

1. Artykuły naukowe / Scientific articles

Strony / Pages: 1-13

Wyspowe występowanie żagnicy torfowcowej *Aeshna subarctica* WALKER, 1908 na Nizinach Środkowopolskich i Sasko-Łużyckich. – Patchy occurrence of *Aeshna subarctica* WALKER, 1908 in the Central Polish Lowlands and in the Polish part of the Saxonian-Lusatian Lowlands

Rafał BERNARD¹, Grzegorz TOŃCZYK²

¹ Zakład Zoologii Ogólnej, Uniwersytet im. Adama Mickiewicza, ul. Umultowska 89, 61-614 Poznań; e-mail: rbernard@amu.edu.pl

² Katedra Zoologii Bezkręgowców i Hydrobiologii, Uniwersytet Łódzki, ul. Banacha 12/16, 90-237 Łódź; e-mail: tonczyk@biol.uni.lodz.pl

Aeshna subarctica is rare in the old-glacial lowlands of Poland, i.e. in the Central Polish Lowlands and the Saxonian-Lusatian Lowlands, which occupy the central latitudes of the country and its southwestern areas (Fig. 1). Only thirteen localities of the species have been found in this area (Fig. 1); they have been presented so far only in the form of occupied UTM-squares (BERNARD et al. 2009). These localities are described in detail (geographic position, habitat, data concerning *A. subarctica*, accompanying species). The rarity of *A. subarctica* reflects the small number of habitats which are appropriate for it. This unfavourable conservation status is partly naturally conditioned as the old-glacial plains are situated to the south of the last glaciation (Würm) range. Hence, they are much poorer in natural water bodies than the northern postglacial lake districts. However, human impact has also contributed to the rarity of *A. subarctica* habitats. These areas have been long inhabited and intensively exploited by man and thus are among the most transformed regions in Poland. Over the last two hundred years the area of *Sphagnum* bogs has decreased drastically (HERBICH and HERBICHOWA 2002). As a consequence, the distribution of *A. subarctica* in the study area has been severely fragmented – restricted to largely isolated single localities or small groups of them, such as 6 localities in an area of 25 km² near Pabianice (No. 3–8) or 2 (No. 9 and 10) near Białobłoty. These groups are especially valuable as they give *A. subarctica* an opportunity to exchange individuals between local populations (the metapopulation structure) and to restore reduced/extinct local populations on the basis of neighbouring populations.

All the presented localities are situated in woodland and are surrounded with mostly pine forest or occasionally with heath. On sandy grounds and a thin peat layer, a mosaic of shallow *Sphagnum* bogs, transition mires and acidic sedge fens most frequently occur. The abundant vegetation is predominated by *Cari-ci-Agrostietum caninae*, *Sphagno recurvii-Eriophoretum angustifolii*, and also locally by *Ranunculo-Juncetum bulbosi*. Large amounts of *Sphagnum* occur in the form of both floating 'soup' and thin mats covering the bottom/ground. The water bodies are shallow – only rarely deeper than 0.5 m – and frequently astatic, larger in the spring and partly drying out in the summer. As a consequence, the *A. subarctica* habitats are much more liable to desiccation than those situated in more stable, deeper water bodies in the postglacial landscape in the North. At some localities (No. 3, 8 and 12), an advanced eutrophication process was recorded, indicated by the replacement of the boggy vegetation with *Phragmites australis* and *Typha latifolia*. At locality No. 8, the population of *A. subarctica* was already almost extinct.

In contrast to the mostly primary (natural) habitats of *A. subarctica* in northern Poland, the habitats in the study area survived or were formed, at least in several cases, due to human activities. So they are actually partly secondary – anthropogenic, but completely or to a large extent renaturalized. At locality No. 13 they have developed in an excavated fire-fighting pool and at No. 7 in shallow peat excavations. Though forms left by extensive peat digging are already unrecognizable, we believe that this human activity also resulted in the formation of favourable habitats at several other studied localities. The occurrence in partly anthropogenic habitats is a chance for *A. subarctica* to survive in lowlands poor in natural water bodies. What is more, conservation policy should use this opportunity for habitat-based actions. Existing habitats could be restored or regenerated in the future – and new ones formed – due to shallow peat digging in small areas of selected localities according to the rotation model (WILDERMUTH 2001). Plant succession in such shallow peat excavations leads to various forms of moorlands, especially to *Sphagno recurvii-Eriophoretum*

angustifolii, often inhabited by *A. subarctica*. The conservation of *A. subarctica* habitats would also be favourable for other tyrphobiontic and tyrphophilous species, which are fairly rare or rare in these regions, as e.g. for 4 *Leucorrhinia*-species occurring at the studied localities.

