severin Department (Negrea and Negrea, 1971); Țolosu Cave, Iabalcea village, Carașova commune, Caraș-Severin Department (Negrea and Negrea, 1971); Lilieci Cave, Carașova commune. Caraș-Severin Department (Negrea and Negrea, 1971); Steiul-Roșu Cave, Runcu commune. Gorj Department (Bazilescu et al., 1980; Bazilescu, 1982).

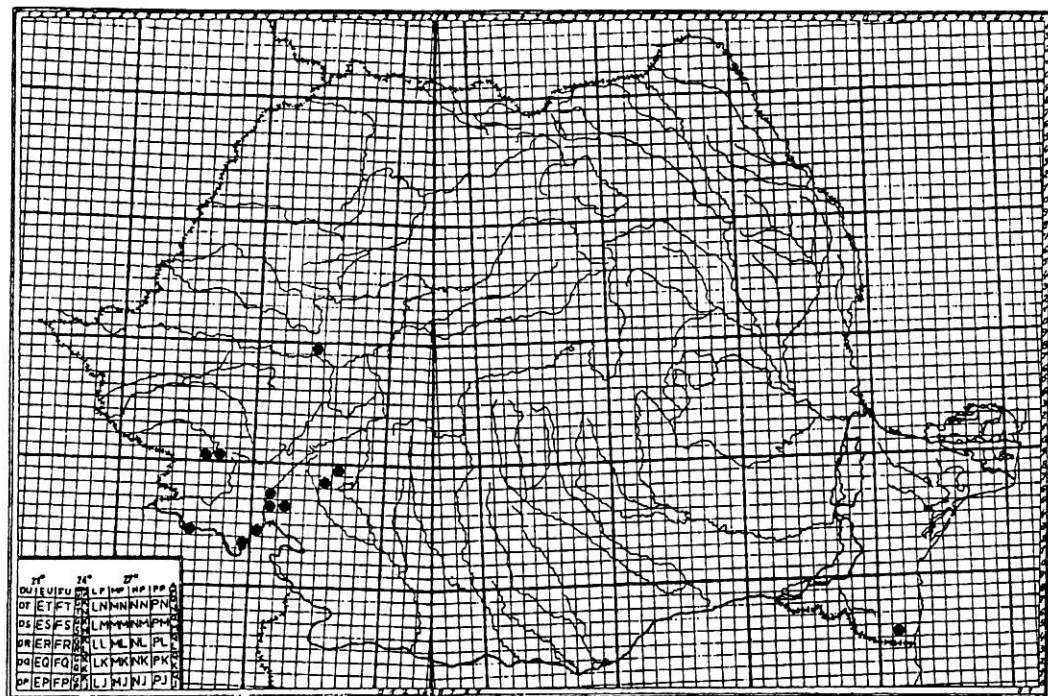


Fig.1 - The mentions of *Myotis capaccinii* (Bonaparte, 1837) in Romania

We found a colony of *Myotis capaccinii* in southern Dobrudja, Hagieni Forest, Hagieni village (Limanu commune, Constanța Department).

MATERIAL AND METHOD

The colony was studied in July, December 1992 and May 1993. The bats, collected using a net, were measured in field and preserved as skins and skulls. The measurements were made using the tape line, sliding callipers, balance, thermometer and are given in millimetres and grammes.

Abbreviations:

L_A = forearm length	L_m = mandible length
L_B = arm length	L_{con} = condylobasal length
L_{C+T} = head and body length	\hat{f}_{cr} = skull height
L_{AU} = ear length	l_{cr} = skull breadth
L_{CO} = tail length	$l_{cr, z}$ = skull breadth in the zygomatic arch
$L_{C-M'}$ = length of the upper teeth row	l_M = skull breadth in the upper molar III
L_{C-M3} = length of the lower teeth row	G = weight

RESULTS

Shelter localization. Hagieni Forest is in the southern Dobrudja Tableland which is formed of limestone and quaternary loess.

The shelter is a tunnel (Fig. 2) in the north-east forest. It was dugged in 1950 and used as a storehouse. It is placed at about 15 m from the prolongation of the terminal side of Mangalia Lake. From the road a slope goes up about 10 m and then down 3–4 m towards the entrance of the passage A (Fig. 3) or B. The two south-westwards entrances have a length of 8.50 m and a high of 2.20 m, with boulders on floor but unshutting them off. Tunnel total length is of 131.50 m, its width of 1.50 m and its high of 3.00 m. Either passages, A and C, have 5 lateral rooms, with a variable length (L) and width (l) ($L = 2.50$ – 5.80 , $l = 2.70$ – 3.40) but with the same height (3.00 m). The walls are straight, vertical and the ceiling and the floor are horizontal. Corners are more or less damaged. In the central part of the passage B, of about 10 m, boulder stones fell down from the ceiling and the inner lateral wall.

