Bats (Mammalia: Chiroptera) of the Eastern Mediterranean. Part 2. New records and review of distribution of bats in Greece

Vladimír HANÁK[1)], Petr BENDA[2)], Manuel RUEDI[3)],
Ivan HORÁČEK[1)] & Theodora S. SOFIANIDOU[4)]

[1)] Department of Zoology, Charles University, Viničná 7, CZ–128 44 Praha 2, Czech Republic
[2)] Department of Zoology, National Museum, Václavské nám. 68, CZ–115 79 Praha 1, Czech Republic
[3)] Muséum d'histoire naturelle de Genčve, case postale 6434, CH–1211 Genčve 6, Switzerland
[4)] Department of Zoology, Aristotelian University, Thessaloniki – TK 54 006, Greece

Abstract. New records and a complete list of published records of bats from Greece are presented. Record review is supplemented with distribution maps, brief summary of distributional status, tables of measurements of newly recorded bat specimens and taxonomic notes. In total, 32 bat species were documented from Greece, viz., *Rhinolophus ferrumequinum* (Schreber, 1774) (72 record localities), *R. hipposideros* (Bechstein, 1800) (49), *R. euryale* Blasius, 1853 (17), *R. mehelyi* Matschie, 1901 (12), *R. blasii* Peters, 1866 (32), *Myotis myotis* (Borkhausen, 1797) (31), *M. blythii* (Tomes, 1857) (53), *M. bechsteinii* (Kuhl, 1817) (8), *M. nattereri* (Kuhl, 1817) (11), *M. emarginatus* (Geoffroy, 1806) (21), *M. mystacinus* (Kuhl, 1817) s. l. (11), *M. aurascens* Kusjakin, 1935 (20), *M. alcathoe* Helversen et Heller, 2001 (4), *M. daubentonii* (Kuhl, 1817) (7), *M. capaccinii* (Bonaparte, 1837) (27), *Vespertilio murinus* Linnaeus, 1758 (7), *Eptesicus serotinus* (Schreber, 1774) (28), *E.* (*bottae*) *anatolicus* Felten, 1971 (7), *Hypsugo savii* (Bonaparte, 1837) (46), *Pipistrellus pipistrellus* (Schreber, 1774) s. l. (50), *P. nathusii* (Keyserling et Blasius, 1839) (25), *P. kuhlii* (Kuhl, 1817) (52), *Nyctalus noctula* (Schreber, 1774) (10), *N. leisleri* (Kuhl, 1817) (28), *N. lasiopterus* (Schreber, 1780) (10), *Barbastella barbastellus* (Schreber, 1774) (3), *Plecotus auritus* (Linnaeus, 1758) (6), *P. austriacus* (Fischer, 1829) s. l. (10), *P. austriacus* s. str. (7), *P. kolombatovici* Đulić, 1980 (5–11), *Miniopterus schreibersii* (Kuhl, 1817) (36), *Tadarida teniotis* (Rafinesque, 1814) (41); both species of *Pipistrellus pipistrellus* complex are confirmed in Greece: *P. pipistrellus* s. str. (6 records) and *P. pygmaeus* (Leach, 1825) seu *P. mediterraneus* Cabrera, 1904 (15). *Plecotus kolombatovici* has after morphological or genetical analyses been confirmed from at least four mainland Greek localities and from Crete. Two other species, *Myotis brandtii* (Eversmann, 1845) and *Eptesicus nilssonii* (Keyserling et Blasius, 1839), were recorded in closest neighbourhood of the Greek border in Bulgaria and are looked upon as candidates to the bat fauna of Greece.

Distribution, Chiroptera, the Balkans, Greece, Palaearctic Region

INTRODUCTION

The research on mammals in the Balkans, together with those in the whole eastern Mediterranean Region, began developing with a delay against the interest in mammals in central and western Europe. Following the occasional data published before World War II, more comprehensive papers began appearing only after the 1920s. They described results obtained from systematic studies undertaken by native as well as foreign specialists. In that way, the relevant data were progressively accumulated, providing a general picture of the distribution of mammals, including bats, over that important region. Such data contributed not only the knowledge of the territory *per se* but, above all, the general comprehension to zoogeography of European mammals, and, in particular, to specificities of their distribution in the submediterranean arboreal, a region of key importance for the zoogeography of the whole western Palaearctic Region.

The whole territory of the present Republic of Greece (131 957 km^2, ca. 110 000 km^2 of mainland incl. the Peloponnese, plus over 20 000 km^2 of islands, incl. Crete with 8336 km^2), lies in the subregion of Mediterranean arboreal and includes various habitat types, from semi-arid coastal shrubwood to forested high mountain ranges, some of them lying around 2000 m above sea level (Fig. 1). In zoogeography, this territory plays a very important role as it represents the southernmost tip of the Balkan Peninsula. It has been repeatedly an important refuge for the European fauna during the Pleistocene, and a source area for the formation of recent European mammal fauna. The zoogeographic and evolutionary importance of this region has already been demonstrated in small terrestrial mammals whose species diversity is much higher in that territory than in the rest of Europe (Cheylan 1990, Bilton et al. 1998). As regards bats, which are animals with high vagility, their contribution to the general picture of European zoogeography is not so marked. Nevertheless, detailed knowledge of the distribution of this mammal group over the Balkan Subregion is potentially useful. First, by establishing the southern limits of many widespread Western Palaearctic forms and, second, by completing data on the mammal fauna lying in the boundary between western and eastern Mediterranean, or the European and the Middle Eastern regions. The present contribution thus contains a number of substantial supplementary data, particularly concerning the southern limits of ranges of several boreal species (*Myotis daubentonii*, *Vespertilio murinus*, *Nyctalus noctula*, *Pipistrellus nathusii*, *Barbastella barbastellus*, *Plecotus auritus*). Of importance are also data on species with a typical Submediterranean distribution (*Rhinolophus* spp., *Myotis blythii*, *M. emarginatus*, *M. aurascens*, *M. capaccinii*, *Pipistrellus kuhlii*, *Hypsugo savii*, *Nyctalus lasiopterus*, *Plecotus kolombatovici*, *Miniopterus schreibersii*, *Tadarida teniotis*), providing additional data to

establish their ranges in Europe. At the same time, these data are contrasted with knowledge of surrounding regions (the northern regions of the Balkans, Asia Minor, the Palaearctic part of Africa). The present contribution is also part of a series of studies summarising data obtained during long-term investigations on mammals which were conducted in the eastern part of the Mediterranean Region.

Bat research in Greece

The first modern notes (besides non-comparable data by Aristotle, f. e.) on Greek mammals date back from the 19th century (Geoffroy Saint-Hilaire 1832, Erhard 1858, Heldreich 1878), yet the first real, zoologically useful data on the occurrence of bats in the territory of the present Greece were provided by Lindermayer (1855). In his minor report, Lindermayer named locality Euboea Island, for ten readily identifiable species (*Rhinolophus ferrumequinum*, *R. hipposideros*, *R. blasii*, *Vespertilio murinus*, *Eptesicus serotinus*, *Hypsugo savii*, *Pipistrellus pipistrellus* s. l., *P. kuhlii*, *Nyctalus noctula* and *Tadarida teniotis*). For several other species were reported "Morea" (= Peloponnese) or "Griechenland" (= the present territory of Sterea Ellada, Thessaly and Peloponnese) by another older authors (Keyserling & Blasius 1839, Kolenati 1856, 1859, Blasius 1857, Koch 1865), but these mentions were very probably based on real records.

Knowledge of the Greek bat fauna was further enriched by individual records published by Dobson (1878), Lataste (1885), Doria (1887), Douglass (1892) and Winge (1881). Other specific data on the bats of Greece were also recorded in the classical work of Miller (1912), supplemented by the study of Chaworth-Musters (1932). For a rather long period of time, this author was engaged in a study of mammals in the territory of Macedonia and Thessaly, and he also presented a number of original data on bats from the Olympus Mts. Until the beginning of World War II, it is worth mentioning only occasional reports on the occurrence of certain species, such as the reviews made by Bolkay (1926) and Wettstein (1926, 1933, 1941). Chiropterological research in Greece did not develop further until the 1950s, when foreign specialists includes bats in their studies devoted to wider zoological groups or to spelaeological activities (Lindberg 1955, Strinati 1955, 1959, Lanza 1957, Wolf 1964). A number of additional data of poorly known bat species are described in a series of contributions by Pieper (1966, 1977, 1978) which also evaluate for the first time the remains of bats found in owl pellets.

Many valuable data are also described in the papers aimed at various other topics, such as parasitological studies (Bau 1929, Peus 1954, Beron 1970, Aellen 1955, Hopkins & Rotschild 1956, Pieper 1965, Theodor 1967, Hurka 1972, Kock 1974, 1989).

Of particular importance are the more comprehensive papers dating from the 1960s, which summarise and evaluate data collected during thorough investigations. Among other it is the synopsis by Laar & Daan (1964), which reports the observations obtained during three-months excursion (and, moreover, aimed at herpetological research). These authors also gathered up all literary data on the bat fauna from Greece and Greek islands available at that time. In their paper, they list a total of 24 bat species from the whole territory of Greece. Of equally compilatory character are the papers summarising the available data on the whole mammal fauna of Greece, together with data on concrete localities (Kanelli & Hadzisarantou 1963, Ondrias 1965). These synopses report 25 bat species for Greece (adding *N. lasiopterus* after Wolf 1964) but they do not supplemented the report by Laar & Daan (1964) essentially.

An important increase in chiropterological activities in Greece took place during the 1970s and 1980s when bats were systematically investigated by Ioanna Iliopoulou-Georgudaki, a student of Professor Ondrias at the University of Patras. This author launched extensive collections of material and substantially supplemented faunal data by adding a number of new localities. In her PhD thesis (Iliopoulou-Georgudaki 1977), she also presented taxonomical analyses of most Greek bat species. She described two new bat subspecies from the territory of Greece, viz., *M. blythii lesviacus* from Lesvos Island and, together with Ondrias, *R. ferrumequinum creticus* from Crete. She gathered up her observations in a number of papers (Iliopoulou-Georgudaki 1979, 1984, 1985, 1986, Iliopoulou-Georgudaki & Ondrias 1978, 1986, Iliopoulou-Georgudaki & Giagia 1984). Somewhat later, from the beginning of the 1980s until present, various chiropterological activities have taken place in Greece, and were carried out by groups of students and post-graduates from the University of Erlangen, Germany. Although their main interest was in echolocation studies of hunting bats, they accumulated, during repeated, rather long stays in the field, an amount of important faunal data, partly summarised by Helversen & Weid (1990) including the records of three species (*Myotis bechsteinii*, *M. daubentonii*, *Barbastella barbastellus*) new to Greece. Special problems were tackled in some other papers made by members of this group of students (Volleth 1987, Weid 1988, 1994, Helversen 1989a, b, 1998, Helversen & Helversen 1994, Helversen et al. 2001, Helversen in Mitchell-Jones et al. 1999, Volleth et al. 2001) which contain a number of original faunal data, too.

Lastly, researchers from Charles University in Prague, in co-operation with Professor T. S. Sofianidou (University of Thessaloniki), have taken part in study of mammals in Greece during the 1980s and 1990s. The faunal data on bats they obtained are summarised in the present contribution; so far they have only been published as parts of

taxonomical studies (Kryštufek 1993, Benda & Horáček 1995a, b, Benda & Tsytsulina 2000) and will be supplemented here by a synopsis of all data hitherto published in this region.

Very valuable data on the bat fauna of the eastern Mediterranean have been provided by occasional investigations carried out on some Greek islands. At this point, Crete is the most thoroughly known as investigations were launched by Bate (1905), Miller (1912), and especially by Pohle (1953), Kahmann (1959), Martens (1967), Pieper (1977) and Iliopoulou-Georgudaki (1979), and supplemented by occasional records made by other researchers. Thus, Crete is relatively well-known at present, with 15 bat species reported to occur there. Corfu was studied by Niethammer (1962) and individual records have been reported from additional Ionian islands (above all, from Zakynthos, Lefkada and Kithira). A number of interesting records have been reported from some Aegean Islands, above all, Lesbos (Iliopoulou-Georgudaki and her co-workers), Rhodes and Kos (Festa 1914, DeBeaux 1929, Pieper 1966), Chios (Kock 1974a) and some others. Most Greek islands lying in the Ionian and particularly the Aegean Sea, however, have not been investigated, even occasionally, and future investigations may bring interesting data, as suggested, e. g. by the recent record of the Asian species, *Eptesicus bottae anatolicus*, in Rhodes (Helversen 1998).

It follows from the review of both literary data and new records given below that the essential faunal information on bats of Greece appears to be roughly completed. Our contribution respect also the results of recent taxonomical revisions (Barratt et al. 1997, Benda & Tsytsulina 2000, Helversen et al. 2001, Spitzenberger et al. 2001, etc.). Though the status of the respective taxa and, above all, the actual distribution ranges of them are still uncertain. The future faunistic investigations is expected to provide fundamental data on their distribution and ecological requirements.

In the descriptions of records, the Latin transcription of geographic names, originally written in Greek alphabet, has been unified according to the system used in the relatively similar and readily accessible map atlas "Griechenland, Euro-Reisenatlas 1:300.000", Berlin-Gütersloh-Leipzig-München-Potsdam-Werder-Stuttgart: RV Reise- und Verkehrsverlag GmbH, 104 pp., 1992.

The term Macedonia is used here to denote the northern Greek region and the former Greek province. The neighbouring country of the same name (the former Yugoslav province) is termed here the Republic of Macedonia (Rep. of Macedonia). Similarly, the term Thrace denotes the Greek part of that region, whereas the part lying in the neighbouring countries are termed the Turkish Thrace or the Bulgarian Thrace.

The list of records (arranged in alphabetical and/or chronological order) includes, for each item, the following information: the name of the prefecture (n o m o s, in spaced types), the name of the locality [in brackets, number of the locality from the map; in *italics*, those not indicated in the map], and/or description of record site, date, number of recorded animals with indication of their sex (m = male, f = female), age (j = juvenile, s = subadult, a = adult) and physiological condition (G = pregnancy, L = lactation) and, in some instances, the collection of museum material deposition (IVB = Institute of Vertebrate Biology, Brno, Czech Republic; MHNG = Natural History Museum Genčve, Switzerland; MKB = Museum Alexander Koenig, Bonn, Germany; MUB = Masaryk University, Brno, Czech Republic; NMP = National Museum, Praha, Czech Republic [collection numbers are with the prefix "P6V"]; NMW = Natural History Museum, Wien, Austria; SMF = Senckenberg Museum Frankfurt a. M., Germany; WIC = Willy Issel Collection [the collection has been moved in the Museum Stuttgart, Germany]; ZIN = Zoological Institute of Russian Academy of Sciences, Sankt-Peterburg, Russia), collection number and type of preparate (A = alcohol specimen, S = prepared skull, B = prepared dry skin).

Helversen (in Mitchell-Jones et al. 1999) has included in his distribution maps a number of unpublished records in the form of occupied quadrats, which, therefore, cannot be included in the record lists given below; however, the more important ones, especially these coming from islands, are commented upon in the text.

In the tables (Tabs 1–6), the following abbreviations were used for body and skull dimensions of examined specimens: LC = head and body length; LCd = tail length; LAt = forearm length; LA = auricle length; LTr = tragus length; G = body weight; LCr = greatest length of skull; LCb = condylobasal length of skull; LCc = condylocanine length of skull; LaZ = zygomatic width; LaI = width of interorbital constriction; LaN = neurocranium width; AN = neurocranium height; CC = rostral width between canines (incl.); M^3M^3 = rostral width between third upper molars (incl.); CM^3 = length of upper teeth-row between CM^3 (incl.); LMd = mandible length; ACo = height of coronoid process; CM_3 = length of lower teeth-row between CM_3 (incl.); LB = length of tympanic bulla.

LIST OF SPECIES

Nycteris thebaica Geoffroy, 1818

RECORD. **Published datum**: I o n i a n I s.: Korfu [= Kérkira], 11 April 1914: 1fa (Wettstein-Westersheim 1925).

COMMENT. Wettstein-Westersheim (1925) described a record of a specimen of *N. thebaica* from Corfu Island on the basis of his studies of earlier museum collections. In his comprehensive review of mammals of Corfu, Niethammer (1962) throws no doubt on this record and – like Pohle (1953) did earlier, or Ondrias (1965) later – he considers it to be one of a stray individual. The record is considered valid even by other authors, such as Corbet (1978). However, *N. thebaica* is distributed throughout the Afrotropical Region and is one of the Saharo-Sindian elements in the Palaearctic Region. It reaches the Mediterranean Region in the north of Egypt via the Nile valley, and from southern and central Arabia up to the Rift Valley in Palestine – the northernmost record coming from the northern shore of the Sea of Galilee (Mendelssohn & Yom-Tov 1999). Thus the record from Corfu is highly improbable, unless it pertains to an individual introduced to the island by (shipping) traffic.

Apparently, the problem has been solved during a revision of the collection preserved in the Natural History Museum in Vienna, containing the "Corfu" specimen, by a later emendation of its label, as mentioned by Van Cakenberghe & De Vree (1998): "... the specimen's label bears a correction, changing the locality in "Egypt" ...". Thus it is most appropriate to consider the record of *N. thebaica* in Greece to be dubious and to disregard this species as a member of Greek (and thus even European) bat fauna (see Koopmann 1994, Mitchell-Jones et al. 1999, Horáček et al. 2000).

Rhinolophus ferrumequinum (Schreber, 1774)

RECORDS. **Original data**: A h a i a: Kastría, Limnon cave [1], 12 April 1974: 1m, 1f (MHNG 1325.070, 1325.071 [A]). – D r á m a: Mikrópoli [2], cave, 25 March 1994: obs. large colony. – É v r o s: Didimótiho [3], cave, 21 June 1994: obs. colony 300 ind., 22 July 2000: obs. colony. – F l ó r i n a: Píli, Spilia Zahariadi cave [4], 3 Sept. 2001: obs. 3 ind. torp., net. 1ma (NMP 49049 [S+A]). – F o k í d a: Delfí [5], 23 Sept. 1988: net. 1ms (NMP 48568 [S+B]). – H a l k i d i k í: Petrálona [6], cave, 28 Sept. 1988: net. 1fs (NMP 48608 [S]), 27 Sept. 1988: net. 1 ind, 5–8 Oct. 2000: det. several ind. – F t h i o t i d a: Kombotádes [7], bunker cellar, 11 Sept. 1996: net. 1ma (NMP 48729 [S+A]). – I l í a: Perivolía [8], 21 May 1959: 1 ind. (ZMH). – I m a t h í a: Náoussa [9], Apano Scala cave, 15 July 2000: obs. 1 ind. – K o r i n t í a: Arhéa Korinthos, Akrokorinthos [10], castle ruins, 21 Sept. 1988: obs. 1 ind. – L a k o n í a: Mistrás [11], ruins of Byzantine town, 27 August 2001: obs. 3 ind. – P r é v e z a: Despotikó [12], above creek, 3 July 1989: net. 1fG (NMP 48709 [S+B]). – R o d ó p i: Marónia [13], Cave of the Cyclops Polyphemos, 19 June 1989: net. 3ms, 1fs (NMP 48639 [S], 48638, 48640, 48641 [S+B]), above a creek 2 km SW, 19 June 1989: net. 2fL (NMP 48644, 48645 [S+B]; cf. Kryštufek 1993). – T r í k a l a: Meteóra [14], cave, 24 August 1971: 1ma (WIC I18). – A e g e a n I s.: Lesvos, Agios Isidóros [15], cave, 12 Sept. 2000: net. 2m; – Lesvos, Agía Marina [16], Agios Bartholomeos cave, 11 Sept. 2000: net. 4m, 6f (coll. 1ma; MHNG 1807.097 [S+A]); – Lesvos, Efthalou [17], ancient mine 4 km E, 14 Sept. 2000: net. 6m, 1f; – Lesvos, Vassiliká [18], ancient mine 5.5 km E, 13 Sept. 2000: net. 1m; – Páros, Náousa [19], 10 Oct. 1941: 1 ind. (ZMH; leg. Peus); – Thássos, Arhangélou monastery [20], spring 1 km W, 26 June 1989: net. 3fL (NMP 48697–48699 [S+B]; cf. Kryštufek 1993); – Thássos, Panagiá [21], Dracotrypa cave, 24 June 1989: net. 1ms (NMP 48688 [S+B]; cf. Kryštufek 1993). – C r e t e: Agía Triáda monastery (Akrotiri pen.) [22], 15 August 1971: 1f (WIC I17); – Amoudára [23], small cave, 8 July 1995: obs. 1 ind.; – Geráni [24], rocky canyon, 16 July 1995: det. 1 ind.; – Haniá [25], Summer 1971: 1fa (WIC I16); – Górtis [26], labyrinth, 1 ind. (ZIN). – **Published data**: A h a i a: Kastrión [= Kastriá] [1], Limnon cave, 2m, 1f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986). – A r k a d i á: cave Agías Eleoúsis, resp. Ag. Heleousa [27], Kinouría, resp. Nea Chora [= Neá Hóra], 48 ind., resp. 14m, 31f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986). – A t t i k í - P i r e á s: Dekelion [= Dekéleia] [28], 3f (Winge 1881). – E t o l í a A k a r n a n í a: Agrinion [= Agrínio] [29], cave, 13 March 1973: 1f (Niethammer 1974); – Kástrou cave [30], 1 ind. (Iliopoulou-Georgudaki 1977); – Koloúria, Thérmou, resp. Thermos [= Thérmo] [31], n. Mesologgi [= Messolóngi], 2m (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986); – Naupactos [= Nafpaktos] [32], castle, 1f (Iliopoulou-Georgudaki 1986); – cave Varasóvis, resp. Varasova, n. Mesologgi [= Messolóngi] [33], 57 ind., resp. 31m, 29f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986). – É v r o s: Ávantos [= Ávas] [34], cave, 1f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986); – Dadia Forest Reserve [35] (Adamakopoulos et al. 1995); – Didimotichon, resp. Didymotichon [= Didimótiho] [3], cave, 3 August (July) 1971: colony ca. 200 ind. (Niethammer 1974, Kock 1974), Didymotichon, 8 ind. (Kryštufek 1993); – cave Kamila (n. Dadiá) [36], 18 June 1997: obs. 1 ind. (Ivanova 2000); – Kouvobono [= Koufóvouno] [37], cave, 8–9 June 1965 (Hurka 1972, Kock 1974), cave Coufovouno, 23 July 1997: obs. nurs. colony of ca. 100 ind. (Ivanova 2000). – I o á n n i n a: Joannina [= Ioánnina] [38], Sept. 1963: 10 ind. (Kock 1974, Felten et al. 1977). – K a s t o r i á: Drákou, resp. Drakos [39], cave, 2 ind., resp. 3m, 4f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986). – Mavrotissis [40], cave, 5 ind. (Iliopoulou-Georgudaki 1977). – L á r i s s a: Elassóu, resp. Elasson [= Elassóna] [41], cave Pithiou, resp. Pythion, 1f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986). – P i e r i á: Monastery of St. Dionysios [= Agios Dionissios] [42], after 13 May 1931: obs. “fairly common” and “occured in numebers and roosted in [...] the Monastery” (exam. 4f) (Chaworth-Musters 1932). – P r é v e z a: Nikopolis [= Nikópoli] [43], ruins of the amphitheatre, 12 March 1973: 1m (Niethammer 1974). – T h e s s a l o n í k i: Rentina [= Rendína] [44], two caves, 24 April 1955: 2m [MHNG 967.062, 967.063; A] (Strinati 1959); – Stavrós [45], 13 March 1963 (Pieper 1965). – V i o t í a: Parnassus reg. [= Parnassós Mts.] [46], 1 ind. (Miller 1912), “Jurkgrotte, der Bielshöhle bei Rübeland, vom Parnass” [= Parnassós Mts.] (Bau 1929). – X á n t h i: Kimméria [47], galleries, 16 May 1954 [1m (MHNG 1711.078 [A])] (Lindberg 1955); – Mándra [48], 2 ind. (Kryštufek 1993); – Porto Lágos [49], Febr.–March 1987: 1 ind. (from owl pellets) (Alivizatos & Goutner 1999). – A e g e a n I s.: Euboea [= Évia] [50] (Lindermayer 1855, Kolenati 1859); – Kos [51], 22 March 1966 (Martens 1967); – Rhodes [= Ródos], Afándou [52], cave (DeBeaux 1929); – Rhodes [= Ródos], Siána [53] (Festa 1914); – Island of Syra [= Síros] [54], 1 ind. (Miller 1912); – Skyros [= Skíros] [55] (Pohle 1953), Island of Scyros, Strimenea Brothers, 1 August 1894: 1 ind. ad. (Bolkay 1926). – C r e t e: Ágios [= Ágía] Pnevma [56], 1 ind. (from owl pellets) (Pieper 1977); – Katholiko monastery (Akrotiri pen.) [57], caves, 13 March 1965: 6 ind. (Martens 1967); – Azogyres bei Paläochora [= Azogirés n. Paleohóra] [58], cave, 13 March 1965: 3 ind. (Martens 1967); – cave Lavirinthou, resp. cave “Labyrinth”, resp. cave Mikró labyrinthaki [59], 8 August 1973: 3 ind., resp. 3m, 1f (Iliopoulou-Georgudaki 1977, 1979, Iliopoulou-Georgudaki & Ondrias 1986); – Milátu cave, resp. cave “Milatos” [60], 1 ind., resp. 1f (Iliopoulou Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986); – Mt. Goria monastery [= Moni Goniás] [61], 1m, 2f (Miller 1912, Theodor 1967); – NW coast, cave close to the sea [*62*], March 1904, 3 ind. (Bate 1905); – Paläochora [= Paleohóra] [63], gallery, 13 March 1965: 1 ind. j (mummy) (Martens 1967); – Piskokéfalo [64], cave, 22 March 1958 (Kahmann 1959); – Rethimnon, resp. Rethymnon [= Réthimno] [65], 20 April 1975: 1 ind. (Felten et al. 1977, Kock 1989); – Sarchos [= Sárhos] [66], 10 ind. (from owl pellets) (Pieper 1977); – Sitía [67], 1 ind. (Felten et al. 1977), Sitía, Katafyngui cave, 1958 (Kahmann 1959), Megalo Katafygi, resp. Katofyngui, 14–15 km SW Sitia, ost. remnants (Boettger 1962, 1963, Martens 1967); – Starohóri, resp. Starochori [= Stavrohóri] [68], 12 ind., resp. 5m, 7f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Ondrias 1986); – Topólia [69], cave Aghia Sophia, 16–17 March 1965: 2 ind. (Martens 1967), Topólia, 14 ind. (from owl pellets) (Pieper 1977); – Vafés [70], Kalamatu cave, 15 Jan. 1968 (Beron 1970). – I o n i a n I s.: Korfu [= Kérkira], Ag. Mathaeos [= Agía Matheos] [71], 3 ind. (from owl pellets) (Niethammer 1962); – Korfu [= Kérkira], Kanáli [72], gallery, 17 April 1961: 1m (Niethammer 1962).

DISTRIBUTIONAL STATUS (Fig. 2). On the basis of a number of records in practically all regions of Greece incl. Crete and other islands, this species is distributed throughout the territory and is among the most common bats, especially in karstic areas lying at medium and lower altitudes; it is also present in mountain areas (Olympus Mts., 1100 m a. s. l.). This is in agreement with the situation known in other Balkan countries (Albania, Rep. of Macedonia, Bulgaria, Turkish Thrace, see Mitchell-Jones et al. 1999). Most Greek records come from underground spaces or are the netting records at entrances to underground spaces, in rocky valleys, over waters, in ancient ruins. The synanthropic occurrence of this bat species in lofts, as is known in central Europe, is to be considered exceptional or non-existent in Greece; our records have not yet demonstrated it. Besides records of individual bats, evidence has been obtained of larger nursery colonies in caves, sometimes mixed with other species (*Miniopterus schreibersii*, *Myotis emarginatus*, other *Rhinolophus* species). Some records document hibernating bats (March); finds in owl pellets are also represented. Helversen (in Mitchell-Jones et al. 1999) supplements the above mentioned records with additional

ones from the islands of Andros (or Tinos), Kassos, and Safora. Thus, *R. ferrumequinum* is known to occur in 13 Greek islands (incl. Crete). External and cranial dimensions of examined specimens of *R. ferrumequinum* from Greece are shown in Tab. 1.

TAXONOMIC NOTE. The Greek populations of *R. ferrumequinum* have been evaluated several times. Felten et al. (1977), in a comprehensive revision of the geographic variability of this species in the western part of the Palaearctic Region, examined, among others, a sample of several specimens coming from Epirus that they identified as *R. f. martinoi* Petrov, 1941, a form described from a nearby region of the Balkan Peninsula (terra typica: Trifunovičevo Brdo [= Orlo Bair, see Kryštufek et al. 1992], Rep. of Macedonia). To this form, which they considered to be the largest in the western Palaearctic Region, they also included a sample coming from the Rep. of Macedonia and from Sicily. Their conclusion was used as a starting point by Iliopoulou-Georgudaki & Ondrias (1986) in their revision of the Greek populations in which they separated the continental Greek population (which they included in *R. f. martinoi*) from the population of Crete which they included in a newly described subspecies, *R. f. creticum* Iliopoulou-Georgudaki et Ondrias, 1986 (t. t.: Cave Milatos, Lasithi, Crete; the correct form of the name is *R. f. creticus*, see Koopman 1994, Mitchell-Jones et al. 1999). They found this form to be markedly more gracile than the two subspecies compared from continental Europe (*R. f. ferrumequinum*, *R. f. martinoi*). Kryštufek (1993), having examined the variability of *R. f. ferrumequinum* populations in SE Europe, found the definition of *R. ferrumequinum martinoi* to be unsubstantiated in view of a cline shift in metrical characters within populations from the north-west (Austria, Slovenia, and Slovakia) to the south-east (Albania and northern Greece). DePaz (1995) described a similar trend within the whole western Palaearctic, from Iberia and Morocco down to eastern Iran, but offered no opinion concerning the validity of the subspecific status of marginal populations such as the one from Crete. Ransome (in Mitchell-Jones et al. 1999) reports *R. f. creticus* to be the only subspecies of this species occurring in Europe besides the nominotypical one.

We accept here the above mentioned views proposing to use the name *R. f. ferrumequinum* to denote all continental populations of this species including those on mainland Greece and probably also on the offshore islands. Anyhow, the form *R. f. creticus* on Crete should be considered as an open problem which call for a detailed revision and comparison with the populations of *R. ferrumequinum* inhabiting neighbouring regions (Asia Minor, SE Europe, Italy, N Africa) as well as those of *R. clivosus* Cretzschmar, 1828 (N Africa). By employing both morphometric and genetical methods, the history of colonisation of Crete by this form should be traced. The described metric differences from populations inhabiting mainland Greece from that living in Sicily suggest that the history of *R. ferrumequinum* on Crete is different from that in the neighbouring regions or that Crete was colonised by this species from a different region or at a different period than were the neighbouring regions.