At five localities (No. 1, 9–12) colour morphs were analysed. Five individuals represented pale f. *interlineata* and five were intermediate – due to slightly smaller spots on the thorax – between *interlineata* and the dark f. *elisabethae*. Considering the occurrence of intermediate forms, it is better to use the term 'paler individuals' – or describe the tendency to be significantly paler (DIJKSTRA 2006) – than to sharply distinguish between the pale f. *interlineata* and the dark f. *elisabethae*.

Considering :

- the significantly paler individuals in central European bogs than in boreal and alpine regions (Dijkstra 2006)
- and the absence of the dark f. *elisabethae* from the presented shallow and warm localities in the southern, marginal zone of the species range,

It can be concluded that the paler individuals of *A. subarctica* are associated with warmer habitats. The simple and direct correlation between the habitat temperature and existing colour morphs was not confirmed experimentally (STERNBERG 2000). Therefore, we believe that the occurrence of colour morphs depends on a set of conditions with the habitat temperature as the leading (but not sole) factor.

Contrary to BÖNSEL's (2001) suggestion, paler individuals of *A. subarctica* coexist with *Aeshna juncea* as recorded at all five of these localities

Key Words. Odonata, dragonflies, *Aeshna subarctica*, faunistics, morphology, habitat selection, conservation status, conservation policy, Poland.

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2. Doniesienia naukowe / Scientific notes

Strony / Pages: 14-18

Nowe stanowiska iglicy małej *Nehalennia speciosa* (CHARPENTIER, 1840) w południowo-wschodniej Polsce (Odonata: Coenagrionidae). – New localities of *Nehalennia speciosa* (CHARPENTIER, 1840) in southeastern Poland (Odonata: Coenagrionidae)

Bogusław DARAŻ

ul. Kościelna 41, 35-505 Rzeszów; e-mail: bdaraz@poczta.onet.pl

Two new localities of *Nehalennia speciosa* were found in 2010 in southeastern Poland, in the south of the Sandomierz Basin (Kotlina Sandomierska), in two nature reserves – „Bagno Przecławskie” (50°11'15"N, 21°25'15"E, UTM EA35) and „Torfy” (50°02'38" N, 21°17'45" E, EA24). They form – together with the localities near Błędów and in the nature reserve „Broduszurki” (BERNARD, DARAŻ 2008; BERNARD et al. 2009; MISZTA, CUBER 2009) – the current southern range limit of the species distribution in Poland and Eastern Europe. Far outside this range, only a highly isolated and relict locality in the Southern Carpathians in the south of Romania is known (MANCI 2009, 2010). Other localities of *N. speciosa* situated to the south of the current species range – in the southern Ukraine, Slovakia and northern Romania – are only historical as they have not been confirmed during the last half-century (BERNARD, WILDERMUTH 2005; ŠÁCHA 2010).

At the new localities, *N. speciosa* inhabits old peat excavations, with the water bodies abounding with *Sphagnum* sp. and *Carex rostrata*, and bounded by *Molinia coerulea*. It is typical of *N. speciosa* in the marginal zone of its distribution range to inhabit the partly secondary (i.e. anthropogenic) habitats and to use the vegetation composed of these species (cf. BERNARD, WILDERMUTH 2005; BERNARD, DARAŻ 2008).

Key Words. Odonata, dragonflies, *Nehalennia speciosa*, faunistics, zoogeography, habitat, Poland, Sandomierz Basin.

