

BEAUFORTIA

SERIES OF MISCELLANEOUS PUBLICATIONS

ZOOLOGICAL MUSEUM - AMSTERDAM

No. 120

Volume 10

January 31, 1964

On some *Chiroptera* from Greece

by

VINCENT VAN LAAR & SERGE DAAN

On a trip to Greece between the 25th April and the 25th July 1963, the authors collected (on the mainland and some islands in the Aegean) insects, amphibians and reptiles as well as 194 mammals. Among the mammals, mainly rodents and insectivores, there were also 27 bats, belonging to five species. Although this collection of *Chiroptera* is very small, it was thought useful to publish some notes. The more so as some recent papers have appeared (KAHMANN & ÇAGLAR, 1960; KAHMANN, 1962 and OSBORN, 1963), in which the data on the occurrence and the distribution of bats in Southeastern Europe and Turkey were summarized.

Immediately after capture, the animals were killed, measured, weighed and then preserved in spirit. As we did not have a colour guide with us in the field, we omitted to make notes on the colours and the colour distribution. The bats, together with the other animals collected in Greece, are now part of the collections of the Zoological Museum in Amsterdam. The authors are very grateful to Drs. P. J. H. van Bree (Zoological Museum, Amsterdam) and to Dr. J. C. Ondrias (Zoological Laboratory and Museum, Athens) for their help and encouragement, and to Mr. J. C. Whittaker for correcting the English.

Rhinolophus blasii PETERS, 1866

23 specimens, all males. 17.VI.1963. In a disused coppermine ("Nealia") near Therma Loutra on the island of Ikaria, Greece. The first faunistic record for Greece, from Nauplia, was published by MILLER in 1912. In 1957 LANZA published some data on specimens collected on the small island of Petala; and on the distribution map of this species by KAHMANN & ÇAGLAR (1960) it is indicated that *R. blasii* occurs on the Eastern half of the mainland of Greece. This species of bat is also mentioned from the island of Rhodes (DE BEAUX, 1928/29) and from the island of Crete (KAHMANN, 1959).

That only male bats were found is not strange as it is known that during the parturition period "bachelors' societies" are fairly common (e.g. see FRICK & FELTEN, 1952).

Received September 30, 1963.

The body dimensions and weights are given in table I. Following the method of AELLEN (1955), the greatest width of the "horseshoe" was measured; the range, (n = 23) 7,0—8,2 mm (mean value 7,4 mm; standard deviation $\pm 0,32$), is distinctly larger than in bats of the same species from Morocco and in agreement with the values mentioned for animals from Palestine. As can be seen from table I, the statement that the first phalanx

| Table I | mean | range | standard deviation |
|---------------------|-------|--------------|--------------------|
| Head & Body | 48,93 | 45,9 — 52,6 | 1,73 |
| Tail | 23,91 | 19,1 — 27,2 | 2,14 |
| Hindfoot | 9,06 | 7,5 — 9,9 | 0,54 |
| Earlength | 16,26 | 14,2 — 17,4 | 0,79 |
| Underarm | 44,72 | 41,8 — 46,8 | 1,00 |
| Ph. I (4th finger) | 7,60 | 6,8 — 8,3 | 0,40 |
| Ph. II (4th finger) | 13,73 | 13,0 — 14,6 | 0,36 |
| Ph. II/Ph. I | 0,553 | 0,479— 0,601 | — |
| Weight (grams) | 9,91 | 9,0 — 11,0 | 0,51 |

Body dimensions (in mm) and weights of 23 male specimens of *Rhinolophus blasii* from the island of Ikaria, Greece.

of the fourth finger is over half as long as the second phalanx, only holds in general. The dimensions obtained for the second phalanx are somewhat smaller than those of KAHMANN & ÇAGLAR (loc. cit.), though this is probably due to a different technique of measuring. The distance between the last joint to the non-straightened tip of the phalanx was measured by us.

