

DESCRIPTION OF SIX NEW SPECIES OF *OGCODES*
FROM BORNEO, JAVA, NEW GUINEA, TAIWAN
AND THE PHILIPPINES (Diptera: Acroceridae)

By Evert I. Schlinger¹

Abstract : Six new species of *Ogcodes* are described representing the first records of the genus from Borneo and Taiwan and only the second species each from New Guinea, Java and the Philippines. The new species, together with their respective species groups and regions are : *borneoensis* n. sp., pallidipennis group, Borneo ; *gressitti* n. sp., colei group, New Guinea ; *longicolus* n. sp., borealis group, Java ; *luzonensis*, pallidipennis group, Philippines ; *maai* n. sp., eugonatus group, Borneo ; *taiwanensis* n. sp., colei group, Taiwan.

The genus *Ogcodes* Latreille, the largest member of the subfamily Acrocerinae, is nearly cosmopolitan and contains 3 subgenera and 90 species. The genus was revised by Schlinger (1960), but specimens from Taiwan, Borneo, Java and New Guinea were unavailable to me until recently. The species described below represent the first records of the genus from Taiwan and Borneo, and only the second record each from New Guinea, Java and The Philippines. These new species are described now so that the new names may be included in a Catalogue of Oriental Diptera being prepared by Drs D. E. Hardy and M. D. Delfinado of the University of Hawaii.

This becomes the eighteenth paper in a series planned towards eventually publishing a monograph of the family Acroceridae. References to recent articles in this series can be found in Schlinger (1968a & b, 1971a & b).

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Genus *Ogcodes* Latreille

Ogcodes Latreille, 1796 (for complete synonymy and taxonomic literature refer to Schlinger, 1960).

Four species of *Ogcodes* have been described previously from the islands considered in this paper, and references to these species can be found in Schlinger (1960). These species are : (1) *O. costalis* (Walker, 1852) said to be described from "East Indies," but

1. Department of Entomology, University of California, Berkeley, Calif. 94720.

Brunetti (1926) examined the type specimen and said the locality label was "Ind.," which no doubt meant India. (2) *O. trifasciatus* de Meijere (1915) from New Guinea. (3) *O. javanus* de Meijere (1924) from Java. (4) *O. philippinensis* Schlinger (1960) from Sibuyan I., Philippines. With the exception of the latter species, which was placed in the *pallidipennis* group, other described species cannot be placed in species groups due to the absence of specific diagnoses of wing venational and genitalic features.

Ogcodes (Ogcodes) taiwanensis Schlinger, new species Fig. 1, 9, 12, 15, 17.

Species of the *colei* group (Schlinger, 1960).

♂. Length of entire specimen 6.0 mm, wing length 5.0 mm.

Head: Eyes, antennae and ocelli dark brown, ocellar tubercle black, occiput grey, oral region brownish yellow and U-shaped behind; frons about as wide as ocellar tubercle, not protruding.

Thorax: Mesonotum yellowish white except for 3 black shining vittae as in fig. 17; humeri, post-alar calli above, large spot below wing base and legs (except coxae and tarsal claws) yellowish white; remainder of thorax, coxae, tarsal claws, pulvilli, rim or squama and basal area of post-alar calli dark brown; scutellum brownish black except for large yellowish white lateral spot (fig. 17); squama opaque brown; halter stem yellow with light brown knob; thorax covered with dense light brown pile, lighter on yellowish white areas, about as long as tarsal claw but longer on scutellum; wing hyaline, veins yellowish white, venation faint with cross vein M-Cu and most of vein M₁ a thin crease; venation as in fig. 1.

