

A new *Chrysopa* from Pakistan (Neur. Chrysopidae)

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The species described below was sent for identification by Dr. John E. H. Martin, Canada Department of Agriculture, Ottawa. The Identification Service of the department had received it from the Biological Control Laboratory. The species is reported as a predator of the Balsam woolly aphid on *Abies pindrow* in Murree, Pakistan, and is used in the biological control of this aphid.

The chrysopids of India are very insufficiently known. But few species have been accurately described, with figures of the genitalia. The present species runs out in Banks' 1911 Key of Indian Chrysopas to *C. orestes* Banks but differs from it in several characters in colour and wing-venation. The species seems neither to agree with any of the various, inadequate descriptions given by Navás. I prefer therefore to describe it as new rather than to assign it doubtfully to a described species, especially in view of the economic importance attached to the species.

Chrysopa murreensis n. sp.

(Figs. 1—17)

Locus typicus: Murree in Pakistan. — Type: a ♂ in the collections of the Canada Dept. of Agriculture, Ottawa.

Description

Available material: 1 ♂ and 4 ♀♀ (pinned).

Size: holotype ♂, body 8 mm, forewing 11.5 mm, hindwing 10 mm.

allotype ♀, body 9 mm, forewing 14.5 mm, hindwing 10 mm.

paratypes ♀♀, body 8—9 mm, forewing 13—14 mm, hindwing 11.5—12.5 mm.

Holotype ♂. Head green with a brown, subquadrangular, distinct spot between the bases of the antennae and with a black streak over genae and lateral margins of clypeus. Palpi black. Antennae green (apex lacking) but scape with a large dorso-lateral, brown spot which reaches the tip of scape but has an angular incision as shown in fig. 17; pedicel with a brownish shading latero-ventrally. Hairiness of head very sparse and short, pale on labrum, black on vertex. Antennae with short, dark hairs.