Rhinolophus hipposideros (Bechstein, 1800)

RECORDS. **Original data**: A r k a d í a: Karitena [1], chapel, 25 August 2001: obs. 2 ind. (ad.+juv.). – D r á m a: Mikrópoli [2], cave, 25 March 1994: obs. large colony. – É v r o s: Alexandroúpoli [3], 1 ind. (MKB 775686). – F l ó r i n a: Píli, Spilia Zahariadi cave [4], 3 Sept. 2001: obs. 2 ind. torp., det. 1 ind. – F t h i o t i d a: Kombotádes [5], bunker cellar, 9 Sept. 1996: obs. 1fa+j, 10 Sept. 1996: obs. 7 ind. (net. 1ms, 2fa, 3fs; NMP 48710–48715 [S+A]); 31 August 2001: obs. colony of 11 ind. (coll. 1fa, NMP 49028 [S+A]). – K o r i n t h í a: Arhea Korinthos, Akrokorinthos [6], castle ruins, 30 August 2001: obs. 1 ind. – K o z á n i: Ermakiá [7], 1 km W, 14 July 2000: net. 1 ind. – L a k o n í a: Mistrás [8], ruins of Byzantine town, 27 August 2001: obs. 1 ind. – L á r i s s a: Agíos Dimitrios [9], 27 July 1936: 1 ind. (ZIN). – M e s s i n í a: Petrohóri, Paleokastro [10], spilia Nestoros cave, 26 August 2001: obs. colony of ca. 35 ind. – P r é v e z a: Mesopótamo [11], chapel, 2 June 1989: obs. 1fa+1j. – R o d ó p i: Marónia [12], Cave of the Cyclops Polyphemos, 19 June 1989: net. 1fG (NMP 48643 [S+B]). – T r í k a l a: Meteóra [13], cave, 3 August 1964: 1fL (WIC I82), 24 August 1971: 1fs (WIC I83). – V i o t í a: Livadiá [14], 1 ind. (MKB 773536). – A e g e a n I s.: Lesvos, Agía Marina [15], Agios Bartholomeos cave, 11 Sept. 2000: net. 3f. – C r e t e: Omalós [16], cave, 13 July 1995: 1 skeleton. – I o n i a n I s.: Kefaloniá, Karavómilos [17], Fitídi cave, 6 April 1970: 1m (MHNG 1709.002 [A]). – **Published data**: A h a i a: Rodiá [18], 1 ind. (Iliopoulou-Georgudaki 1977). – A r k a d í a: Megalópoli [19], 6 ind. (Iliopoulou-Georgudaki 1977). – A t t i k í - P i r e á s: Agía Marína [20], cave, 2 ind. (Iliopoulou-Georgudaki 1977); – Athína, Kaisarianí [21], 2 ind. (Iliopoulou-Georgudaki 1977); – Dekelion [= Dekéleia] [22], 1m, 1f (Winge 1881); – Grotte de Kakavoula [23], 15 April 1954 [1m (MHNG 968.036 [A])] (Lindberg 1955); – Massif du Pentelikon [= Pendéli], Amomon cave [24], 31 Jan. 1954: 1 ind. [1f (MHNG 968.037 [A])] (Strinati 1955). – E v r i t a n i a: Kerasohório [= Kerasohóri] [25], 1 ind. (Iliopoulou-Georgudaki 1977). – É v r o s: Alexandroúpoli [3], 21 May 1962 (Kanelli & Hatzisarantou 1963); – Dadia Forest Reserve [26] (Adamakopoulos et al. 1995); – galleries Tsoutourou III (n. Dadiá) [27], 22 July 1997: 1 ind. (Ivanova 2000). – H a l k i d i k í: Hg. Anastasia [= Agíos Anastasias] [28], 27 April 1968: 1 ind. (Roer & Schober 2001). – L a k o n í a: Flomohório [= Flomohóri] [29], 1 ind. (Iliopoulou-Georgudaki 1977). – M e s s i n í a: Agios Dimítrios cave (n. Kardamili) [30], 2 ind. (Iliopoulou-Georgudaki 1977). – T r í k a l a: Meteóra [13], 3f (Felten & Storch 1970, Felten et al. 1977), Meteóra, cave, 9 March 1973: 1f (Niethammer 1974); – tunnel 20 km W of Kalambáka [31], 10 March 1973: 1 ind. (Niethammer 1974). – V i o t í a: Levadia [= Livadiá] [14], cave, 14 May 1952, 2 ind. (Peus 1954). – A e g e a n I s.: Euboea [= Évia] [32] (Lindermayer 1855, Kolenati 1859); – Rhodos [= Ródos] [33] (Pieper 1966). – C r e t e: Katholiko monastery (Akrotiri pen.) [34], caves, 13 March 1965: 2 ind. (Martens 1967); – Arkalohóri [35] (from owl pellets) (Kahmann 1959); – Azogyres bei Paläochora [= Azogirés n. Paleohóra] [36], cave, 13 March 1965: 1 ind. (Martens 1967); – hills south of Khania [= Haniá] [37], cave, 1 ind. (Bate 1905); – way from Agya to Kirtomado [= Kitomádos] [38], house, 23 April 1958: 1f (Kahmann 1959); – Mesa Mouliana [39], 1958: obs. (Kahmann 1959); – Milátos [40], cave, 5 ind. (Iliopoulou-Georgudaki 1977); – Mourí (n. Kournás), 14 April 1958: 1f [41] (Kahmann 1959); – Omalós-Katavothron [16], 7 April 1965: 2 ind. (Martens 1967); – Bryses [= Vríses] (33 km SW of Haniá) [42], 1 ind. (Pohle 1953); – Rethymnon [= Réthimno] [43], 1 ind. (Felten et al. 1977); – Sarchos [= Sárhos] [44], 1 ind. (from owl pellets) (Pieper 1977); – Sitía [45], 1958: obs. (Kahmann 1959); – Topólia, cave Aghia

Sophia [46], 16–17 March 1965: 1 ind. (Martens 1967); – Vafés [47], Krionerida cave, 15 Jan. 1968 (Beron 1970). – I o n i a n I s.: Korfu [= Kérkira], Kanáli [48], gallery, 22 March 1961: 1f (Niethammer 1962).

DISTRIBUTIONAL STATUS (Fig. 3). Like in the preceding species, current records indicate that *R. hipposideros* is widespread throughout the territory of Greece including the islands investigated; the species is distinctly absent from the mountain regions of N Macedonia and Thrace. In general, however, this species is less common than *R. ferrumequinum*; again, the most frequent records come from the karstic areas of southern Greece and Crete where it is associated with caves as well as man-made underground spaces, but small nursery colonies have also been found in abandoned and/or sacral buildings. Records at lower and medium elevations predominate but evidence is also available from the occurrence of this species up to 1000 m. A similar widespread occurrence of this species has also been demonstrated in the neighbouring Balkan countries (Albania, Rep. of Macedonia, Bulgaria, Turkish Thrace; Mitchell-Jones et al. 1999). Helversen (in Mitchell-Jones et al. 1999) added important data to the distribution of *R. hipposideros* on the Aegean islands Ikaria and Skiros. External and cranial dimensions of examined specimens of *R. hipposideros* from Greece are shown in Tab. 1.

TAXONOMIC NOTE. As stated in more details elsewhere (Benda & Horáček 1998), Felten et al. (1977) who examined a large sample of western Palaearctic material, suggest for Greece two forms, viz., *R. h. hipposideros* (Bechstein, 1800) (terra typica: France) that inhabits mainland Greece, and *R. h. minimus* Heuglin, 1861 (t. t.: Keren, Eritrea) on Crete. However, Corbet (1978) included all Mediterranean populations of *R. hipposideros* with the nominotypical form. On the contrary, Koopman (1994), in a conservative approach, divided European populations into four subspecies, including (similarly as Miller 1912, Ellerman & Morrison-Scott 1951, and Saint-Girons & Caubere 1966) all Greek populations in *R. h. minimus*.

While European specimens (from Slovakia, Bulgaria, the Caucasus Mts.) show the classical chromosome formula 2n = 56, those from the Middle East (western Anatolia, Syria, Jordan) possess 2n = 58 chromosomes (for a review see Zima et al. 1992, Benda & Horáček 1998). These facts suggest that Europe and the Middle East are populated by two karyotypically different races of *R. hipposideros*, the division line between them passing through the eastern Mediterranean. However, the Balkan lesser horseshoe bats were not sufficiently evaluated in the light of the karyological differences found between European and Asian populations. Our evaluation of specimens from the locality Kombotades (Sterea Ellada; loc. No. 5) confirms that the mainland Greek population belongs to the "European" karyotype race (2n = 56, four specimens NMP 48710–48713). However, no karyological examinations have involved individuals from Crete, which would confirm or refuse considerations of the exclusive character of that population or of its differing from those inhabiting mainland Greece or Anatolia, as suggested by Felten et al. (1977).

Rhinolophus euryale Blasius, 1853

RECORDS. **Original data**: A h a i a: Kastría, Limnon cave [1], 1–2 August 2000: net. 1m, 1f (coll. 1ms, MHNG 1807.041 [S+A]). – F l ó r i n a: Píli, Spilia Zahariadi cave [2], 3 Sept. 2001: net. fa (NMP 49046 [S+A]). – H a l k i d i k í: Petrálona [3], cave, 28 Sept. 1988: net. 8ms, 1fs (NMP 48595–48598, 48604, 48612–48615 [S+B]); Petrálona, 1 ind. (MKB 7752). – K o r i n t h í a: Arhea Korinthos [4], water canal, 6 August 1979: mixed colony of ca. 200 ind. of medium sized horseshoe bats, coll. 1f of *R. euryale* (NMW 29716 [S+B]; leg. A. & W. Baar). – L á r i s s a: Ossa Mts. (no exact loc.) [5], 1 ind. (ZIN, leg. Martino). – R o d ó p i: Marónia [6], Cave of the Cyclops Polyphemos, 25 July 2000: obs. colony. – T h e s s a l o n í k i: Stavrós [7], bunker galleries, 12 July 1979: 2f, 2j (NMW 45749 [S+A], 45750–45752 [A], leg. U. Passauer). – A e g e a n I s.: Lesvos, Agía Marina [8], Agios Bartholomeos cave, 11 Sept. 2000: net. 1f. – I o n i a n I s.: Kefaloniá, Karavómilos [9], Fitídi cave, 31 March 1971: 2m, 1f (MHNG 1183.081–083 [A]). – **Published data**: E t o l í a A k a r n a n í a: Akarnania (no exact loc.), 1894: 3ma, 4fa (Bolkay 1926); – Missolungi [= Messolóngi] [10], 2f (Miller 1912). – É v r o s: Avantos [= Ávas] [11], cave, 61 ind. (Iliopoulou-Georgudaki 1977); – cave Bouba Lefkimis (n. Lefkimmi) [12], 24 July 1997: obs. nurs. colony of ca. 200 ind. (Ivanova 2000); – Dadiá, galleries Tsoutourou II [13], 22 July 1997: ca. 10 ind. (Ivanova 2000); – Didymotichon [= Didimótiho] [14], 3 August 1971 (Kock 1974); – Provatóna [= Provató] (n. Lefkímni) [15], cave, 28 July 1987: 1ms, 3fa, 7fs (Crucitti 1988). – H a l k i d i k í: Petrálona [3], 25 May 1962 (Kanelli & Hatzisarantou 1963). – T r í k a l a: Meteóra [16], cave, 9 March 1973: 1f (Niethammer 1974). – I o n i a n I s.: Petala [= Petalas] [17] (Ondrias 1965, with quoting of Bolkay 1926, who in reality didn't mention this record).

DISTRIBUTIONAL STATUS (Fig. 4). The distribution of the few records from Greece summarised here and the situation in the neighbouring countries suggest that the range of this species covers the whole southern part of the Balkan Peninsula. Evidence is still missing of its occurrence in some parts of Greece although Helversen (in Mitchell-Jones et al. 1999) brings some records from Attica, eastern Macedonia, and Rhodes. The available data are currently insufficient to evaluate the abundance of this species; one may only assume it to be considerably rarer than the two preceding *Rhinolophus* spp. The hitherto records come from the lower altitudes in which the species is exclusively confined to caves; a large part of the data have been obtained by netting. External and cranial dimensions of examined specimens of *R. euryale* from Greece are shown in Tab. 1.

Rhinolophus mehelyi Matschie, 1901

RECORDS. **Original data**: É v r o s: Didimótiho [1], cave, 22 June 1989: net. 3fL (NMP 48668–48670 [S+B]). – H a l k i d i k í: Petrálona [2], cave, 28 Sept. 1988: net. 4ms, 1fs (NMP 48591, 48592, 48600, 48602, 48605 [S+B]). – R o d ó p i: Marónia [3], Cave of the Cyclops Polyphemos, 18 June 1989: net. 1faL (NMP 48637 [S+B]). – X á n t h i: Kimméria [4], gallery, 23 June 1989: net. 1fL (NMP 48672 [S+B]), 20 July 2000: capt. 1faL, 6 s. i. – A e g e a n I s.: Lesvos, Efthalou [5], ancient mine 4 km E, 14 Sept. 2000: net. 3m (coll. 1ma; MHNG 1807.001 [S+A]). – **Published data**: A h a i a: Klitória [6], Limnon cave, 1m, 1f (Iliopoulou-Georgudaki 1977). – A t t i k í - P i r e á s: Nymphis Kouvara [= Kouvarás] [7], cave, 27 Jan. 1954: 1 skull (Strinati 1955). – E t o l í a A k a r n a n í a: Monastiráki [8], cave Simitu, 1f (Iliopoulou-Georgudaki 1977). – É v r o s: Didimitichon [= Didimótiho] [1], cave, 3 August 1971: ca. 400 ind. (Niethammer 1974), Didymoticho, 12 Sept. 1990: 1 ind of *R.* cf. *mehelyi* (from owl pellets) (Vohralík & Sofianidou 1992); – Kouvobono [= Koufóvouno] [9], cave, 8–9 June 1965 (Hurka 1972), cave Coufovouno, 23 July 1997: obs. nurs. colony of ca. 500 ind. (Ivanova 2000). – H a l k i d i k í: Petrálona [2], 15 March 1963 (Pieper 1965). – S é r r e s: Chrysopigui, resp. Chrysopighi [= Hrisopigí] [10], grote Nasioutsik, 7–12 May 1954 [1m, 1f (MHNG 925.089 [A], 925.090 [S+A])] (Lindberg 1955, Aellen 1955); – Saint-Jean-le-Prodrome [= Agios Ioannis Prodromos] [11], cave Pelade, 6 May 1954 [1f (MHNG 925.091 [A]) (Lindberg 1955). – T h e s s a l o n í k i: Vrasna [= Vrassná] [12], 12 March 1963 (Pieper 1965).

DISTRIBUTIONAL STATUS (Fig. 5). According to the small number of records, the species appears to be the least common of all Greek representatives of the genus. Moreover, the hitherto data are limited to the north-eastern part of Greece (Halkidiki, Thrace) and its southern part (Peloponnese, Attica). Helversen (in Mitchell-Jones et al. 1999) presents additional records from the south of mainland Greece only. However, the known range of this species in the Balkans also reaches the Rep. of Macedonia, Bulgaria, Turkish Thrace and southern Romania (Mitchell-Jones et al. 1999). External and cranial dimensions of examined specimens of *R. mehelyi* from Greece are shown in Tab. 1.

Rhinolophus blasii Peters, 1866

RECORDS. **Original data**: É v r o s: Ávas [1], road 2 km S, 20 June 1989: net. 1fL. – H a l k i d i k í: Petrálona [2], cave, 28 Sept. 1988: net. 4ms, 3fs (NMP 48593, 48594, 48599, 48601, 48603, 48606, 48607 [B]), 1ms, 1fs, 18 June 1989: net. 5m, 4f. – I o á n n i n a: Aidonóhori (2 km W of Melissópetra) [3], Aóos river, 28 Sept. 1988: net. 1fs (NMP 48590 [S+B]). – K o r i n t h í a: Arhea Korinthos [4], water canal, 6 August 1979: mixed colony of ca. 200 ind. of medium sized horseshoe bats, coll. 1m, 1f of *R. blasii* (NMW 29717, 29718 [S+B]; leg. A. & W. Baar). – M e s s i n í a: Stoupa (n. Kardamili) [5], 8 July 1991: 2m, 2f (NMP 51479–51482; leg. Anděra & Zbytovský). – R o d ó p i: Marónia [6], Cave of the Cyclops Polyphemos, 18 June 1989: net. 3fa (NMP 48634–48636 [B]). – A e g e a n I s.: Lesvos, Efthalou [7], ancient mine 4 km E, 14 Sept. 2000: net. 2m (coll. 1ma; MHNG 1807.098 [S+A]). – C r e t e: Katholikó monastery (Akrotiri pen.) [8], cave, 11 Sept. 1986: net. 1m (NMW 36149 [S+B]; leg. A. Baar & W. Pölz); – Katofígi [9], cave, 9 May 1959: skull (MHNG 1705.079); – Sárhos [10], cave, 10 April 1955: 1m, 3f (MHNG 1713.084–087 [S+A]). – Morea (= Peloponíssos), no exact loc., 12 June 1885: 1fa (NMW 10805 [S+A], leg. E. Reitter). – **Published data**: A r g o l í d a: Nauplia [= Nafplio] [11], 1 ind. (Miller 1912). – A t t i k í - P i r e á s: Dekelion [= Dekéleia] [12], 1f (as *R. clivosus*; Winge 1881); – Liopesi [13], 17m (Iliopoulou-Georgudaki 1977). – E t o l í a A k a r n a n í a: Akarnania (no exact loc.), 1894: 5ma, 3fa (Bolkay 1926); – Krionerion [= Krionéria] [14], 4 Febr. 1897: 1ma (Bolkay 1926). – É v r o s: Dadia Forest Reserve [15] (Adamakopoulos et al. 1995). – H a l k i d i k í: Petrálona [2], 15 March 1963 (Pieper 1965). – T h e s s a l o n í k i: Vrasna [= Vrassná] [16], 19 March 1963 (Pieper 1965). – A e g e a n I s.: Euboea [= Évia] [17] (as *R. clivosus*; Lindermayer 1855, Kolenati 1859); – Ikariá, Thérma Loutra [18], coppermine Nealia, 17 June 1963: 23m (Laar & Daan 1964); – Kárpathos, btw. Apéri and Pigadhia (Kárpathos) [19], 4 April 1964, 19 April 1964 (Pieper 1965); – Lésvos, Plomári [20], 10m, 12f (Iliopoulou-Georgudaki 1986); – Mílos [21] (Lataste 1885, Doria 1887); – Rhodes [= Ródos], Afando [= Afándou] [22], cave (DeBeaux 1929); – Thassos, Sotír [23], 4m, 1f (Iliopoulou-Georgudaki 1977). – C r e t e: Aghios Ioannis [= Agíos Ioánnou] (Akrotiri pen.) [24], cave, 13–14 March 1965: 5 ind. (Martens 1967); – Ano Viannos [= Áno Viános] [25], 2 ind. (from owl pellets) (Pieper 1977); – Milo [= Milátos] [26] (Doria 1887); – Paläochora [= Peleohóra] [27], gallery, 19 March 1965: 25 ind. (Martens 1967); – Piskokéfalo [28], cave, 22–23 March 1958: colony (coll. 3f) (Kahmann 1959); – Sitía [29], 1 ind. (Felten et al. 1977). – I o n i a n I s.: Petala [= Petalas] [30], cave, 17 July 1956: 4m, 12f (Lanza 1957), Insel Petala (Kryštufek & Đulić 2001); – Kythira [= Kithira], Höhle Mylopotamos [= Milopótamos] [31], 5–6 March 1965: 11 ind. (Martens 1967).

Rhinolophus sp. (medium sized)
RECORDS. **Published data**: A t t i k í - P i r e á s: Nymphis Kouvara [= Kouvarás], cave, 27 Jan. 1954: group (Strinati 1955).

DISTRIBUTIONAL STATUS (Fig. 6). The few records scattered in various parts of Greece, include Crete and several other Aegean and Ionian islands. This suggests that the species is potentially present all over the territory, even if evidence is still lacking from extensive areas, above all from Thessaly. Helversen (in Mitchell-Jones et al. 1999) adds data mainly from northern Macedonia. The continuous range of the species in the south of the Balkans is confirmed by records made in Albania, the Rep. of Macedonia, Bulgaria, and Turkish Trace. Apparently, *R. blasii* is another uncommon and strictly cavernicolous species. External and cranial dimensions of examined specimens of *R. blasii* from Greece are shown in Tab. 1.

Myotis myotis (Borkhausen, 1797)

RECORDS. **Original data**: A h a i a: Kastría, Limnon cave [1], 17 May 1974: 2ma. 9fa (MHNG 1713.029–039 [S+A]), 1–2 August 2000: net. 4m, 16f. – É v r o s: Koufóvouno [2], cave, 21 June 1994: obs. colony 50 ind., 22 July 2000: capt. 2m. – H a l k i d i k í: Petrálona [3], cave, 5–8 Oct. 2000: det. several ind. of *M.* cf. *myotis*. – I o á n n i n a: Ioánnina, Límni Pamvotis lake, Pantelemon I. [4], 22 April 1996: net. several ind. – K a s t o r i á: Kría Nerá [5], river, 4 Sept. 2001: net. 1ma (NMP 49047 [S+A]). – P i e r i á: Prionia [6], waterfall in 1100 m a. s. l., 17 Sept. 1988:

net. 1fs (NMP 48558 [S+B]; cf. Benda & Horáček 1995). – R o d ó p i: Marónia [7], Cave of the Cyclops Polyphemos, 15 April 1992: obs. colony (exam. 2m, 3f), 25 July 2000: capt. 7m, 13 f (coll. 1fs, MHNG 1807.042 [S+A]). – S é r r e s: Agios Ioannis Prodromos [8], cave Pelade, 17 July 2000: 8m, 12f (coll. 1ma, 2ms, MHNG 1807.046–048 [S+A]). – V i o t í a: Aráhova [9], Corycian cave, 31 July 2000: capt. 1m. – X á n t h i: Kimméria [10], gallery, 16 June 1989: net. 2ma, 1f (NMP 48619 [S], 48620 [S+B]; cf. Benda & Horáček 1995), 23 June 1989: obs. colony ca. 1000 ind., net. 4ma (NMP 48673, 48675–48677 [S+B]; cf. Benda & Horáček 1995), 20 July 2000: capt. 6m, 14f (coll. 1fL, MHNG 1807.043 [S+A]). – A e g e a n I s.: Lesvos, Agios Isidóros [11], cave, 12 Sept. 2000: net. 2ma (MHNG 1807.094, 1807.095 [S+A]); – Lesvos, Vassiliká [12], ancient mine 5.5 km E, 13 Sept. 2000: net. 1m, 6f (coll. 1fa; MHNG 1808.003 [S+A]). – **Published data**: A h a i a: Kastriae [= Kastría] [1], Limnon cave, 17 May 1974: 9m, 12f (Iliopoulou-Georgudaki 1986, Iliopoulou-Georgudaki & Giagia 1984); – Patras [= Pátra] [13], 10 June 1908 (Hopkins & Rotschild 1956). – A r g o l í d a: Kephalari [= Kefalári] [14], n. Árgos, cave, 29 April 1952, 3 ind. (Peus 1954). – A t t i k í - P i r e á s: Dekélion [= Dekéleia] [15] (as *Vespertilio murinus*; Winge 1881, rev. Pieper 1978). – É v r o s: cave Bouba Lefkimis (n. Lefkimmi) [16], 24 July 1997 (Ivanova 2000); – Dadia Forest Reserve [17] (Adamakopoulos et al. 1995); – Provatonas river (n. Provató) [18], cave, 21 July 1997: net. 1m (Ivanova 2000). – F o k í d a: Itéa [19], mandible fragment (from owl pellets) (Niethammer 1974). – I m a t h í a: Náoussa [20], grotte de l'Apano Scala, resp. Scola, 24 May 1954 (Lindberg 1955, Aellen 1955). – I o á n n i n a: Joannina [= Ioánnina] [21], 15 Sept. 1963: 2 ind. (Kock 1974, Felten et al. 1977). – K i l k í s: Kilkís [22], cave Sarada Kamares, 3 Sept. 1973: 1m, 7f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Giagia 1984). – K o z á n i: Ermakiá [23], cave, 11 Oct. 1973: 2m, 2f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Giagia 1984). – S é r r e s: cave of Alistrati [24], 9 Oct. 1978 and 22 Sept. 1986: 7m, 1f (Spitzenberger 1996); – Saint-Jean-le-Prodrome [= Agios Ioannis Prodromos] [8], grotte Pelade, 6 May 1954 [4fa (MHNG 1713.089–091 [S+A])] (Lindberg 1955, Aellen 1955), cave Ioannou Prodromou, resp. Serres, 1 June 1973: 6m, 3f (Iliopoulou-Georgudaki 1977, Iliopoulou-Georgudaki & Giagia 1984). – V i o t í a: "Jurkgrotte, der Bielshöhle bei Rübeland, vom Parnass" [= Parnassós Mts.] [25] (Bau 1929). – X á n t h i: Kimméria [10], gallery, 16 May 1954 [1m (MHNG 1711.074 [S+A])] (Lindberg 1955); – Toxotai, resp. Toxotei [= Toxótes] [26], railway tunnel 2 km NW, 20 (resp. 21) Sept. 1966: 2m, 1f (Spitzenberger 1996, cf. Hurka 1972). – A e g e a n I s.: Kos [27] (Pieper 1977); – Lésvos, Polihnítos, resp. Polychnitos [28], 13 April 1980: 3m (Iliopoulou-Georgudaki & Giagia 1984, Iliopoulou-Georgudaki 1986). – I o n i a n I s.: Korfu [= Kérkira], Ag. Mathaeos [= Agía Matheos] [29], 2 ind. (from owl pellets) (Niethammer 1962); – Korfu [= Kérkira], Ringlades [30], 1m (Niethammer 1962). – Morea [= Peloponíssos] (no exact loc.) (as *Vespertilio murinus*; Keyserling & Blasius 1839, Blasius 1857). – Griechenland (no exact loc.) (as *Vespertilio murinus*; Blasius 1857, Kolenati 1859).

DISTRIBUTIONAL STATUS (Fig. 8). Our current knowledge based on sparse records in Greece suggest that the Balkan range of this species comprises the whole territory, incl. its offshore islands (Corfu, Lesvos, and Kos). Autentified data are missing from Crete since an old mention by Bate (1905) was in fact reidentified by Miller (1912) as *M. oxygnathus* (= *M. blythii*). In view of the relatively good knowledge of the large bat fauna of that island, we can confidently admit that *M. myotis* does not occur on Crete (contra Güttinger et al. 2001); the same conclusion has already presented by Pieper (1977). Obviously, the present knowledge of the distribution of this species in Greece can serve to precisely define the southern limit of its range in the Balkans even though it may be expected to be found on additional offshore islands in the Ionian and/or Aegean seas. The available records document both the occurrence of single individuals and the presence of large nursery colonies located, as a rule, in underground spaces (caves, galleries). In mainland Greece, *M. myotis* is apparently among the fairly common bat species. External and cranial dimensions of examined specimens of *M. myotis* from Greece are shown in Tab. 2.