Abdomen: Mostly shining dark brown dorsally except for large lateral yellowish-white areas on tergites II and III and narrow posterior fascia on tergite IV and V; tergite I (mostly hidden) is dark brown laterally, but appears yellowish white above; venter entirely yellowish white except for small dark brown, anterolateral spot on sternite II and distinct dark brown spiracles on segments II-IV; genitalia small and light brown except for dark brown tergite IX; aedeagus as in fig. 9; ejaculatory apodeme as in fig. 12 and 15; pile on abdominal dorsum (mostly rubbed off) appears to be mostly sparse and very long (about as long as antenna) on dorsomedian area of tergites II and III, most of IV and all of V and VI; pile on lateral margins of II-IV very dense and short; pile on venter is dense but not quite as long as on tergite V and is arranged in rows on posterior margin of sternites II-VI, being shorter on sternite V-VI. Pile on abdomen is light brown on dark brown areas and yellowish white on concolorous areas.

♀. Unknown.

Holotype ♂: Taiwan (Formosa), Eboshiyama, 17-21.V.1933 (T. Shiraki). The type is rather dirty and is missing the left hind leg. It will be deposited in the National Institute of Agricultural Sciences collection in Tokyo.

Discussion: This species is the first *Ogcodes* to be recorded from Taiwan. Aside from clearly belonging in the *colei* species group, *taiwanensis* is apparently quite unrelated to any known species. In certain aspects the male genitalia (see fig. 9, 12, 15) show relationship to those of *nitens* (Hutton) and *argigaster* Schlinger, both from New Zealand, but the up-sloping "wings" of the aedeagal apodeme show it to be quite distinct.