Entomol. Ts. Arg. 84. H. 1—2, 1963

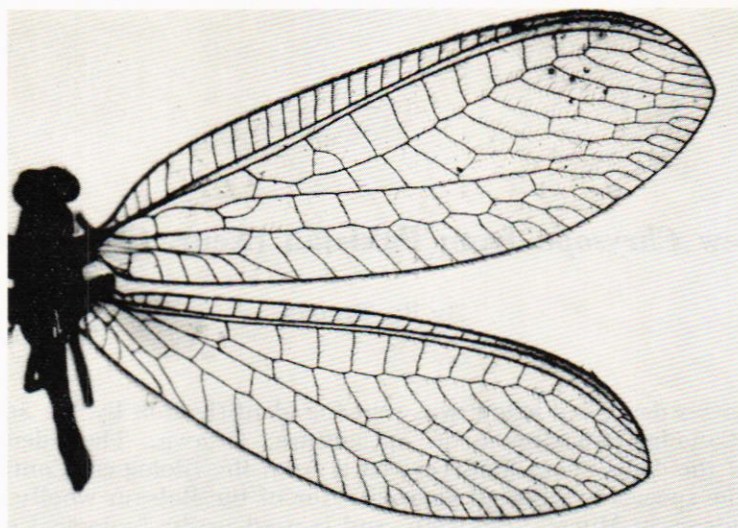


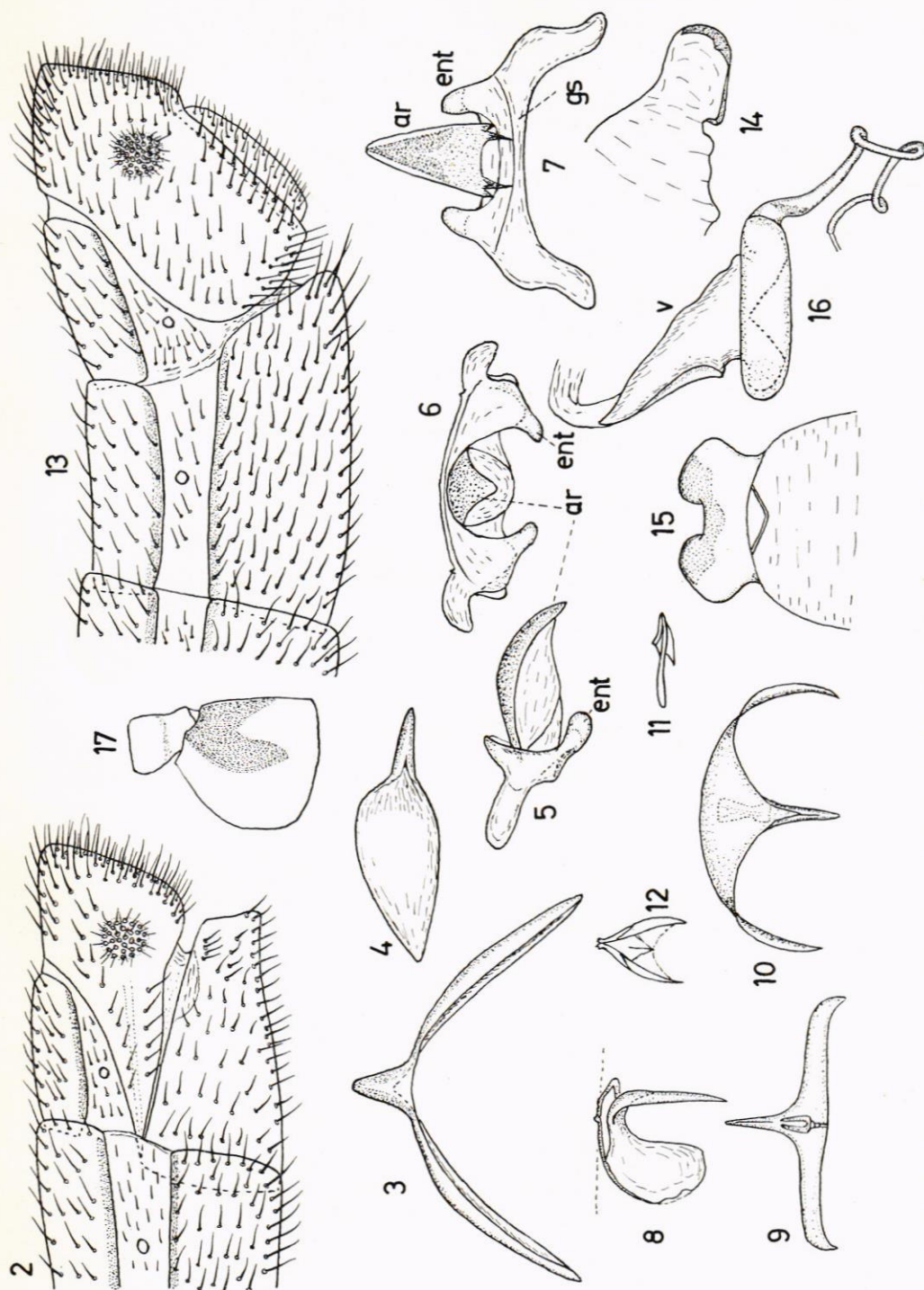
Fig. 1. *Chrysopa murrensis* n.sp., allotype ♀, wing-venation.

Pronotum a little shorter than its width at base, tapering to a rounded anterior margin, with a deep transverse furrow near base. Dorsum of thorax with a broad, green median longitudinal stripe and brownish shadings laterally of this stripe, on pronotum dark brown and very distinct, especially just before the transverse furrow, where they are blackish-brown, leaving the margin narrowly green. Sides of thorax pale green. Legs green with apex of tarsi darkened. Claws with internal rectangular tooth. Hairiness of thorax and legs black, sparse on thorax, dense on legs.