Myotis blythii (Tomes, 1857)

RECORDS. **Original data**: A h a i a: Kastría, Limnon cave [1], 17 May 1974: 7fa (MHNG 1713.040–046 [S+A]), 1–2 August 2000: net. 4m, 2f. – É v r o s: Dadiá [2], Tsoutsourou, galleries, 24 July 2000: 41 ind. (cf. Ivanova 2000); – Didimótiho [3], cave 2 km W, 23 June 1989: net. 1ma (NMP 48671 [S+B]); – Koufóvouno [4], 23 June 1989: obs. colony, 22 July 2000: 3m, 1f, 24 s. i. (cf. Ivanova 2000). – F l ó r i n a: Vathóri [5], 2 km E, 12 July 2000: net. 13 ind. – I o á n n i n a: Pápigo [6], cave, 26 Sept 1988: net. 1f (NMP 48580 [S]). – P i e r i á: Prionia [7], waterfall in 1100 m a. s. l., 17 Sept. 1988: net. 1fa (NMP 48559 [S+B]). – R o d ó p i: Marónia [8], Cave of the Cyclops Polyphemos, 25 July 2000: obs. colony. – S é r r e s: Agios Ioannis Prodromos [9], cave Pelade, 17 July 2000: net. 2m, 3f, above river, 17 July 2000: net. 1fs (MHNG 1807.031 [S+A]). – X á n t h i: Kimméria [10], gallery, 16 June 1989: 3ma (NMP 48617, 48618, 48621, 48627 [S+B]), 23 June 1989: net. 1ma (NMP 48674 [S+B]), 20 July 2000: capt. 15 ind. – A e g e a n I s.: Lesvos, Efthalou [11], ancient mine 4 km E, 14 Sept. 2000: net. 1fa, found 1 mummy (MHNG 1807.099 [S+A], 1807.100 [S+humerus]); – Samothráki, Hora (= Samothráki) [12], cave, 10 July 1994: net. 7ma; – Samothráki, Lákkoma [13], cavern, 14–16 July 1994: obs. ca. 25m; – Samothráki, Paleópoli [14], 28 Sept. 1996: remains of 5 ind. in *Tyto alba* pellets (leg. V. Vohralík & D. Frynta). – C r e t e: Áno Viánnos [15], Mt. Kato cave, August 1999: coll. 4fa (MHNG 1807.068, 1807.069, 1808.005, 1808.006 [S+A]); – Górtis [16], labyrinth, 4 ind. (ZIN; cf. Strelkov 1972); – Mílatos [17], cave, 12 May 1955: 2ma, 1fa (MHNG 1713.081–083 [S+A]); – Omalós [18], water cave, 5 August 1971: 5ma, 1fa (WIC I390–395), cave, 12 July 1995: net. 1ma, 1faNL, 2 ind.; – Stavrós (Akrotiri pen.) [19], cave 1, 10 July 1995: net. 6ma, 2fa; – Tzermiádo [20], 18 July 1995: det. 2 ind. – **Published data**: A h a i a: Limnon cave [1], 1 Oct. 1967: 1m, 1f, 17 May 1974: 3m, 24f (Iliopoulou-Georgudaki 1984, 1986); – Patras [= Pátra] [21], 2f (Miller 1912). – A r g o l í d a: Nauplia [= Nafplio] [22], 1 ind. (Miller 1912). – A t t i k í - P i r e á s: Athens [= Athína], Ethnikos Kipos, A'Nekrotafeio [23], 1992–1995: detected calls (Legakis at al. 2000); – Athens [= Athína], Skopeftirio Kaisarianis, Alsos Pangratiou, Arditos [24], 1992–1995: detected calls (Legakis at al. 2000); – Dekélia [= Dekéleia] [25] (Pieper 1978, cf. Winge 1881). – E t o l í a A k a r n a n í a: Horion Monastiráki, resp. Monastiracion [= Monastiráki] [26], 3 June 1964: 3m, 2f (Iliopoulou-Georgudaki 1977, 1984). – É v r o s: Didymotichon [= Didimótiho] [3], cave 3 km WNW, 22 June 1963 (Hurka 1972, cf. Spitzenberger 1996), Didimotichon, 3 August 1971: ca. 800 ind. (Niethammer 1974, Kock 1974), Didymoticho, 12 Sept. 1990: 1 ind. (from owl pellets) (Vohralík & Sofianidou 1992); – Kouvobono [= Koufóvouno] [4], cave, 8–9 June 1965 (Hurka 1972), cave n. Kouvobono, 22 June 1963: 2m, 6f (Spitzenberger 1996, cf. Hurka 1972); – Provatonas river (n. Provató) [27], cave, 21 July 1997: net. 5m (Ivanova 2000); – gallery Saint Barbara I (n. Dadiá) [28], 19 July 1997: 2m, obs. ca. 10 ind. (Ivanova 2000). – F t h i ó t i d a: Lamía [29], 1 ind. (Miller 1912). – I m a t h í a: Náoussa [30], Apano Scala cave, 24 May 1954 [2m (MHNG 1713.095, 1713.096 [S+A])] (Lindberg 1955). – I o á n n i n a: Miliá [= Miléa] [31], N. P. Valia-Calda, Zesto Réma, July 1985: obs. (Tsunis 1987); – Joannina [= Ioánnina] [32], 1 ind. (Felten et al. 1977). – K i l k í s: Kilkís [33], cave Saránta Kámares (resp. Saranta Camares), 3 Sept. 1973: 1f (Iliopoulou-Georgudaki 1977, 1984). – K o r i n t í a: Corinth [= Kórinthos] [34], 7 ind. (5m) (Miller 1912); – Neméa [35], 3 August 1971: mandible (from owl pellets) (Niethammer 1974). – L a k o n í a:

Flomohóri, resp. Flomochorion [36], 20 June 1966: 64f (Iliopoulou-Georgudaki 1977, 1979, 1984, 1986). – S é r r e s: Saint-Jean-le-Prodrome [= Agios Ioannis Prodromos] [9], grotte Pelade, 6 May 1954 [2m (MHNG 1713.093, 1713.094 [S+A])] (Lindberg 1955, Aellen 1955). – T h e s s a l o n í k i: Nimfopetra [= Nimfópetra] [37], 5 May 1977: 1 ind. (from owl pellets) (Pieper 1978). – T r í k a l a: Meteóra [38], 1 ind. (Felten et al. 1977). – X á n t h i: Mándra [39], 1 km S, 28 Sept. 1966: 4m (Spitzenberger 1996, cf. Hurka 1972); – Kimméria [10], galleries, 16 May 1954 [2m, 1 ind. (MHNG 1711.070–072 [S+A])] (Lindberg 1955), Kimméria, 1 km SE, 27 Sept. 1966 (Kock 1974); – Toxotai, resp. Toxotei [= Toxótes] [40], railway tunnel 2 km NW, 20 (resp. 21) Sept. 1966: 7f (Spitzenberger 1996, cf. Hurka 1972). – A e g e a n I s.: Ikariá, Thérma Loutra [41], coppermine Nealia, 17 June 1963: 1f (Laar & Daan 1964); – Kárpathos, Finiki [= Foiníki] [42], 18 June 1935: 1m (Wettstein 1941), Karpathos, 17 April 1965 (Martens 1967); – Lésvos, Míthimna, resp. Mithymna [43], cave, 1 July 1965: 27m, 65f (Iliopoulou-Georgudaki 1977, 1984, 1986); – Lesvos, Polychnitos [= Polihnítos] [44], old mine tunnel, 14 April 1980: 1f (Iliopoulou-Georgudaki 1984), 1m (Iliopoulou-Georgudaki 1986); – Samotracia [= Samothráki], Lakoma [= Lákkoma] [12], cave, 17 August 1984: 1m (Crucitti 1987, 1988). – C r e t e: Haghia Dekka [= Ágioi Déka] [45], Labyrinth, colony (3m, 1f) (Miller 1912, cf. Bate 1905), Aji Deka [= Ágioi Déka], 22 ind. (Pohle 1953), cave Mikró lavyrintháki (resp. Micro Lavyrinthaki), 8 August 1973: 15m, 18f (Iliopoulou-Georgudaki 1977, 1979, 1984); – Ag. Pnevma [46], 5 ind. (from owl pellets) (Pieper 1977); – Aloni [47], 5 ind. (from owl pellets) (Pieper 1977); – Ano Viannos [= Áno Viános] [15], 25 ind. (from owl pellets) (Pieper 1977); – Gortys [= Górtis] [16], 1 ind. (from owl pellets) (Pohle 1953), cf. Gortys, August and Oct. 1942: 4 ind. (from owl pellets) (Uttendörfer 1942); – Platania [48], 3 ind. (from owl pellets) (Pieper 1977); – Sarchos [= Sárhos] [49], 5 ind. (from owl pellets) (Pieper 1977); – Skotino [= Skoteinó] [50], 5 ind. (from owl pellets) (Pieper 1977); – Topólia [51], 21 ind. (from owl pellets) (Pieper 1977). – I o n i a n I s.: Korfu [= Kérkira], Ag. Mathaeos [= Agía Matheos] [52], min. 2 ind. (from owl pellets) (Niethammer 1962); – Petala [= Petalas] [53], cave, 17 July 1956: 3m (Lanza 1957).

DISTRIBUTIONAL STATUS (Fig. 7). The relatively numerous records suggest that this is probably one of the most frequent bat species in Greece, distributed throughout mainland Greece. It is also found on Crete and some Ionian and Aegean islands. Apparently, this is a strictly cavernicolous species, with numerous nursery colonies (sometimes mixed with other species) being confined to rather large caves or man-made underground spaces, including ancient ruins, especially at lower altitudes (the highest record lying ca. 1300 m a. s. l.; Tsunis 1987). External and cranial dimensions of examined specimens of *M. blythii* from mainland Greece are shown in Tab. 2.

TAXONOMIC NOTE. The Greek populations of the *M. myotis-blythii* complex have been evaluated several times. Within a wider taxonomic context the Greek populations were evaluated for the first time by Strelkov (1972) who defined two forms inhabiting the territory of Greece, viz., *M. blythii oxygnathus* (Monticelli, 1885) (terra typica: Matera, S Italy) occupying mainland Greece, and *M. blythii omari* Thomas, 1906 (t. t.: Derbent, central Iran) on Crete. His conclusions have been confirmed by Topál (1971) and Felten et al. (1977) in their analyses. The presence of *M. b. omari* on Crete has been further confirmed by Iliopoulou-Georgudaki (1979). Later, Iliopoulou-Georgudaki (1984) presented a detailed analysis of the population of this species in the whole of Greece. She confirmed the subspecific division of *M. b. oxygnathus* from *M. b. omari*. Moreover, she described the insular population from Lesvos Island as being different, and thus named it *M. blythii lesviacus* Iliopoulou, 1984 (t. t.: Mithymna, Lesvos; loc. No. 43). However, the justification of that form was later questioned (Benda & Horáček 1995a, b, Arlettaz et al. 1997, Topál & Ruedi 2001) as the variation range of cranial dimensions of bats from Lesvos fits with that found in central and south-eastern European populations (see Benda 1996). While there is no doubt that the Lesvos population does not deserve the taxonomic status of a subspecies, some authors do accept it without further comments; see Koopman (1994) and Topál (in Mitchell-Jones et al. 1999). The two subspecies are separately listed in this contribution, the form *M. b. omari* including findings from Crete, and the form *M. b. oxygnathus* comprising all mainland ones. It is obvious that some of the records contained in the literature cannot be as unequivocally separated and that the subspecific status of some of the insular populations is unclear from this point of view (particularly in the Dodecannese group); after measurements given by Laar & Daan (1964), the specimen obtained on Ikaria Island can belong to *M. b. omari*.

Myotis bechsteinii (Kuhl, 1817)

RECORDS. **Original datum**: A r k a d í a: Spátharis [1], creek 4 km S, 24 August 2001: net. 1fa (NMP 49018 [S+A]). – **Published data**: D r á m a: Paranestion [= Paranésti] [2], Loutra Thermia, 20 June 1987: net. 1fa (Helversen & Weid 1990). – I o á n n i n a: betw. Vouliásta and Panagía [3], Loúros river, bunker, 7 August 1976: 3f, 3j, 11 August 1979: nurs. colony, 3f, 2j (Helversen & Weid 1990). – K a r d í t s a: Loutropigí [4], creek valley, 19 May 1989: 1f (Helversen & Weid 1990). – K a s t o r i á: Gavros [5], Ladopotamos river, 17 August 1988: net. 1m (Helversen & Weid 1990). – P r é v e z a: Kleisoura [= Klissoúra] [6], 1978: 1 ind. (Volleth 1987). – T h e s s a l o n í k i: Rendína [7], Volvi-See [= Límni Vólvi lake], plane-tree wood, 17 August 1985: net. 1m (Helversen & Weid 1990); – Stavrós [8], creek in plane-tree wood NW, 10 Sept. 1983: net. 1f (Helversen & Weid 1990).

DISTRIBUTIONAL STATUS (Fig. 9). The presence of *M. bechsteinii* in the Greek territory has been demonstrated by Helversen & Weid (1990) by six records in northern and central Greece. Our record from Arcadia has expanded the known distribution of this species in Greece down to the Peloponnese. These localities complete the hitherto observations from Albania (Uhrin et al. 1996), southern Bulgaria (Hanák & Josifov 1959, Horáček et al. 1974) and Turkish Trace (Kahmann 1962, Benda & Horáček 1998), and thus changes considerably the southern limit of its distribution in the Balkans. However, this is not so surprizing, judging from similar records from southern Turkey

(Helversen 1989b), Sicily and southern Iberia (Mitchell-Jones et al. 1999). Thus *M. bechsteinii* is distributed discontinuously down to southern Europe, yet its distribution may be more patchy in its southernmost parts. As shown by Ibańez et al. (1992), in Iberia this species occurs in the mountains of the southernmost part of the Mediterranean Region. The records in Greece come from the valleys of warm woodlands, from seashores up to higher altitudes (Rhodopi Mts.); a nursery colony was found in an abandoned building in Epirus (Helversen & Weid 1990). The occurrence of this species on Greek islands is hardly probable in view of its habitat preference in mainland Greece. External and cranial dimensions of examined specimen of *M. bechsteinii* from Greece are shown in Tab. 2.

Myotis nattereri (Kuhl, 1817)

RECORDS. **Original data**: A r k a d í a: Vizíki [1], road bridge 1 km S, 25 August 2001: coll. 2ma in male displays (NMP 49019, 49020 [S+A]). – É v r o s: Kírki [2], river 6 km E (Avantas gorge), 21 July 2000: net. 1ma (MHNG 1807.049 [S+A]). – I o á n n i n a: Pápigo [3], cave, 26 Sept. 1988: net. 1m (NMP 48581 [S+B]). – K o r i n t h í a: Arhea Korinthos, Akrokorinthos [4], castle ruins, 30 August 2001: obs. 1 ind. – L a k o n í a: Mistrás [5], ruins of Byzantine town, 27 August 2001: obs. two small colonies, both of 4 ind., and 1 ind. (probably male display) (coll. 2fa, NMP 49024, 49027 [S+A], 2fs, NMP 49025, 49026 [A]). – P i e r i á: Prionia [6], waterfall in 1100 m a. s. l., 17 Sept. 1988: net. 1ms (NMP 48560 [S+B]). – **Published data**: A h a i a: Akráta [7], rocky crevice, 9 August 1964: colony (coll. 15fa) [WIC I328–342 = 1–15/64] (Horáček & Hanák 1984, Helversen & Weid 1989; this locality name was misprinted by Benda & Horáček 1995 as "Aokas"). – F l ó r i n a: Psarádes [8], Prespa-See [= Límni Megali Prespa lake], cave, 3 August 1988: 2f (Helversen & Weid 1990). – K a s t o r i á: "Bergsee im Buchenwald unterhalb" Mt. Epírnó Aréna [9], Grammos Mts., 24 August 1987: net. 1m (Helversen & Weid 1990). – L a k o n í a: Mistrás [5], 20 August 1971: 2m, 1f [WIC I345–347 = 1–3/71] (Helversen & Weid 1989, Benda & Horáček 1995). – T h e s s a l o n í k i: Stavrós [10], plane-tree wood, rock crevice, 5 April 1983: 1m (Helversen & Weid 1990). – I o n i a n I s.: Korfu [= Kérkira], Ag. Mathaeos [= Agía Matheos] [11], 1 ind. (from owl pellets) (Niethammer 1962).

DISTRIBUTIONAL STATUS (Fig. 11). The occurrence of this species in Greece has been demonstrated for the first time by a find of bones in pellets of *Tyto alba* on Corfu (Niethammer 1962) and by the subsequent records by W. Issel (see Hanák & Horáček 1984, Helversen & Weid 1990). Our current records from Greece, together with data from Bulgaria (Horáček et al. 1974), Albania (Uhrin et al. 1996), Rep. of Macedonia (Kryštufek et al. 1998), and Turkish Thrace (Benda & Horáček 1998), have considerably completed the picture of distribution of *M. nattereri* in the Balkans. As expected, the species occurs throughout mainland Greece incl. the Peloponnese; except for Corfu, the species has not yet been documented on islands but its occurrence on some of the offshore ones is probable. The hitherto available data do not permit to evaluate the abundance of this species in Greece, but it appears to be rather scarce but widespread (among the more common constant species) in that region. It is a species broad ecological requirements, occurring in the Mediterranean in most diverse habitat types. External and cranial dimensions of examined specimens of *M. nattereri* from Greece are shown in Tab. 2.

Myotis emarginatus (Geoffroy, 1806)

RECORDS. **Original data**: F o k í d a: Delfí [1], Corycian Grotta, 7 August 1979: 2m (NMW 35454, 35455 [S+B]). – H a l k i d i k í: Petrálona [2], cave, 3 June 1977: 28f (NMW 31359–31386 [S, S+B, S+A]). – S é r r e s: Agios Ioannis Prodromos [3], river n. monastery, 17 July 2000: net. 1fa (MHNG 1807.040 [S+A]). – T h e s s a l o n í k i: Loutrá Thérmis [4], 1f (MA); – Stavrós [5], bunker galleries, 12 July 1979: 8f (NMW 45753–45756 [S+A]; leg. U. Passauer). – X á n t h i: Xánthi, road 8 km NW [6], 17 June 1989: 1faL (NMP 48630 [S+B]). – C r e t e: Haniá [7], 12 August 1971: 1fa (WIC I1608); – Amoudára [8], canyon, remains of 1 ind. in an owl pellet. – **Published data**: A r g o l í d a: Néa Hóra [9], Kinouría, Agía Eléousa, 5f, 6j (= nursery colony) (Iliopoulou-Georgudaki 1977). – A t t i k í - P i r e á s: Athens [= Athína], Akti Kountourioti, Profitis Ilias, Stadio Eirinis & Filias [10], 1992–1995: detected calls (Legakis at al. 2000); – Dekelion [= Dekéleia] [11], 1m (as *Vespertilio ciliatus*) (Winge 1881). – E t o l í a A k a r n a n í a: Paravóla (n. Agrínio) [12], 19 April 1972: 1f (Iliopoulou-Georgudaki 1977). – É v r o s: Avados [= Ávas] [13], cave, 21f (Iliopoulou-Georgudaki 1977); – cave Kamila (n. Dadiá) [14], 24 July 1997: net. 1fL (Ivanova 2000); – Provatóna [= Provató] [15], n. Lefkímni, cave, 28 July 1987: 1f (Crucitti 1988); – Provatonas river (n. Provató) [16], 17 July 1997: 1m, 1f (Ivanova 2000). – F t h i ó t i d a: Ipáti [17], Anemótrypa, 1j (Iliopoulou-Georgudaki 1977); – H a l k i d i k í: Petrálona [2], 25 May 1962 (Kanelli & Hatzisarantou 1963). – P i e r i á: Monastery of St. Dionysios [= Agios Dionissios] [18], Spring 1931: 1fa (in a colony of *R. ferrumequinum*) (Chaworth-Musters 1932). – S é r r e s: Milosavrakhi [19], 15 km NE Sidirókastro, cave inom. II., 11 May 1954 [1 ind. (MHNG 1711.080 [A])] (Lindberg 1955). – T h e s s a l o n í k i: Kato Stavros [5], 1986: 1 ind. (Helversen et al. 2001). – A e g e a n I s.: Ikariá, Thérma Loutra [20], coppermine Nealia, 17 June 1963: 1f (Laar & Daan 1964); – Kárpathos [21] (Pieper 1977). – C r e t e: Sarchos [= Sárhos] [22], 2 ind. (from owl pellets) (Pieper 1977); – Skotino [= Skoteinó] [23], 1 ind. (from owl pellets) (Pieper 1977); – Topólia [24], 6 ind. (from owl pellets) (Pieper 1977). – I o n i a n I s.: Korfu [= Kérkira], Ag. Mathaeos [= Agía Matheos] [25], 1 ind. (from owl pellets) (Niethammer 1962; nevertheless, after description the record is apposite considered of *M. nattereri*).

DISTRIBUTIONAL STATUS (Fig. 10). So far the species has been documented by records from various parts of mainland Greece, Crete and other islands. While no data are available from some regions, one may assume that the species is distributed all over the territory of Greece and is a rather common species, at least in the more humid northern regions, which would correspond with the situation known in the Balkans at present (cf. Mitchell-Jones et

al. 1999). The records from Greece either document the occurrence of that species in caves (sometimes in mixed colonies with *R. ferrumequinum*) or results of nettings or finds in owl pellets.

TAXONOMIC NOTE. Although the geographic variability of the Balkan populations of *M. emarginatus* has not been studied in sufficient detail, they can be ascribed to the nominotypical subspecies, *M. e. emarginatus* (Geoffroy, 1806) (terra typica: Charlemont, France). There are a number of opinions concerning the interspecific variability of this species, referring, above all, to the differences in its coloration (see Benda & Horáček 1998 for a review). For the mainland Greek population, Iliopoulou-Georgudaki (1977) has proposed a subspecific status ("*hellenicus*") although her consideration has never been formalised taxonomically. Since the geographic variability has never been analysed over the whole range of the species, no definitive conclusion can be drawn concerning the Greek populations. External and cranial dimensions of examined specimens of *M. emargi-natus* from Greece are shown in Tab. 2.

Myotis mystacinus (Kuhl, 1817) s. l.

RECORDS. **Original data**: H a l k i d i k í: Halkidikí (no exact loc.), 28 May 1962: 2 ind. (MKB 77.37, 77.38; leg. Wolf); – Metamórfossi [1], river 5 km W, 26 Sept. 1988: net. 2f; – Ormília [2], creek, 14 Sept. 1988: net. 1ms (NMP 48514 [S+B]). – K o r i n t h í a: Antikrion (n. Ríza) [3], rocky crevice, 19 August 1964: 1m (WIC II322). – T h e s s a l o n í k i: Rendína, creek 2 km E [4], 12 Sept. 1988: net. 1f (NMP 48518 [B]). – **Published data**: D r á m a: Angiti [= Angítís] [5], 30 May 1983: 1 ind. (Helversen et al. 2001); – Arkoudoremma [6], 18 August 1997: 2 ind. (Helversen et al. 2001). – É v r o s: Essími [7], 21 August 1984: 1m (Crucitti 1987, 1988); – Mákri [8], 2 km W, 2 Oct. 1966 (Hurka 1972). – I o á n i n a: Vrosina [= Vrossína] [9], 6 Sept. 1997: 1 ind. (Helversen et al. 2001). – K a s t o r i á: Aliakmonas [10], 1m (Benda & Tsytsulina 2000). – I o n i a n I s.: Korfu [= Kérkira], Ag. Mathaeos [= Agía Matheos] [11], 1 ind. (from owl pellets) (Niethammer 1962). – Peloponnisos (no exact loc.), 1 ind. (Helversen et al. 2001).

DISTRIBUTIONAL STATUS (Fig. 12). Since the hitherto records pertain to several taxa of this species (see Taxonomic note) which cannot be unequivocally determined in most cases, they cannot be used to determine the exact distributional status of some of the newly defined forms. However, considering the form *M. mystacinus* sensu lato, one may state that, concerning the number and density of the records, it corresponds with the situation known from the neighbouring Bulgaria (own data) or the Rep. of Macedonia (Kryštufek et al. 1992, 1998). External and cranial dimensions of examined specimens of bats from the *M. mystacinus* group from Greece are shown in Tab. 2.

The territory of Greece lies beyond the known range of *M. brandtii* (Eversmann, 1845). However, records of this species in the Balkans and, above all, in the Bulgarian part of the Rodopi Mts. (Horáček et al. 1974, Ivanova 1998, Tvrtković et al., in press) suggest the probable occurrence of this woodland-inhabiting species in the adjacent mountain ranges in the north of Greece. Most probably, the southern limit of its distribution in the Balkans lies in approximately the same latitudes as that of *M. daubentonii* (cf. Mitchell-Jones et al. 1999, see below).

TAXONOMIC NOTE. The *M. mystacinus* group has been recently thoroughly revised, and this revision has substantially altered our view of the systematics of the whole group in the western Palaearctic and particularly in the Balkans (Benda & Tsytsulina 2000, Helversen et al. 2001). These revisions have revealed the presence of four (instead of two) species of whiskered bat in south-eastern Europe, viz., *M. mystacinus* (Kuhl, 1817), *M. brandtii* (Eversmann, 1845), *M. aurascens* Kusjakin, 1935, and *M. alcathoe* Helversen et Heller, 2001. As stated above, the occurrence of *M. brandtii* in the territory of Greece has not yet been confirmed. But the occurrence of *M. aurascens* in Greece was first suggested by Voleth (1987) in three localities (*Myotis* sp. A), which was subsequently confirmed by Benda & Tsytsulina (2000); additional records of this species in Greece are given below.

According to our present knowledge, the other two forms, *M. mystacinus* and *M. alcathoe*, can hardly be separated on the basis of morphological characters but merely through cytogenetical and ultrasound characters. Helversen et al. (2001) reported four localities where *M. alcathoe* occurs in Greece (see below). Thus, records of *M. mystacinus* s. l., listed in this review, may either pertain to all three forms (viz., *M. mystacinus* s. str., *M. alcathoe*, *M. aurascens*) or to *M. mystacinus* s. str. or *M. alcathoe* in the cases of museum specimens examined (see Fig. 12 and Tab. 2). For that reason, the present distribution of *M. mystacinus* s. str. in Greece or all over the Balkan Peninsula cannot be evaluated, as both *M. mystacinus* s. str. and *M. alcathoe* apparently inhabit the entire south-eastern Europe (see Helversen et al. 2001).

Myotis aurascens Kusjakin, 1935

RECORDS. **Original data**: F l ó r i n a: Papagiannis [1], river, 2 Sept. 2001: net. 1ma (NMP 49044 [S+A]); – Píli [2], 3 km E, 13 July 2000: net. 1ma, 1fa (MHNG 1807.033, 1807.034 [S+A]). – H a l k i d i k í: Metamórfossi [3], river 5 km W, 26 Sept. 1988: net. 1ms (NMP 48517 [S]; cf. Benda & Tsytsulina 2000); – Ormília [4], creek, 14 Sept. 1988: net. 2fa, 1fs (NMP 48512, 48513, 48515 [S+B]; cf. Benda & Tsytsulina 2000). – I l í a: Simopoulo [5], river 2 km W, 23 August 2001: net. 1fs (NMP 49017 [S+A]). – K i l k í s: Mílos [6], 1 km E, 15 July 2000: net. 1ma (MHNG 1807.032 [S+A]). – L a k o n í a: Spárti [7], above the Evrotas river, 17 Sept. 1996: net. 1fs (NMP 48346 [S+A]). – M e s s i n í a: Stoupa (n. Kardamili) [8], 7 July 1991: 1f (NMP 51477; leg. Anděra). – P i e r i á: Prionia [9], waterfall in 1100 m a. s. l., 12 Sept. 1988: net. 1fa (NMP 48516 [S+B]; cf. Benda & Tsytsulina 2000). – T h e s s a l o n í k i: Rendína [10], 1 km E, 28 July 2000: net. 1ma, 1ms, 2fa, 1fs, 1f (coll. 5 ind.,

MHNG 1807.035–039 [S+A]). – C r e t e: Stavrós (Akrotiri pen.) [11], cave, 10 July 1995: net. 1ma (NMP 48345). – **Published data**: D r á m a: Arkoudorema river [12], 1m (Benda & Tsytsulina 2000); – Neglei [13], 1f (Benda & Tsytsulina 2000). – H a l k i d i k i: Gerakini [14], 1985: 1f (Volleth 1987); – Marathoússa [15], 1 ind. (Benda & Tsytsulina 2000). – K a s t o r i á: Gramos [16], 20 August 1982: 2m (Benda & Tsytsulina 2000, cf. Helversen et al. 2001); – Nestorio [17], Aliakmonas river, 1f (Benda & Tsytsulina 2000, cf. Volleth 1987); – Pevkos [= Péfkos] [18], 1982: 2m (Volleth 1987). – K i l k í s: Metalion [= Metalliko] [19], 1f (Benda & Tsytsulina 2000). – P i e r i a: Néa Agathoúpolis [20], 1981: 1f (Volleth 1987).

DISTRIBUTIONAL STATUS (Fig. 4). Since *M. aurascens* can be well distinguished from the remaining forms of the *M. mystacinus* group with aid of the morphological characters (Benda & Tsytsulina 2000), we revised museum specimens when possible. In the whole territory of Greece, 20 localities of *M. aurascens* have been successfully established on the grounds of that revised material. These records come only from the northernmost (Macedonia) and southernmost (Peloponnese, Crete) parts of Greece. This wide span, however, suggests that the species occurs throughout the territory of Greece, from seashores up to moderate elevations (Lake Prespa, ca. 850 m a. s. l., Olympus Mts., ca. 1100 m a. s. l.). As stated by Benda & Tsytsulina (2000), *M. aurascens* seems to be the most abundant form of the *M. mystacinus* group in the Balkans, co-occurring with the remaining species at a 2:1 ratio (or even 3:1 in some of the localities).

Myotis alcathoe Helversen et Heller, 2001

RECORDS. **Published data**: D r a m a: Nestos river [1], n. Loutra Thermia, 2 Sept. 1997: 1 ind. (Helversen et al. 2001); – Skaloti [2], Sept. 1985: 1m (Volleth 1987, Helversen et al. 2001). – E v r i t a n í a: Kleistos [= Klistó] [3], Fournikos river, 14 August 1981: net. 1ma (SMF 90249, holotype; Helversen et al. 2001, cf. Volleth 1987). – K a r d í t s a: Loutropygi [= Loutropigí] [4], 5 June 1991: 1 ind., 17 June 1992: nurs. colony (3fa, 2j), net. 3 fa (paratype series; Helversen et al. 2001).

DISTRIBUTIONAL STATUS (Fig. 12). Helversen et al. (2001) report the occurrence of this newly defined species in two localities in eastern Macedonia and two localities in central Greece. All these records come from mountain regions (Pindus Mts., Rodopi Mts.), suggesting that *M. alcathoe* may not be a strictly Mediterranean element, as can be concluded from the regions in which it had been discovered, and that it might occur even in more northern regions of the Balkans (two genetically confirmed records from the mountains in the north of Hungary, see Helversen et al. 2001). According to Helversen et al. (2001), *M. alcathoe* inhabits, in Greece, narrow humid valleys grown with dense vegetation and with the presence of streams; the only maternity colony was found in a fissure in a plane-tree trunk.

Myotis daubentonii (Kuhl, 1817)

RECORDS. **Original datum**: T h e s s a l o n í k i: Rendína [1], creek 2 km E, 12 Sept. 1988: net. 1fs (NMP 48552 [S+B]), 1 km E, 28 July 2000: net. 2ma (MHNG 1807.044, 1807.045 [S+A]). – **Published data**: D r á m a: Dipotáma [2], Arkoudorema river, 30 August 1987: net. 1m, 2 Sept. 1987: net. 1m (Helversen & Weid 1990). – F l ó r i n a: Psarádes [3], Prespa-See [= Límni Megali Prespa lake], 15 and 18 August 1987: net. 21 ind., obs. hundreds ind., cave, 3 and 14 August 1988: net. 42 ind., obs. nurs. colony (Helversen & Weid 1990). – K a s t o r i á: Gavros [4], Ladopotamos river, 17 August 1988: net. 1m, 1f (Helversen & Weid 1990); – "Bergsee im Buchenwald unterhalb" Mt. Epírnó Aréna [5], Grammos Mts., 24 August 1987: net. 1m (Helversen & Weid 1990); – Pevkos [= Péfkos] [6], Aliakmon [= Aliákmonas] river, 21 August 1982: net. 1m, 22 August 1987: net. 1m (Helversen & Weid 1990, cf. Volleth 1987, Bogdanowicz 1990). – T h e s s a l o n í k i: plane-tree wood and creek between Rendína and Stavrós [1], 5 April 1983: obs., 13 days in 1983–1988: obs., net. several ind. (Helversen & Weid 1990); – Kato Stavros [7], 1983: 2m, 1f (Volleth 1987), Stavros, 4 ind. (Bogdanowicz 1990).

DISTRIBUTIONAL STATUS (Fig. 6). Helversen & Weid (1990) have published the first six records of this species in Greece; our own ones only supplement their data. The species is distributed over the northern regions of Greece (Macedonia, Epirus) where it is found in woodland, near lakes and streams at various elevations (from the seashore up to mountain regions); it may be very abundant locally (environs of Prespa lakes, Lake Volvi). At the same time, the current records from Greece, together with those from south-eastern Albania (Uhrin et al. 1996), the Rep. of Macedonia (Kryštufek et al. 1992) and Turkish Thrace (Benda & Horáček 1998) serve to precise the known limit of the range of this species in the Balkans, which, along much the same latitude, continues further to the east in Turkey (Helversen 1989b, Benda & Horáček 1998). In line with this observation, Uhrin et al. (1996) suggest that the known trend of increased abundance of this species in Europe may be also apparent at the southern limit of its range, or may be due to a shift of its range forwards the south. This, however, can hardly be demonstrated due to the lack of historical data. External and cranial dimensions of examined specimen of *M. daubentonii* from Greece are shown in Tab. 2.

TAXONOMIC NOTE. The analyses of geographic variability of *M. daubentonii*, available so far (Hanák & Horáček 1984, Bogdanowicz 1990, 1994), have included the Balkan populations into the subspecies *M. d. daubentonii* (Kuhl, 1817) (terra typica: Hanau, Germany). Nevertheless, Bogdanowicz (1990) states that the populations inhabiting the Pindus Mts. exceed the general cline shift of metrical characters in Europe from the south-west to the north-east (in

agreement with Bergmann's rule), the specimens being larger than those from the neighbouring lowland populations. The same difference has been observed by Helversen (1989b) and Helversen & Weid (1990) who have completed the description of this species by showing differences in coloration (the mountain specimens being darker in colour than the lowland ones). Although the different phenotype and thus also the possible different status of the southern marginal populations of *M. daubentonii* had already been pointed out by Hanák & Horáček (1984), the situation has not yet been reliably analysed.