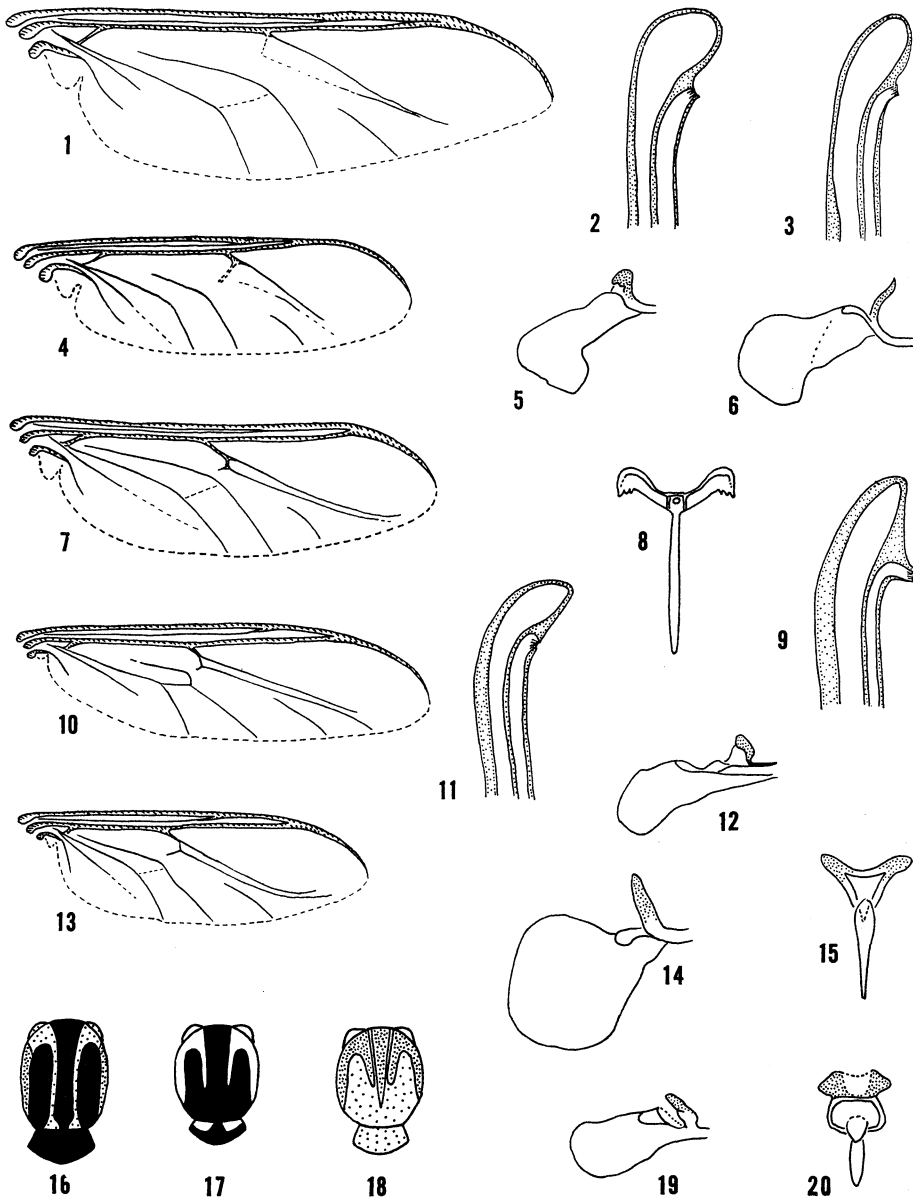


Fig. 1, 9, 12, 15, 17, *Ogcodes taiwanensis* n. sp. Fig. 4, 11, 14, *Ogcodes maai* n. sp.
 Fig. 2, 5, 7, 8, *Ogcodes luzonensis* n. sp. Fig. 10, 16, 19, 20, *Ogcodes longicolus* n. sp.
 Fig. 13, 18 *Ogcodes gressitti* n. sp. Fig. 3, 6, *Ogcodes borneoensis* n. sp.

Wings, Fig. 1, 4, 7, 10, 13; aedeagus in lateral view, Fig. 2, 3, 9, 11; ejaculatory apodeme in lateral view, Fig. 5, 6, 12, 14, 19; ejaculatory apodeme in anterior view, Fig. 8, 15, 20; mesonotal disc, Fig. 16, 17, 18.

Ogcodes (Ogcodes) gressitti Schlinger, new species Fig. 13, 18.

Species of the *colei* group (Schlinger, 1960).

♀. Length of entire specimen 7.0 mm, wing length 7.0 mm.

Head: Eyes and ocellar tubercle black, occiput grey, frons and most of oral region reddish brown, antennae and ocelli brown; ocellar tubercle small, about 1/2 as wide as frons at base, area behind tubercle somewhat hollowed out; frons grooved medially and gently protruding; oral region V-shaped behind.

Thorax: Mesonotum shining dark brown except for light yellowish brown areas on lateral and posterior margins and 2 faint median vittae as shown in fig. 18; white are humeri including spiracular area, spot above fore coxa, mediobasal spot on propleura, most of mesopleura including area around wing base and upper margins of post-alar callus; yellowish brown are dorsal spot on propleura, spot above meso- and metacoxa, most of post-alar callus, scutellum and metanotal area; remainder of thorax dark brown; squama heavily infuscated, opaque with darker brown margin; halter large and white except for outer side of knob; legs shining dark brown except for yellow femora and light brown to yellow area on inner basal 1/2 of tibiae; pulvilli dark brown; claws dark brown with black tips; hind femur longer than hind tibia and extremely narrowed basally, but only slightly swollen towards apex; metanotal area high and scutellum therefore protrudes far away from abdominal attachment region (about as in pl. 5, fig. 22 of Schlinger, 1960); wing subhyaline except for distinct infuscation in costal, subcostal area around base of veins R_{4&5} and r-m, and large spot on wing tip; veins dark brown except M₁ and r-m light brown; venation as shown in fig. 13, vein m-cu a thin white crease; pile light brown and short on mesonotum, somewhat longer on posterior margin of post-alar callus and longest and more dense on scutellum and hypopleura, sparse on lower margin of humeri and dorsal margins of pro- and mesopleura; most of pleural area apilose and shiny.

Abdomen: Shining dark brown dorsally with extremely narrow, white, posterior fascia on each segment; venter mostly white but sternites VI and VII dark brown and VII has black areas; dorsal pile short, sparse and mostly dark brown, that on venter even more sparse; lateral margin of abdomen appears thickly ridged and most spiracles are not seen except when viewed from venter.