Environment agents. Although the tunnel has two entrances the air currents are weak and the temperature varies according to the environment temperature (Tab. 1). The light is intense at the two entrances and then diminishes towards passage B where it is completely dark. The lateral walls and the floor are wet.

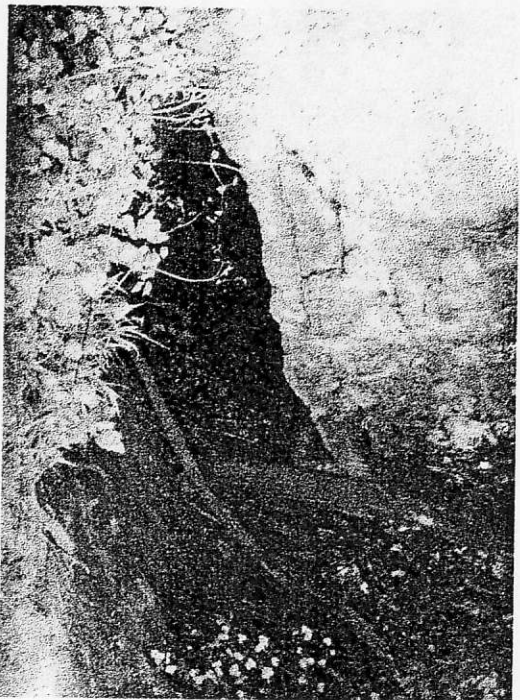
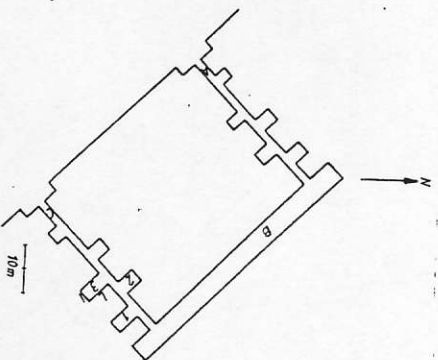


Fig. 2 - The scheme of the Hagieni Forest tunnel: L - length; l - width; A, B, C - passage; 1, 2, 3 - rooms.
Fig. 3 - The entrance in the A passage of the Hagieni Forest tunnel.

Table 1

Air temperature variation in the tunnel of the Hagieni Forest

Date	T _E ^o	T _I ^o	T _B ^o
12.07.1992	+ 26	+ 16	+ 12
2.12.1992	+ 4	+ 5	+ 6
27.05.1993	+ 22	+ 12	+ 10

Bats colony. *Myotis capaccinii* summer colony, formed of about 100–150 specimens, was identified on 12th of July 1992. The bunchshaped colony was met in the central side, on the ceiling of the passage B. On the floor, right down the colony, it was a guano pile, with a diameter of 23 cm and a high of 17 cm in its center. On the central side of the passage B floor there was a guano thin layer. In passage C, especially in the rooms 1, 2 and 3 (Fig. 2) there was a small number of bats.

For the 10 collected specimens (9 males and a female) belonging to *Myotis capaccinii* (Fig. 4 A) I present the biometrical values average in table 2.

Table 2

Biometrical values average in *Myotis capaccinii*

Spms no	Sex	L _A	L _B	L _{C+T}	L _{CO}	L _{AU}	G	L _{C-M3}	L _{C-M3}	L _m	L _{con.}	l _{cr}	l _{cr}	l _{cr. z}	l _M ¹
1	♀	37.3	23	45	40	15	8	5.3	5.6	9.5	13.6	6.9	7.9	9.1	5.9
9	♂	37.2	22.6	44.3	34.7	13	6.93	5.17	5.47	9.18	12.9	6.5	7.8	8.8	5.8

Among the colony of *Myotis capaccinii* there was a female of *Miniopterus schreibersi* (Fig. 4 B).

During another field trip (2nd of December 1992) I found the colony left this shelter. In spite of this, in passage A, at 17 m from the entrance and a high of 2.5 m (Fig. 2) I collected a female of *Plecotus auritus* (Fig. 5 A).

On 22nd May 1993, another colony formed of males and females of *Miniopterus schreibersi* and a female of *Rhinolophus ferrumequinum* (Fig. 5 B) was identified. It was also bunch-shaped and found in the same place where the colony of *M. capaccinii* was present a year ago.



