

Distribution of *Barbastella barbastellus* in Poland in the years 1980-1998

Verbreitung von *Barbastella barbastellus* in Polen in den Jahren 1980-1998

Distribution de *Barbastella barbastellus* en Pologne entre 1980 et 1998

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Summary

Barbastella barbastellus was being recorded throughout Poland. Its winter localities were fixed in 117 UTM-squares (3.7%, Fig. 1). During the summer *B. barbastellus* is observed rarely. In the period of 1980-1998 it was recorded only in 19 UTM-squares, when 17 of them are located in the eastern part of Poland (Fig. 2). There were 10 localities on which procreation activities of this species was stated (2 breeding colonies were found behind house shutters).

The map of *B. barbastellus* occurrence in „Atlas of Polish mammals” (RUPRECHT 1983) showed the lack of the *B. barbastellus* localities in the W and NE part of Poland. It must have been caused by the lack of bat researchers in these areas, but not specially by settling down *B. barbastellus* in the latest years. That is indicated by a large local accumulation in these areas (e.g. bunkers in the area of Mamerki village - E. FUSZARA & M. WOJCIECHOWSKI unpubl. data).

Zusammenfassung

Barbastella barbastellus wurde in ganz Polen nachgewiesen. Ihre Überwinterungsplätze wurden in 117 UTM-Quadraten (3,7%, Abb. 1) aufgezeigt. Im Sommer wird die Mopsfledermaus seltener beobachtet. Zwischen 1980 und 1998 wurde sie lediglich in 19 UTM-Quadraten verzeichnet, wobei sich 17 dieser Quadraten im östlichen Teil Polens befinden (Abb. 2). In 10 Quartieren wurden Fortpflanzungsaktivitäten festgestellt (2 Wochenstubenkolonien wurden hinter Fensterläden von Häusern gefunden).

Die Karte zum Vorkommen von *Barbastella barbastellus* im „Atlas polnischer Säugetiere” (RUPRECHT 1983) zeigte ein Fehlen der Mopsfledermaus im westlichen und nordöstlichen Teil Polens auf. Grund dafür ist wahrscheinlich der Mangel an Forschern in diesen Gebieten, und nicht speziell die fehlende Ansiedlung von *Barbastella barbastellus* in den letzten Jahren. Dies wird durch große örtliche Ansammlungen in diesen Gebieten (z. B. Bunker im Gebiet des Dorfes Mamerki - E. FUSZARA & M. WOJCIECHOWSKI, unveröff. Daten) angezeigt.

Résumé

Barbastella barbastellus a été trouvée dans toute la Pologne. Ses quartiers d'hiver ont été mis en évidence dans 117 carrés UTM (3,7%, Fig. 1). La Barbastelle est rarement observée en été. Entre 1980 et 1998, elle n'a été trouvée que dans 19 carrés UTM, dont 17 sont situés dans l'est de la Pologne (Fig. 2). Il y avait 10 localités où la reproduction a été constatée. Deux colonies ont été trouvées derrière les volets de maisons.

La carte de la répartition de *Barbastella barbastellus* dans l'„Atlas polonais des mammifères” (RUPRECHT 1983) montrait l'absence de la Barbastelle dans l'ouest et le nord-est de la Pologne. Les raisons sont à rechercher dans le manque d'observateurs dans ces régions, et non pas dans la colonisation récente de la Barbastelle. Ceci est démontré par de grands rassemblements dans les bunkers à proximité du village de Mamerki (E. FUSZARA & M. WOJCIECHOWSKI obs. non publ.).