Myotis capaccinii (Bonaparte, 1837)

RECORDS. **Original data**: A h a i a: Kastría, Limnon cave [1], 17 May 1974: 2m (MHNG 1711.055, 1711.056 [A]), 1–2 August 2000: net. 1m. – É v r o s: Dadiá [2], Tsoutourou, galleries, 24 July 2000: 15 ind.; – Didimótiho [3], cave, 22 June 1989: net. 1mj, 1fa, 5fL (NMP 48658–48664 [S+B]), 21 June 1994: obs. 2 ind., 22 July 2000: obs. colony; – Kírki [4], river 6 km E, 21 July 2000: net. 1m. – G r e v e n á: Dímitra [5], a river 3 km E, 1 Sept. 2001: det. min. 1 ind. – I o á n n i n a: Kleidoniá [6], Voidomatis river, 27 Sept. 1988: net. 3ms, 1f (NMP 48582–48584, 48616 [S+B]). – K a s t o r i á: Kría Nerá [7], river, 4 Sept. 2001: net. 1ma (NMP 49048 [S+A]). – M e s s i n i á: Tzánes [8], river 2 km NW, 26 August 2001: net. 1fs (NMP 49023 [A]). – R o d ó p i: Marónia [9], creek 2 km SW, 19 June 1989: net. 6ms, 4fa (NMP 48647–48656 [S+B]); Cave of the Cyclops Polyphemos, 25 July 2000: obs. colony. – S é r r e s: Agios Ioannis Prodromos [10], cave Pelade, 17 July 2000: capt. 2f. – X á n t h i: Kimméria [11], gallery, 16 June 1989: net. 1 fa (NMP 48626 [S]), 20 July 2000: capt. 10 ind. (incl. 1f). – A e g e a n I s.: Thássos, Skála Potamiá [12], sea shore, 18 July 1994: det. 1 ind. of *M.* cf. *capaccinii*; Thassos, 1 ind. (MKB). – **Published data**: E t o l í a A k a r n a n í a: Monastiráki [13], cave Somittou, 4m, 24f (Iliopoulou-Georgudaki 1977). – É v r o s: cave Bouba Lefkimis (n. Lefkimmi) [14], 24 July 1997: obs. nurs. colony of ca. 100 ind. (Ivanova 2000); – Diavolorema river (n. Dadiá) [15], 22 July 1997: net. 1mj (Ivanova 2000); – Didymotichon, resp. Didimotichon [= Didimótiho] [3], cave, 3 July (August) 1971: ca. 100 ind. (Niethammer 1974, Kock 1974), Didymotichon, 3 km WNW, 22 June 1963 (Hurka 1972); – Kouvobono [= Koufóvouno] [16], cave, 8–9 June 1963 (Hurka 1972), cave Coufovouno, 23 July 1997: obs. nurs. colony of ca. 300 ind. (Ivanova 2000); – gallery Tsoutourou II (n. Dadiá) [2], 22 July 1997: obs. nurs. colony of ca. 100 ind. (Ivanova 2000). – I l í a: Kaiaphas-See [= Kaiáfas] [17], 6 July 1995: an ind. (Spitzenberger & Helversen 2001). – I m a t h í a: Náoussa [18], Grotte de Paparados, resp. de Paparadon, 24 May 1954 [3f (MHNG 1711.001, 1711.002, 1711.077 [A])] (Lindberg 1955, Aellen 1955). – L a k o n í a: Githion [= Githio] [19] (Spitzenberger & Helversen 2001). – S é r r e s: Levkón [= Lefkonas] [20], 1m (Iliopoulou-Georgudaki 1977). – T h e s s a l o n i k i: Kato Stavros [21], 1983: 1m (Volleth 1987). – A e g e a n I s.: Samos [22] (Spitzenberger & Helversen 2001); – Thássos, Panagiá [23], Drakotrypa cave, 16 July 1963: 1m (Laar & Daan 1964). – C r e t e: Piskokéfalo [24], 21 May 1960: 2 ind. (Kock 1974, cf. Kahmann & Çaglar 1960). – I o n i a n I s.: Petala [= Petalas] [25], cave, 17 July 1956: 8m, 17f (Lanza 1957). – Thrazien (no exact loc.), 29 April 1973 (Kock 1974).

DISTRIBUTIONAL STATUS (Fig. 13). The records of this species from various parts of Greece incl. Crete, presented above, are supplemented by those of Helversen (in Mitchell-Jones et al. 1999), above all, from Peloponnese, Epirus and eastern Macedonia. Thus, the whole of Greece incl. Crete can be considered to be a part of the range of this species. Records from the north of Greece (Epirus, Macedonia) make a continuity those from Albania, the Rep. of Macedonia, Bulgaria, and Turkish Thrace (Uhrin et al. 1996, Kryštufek et al. 1992, Benda & Horáček 1998, own data); altogether, they bring important knowledge of the distribution of this little known bat species in the Balkan region. Consequently, the range of this species reaches farther to the north up to Slovenia, Croatia, Serbia and to the south of Romania (Mitchell-Jones et al. 1999). At the same time, *M. capaccinii* is sympatric with the ecologically similar species, *M. daubentonii*, in a zone at least 500 km wide (in Greece, at least, in Epirus, Macedonia and Thrace). *M. capaccinii* posseses a typical Mediterranean distribution (S Europe, Turkey, the Near East, NW Africa). According to our experience, *M. capaccinii* is in Greece a strictly cavernicolous species that forms relatively large colonies (both nursery and wintering), often mixed together with other bat species (*Rhinolophus* spp., *Miniopterus schreibersii*, large *Myotis* ssp., etc.), for example in the cave near Didimotiho (Thrace). External and cranial dimensions of examined specimens of *M. capaccinii* from Greece are shown in Tab. 2.

TAXONOMIC NOTE. Some recent authors, e.g. Koopman (1994) and Guillén (in Mitchell-Jones et al. 1999) acknowledge the validity of the subspecies *M. capaccinii bureschi* (Heinrich, 1936) (terra typica: Karamlek, Strandja Mts., E Bulgaria) for the populations inhabiting the eastern part of the range, from the Balkans down to Mesopotamia. This form, however, shows no metric differences from the nominotypical one (see Albayrak 1990) and its status is based on a different coloration of its pelage (the specimens from the eastern populations being described as paler in colour). Validity of these differences as well as the metric ones, however, should be revised over the whole range of this species. Until then, we prefer to include the Balkan population in the nominotypical subspecies, *M. c. capaccinii* (see Corbet 1978, Spitzenberger & Helversen 2001).

Vespertilio murinus Linnaeus, 1758

RECORDS. **Original data**: P i e r i á: Prionia [1], waterfall in 1100 m a. s. l., 17 Sept. 1988: net. 1m (NMP 48557 [S+B]). – **Published data**: D r á m a: Angitis river [2], 13 km SW of Dráma, 2–3 Sept. 1984: net. 2m (Weid 1988, cf. Volleth 1987); – E of Dipotáma [3], 400–1400 m a. s. l., 1987, det. & obs. on 4 places (Weid 1988); – E of Livaditis [4], 1200–1400 m a. s. l., 1986, det. & obs. on 6 places (Weid 1988); – Kentriki-Rodopi reserve [5], 1984, det. & obs. on 4 places (Weid 1988). – X á n t h i: Mondra, resp. Mandra [= Mándra] [6], 27 Sept. 1966: 1f (Iliopoulou-Georgudaki 1977, Weid 1988). – A e g e a n I s.: Euboea [= Évia] [7] (as *Meteorus discolor*; Lindermayer 1855, Kolenati 1859).

DISTRIBUTIONAL STATUS (Fig. 13). The occurrence of this species in the Balkans was long considered doubtful (Laar & Daan 1964, Pieper 1966) although there was an old report of Lindermayer (1855) from Euboea Island as well as a more recent one from the present territory of the Rep. of Macedonia (Karaman 1931). The doubts have not been removed until the findings made in Bulgaria (Hanák & Josifov 1959) and new Greek records by Bauer and later also by Weid (Iliopoulou-Georgudaki 1977, Weid 1988), supplemented by our own autumn record from the Olympus Mts. (1100 m a. s. l.). External and cranial dimensions of examined specimen of *V. murinus* from Greece are shown in Tab. 3.

Thus the present review of records from Greece seems to confirm the regular occurrence of *V. murinus* in the Greek Rodopi Mts. as well as the presence of occasional individuals in central Greece (Olympus Mts., Euboea Is.). In particular, its fairly common occurrence in woodland landscape in the Greek Rodopi Mts. connects with similar localities in the south of Bulgaria and integrates records at similar latitudes in the Rep. of Macedonia (Kryštufek et al. 1992), Albania (Uhrin et al. 1996) and Turkey (Benda & Horáček 1998). Since all known records have been made in autumn and the species is known to be among those performing long-distance migrations, it appears more correct to interpret, all available records as migrations from more northern populations to their hibernacula in the south (see Strelkov 1997a, b), or as the permanent occurrence of males south of breeding areas (cf. our find of a large summer colony of males in the roof panelling of a gamekeeper's lodge in the Pirin Mts., Bulgaria, in ca. 1230 m a. s. l., on 10 July, 1976). However, one cannot rule out a permanent population and reproduction of the species in the wooded areas in northern Greece.

Eptesicus serotinus (Schreber, 1774)

RECORDS. **Original data**: F l ó r i n a: Papagiannis [1], river, 2 Sept. 2001: det. min. 2 ind. – F t h i o t i d a: Kombotádes [2], above the Sperhiás river, 9 Sept. 1996: net. 1fa (NMP 48723 [S+A]). – R o d ó p i: Marónia [3], creek 2 km SW, 19 June 1989: 1ma (NMP 48646 [S]). – S é r r e s: Agios Ioannis Prodromos [4], river n. monastery, 17 July 2000: net. 1m. – V i o t í a: Aráhova [5], Corycian cave, 31 July 2000: net. 3m (coll. 1ma, MHNG 1807.065 [S+A]). – X á n t h i: Galáni [6], cave, 23 June 1989: net. 9fG (NMP 48679–48687 [S+B]). – A e g e a n I s.: Lesvos, Vassiliká [7], ancient mine 5.5 km E, 13 Sept. 2000: net. 1ma (MHNG 1808.004 [S+A]); – Samothráki, Paleópoli [8], 28 Sept. 1996: remains of 5 ind. in *Tyto alba* pellets (leg. V. Vohralík & D. Frynta); – Samothráki, Thérma [9], 13 July 1994: det. 1 ind. – **Published data**: A h a i a: Patras [= Pátra] [10], 10f, 4 ind. (Miller 1912), 5 June 1908 (Hopkins & Rotschild 1956). – A t t i k í - P i r e á s: Athens [= Athína], Skopeftirio Kasarianis, Alsos Pangratiou, Ardittos [11], 1992–1995: detected calls (Legakis at al. 2000); – Athens [= Athína], Polemiko Mouseio, Zappeio, Evangelismos [12], 1992–1995: detected calls (Legakis at al. 2000); – n. Athens [= Athína] [13], 1f (Miller 1912); – Dekelion [= Dekéleia] [14], 3m, 1f (Winge 1881). – É v r o s: Dadia Forest Reserve [15] (Adamakopoulos et al. 1995); – Diavolorema river (n. Dadiá) [16], 19 July 1997: net. 1fL (Ivanova 2000); – cave Kamila (n. Dadiá) [17], 24 July 1997: net. 1m (Ivanova 2000); – Provatonas river (n. Provató) [18], 21 July 1997: net 1fL, obs. nurs. colony of ca. 20 ind. (Ivanova 2000). – H a l k i d i k i: Marathoússa [19], 1982: 1m (Volleth 1987). – T h e s s a l o n í k i: Thessaloníki [20], 17 ind. (Iliopoulou-Georgudaki 1977). – A e g e a n I s.: Eubća [= Évia] [21] (Lindermayer 1855, Kolenati 1859); – Sámos [22], individuals (Helversen 1998); – Skyros [= Skíros] [23], 2 ind. (Pohle 1953). – C r e t e: Ag. Pnevma [24], 2 ind. (from owl pellets) (Pieper 1977); – spring in valley n. Samariá (n. Omalós) [25], 16 June 1942: 1 ind. (Pohle 1953); – Skotino [= Skoteinó] [26], 1 ind. (from owl pellets) (Pieper 1977); – Topólia [27], 2 ind. (from owl pellets) (Pieper 1977). – I o n i a n I s.: Korfu [= Kérkira], Ag. Mathaeos [= Agía Matheos] [28], 1 ind. (from owl pellets) (Niethammer 1962). – Peloponnese (no exact loc.), individuals (Helversen 1998).

DISTRIBUTIONAL STATUS (Fig. 9). Review of records from various regions of mainland Greece, Corfu, Crete and two Aegean islands suggests that the whole region is part of the range of this species. Helversen (in Mitchell-Jones et al. 1999) adds further records made, above all, in Epirus, Macedonia and Peloponnese. Thus the occurrence in Greece connects continuously with the documented range of the species in the neighbouring countries (see Mitchell-Jones et al. 1999, etc.). Comparing the number of localities in Greece with those in the neighbouring countries, the overall abundance could seem to be lower in Greece; the differences, however, are probably due to different intensity of investigations carried out in the different countries. Even in this region this species can be described as common, confined to both karstic or mountain areas and to cultivated landscape including human settlements. External and cranial dimensions of examined specimens of *E. serotinus* from Greece are shown in Tab. 3.

Eptesicus (*bottae*) *anatolicus* Felten, 1971

RECORDS. **Published data**: A e g e a n I s.: Rhodos [= Ródos], Charaki Bay, estuary of Makaris creek, 1 Sept. 1996: det. (Helversen 1998); – Rhodos [= Ródos], Gaiduras creek, bridge n. Agiós Georgiós Loryma, 7–10 Sept. 1996: 1 ind. (Helversen 1998); – Rhodos [= Ródos], Kiotari, sea shore, 3 Sept. 1996: det. (Helversen 1998); – Rhodos [= Ródos], Kolímbia, sea shore, 9 Sept. 1996: det. (Helversen 1998); – Rhodos [= Ródos], Lachania [= Lahania], shore, 7 Sept. 1996: det. (Helversen 1998); – Rhodos [= Ródos], Lárdos Bay (S Lindos), creek estuary, 4 Sept. 1996: net. 5fa (Helversen 1998); – Rhodos, resp Rhodes [= Ródos], Sálakos, creek, 10 Sept. 1996: net. 1m (Helversen 1998, Volleth et al. 2001).

DISTRIBUTIONAL STATUS. This Asian species appears in the list of Greek fauna thanks to the records on Rhodes Island (Helversen 1998). Therefore, it has been considered a member of European bat fauna from a political point of view, while its characteristic Asian range is not questioned. In view of the known range in the western part of Asia

Minor (Spitzenberger 1994), however, finding *E*. (*b*.) *anatolicus* on the adjacent Greek islands (Chios, Samos, Kos, Kostellorizo, Karpathos, etc.) cannot be ruled out (see Pieper 1966).

TAXONOMIC NOTE. The individuals found on Rhodes Island belong to the Asia Minor population, that is, to the form denoted as *E*. *bottae anatolicus* Felten, 1971 (terra typica: Alanya, SW Turkey) (Harrison 1975, Nader & Kock 1990, Koopman 1994, Mitchell-Jones et al. 1999). As concerns records of *E*. *b*. *anatolicus* on Rhodes Island, Helversen (1998) considers possible conspecificity of the North African form denoted as *E*. *serotinus isabellinus* (Temminck, 1840) (t. t.: environs of Tripoli, Libya) and the form *E*. *bottae*. This opinion, which is not new (see Hanák & Elgadi 1984 for a review), deserves attention and, beyond doubt, it is necessary to thoroughly revise the pertinence of merging the two forms into a single species (in which case the name *isabellinus* would have priority). At this point, however, further doubts can be casted, as the bat faunae of NW Africa and the Middle East share only few identical elements of the Mediterranean arboreal. According to our own observations, the parapatric occurrence of several forms has been found in several places in the Middle East, where two forms are included in a single species, *E*. *bottae* (Peters, 1869): *E*. *b*. *anatolicus* and *E*. *b*. *hingstoni* Thomas, 1919 (t. t.: Baghdad, Iraq) in western Syria, or *E*. *b*. *anatolicus* and *E*. *b*. *taftanimontis* Rougin, 1987 (t. t.: Mt. Taftan, Irani Baluchestan) in eastern Iran. The form *anatolicus* distinctly differs from the two remaining ones ecologically (being a species of the Mediterranean arboreal, while the remaining ones live exclusively in deserts), as well as metrically and in coloration (*anatolicus* being larger and darker). Considering the marked differences in many respects, *E*. (*b*.) *anatolicus* cannot be mistaken for the adjacent forms and, at the same time, it is distributed close to the adjacent desert forms, it is justified to consider *E*. *anatolicus* to be an independent species which should be distinct from *E*. *bottae*. This problem will be discussed in details in a fothcoming contribution.

Hypsugo savii (Bonaparte, 1837)

RECORDS. **Original data**: A r k a d í a: Eleohóri [1], valley 3 km S, 28 August 2001: det. min. 3 ind. – A t t i k í - P i r e á s: Athína, Likavitos hill [2], 9–11 Oct. 2000: det. several ind. – F o k í d a: Delfí [3], 22 Sept. 1988: det. 1 ind. – H a l k i d i k í: Petrálona [4], cave, 5–8 Oct. 2000: det. several ind. – I l í a: Arhea Olympia [5], ruins, 24 August 2001: obs. 1 ind. – I o á n n i n a: Pápigo [6], cave, 26 Sept. 1988: net. 1ms (NMP 48577 [S+B]); Pápigo, above creek, 25 Sept. 1988: net. 1ma (NMP 48571 [S+B]). – K a r d í t s a: Anthiro [7], Tavropos river, 31 August 2001: det. min. 3 ind., net. 1ma (NMP 49029 [S+A]). – K i l k í s: Mílos [8], 1 km E, 15 July 2000: net. 1fs (MHNG 1807.061 [S+A]). – K o r i n t h í a: Antikrion (n. Ríza) [9], 19 August 1964: 1f (WIC 701). – L a k o n í a: Githio, rocky crevice 5 km NE [10], 1f (WIC 706); – Polidroso [11], mountain plateau 2 km S, 27 August 2001: det. min. 2 ind. – M e s s i n í a: Néo Proástio [12], cave, 12 Sept. 1996: net. 1ma (NMP 48730 [S+A]); – Trahíla [13], cave, 13 Sept. 1996: net. 1ms, 1fa (NMP 48732 [S+A]). – P i e r i á: Agios Dionissios [14], 15 August 1930: 1 ind. (ZMMU 35110, leg. Grebenščikov), 15 August 1931: 1 ind. (ZIN 622); – Paralía Skotínas [15], beach, 19 Sept. 1988: net. 1ms (NMP 48565 [S+B]). – S é r r e s: Agios Ioannis Prodromos [16], river n. monastery, 17 July 2000: net. 5m, 2f (coll. 1fs, MHNG 1807.063 [S+A]). – T h e s s a l o n í k i: Rendína [17], 1 km E, 28 July 2000: net. 1m. – T h e s p r o t í a: Asprokklíssi [18], above pool, 1 July 1989: net. 2fa (NMP 48701, 48702 [S+B]). – T r í k a l a: Meteóra [19], Agia Triada monastery, 3 Sept. 1988: det. 1 ind. – V i o t í a: Aráhova [20], Corycian cave, 31 July 2000: net. 5m (coll. 1ma, MHNG 1807.062 [S+A]). – X á n t h i: Galáni [21], cave, 23 June 1989: net 1fG (NMP 48678 [S+B]). – A e g e a n I s.: Samothráki, Hora (= Samothráki) [22], 10–11 July 1994: det. 1 ind.; – Thássos, Arhangélou monastery [23], spring 1 km W, 26 June 1989: net. 1fL (NMP 48696 [S]); – Thássos, Panagiá [24], Dracotrypa cave, 24 June 1989: net. 1ms, 1ma (NMP 48689, 48690 [S+B]); – Thássos, Theologos [25], above creek, 25 June 1989: net. 3ma, 1fG (NMP 48691–48694 [S+B]); – Thíra, Périssa [26], 11 Oct. 2000: det. 2 ind. – C r e t e: Agía Roúmeli [27], a rocky cliff, 14 July 1995: det. 1 ind.; – Amoudára [28], cave, 8 July 1995: det. 1 ind., rocky canyon, 7 July 1995: det. 1 ind.; – Geráni [29], rocky canyon, 16 July 1995: det. 1 ind.; – Koma lake [30], SW shore (n. Hania), 1 ind. (BMNH); – Xylóskalo n. Omalós [31], cave, 13 July 1995: det. 1 ind. – **Published data**: A h a i a: Kastrítsi, resp. Kastrithi [32], 10 Oct. 1972: 1m, resp. 2m, 1f (Iliopoulou-Georgudaki 1977, 1985). – A t t i k í - P i r e á s: Dekelion [= Dekéleia] [33], 2m, 4f (as *Vesperugo maurus*) (Winge 1881). – É v r o s: Diavolorema river (n. Dadiá) [34], 19 July 1997: 1mj, 2fj (Ivanova 2000); – cave Kamila (n. Dadiá) [35], 24 July 1997: 6m, 1mj (Ivanova 2000); – Provatonas river (n. Provató) [36], 21 July 1997: 2mj, 4fj (Ivanova 2000). – I o á n n i n a: Miliá [= Miléa] [37], N. P. Valia-Calda, Zesto Réma, July 1985: obs. (Tsunis 1987). – P i e r i á: Monastery of St. Dionysios [= Agios Dionissios] [14], first half of May 1931: 8m, 3f, 1 ind. (coll. 3m, 1f) (Chaworth-Musters 1932). – A e g e a n I s.: Amorghos [= Amorgós] [38], August 1932: 1 ind. (Wettstein-Westersheim 1933); – Euboea [= Évia] [39] (Lindermayer 1855, Kolenati 1859); – Karpáthos [40] (Pieper 1977), an individual (Helversen 1989); – Rhodos [= Ródos], Prof. Ilias [= Profítis Ilías] [41], 1983: 1m (Volleth 1987), Rhodos [= Ródos], an individual (Helversen 1989b). – C r e t e: Ano Viannos [= Áno Viános] [42], 1 ind. (from owl pellets) (Pieper 1977); – Ádrianos [43], Átziganóspelos cave, 10 Sept. 1974: 1f (Iliopoulou-Georgudaki 1977, 1985); – Nerokoúros cave [44], 1m, 2f (Iliopoulou-Georgudaki 1977); – Sarchos [= Sárhos] [45], 5 ind. (from owl pellets) (Pieper 1977); – Zarós Eracleion [46], 5 May 1975: 1m (Iliopoulou-Georgudaki 1985).

DISTRIBUTIONAL STATUS (Fig. 14). According to the distribution and fairly large number of records from both mainland and insular Greece, the range of *H*. *savii* can be described as covering the whole territory of Greece. Moreover, it is a relatively common species inhabiting various habitat types from lowlands up to mountain localities (Olympus Mts., 1100 m a. s. l., Parnonas Mts., 1100 m a. s. l., Pindus Mts., 1200 and 1300 m a. s. l.). The species has been most frequently captured in karstic areas, rocky habitats, stream canyons, and near human settlements. A similar situation has been found in adjacent countries, above all, the thoroughly investigated Bulgaria (own data) or Rep. of Macedonia (Kryštufek et al. 1992, 1998, Stojanovski 1994), but no records are still available from Turkish Thrace. External and cranial dimensions of examined specimens of *H*. *savii* from Greece are shown in Tab. 3.

Pipistrellus pipistrellus (Schreber, 1774) s. l.

RECORDS. **Original data**: F t h i o t i d a: Kombotádes [1], above the Sperhiás river, 9 Sept. 1996: net. 2ma, 5fa (NMP 48716–48722 [S+A]). – G r e v e n á: Dímitra [2], a river 3 km E, 1 Sept. 2001: net. 1ms, 1fs (NMP 49040, 49041 [S+A]). – H a l k i d i k í: Ágios Pródromos [3], 1 km W, 13 Sept. 1988: net. 1fa (NMP 48553 [S+B]); – Ormília [4], creek, 14 Sept. 1988: net. 1f (NMP 48556 [S+B]). – I o á n n i n a: Aidonóhori (2 km W of Melissópetra) [5], Aóos river, 28 Sept. 1988: net. 2ma (NMP 48588 [S+B], 48589 [S]); – Ioánnina, Límni Pamvotis lake, Pantelemon I. [6], 22 April 1996: net. several individuals; – Kleidoniá [7], Voidomatis river, 27 Sept. 1988: net. 2f (NMP 48586, 48587 [S+B]). – L a k o n í a: Spárti [8], above the Evrotas river, 16 Sept. 1996: net. 1ma (NMP 48738 [S+B]). – P i e r i á: Agios Dionissios (n. Litóhoro, Olympos Mts.) [9], 15 August 1931: 1 ind. (ZIN 664) – Paralía Skotínas [10], plane-tree line, 22 July 1992: det. min 1 ind. of *P. pipistrellus* s. l. (leg. J. Gaisler). – P r é v e z a: Mesopótamo [11], water canal, 2 July 1989: net. 1m, 1f (NMP 48707, 48708 [S+B]). – T r í k a l a: Meteóra [12], Agía Triada monastery, 24 Sept. 1988: net. 1ms (NMP 48570 [S+B]). – X á n t h i: Xánthi, road 8 km NW [13], 17 June 1989: net. 1ma (NMP 48628 [S+B]). – A e g e a n I s.: Ándros [14], 1 ind., BMNH (leg. Mattaz); – Samothráki, Thérma [15], 13 July 1994: det. 1 ind.; – Skíathos [16], Kapriso, 18 Oct. 1973: 1f (SMF 45212); – Thássos, Panagiá [17], 17 July 1994: det. 1 ind.; – Thássos, town of Thássos [18], ancient Agora, 27 June 1989: net. 1ma (NMP 48700 [S+B]). – C r e t e: Agía Roúmeli [19], in a village, 14 July 1995: det. ca. 20 ind. *P.* cf. *pipistrellus* s. l.; – Psihró [20], village, 19 July 1995: det. 1 ind. *P. pipistrellus* s. l. – **Published data**: A r k a d í a: Karítaina, resp. Corytaena [21], 6 July 1967: 2f, 1j, resp. 12f (Iliopoulou-Georgudaki 1977, 1985); – Kinuría, resp. Kinourias [22], Néa Hóra, cave Agía Eleoússa, resp. Agias Eleusis, 15 August 1972: 1m (Iliopoulou-Georgudaki 1977, 1985). – A t t i k í - P i r e á s: Athens [= Athína] [23], 1 ind. (Miller 1912), bei Athen [= Athína], April 1901: 1m, 1f (Wettstein 1941); – Dekelion [= Dekéleia] [24], 11m, 54f (Winge 1881); – Kephissia [= Kifissiá] [25], 1m, 3f (Miller 1912); – Tatoi n. Athens [= Athína] [*26*], 11 ind. (3f) (Miller 1912). – D r a m a: Skaloti [27], 1985: 1m (Volleth 1987). – E t o l í a A k a r n a n í a: Akarnania (no exact loc.), 1894: 1fa (Bolkay 1926); – Evinohóri, resp. Evinochori (n. Messolóngi) [28], 12 May 1972: 3f, resp. 1f (Iliopoulou-Georgudaki 1977, 1985); – Xeromeron [= Xiromeno] [29], 12 Sept. 1974: 2f (Iliopoulou-Georgudaki 1985). – É v r o s: Alexandroupoli [30] (Kanneli & Hatzisarantou 1963); – Dadia Forest Reserve [31] (Adamakopoulos et al. 1995); – Diavolorema river (n. Dadiá) [32], 22 July 1997: net. 1m (Ivanova 2000); – cave Kamila (n. Dadiá) [33], 24 July 1997: net. 1m (Ivanova 2000); – Provatonas river (n. Provató) [34], 21 July 1997: net. 3m (Ivanova 2000). – F t h i o t i d a: Agios Georgios [35], 1983: 1m (Volleth 1987). – I o á n n i n a: Miliá [= Miléa] [36], N. P. Valia-Calda, Zesto Réma, July 1985: obs. (Tsunis 1987). – K a r d í t s a: Moschato [= Mosháto] [37], 15 April 1972: 2f (Iliopoulou-Georgudaki 1985). – L a k o n í a: Gytheion [= Githio] [38], 17 June 1898: 1fa (Bolkay 1926). – P i e r i á: Monastery of St. Dionysios [= Agios Dionissios] [9], March–May 1931: obs. in Monastery building, coll. 3m, 1f (Chaworth-Musters 1932). – A e g e a n I s.: Chios [= Híos], Chios (Stadt) [39], 13 May 1972: 1m (Kock 1974a); – Euboea [= Évia] [40] (Lindermayer 1855, Kolenati 1859); – Ikaría [41] (Kanneli & Hatzisarantou 1963); – Kárpathos [42] (Kanneli & Hatzisarantou 1963); – Kímolos [43] (Kanneli & Hatzisarantou 1963); – Kíthnos [44] (Kanneli & Hatzisarantou 1963); – Kos, cave Pilion, resp. Pylion [= Pilí] [45], 4 May 1967: 22f, resp. 9f (Iliopoulou-Georgudaki 1977, 1985); – Rhodes [= Ródos], Rhodes-town [46] (Festa 1914); – Sámos, Pyrgos [= Pírgos] [47], old church, 22 May 1963: 1m (Laar & Daan 1964); – Samothráki [15] (Kanneli & Hatzisarantou 1963); – Sífnos [48] (Kanneli & Hatzisarantou 1963). – C r e t e: Kisámo Kastélli [= Kissámou Kastéli] [49], Korfalóna, 20 April 1958: 1m (Kahmann 1959). – Morea [= Peloponissos] (Keyserling & Blasius 1839). – Griechenland (no exact loc.) (Blasius 1857, Kolenati 1856).

Pipistrellus pipistrellus (Schreber, 1774) s. str.

RECORDS. **Original data**: A t t i k í - P i r e á s: Athína, Likavitos hill [1], 10 Oct. 2000: det. 1 ind. – F l ó r i n a: Píli [2], 3 km E, 13 July 2000: net. 2ma, 2fa (coll. 1m*, 1fL*; MHNG 1807.051, 1807.052 [S+A]). – G r e v e n á: Dímitra [3], a river 3 km E, 1 Sept. 2001: det. min. 2 ind. – H a l k i d i k í: Petrálona [4], cave, 5–8 Oct. 2000: det. several ind. – I o á n n i n a: Ioánnina, Limni Pamvotis lake [5], NW bank, 13 Oct. 2000: det. ca. 5 ind. – S é r r e s: Agios Ioannis Prodromos [6], river n. monastery, 17 July 2000: net. 1ms* (MHNG 1807.053 [S+A]). – **Published data**: A t t i k í - P i r é a s: Athens [= Athína] [1], 1992–1995, the calls detected on 23 sites throughout whole metropolitan area of Athens (Legakis at al. 2000).