♂. Unknown.

Holotype ♀: (BISHOP 9617), New Guinea (NE), Tsenga, 1200 meters, Upper Jimi Valley, 14.VI.1955 (J. L. Gressitt). The holotype will be deposited in the Bishop Museum.

Discussion: This is the second *Ogcodes* species to be recorded from New Guinea. *O. trifasciatus* Meijere (1915) from "Hollandia" is likely not related to *gressitti* judging by its black scutellum, the absence of m-cu cross vein, the black and yellow tergum and the reddish yellow legs. The distinct mesonotal pattern and wing venation (fig. 13, 18) show that *gressitti* is not closely related to any known species, and hence I have little hesitation in describing this species from the female sex alone.

Ogcodes (Ogcodes) longicolus Schlinger, new species Fig. 10, 16, 19, 20.

Species of the *borealis* group (Schlinger, 1960).

♂. Length of entire specimen 7.5 mm, wing length 8.0 mm, entire length of hind leg 8.0 mm.

Head: Eyes, antennal segments I and II, frons, tip of proboscis and swollen genal angle dark brown; base of proboscis, anterior genal area, lateral ocellus and antennal segment III light

brown; oral area large, round except more pointed near base of antennae; frons flat, bisected medially, about as wide basally as ocellar tubercle medially; ocellar tubercle shiny black, occiput grey tomentose.

Thorax: Mesonotum yellowish brown except for 3 black shiny vittae as in fig. 16; humeri, pronotum, upper part of post-alar callus and large spot below wing base light yellow, almost white in spots; remainder of pleura dark brown and large part of post-alar callus light brown; scutellum entirely dark brownish black, metanotum shiny dark brown except for anterodorsal area light brown which is covered with long sparse brown hairs; pile on thorax short, mostly appressed and golden brown; squama nearly opaque, light brown with slightly darker margin; halter light brown with yellow stem; legs long and thin; legs, including knees, dark brown except for yellowish brown forecoxa, fore and mid femora, tibiae and basitarsi and basal 1/3 of hind femur; claws dark brown, pulvilli light brown; wing long for *Ogcodes* species, light brown, somewhat darker in costal and wing tip areas; venation unique and quite complete as in fig. 10, with medial vein and r-m cross vein delimiting the medial and second radial cells.

Abdomen: Dorsum shiny dark brown with narrow posterior yellow fasciae on tergites II-V, nearly incomplete on I and absent on VI; entire dorsum covered with short, erect golden brown pile; venter dark shiny brown except for yellowish white sternite I and posterior fasciae on sternites II-VI which are considerably wider than those on tergites; thin lateral line on abdomen from segments I-IV, yellowish white; genitalia small, light brown, ejaculatory apodeme formed as in fig. 19 and 20.

♀. Unknown.

Holotype ♂: West Java, Mt Gede, Lebak Sive, 5000', IX.1937, B.M. 1962-651. The type will be deposited in the British Museum (Natural History).

Discussion: This is the second *Ogcodes* species recorded from Java, the other being *javanus* Meijere (1924) from Buitenzorg. *O. longicolus* may be related to *javanus*; however the long legs, long wings, much larger size and the thoracic color pattern clearly shows that *longicolus* differs from *javanus* and from all other species I am familiar with.

Even though the tip of the aedeagus is broken off in the holotype, the shape and structure of the aedeagal apodeme and the wing venational features are evidence enough for me to place *longicolus* in the *borealis* species group.

***Ogcodes (Ogcodes) maai* Schlinger, new species Fig. 4, 11, 14.**

Species of the *eugonatus* group (Schlinger, 1960).

♂. Length of entire specimen 4.5 mm, wing length 4.0 mm.

Head: Eyes, antenna, ocelli dark brown; ocellar tubercle shiny black; occiput and frons dull black; frons slightly swollen, oral area wide V-shaped.

