

Artykuły naukowe / Scientific articles

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Nowe stanowiska iglicy małej *Nehalennia speciosa* (CHARPENTIER, 1840) (Odonata: Coenagrionidae) w południowej części Podlasia z uwagami o ekologii i mobilności gatunku. – New sites of Pygmy Damselfly *Nehalennia speciosa* (CHARPENTIER, 1840) (Odonata: Coenagrionidae) in the southern part of Podlasie with notes on ecology and species mobility

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The Author discusses 7 new sites of *Nehalennia speciosa* in the southern Podlasie (central-eastern Poland). Two of them (4 and 5) are situated within agricultural landscape and have no forest buffering zone. It shows that the environment without forest surrounding but with suitable spatial structure of vegetation – a key factor for *N. Speciosa* – can be inhabited by this species.

Microhabitat preferences of pygmy damselfly found during studies were interesting. Except for sedge species given in the literature as most preferable plant species by *N. speciosa*, at sites discussed in this paper the leading plant components for this species were *Equisetum fluviatile* (sites 4 and 5), *Eriophorum vaginatum* (site 2). These are, respectively, only the fourth and second confirmed records of this kind in Poland. At two sites within the study area imagines as well as larval development in larger patches of *Carex vesicaria* (site 6 in this paper) were also found. Moreover, at one of them, many larvae were collected in the aggregation of *Eriophorum angustifolium*. At both known sites with *E. vaginatum* imagines were present in its clumps while larvae – at their bases and probably in spaces between, with flooded *Sphagnum*. These are the examples of inconsiderable spatial separation of larval and imaginal habitats although they were close. The similar situation was found in south-eastern Poland, where *Molinia caerulea* grew on land in the direct neighbourhood to a flooded peat bog excavation. *Carex elata* as the leading plant component was found at one of the sites from eastern Mazowsze. The clumps of *C. elata* were massive and did not display typical hummock-hollow structure. Loose clump formations of *Carex* sp. (*C. elata* probably) are also known at one site in south-eastern Poland. All of these observations confirm that ecological plasticity and habitat spectrum of *N. speciosa* are bigger than previously thought.

Presented data shows the ability of *N. speciosa* for the colonization of new sites. Sites 3 was not the place of development: the observed individuals are the example of dispersion. However, site 2 had originally the character of a bog forest with large trees. Suitable conditions appeared there until 2011 due to a record increase in groundwater level and the death of almost all the trees – the site was colonized in this year. Distance from the nearest active site is ca. 400 and 700 m. Therefore *N. speciosa* is fully mobile, at least for close distances (ca. 1 km) and certainly these are not exceptional cases.

Many sites of *N. speciosa* in southern Podlasie dry up partly or entirely during dry summers. At some of them the periods without water could be longer than hydration periods. It is not clear whether the presence of the species in many of these sites is the result of surviving by the larvae unfavourable hydrological conditions, or rather the result of colonization. Clarification of this issue should provide further observations of dried sites in the year 2012.

Key Words. Odonata, *Nehalennia speciosa*, Sedgling, new record, habitat, astatic water body.

Some dragonflies (Odonata) of Chingombe, Zambia, and some other localities in Zambia and Botswana. – przyczynek do znajomości ważek (Odonata) Chingombe (Zambia) i kilku innych stanowisk w Zambii i Botswanie

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During occasional observations at ten southern African localities in 2011, mainly in Zambia and additionally in Botswana, 24 dragonfly species were recorded. Sixteen species were recorded in Chingombe, central Zambia.

Key Words. Odonata, dragonflies, zoogeography, Zambia, Botswana, southern Africa.

Nowe stanowiska szklarnika leśnego *Cordulegaster boltonii* (DONOVAN, 1807) (Odonata: Cordulegastriidae) w środkowo-zachodniej Polsce. – New sites of the Golden-ringed Dragonfly *Cordulegaster boltonii* (DONOVAN, 1807) (Odonata: Cordulegastriidae) in the mid-western Poland

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Cordulegaster boltonii has been known from 133 sites in Poland so far. Currently, the largest meta-populations are present in the Pomarenian's Lake District, Lubusz Land, Upper Silesia and Lesser Poland. However, the knowledge about the distribution of *C. boltonii* is still incomplete and any information is required since it has been vulnerable and consequently protected species in Poland. Therefore, new records of *Cordulegaster boltonii* from mid-western Poland (southern Lubusz Land) are presented in this paper. The investigated area is situated on territories of communes Brody, Gubin, Lubsko and Tuplice in the Lubuskie District. In brief, it is lowland locally with varied relief structure of numerous morainic hills (altitudes to 120 a.s.l.) and depressions (altitudes to 50 a.s.l.), particularly covered by pine cultures with small participation of leaf forests. The main running waters like Pstrąg, Tymnica, Golec and Welnica (Fig. 1) represent the type of lowland rivers dominated by sandy channel substrates and receive flows from numerous small tributaries in the area.

