CERCION LINDENII (SELYS), A NEW SPECIES FOR THE FAUNA OF POLAND (ZYGO-PTERA: COENAGRIONIDAE)

R. BERNARD

Department of General Zoology, A. Mickiewicz University, Fredry 10, PO-61-701 Poznań, Poland

Abstract – The sp. is recorded from 2 localities in the Wielkopolsko-Kujawska Lowland, representing a NE extension of its known range. The habitats and their odon. communities are described in detail, and some biogeographic considerations are appended.

Introduction

The odonate fauna of Poland is relatively well explored (cf. MIELEWCZYK, 1990). No new species were reported during the past 6 decades,

though the probable discovery of *Cercion lindenii* was predicted already by URBAŃSKI, in 1948.

The 2 here reported populations were dis-

covered in the Wielkopolsko-Kujawska Lowland, western Poland (cf. Fig. 1), on August 19, 1992, bringing the status of the Polish odonate fauna up to 71 species.

Voucher specimens are in the author's collection.

Localities and observations

(1) R a d z i s z e w s k i e Lake, 13 km W of Wronki; UTM WU 84 (52°42'20"N, 16°11'10"E). — A slightly eutrophic lake (with some mesotrophic features), with wooded banks and sandy floor, with almost no littoral vegetation (Typha, Phragmites), and with a Myriophyllum spicatum/Ceratophyllum demersum zone some distance off the shore. In this zone, numerous C. lindenii have been observed, the males dominating. All females were either in copula, or ovipositing. The behaviour was peculiar: all indivi-

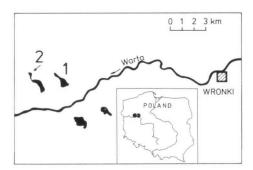


Fig. 1. Localities of *Cercion lindenii* (Sel.) in Poland: (1) Radziszewskie Lake: – (2) "Kuchowiec" Lake.

duals and pairs were flying low over the water surface, perching frequently on the protruding *Myriophyllum*. – 3 & were collected.

(2) "Kuchowiec" (or "Głuchowiec"), a lake without a name on the map, in the N extension of Chojno Lake, 16 km W of Wronki; UTM WU 74 (52°42'35"N, 16°08'40"E). - A forest eutrophic lake (with a tendency towards dystrophy), with brownish water and a thick layer of mud, lowmoor peat and detritus on the bottom. It served as a fishpond, therefore its area was enlarged, but no fish farming has been carried out for years. In some coastline sections, there are substantial belts of Phragmites australis and Carex sp., locally also Schoenoplectus lacustris, some Salix bushes and young Alnus glutinosa. The lowmoor bog islets, with numerous sunny coves, are of particular interest. The lake supports a small C. lindenii population, dwelling near the bank and on the islets. -1 d and 1 mated pair were collected.

Comments and discussion

C. lindenii is considered a "holomediterranean" element (BEUTLER, 1982), a member of the preglacial refugial fauna (ST. QUENTIN, 1960). It occurs in North Africa, Asia Minor, the Caucasus, western and southern Europe, reaching the Netherlands and Germany in the North, though it is rare North of the Alps. The Brandenburg populations (E Germany) are isolated from the

main range (KANZLER, 1954; OESER, 1963; JACOB, 1969; BEUTLER, 1982), and were considered referable to a distinct subspecies, *C. lindenii lacustre* BEUTLER, 1985. The recent discovery in western Poland represents the northeasternmost point in the known range of the species

The presence of *C. lindenii* in the Polish localities can be tentatively explained in two ways:

- (1) Following BEUTLER's (1982) suggestion for Brandenburg, the species could have reached Poland during the Postglacial, in which case the populations there should be considered old and alopatric. Since this area has been so far odonatologically almost entirely unexplored, the species could easily escape the
- (2) It could have also reached Poland (from Brandenburg) quite recently, using the Odra-Warta-Warta hydrographic system, which links the Warta R. with the Polish localities. It is reasonable to assume that the very mild 1989-1992 winters (when the lakes hardly, or not at all froze) would facilitate the process. It should be emphasised that the geomorphological and environmental conditions in Brandenburg and the Polish region concerned are somewhat similar, but the occurrence of the Brandenburg C. lindenii at "flowing" lakes, situated in the system of narrow

postglacial gullies (BEUTLER, 1982), is pe-

notice earlier.

culiar.

According to JACOB (1969), the "Cercion--Platycnemis" coenoecium in Brandenburg is typical of meso- and eutrophic lakes, with a narrow belt of Typha-Phragmites vegetation. A similar coenotope has been noticed for C. lindenii also in Austria (LANDMANN, 1982). BEUT-LER (1982) has pointed out that the original Cercion coenotope in Brandenburg are mesotrophic lakes, almost lacking the emerged shore vegetation (Typha, Phragmites, etc.), but rich in submerged vegetation, such as Potamogeton, Myriophyllum and Ceratophyllum. It is the latter vegetation that is used by C. lindenii for oviposition. Beutler's habitat description is almost identic with the Radziszewskie Lake situation. In the late 1992 summer, from the species characteristic of the "Cercion-Platycnemis" community, Ischnura elegans (Vander L.) occurred in small numbers, and Orthetrum cancellatum (L.) and Sympetrum sp. have also been noticed.

At "Kuchowiec" Lake the coenotope is completely different. The late summer aspect of the odonate community includes the dominating I. elegans and other species than those listed by JACOB (1969) for the "Cercion-Platycnemis" coenoecium, viz. Sympetrum vulgatum (L.), S. sanguineum (Müll.), S. danae (Sulz.), S. pedemontanum (Allioni). These were accompanied by Aeshna grandis (L.), A. mixta Latr., a few Chalcoviridis (Vander L.) and Platylestes cnemis pennipes (Pall.). Consequently, the faunal assemblage approximates to the JACOB's (1969) "Lestes-Sympetrum-Aeshna mixta" community. This indicates that C. lindenii can occur in different coenoecium types and in diverse types of water. But it is possible that C. lindenii flies to this lake from the heighbouring, so far unexplored Chojno Lake (of the Radziszewskie Lake type).

References — BEUTLER, H., 1982, Faun. Abh. Mus. Tierk. Dresden 9(5): 87-94; — 1985, Ent. Abh. Mus. Tierk. Dresden 49(4): 69-82; — JACOB, U., 1969, Faun. Abh. Mus. Tierk. Dresden 2(24): 197-239; — KANZLER, W., 1954, Dt. ent. Z. (N.F.) 1: 42-85; — LANDMANN, A., 1982, Notul. odonatol. 1(9): 153-154; — MIELEWCZYK, S., 1990, in: J. Razowski, [Ed.], Wykaz zwierząt Polski, Vol. 1, pp. 39-42, Ossolineum, Wrocław-Warszawa-Kraków; — OESER, R., 1963, Ent. Abh. Mus. Tierk. Dresden 29: 469-473; — ST. QUENTIN, D., 1960, Zool. Jb. Syst. 87: 301-316; — URBAŃSKI, J., 1948, Annls Univ. Mariae Curie-Skłodowska (C)3: 289-317.

Received September 16, 1992