The skull dimensions of a number of the specimens are given in table II.

| Table II | mean | range | standard deviation |
|------------------------------------|---------------|-----------|--------------------|
| Condylar basal length (C-condylae) | 16,40 (n = 5) | 15,9—16,8 | 0,32 |
| Mastoid breadth | 8,88 (n = 5) | 8,7— 9,0 | — |
| Height skull over bullae | 7,98 (n = 6) | 7,7— 8,2 | — |
| Interorbital constriction | 2,64 (n = 9) | 2,5— 2,8 | — |
| Distance C—M | 6,63 (n = 10) | 6,5— 6,8 | — |
| Zygomatic breadth | 8,75 (n = 6) | 8,0— 9,2 | — |

Skull dimensions of 23 male specimens of *Rhinolophus blasii* from the island of Ikaria, Greece.

We obtained this rather large collection of *R. blasii* by the somewhat overzealous help of the local children and as quite a few of the skulls were broken they could not be used for ascertaining the dimensions.

Myotis blythi (TOMES, 1857)

One ♂. 17.VI.1963. In a disused coppermine ("Nealia") near Therma Loutra on the island of Ikaria, Greece. This species is also recorded by MILLER (1912) from the mainland of Greece, by WETTSTEIN (1941) from Karpathos, by POHLE (1952) and by KAHMANN (1959) from the island of

Crete, by LANZA (1957) from the island of Petala. NIETHAMMER (1962) found two skulls of this species in an owl pellet in the island of Corfu. For more faunistic data, see the list at the end of this paper. This specimen was found among the above-mentioned specimens of *Rhinolophus blasii*; among them the specimen of *Myotis emarginatus* was also found.

It is very likely that *Myotis blythi* is as common in the whole of Greece as it is in the rest of the Mediterranean region. Data on the dimensions of the body and the skull and on the weight of this animal can be found in tables III and IV.

| Table III | HB | T | Hf | E | UA | W |
|--------------------------|------|------|------|------|------|----|
| <i>Myotis blythi</i> ♂ | 64,7 | 56,1 | 13,2 | 21,5 | 57,4 | 27 |
| <i>M. emarginatus</i> ♀ | 41,5 | 34,5 | 8,1 | 14,2 | 35,0 | 5 |
| <i>M. capaccinii</i> ♂ | 48,0 | 39,6 | 11,9 | 12,3 | 40,6 | 8 |
| <i>P. pipistrellus</i> ♂ | 38,2 | 30,8 | 4,7 | 10,1 | 29,6 | 4 |

Body dimensions (in mm) and weights of some bats collected in Greece (for particulars see text). For abbreviations see table I.

| Table IV | Cb.l. | Mast.b. | Height | Interorb.c. | C-M | Zyg.b. |
|--------------------------|-------|---------|--------|-------------|-----|--------|
| <i>Myotis blythi</i> ♂ | 22,0 | 10,6 | 9,1 | 5,5 | 9,3 | 14,6 |
| <i>M. emarginatus</i> ♀ | 14,5 | 7,7 | 6,7 | 3,8 | 5,7 | ± 8,5 |
| <i>M. capaccinii</i> ♂ | 14,4 | 8,1 | 7,3 | 3,7 | 5,9 | 9,3 |
| <i>P. pipistrellus</i> ♂ | 11,6 | 6,6 | 5,3 | 3,4 | 4,3 | — |

Skull dimensions of some Chiroptera from Greece (for particulars see text). For abbreviations see table II.

Myotis emarginatus (GEOFFROY, 1806)

One ♀. 17.VI.1963. In a disused coppermine ("Nealia") near Therma Loutra on the island of Ikaria, Greece.

This species is recorded by CHAWORTH-MUSTERS (1932) from the monastery St. Dionysios (Mount Olympus); LINDBERG (1955) found it in a cave at Mylosavrakhi in Macedonia. In an owl pellet on the island of Corfu NIETHAMMER (1962) discovered a skull either belonging to *Myotis nattereri* or to *M. emarginatus*, but since the premolars of this skull were missing it could not be identified with certainty.