DISTRIBUTIONAL STATUS (Fig. 15). The traditional *Pipistrellus pipistrellus* species complex includes one of the most frequently bat forms found in Greece; its occurrence has been documented by numerous records throughout the mainland, including Peloponnese, as well as on Crete and a number of Aegean islands. Since the morphological revision of museum material has not been feasible, it is necessary to re-describe the true distribution of the two newly established sibling species on the basis of new data (see Taxonomic note below). Our observations show that Greece is inhabited by both sibling species, viz., *P. pipistrellus* s. str. and *P. pygmaeus/mediterraneus*. We have confirmed the occurrence of *P. pipistrellus* s. str., on the basis of genetical comparisons (cytochrome b sequences – indicated with asterisk [*] in the above list of records) or analyses of echolocation signals in four localities in northern Greece. Also, Legakis et al. (2000) report having recorded the 45 kHz phonic type (= *P. pipistrellus* s. str.) in the city of Athens, where we also detected calls of this species. The problem of the specific attribution of populations of the *P. pipistrellus* complex in southern Greece (Peloponnese, Crete) and on the Aegean Islands remains open for discussion. Experience obtained by using an ultrasound detector on Cyprus, suggest that it is inhabited by both phonic types (J. Gaisler, pers. com.). A single sequence analysed from Cyprus confirms the presence of *P. pygmaeus/mediterraneus* there (Ruedi, unpubl. data). The same situation could be found in southern Greece including Crete. Records from that island could pertain to both newly defined species. External and cranial dimensions of examined specimens of *P. pipistrellus* s. l. from Greece are shown in Tab. 4.

TAXONOMIC NOTE. In the past decade, studies of echolocation signals and genetical analyses have resulted in discovery, in western Europe, of two cryptic bat species previously known as *P. pipistrellus* (Jones & Parijs 1993, Barratt et al. 1997), viz., *P. pipistrellus* s. str. (Schreber, 1774) (terra typica: France) and *P. pygmaeus* (Leach, 1825) (t. t.: Dartmoor, Devonshire, U. K.) (Jones & Barratt 1999). The definitive name of the latter species is not yet firmly

established as some authorities apply *P. mediterraneus* Cabrera, 1904 (t. t.: Valencia, Spain) (Helversen et al. 2000, Van Cakenberghe 2001) instead; for a review see Horáček et al. (2000).

The two newly defined species can be readily separated by the terminal frequencies of their echolocation calls: around 45 kHz in *P. pipistrellus* s. str., and around 55 kHz in *P. pygmaeus/mediterraneus* (Jones & Parijs 1993) and also by their DNA sequences (Barratt et al. 1997). Their morphological differentation, even after extensive analyses (Barlow & Jones 1999, Häussler et al. 2000), have not yet been established on more numerous material that would come from a wider geographic range (the latter being still not precised for the two forms), especially for populations living in SE Europe including Greece. For this reason, the material collected by us has not been revised morphologically, and our earlier records are given here under the collective name *P. pipi-strellus* s. lat. (see above and Tab. 4). Statements of the presence of cryptic species are thus based exclusively either on specimens that were studied genetically or those for which the field records of echolocation calls are available.

Pipistrellus pygmaeus (Leach, 1825) seu *P. mediterraneus* Cabrera, 1904

RECORDS. **Original data**: A r k a d í a: Spátharis [1], creek 4 km S, 24 August 2001: det. min. 5 ind. – G r e v e n á: Dímitra [2], a river 3 km E, 1 Sept. 2001: det. min. 3 ind. – I l í a: Nea Ilis, Piniós river 2 km N [3], 4 August 2000: net. 1fa* (MHNG 1807.058 [S+A]); – Simopoulo [4], river 2 km W, 23 August 2001: net. 1ma (NMP 49016 [S+A]). – K a r d í t s a: Anthiro [5], Tavropos river, 31 August 2001: det. min. 5 ind., net. 1ma (NMP 49030 [S+A]). – K a s t o r i á: Kría Nerá [6], river, 4 Sept. 2001: det. min. 3 ind. – M e s s i n í a: Artíki [7], river 1 km N, 25 August 2001: det. min. 5 ind., net. 1ms (NMP 49021 [S+A]); – Tzánes [8], river 2 km NW, 26 August 2001: det. min 5 ind. – T h e s p r o t í a: Paralía Drépano [9], 6 Sept. 2001: det. min. 2 ind. – T h e s s a l o n í k i: Rendína [10], 1 km E, 28 July 2000: net. 2ma* (MHNG 1807.059, 1807.060 [S+A]). – V i o t í a: Aráhova [11], Corycian cave, 31 July 2000: net. 5m, 1f (coll. 3ma*, MHNG 1807.055–057 [S+A]). – A e g e a n I s.: Lesvos, Agios Isidóros [12], cave, 12 Sept. 2000: net. 1m, 1f (coll. 1ma*; MHNG 1807.096 [S+A]); – Lesvos, Mihós [13], dirt track, 16 Sept. 2000: net. 1m, 2f; – Lesvos, Skoutáros [14], river 4 km S, 15 Sept. 2000: net. 5m, 4f; – Ródos, Afándou [15], fields n. the village, 11 Sept. 2001: det. min. 20 ind. (leg. J. Gaisler).

DISTRIBUTIONAL STATUS (Fig. 15). The presence of this species has been demonstrated by genetical analyses (cytochrome b) of material from four localities that embrace the whole of mainland Greece (Peloponnese, Sterea Ellada, Macedonia). These records (specimens) are indicated by asterisk (*) in the above list. With aid of ultrasonic bat detectors (mostly heterodyne, of course) the species was recorded in another 11 localities, above all, in the south of Greece. It can be inferred from the hitherto known distribution of this species in other parts of southern Europe (Barratt et al. 1997, Russo & Jones 2000, Horáček et al. 2000) that this pygmy pipistrelle occurs throughout mainland Greece and its offshore islands. In localities from southern Greece checked by us, the species has been recorded (and sometimes even netted) syntopically with one of other *Pipistrellus* species: at least three times with *P. kuhlii*, once with *P. pipistrellus* s. str. (Dimítra, Thessaly).

Pipistrellus nathusii (Keyserling et Blasius, 1839)

RECORDS. **Original data**: P i e r í a: Paralía Skotínas [1], beach, 19 Sept. 1988: net. 1ms, 1fs (NMP 48563, 48564 [S+B]). – T h e s s a l o n í k i: Thessaloníki [2], university campus, 11 Sept. 1988: net. 1m (NMP 48551 [S+B]). – X á n t h i: Xánthi, road 8 km NW [3], 17 June 1989: net. 1fG (NMP 48629 [S+B]). – A e g e a n I s.: Lesvos, Skoutáros [4], river 4 km S, 15 Sept. 2000: net. 1f. – **Published data**: D r á m a: Paranestion [= Paranésti] [5], creek 15 km N, 20 Oct. 1988: net. 1m (Helversen & Weid 1990); – Dipotáma [6], creek, 21 Oct. 1988: net. 2m, 2f (Helversen & Weid 1990). – E t o l í a A k a r n a n í a: Mesolongi, resp. Mesolongion [= Messolóngi] [7], 3 April 1962: 1f (Pieper 1978, Helversen & Weid 1990). – É v r o s: Dadia Forest Reserve [8] (Adamakopoulos et al. 1995); – Diavolorema river (10 km W Dadiá) [9], 19 July 1997: net. 1m (Ivanova 2000). – F l ó r i n a: Bigla [= Vígla] Mt. [10], n. Álona, Vérno Mts., 16 August 1982: net. 1m, 10 August 1987: net. 4m, 12 July 1988: net. 2m, 29 July 1988: net. 1m (Helversen & Weid 1990); – Psarades [11], Prespa-See [= Megali Prespa lake], 18 August 1987: net. 1m, 3 and 14 August 1988: net. 9m (Helversen & Weid 1990). – H a l k i d i k í: Marathoúsa [12], creek, 31 July 1982: net. 1m, 3 August 1982: net. 2m, 4 August 1982: net. 2m, 20 June 1984: net. 1m (Helversen & Weid 1990, cf. Volleth 1987). – I l í a: Várda [13], wood, 22 April 1984: net. 1m, 5 April 1986: 3f (Helversen & Weid 1990). – I m a t h í a: delta of Aliakmon [= Aliákmonas] river [14], house, 10 April 1984: 1f (Helversen & Weid 1990). – K a r d í t s a: Palamás [15], 7 April 1972: 4m, 3f (Iliopoulou-Georgudaki 1977, 1985). – K a s t o r i á: Nestorion [= Nestório] [16], Aliákmonas river, 21 August 1987: net. 1m (Helversen & Weid 1990); – Pevkos [= Péfkos] [17], Aliakmon [= Aliákmonas] river, 20 August 1982: net. 1m (Helversen & Weid 1990). – K a v á l a: Chrysoupolis [= Hrissoúpoli] [18], E of, delta of Nestos river, 28 June 1982: 1 ind. (Helversen & Weid 1990); – Kavalla [= Kavála] [19], 8 April 1963: 1fad (24 May 1961 ringed in Voronež reserve, Russia, 1600 km flight-distance) (Strelkov 1969). – S é r r e s: Megalohóri, resp. Megalochori [20], 12 April 1974: 3m, 4f (Iliopoulou-Georgudaki 1977, 1985). – T h e s s a l o n í k i: delta of Axiós river [21], house, 12 Oct. 1988: 3m, 5f (Helversen & Weid 1990); – delta of Loudías river [22], house, 3 April 1983: net. 1m, 7 April 1984: net. 1m (Helversen & Weid 1990), church, crevice, 3 April 1983: net. 1f, 19 April 1983: 1m, 7f, 7 April 1984: net. 1m, 4f (Helversen & Weid 1990); – Nimfópetra [23], 5 May 1977: min. 2 ind. (from owl pellets) (Pieper 1978); – Rendína [24], plane-tree wood, August–Oct. 1983 and 1988: obs. (Helversen & Weid 1990); – Stavrós [25], bunker, 14 August 1979: net. 1m, 28 Dec. 1984: hib. 8 ind. (m+f) (Helversen & Weid 1990). – Griechenland (no exact loc.) (Kolenati 1856, 1859).

DISTRIBUTIONAL STATUS (Fig. 17). Although Greece is beyond doubt one of the southern marginal regions of the range of *P. nathusii*, the centre of whose range lies in more northern regions of central and eastern Europe, there are numerous reliable records from that country. Most of them come from the northern parts of Greece (Macedonia, Thrace) but there are also records of individuals in areas lying more to the south, such as Thessaly, Sterea Ellada

and/or Peloponnese. One record comes from an offshore island close to Asia Minor. Most of these data pertain to individual males, females, or groups of individuals netted from April to early May and in August, September to October; data from June and July are less frequent; wintering has been evidenced in one case (14 Dec. 1984). It can thus be concluded that the occurrence of *P. nathusii* in Greece is primarily a seasonal phenomenon, involving individuals on migration from the more northerly parts of the range. Such migration patterns has been evidenced by the finding a ringed individual (migrating from Voronež, Russia, to Kavala, E Macedonia – Strelkov 1969). Some of the records made in early summer, e. g., 17 June (a pregnant female !), 19 June (2 males), 12 July (one and two males), 19 July (a male), 29 July (one and two males) in the north of Greece suggest the presence of a possible permanent population in wooded areas; no records of nursery colonies are available yet. If this possibility is confirmed, it will be necessary to consider a shift of the southern limit of the permanent range of this species down to northern Greece (cf. Strelkov 1997a, b). Such considerations are also supported by the recent discoveries of summer colonies in the southern part of central Europe (Martinoli et al. 2000, Jahelková et al. 2000). External and cranial dimensions of examined specimens of *P. nathusii* from Greece are shown in Tab. 4.

Pipistrellus kuhlii (Kuhl, 1817)

RECORDS. **Original data**: A r k a d í a: Spátharis [1], creek 4 km S, 24 August 2001: det. min. 2 ind. – A t t i k í - P i r e á s: Avlaki, n. Daskalio [2], 1–4 Oct. 2000: det. ca. 10 ind. – F o k í d a: Ámfissa [3], 21 Sept. 1958: 1m (MHNG 949.055 [A]). – H a l k i d i k í: Eleohória [4], village, 28 Sept. 1988: det. ca. 20 ind.; – Metamórfossi [5], river 5 km W, 26 Sept. 1988: net. 4m, 2f; – Ormília [6], creek, 14 Sept. 1988: net. 1ma, 1ms (NMP 48544, 48555 [S+B]). – I l í a: Simopoulo [7], river 2 km W, 23 August 2001: net. 5 ind. (coll. 3fa, NMP 49013–49015 [S+A]). – I o á n n i n a: Ioánnina, Límni Pamvotis lake, Pantelemon I. [8], 22 April 1996: net. several ind. – K i l k í s: Mílos [9], 1 km E, 15 July 2000: net. 1ms (MHNG 1807.054 [S+A]). – K o r i n t h í a: Arhea Korinthos, Akrokorinthos [10], castle ruins, 30 August 2001: obs. 1 ind. – L a k o n í a: Spárti [11], above the Evrotas river, 16 Sept. 1996: net. 1ma, 4fs (NMP 48733–48737 [S+A]). – M e s s i n í a: Artíki [12], river 1 km N, 25 August 2001: det. min. 2 ind., net. 1fs (NMP 49022 [S+A]). – P i e r í a: Paralía Skotínas [13], beach, 19 Sept. 1988: net. 1ms, 1fa (NMP 48561, 48562 [S+B]). – P r é v e z a: Mesopótamo [14], water canal, 2 July 1989: net. 2fa (NMP 48705, 48706 [S+B]). – T h e s p r o t í a: Asprokklíssi [15], above pool, 1 July 1989: net. 1ma, 1fa (NMP 48703, 48704 [S+B]). – T h e s s a l o n í k i: Rendína [16], 1 km E, 28 July 2000: net. 5m, 3f. – A e g e a n I s.: Míkonos, Kalamopodi [17], camping, 5 Oct. 2000: det. 1 ind.; – Skíathos [18], Kapriso, 16–21 Oct. 1973: 1m, 6f (SMF 45213–45219 [S+B], leg. G. Storch & D. Kock); – Thíra, Périssa [19], 10–11 Oct. 2000: det. 2–3 ind. – C r e t e: Agía Roúmeli [20], 14 July 1995: det. ca. 30 ind.; – Geráni [21], rocky canyon, 16 July 1995: det. 1 ind.; – Haniá [22], castle, 9 July 1995: obs. ca. 20 ind.; – Paralía [23], 7 and 12 July 1996: det. min. 5 ind. (leg. J. Gaisler). – I o n i a n I s.: Kérkira, Messongí [24], 10 July 1995: det. max. 5 ind. (leg. J. Gaisler); – Kérkira, Potamós [25], 1m, 2f (BMNH; cf. Miller 1912). – **Published data**: A h a i a: Kálanos (n. Kalávrita) [26], 20 Jan. 1974: 1f (Iliopoulou-Georgudaki 1977, 1985); – Kastritsi [27], 1972–1982: 12m, 14f (Iliopoulou-Georgudaki 1985); – Patras [= Pátra] [28], 5 June 1908: 1m, 1f (Miller 1912, Hopkins & Rotschild 1956, Peus 1954), Patras, university campus, 18 ind. (Iliopoulou-Georgudaki 1977); – Rododáfni, resp. Rododaphni [29], 2 June 1968: 1f (Iliopoulou-Georgudaki 1977, 1985). – A r k a d í a: Tegéa [30], 16 August 1960: 2m, 3f (Kahmann 1964, Kock et al. 1972). – A t t i k í - P i r é a s: Athens [= Athína] [31], 1992–1995, the calls detected on 18 sites throughout whole metropolitan area of Athens (Legakis at al. 2000). – É v r o s: Dadia Forest Reserve [32] (Adamakopoulos et al. 1995). – F o k í d a: Ámfissa [3], hotel, 10 March 1971: colony (coll. 1m, 1f) (Niethammer 1974). – H a l k i d i k í: Marathoussa [33], 1982: 1f (Volleth 1987); – Chalkidiki [= Halkidikí], no exact loc., 13 March 1963 (Pieper 1965). – M e s s i n í a: Hóra [34], Trifillía, resp. Chora Triphylias, 10 May 1968: 5f (Iliopoulou-Georgudaki 1977, 1985); – Valíra, resp. Valyra [35], 28 Dec. 1977: 2f (Iliopoulou-Georgudaki 1977, 1985). – S é r r e s: Megalohóri, resp. Megalochori [36], 5 Dec. 1974: 1f (Iliopoulou-Georgudaki 1977, 1985). – T h e s s a l o n í k i: Nimfópetra [37], 5 May 1977: 1 ind. (from owl pellets) (Pieper 1978); – Stavrós [38], 13 March 1963 (Pieper 1965). – A e g e a n I s.: Euboea [= Évia] [39] (as *Nannugo marginatus*; Lindermayer 1855, Kolenati 1859); – Rhodos [= Ródos] [40] ("möglicherweise") (Pieper 1966). – C r e t e: Agya [= Agiá], dam 10 km SW of Haniá [41], 6 April 1943: 1 ind. (Pohle 1953); – Chania [= Haniá] [22], 21 May 1942: 1 ind., 24 May 1942: 1 ind. (Pohle 1953); – Kisamo Kastelli [= Kissámou Kastéli] [42], 22 April 1942: 1 ind., 26 April 1942: 1 ind. (Pohle 1953); – Kourna [= Kournás] lake (n. Mourí) [43], 15 April 1958: 1f (Kahmann 1959, Felten & Storch 1970, Kock et al. 1972); – Rethymno [= Réthimno] [44], 19 April 1974: 1m, 1f (Iliopoulou-Georgudaki 1985); – Sarchos [= Sárhos] [45], 3 ind. (from owl pellets) (Pieper 1977); – Topólia [46], 4 ind. (from owl pellets) (Pieper 1977). – I o n i a n I s.: Cephalonia [= Kefaloniá], Argostóli, resp. Agostoli [47], 5 May 1908: 10 ind. (3m, 1f) (Miller 1912, Hopkins & Rotschild 1956, Peus 1954, Harrison & Bates 1991); – Corfu [= Kérkira] [?25], 1m, 1f (Miller 1912); – Korfu [= Kérkira], Kritika [48], 27 March 1961: 2m, 1 ind. (Niethammer 1962); – Korfu [= Kérkira], Korfu-Stadt [= Kérkira] [49], 30 April 1961: 2f (Niethammer 1962); – Levkas [= Lefkáda] [50], 1933: 1f (Wettstein 1941); – Zákinthos, resp. Zante, Lagkadákia, resp. Lagadakia [51], 20 April 1974: 2f (Iliopoulou-Georgudaki 1977, 1985).

DISTRIBUTIONAL STATUS (Fig. 16). This species characterised by a circummediterranean distribution in Europe, apparently occurs in most of the territory of Greece but chiefly in coastal regions and on islands (at least nine, including Crete). However, it almost has not been found in Thrace (for that matter, it has only recently been documented in south-western and south-eastern Bulgaria and Turkish Thrace (Ivanova & Popov 1994, Benda & Horáček 1998, J. Červený in litt.) nor in the mountain regions of western Macedonia (see also Helversen in Mitchell-Jones et al. 1999). The species is mainly confined to extensive floodplains of large rivers (Axios, Evrotas and Strimonas rivers), coastal regions and islands as well as human settlements including large towns; often bone remains of this species have been found in owl pellets. The Balkan part of its range joins the Adriatic coasts of Dalmatia and Albania (see Mitchell-Jones et al. 1999); in the Rep. of Macedonia it has been recorded mostly in the floodplain of the Vardar [Axios] River (Kryštufek et al. 1992, Stojanovski 1994), one record comes from montaneous part of the Bregalnica River valley (Kryštufek et al. 1998). While the western limit of its Balkan range reaches up to central Europe (Austria, Hungary), the north-eastern border of Greece essentially forms part of the

northern limit of distribution of the species in south-eastern Europe (see Kryštufek et al. 1998, Mitchell-Jones et al. 1999). External and cranial dimensions of examined specimens of *P. kuhlii* from Greece are shown in Tab. 4.

Nyctalus noctula (Schreber, 1774)

RECORDS. **Original datum**: É v r o s: Didimótiho [1], cave, 21 June 1994: remains of 3 ind. in *Tyto alba* pellets (leg. V. Vohralík). – K a r d í t s a: Anthiro [2], Tavropos river, 31 August 2001: net. 1fa (NMP 49032 [S+A]). – T h e s s a l o n í k i: Rendína [3], 1 km E, 28 July 2000: net. 3m, 6f (coll. 1ma, MHNG 1807.050 [S+A]). – A e g e a n I s.: Thássos, Theologos [4], above creek, 25 June 1989: net. 1ma (NMP 48695 [S+B]). – **Published data**: É v r o s: Dadia Forest Reserve [5] (Adamakopoulos et al. 1995); – Provatonas river (n. Provató) [6], 21 July 1997: net. 1m (Ivanova 2000). – I o á n n i n a: Miliá [= Miléa] [7], N. P. Valia-Calda, Zesto Réma, July 1985: obs. (Tsunis 1987). – K o r i n t í a: Corinth [= Kórinthos] [8], 8f, 4 ind. (Miller 1912). – T h e s s a l o n í k i: Stavrós [9], middle of August 1985 and August/Sept. 1987: "rufenden Männchen stammen von Balzquartieren" (Weid 1994). – A e g e a n I s.: Euboea [= Évia] [10] (Lindermayer 1855, Kolenati 1859). – About two old specimens in Collections of University Patras, without other details, mentioned Iliopoulou-Georgudaki (1977).

DISTRIBUTIONAL STATUS (Fig. 8). Available records document the summer occurrence of *N. noctula* in the wooded region of northern and central Greece (see also Helversen in Mitchell-Jones et al. 1999); isolated, southern, and marginal records (Euboea, Attica, N Peloponnese) may pertain only to stray bats during migration. Essentially, this corresponds to the situation in the neighbouring Balkan countries in which the species is chiefly known to occur during the migration period or in winter. However, it is possible that the wooded regions of NE Greece may be inhabited by permanent populations, including nursery colonies; the same may be expected in the wooded regions of adjacent countries (our documented records of subadult individuals in Bulgaria in summer, Hanák & Josifov 1959, own data); this assumption is supported by much more southerly records of nursery colonies found in the Levant (Mendelsson & Yom-Tov 1999, own data) or in Iberia (Ruedi et al. 1998). However, the more southern part of Greece apparently lies beyond the permanent range of this species. The above tentative conclusions, however, require confirmation by additional data obtained from all parts of the Balkans and especially of direct observations made during the short nursing period of that species. External and cranial dimensions of examined specimens of *N. noctula* from Greece are shown in Tab. 5.

Nyctalus leisleri (Kuhl, 1817)

RECORDS. **Original data**: F l ó r i n a: Papagiannis [1], river, 2 Sept. 2001: net. 2ms (NMP 49042, 49043 [S+A]). – F t h i o t i d a: Kombotádes [2], above the Sperhiás river, 9 Sept. 1996: net. 1ma (NMP 48724 [S+A]). – G r e v e n á: Dímitra [3], a river 3 km E, 1 Sept. 2001: net. 1ms, 1fa (NMP 49038, 49039 [S+A]). – I o á n n i n a: Pápigo [4], Dracolimni lake, 25 Sept. 1988: found 1 dead ind. (NMP 48739 [S]). – K a r d í t s a: Anthiro [5], Tavropos river, 31 August 2001: net. 4m, 3f (coll. 2ma, 1ms, 1fa, 1fs, NMP 49033–49037 [S+A]). – P i e r í a: Paralía Skotínas [6], beach, 19 Sept. 1988: net. 1fs (NMP 48566 [S+B]). – X á n t h i: Xánthi, road 8 km NW [7], 25 June 1989: net. 1ma (NMP 48631 [S+B]). – A e g e a n I s.: Ródos, Afándou [8], olive-tree wood, 11 Sept. 2001: det. 2 ind. (leg. J. Gaisler). – **Published data**: A r k a d í a: Daviá [9], 6 July 1986: net. 2m (Helversen & Weid 1990). – A t t i k í - P i r e á s: Dekelion [= Dekéleia] [10], 1m, 1f (Winge 1881, rev. Pieper 1978). – D r á m a: Dipotáma [11], 30 August 1987: 1m (Helversen & Weid 1990); – Mikroklissoúra [12], creek, 4 Sept. 1983: net. 2m (Helversen & Weid 1990); – Sidirónero [13], Nestos river, 6 Sept. 1983: 1m (Helversen & Weid 1990). – É v r o s: Diavolorema river (10 km W Dadiá) [14], 19 July 1997: net. 1m (Ivanova 2000). – F l ó r i n a: Bigla [= Vígla] Mt. [15], n. Álona, Vérno Mts., 22 July–7 August 1988: net. 25m (Helversen & Weid 1990), n. Pisoderi pass, August 1988, 1989 and 1990 (Helversen & Helversen 1994). – F t h i ó t i d a: Ágios Geórgios [16], Sperchios [= Sperhiás] river valley, 25 May 1983: net. 1m (Helversen & Weid 1990); – Mákri [17], Spercheios [= Sperhiás] river valley, 22 May 1983: 1m (Helversen & Weid 1990); – Vítoli [18], 1 June 1985: 1m (Helversen & Weid 1990). – K a r d í t s a: Rendína [19], 29 May 1988: 1m (Helversen & Weid 1990); – Zaimi [20], creek, 27 May 1983: 1m (Helversen & Weid 1990). – K a s t o r i á: Gavros [21], Ladopotamos river, 8 August 1988: net. 1m, 17 August 1988: net. 1m (Helversen & Weid 1990); – Pefkófito [22], Sarantáporos river, 4 August 1988: 1m (Helversen & Weid 1990); – Pevkos [= Péfkos] [23], Aliakmon [= Aliákmonas] river, 21 August 1982: 1m (Helversen & Weid 1990, cf. Volleth 1987); – "Bergsee unterhalb" Mt. Epanó Aréna [24], 24 August 1987: 1m (Helversen & Weid 1990). – P é l l a: Aridéa [25], creek W, 31 August 1982: net. 5m, 1f (Helversen & Weid 1990). – T h e s s a l o n í k i: Rendína [26], plane-tree wood, August–October 1983–1988: net. several ind. (Helversen & Weid 1990); – Stavrós [27], plane-tree wood, 16 Sept. 1983: net. 1m (Helversen & Weid 1990). – X á n t h i: Vistonis-See [= Limni Vistonida] [28], mouth of Kompsatos creek, 21 June 1987: net. 1m (Helversen & Weid 1990).

DISTRIBUTIONAL STATUS (Fig. 5). The Greek records of *N. leisleri* given above are unexpectedly numerous in an area considered to be marginal of the whole range of the species. Moreover, those records document its occurrence throughout the territory of Greece, including Peloponnese, even though they are more frequent and more numerous in its northern and central parts. So far, *N. leisleri* has not been ascertained on Crete, yet it is known from Northern Africa (Hanák & Gaisler 1983). The species is known from the only Greek island, Rhodes; this record is not surprizing because in south-western part of Asia Minor *N. leisleri* was recorded (Helversen 1989b). This current situation is rather different from the status known from the neighbouring countries in the Balkans (Mirić & Paunović 1997), where only individual and occasional records are available, even from Bulgaria, a thoroughly investigated country (Ivanova 1995, own data).

It is necessary to stress that most of the records in Greece come from the period of August and September; also, males distinctly predominate in netted samples. Nevertheless, there are also a number of records which fall in the

period of the breeding season (May–July). In any case, most of records can be attributed to seasonal migrations from the northwardly situated regions and some of them are remarkable for their unusual circumstances (for example, the individual netted near the sea shore in Pieria (Macedonia); the find of a dead specimen on the shore of the Drakolimni lake in Pindus Mts., at 2250 m a. s. l.). Nevertheless, records made in early summer, confirm the possible existence of a permanent population, at least in the wooded regions of Macedonia, Thrace, and Sterea Ellada. Although mostly males have been recorded so far, one cannot rule out the existence of nursery colonies, considering that the species permanently occurs and breeds, for instance, in Cyrenaica, Libya (Hanák & Gaisler 1983), that is, much more to the south. Likewise, the species has been repeatedly found in southern Iberia (Ibańez et al. 1992). This conclusion is also supported by the overall frequency of records of *N. leisleri* in Greece, which markedly exceeds the number of documents of *N. noctula*, a species which is more common and more conspicuous elsewhere. One may hypothesis that within the guild represented by the genus *Nyctalus*, *N. leisleri* (and probably also *N. lasiopterus*) occupied empty niche south of the limit of the range of *N. noctula*, a species which is dominant elsewhere. External and cranial dimensions of examined specimens of *N. leisleri* from Greece are shown in Tab. 5.

Nyctalus lasiopterus (Schreber, 1780)

RECORDS. **Original datum**: K a r d í t s a: Anthiro [1], Tavropos river, 31 August 2001: net. 1ma (NMP 49031 [S+A]). – **Published data**: D r á m a: Arkoudorrema river mouth [2], 3 km NW of Paranestion [= Paranésti], 23 June 1984: 1m (Helversen & Weid 1990); – Paranestion [= Paranésti] [3], N forest, June 1984: obs. 10–15 ind (Helversen & Weid 1990). – F t h i ó t i d a: Mákri [4], Spercheios [= Sperhiás] river valley, 22 May 1983: 2m (Helversen & Weid 1990, cf. Volleth 1987). – G r e v e n á: Samarína [5], Smolikas river, 26 July 1978: 1m (Helversen & Weid 1990). – H a l k i d i k í: Marathoúsa [6], creek, 31 July 1982: 1m (Helversen & Weid 1990). – K a r d í t s a: Rentína [7], 29 May 1988: net. 1m (Helversen & Weid 1990). – T h e s s a l o n í k i: Rendína [8], Sept.–Oct. 1983–1987, obs., some ind. net., Sept.–Oct. 1988: net. 6m, 1f (Helversen & Weid 1990). – T r í k a l a: Pertuli [= Pertoúli] [9], 9 June 1964, colony in tree hole (coll. 3f) (Wolf 1964). – X á n t h i: Mándra [10], 1 km SE, 27 Sept. 1966: 1ma (Helversen & Weid 1990). – About one old specimen in Collections of University Patras, without other details, mentioned Iliopoulou-Georgudaki (1977).

DISTRIBUTIONAL STATUS (Fig. 11). The number of records of *N. lasiopterus* in Greece presented here, is surprizingly large compared with data from neighbouring countries. Most records are quite recent (Helversen & Weid 1990, Helversen in Mitchell-Jones et al. 1999), but there is even a record of a nursery colony (Wolf 1964). Thus, there are sufficient reliable data to suggest that the whole territory of mainland Greece is part of the range of this species, the same as for other regions of submediterranean Europe (cf. Mitchell-Jones et al. 1999). So far, no data are available from islands but the species can be expected on some of the more wooded ones (Thassos, Crete, Ionian Islands), judging from its occurrence further south, in Cyrenaica, Libya (Spitzenberger 1982, Qumsiyeh & Schlitter 1982). Apparently, the species is tied to wooded regions from lowlands up to mountains (Pindus Mts. 1200 m a. s. l.), and its range is almost circummediterranean. External and cranial dimensions of examined specimen of *N. lasiopterus* from Greece are shown in Tab. 5.

Barbastella barbastellus (Schreber, 1774)

RECORDS. **Published data**: F t h i ó t i d a: Agíos Georgios [1], 1985: 1f (Volleth 1987); – Mt. Katavotron [= Katavóthra] [2], Georgopotamos river, cave, 9 August 1988: 3m, 2f (Helversen & Weid 1990); – Vítoli [3], creek valley, 1 June 1985: net. 1f (Helversen & Weid 1990).

