

REVIEW OF *HEMIANAX EPHIPPIGER*
(BURM.) RECORDS FROM BULGARIA
(ANISOPTERA: AESHNIDAE)

Since Bulgaria probably lies on some of the migration routes of this species and it presents a multitude of habitats that are considered suitable for its temporary breeding (for references on this subject, see R. BERNARD & J. MUSIAL, 1995, *Opusc. zool. flumin.* 138: 1-9), a review of the known records is of interest. These are as follows [grid references in parentheses]:

- May (year & specimen/s not stated): Bourgas [NH 30] (N. NEDELKOV, 1923, *Spis. bulg. Akad. Nauk* [Prir.-mat.] 25[12]: 45-53)
- 4-IX-1970: Plovdiv [LG 16], 1 ♂ (coll. Nat. Hist. Mus., Plovdiv)
- 1970/1971 (date & specimen/s not stated):

Izbeqli [LG 35] (T. PETROV, 1973, *Izv. prir. Muz. Plovdiv* 11: 65-88)

- 25-VIII-1982: Kranevo [NJ 80], 1 ♂ (R. MAUERSBERGER, 1985, *Ent. Nachr. Ber.* 29: 199-207)
- 7/11-VIII-1983: Dourankoulak [PJ 23], 1 ♀ and several individuals of which the sex is not stated (MAUERSBERGER, 1985, *ibid.*)
- 8-VIII-1989: Srebarna [NJ 08], 3 ♂, 1 ♀ (V. BESCHOVSKI & M. MARINOV, 1993, *Proc. 2nd natn. scient. Conf. Ent.*, Sofia, pp. 9-13)
- 16-IX, 22-IX, 1-X-1990: Atanasovsko Lake [NH 31], resp. 1 ♂, 1 ♂, 1 ♀
- 25-IV-1991: Stamopoulo, 2 ♂, 1 ♀, mated pair (M. Dimitrov leg.)
- 23-IV, 16-V-1994: Levounovo Fish Farms [FL 99], resp. 1 ♂ and 1 ♀, 1 ♀ (V. Gashtarov leg.)

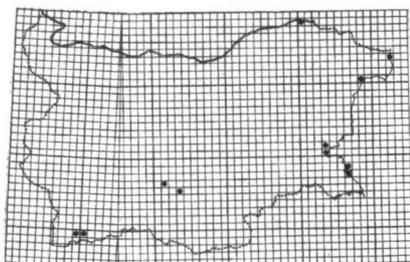


Fig. 1. Records of *H. ephippiger* in Bulgaria.

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- 13-V-1995: Atanasovsko Lake [NH 3], mated pair
- 25-V-1996: Poda Protected Area, Bourgas, 1 ♂
- 8-VI-1996: Komlouk Lowlands, 1 ♂
- 2-VIII-1997: St Ilia-Kalimantzi [GL 09], 1 ♂, 1 ♀ (V. Gashtarov leg.).

Three points from the above evidence should be emphasized, viz.:

- (1) The Srebarna ♂ was not fully mature; the date coincides fairly well with the mass trans-mediterranean migration, described by H.J. DUMONT & K. DESMET (1990, *Odonatologica* 19: 181-186), which resulted in numerous records from central and western Europe. It is reasonable to assume that some individuals crossed the East Mediterranean as well.
- (2) The 2 mated pairs on record were sighted in (early) spring.
- (3) Most records are from the Black Sea coast and from the Struma river valley (SW Bulgaria).

It could be tentatively postulated that one of the East Mediterranean migration routes leads along the Black Sea coast, where there are several wetlands, similar to those described from Hungary by A. AMBRUS et al. (1996, *Odonata Stadium Larvae* 1: 5-11) that are suitable as *Hemianax* temporary breeding sites, viz. shallow, more or less brackish, easily warming-up lakes, with *Phragmites australis*, *Bolboschoenus maritimus*, *Typha* sp. and *Juncus maritimus*. These are inhabited typically by *Anax parthenope*, a species common along the entire coastal line. Its co-occurrence with *H. ephippiger* has been reported from eastern Greece (O. HOLUŠA, 1998, *Notul. odonatul.* 5: 10), therefore incidental breeding of *H. ephippiger* could be expected in the Bulgarian Black Sea coastal area as well.