Fig. 4 - A, *Myotis capaccinii* (Bonaparte, 1837), skin; B, *Pipistrellus pipistrellus* (Schreber, 1774), skin.
Myotis schreibersi (Kuhl, 1819)

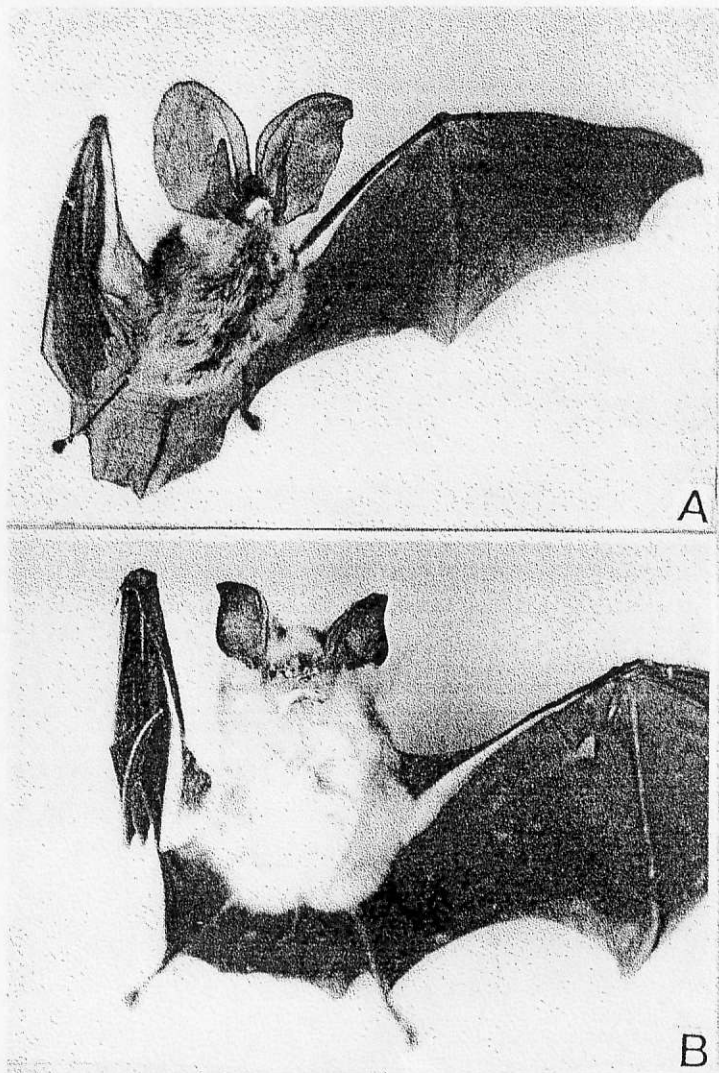


Fig.5 - A, *Plecotus auritus* (Linneus, 1758), skin; B, *Rhinolophus ferrumequinum* (Schreber, 1774), skin.

CONCLUSIONS

Myotis cappaccinii (Bonaparte, 1837) is a troglobiotic species with a discontinuous range. In Romania, it was mentioned from Banat and Oltenia. The northernmost limit, where it was mentioned, in the cave from Valea Cheii (Hunedoara Department) and the easternmost one Steiul-Roșu (Gorj Department).

Taking into account that *Myotis cappaccinii* is mentioned for the first time in Dobrudja its distribution map is completed. The tunnel from Hagieni Forest creates good conditions for breeding and rearing for other species, too, like *Miniopterus schreibersi*, *Rhinolophus ferrumequinum* or only for wintering as for *Plecotus auritus*.

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CONTRIBUȚII LA CUNOAȘTEREA RĂSPÂNDIRII ȘI BIOLOGIEI
SPECIEI *MYOTIS CAPACCINII* (BONAPARTE, 1837)
(CHIROPTERA: VESPERTILIONIDAE) ÎN ROMÂNIA

Autorul prezintă harta răspândirii în România a speciei *Myotis cappaccinii* (Bonaparte, 1837) specificând că este la prima semnalare din Dobrogea (România). Se descrie adăpostul, cu condițiile sale de microclimat, reprezentat de tunelul din Pădurea Hagieni. Aceasta asigură condiții optime pentru fătare și creșterea puilor la speciile *Myotis cappaccinii* (Bonaparte, 1837), *Rhinolophus ferrumequinum* (Schreber, 1774), *Miniopterus schreibersi* (Kuhl, 1819) sau numai pentru hibernare cum este cazul speciei *Plecotus auritus* (Linnaeus, 1758).

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