



A synopsis of the milliped genus *Brachycybe* Wood, 1864 (Platydesmida: Andrognathidae)

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Abstract: The milliped genus *Brachycybe* Wood, 1864 (Platydesmida: Andrognathidae) comprises seven species in the eastern and western United States (two and three species, respectively) and Japan/South Korea and China (one species each); it is provisionally assigned to a broad-bodied platydesmid in Taiwan that may constitute an eighth species. *Brachycybe* is characterized by long, alate paranota, distinct dorsal tubercles, and closely proximate opposing legs that are separated by an anteriorly directed process. Species are identified by somatic features like the configurations of the colla, the presence or absence of notches on the caudal paranotal margins, the relative sizes of the tubercles and lengths of the rows, and the relative lengths of the legs; a key and anatomical illustrations facilitate determinations. Distributions are characterized by allopatric populations indicative of age; extreme disjunctions exist in *B. leontii* Wood, 1864, and *B. producta* Loomis, 1936, in the eastern and western US, respectively. The former is projected for the southeastern corner of Kansas and is newly documented from Missouri and Texas; the latter is newly recorded from Oregon. *Sinocybe* Loomis, 1942, is placed in synonymy under *Brachycybe*, and *S. cooki* Loomis, 1942, is transferred into the genus; the synonymy of *Platydesmus californicus* Karsch, 1881, under *B. rosea* Murray, 1877, is confirmed.

Key words: Platydesmida, *Brachycybe*, *Sinocybe*, distribution, North America, East Asia, allopatry.



***Myrmica lacustris* Ruzsky (Hymenoptera: Formicidae), an ant species new for Poland¹**

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Abstract: A rare and poorly known ant species, *Myrmica lacustris* Ruzsky, belonging to the *schencki*-group, is reported from Poland for the first time. The taxonomic history of the name and current knowledge of the distribution and ecology of this species are summarised. The characteristic morphological features of *M. lacustris* are illustrated and a key for separating this taxon from the two morphologically similar species is given.

Key words: ants, taxonomy, *Myrmica lacustris*, *Myrmica deplanata*, *schencki*-group, *lobicornis*-group, Poland, key

¹This work was partly supported by the grant No. 2P04C06429 of the Ministry of Education and Science



FRAGMENTA FAUNISTICA 48 (2): 175–180, 2005
PL ISSN 0015-9301 © MUSEUM AND INSTITUTE OF ZOOLOGY PAS

***Formica uralensis* Ruzsky (Hymenoptera: Formicidae) in Poland**

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Abstract: *Formica uralensis* Ruzs. is a boreo-montane ant species, common to the area east of the Ural Mts, but very scarce and relict in Europe, where it occurs almost exclusively in peat bogs. In Poland, the species was known only from one site, Bagno Rakowskie, a peat bog near Frampol, the Roztocze Uplands, where it was found half a century ago. The current presence of the species there is confirmed and two new localities are reported in the Lublin Uplands: in a peat bog in the Moszne Lake nature reserve within the Polesie National Park and in a marshy meadow near the Buzornica peat bog at Kosyń within the Żółwiowe Błota nature reserve.

Key words: ants, *Formica uralensis*, relict species, peatland fauna, Poland



Changes in the species composition and distribution of butterflies (Rhopalocera) in Cracow (Poland) since the mid-19th century

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Abstract: Qualitative changes in the diurnal lepidopteran fauna of the Cracow area have been studied over a period beginning in the mid-19th century. Sources of data included the scientific collections of the Institute of Systematics and Evolution of Animals, PAS, some private collections and data from the authors' own studies (2000–2003). In the historical period covered by the study (three time intervals), a total of 99 species of Rhopalocera were recorded. Altogether, negative population trends were recorded in 46 species, including 27 species that withdrew from the study area; positive trends were demonstrated in 33 (including 20 new arrivals), and 20 species were shown to have more or less stable populations. The most powerful adverse impact was that exerted by natural factors (which affected 28 species), much less that due to a combination of natural and anthropogenic factors (in 8 species) or to anthropogenic factors alone (10 species). Some species of Rhopalocera manifested considerable adaptability to altered habitat conditions. Among the recorded species, 11 are under strict legal protection in Poland. The long term survival chances of endangered species could be enhanced by active protection of the habitats, with natural reserves as the most important measure.

Key words: Rhopalocera, species composition and distribution change, Cracow, Poland



Western Antarctic fish species and biomass diversity

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Abstract: Of the 168 fish species living in the Western Antarctic, 104 species belonging to 20 families occur in the South Shetland area: 39 species from 10 families have been found in the Admiralty Bay, 91 species (29 families) in the South Georgia area; the South Orkney region hosts 74 species from 18 families while the near Antarctic Peninsula shelf 71 species from 19 families. The respective figures were lower in the Southern Sandwich area, amounting to 44 species from 17 families. Endemic species amounted to 61.2%, the remaining 38.8% being cosmopolitan. The South Georgia area and the neighbouring Shag Rocks area differed also in the composition and biomass of several commercially harvested fish species, such as *Pseudochaenichthys georgianus* Norman, 1937, *Notothenia rossii* Richardson, 1844, *Patagonotothen guntheri* Norman, 1937 or *Lepidonotothen squamifrons* Günther, 1880. The South Shetland and Antarctic Peninsula regions were also distinguished from the South Georgia region by the presence of *Champsocephalus gunnari* Lönnberg, 1905 and above all, by the biomass of *Gobionotothen gibberifrons* Lönnberg, 1905, which is present in the former, but not found in the latter of the areas.

Key words: fish, biodiversity, biomass, Antarctic



Green infrastructure of a city and its biodiversity: take Warsaw as an example

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Abstract: Many cities are expanding rather fast. As a result several green areas vanished, while the remaining ones are getting more and more under urban pressure. Changes in the size and configuration of green urban areas will affect the liveability of a city for citizens, as well as the local survival probability of many plant and animal species. In order to keep the city liveable and healthy not only water, energy and waste flows should be managed properly, but also green urban areas. Area, connectivity and quality of habitat patches are crucial for the survival of many species. Therefore, biotope types should be maintained in a proper setting of a network, which makes the exchange of individuals of species with a poor dispersal capacity possible. For getting public support for the maintenance of nature quality of green areas a good communication between responsible authorities and citizens is conditional. Monitoring of nature quality is necessary in order to keep biodiversity at a high level. A monitoring programme can be part of an Ecological Policy Plan of the city.

Key words: urban ecology, urban biodiversity, urban green, ecological network