DISTRIBUTIONAL STATUS (Fig. 21). In Greece, *B. barbastellus* was documented for the first time by three records in Sterea Ellada (Helversen & Weid 1990, Volleth 1987). These records suggest its potential occurrence in the Balkans, previously documented by records from Bulgaria (Heinrich 1936, Horáček et al. 1974, Ivanova 1998, etc.), the Rep. of Macedonia (Đulić & Mikuška 1966) and Turkish Thrace (Benda & Horáček 1998). Further investigations are needed to show whether its occurrence in the south of the Balkans is only marginal in mountain woodlands or is more continuous. Since Ibańez et al. (1992) have demonstrated the widespread occurrence of the species in Iberia and since the species is known from North-western Africa as well (Panouse 1955), its more southern and more common occurrence may also be expected in Greece.

Plecotus auritus (Linnaeus, 1758)

RECORDS. **Original datum**: P i e r í a: Paralía Skotínas [1], beach, 19 Sept. 1988: net. 1ma (NMP 48567 [S+B]). – **Published data**: A h a i a: Zahloroú [2], 2m, 5f (Iliopoulou-Georgudaki 1977). – A t t i k í - P i r e á s: Athens [= Athína], Nea Filadelfia, Prompona [3], 1992–1995: detected calls (Legakis et al. 2000); – Dekelion [= Dekéleia] [4], 1m (Winge 1881). – F l ó r i n a: Vernon [= Vérno] Mts. [5], "Buchenwaldzone", 28 July 1988: net. 1f (Helversen & Weid 1990). – F t h i ó t i d a: Oiti [= Iti] Mts. [6], Georgopotamos river, cave, 18 August 1981: net. 1m, 1f, 9 August 1988: 2m, 1f (Helversen & Weid 1990). – G r e v e n á: Samarína [7], Smolikas Mts., 26 July 1978: net. 1f (Helversen & Weid 1990). – I o á n n i n a: Ioánnina [8], in a house, 1m (Iliopoulou-Georgudaki 1977). – K a s t o r i á: Mt. Epanó Aréna [9], small lake, 24 August 1987: net.

1m, 2f (Helversen & Weid 1990). – A e g e a n I s.: Santorini [= Thíra], n. Pýrgos [10], May 1892: 1 ind. (Douglas 1892). – C r e t e: Topólia, 1–11 ind. (from owl pellets) (Pieper 1977), this record is considered here as of *P*. cf. *kolombatovici*.

DISTRIBUTIONAL STATUS (Fig. 18). The list of records suggest occurrence of this woodland species in at least seven localities in mainland Greece. Most of them pertain to mountain regions in northern and central Greece (elevations up to 1600 m) but specimens are also available from the sea shore, the southernmost one from northern Peloponnese. Hence, *P. auritus* appears to be uncommon in Greece, its occurrence being rather patchy in woodlands at higher elevations. In the light of the recent taxonomic changes (see Taxonomic note) the record of *P. auritus* from Crete, based on skeletal remains in owl pellets (Pieper 1977), appears to be doubtful. Likewise, the old records by Winge (1881) and Douglas (1892) from Attica and from Santorini (Thira) Island may pertain to another *Plecotus* species the specific status of which has been established only in more recent time and whose ecology is in better accordance with the Mediterranean conditions of those localities (viz., *P. austriacus* and/or *P. kolombatovici*). The record of detected call published by Legakis et al. (2000) is appropriate to consider doubtfull specific identification because of unfeasibility of clear definition of the individual *Plecotus* species by using an ultrasound detector (Weid & Helversen 1987, Barataud 1996, etc.). External and cranial dimensions of examined specimens of bats of the genus *Plecotus* from Greece are shown in Tab. 6.

TAXONOMIC NOTE. In their taxonomic revision of bats of the genus *Plecotus* from central and SE Europe, Spitzenberger et al. (2001) defined three distinct species in that region, viz., *P. auritus* (Linnaeus, 1758) (terra typica: Uppsala, Sweden), *P. austriacus* (Fischer, 1829) (t. t.: Vienna, Austria), and *P. kolombatovici* Đulić, 1980 (t. t.: Žrnovo, Korčula Is., Croatia). The systematic position of *P. auritus* has essentially not been altered and thus its geographic distribution need not be revised. It cannot be ruled out, however, that some of the records attributed to this species pertain in fact to *P. kolombatovici* which has been described as a species resembling, in some of its cranial dimensions, *P. auritus*, see Fig. 19 and Tab. 6 (comp. Spitzenberger et al. 2001). In particular, this may concern some of the southern populations included so far in *P. auritus*, particularly those found in southern Europe (Italy, Dalmatia, the Balkans) and in central and southern Anatolia (cf. Albayrak 1991, Benda & Horáček 1998, Spitzenberger et al. 2001) could be in this case. Of the Greek records, some doubts have thus been thrown especially on the record from Crete (Pieper 1977), here tentatively reconsidered as *P.* cf. *kolombatovici* (because occurrence of *P. kolombatovici* on Crete was confirmed, see below and Helversen & Weid 1989). The same is true of the records by Douglas (1892) from Santorini (Thira) and by Winge (1881) from Attica, see above. Concerning our own material of Greek bats, the specimen from Thessaly corresponds to the characters of *P. auritus* in the sense of Spitzenberger et al. (2001).

Plecotus austriacus (Fischer, 1829) s. l.

RECORDS. **Original data**: F l ó r i n a: Píli [1], 3 km E, 13 July 2000: net. 1ma (MHNG 1807.029 [S+A]). – H a l k i d i k í: Halkidikí (no exact loc.), 28 May 1962: 1 ind. (MKB 7749, leg. Wolf). – I l í a: Kástro [2], Hlemoútsi castle ruins, 23 August 2001: obs. 1 ind. – K o r i n t h í a: Arhea Korinthos, Akrokorinthos [3], castle ruins, 30 August 2001: obs. 1 ind. – L a k o n í a: Mistrás [4], ruins of Byzantine town, 27 August 2001: obs. 1 ind. – A e g e a n I s.: Samothráki, Hora [= Samothráki] [5], cave, 10 July 1994: net. 2ma. – C r e t e: Agía Roúmeli [6], village, 14 July 1995: obs. 5 ind.; – Stavrós (Akrotiri pen.) [7], cave, 10 July 1995: net. 1faL. – **Published data**: É v r o s: cave Kamila (n. Dadiá) [8], 24 July 1997: net. 1m (Ivanova 2000); – C r e t e: Topólia, 1–11 ind. (from owl pellets) (Pieper 1977), this record is considered here as of *P.* cf. *kolombatovici*.

Plecotus austriacus (Fischer, 1829) s. str.

RECORDS. **Original data**: F l ó r i n a: Papagiannis [1], river, 2 Sept. 2001: net. 1fa (NMP 49045 [S+A]); – Píli [2], 3 km E, 13 July 2000: net. 1ma (MHNG 1807.030 [S+A]). – H a l k i d i k í: Petrálona [3], cave, 26 Sept. 1988: net. 1ms, 28 Sept. 1988: net. 1m (NMP 48609 [S+B]). – T r í k a l a: Meteóra [4], 1m (SMF 23025; leg. G. Link, G. Storch, and H. Wohlang; cf. Kock 1969, 1974, Kock et al. 1972, Felten & Storch 1970). – **Published data**: É v r o s: N of Dhikella [= Díkella] [5], 1966: 6 ind. (Spitzenberger et al. 2001); – Mákri [9], cave Kíklopos, 1m (Iliopoulou-Georgudaki 1977), Mákri, 1966: 1 ind. (Spitzenberger et al. 2001). – F o k í d a: Delphi [= Delfí] [7], 1979, 1f (Spitzenberger et al. 2001).

DISTRIBUTIONAL STATUS (Fig. 18). So far the occurrence of *P. austriacus* s. str. (in the sense of Spitzenberger et al. 2001) has been reliably documented in only seven localities, five in the north of Greece and two in central Greece. However, a number of additional records are available (see the records of *P. austriacus* s. l.), of which specially those in mainland Greece may also pertain to *P. austriacus* s. str.

TAXONOMIC NOTE. The records of *P. austriacus* s. l. from the whole of SE Europe, particularly from the western part of the Balkans and Dalmatia, should be evaluated in the light of the new definition of *P. kolombatovici*. Originally, *P. kolombatovici* had been described as a subspecies of *P. austriacus* which was thought to inhabit the Mediterranean part of Croatia and Hercegovina (Đulić 1980). Spitzenberger et al. (2001) describe the tentative range of *P.*

kolombatovici as a belt along the Adriatic coast from the Alps (incl. southern Austria) down to Greece. Although the authors do not state the degree of sympatry of the two forms in that region, it is clear that in order to reliably define the ranges of *P. austriacus* s. str. and *P. kolombatovici* it is necessary to revise their records from the whole of SE Europe including those from Greece. Some specimens revised by us, previously determined as *P. austriacus* (s. l.), has confirmed the correct specific determination as *P. austriacus* s. str. in the sense of Spitzenberger et al. (2001), see Tab. 6. These include the specimen from Thessaly (SMF 23025; the record was already published, see Kock 1969, 1974, etc., see above), two newly recorded specimens from Macedonia (NMP 48609, 49045) and one of the individuals collected in Pili, Macedonia (MHNG 1807.030) that was identified genetically as *P. austriacus* s. str. The Macedonian record mentioned by Iliopoulou-Georgudaki (1977) is also after given measurements appropriate to consider as of *P. austriacus* s. str. (comp. Tab. 6).

Plecotus kolombatovici Đulić, 1980

RECORD. **Original data**: F o k í d a: Delfí [1], 23 Sept. 1988: net. 1ms (NMP 48569 [S]). – F t h i o t i d a: Kombotádes [2], above the Sperhiás river, 9 Sept. 1996: net. 1fa (NMP 48725 [S+A]), Kombotádes, cave, 10 Sept. 1996: net. 3ma (NMP 48726–48728 [S+A]). – I o á n n i n a: Kleidoniá [3], Voidomatis river, 27 Sept. 1988: net. 1m (NMP 48585 [S+B]); – Pápigo [4], cave, 26 Sept. 1988: net. 4ms (NMP 48573–48575 [S+B], 48576 [S]); Pápigo, above creek, 25 Sept. 1988: net. 1fa (NMP 48572 [S+B]). – C r e t e: Mires [5], old mine (Microlavirynth), 2 April 1999: net. 1ma (M 582 [A]). – **Published datum**: F o k í d a: Delphi [= Delfí] [1], 1979: 2f (Spitzenberger et al. 2001).

Plecotus cf. *kolombatovici* Đulić, 1980

RECORDS. **Original data**: A e g e a n I s.: Híos, Agia Fotía [1], 23 May 1972: 1m (SMF 44918; cf. Kock 1974a). – **Published data**: F o k í d a: betw. Delphi [= Delfí] and Arakhova [= Aráhova] [2], 1933: 1 ind. (Spitzenberger et al. 2001). – M e s s i n í a: Trakhila [= Trahíla] [3], 1982: 1 ind. (Spitzenberger et al. 2001). – P i é r i á: W of Litóhoro [4], 1982: 1 ind. (Spitzenberger et al. 2001). – A e g e a n I s.: Rhodos [= Ródos], S of Salachos [= Sálakos] [5], 1971: 1 ind. (Spitzenberger et al. 2001). – C r e t e: Topólia [6], 12 ind. (from owl pellets) (as *Plecotus* sp.; Pieper 1977), Topólia, cave Aghia Sophia [7], 16–17 March 1965: 1f (Martens 1967). – I o n i a n I s.: Korfu [= Kérkira], Kritika [8], 27 March 1961: 1m (Niethammer 1962).

DISTRIBUTIONAL STATUS (Fig. 18). The occurrence of *P. kolombatovici* in mainland Greece was at first mentioned from a single locality in Sterea Ellada (Spitzenberger et al. 2001), to which we added another five records from Epirus, Sterea Ellada and Crete. The latter record was documented by genetical analysis of specimen's cytochrome b, which was very close to that of *P. kolombatovici* from Switzerland (Ruedi, unpubl. records). Considering minute bats of the genus *Plecotus* that are in external characters (coloration, thumb and face shape) close to *P. austriacus* and in metrical skull characters close to *P. auritus*, that is, morphologically closest to *P. kolombatovici* s. str. (= from Croatia) to be the representatives of this species (see Fig. 19), then *P. kolombatovici* is distributed over mainland Greece (except in Thrace and eastern Macedonia) from low elevations up to mountain localities (Pindus Mts., ca. 1200 m a. s. l.). This form (*P.* cf. *kolombatovici*) has also been recorded from two islands (Chios, Rhodes) and thus it is possible that even other insular records of *Plecotus* spp. (Thira [Douglas 1892], Crete [Martens 1967, Pieper 1977], Corfu [Niethammer 1962]) may belong to this form – cranial measuremets given by Niethammer (1962) and Martens (1967) agree with these of material of *P. kolombatovici* examined by us.

TAXONOMIC NOTE. Spitzenberger et al. (2001) described the metric characters of *P. kolombatovici* on the basis of examinations of a total of 26 specimens from southern Austria. Besides, they presented several specimens fitting with their variation range of the Austrian population, coming from localities in Croatia, Bosnia, and two specimens from Sterea Ellada (Delphi). Thereby they have evidenced the occurrence of *P. kolombatovici* in Greece. Our material of Greek bats also contained several specimens showing similar metric characters as *P. kolombatovici* from Croatia, which we consider as representatives of this species (see Fig. 19 and Tab. 6). Nevertheless, Spitzenberger et al. (2001) mentioned another specimen from Asia Minor, resembling in its metric characters *P. kolombatovici* and *P. auritus*, but *P. austriacus* s. str. in genetic traits. They do not provide a definitive species identification for that specimen, and, correspondingly, we do the same with such bats from Aegean Islands here listed as *P.* cf. *kolombatovici*.

Miniopterus schreibersii (Kuhl, 1817)

RECORDS. **Original data**: A h a i a: Kastría, Limnon cave [1], 17 May 1974: 6f (MHNG 1712.021–026 [A]), 1–2 August 2000: net. 1ma (MHNG 1807.064 [S+A]). – A r g o l í d a: Kefalóvrisso [2], cave, 13 April 1978: 1m (MHNG 1492.081 [A]). – D r á m a: Mikrópoli [3], cave, 25 March 1994: obs. large colony. – É v r o s: Ávas [4], road 2 km S, 20 June 1989: net. 1ms (NMP 48657 [S+B]); – Dadiá [5], Tsoutsourou, galleries, 24 July 2000: obs. colony; – Didimótiho [6], cave, 22 June 1989: net. 1ma, 2fa (NMP 48665–48667 [S+B]); – Koufóvouno [7], cave, 22 July 2000: obs. colony. – H a l k i d i k í: Petrálona [8], cave, 28 Sept. 1988: net. 1m, 1f (NMP 48610, 48611 [S+B]). – I o á n n i n a: Pápigo [9], cave, 16 Sept. 1988: net. 2f (NMP 48578, 48579 [S]). – L a k o n í a: Githio [10], 16 August 1964: 1m (WIC I1206). – R o d ó p i: Marónia [11], Cave of

the Cyclops Polyphemos, 18 June 1989: net. 2fa (NMP 48632, 48633 [S+B]), 19 June 1989: net. 1ma (NMP 48642 [S+B]). – S é r r e s: Agios Ioannis Prodromos [12], cave Pelade, 17 July 2000: 2f, river n. monastery, 17 July 2000: net. 7m, 10f. – T h e s s a l o n í k i: Rendína [13], 1 km E, 28 July 2000: net. 1m. – X á n t h i: Kimméria [14], gallery, 16 June 1989: net. 2ma, 2f (NMP 48622–48625 [S+B]), 20 July 2000: capt. 10 ind. – A e g e a n I s.: Lesvos, Efthalou [15], ancient mine 4 km E, 14 Sept. 2000: obs. several ind., net. 1ma (MHNG 1808.002 [S+A]); – Lesvos, Vassiliká [16], ancient mine 5.5 km E, 13 Sept. 2000: obs. 6 ind. – C r e t e: Górtis [17], Labyrinth, 3 ind. (ZIN); – Omalós [18], cave, 12 July 1995: net. 1ma. – **Published data**: A h a i a: Kastriá [1], cave, 11 ind. and 29 ind. (Iliopoulou-Georgudaki 1977), Limnae Kastriae, Mt. Helmos (Iliopoulou-Georgudaki & Ondrias 1978), Limnon cave, 9m, 12f (Iliopoulou-Georgudaki 1986). – A t t i k í - P i r e á s: Nymphis Kouvara [= Kouvarás] [19], cave, 27 Jan. 1954: 1 skull [MHNG 975.077] (Strinati 1955). – É v r o s: cave Bouba Lefkimis (n. Lefkimmi) [20], 24 July 1997: obs. nurs. colony of ca. 200 ind. (Ivanova 2000); – Didymotichon [= Didimótiho] [6], cave, 3 km WNW, 22 June 1963 (Hurka 1972), Didymotichon, resp. Didimotichon, cave, 3 August 1971: ca. 2000 ind. (Niethammer 1974, Kock 1974); – Kouvobono [= Koufóvouno] [7], 8–9 June 1965 (Hurka 1972), cave Coufovouno, 23 July 1997: obs. nurs. colony of ca. 3000–3500 ind. (Ivanova 2000); – gallery Tsoutourou II (n. Dadiá) [5], 22 July 1997: obs. nurs. colony of ca. 50 ind. (Ivanova 2000). – I m a t h í a: Náoussa [21], grotte de l'Apano Scala, resp. Scola, 24 May 1954 [1f (MHNG 1711.079 [A])] (Lindberg 1955, Aellen 1955). – K a s t o r i á: Trou de Patarangou, resp. de Patarangon, cave [22], 28 May 1954 [4f (MHNG 1713.097–100 [A])] (Lindberg 1955, Aellen 1955), 4m, 11f (Iliopoulou-Georgudaki 1986). – K o r i n t í a: Corinth [= Kórinthos] [23], 3m, 3f, 11 ind. (Miller 1912). – K o z á n i: Ermakiá [24], cave, 19 ind. (Iliopoulou-Georgudaki 1977, Iiopoulou-Georgudaki & Ondrias 1978). – R o d ó p i: Maronia [11], cave of Cyclops, 26 July 1997: obs. colony of ca. 1500 ind. (Ivanova 2000). – S é r r e s: Saint-Jean-le-Prodrome [= Agios Ioannis Prodromos] [12], grotte Pelade, 6 May 1954 [2m, 2f (MHNG 1714.003–006 [A])] (Lindberg 1955, Aellen 1955), cave Prodromou Serrón, resp. Ioannis Prodromos, 4m, 11f (Iliopoulou-Georgudaki 1977, Iiopoulou-Georgudaki & Ondrias 1978). – T h e s s a l o n í k i: Rentina [= Rendína] [13], cave, 24 April 1955: 1f [MHNG 967.075; A] (Strinati 1959). – Thrazien (no exact loc.), 23 April 1973 (Kock 1974). – A e g e a n I s.: Kos [25], sea cave, 22 March 1966 (Martens 1967); – Lésvos, Mithymna [= Míthimna] [26], 55m, 91f (Iliopoulou-Georgudaki 1977, 1986, Iliopoulou-Georgudaki & Ondrias 1978); – Rhodos [= Ródos], Líndos, 27 April 1964 [27] (Pieper 1965, 1966); – Skíathos, Kástro [28], 29 March 1959: 3 ind. (Kock 1974). – C r e t e: Haghia Dekka [= Ágioi Déka] [17], Labyrinth, 2 ind., resp. 1m (Bate 1905, Miller 1912), Labyrinth, 11 June 1925: 1 ind. (Pohle 1953); – Chaniá [= Haniá] [29], before 1886: 1 ind. (Kock 1974); – Límnes [30] (Theodor 1967); – Sarchos [= Sárhos] [31], 1 ind. (from owl pellets) (Pieper 1977); – Topólia [32], 10 ind. (from owl pellets) (Pieper 1977); – Kreta (no exact. loc), 2 ind. (Pohle 1953). – I o n i a n I s.: Korfu [= Kérkira], Ag. Mathaeos [= Agía Matheos] [33], 1 ind. (from owl pellets) (Niethammer 1962); – Zákinthos [34], Zygoti cave, 1 ind. (Iliopoulou-Georgudaki 1977).

DISTRIBUTIONAL STATUS (Fig. 21). Like all over the Balkans, this species is widespread over the territory of Greece incl. Crete and a number of islands, thus being among the most common bat species. As a typical cavernicolous species, it is confined to karstic areas from the sea level up to high mountain altitudes (up to 1100 m in the Pindus Mts.). Like elsewhere in the Balkans, it forms large colonies in spacious caves (Didimotiho, 3 August 1971, ca. 2000 ind.); data are also available on hibernation of this species in Greece (March, Thrace). External and cranial dimensions of examined specimens of *M. schreibersii* from Greece are shown in Tab. 5.

TAXONOMIC NOTE. The Balkan populations of *M. schreibersii*, including the Greek ones, has been occasionally included in the subspecies *M. schreibersii inexpectatus* Heinrich, 1936 (terra typica: Strandja Mts., SE Bulgaria). However, that name has been considered, almost without any exceptions, to be a junior synonym of the nominotypical form (Ellerman & Morrison-Scott 1951, Corbet 1978, Koopman 1994, Rodrigues in Mitchell-Jones et al. 1999, etc.).

Tadarida teniotis (Rafinesque, 1814)

RECORDS. **Original data**: A t t i k í - P i r e á s: Athína, Likavitos hill [1], 9 Oct. 2000: det. 1 ind. – É v r o s: Kírki [2], river 6 km E, 21 July 2000: det. 1 ind. – F o k í d a: Delfí [3], 22 Sept. 1988: det. 1 ind. – H a l k i d i k í: Petrálona [4], rocky ridge, 27 Sept. 1988: det. 1 ind. – I o á n n i n a: Ioánnina, Limni Pamvotis lake [5], NW bank, 13 Oct. 2000: det. 1 ind. – M e s s i n í a: Trahíla [6], sea shore, 13 Sept. 1996: det. 1 ind. – L a k o n í a: Ítilo [7], garden, 14 Sept. 1996: det. min. 1 ind. – T h e s s a l o n í k i: Thessaloníki [8], university, 3 July 1991: 1m. – T r í k a l a: Meteóra [9], 3 August 1694: 2fa (WIC 1404, 1405), 24 August 1964: 4fa (WIC 1412–1415), 23 Sept. 1988: det. 10 ind. – X á n t h i: Galáni [10], cave, 26 June 1989 and 15 Sept. 1990: obs. – A e g e a n I s.: Lesvos, Agía Marina [11], mountain ridge, 11 Sept. 2000: det. several ind.; – Lesvos, Efthalou [12], area 4 km E, 14 Sept. 2000: det. several ind.; – Thíra, Périssa [13], 10–11 Oct. 2000: det. min. 1 ind. – C r e t e: Agía Roúmeli [14], a rocky cliff, 14 July, 1995: det. 1 ind.; – Amoudára [15], cave, 8 July 1995 and 10 July 1995: det. 1 ind., rocky canyon, 7 July 1995: det. 1 ind.; – Omalós [16], above the valley, 12 July 1995: det. 1 ind.; – Psihró [17], village, 19 July 1995: det. 1 ind.; – Stavrós (Akrotiri pen.) [18], 10 July 1995: det. 1 ind.; – Xylóskalo n. Omalós [19], a small cave, 13 July 1995: det. 1 ind. – **Published data**: A t t i k í - P i r e á s: Athen [= Athína], Lykabettos [= Likavitos] [1], 15 and 17 April 1965: obs. (Martens 1967), Likavitos, 1m (Iliopoulou-Georgudaki 1977); – Dekelion [= Dekéleia] [20], 4f (as *Nyctinomus cestonii*) (Winge 1881). – T r í k a l a: Meteóra [9], 3 August 1964, 24 August 1971: 5fa (Kock & Nader 1984). – T h e s s a l o n í k i: Stavrós [21], 13 March 1963: 1m, 1f (Pieper 1965, Kock 1969, Kock & Nader 1984). – X á n t h i: Porto Lagos [= Lágos] [22], Febr. – early March 1987: 1 ind. (from owl pellets) (Alivizatos & Goutner 1999). – A e g e a n I s.: Eboea [= Évia] [23] (as *Dysopes cestonii*; Lindermayer 1855, Kolenati 1859); – Chios [= Híos] [24], obs. (Kock 1974a); – Kárpathos, Pigadhia (Kárpathos) [25], 9 April 1963 (Pieper 1965), Kárpathos, obs. (Martens 1967); – Kos [26] (Pieper 1966); – Sporaden [= Ns. Sporádes] (no exact loc.), 16 June 1958 (Kahmann 1959); – Rhodos [= Ródos] [27] (Pieper 1966). – C r e t e: Katholikó [28], monastery ruins, Akrotíri pen., 13 March 1965: obs. (Martens 1967); – Ano Viannos [= Áno Viános] [29], 2 ind. (from owl pellets) (Pieper 1977); – Azogyres bei Paläochora [= Azogirés n. Paleohóra] [30], 19 March 1965: obs. (Martens 1967); – Dia I. [31] (Kahmann 1959); – Dragonada I. [32] (Kahmann 1959); – Kalíves [33], E of Chania [= Haniá], 22 March 1965: obs. (Martens 1967); – Lákki [34], Weiße Berge [= Lefka Óri], 6 April 1965: obs. (Martens 1967); – Paläochora [= Paleohóra] [35], 21 March 1965: obs. (Martens 1967); – Sarchos [= Sárhos] [36], 1 ind. (from owl pellets) (Pieper 1977); – Sitía, Kap Sitía [37], rocky crevice, 22 March 1958: 1 ind. (Kahmann 1959), 23 March 1965: obs. (Martens 1967), Sitia, 1 ind. (Kock 1969); – Topólia [38], 17 March 1965: obs. (Martens 1967), Topólia, 1 ind. (from owl pellets) (Pieper 1977). – I o n i a n I s.: Kíthira, n. Potamós [39], May 1970: 1 ind. (from owl pellets) (Niethammer 1971). – Macedonia (no exact loc.), obs. (Martens 1967). – Peloponnese, E coast, obs. (Martens 1967). – Greece (no exact loc.), 1fa (Dobson 1878, Miller 1912).

DISTRIBUTIONAL STATUS (Fig. 22). As shown by the Greek records registered here, this typical Mediterranean species is probably distributed almost all over mainland Greece as well as on Crete and at least seven Aegean islands. The northern limit of its Balkan range passes fringes the north of the Greek territory through southern Bulgaria (Kalčev & Beškov 1963, Pandurska 1992, Obuch & Benda 1996, own data), the Rep. of Macedonia (Kryštufek et al. 1992, 1998) and Albania (Lamani 1970, Uhrin et al. 1996). Northernmost part of distributional area of *T. teniotis* in the Balkans lies in central Dalmatia (for a review see Červený & Kryštufek 1988, comp. Mitchell-Jones et al. 1999).

CONCLUSIONS

In the present review, we have summarised the occurrence of a total of 32 bat species from the whole territory of Greece (Tab. 7). For each species, a complete list of published records in Greece is given and new, original ones are added for 29 of them. The species *Pipistrellus pygmaeus* (= *P. mediterraneus*) is reported here from the territory of Greece for the first time. In agreement with a number of earlier authors, we have excluded *Nycteris thebaica* from the list of the bats of Greece (see Comments on *N. thebaica*).

Considering the relatively small territory of Greece, the unexpectedly large diversity of bats was here recorded. This suggest as well that this region ranks among the important zoogeographic crossroads as that this is the region with considerably large geographic and enviromental diversity. Bat fauna of Greece includes as well the boreal species, widespread over the western Palaearctic meet as those just characteristic of the southern Mediterranean part of Europe. The territory of Greece show greater species richness (among others, of the bat fauna) than other European regions of comparable size. Moreover, our contribution has acknowledged recent partial taxonomic revisions that have enriched the classical conception of the European bat fauna, as presented e. g., by Mitchell-Jones et al. (1999). This is true for five taxa to which the species status and also occurrence in Europe has recently been ascribed (viz., *Myotis aurascens*, *M. alcathoe*, *M.* cf. *punicus*, *Pipistrellus pygmaeus/mediterraneus*, *Plecotus kolombatovici*). Above all, it is this latter fact which has markedly increased the presumed species spectrum of Greek bats but, at the same time, it is most unfortunate that it does not permit – at least for the time being – a more general comparison with the situation in other regions of south-eastern Europe where the new species may also be expected to occur but have not yet been mentioned in the literature. Even so, the bat fauna inhabiting the southernmost tip of the Balkan Peninsula shows a rather dominant European composition, almost without the presence of forms that penetrate the eastern Mediterranean from the Middle East (cf. Benda & Horáček 1998, Harrison & Bates 1991) or from the Northern Africa (comp. Hanák & Elgadi 1984, Qumsiyeh 1985, Qumsiyeh & Schlitter 1982). Exceptions are provided by *Myotis blythii omari* which has colonized Crete, and *Eptesicus* (*bottae*) *anatolicus* inhabiting Rhodes Island. The latter species has only been included in the Greek fauna because this Asia Minor island belongs to Greece, while the species does not exceed in any way the limits of its Asian range. *M. b. omari* on Crete and *E.* (*b.*) *anatolicus* on Rhodes attain the westernmost limits of their respective ranges.

In contrast to previous reviews of the bat fauna of Greece (Laar & Daan 1964, Ondrias 1965, Iliopoulou-Georgudaki 1977), the present one substantially contribute to better define the southern limits of the ranges of several European "boreal" species in the Balkans. This concerns especially *Myotis bechsteinii*, *M. daubentonii*, *M. nattereri*, *Vespertilio murinus*, *Pipistrellus nathusii*, *Nyctalus noctula*, *N. leisleri*, and *Barbastella barbastellus*. While the ranges of *M. bechsteinii*, *M. nattereri*, and *B. barbastellus* apparently reach the southernmost regions of mainland Greece, this cannot be definitely stated as regards the other species mentioned (above all, *M. daubentonii*, *V. murinus*, and *P. nathusii*). The summer occurrence of *P. nathusii*, *N. noctula* and *N. leisleri* pertains mostly to the northern and/or montaneous regions of Greece and, since all these three species perform long-range migrations (see e. g. Strelkov 1969, 1997a, b), records in the more southern regions of Greece may represent seasonal visits only. According to current observations, the southern limit of the range of *M. daubentonii* reaches only the north of Greece where lives in sympatric occurrence with *M. capaccinii*, a species of similar ecology. In that region, a distribution limit similar to that of *M. daubentonii* may also be true for *Myotis brandtii*, a species which has not yet been documented in the territory of Greece. The records of this species in the Bulgarian Rodopi Mts. close to the Greek border (Horáček et al. 1974) suggest the possible occurrence of this species in Greece. Another species showing a similar distribution over Europe and which is also present in southern Bulgaria, is *Eptesicus nilssonii* (Keyserling et Blasius, 1839). This is thus another candidate for possible addition to the list of Greek bat fauna (see Hanák & Horáček 1986). As regards other bat species, our review has only completed the published data by a number of new records, without altering the known picture of their distribution in that region.

As mentioned above, the present contribution reports the occurrence of forms whose species status has only recently been recognised (Barratt et al. 1997, Benda & Tsytsulina 2000, Helversen et al. 2001, Spitzenberger et al. 2001) and thus implement the respective taxonomic results into actual distributional and zoogeographical contexts.