Thorax: Shiny dark brown almost black except for prothoracic spiracle and interpleural area below wing base yellowish white; mesopleural area and upper outer margin of metanotum light brown; legs yellow except coxae, trochanters, apices of tarsi, tarsal claws and pulvilli dark brown; squama opaque, dark brown with thin slightly darker brown margin; halter dark brown with yellow stem; thorax covered with dense, white, mostly erect pile which is about as long as antenna; wing hyaline, veins light brown; venation as in fig. 4.

Abdomen: Short and broad; dorsum tri-colored brown, yellow and white as follows: tergite I dark brown; tergite II and III with dark brown basal fasciae, white posterior fasciae and

yellow median fasciae; tergite IV-VI yellow with posterior white fasciae and each tergite with small anterolateral dark brown spot; venter whitish yellow; dorsum covered with sparse, erect white pile, shorter than on thorax; venter covered with more sparse and shorter pile than on dorsum; genitalia dark brown, aedeagus as in fig. 11, ejaculatory apodeme as in fig. 14.

♀. Unknown.

Holotype ♂: (BISHOP 9618) Borneo, Sarawak, Kapit District, Merirai, V, 30-300 meters, VIII-1 to 6, 1958, in secondary forest, T. Maa, to be deposited in the Bishop Museum. Paratype male: Borneo, Pontianak, VIII.1907, F. Muir (Paris Museum). The paratype differs obviously from the holotype only in that tergite IV has the dark brown anterolateral spot more fasciate, extending about 3/4 way towards the midline.

Discussion: This distinctly colored species is not closely related to any known species and the first established representative of the *eugonatus* group known from the Oriental region.

Ogcodes (Ogcodes) borneoensis Schlinger, new species Fig. 3, 6.

Species of *pallidipennis* group (Schlinger, 1960).

♂. Length of entire specimen 5.0 mm; wing length 4.5 mm.

Head: Eyes, ocelli, antenna (only segments I and II present) dark brown; ocellar tubercle shiny black; occiput, frons dull greyish black; occiput covered with long brown hairs; eye margin overlaps posterior head margin more than usual for *Ogcodes* species, making occiput narrow in breadth; frons slightly swollen, slightly wider ventrally than ocellar tubercle is medially.

Thorax: Shiny dark brown except as follows: most of pro- and mesopleurae, most of metanotum, tiny lateral spot on scutellum, a pair of faint spots just anterior of scutellum, light brown; thorax covered with dense short golden brown pile; legs yellow except for coxae, trochanters, knees, apical spot on tibiae, most of metatarsi, claws and pulvilli dark brown; squama opaque light brown with distinct dark brown margin, halter light brown with yellow stem; wing hyaline but faintly browned, veins dark brown; venation similar to that given in Schlinger (1960, pl. 4, fig. 20) for *O. orientalis* except m-cu crossvein is absent; vein M_1 complete but faint distally, r-m crossvein faint and indistinct.

Abdomen: Dorsum shiny dark brown except for narrow whitish yellow posterior fasciae on tergites I-VI, covered with short brown pile, more dense and longer medially on tergites II-III, more golden brown apically; venter whitish yellow with narrow anterior dark brown fasciae on sternites I-VI, sparsely covered with short golden brown pile; genitalia dark brown, aedeagus as in fig. 3, ejaculatory apodeme as in fig. 6.

♀. Unknown.

Holotype ♂: Northern Borneo, Bettotan, nr Sandakan, 17.VIII.1927, C.B.K. and H. M.P., from the F.M.S. Museum, B.M. 1955-354. The type will be deposited in the British Museum (Natural History).

Discussion: This species appears to be related to *luzonensis* n. sp., *orientalis* Schlinger and *philippinensis* Schlinger. It is easily separated from all three species by the configuration of the aedeagus and the ejaculatory apodeme. All four of these species are somewhat different from typical members of the *pallidipennis* group in having a faint m-cu cross vein present. This indicates that a separate group should be set up for them.

