

SOME RECORDS OF ODONATA FROM THE DEPARTMENTS OF HALKIDIKI AND THESSALONIKI, NORTHERN GREECE

R.G. KEMP and G.S. KEMP

33 Bridge Road, Alveley, Bridgnorth, Shropshire, England

Abstract — Records are provided for 35 spp. from 20 sites, with some notes and observations on *Epallage fatime* (Charp.), *Caliaeschna microstigma* (Schneider), *Cordulegaster pictus* (Sel.), and *Somatochlora metallica meridionalis* Nielsen.

Introduction

The following records and observations were made during a short vacation to Northern Greece between 18th-29th June, 1984. It is hoped that they will provide a small contribution to the knowledge of the odonate fauna of this poorly investigated region. Apart from the great lakes, Koronia and Volvi in Thessaloniki, which were not visited, no other standing water-bodies in the form of lakes or ponds were encountered. Most of the sites visited refer, therefore, to some of the numerous streams and rivers originating in the hill districts of the two departments.

Sites visited

These are numbered to correspond with the numbers listed after species in the species list below.

Halkidiki

(1) Psakoudia. Brackish coastal marsh with

small, dried-up, temporary pools, fringed with *Juncus* sp.; 18-VI-84, 22-VI-84.

- (2) Mouth of river situated approx. 5 km east of Psakoudia, on the road to Metamorphosis. A small, relatively fast-flowing river with sand and gravel bed. Occasional deep pools, with *Potamogeton/Phragmites* sp.: 18-VI-84, 22-VI-84.
- (3) Tiny muddy rivulet 1 km west of Olymbias, situated in open agricultural land; 19-VI-84.
- (4) Rocky stream passing through woodland, 3 km north of Olymbias, on Stavros road; 19-VI-84.
- (5) Stream, 3 km north of Paleokastron, on the road to Sana. Well shaded by surrounding trees, this stream was primarily swiftly flowing and rocky, however, occasional slow-moving silted stretches with emergent vegetation were present; 21-VI-84, 26-VI-84.
- (6) Small pool fringed with *Phragmites* 1 km south of Kallithea, Kassandra, on coast; 25-VI-84.
- (7) Rocky stream approx 1 km north-west of Doumbia. Situated in steep sided gorge; 26-VI-84.
- (8) Tiny muddy rivulet draining into sea 1.5

- km south-west of Sikea, Sithonia. Choked with *Phragmites*; 29-VI-84.
- (9) Small pool created by dam on a stream 1 km south of Sarti, Sithonia, on main peninsular road; 29-VI-84.
- (10) River between Ayios Ioannis and Prodromos. Slow-moving, with sand-gravel bed; 29-VI-84.
- (11) River 1.5 km west of Plana. A wide, shallow, slow-moving river with gravel/pebble bed, some silted margins; 29-VI-84.
- (12) River 5 km west of Plana. At the ford of the road this river was divided into an effectively dammed, very slow-flowing, woodland pool with abundant *Potamogeton*. Immediately south of the ford the river continued as a rocky torrent; 29-VI-84.
- Thessaloniki
- (13) Gallikos River, west of Meseon; 20-VI-84.
- (14) Stream, approx. 7 km south of Yerakarou, on Yerakarou/Zangliveron road. Small rocky stream well shaded by surrounding woodland; 19-VI-84.
- (15) Stream, approx. 5 km south of Yerakarou, on same road. Rocky, woodland stream; 20-VI-84.
- (16) River at ford 1.5 km south of Sholarion; 24-VI-84. Heavily choked with vegetation, *Phragmites*/*Scirpus*/*Potamogeton*.
- (17) Small (approx. 1 m wide) stream 2.5 km north of Askos. Well vegetated with muddy bed, passing through open pastureland; 28-VI-84.
- (18) Small stream approx. 1.5 km south-east of Sohos and 0.5 km off the main Sohos road, situated in a steep-sided valley bounded by open agricultural land; 24-VI-84, 28-VI-84.
- (19) River leaving Lake Volvi at Rendina; 28-VI-84. Very slow-flowing, abundant emergent vegetation.
- (20) River 1 km south of Arethusa; 28-VI-84. Wide, rocky, fast-flowing, partially shaded.

