AUSTRALIAN MUSEUM SCIENTIFIC PUBLICATIONS

Milledge, G. A., 1989. *Scolodera pardalotus* n. gen., n. sp. (Mantodea, Mantidae) from northern Queensland, Australia. *Records of the Australian Museum* 41(2): 107–110. [22 September 1989].

doi:10.3853/j.0067-1975.41.1989.138

ISSN 0067-1975

Published by the Australian Museum, Sydney

Scolodera pardalotus n.gen., n.sp. (Mantodea, Mantidae) from Northern Queensland, Australia

G.A. MILLEDGE

Museum of Victoria
71 Victoria Crescent, Abbotsford, Vic. 3067, Australia

ABSTRACT. A new mantid genus and species, *Scolodera pardalotus*, is described from the Mareeba district in north-eastern Australia.

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The mantodean fauna of Australia is quite distinctive, although rather impoverished (Beier, 1968). For example, in the Mantinae, nine of the 14 genera recorded from Australia are endemic or also occur in New Guinea (Balderson, 1984). The genus described here apparently has no close associations within either this group or the more widespread Asian element. Its possible relationships are discussed in this paper.

The terminology used in describing the genitalia follows La Greca (1953-1954). For examination purposes the genitalia were prepared by relaxing the specimen for 48 hours, then dissecting out the genital complex and immersing it in 10% KOH for 24 hours at room temperature. It was then washed and transferred to 70% alchohol, and the soft internal tissues were teased out. The genital complex is stored in glycerol in a small vial attached to the specimen pin.

The holotype is lodged in Australian Museum, Sydney. It is the only specimen of this new species known at present.

Scolodera n.gen.

Type species. *Scolodera pardalotus* n.sp.

Diagnosis. Male only, female unknown. Of medium stature. Head triangular from anterior aspect, wider than high, shallowly concave anteriorly; eyes prominent, margins rounded; facial shield transverse with narrow transverse ridge near upper margin curving dorsally between antennae, each lateral margin with a bulge which projects ventrally.

Prothorax moderately elongate; prozona dorsally somewhat swollen in anterior half, posterior half with low diagonal ridge on each side of midline, ventrally with large spiniform process on each side anterior to coxal insertion; dorsal surface of metazona anteriorly with 2 large spiniform projections side by side and directed dorsolaterally, bulging slightly at posterior margin on either side of midline, without distinct median carina.

Outerface of forecoxa with distinct median ridge.

Forefemur with 3 discoidal spines, 1st and 3rd short, 2nd much longer; with 4 outer spines, the first 3 rather long, and 13 inner spines; claw groove centrally situated. Foretibia with 6 outer and 12 inner spines. Mid and hind legs moderately long.

Tegmina and wings elongate, surpassing tip of abdomen; abdomen narrow and elongate; cerci of moderate length, cylindrical. Genitalia with distal process undivided, medial arm partially sclerotized, anterior apodeme elongate narrow to the right and broadly squamiform to the left, ventral sclerified process small and U-shaped, ventral plate fused to main body of phallomere.

Etymology. The generic name is derived from the Greek *skolos* meaning thorn and *dere* meaning neck. The gender is feminine.

Scolodera pardalotus n.sp.

Figs 1-6

Type material. HOLOTYPE, male, Lock Creek, Davies Creek Road, Lamb Range, Mareeba district, North Queensland, 25 Dec. 1976, M.S. & B.J. Moulds. (Dry specimen. Australian Museum, Sydney).

Diagnosis (male). Colour of dry specimen pale yellow-brown, peppered with blotches and spots of blackish brown (Fig. 1). Head capsule (Fig. 2) with narrow black band on each side anteriorly, extending from middle of eye margin down beside facial shield onto inner margin of mandibles; a broader dark band on each side extending somewhat diagonally from upper inner margin of eye and fading dorsally toward neck; also with a central black band extending from neck to base of central ocellus; facial shield with thin central blackish stripe and a broader pale brown stripe on each side before marginal bulge; posterior part of head black with pale spot on external half of each side; antennae pale yellow brown, slightly more than twice the length of prothorax.

Prothorax (Fig. 3) with margins distinctly lamellate, especially at supracoxal expansion and with scattered, very small, tubercles; dorsal surface pale yellow-brown with large black blotches; prozona dorsally with a few scattered tubercles anteriorly and a few smaller ones posteriorly, slightly depressed centrally, ventrally dark brown with black blotches; metazona with a few small scattered tubercles dorsally, smooth and pale ventrally except for small dark area at base.

Forecoxa (Fig. 4) with outerface pale and darkly blotched; anterior margin with 7 elongate, blunt tipped spines; innerface pale with black band at proximal and distal ends. Forefemur with 1st and 3rd discoidal spines pale, 2nd black on innerface; 1st outer spine pale, rest black; long inner spines black, short ones pale; innerface of femur pale with large blackish patch just anterior to claw groove and a smaller one at grooming brush. Foretibial spines all tipped blackish. Mid and hind femur with distinct genicular spine.