Gatunki ważek (*Odonata*) nowe i rzadkie dla Bieszczadzkiego Parku Narodowego stwierdzone w 2009 i 2010 roku. – New and rare dragonflies (*Odonata*) in the Bieszczady National Park recorded in the years in 2009 and 2010

Marek HOLLY

Ośrodek Naukowo–Dydaktyczny Bieszczadzkiego Parku Narodowego, ul. Bełska 7, 38-700 Ustrzyki Dolne; marekholly@wp.pl

The author studied small water bodies created for amphibians in the Bieszczady National Park in the years 2009 and 2010. *Lestes dryas* and *Cordulia aenea* have been recorded for the first time in the park. Records of some other species are given too, of which *Aeshna juncea* is of special interest. Two sites of *Cordulegaster bidentata* were also found in the Bieszczady National Park.

Key Words. Poland, Bieszczady National Park, Odonata, records, new species, rare species.

Nowe stanowisko iglicy małej *Nehalennia speciosa* (CHARPENTIER, 1840) (Odonata: Coenagrionidae) w Trójmiejskim Parku Krajobrazowym. – New locality of the Pygmy Damselfly *Nehalennia speciosa* (CHARPENTIER, 1840) (Odonata: Coenagrionidae) in the Tricity Landscape Park

Dariusz KONOPKO

ul. Dedala 8/2/9, 81-197 Gdynia; darkon27@wp.pl

The Pygmy Damselfly *Nehalennia speciosa* inhabits mainly small natural water bodies with the area less than 1 ha, great amount of mud sedge *Carex limosa* and slender sedge *Carex lasiocarpa* as well as submerged vegetation. In Poland, 75 sites of this species have been discovered so far of which 44 are regarded as contemporary.

In the Tricity Landscape Park, the Pygmy Damselfly was discovered for the first time in July 2006 at the site about 1,1 km NE away from Kamień in the commune of Szemud (KONOPKO 2007). The next site was discovered in July 2009, in a peat bog bordered from NE with Zawiat Lake situated in the vicinity of Bieszkowice, in the commune of Wejherowo.

The central point of the peat bog is a dystrophic water body with the Sphagnum moss matt separated from the lake by 90 meter-width belt of *Vaccinio uliginosi-Pinetum sylvestris* KLEIST 1929 bog woodland. The Pygmy Damselflies are present in *Carex limosa* swamp. The population is small; the highest number of individuals was 70. During earlier studies this species was not found in the peat bog. The colonization of this site was probably made before our eyes. Except for the Pygmy Damselfly, 32 dragonfly species were observed in the peat bog in which four of them are under protection: *Aeshna subarctica*, *Leucorrhinia albifrons*, *L. caudalis* and *L. pectoralis*.

In the future, in the area of the peat bog, the forming of the nature reserve called „Bieszkowickie Moczary” is planned, however, nowadays the steps for establishing the second refuge for the Pygmy Damselfly in the area of the Tricity Landscape Park are taken.

Key words. Odonata, dragonflies, *Nehalennia speciosa*, new locality, N Poland, Tricity Landscape Park.

3. Literatura i recenzje / Literature and reviews

Strony / Pages: 27-30

RECENZJA. BELLMANN H. 2010. Przewodnik entomologa. Ważki. MULTICO Oficyna Wydawnicza. 280 ss. ISBN 978-83-7073-706-1. – REVIEW. BELLMAN H. 2010. [Entomologist's guide. Dragonflies]. MULTICO Oficyna Wydawnicza. 280 pp. ISBN 978-83-7073-706-1.

Jacek WENDZONKA¹, Paweł BUCZYŃSKI²

¹Zakład Zoologii Systematycznej UAM, Collegium Biologicum, ul. Umultowska 89, 61-614 Poznań; e-mail: wendzonka@wp.pl

²Zakład Zoologii UMCS, ul. Akademicka 19, 20-033 Lublin; pawbucz@gmail.com

The reviewed work is the first general book about dragonflies from over 100 years in Poland. It has been translated from the German edition. It contains general information about dragonflies of Central Europe with keys to adults (relatively good) and larvae (very poor) and individual descriptions of all species with good photographs and drawings. Unfortunately, the publisher has not consulted this edition with any Polish odonatologists and the book contains a lot of mistakes and omissions.