It is rather remarkable that *Myotis emarginatus* was found in this old copper mine, since the temperature in the galleries of the mine was over 20° Centigrade (probably due to volcanic activity on the island of Ikaria; hot springs etc.), while it is known that *Rhinolophus blasii* has a preference for rather warm caves (DULIĆ, 1959) but in *Myotis emarginatus* nothing is known about such a preference. For data on this animal see tables III and IV.

Myotis capaccinii (BONAPARTE, 1837)

One ♂. 16.VII.1963. In a natural sinter cave ("Drakotrypa") near Panagia on the island of Thasos, Greece.

This bat species was found earlier at Naoussa, Macedonia, by LINDBERG (1955), on the island of Petala by LANZA (1957) and on the island of Crete by KAHMANN & ÇAGLAR (1960). The species is common in the whole Mediterranean region and will probably be discovered in many areas of Greece. Tables III and IV provide data for this specimen.

Pipistrellus pipistrellus (SCHREBER, 1774)

One ♂. 22.V.1963. In a crevice in a wall of an old church at Pyrgos on the island of Samos, Greece.

The species is recorded from Athens and from Kephissia and Tatoi in Attica by MILLER (1912), from the island of Rhodes (FESTA, 1914) the monastery St. Dionysios on Mount Olympus (CHAWORTH-MUSTERS, 1932) and from the island of Crete by KAHMANN (1959).

As in so many specimens of this species, our animal shows an ill-defined light border to the wing. Data of this bat are in tables III and IV.

In preparing our notes it was necessary to study all the literature on bats from Greece. We think it may be helpful to future workers on *Chiroptera* to give a checklist of the species of this order from Greece.

| <i>Area</i> | <i>Location</i> | <i>Author</i> |
|---|----------------------|-------------------------------------|
| <i>Nycteris thebaica</i> GEOFFROY, 1818 | | |
| Corfu: | | Wettstein (1926) in Pohle (1952) |
| <i>Rhinolophus ferrumequinum</i> (SCHREBER, 1774) | | |
| Thrace: | Kimmeria | Lindberg (1955) |
| Chalcidice: | Rentina | Strinati (1959) |
| Thessaly: | Mt. Olympus | Chaworth-Musters (1932) |
| Phocis: | Parnassus-region | Miller (1912) |
| isl. Skyros: | | v. Örtzen in Pohle (1952) |
| Syros: | | Miller (1912) |
| Rhodes: | Siana | Festa (1914) |
| | C. (Cave) Afando | De Beaux (1928/29) |
| Crete: | N.W. Coast | Bate (1905) |
| | Sitia | Kahmann (1959) |
| | Piskokefalo | " |
| | Mon. Mt. Gorla | Miller (1912) |
| | C. Megalo Katofyngui | Boettger (1963) |
| Corfu: | Kanali | Niethammer (1962) |
| | Ag. Mathaeos | " |