Wings hyaline, without spots. Pterostigma faint, green. Longitudinal veins green. Costals dark to near the pterostigma. Proximal crossveins between R and Rs darkened. Base of Rs dark. First two crossveins between Rs and Psm dark. Lower vein of first intramedian cell dark. Gradate crossveins green. First intramedian cell extends beyond the 1st radio-medial crossvein. Rows of gradate crossveins parallel to one another and to Rs. Fringes very short, black. Hairs of veins black.

Abdomen green with two narrow, black lateral lines, one along the lower margin of tergites, the other along the upper margin of sternites (cf. fig. 2). Hairiness black, stiff. Sternites 8 and 9 completely fused, forming an elongate very long structure with oblique apex as illustrated in fig. 2. Fused ectoproct and tergite 9 also very long with prominent upper angle and straight hind margin. Callus cerci large with about 30 trichobothria. Transversal arch with long, median tooth; its side-pieces broad in lateral view (figs. 3—4). Gonarcus a shallow arch with a very large arcessus and well-developed entoprocessus (figs. 5—7). Parameres lacking. Gonapsis very large, with long, downwards directed tooth (figs. 8—10). Hypandrium internum small, of shape as shown in figs. 11—12.

Allotype ♀. Similar to the holotype male but larger. Flagellum of antennae broken off. Colour of head with appendages, body, wings, legs and abdomen



Figs. 2—17. *Chrysopa murrensis* n.sp. — 2. Apex of ♂ abdomen, lateral. — 3. Transversal arch, dorsal. — 4. Ditto, lateral. — 5. Gonarcus with arecessus and entoprocessus, lateral. — 6. Ditto, caudal. — 7. Gonapophysis, lateral. — 8. Gonapophysis, lateral. — 9. Ditto, dorso-caudal. — 10. Ditto, frontal. — 11. Hypandrium internum, lateral. — 12. Ditto, dorsal. — 13. Apex of ♀ abdomen, lateral. — 14. Subgenital, lateral. — 15. Ditto, ventral. — 16. Spermatheca, lateral. — 17. Scape and pedicel of right antenna of male, dorsal. (Figs. 3—16 drawn with the same power of magnification).

Abbreviations: ar = arecessus; ent = entoprocessus; gs = gonarcus; v = vela.

as in the holotype. Venation as in the holotype (fig. 1). Terminal structures of abdomen, cf. figs. 13—16. Sternite 7 very long; its hindmargin slanting; apex projecting. Fused tergite 9 and ectoproct form a subparallel plate with acute upper angle and straight hindmargin as well in the upper as in the lower portion. Callus cerci large with 38 trichobothria. Lateral gonapophyses narrow. Subgenitale with deep apical emargination (fig. 15); in lateral view rounded (fig. 14). Spermatheca quite unpigmented; its main part narrow; ventral impression broadly triangular, shallow (fig. 16). Vela long, triangular, with acute apex and small proximal tooth-like projection (fig. 16, v).

Paratypes ♀♀. One paratype very incomplete, only the metathorax with hindwings, hind legs and abdomen remaining. Another lacks the antennae. The third one is rather teneral but complete except the absence of one antenna. The complete antenna has about the same length as the forewing. Colour and other characters as in the allotype.

Geographical Distribution

Pakistan: Murree, in the province of Rawalpindi, about 34° N and 73.5° E, close to the border of Kashmir, holotype ♂ reared in laboratory, C.I.B.C. 22.ii.1960 (No. 60—2, 69—2883, 60—188); allotype ♀ reared in laboratory, C.I.B.C. 18.ii.1960 (No. 61—60, 69—2886, 60—188); 3 paratypes ♀♀, on *Abies pindrow*, 29.ii.1960 (No. 60—2, 69—2882, 2884, 2885; 60—188). Holotype, allotype and two paratypes in the coll. of the Canada Dept. of Agriculture, Ottawa. One paratype retained for the coll. of the Zoological Institute of Lund University.

Ecological Distribution

The larva of this species was observed to feed on the Balsam woolly aphid on *Abies pindrow* Spach.