The situation recently arising with the forms of *M. mystacinus* group is particularly complicated in the region of the southern Balkans. While, until now, only *M. mystacinus* (s. l.) was reported to occur in that region (presence of *M. brandtii* being expected in the northern regions of Greece, not proved, of course), at present, the newly recognised species, *M. aurascens* (see Benda & Tsytsulina 2000) is considered to be the dominant form of that species group. Besides of *M. aurascens*, two other species were proved to occur in Greece: the newly described *M. alcathoe* and the central European *M. mystacinus* s. str. It is difficult to separate the latter two species with morphologic characters due to the scarce available material from the Balkans. Hence it is not easy to precisely define the ranges of these two species in the whole of south-eastern Europe. The situation of the *Pipistrellus pipistrellus* species complex appears to be more clear, though the newly defined species are still not clearly recognisable with aid of morphological characters. In the classical ("single-species") concept, *P. pipistrellus* was among the most common bat species in Greece. Our observations show that both species, *P. pipistrellus* s. str. and *P. pygmaeus/mediterraneus*, occur in the territory of Greece, and the later species seems more abundant. However, it will be necessary to precise their distribution, biology and ecological requirements both in Greece and the whole Palaearctic. Already in the past there had been a problem associated with the distribution of the two classical species of the genus *Plecotus* (viz., *auritus* and *austriacus*, see e.g. Pieper 1977). At present, with the specific status being suggested for a third form, *P. kolombatovici*, it is necessary to check, uncertain records of *P. auritus* from the south of Greece and to admit the occurrence of a third species in that region. The results presented above show that all three species mentioned do occur in that territory even if the taxonomic value of a number of the records is unclear for the time being.

In this contribution we have presented the hitherto known picture of all bat species known to occur in the territory of Greece. However, this is only a partial stage of research into the fauna of Greece; it will be necessary to precise the ranges of most bat species by subsequent investigations. As regards that territory, the knowledge of its bat fauna is just mosaic. Above all, the bat fauna of most islands as well as several regions of mainland Greece is known only on the basis of occasional records and, beyond doubt, the systematic investigations will change the present view considerably. Increased knowledge of the distribution of bats over the Balkans will also increase the possibility for a real comprehension to some of the taxonomic and biogeographic problems of the Palaearctic bat fauna (see Horáček et al. 2000).

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APPENDIX I – GAZETTEER

Original record localities mentioned in the text (see Fig. 23): **1** Didimótiho [Διδυμοτειχο] (Évros) (41° 21’ N, 26° 29’ E). – **2** Koufóvouno [Κουφοβουνο] (Évros) (41° 22’ N, 26° 26’ E). – **3** Dadiá [Δαδια], Tsoutsourou, galleries (Évros) (41° 08’ N, 26° 13’ E). – **4** Kírki [Κιρκη], river 6 km E (Évros) (40° 58’ N, 25° 50’ E). – **5** Ávas [Αβας], road 2 km S (Évros) (40° 55’ N, 25° 55’ E). – **6** Alexandroúpoli [Αλεξανδρουπολη] (Évros) (40° 51’ N, 25° 52’ E). – **7** Mákri [Μακρη] (Évros) (40° 51’ N, 25° 14’ E). – **8** Marónia [Μαρωνεια], Cave of the Cyclops Polyphemos (Rodópi) (39° 54’ N, 25° 33’ E), creek 2 km SW (Rodópi) (39° 54’ N, 25° 32’ E). – **9** Kimméria [Κιμμερια] (Xánthi) (41° 09’ N, 24° 56’ E). – **10** Xánthi [Ξανθη], road 8 km N (Xánthi) (41° 11’ N, 24° 51’ E). – **11** Galáni [Γαλανη] (Xánthi) (41° 06’ N, 24° 46’ E). – **12** Mikrópoli [Μικροπολι] (Dráma) (41° 12’ N, 23° 48’ E). – **13** Agios Ioannis Prodromos [Αγιος Ιωαννης Προδρομος] (Sérres) (41° 08’ N, 23° 37’ E). – **14** Stavrós [Σταυρος] (Thessaloníki) (40° 40’ N, 23° 42’ E). – **15** Rendína [Ρεντινα], creek 2 km E (Thessaloníki) (40° 40’ N, 23° 38’ E). – **16** Ágios Pródromos [Αγιος Προδρομος] (Halkidikí) (40° 28’ N, 23° 23’ E). – **17** Ormília [Ορμυλια] (Halkidikí) (40° 17’ N, 23° 33’ E). – **18** Metamórfossi [Μεταμορφωση], river 5 km W (Halkidikí) (40° 15’ N, 23° 33’ E). – **19** Petrálona [Πετραλωνα] (Halkidikí) (40° 22’ N, 23° 09’ E). – **20** Eleohória [Ελαιοχωρια] (Halkidikí) (40° 20’ N, 23° 10’ E). – **21** Loutrá Thérmis [Λουτρα Θερμης] (Thessaloníki) (40° 31’ N, 23° 04’ E). – **22** Thessaloníki [Θεσσαλονικη] (Thessaloníki) (40° 38’ N, 22° 58’ E). – **23** Mílos [Μυλος], 1 km E (Kilkís) (40° 54’ N, 22° 53’ E). – **24** Náoussa [Ναουσα], Apano Scala cave (Imathía) (40° 38’ N, 22° 04’ E). – **25** Ermakiá [Ερμακια], 1 km W (Kozáni) (40° 30’ N, 21° 51’ E). – **26** Papagíannis [Παπαγιαννης] (Flórina) (40° 51’ N, 21° 29’ E). – **27** Píli [Πυλη], 3 km E (40° 47’ N, 21° 04’ E) and Spilia Zahariadi cave [Σπιλια Ζαχαριαδη] (40° 47’ N, 21° 02’ E) (Flórina). – **28** Vatohóri [Βατοχωρι], 2 km E (Flórina) (40° 41’ N, 21° 10’ E). – **29** Kría Neá [Κρυα Νερα] (Kastoriá) (40° 25’ N, 21° 11’ E). – **30** Pápigo [Παπιγκο] (Ioánnina) (39° 58’ N, 20° 43’ E) and Drakolimni lake [Δρακολιμνη] (Ioánnina) (39° 59’ N, 20° 47’ E). – **31** Kleidoniá [Κλειδωνια] (Ioánnina) (39° 58’ N, 20° 40’ E). – **32** Aidonóhori [Αιδονοχωρι] (Ioánnina) (40° 04’ N, 20° 35’ E). – **33** Asprokklíssi [Ασπροκκλησι] (Thesprotía) (39° 37’ N, 20° 14’ E). – **34** Paralía Drépano [Παραλια Δρεπανο]

(Thesprotía) (39° 31’ N, 20°12’ E). – **35** Mesopótamo [Μεσοποταμο] (Préveza) (39° 15’ N, 20° 33’ E). – **36** Despotikó [Δεσπο-τικο] (Préveza) (39° 13’ N, 20° 40’ E). – **37** Ioánnina, Limni Pamvotis lake [Ιωαννινα, Λιμνι Παμβοτις] (Ioánnina) (39° 41’ N, 20° 21’ E). – **38** Meteóra [Μετεορα] (Tríkala) (39° 43’ N, 21° 38’ E). – **39** Dímitra [Δημητρα], 3 km E (Grevená) (39° 57’ N, 21° 41’ E). – **40** Prionia [Πριονια] (Pieriá) (40° 05’ N, 22° 24’ E). – **41** Agios Dionissios monastery [Μονη Αγιος Διονυσιος] (Pieriá) (40° 06’ N, 22° 26’ E). – **42** Paralía Skotínas [Παραλια Σκοτινας] (Pieriá) (40° 2’ N, 22° 35’ E). – **43** Agíos Dimitrios monastery [Μονη Αγιος Δημητριος] (Lárissa) (39° 52’ N, 22° 44’ E). – **44** Anthiro [Ανθιρο], Tavropos river (Kardítsa) (39° 12’ N, 21° 45’ E). – **45** Kombotádes [Κομποταδες] (Fthiótida) (38° 52’ N, 22° 21’ E). – **46** Ámfissa [Αμφισσα] (Fokída) (38° 32’ N, 22° 23’ E). – **47** Delfí [Δελφοι] (Fokída) (38° 29’ N, 22° 30’ E). – **48** Aráhova [Αραχοβα], Corycian cave (Viotía) (38° 29’ N, 22° 35’ E). – **49** Livadiá [Λειβαδεια] (Viotía) (38° 26’ N, 22° 53’ E). – **50** Athína, Likavitos hill [Αθηνα, Λυκαβηττος] (Attikí-Pireás) (37° 59’ N, 23° 45’ E). – **51** Daskalio [Δασκαλιο] (Attikí-Pireas) (37° 49’ N, 24° 03’ E). – **52** Arhéa Korinthos [Αρχαια Κορινθος] (Korinthía) (37° 53’ N, 22° 52’ E). – **53** Antikrion [Αντικριον] (Korinthía) (38° 03’ N, 22° 35’ E). – **54** Kastría [Καστρια], Limnon cave (Aháia) (37° 57’ N, 22° 08’ E). – **55** Vizíki [Βυζικι], 1 km S (Arkadía) (37° 43’ N, 21° 57’ E). – **56** Spátharis [Σπαθαρης], 4 km S (Arkadía) (37° 43’ N, 21° 53’ E). – **57** Simopoulo [Σιμοπουλο], 2 km W (Ilía) (37° 51’ N, 21° 32’ E). – **58** Nea Ilis [Νεα Ηλις], Piniós river 2 km N (Ilía) (37° 54’ N, 21° 23’ E). – **59** Kástro [Καστρο] (Ilía) (37° 53’ N, 21° 08’ E). – **60** Arhea Olympia [Αρχαια Ολυμπια] (Ilía) (37° 38’ N, 21° 38’ E). – **61** Perivolía [Περιβολια] (Ilía) (37° 25’ N, 21° 51’ E). – **62** Karitena [Καριταινα] (Arkadía) (37° 29’ N, 22° 02’ E). – **63** Artíki [Αρτικι], 1 km N (Messinía) (37° 16’ N, 21° 47’ E). – **64** Petrohóri, Paleokastro [Πετροχωρι, Παλαιοκαστρο] (Messinía) (36° 58’ N, 21° 39’ E). – **65** Tzánes [Τζανες], 2 km NE (Messinía) (36° 59’ N, 21° 56’ E). – **66** Néo Proástio [Νεο Προαστιο] (Messínia) (36° 52’ N, 22° 15’ E). – **67** Stoupa, Kardamili [Στουπα, Καρδαμυλη] (Messinía) (36° 51’ N, 22° 16’ E). – **68** Trahíla [Τραχηλα] (Messínia) (36° 47’ N, 22° 19’ E). – **69** Ítilo [Οιτυλο] (Lakonia) (36° 42’ N, 22° 23’ E). – **70** Githio [Γυθειο] (Lakonía) (36° 46’ N, 22° 34’ E). – **71** Mistrás [Μυστρας] (Lakonía) (37° 05’ N, 22° 22’ E). – **72** Spárti [Σπαρτη] (Lakonia) (37° 05’ N, 22° 26’ E). – **73** Polidroso [Πολυδροσο], 2 km S (Lakonía) (37° 09’ N, 22° 37’ E). – **74** Eleohóri [Ελαιοχωρι], 3 km S (Arkadía) (37° 26’ N, 22° 35’ E). – **75** Kefalóvrisso [Κεφαλοβρυσο] (Argolída) (37° 42’ N, 22° 28’ E).

A e g e a n I s.: **76** Thássos, Thássos (Hora) [Θασος, Χωρα] (Kavála) (40° 46’ N, 24° 43’ E). – **77** Thássos, Panagiá [Θασος, Παναγια] (Kavála) (40° 44’ N, 24° 44’ E) and Skála Potamiá [Σκαλα Ποταμια] (40° 43’ N, 24° 46’ E). – **78** Thássos, Arhangélou monastery [Θασος, Μονι Αρχαγγελου] (Kavála) (40° 36’ N, 24° 44’ E). – **79** Thássos, Theologos [Θασος, Θεολογος] (Kavála) (40° 39’ N, 24° 42’ E). – **80** Samothráki, Paleópoli [Σαμοθρακη, Παλαιοπολι] (Évros) (40° 41’ N, 25° 32’ E). – **81** Samothráki, Thérma [Σαμοθρακη, Θερμα] (Évros) (40° 40’ N, 25° 36’ E). – **82** Samothráki, Samothráki (Hora) [Σαμοθρακη, Χωρα] (Évros) (40° 39’ N, 25° 31’ E). – **83** Samothráki, Lákkoma [Σαμοθρακη, Λακκωμα] (Évros) (40° 36’ N, 25° 31’ E). – **84** Skíathos, Kapriso [Σκιαθος, Καπρισο] (Magnissía) (39° 10’ N, 23° 59’ E). – **85** Lesvos, Skoutáros [Λεσβος, Σκουταρος], 4 km S (Nissia Egeou) (39° 16’ N, 26° 07’ E). – **86** Lesvos, Efthalou [Λεσβος, Ευθαλου], 4 km E (Nissia Egeou) (39° 23’ N, 26° 14’ E). – **87** Lesvos, Agía Marina [Λεσβος, Αγια Μαρινα], Agios Bartholomeos cave (Nissia Egeou) (39° 03’ N, 26° 33’ E). – **88** Lesvos, Agios Isidóros [Λεσβος, Αγιος Ισιδωρος] (Nissia Egeou) (38° 58’ N, 26° 24’ E). – **89** Lesvos, Mihós [Λεσβος, Μιχος] (Nissia Egeou) (39° 05’ N, 26° 25’ E). – **90** Lesvos, Vassiliká [Λεσβος, Βασσιλικα], 5.5 km E (Nissia Egeou) (39° 06’ N, 26° 17’ E). – **91** Míkonos, Kalamopodi [Μυκονος, Καλαμοποδι] (Kikládes) (37° 25’ N, 25° 21’ E). – **92** Páros, Náousa [Παρος, Ναουσα] (Kikládes) (37° 07’ N, 25° 14’ E). – **93** Thíra (Santorini), Périssa [Θηρα, Περισσα] (Kikládes) (36° 22’ N, 25° 28’ E). – **94** Ródos, Afándou [Rodos, Afantou] (Dodekánissa) (36° 17’ N, 28° 11’ E).

C r e t e: **95** Agía Triáda monastery [Μονη Αγια Τριαδα] (Haniá) (35° 34’ N, 24° 08’ E). – **96** Stavrós [Σταυρος] and Katholikó monastery [Μονη Καθολικο] (Haniá) (35° 35’ N, 24° 05’ E). – **97** Geráni [Γερανι] (Haniá) (35° 31’ N, 23° 52’ E). – **98** Haniá [Χανια] (Haniá) (35° 31’ N, 24° 0’ E). – **99** Omalós [Ομαλος] (Haniá) (35° 21’ N, 23° 54’ E) and Xylóskalo [Ξιλοσκαλο] (Haniá) (35° 18’ N, 23° 55’ E). – **100** Agía Roúmeli [Αγια Ρουμελη] (Haniá) (35° 15’ N, 23° 57’ E). – **101** Sárhos [Σαρχος] (Iráklio) (35° 14’ N, 25° 00’ E). – **102** Amoudára [Αμμουδαρα] (Iráklio) (35° 20’ N, 25° 04’ E). – **103** Górtis [Γορτις] (Iráklio) (35° 04’ N, 24° 57’ E). – **104** Mílatos [Μιλατος] (35° 18’ N, 25° 34’ E) and Paralía [Παραλια] (Lassíthi) (35° 19’ N, 25° 34’ E). – **105** Psihró [Ψυχρο] (Lassíthi) (35° 10’ N, 25° 27’ E). – **106** Tzermiádo [Τζερμιαδο] (Lassíthi) (35° 12’ N, 25° 29’ E). – **107** Áno Viánnos [Ανω Βιαννος] (Iráklio) (35° 03’ N, 25° 25’ E). – **108** Katofígi [Κατωφυγι] (Iráklio) (35° 05’ N, 25° 24° 04’ E). – **109** Mires [Μοιρες] (Iráklio) (35° 04’ N, 24° 53’ E).

I o n i a n I s.: **110** Kefaloniá, Karavómilos [Κεφαλλωνια, Καραβομυλος], Fitídi cave (Kefaloniá) (38° 16’ N, 20° 37’ E). – **111** Kérkira, Messongí [Κερκυρα, Μεσογγη] (Kérkira) (39° 29’ N, 19° 56’ E). – **112** Kérkira, Potamós [Κερκυρα, Ποταμος] (Kérkira) (39° 37’ N, 19° 53’ E).

APPENDIX II – LIST OF COMPARATIVE MATERIAL

Plecotus auritus (Linnaeus, 1758)

Czech Rep.: Bechyně (Tábor Dist.), 18 March 1965: 1f (NMP 49116); – Chlum (Benešov Dist.), 31 Jan. 1955: 1f (IVB 07); – Dobrá (Frýdek-Místek Dist.), 27 August 1954: 2f (IVB 11, 12); – Josefov, Býčí skála cave (Blansko Dist.), 17 March 1962: 1m (IVB 13); – Karlštejn (Beroun Dist.), 12 March 1955: 1m (IVB 5); – Lažánky, Kateřinská jeskyně (Blansko Dist.), 4 March 1963: 1f (IVB 20); – Lesnice (Šumperk Dist.), 2 July 1964: 1f (IVB 24); – Loreta (Klatovy Dist.), 31 Dec. 1984: 1m (NMP 39149); – Malá Morávka (Bruntál Dist.), 14 Jan. 1971: 1 s. i., 1m (MUB 1.2.81, 1.1.82], 24 Febr. 1973: 1f (MUB 1.2.12), 9 Febr. 1974: 1f (MUB 1.2.48); – Nákří (České Budějovice Dist.), 9 Sept. 1955: 1m (IVB 10); – Olšovec (Přerov Dist.), 9 Febr. 1961: 1m (IVB 6); – Ostrov u Macochy (Blansko Dist.), 9 Jan. 1968: 1m (IVB 27); – Pohořelice (Břeclav Dist), 22 August 1958: 1f (IVB 4); – Polná (Jihlava Dist.), 18 June 1963: 1f (IVB 28); – Praha-Lhotka (sídliště Novodvorská) (Praha Dist.), 17 June 1988: 1f (NMP 50999); – Studenec (Třebíč Dist.), 6 Sept. 1966: 1m (IVB 26); – Tišnov, Kvěnice (Brno-venkov Dist.), 11 Nov. 1950: 1f (MUB 1.1.23); – Tišnov, Předklášteří (Brno-venkov Dist.), 5 July 1963: 1f (IVB 21), 19 June 1963: 1f (IVB 29); – Zvíkovské Podhradí, Zvíkov (Písek Dist.), 24 April 1960 (NMP 49094), 16 Jan. 1963: 1f (NMP 49093).

Slovakia: Dobšinská Ľadová Jaskyňa (Rožňava Dist.), 3 March 1963: 1m, 1f (IVB 17, 19); – Jelenec, hrad Gýmeš (Nitra Dist.), 1 July 1966: 1m (MUB 1.1.34); – Zverovka (Tvrdošín Dist.), 12 August 1963: 1f (IVB 22).

Bulgaria: Gela (Smoljan Dist.), Ladenica cave, 13 August 1978: 4m, 2f (NMP 49072–49077); – Jagodina (Smoljan Dist.), Dolna Karevska dupka cave, 16 August 1978: 1m (NMP 49078); – Orehovo (Smoljan Dist.), 25 August 1980: 1m (NMP 49082).

Plecotus austriacus (Fischer, 1829)

Czech Rep.: Bechyně (Tábor Dist.), 18 March 1965: 3f (NMP 49113–49115); – Bělá pod Bezdězem (Mladá Boleslav Dist.), 12 Feb. 1962: 1m (NMP 49100); – Budišov (Třebíč Dist.), 7 Sept. 1966: 2m, 2f (IVB 83, 84, 86, 87); – Dolní Podluží (Děčín Dist.), 1986: 1f (NMP 40140); – Hostouň (Kladno Dist.), 27 Feb. 1934: 1m (NMP 39589); – Hrubý Rohozec (Semily Dist.), 12 Febr. 1962: 1f (NMP 49104); – Klášterec nad Ohří (Chomutov Dist.), 15 Febr. 1962: 2m, 3f (NMP 49105–49107, 49110, 49111); – Lipnice nad Sázavou (Havlíčkův Brod Dist.), 30 Jan. 1961: 1m (NMP 49095); – Loket (Sokolov Dist.), 15 Febr. 1962: 1f (NMP 49112); – Lounín (Beroun Dist.), 21 June 1986: 1m (NMP 40141); – Mikulov (soutěska, paseka) (Břeclav Dist.), 24 April 1989: 1f (IVB 88); – Mnichovo Hradiště (Mladá Boleslav Dist.), 12 Febr. 1962: 2m (NMP 49101, 49102); – Moravský Krumlov (Znojmo Dist.), 26 June 1964: 1f (IVB 71); – Nivnice (Uherské Hradiště Dist.), 10 August 1987: 1f (NMP 40630); – Němčany (Vyškov Dist), 13 March 1989: 1m (NMP 50997); – Praha-Hostivař (Praha dist.), 19 Oct. 1985: 1m (NMP 39374); – Rovina (Beroun Dist.), 4 Oct. 1986: 1m (NMP 39843); – Slavkov u Brna (Vyškov Dist.), 9 June 1962: 1f (IVB 24); – Sloup (Blansko Dist.), 14 March 1965: 1m (IVB 80); – Tišnov, Olší (Brno-venkov Dist.), 9 July 1964: 1f (IVB 72); – Velehrad (Uherské Hradiště Dist.), 10 Febr. 1961: 1f (NMP 49096); – Lužnice, Velký Tisý (Jinřichův Hradec Dist.), 25 August 1959: 1m (NMP 49117); – Zvířetice (Mladá Boleslav Dist.), 12 Febr. 1962: 2m, 1f (NMP 49097–49099).

Slovakia: Smolenice, Driny cave (Trnava Dist.), 11 Febr. 1961: 1f (NMP 49103); – Krásnohorské Podhradie, Krásná Hôrka Castle (Rožňava Dist.), 4 Febr. 1970: 1m (MUB 1.2.51); – Važec, Važecká jaskyňa cave (Liptovský Mikuláš Dist.), 14 Febr. 1961: 1m (NMP 49108).

Bulgaria: General Todorov (Blagoevgrad Dist.), 4 August 1994: 2m (NMP 49132, 49133), 11 August 1994: 2m, 1f (NMP 49134–49136); – Gorna Breznica (Blagoevgrad Dist.), 16 July 1981: 2m (NMP 49084, 49085), 20 July 1981: 1m (NMP 49086); – Jagodina, Dolnokarevska dupka (Smoljan Dist.), 16 August 1978: 1m (NMP 49079); – Karlukovo (Loveč Dist.), 3 Oct. 1962: 1m (IVB 42), 7 Febr. 1965: 2m, 3f (IVB 73, 74; NMP 49052–49054), 12 June 1977: 1m (NMP 49064), 15 June 1977: 1m (NMP 49065), 6 August 1978: 1m (NMP 49067), 7 August 1978: 2m (NMP 49068, 49071), 8 August 1978: 1m (NMP 49069); – Kavarna (Tolbuhin Dist.), 11 Sept. 1962: 1m, 3f (IVB 39–41); – Lakatnik (Sofija Dist.), 18 March 1956: 1m (NMP 49051), 10 Febr. 1965: 6m, 6f (IVB 76–78; NMP 49055–49063); – Momčilgrad (Kardžali Dist.), 18 June 1977: 1f (NMP 49066); – Orehovo (Smoljan Dist.), 24 August 1980: 2m (NMP 49080, 49081), 25 August 1980: 1m (NMP 49083), 28 June 1984: 3m (NMP 49087–49089), 29 June 1984: 1m (NMP 49090); – Ploski (Blagoevgrad Dist.), 30 July 1994: 1m (NMP 49130), 31 July 1994: 1m (NMP 49131); – Sliven (Sliven Dist.), 10 June 1982: 1m (NMP 40922); – Zlatna Panega (Loveč Dist.), 8 Febr. 1965: 1f (IVB 75).

Plecotus kolombatovici Đulić, 1980

Croatia, Dalmatia: Hvar Is., Stari Grad, 1 Sept. 1977: 1m (NMP 49092); – Zavala, Bjelušica Pećina cave, 29 August 1977: 1m (NMP 49091).

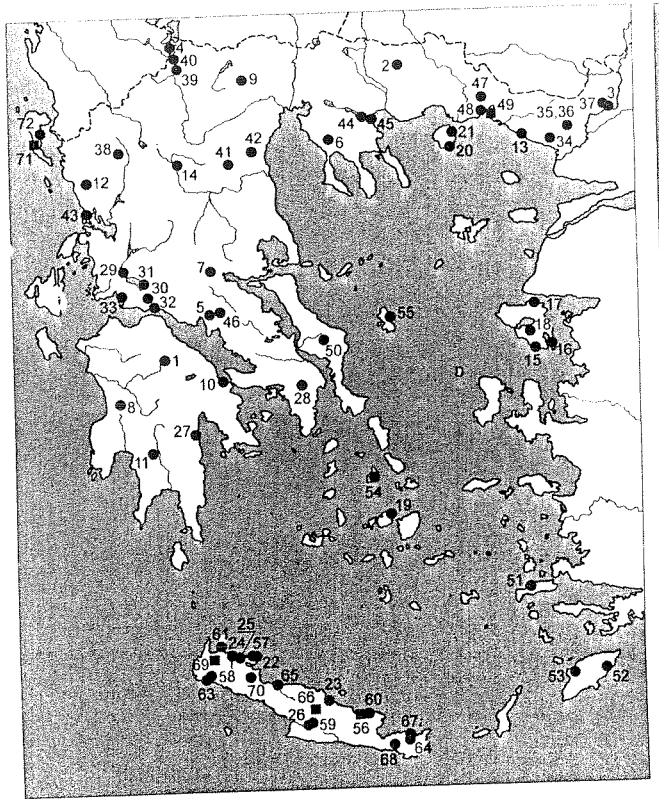

Fig. 2. Records of *Rhinolophus ferrumequinum* (Schreber, 1774) in Greece; squares denote osteological findings and circles the all other records.

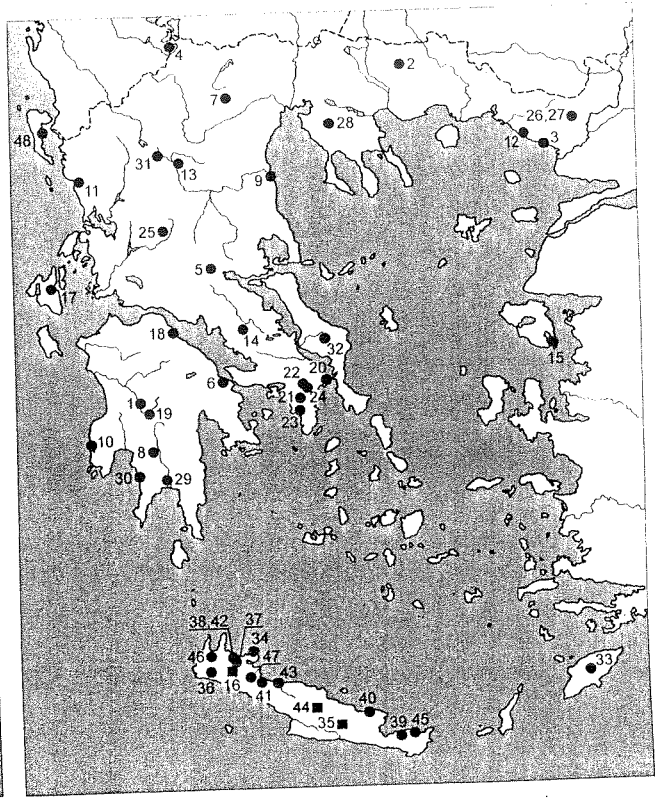

Fig. 3. Records of *Rhinolophus hipposideros* (Bechstein, 1800) in Greece; for symbol explanations see Fig. 2.

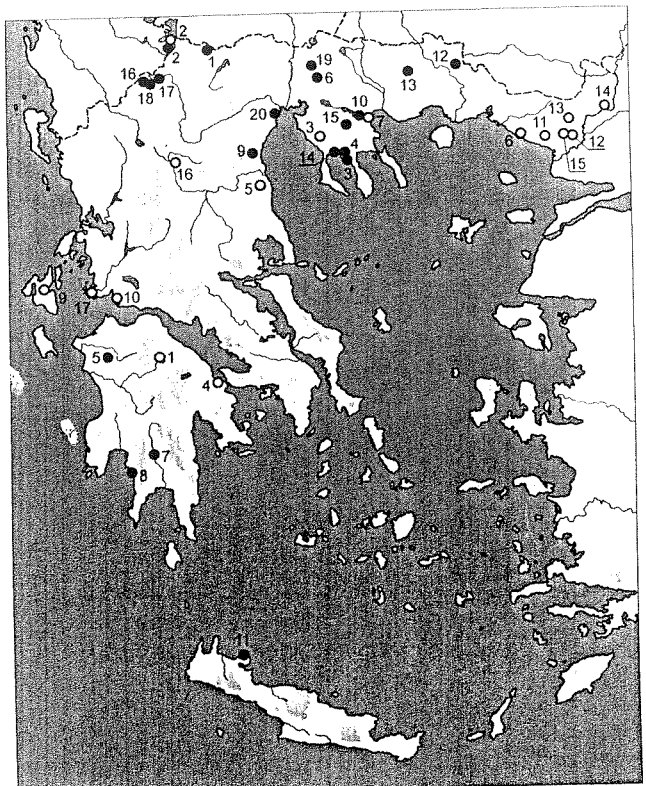

Fig. 4. Records of *Rhinolophus euryale* Blasius, 1853 (open symbols) and *Myotis aurascens* Kusjakin, 1935 (closed symbols) in Greece; for symbol explanations see Fig. 2.

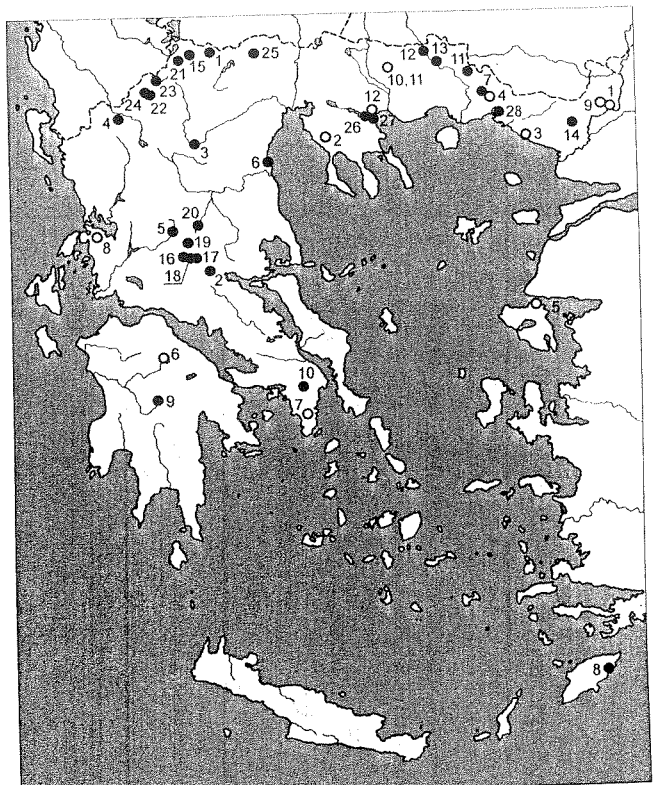

Fig. 5. Records of *Rhinolophus mehelyi* Matschie, 1901 (open symbols) and *Nyctalus leisleri* (Kuhl, 1817) (closed symbols) in Greece; for symbol explanations see Fig. 2.