| <i>Area</i> | <i>Location</i> | <i>Author</i> |
|---|------------------------|------------------------------------|
| <i>Rhinolophus hipposideros</i> (BECHSTEIN, 1800) | | |
| Attica: | C. Kakavoula | Lindberg (1955) |
| isl. Crete: | Khania | Bate (1905) |
| | Bryses | Spatz in Pohle (1952) |
| | Sitia | Kahmann (1959) |
| | Mesa Mouliana | " |
| | Arkalochori | " |
| | Mouri (Kournass) | " |
| | Agyia | " |
| Corfu: | Kanali | Niethammer (1962) |
| <i>Rhinolophus euryale</i> BLASIUS, 1853 | | |
| Acarmania: | Missolongi | Miller (1912) |
| Attica: | C. Nymphis Kouvara | Strinati (1955) (?) |
| <i>Rhinolophus blasii</i> PETERS, 1866 | | |
| Acarmania: | isl. Petala | Lanza (1957) |
| Attica: | C. Nymphis Kouvara | Strinati (1955) (?) |
| Argolis: | Nauplia | Miller (1912) |
| isl. Ikaria: | Therma Loutra | new find |
| Rhodes: | C. Afando | De Beaux (1928/29) |
| Crete: | Piskokefalo | Kahmann (1959) |
| <i>Rhinolophus mehelyi</i> MATSCHIE, 1901 | | |
| Macedonia: | Chrysopigui | Lindberg (1955), Aellen (1955a) |
| Attica: | C. Nymphis Kouvara | Strinati (1955) (?) |
| <i>Myotis capaccinii</i> (BONAPARTE, 1837) | | |
| Macedonia: | Naoussa, C. Paparadon | Lindberg (1955), Aellen (1955a) |
| Acarmania: | isl. Petala | Lanza (1957) |
| isl. Thasos: | Panagia, C. Drakotrypa | new find |
| Crete: | East-point | Kahmann & Çağlar (1960) |
| <i>Myotis mystacinus</i> (KUHL, 1819) | | |
| isl. Corfu: | Ag. Mathaeos | Niethammer (1962) |
| <i>Myotis emarginatus</i> (GEOFFROY, 1806) | | |
| Macedonia: | Mylosavrakhi | Lindberg (1955) |
| Thessaly: | Mt. Olympus | Chaworth-Musters (1932) |
| isl. Ikaria: | Therma Loutra | new find |
| Corfu: | Ag. Mathaeos | Niethammer (1962) (?) |

| <i>Area</i> | <i>Location</i> | <i>Author</i> |
|---|----------------------|---|
| <i>Myotis nattereri</i> (KUHLE, 1818) | | |
| isl. Corfu: | Ag. Mathaeos | Niethammer (1962) (?) |
| <i>Myotis myotis</i> (BORKHAUSEN, 1797) | | |
| Thrace: | Kimmeria | Lindberg (1955) (?) |
| Macedonia: | St. Jean-le-Prodrome | Lindberg (1955) (?) |
| | | Aellen (1955a) (?) |
| | Naoussa | Lindberg (1955) (?) |
| isl. Crete: | Labyrinth Agya Dekka | Bate (1905) (?) |
| | | Wettstein (1941) (?) |
| Corfu: | Ringlades | Niethammer (1962) |
| | Ag. Mathaeos | " |
| <i>Myotis blythi</i> (TOMES, 1857) | | |
| Thrace: | Kimmeria | Lindberg (1955) (?) |
| Macedonia: | St. Jean-le-Prodrome | Lindberg (1955) (?) |
| | | Aellen (1955a) (?) |
| | Naoussa | Lindberg (1955) (?) |
| Phtiotis | Lamia | Miller (1912) |
| Acarmania: | isl. Petala | Lanza (1957) |
| Achaia: | Patras | Miller (1912) |
| Korinthia: | Corinth | " |
| Argolis | Nauplia | " |
| isl. Ikaría: | Therma Loutra | new find |
| Karpathos: | Finiki | Wettstein (1941) |
| Crete: | Labyrinth Agya Dekka | Tournefort in Raulin in Pohle (1952) |
| | | Bate (1905) (?) |
| | | Wettstein (1941) (?) |
| | Gortys | Zimmermann in Pohle (1952) |
| Corfu: | Ag. Mathaeos | Niethammer (1962) |
| <i>Plecotus auritus</i> (LINNAEUS, 1758) | | |
| Literature confirming the occurrence in continental Greece, as supposed by Van den Brink (1955), could not be found. Pohle (1952) also mentions its occurrence after Miller (1912), but this information does not exist in the latter's work. | | |
| <i>Plecotus austriacus</i> FISCHER, 1829 | | |
| isl. Corfu: | Kritika | Niethammer (1962) |