B. barbastellus can be found in the southern and central part of Europe. The northernmost localities exist in Great Britain, southern Sweden and Latvia (STEBBINGS 1988, BUSH 1980). So one can assume that in Poland, country situated south of the presented above border line, *B. barbastellus* lives all over the area. According to the data gathered before 1980, its places of existence were known only in southern and central part of the country. It was the NE and NW part of Poland where no occurrence of that species was recorded (RUPRECHT 1983). The aim of the article is to present the latest data concerning *B. barbastellus* existence in Poland. *B. barbastellus* localities are shown on the maps overlapped with UTM net. Its basic area is square (one side equals 10 km). There are over 3200 such squares (totally or partly) throughout Poland. The map of winter observations contains places at which *B. barbastellus* has been observed during the hibernating period

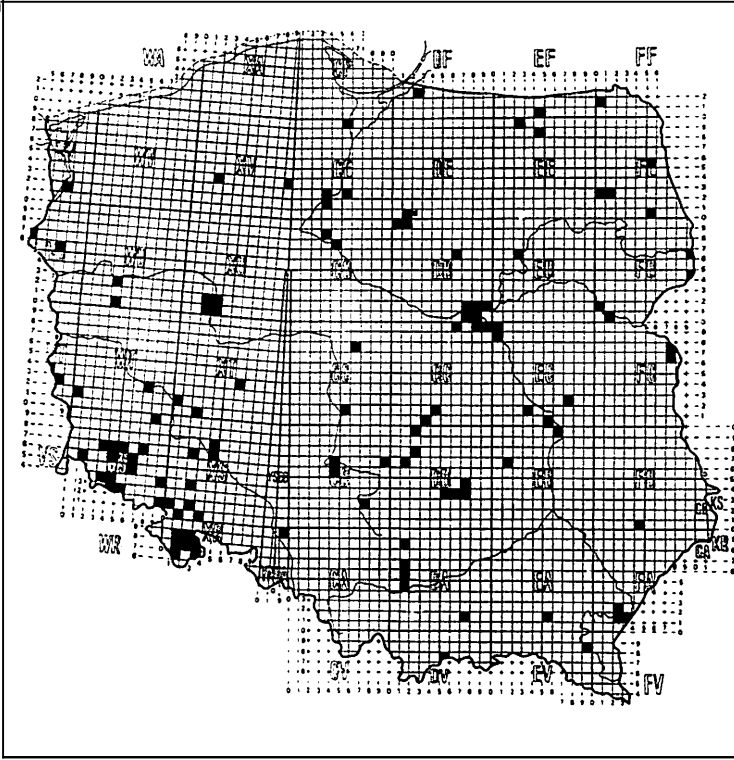


Fig. 1. Localities of *Barbastella barbastellus* in Poland during the hibernation period, years 1980-1997

Abb. 1. Winterquartiere von *Barbastella barbastellus* in Polen, 1980-1997

Graph. 1. Quartiers d'hiver de *Barbastella barbastellus* en Pologne, 1980-1997

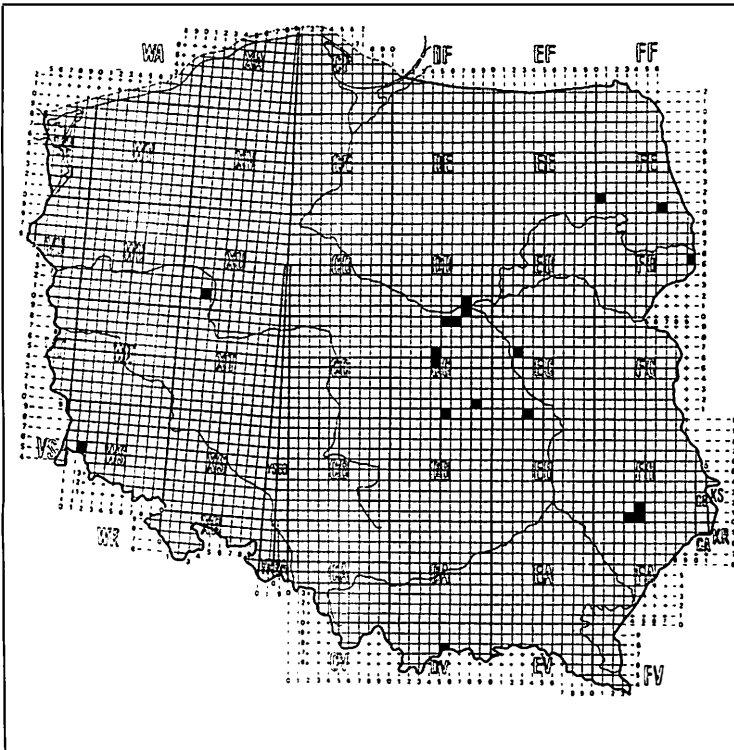


Fig. 2. Localities of *Barbastella barbastellus* in Poland during the summer season, years 1980-1997