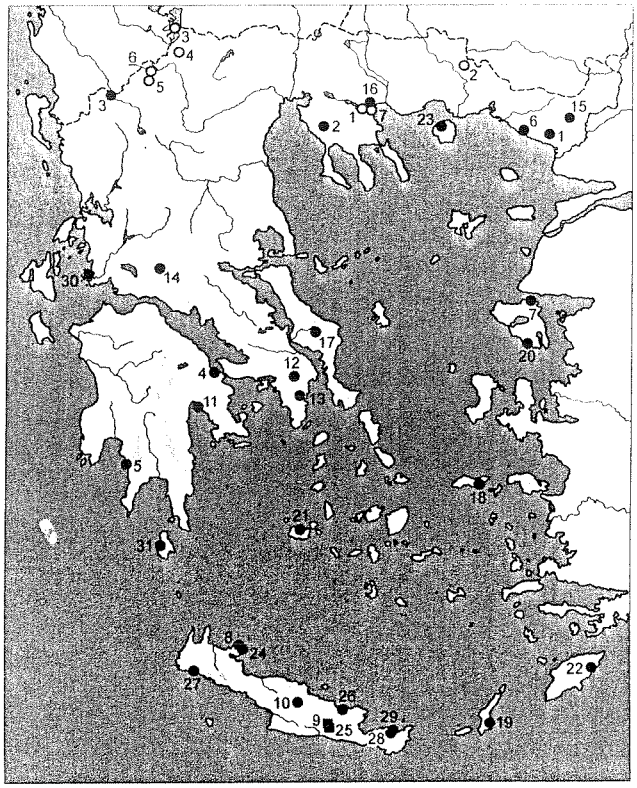

Fig. 6. Records of *Rhinolophus blasii* Peters, 1866 (closed symbols) and *Myotis daubentonii* (Kuhl, 1817) (open symbols) in Greece; for symbol explanations see Fig. 2.

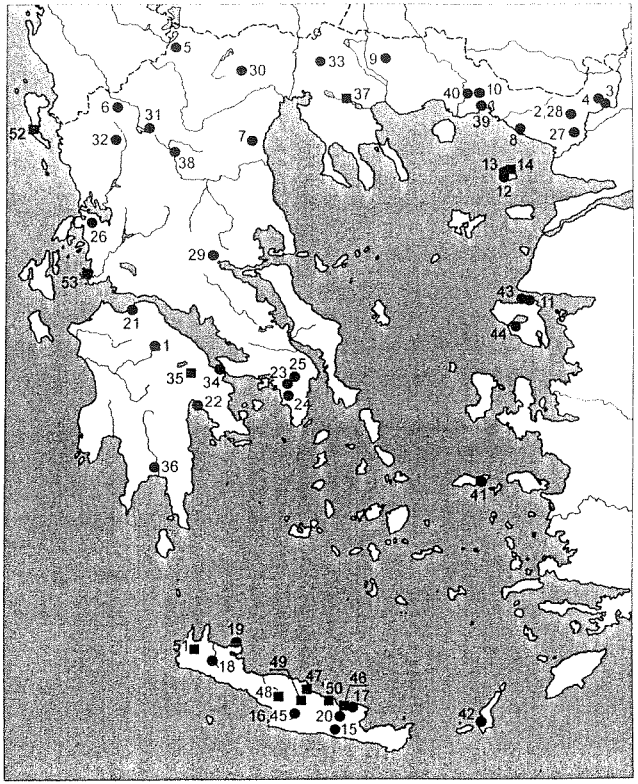

Fig. 7. Records of *Myotis blythii* (Tomes, 1857) in Greece; for symbol explanations see Fig. 2.

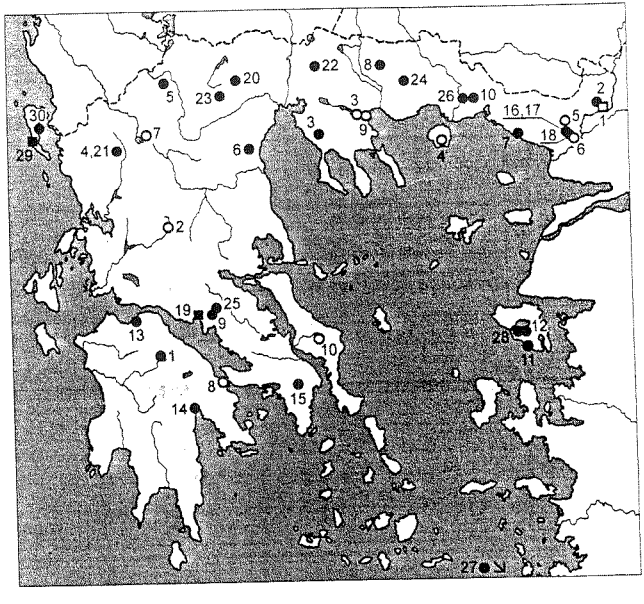

Fig. 8. Records of *Myotis myotis* (Borkhausen, 1797) (closed symbols) and *Nyctalus noctula* (Schreber, 1774) (open symbols) in Greece; for symbol explanations see Fig. 2.

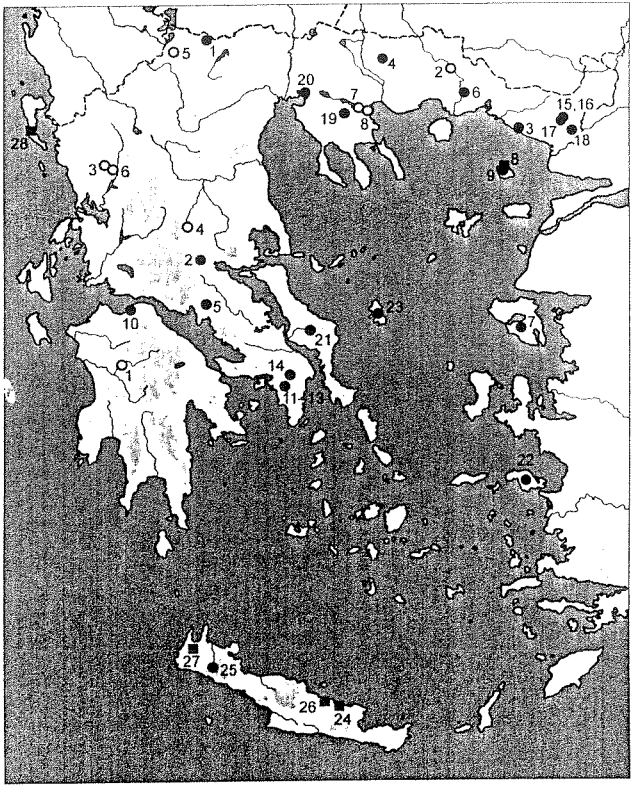

Fig. 9. Records of *Myotis bechsteinii* (Kuhl, 1817) (open symbols) and *Eptesicus serotinus* (Schreber, 1774) (closed symbols) in Greece; for symbol explanations see Fig. 2.

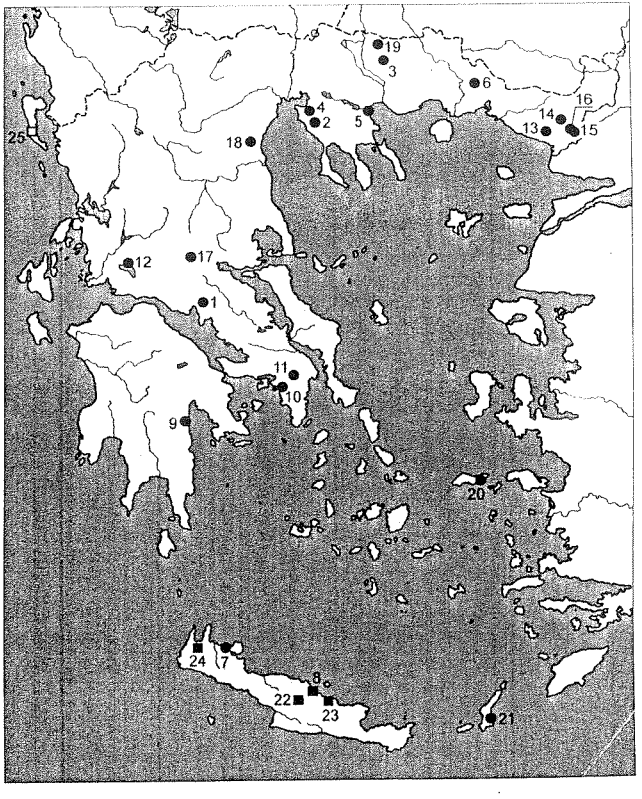

Fig. 10. Records of *Myotis emarginatus* (Geoffroy, 1806) in Greece; for symbol explanations see Fig. 2, the open symbol denotes doubtful record (No. 25).

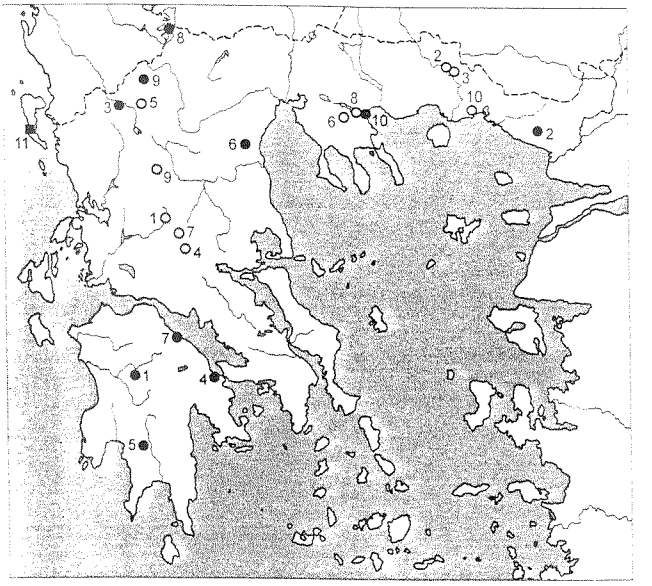

Fig. 11. Records of *Myotis nattereri* (Kuhl, 1817) (closed symbols) and *Nyctalus lasiopterus* (Schreber, 1780) (open symbols) in Greece; for symbol explanations see Fig. 2.

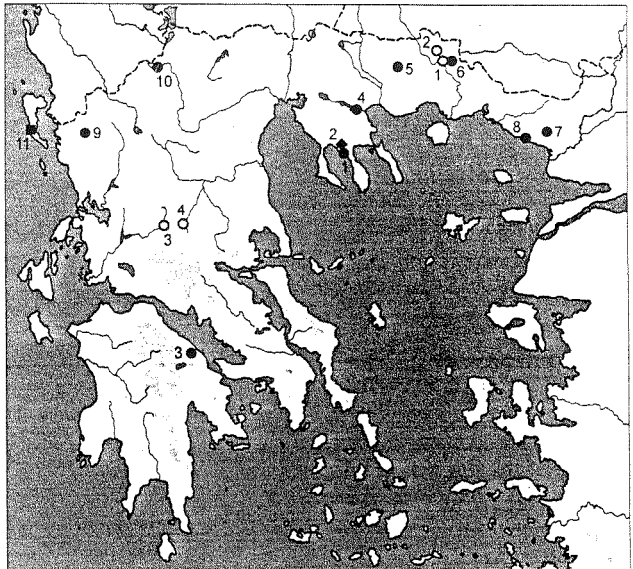

Fig. 12. Records of *Myotis mystacinus* (Kuhl, 1817) s. l. (closed circles), *M. alcathoe* Helversen et Heller, 2001 (open circles) and record of *M. mystacinus* s. str. or *M. alcathoe* (closed diamond) in Greece; for details see text.

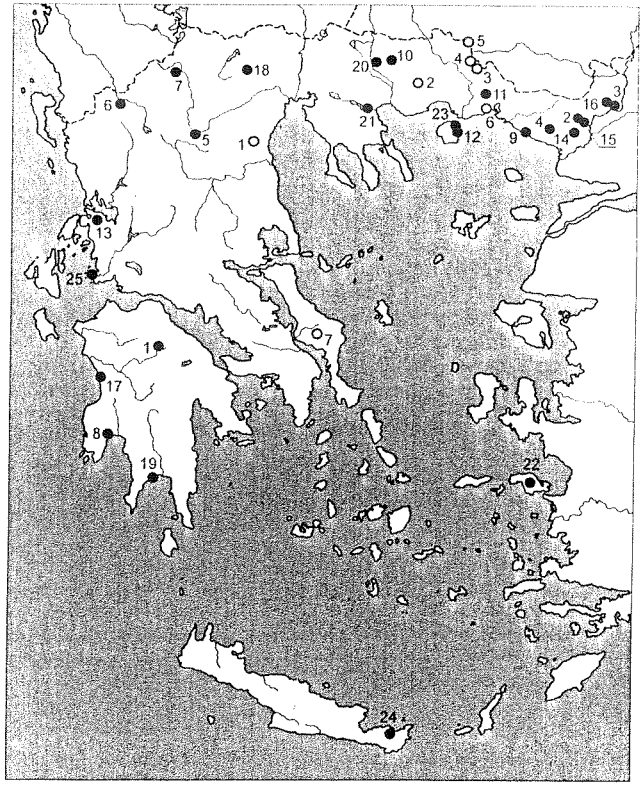

Fig. 13. Records of *Myotis capaccinii* (Bonaparte, 1837) (closed symbols) and *Vespertilio murinus* Linnaeus, 1758 (open symbols) in Greece; for symbol explanations see Fig. 2.

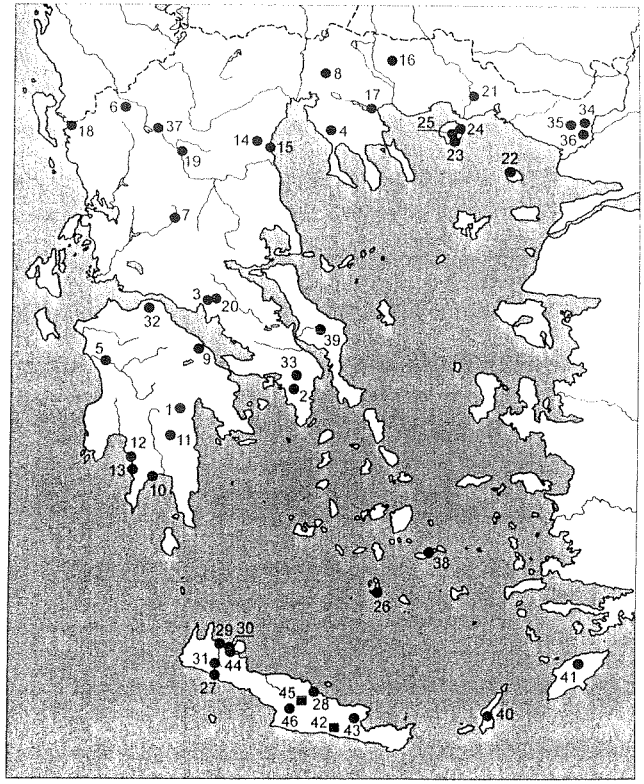

Fig. 14. Records of *Hypsugo savii* (Bonaparte, 1837) in Greece; for symbol explanations see Fig. 2.

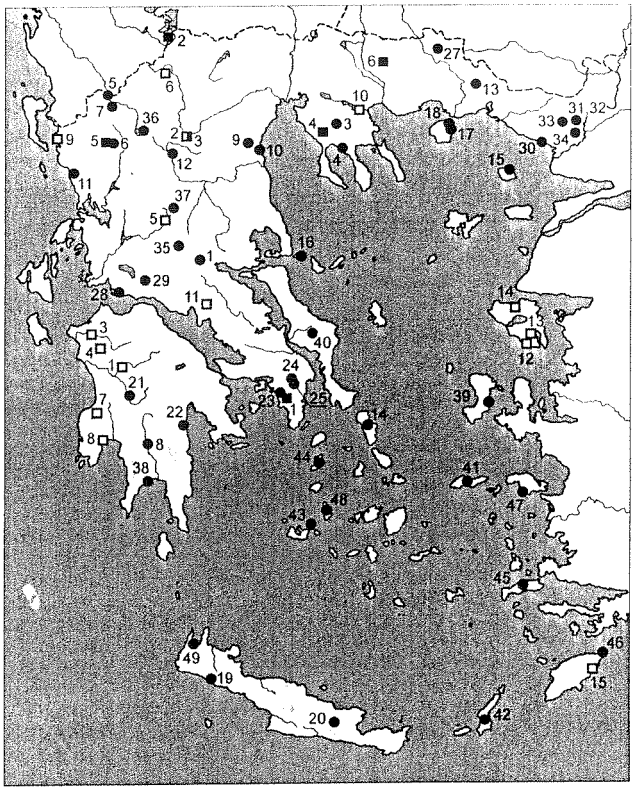

Fig. 15. Records of *Pipistrellus pipistrellus* superspecies: *P. pipistrellus* s. l. (closed circles), *P. pipistrellus* (Schreber, 1774) s. str. (closed squares), *P. pygmaeus* (Leach, 1825) seu *P. mediterraneus* Cabrera, 1904 (open squares).

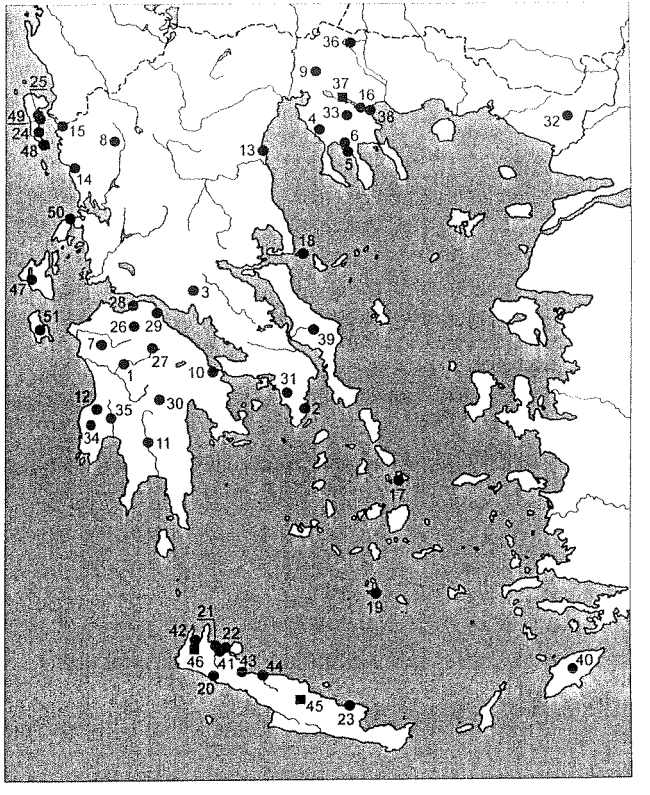

Fig. 16. Records of *Pipistrellus kuhlii* (Kuhl, 1817) in Greece; for symbol explanations see Fig. 2.

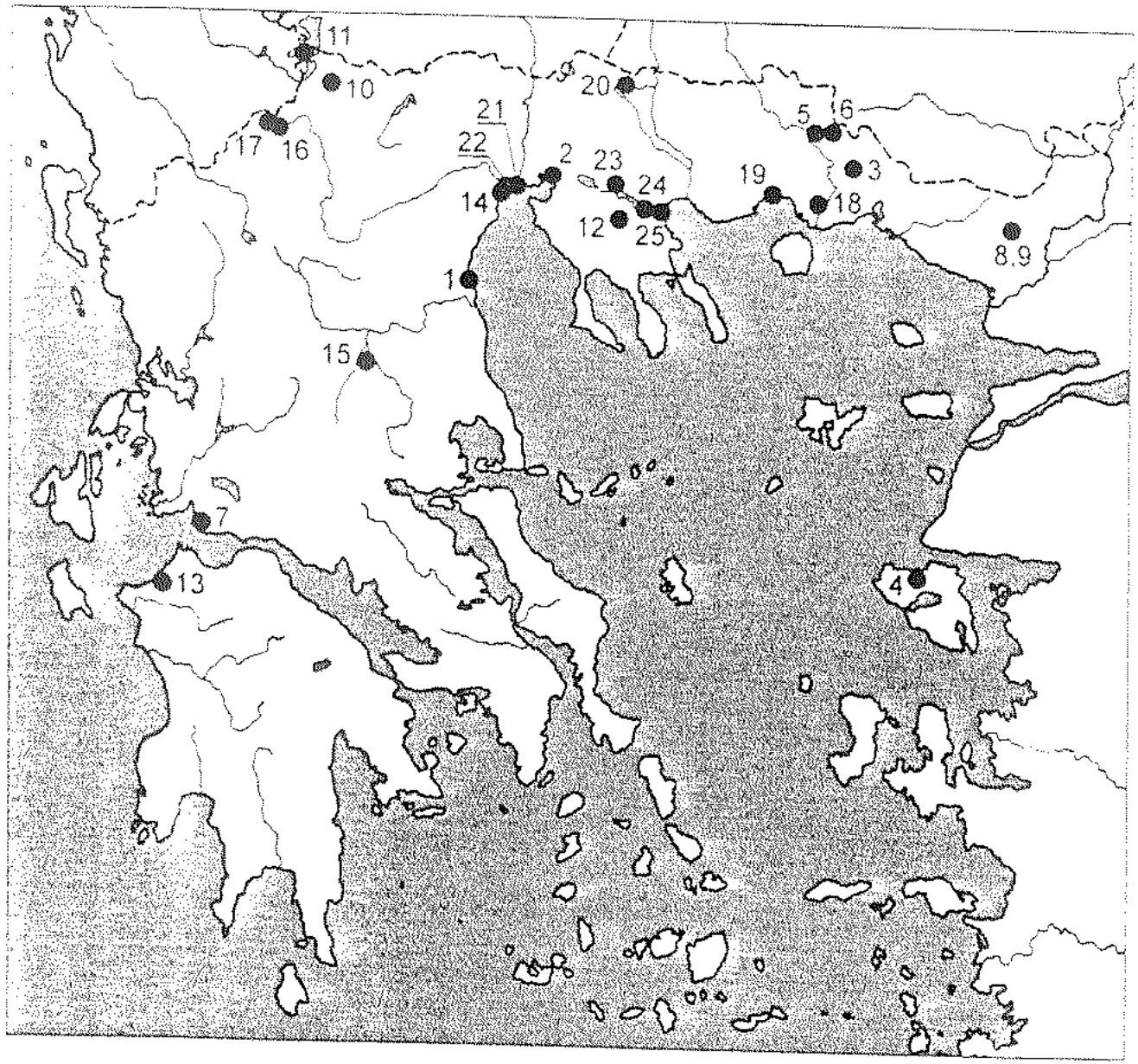

Fig. 17. Records of *Pipistrellus nathusii* (Keyserling et Blasius, 1839) in Greece: for symbol explanations see Fig. 2.

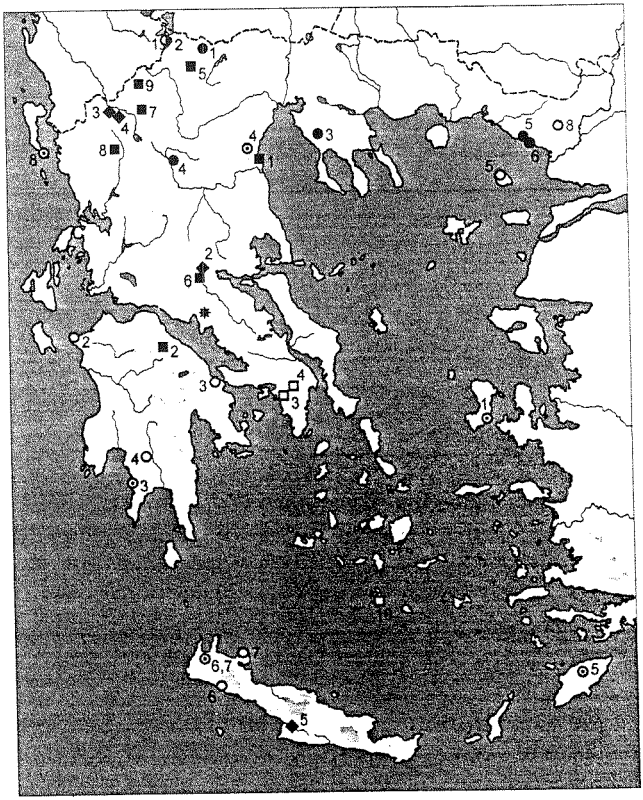

Fig. 18. Records of bats of genus *Plecotus* Geoffroy, 1818 in Greece. Symbol explanations: ■ = *P. auritus* (Linnaeus, 1758) s. str.; □ = *P. auritus* s. l. (= *Plecotus* sp.); ○ = *P. austriacus* (Fischer, 1829) s. l.; ● = *P. austriacus* (Fischer, 1829) s. str.; ◆ = *P. kolombatovici* Đulić, 1980; ⊙ = *P.* cf. *kolombatovici*; ✱ = site, where three forms of *Plecotus* were found (*P. austriacus*, *P. kolombatovici* and *P.* cf. *kolombatovici*).

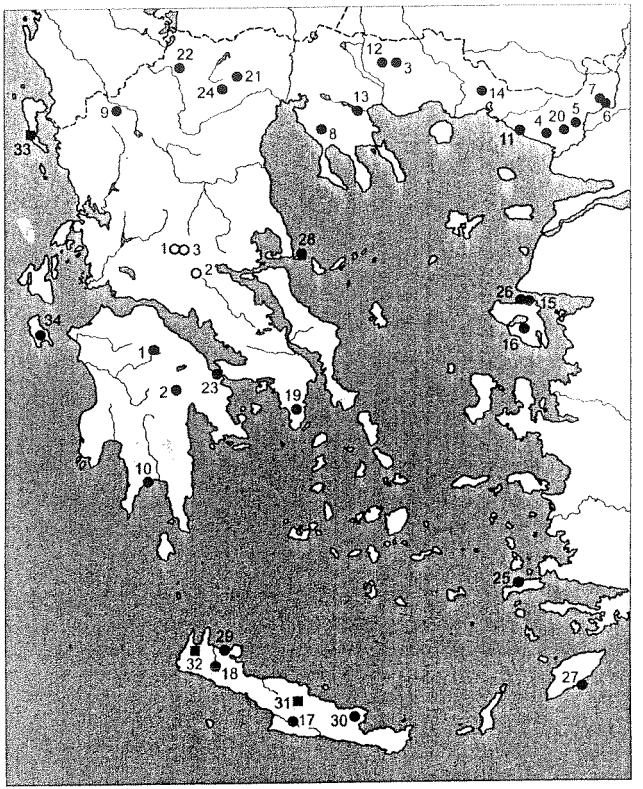

Fig. 21. Records of *Miniopterus schreibersii* (Kuhl, 1817) (closed symbols) and *Barbastella barbastellus* (Schreber, 1774) open symbols) in Greece; for symbol explanations see Fig. 2.

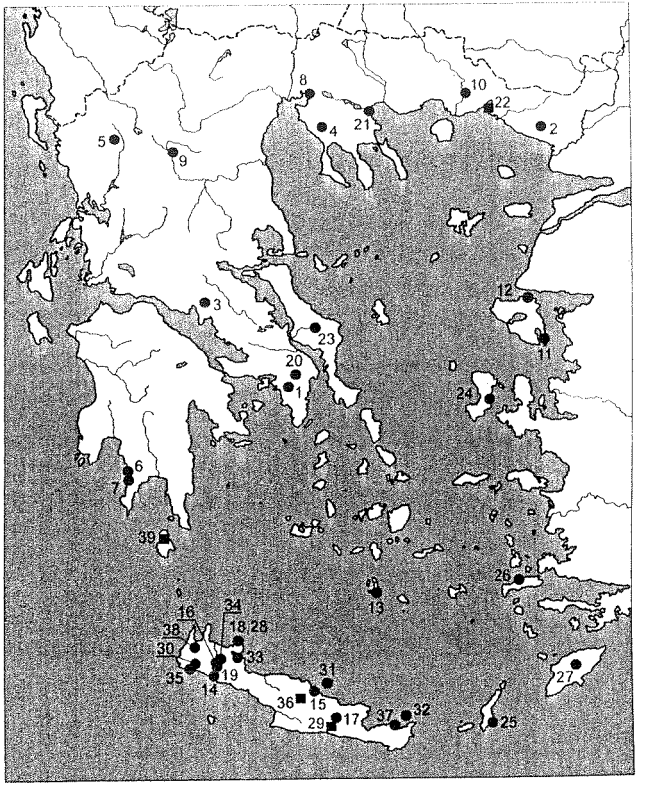

Fig. 22. Records of *Tadarida teniotis* (Rafinesque, 1814) in Greece; for symbol explanations see Fig. 2.

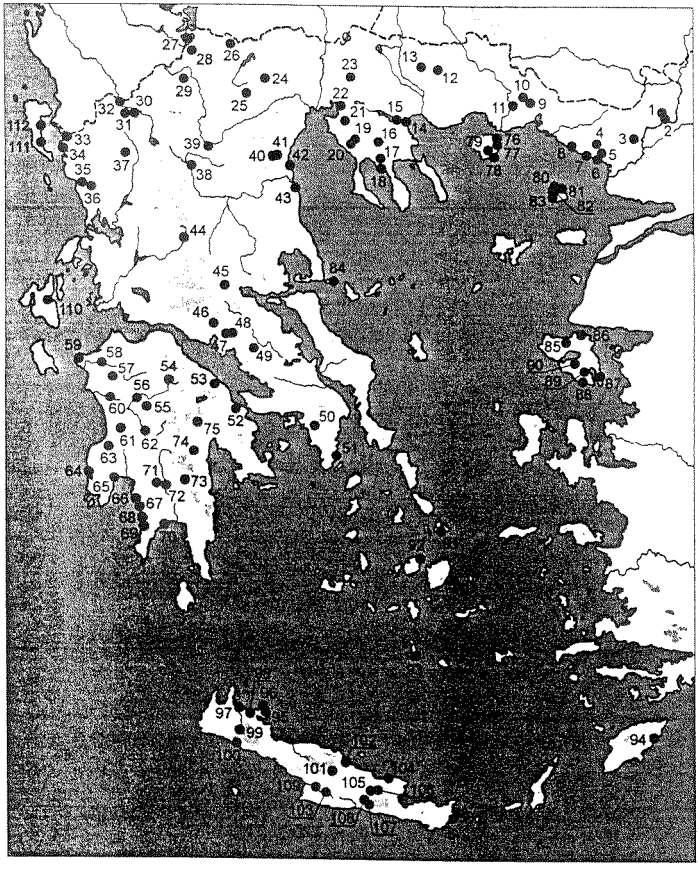

Fig. 23. Original record localities mentioned in the text; for locality numbers see gazetteer in Appendix 1.