| <i>Area</i> | <i>Location</i> | <i>Author</i> |
|---|-----------------------------|------------------------------------|
| <i>Miniopterus schreibersii</i> (NATTERER, 1819) | | |
| Macedonia: | St. Jean-le-Prodrome | Lindberg (1955), Aellen (1955a) |
| | Naoussa, C. Apano | Lindberg (1955), Aellen (1955a) |
| | Scola | Aellen (1955a) |
| | Castoria, C. Patarangon | Lindberg (1955), Aellen (1955a) |
| Chalcidice: | Rentina | Strinati (1959) |
| Korinthia: | Corinth | Miller (1912) |
| isl. Crete: | | v. Örtzen in Pohle (1952) |
| | Labyrinth Agya Dekka | Bate (1905), Pohle (1952) |
| Corfu: | Ag. Mathaeos | Niethammer (1962) |
| <i>Pipistrellus pipistrellus</i> (SCHREBER, 1774) | | |
| Thessaly: | Mt. Olympus | Chaworth-Musters (1932) |
| Attica: | Athens, Tatoi, Kephissia | Miller (1912) |
| isl. Samos: | Pyrgos | new find |
| Rhodes: | Rhodes-town | Festa (1914) |
| Crete: | Kisamo Kastelli | Kahmann (1959) |
| | Korfalona | ” |
| <i>Pipistrellus nathusii</i> (KEYSERLING & BLASIUS, 1839) | | |
| Literature confirming the occurrence in continental Greece, as supposed by Van den Brink (1955), could not be found. | | |
| <i>Pipistrellus kuhlii</i> (KUHL, 1819) | | |
| Achaia: | Patras | Miller (1912) |
| isl. Crete: | Chania | Pohle (1952) |
| | Kisamo Kastelli | ” |
| | Agya | ” |
| | very common, i.a. Mouri | Kahmann (1959) |
| Cephalonia: | | Miller (1912) |
| Levkos: | | Wettstein (1941) |
| Corfu: | | Miller (1912) |
| | Corfu-town | Niethammer (1962) |
| | Kritika | ” |

| <i>Area</i> | <i>Location</i> | <i>Author</i> |
|---|---------------------|------------------------------|
| <i>Pipistrellus savii</i> (BONAPARTE, 1837) | | |
| Thessaly: | Mt. Olympus | Chaworth-Musters (1932) |
| <i>Eptesicus serotinus</i> (SCHREBER, 1774) | | |
| Achaia: | Patras | Miller (1912) |
| Attica | Athens | ” |
| isl. Skyros: | | v. Örtzen in Pohle (1952) |
| Crete: | Samaria near Omalos | Pohle (1952) |
| Corfu: | Ag. Mathaeos | Niethammer (1962) |

Vespertilio murinus LINNAEUS, 1758

Literature confirming the occurrence in Phtiotis and Phocis, as supposed by Van den Brink (1955), could not be found.

Nyctalus noctula (SCHREBER, 1774)

Korinthia: Corinth Miller (1912)

Nyctalus leisleri (KUHL, 1818)

Literature confirming the occurrence in South-eastern continental Greece, as supposed by Van den Brink (1955), could not be found.

Tadarida teniotis (RAFINESQUE, 1814)

'Greece' no exact locality Miller (1912)
isl. Crete: Sitia Kahmann (1959)

LITERATURE

AELLEN, V.

1955 *Rhinolophus blasii* Peters, 1866, Chauve-souris nouvelle pour l'Afrique du Nord. — *Mammalia* 19 : 361—366.

AELLEN, V.

1955a Etude d'une collection de Nycteribiidae et de Streblidae (Diptera pupipara) de la région paléarctique occidentale, particulièrement de la Suisse. — *Bull. Soc. Neuch. Sci. nat.* 78 : 81—104.

BATE, D. M. A.