Abb. 2. Sommerquartiere von *Barbastella barbastellus* in Polen, 1980-1997

Graph. 2. Quartiers d'été de *Barbastella barbastellus* en Pologne, 1980-1997

(1-15 III), the one of summer observations contains places found out during the breeding and raising of the young periods (I.V. - 31.VIII.). The division of the year into seasons was accepted after GAISLER and BAUEROVA (1977). While working on maps one based on data from literature (34 items, Appendix) and unpublished information concerning the following persons:

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- wity Krzy Chiropterological Group: M. GWARDIAN,
- ZO *Barbastellus* (Czech Republik): Z. BURIC, D. SERFOWA,
- and: A. DUSZYSKA, M. GÓRECKI, A. JARNO, M. JURCZYSCYN, T. KLIN, T. KOKUREWICZ, B. SZATKOWSKI, A. WEGIEL.

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Barbastella barbastellus was being recorded throughout Poland in the period of 1980-1998. Its winter localities were fixed in 117 UTM-squares (3,7%, Fig. 1). The greatest number of its localities is recorded in Sudetic Mountains (squares WS, XS, XR). Also its agglomeration is quite notable near Warsaw (DD, DC, EC). However, there are hardly any localities of that species situated in Karpaty and Podgórze Karpackie (CA-FA and CV-FV) together with the NW part of Poland. During the summer *B. barbastellus* is observed rarely. In the period of 1980-1998 it was recorded only in 19 UTM-squares, when 17 of them were located in the E part of Poland (Fig. 2). There were 10 localities on which procreation of this species was stated (2 breeding colonies were found behind house shutters). Other 9 localities refer to late observations (the end of August, when the breeding colonies are breaking up and it is possible for bats to shift) or to adult male bats which can be found separately in the underground.

It's hard to estimate, even in relative terms, the number of the *B. barbastellus* in different regions of Poland. The number of the places of existence does not always have to be adequate to the density of population - it may be, quite well, influenced by many other factors. Anyway it seems that *B. barbastellus* appears more often in the Sudetic Mountains than in any other regions. The quantity of the population existing in the neighbouring Karpaty Mountains is probably low, as in spite of many research works carried out we know only a few localities. However, it is the NE part of our country, where hardly any localities are discovered and where is the largest (after the „Nietoperek” reserve) hibernaculum of this species in Poland (max. 350 specimens, E. FUSZARA, M. WOJCIECHOWSKI unpubl. data). A great number of the localities near Warsaw is due to the extremely high level of research works being carried out in this area. The lowest level of research works considering chiroptero-fauna has been done in the regions of West Pomorze (WA, XA, VV-XV) and the eastern part of Poland (especially FC, FB, FA). The low quantity of localities discovered during the summer time is due to the low detectability of that species during this period - the generative colonies are hidden in places inaccessible to researchers or in places which are hardly any penetrated - the hunting specimens are occasionally caught in the net.

The map of *B. barbastellus* occurrence in „Atlas of Polish mammals” (RUPRECHT 1983) showed the lack of the *B. barbastellus* localities in NW and NE part of Poland. It must have been caused by the shortage of bats in these areas, but not specially by settling down these areas with *B. barbastellus* in the latest years. That is indicated by large local accumulation in these areas (e.g. bunkers in the area of Mamerki village - E. FUSZARA, M. WOJCIECHOWSKI unpubl. data).

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