Strony / Pages: 27-30

RECENZJA. BOUDOT J.-P., KALKMAN V. J., AZPILICUETA AMORÍN M., BOGDANOVIĆ T., CORDERO RIVERA A., DEGABRIELE G., DOMMANGET J.-L., FERREIRA S., GARRIGÓS B., JOVIĆ M., KOTARAC M., LOPAU W., MARINOV M., MIHOKOVIĆ N., RISERVATO E., SAMRAOUI B., SCHNEIDER W. 2009. Atlas of the Odonata of the Mediterranean and North Africa. *Libellula*, Suppl. 9: 1-256. – REVIEW. BOUDOT J.-P., KALKMAN V. J., AZPILICUETA AMORÍN M., BOGDANOVIĆ T., CORDERO RIVERA A., DEGABRIELE G., DOMMANGET J.-L., FERREIRA S., GARRIGÓS B., JOVIĆ M., KOTARAC M., LOPAU W., MARINOV M., MIHOKOVIĆ N., RISERVATO E., SAMRAOUI B., SCHNEIDER W. 2009. Atlas of the Odonata of the Mediterranean and North Africa. *Libellula*, Suppl. 9: 1-256.

Jacek WENDZONKA

Zakład Zoologii Systematycznej UAM, Collegium Biologicum, ul. Umultowska 89, 61-614 Poznań; e-mail: wendzonka@wp.pl

“Atlas of the Odonata of the Mediterranean and North Africa” is a distribution atlas of dragonflies in this region. It contains maps (based on 50x50 km UTM grid) for all of 179 recorded species. Additionally, almost all species presented in photographs are shortly described (biology, ecology, remarks on distribution, IUCN Red List Status). For Polish odonatologists it is not a “must have” book, but it is necessary for everyone who wants to get the wider view about the distribution of “our” dragonfly species.

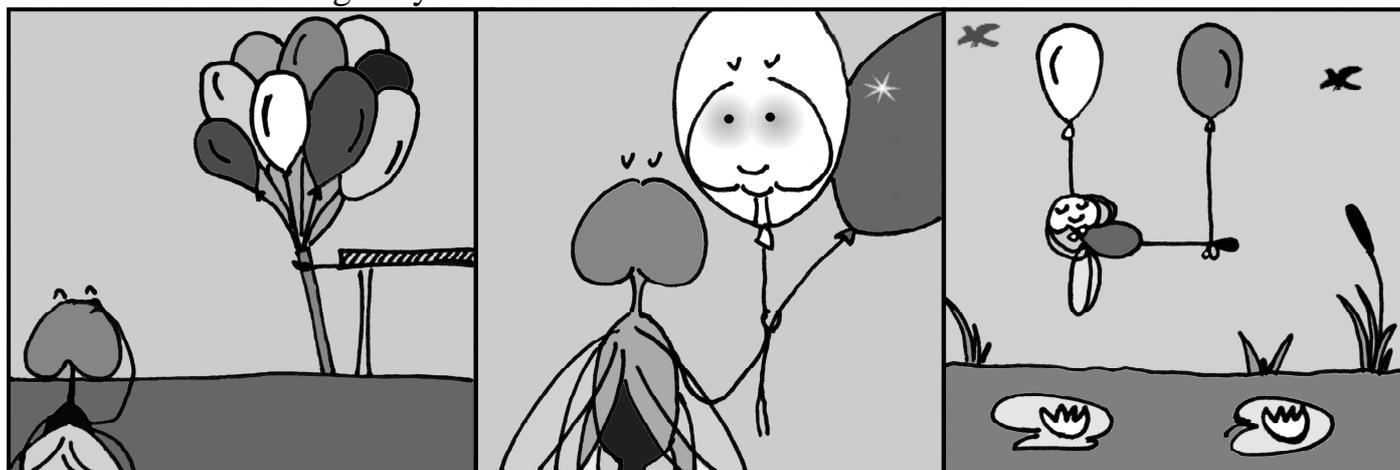
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4. Różności / Varia

Strony / Pages: 23

Przygody ważki z Lublina: Balony.

Adventures of the dragonfly from Lublin: Baloons.



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