1905 On the mammals of Crete. — *Proc. zool. Soc. London* 2 : 315—323.

BEAUX, OSCAR DE

1928/29 Mammiferi. In: *Ricerche faunistiche nelle isole Italiane dell' Egeo*. — *Arch. zool. Italiano*, 12/13, 7 : 135—153.

BOETTGER, C. R.

1963 Die als Schalen juveniler Wurmschnecken (Fam. Vermetidae) angesprochenen Funde aus einer Höhle der Insel Kreta. — *Arch. Moll.* 92, 1/2 : 77—78, Frankfurt.

BRINK, F. H. VAN DEN

1955 Zoogdierengids van Europa ten westen van 30° oosterlengte. 1—231. Elsevier, Amsterdam/Brussel.

- CHAWORTH-MUSTERS, J. L.
1932 A contribution to our knowledge of the mammals of Macedonia and Thessaly. — *Ann. Mag. nat. Hist.* 9 (10) : 166—171.
- DULIĆ, B.
1959 Influence du microclimat ambiant sur le sommeil hivernal des Cheiroptères dans quelques régions méditerranéennes. — *Proc. Intern. Congres Zool.* XV, 815—816.
- FESTA, E.
1914 Escursioni zoologiche del Dr. Enrico Festa nell'Isola di Rodi. Mammiferi. — *Bull. Mus. Zool. Anat. comp. Torino* 29, No. 868 : 1—21, pls I—II.
- FRICK, H. & H. FELTEN
1952 Oekologische Beobachtungen an Sardischen Fledermäuse. — *Zool. Jb. (Syst.)* 81 : 175—189.
- KAHMANN, H.
1959 Beitrag zur Kenntniss der Fledermausfauna auf der Insel Kreta. — *Säugetierk. Mitt.* 7 : 153—156.
- KAHMANN, H.
1962 Neue Ergebnisse in der Säugetierforschung in der Türkei. — *Säugetierk. Mitt.* 10 : 112—116.
- KAHMANN, H. & M. ÇAGLAR
1960 Beiträge zur Säugetierkunde der Türkei 1. Fledermäuse aus der Landschaft Hatay. — *Rev. Fac. Sci. Univ. Istanbul (B)* 25 — 1/2 : 1—23.
- LANZA, B.
1957 Su alcuni chiroterri della penisola Balcanica. — *Monit. Zool. Ital.* 15 — 1/2 : 3—6.
- LINDBERG, K.
1955 Notes sur les grottes de la Grèce. — *Acta Mus. Macedon. Sci. nat. Skopje* 3 2/24 : 41—69.
- MILLER, G. S.
1912 Catalogue of the mammals of Western Europe. — *British Museum National History, London.*
- NIETHAMMER, J.
1962 Die Säugetiere von Korfu. — *Bonner Zool. Beitr.* 13 1/4 : 1—49.
- OSBORN, D. J.
1963 New distributional records of bats from Turkey. — *Mammalia* 27—2 210—217.
- POHLE, H.
1952 Ueber Fledertiere von Kreta. — *Z. Säugetierk. Berlin* 17—1 : 14—20.
- STRINATI, P.
1955 Recherches biospéologiques en Attique. — 'Stalactite', *Org. Soc. Suisse Spéléol.* 5 (4) : 7—9.
- STRINATI, P.
1959 Mission Coiffait-Strinati en Macédoine, Grèce et Turquie (Avril-Mai 1955). Chiroptera. — *Mammalia* 23—1 : 72—76.
- WETTSTEIN, O. VON
1941 Die Säugetierwelt der Ägäis, nebst einer Revision des Rassenkreisels von *Erinaceus europaeus*. — *Ann. nat. hist. Mus. Wien* 52 : 245—278.

VINCENT VAN LAAR
Willemsparkweg 125, Amsterdam-Z.
SERGE DAAN
Plantage Kerklaan 7, Amsterdam-C.