

EXTRAORDINARY FLIGHT DATES OF
CERIAGRION TENELLUM (DE VILL.) IN NW
GERMANY (ZYGOPTERA: COENAGRIONI-
DAE)

C. tenellum is an Atlanto-West-Mediterranean species. Its range towards the north extends to the Netherlands and NW Germany where it is limited by the North Sea. In Great Britain it is restricted to the southern and south-western parts of England. The northernmost breeding sites exceed 53°15'N in England (M. MERRITT, N.W. MOORE & B.C. EVERSHAM, 1996. *Atlas of the dragonflies of Britain and Ireland*, HMSO, London) and in the Netherlands (M. WASSCHER, R. KETELAAR, M. VAN DER WEIDE, A. STROO, V. KALKMAN, N. DINGEMANSE, H. INBERG & I. TIELEMAN, 1995. *Verspreidingsgegevens van de Nederlandse libellen*. European Invertebrate Survey, Leiden), and 53°30'N in Germany (C. LUNAU, 1939, *Schr. naturw. Ver. Schlesw.-Holst.* 23[1]: 140; E. SCHMIDT, 1975, *Ber. Ver. Nat. Heimat naturh. Mus. Lübeck* 13/14: 25-43; K. RETTICH, 1989, *Beitr. Vogel- Insektenwelt Ostfriesl.* 36: 14-21; R. SCHMID, 1995. *Die Libellenfauna Ostfrieslands*, Ostfriesische Landschaft, Aurich). In the northern area *C. tenellum* is confined to fens, *Sphagnum*-bogs, moorland ditches, and pools in sand pits with a distinct flow of ground water. Since this kind of habitat is not rare in the Netherlands and in NW Germany, the species is rather widespread there and locally abundant. The phenology in this area has thoroughly been studied in the Lower Rhine region, in particular at the „Löschteich Orvennsbahn“ (51°11'N; 6°05'E), and the main flight period turned out to be from early July to late August (U. KRÜNER, 1986, *Libellula* 5[3/4]: 85-94; 1989a, *Verh. westd. Ent. Tag* 1988: 133-140;

1989b, *Decheniana* 142: 74-82; R. JODICKE, U. KRÜNER, G. SENNERT & J.T. HERMANS, 1989, *Libellula* 8[1/2]: 1-106); extraordinary phenological dates are discussed below.

In 1995 I started to observe an abundant population of *C. tenellum* at the Diana lakes in Lower Saxony (52°55'N; 8°09'E). In the first year I made no systematic phenological investigation, but I recorded the last male on 19 September. 1996 and 1997 I daily looked for the last individuals on wings and recorded a continuous presence until 30 and 19 September, respectively. The first emergence at the Diana lakes was observed on 2 June 1997. In the same year, *C. tenellum* already emerged on 29 May from the nearby „Börstel“ (52°37'N; 7°43'E). In 1998, fully mature specimens have been recorded at the latter habitat on 31 May. Due to the cold and wet weather which preceded the record, their emergence most probably had started in a hot period during mid May which lasted until 19 May.

The early emergence in 1997 has been confirmed by other observers in the northern area: B. Thomas (pers. comm.) recorded at the „Elmpter Bruch“ in the Lower Rhine region (51°14'N; 6°07'E) the first adult on 27 May, and this male was no more in general condition. Another information came from the „Bornriedmoor“ in Lower Saxony (52°47'N; 10°09'E) by H.-J. Clausnitzer (pers. comm.) who also saw the first adults on 27 May and the last ones on 15 September. Observations in May seem to be not uncommon, as is demonstrated by the data bank of the „Niedersächsisches Landesamt für Ökologie – Fachbehörde für Naturschutz“ which contains 5 records from the last decade in May. The earliest records are dating from 25-V-1985 (R. Altmüller, pers. comm.). Extreme dates in earlier years were also compiled in the Lower Rhine region, at the above mentioned „Löschteich Orvennsbahn“ and its immediate surroundings. Here, early emergence on 30-V-1966 has been published by H. GREVEN (1970, *Decheniana* 122[2]: 251-267) and on 31-V-1986 by JODICKE et al. (1989, *ibid.*). The last individual on wings has been evidenced on 25-IX-1985 by KRÜNER (1986, *ibid.*).

The phenological situation in the Netherlands is comparable, since D.C. GEIJSKES & J. VAN TOL (1983, *De libellen van Nederland [Odonata]*. Koninkl. ned. natuurh. Ver., Hoog-

woud) mentioned 1-VI-1921 as well as 19-IX-1960 as extreme flight dates of adults. Even more extreme are the dates observed in Britain, especially during late summer: C. LONGFIELD (1949, *The dragonflies of the British Isles*, Warne, London [2nd ed.]) cited one observation from early October, and also D. Dell (*in*: A. PAINE, 1997, *Newsl. Br. Dragonfly Soc.* 31: 13) reported a record from 01-X-1996. Another late observation was made on 21-IX in the 19th century (W.J. LUCAS, 1900. *British dragonflies [Odonata]*, L. Upcott Gill, London). MERRITT et al. (1996, *ibid.*) provide a graphic drawing of the seasonal occurrence in England which extends from the 3rd week of May until the 3rd week of September. This is based on extraordinary records from 21-V-1988 and 24-IX-1980, respectively (M.G. Telfer *in*: Institute of Terrestrial Ecology, Environmental Information Centre, pers. comm.). However, there is a citation of a report from 25-IV-1995 (A. Insch *in*: A. PAINE, 1996, *Newsl. Br. Dragonfly Soc.* 29: 17), but this should better be ignored unless further evidence is provided.

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