The investigation was carried out from April to October 2011 in selected sections (length of 100-500 m) of all running waters. The occurrence of larvae, exuviae and imagines, as well as the general hydromorphological features of each habitat were noted. For larvae, 15 to 20 samples were taken with a hydrobiological scoop at each site.

As result, *C. boltonii* was observed at 16 sites in 11 running waters (small rivers and streams) (Fig. 1). Larvae were found at 12 sites localized in 7 running waters, providing a breeding success of *C. boltonii* in these habitats. The highest number of larvae was found in small forest streams at sites 6 and 9, with 21 and 22 larvae respectively. The habitats of *C. boltonii* are small-mid lowland streams, rivers, and rarely ditches with the width range of 0,5 – 3,5 m and depth range of 10 – 100 cm; with swift current, sandy and sand-gravelled bottom partially covered with fine and gross detritus deposits. The flowing water is clear, but at the most sites brown coloured probably as a result of large iron content. Currently, the surface waters in the investigated are only under slight anthropogenic pressure, manifesting in low risk of dispersed nutrients inflows from the drainage basin and in temporary changing hydrological regime and water quality by fish ponds. Locally, the hydrological regime of some running waters is changed by beaver's dam constructions, which slow down the current. In fact, only imagines could be found at some sites downstream from the fish ponds (No. 2 and 7), suggesting that the larvae might avoid habitats localized directly beyond fish ponds. (sites No. However, with increasing distance from ponds, larvae could be observed again (sites No. 4a, 4b, 4c). Additionally, the significant hydromorphological changes occurred only locally (sites No. 3, 4a, 8 and 10) as a results of beaver's activity (several meters above the dams). The larvae of *C. boltonii* weren't observed only the still water bodies. It indicates, that the beavers might have a negative influence only on short

sections of habitats used by *C. boltonii* in this area.

To conclude, the data indicate that the southern part of Lubusz Land is currently an important area for the development and protection of an intact population of *C. boltonii* in Poland.

Key Words. Odonata, Cordulegastridae, Lubusz Land, rivers, streams, protected species.

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Doniesienia naukowe / Scientific notes

Strony / Pages: 29-30

Stanowisko *Sympetrum pedemontanum* (O.F. MÜLLER in ALLIONI, 1766) na Wysoczyźnie Kaliskiej (Południowa Wielkopolska). – Site of *Sympetrum pedemontanum* (O.F. MÜLLER in ALLIONI, 1766) in the Wysocyzna Kaliska (Southern Wielkopolska)

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In the note the information about the site of *Sympetrum pedemontanum* (O. F. MÜLLER in ALLIONI, 1766) located at the Obra Canal near Talary (UTM: XT45) in southern Wielkopolska is given. The site is situated in the Południowowielkopolska Lowland macroregion, at north-eastern edge of the Wysocyzna Kaliska mesoregion. Material: 17.07.2009 – 1♂ teneral, 2.08.2012 – 1♂ adult and 1♂ teneral. After 1990 in south-western Poland this species was recorded only in 10 squares of UTM, and before – in 22 ones. Probably this reflects the rarity of this species in this part of Poland because the species has not been noted near Ostrów Wielkopolski, Gostyń and Pleszew. On the other hand, it was once observed near Wieruszów in the years 2007-2102. In the area of the Wysocyzna Kaliska species has not been previously recorded.

Key Words. dragonflies, Odonata, *Sympetrum pedemontanum*, record, Poland.

Strony / Pages: 31-32

Atlas rozmieszczenia ważek (Odonata) w Polsce – korekta. – A distribution atlas of dragonflies (Odonata) in Poland – correction

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Due to an error in the database an incorrect UTM-square has been included and/or a correct UTM-square has been lacking on the distribution maps for nine species in the “Atlas”. For three further species, this error has resulted in incorrect colour of the circle, which reflects a period of data collecting, in one or two squares. The corrections for particular species both on maps and in the numbers of occupied squares recorded in the historical period are presented in the table.

Key Words. Dragonflies, Odonata, distribution, Poland.