Species recorded

Both sexes were found at each site unless otherwise indicated.

Calopterygidae — *Calopteryx virgo festiva* (Brullé): 3, 4, 5, 7, 12, 14, 15, 16, 17, 18, 19, 20; — *C. splendens balcanica* Fudakowski: 2, 4, 5, 7, 11, 12, 13, 16, 17, 18, 19, 20.

Euphaeidae — *Epallage fatime* (Charp.): 4,

5, 7, 10, 12, 14.

Lestidae — *Lestes barbarus* (Fabr.): 1; — *L. macrostigma* (Eversm.): 1, 6; — *L. viridis* (Vander L.): 16.

Platycnemididae — *Platycnemis pennipes* (Pall.): 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20.

Coenagrionidae — *Pyrrhosoma nymphula* (Sulz.): 5, 20; — *Ischnura elegans* (Vander L.): 2, 6, 7, 11, 16, 17, 18, 19; — *I. pumilio* (Charp.): 6, 16; — *Erythromma najas* (Hans.): 19; — *Coenagrion lindeni* (Sel.): 2, 10, 11, 12; — *C. ornatum* (Sel.): 17, 18 (♂♂ only); — *C. puella* (L.): 2, 5, 7, 8, 16, 18, 20; — *C. pulchellum* (Vander L.): 16, 19; — *C. scitulum* (Ramb.): 8 (2 ♂).

Gomphidae — *Gomphus vulgatissimus* (L.): 5, 13; — *Onychogomphus forcipatus* ssp.: 2, 5, 7, 10, 11, 12, 13, 18, 19, 20.

Aeshnidae — *Caliaeschna microstigma* (Schneider): 5, 7, 14, 15, 18; — *Aeshna affinis* Vander L.: 1 (1 ♂); — *A. isosceles* (Müll.): 16; — *Anax imperator* Leach: 2, 7, 8, 9, 10, 11, 12, 16, 18, 19; — *A. parthenope* Sel.: 2 (1 ♂).

Cordulegastridae — *Cordulegaster pictus* Sel.: 20 (1 ♀).

Corduliidae — *Somatochlora metallica meridionalis* Nielsen: 12 (1 ♂).

Libellulidae — *Libellula depressa* L.: 5, 7, 8, 11, 18, 19, 20; — *L. fulva* Müll.: 2, 8, 12, 16, 19; — *Orthetrum brunneum* (Fonsc.): 3, 4, 5, 7, 8, 9, 11, 12, 13, 16, 18, 19, 20; — *O. cancellatum* (L.): 2, 16, 19; — *O. ramburi* (Sel.): 2, 3, 4, 5, 8, 10, 11, 13, 14, 16, 17, 18, 19, 20; — *Crocothemis erythraea* (Brullé): 2, 3, 6, 9, 11, 16, 17; — *Sympetrum depressiusculum* (Sel.): 18 (1 ♂); — *S. fonscolombi* (Sel.): 1 (1 ♂), 6 (1 ♀); — *S. sanguineum* (Müll.): 16; — *S. striolatum* (Charp.): 2, 16.

Notes and observations on single species

Epallage fatime — Records from the Depts Halkidiki and Thessaloniki have been made by several authors; CAMPION (1919) mentions Stavros and the Rendino Gorge, BILEK (1965) Sohos, and more recently, GALLETTI & PAVESI (1983) refer to it on a stream near Paleokastron in Halkidiki. From these and our observations, it would suggest that this species is widely distributed throughout the region. Frequenting sheltered, rocky, fast-flowing stretches of rivers and streams. The adults

were not uncommon at the sites visited, settling frequently on sunny exposed rocks within and on the banks of the stream; also on the over-hanging branches of near-by trees.