O. borneensis is apparently most closely related to *O. philippinensis* based on the structure of the aedeagus.

Ogcodes (Ogcodes) luzonensis Schlinger, new species Fig. 2, 5, 7, 8.

Species of *pallidipennis* group (Schlinger, 1960).

♂. Length of entire specimen 5.0 mm ; wing length 4.0 mm.

Head : Eyes, frons, oral margin, antennal segment III, dark brown ; antennal segments I and II, ocelli, proboscis light brown ; occiput black ; frons shiny, slightly protruding, grooved medially.

Thorax : Mostly shining black, only mesopleural area and tip of humerus light to dark brown mixed with whitish brown interpleural areas ; mesonotum, scutellum, pro- and mesopleural area clothed with short dense erect golden brown pile ; legs dark brown except for basal 3/4 of femora and basal 3/4 of tibiae yellowish brown ; pulvilli and tarsal claws black ; halter stem whitish brown, knob dark brown ; squama opaque light brown with distinct dark brown rim ; wing light brown, hyaline, veins light brown, venation as in fig. 7.

Abdomen : Tergites dark shining brown with narrow white posterior fasciae that become slightly broader medially on tergites II and III, and broader throughout their length on tergites IV and V ; tergites covered with short, sparse brown pile a little longer medially ; sternite I dark brown laterally, light brown medially ; sternite II dark brown anterolaterally, light brown medially with distinct white posterior fascia ; sternites III-VI with anterior dark brown fasciae, median light brown fasciae and white posterior fasciae ; venter covered with short, sparse light brown pile ; genitalia as in fig. 2, 5 and 8.

♀. Unknown.

Holotype ♂ : Acupan, Benguet, Luzon, Philippines, 14.VII, C. S. Banks (MCZ). The type will be deposited in the Museum of Comparative Zoology, Harvard University.

Discussion : This species is apparently most closely related to *O. philippinensis* Schlinger, from which it differs by both the structure of the aedeagus and ejaculatory apodeme and in having vein R_{4+5} much longer and nearly reaching the wing margin. It is also related to *O. borneensis* n. sp. and *O. orientalis* Schlinger, but differs in genitalic characters and its darker color.

REFERENCES CITED

- Brunetti, E.** 1926. New and little-known Cyrtidae (Diptera). *Ann. Mag. Nat. Hist.* ser. 9, **18** : 561-606.
- Meijere, J. C. H. de.** 1915. Diptera aus Nord-Neu Guinea. *Tijdschr. Ent.* **58**: 109.
1924. Studien über südostasiatische Dipteren XVI. *Tijdschr. Ent.* **67** : 210.
- Schlinger, E. I.** 1960. A revision of the Genus *Ogcodes* with particular reference to species of the Western Hemisphere (Diptera). *Proc. U. S. Nat. Mus.* **111**: 227-336, 112 figs.
1968a. *Africaterphis*, a new genus for the African species of *Terphis*, and a redescription of the Brazilian genus *Terphis* Erichson (Diptera : Acroceridae). *Ann. Nat. Mus.* **20**(1) : 59-62.
1968b. Studies in Neotropical Acroceridae, Part I. A Revision of *Arrhynchus* Philippi and a key to the genera of the *Ocnaea* branch of the Panopinae (Diptera). *Rev. Chilena Ent.* **6** : 47-54, 14 figs.

- Schlinger, E. I.** 1971a. Studies in Neotropical Acroceridae, Part II. The new genus *Archipialea* and its four new Chilean species (Diptera). *Rev. Chilena Ent.*, (in press).
- 1971b. A further review of *Rhysogaster* Aldrich with descriptions of four new species from Java and Borneo. *Pacif. Ins.* **13**(1): 65-73, 18 fig.
- Walker, F.** 1852. *Insecta Saundersiana*; or characters of undescribed insects in the collection of W. W. Saunders, I(3): 203.