Copulation was observed on several occasions, the female being rapidly pursued by the male. Having achieved the tandem position the pair would fly to surrounding bushes or trees to settle before copulation commenced. One pair remained in-copula for approx. 20 min before flying off, in tandem, back to the stream. Oviposition was almost immediate; with the pair alighting on a thick stem, partly submerged, in rapidly flowing water. Within a few minutes, and continuously ovipositing, the female gradually descended below the surface of the water until only the dorsum of the thorax was exposed.

Larval exuvia were most frequently encountered a few centimetres above the water level on exposed rocks within the stream.

Callaeschna microstigma — Its presence was of particular interest for it had not been possible to trace any records for this species from the regions visited. Males were encountered fairly commonly at the sites listed, flying slowly and very low over the water surface, rarely venturing into sunny situations preferring, it would appear, deep shade. A similar observation was cited by MORTON (1915a). "It is very fond of flying up and down wood paths however shady and dark they are". — All the sites visited were small, shady, woodland streams situated in the hills, relatively fast-flowing and rocky. Two sites, No. 5 and 14, were visited by the authors between 10.00 and 18.00 hrs. Here, adult males were not seen over water until approx. mid-day, they gradually increased in frequency into early afternoon, remaining at a level of approx. six individuals per 200 metres.

The behaviour of *C. microstigma* males over water was not unlike that exhibited by *Boyeria irene* (Fronsc.), flying slowly and low along the margins of the stream, investigating overhanging roots and rocky hollows, presumably for ovipositing females. Females were observed on only two occasions over water and in each case flew rapidly up and down stream, from side to side, low over the water. Brief oviposition was noted when one of the females settled, in deep shade, on some damp moss covering an exposed rock in mid-stream.

Larval exuvia were collected beneath over-hanging rock ledges, and occasionally tree roots close to the water surface. A newly emerged female with exuvia was observed in the latter situation in the late afternoon at site No. 5.

Cordulegaster pictus — A single male was taken flying along the bank of a river 1 km S of Arethusa, Thessaloniki. In view of the apparent confusion regarding the *Cordulegaster* species from the Eastern Mediterranean, considerable care was taken over the identity of this insect. From the condition of the insect it was apparent that this individual had been on the wing for some time. Despite a prolonged search, no evidence of breeding could be established.

Somatochlora metallica meridionalis — One male was taken at site No. 12, flying within a woodland clearing adjacent to river. The morphology of the insect conforms well with the description given in CONCI & NIELSEN (1956); and judging from its appearance had only recently emerged. Due to the Dam-like effect of the concrete ford, the northern section of river at this site took on the character of a woodland pool, well shaded, with much silt and other bottom debris appearing quite suitable as a breeding site for this insect.

References — BILEK, A., 1967, *Dt. ent. Z.* (N.F.) 14(3/4): 303-312; — BUCHHOLZ, K.F., 1963, *Opusc. zool., Münch.* 70: 1-16; — CAMPION, H., 1918, *Entomologist* 51: 128-129; — 1919, *Entomologist* 52: 202-206; — 1921, *Entomologist* 54: 262; — CONCI, C. & C. NIELSEN, 1956, *Odonata, Fauna d'Italia*, Calderini, Bologna; — DUMONT, H.J., 1976, *Odonatologica* 5(4): 313-321; — 1977, *Bull. Anns Soc. r. ent. Belg.* 113: 119-171; — FRASER, F.C., 1929, *Mem. Indian Mus.* 9: 69-167; — GALLETTI, P. & M. PAVESI, 1983, *G. it. Ent.* 1: 247-260; — KIAUTA, B., 1963, *Beitr. naturk. Forsch.-Südwestl.* 22(1): 65-66; — MORTON, K.J., 1915a, *Entomologist* 48: 129-134; — 1915b, *Trans. ent. Soc. Lond.* 1915: 273-290; — THEISCHINGER, G., 1979, *Odonatologica* 8(1): 23-38; — WATERSTON, A.R., 1976, *Trans. R. Soc. Edinb.* 69: 457-466.

Received September 26, 1984