Tegmen with costal margin opaque creamish above, brighter yellow ventrally toward base, major veins blackish; remainder of tegmen hyaline except for a number of the cross veins flushed blackish and a blackish patch at either end of the stigma. Wing with veins pale yellowish, especially in costal area, a few small cross veins near tip flushed brown, remainder of wing hyaline.

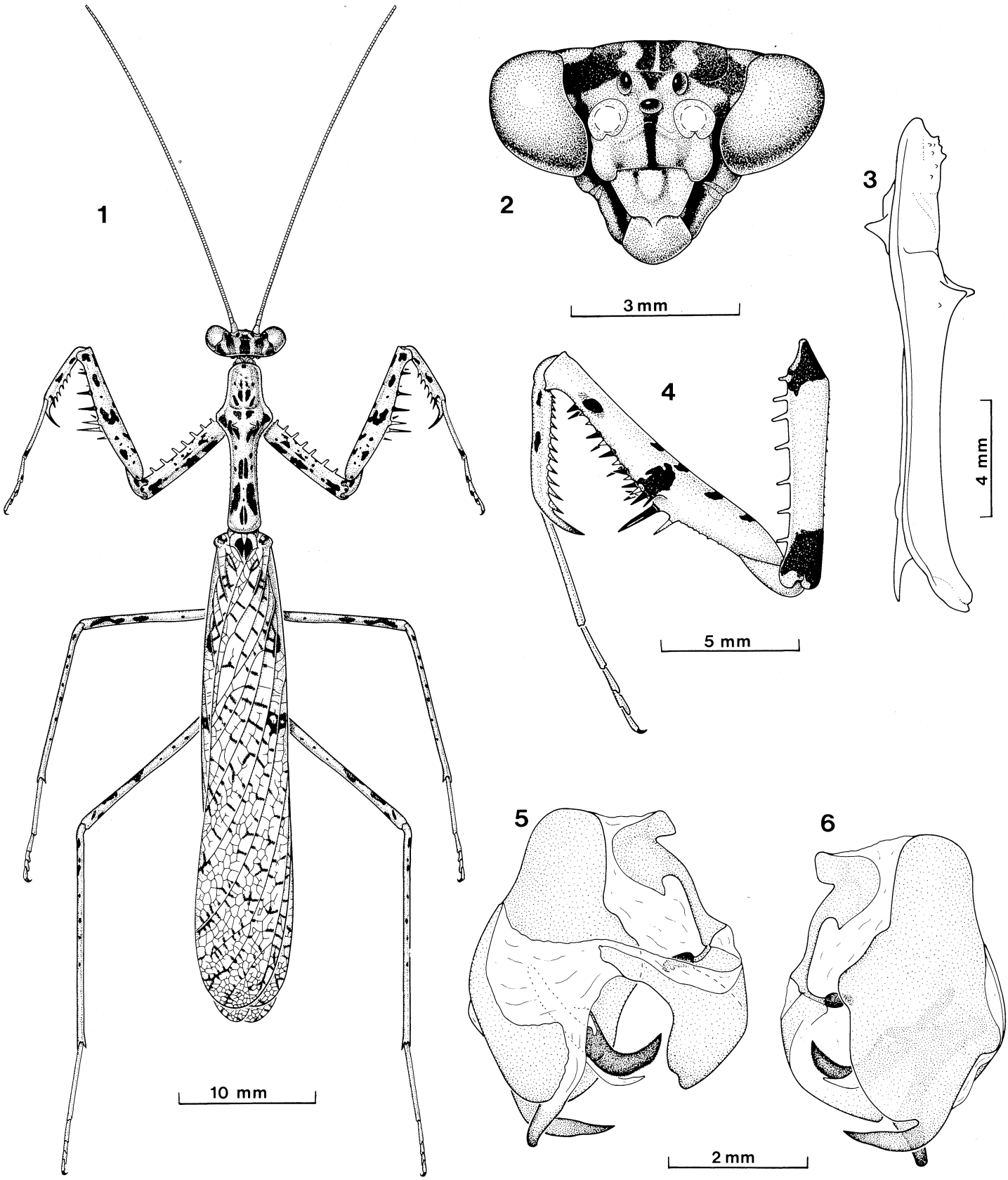
Abdomen brownish, cerci with apical segments somewhat beaded in appearance. Genitalia (Figs 5,6) with distal process elongate spiniform, sharply curved at base and directed dorsolaterally; apical process curving dorsally and blunt tipped; phalloid apophysis a stout uncinate spine, lightly shagreened, with a curved groove near base, anterior process narrow elongate; anterior portion of ventral lamina of left dorsal phallomere roughly triangular in shape with elongate process at junction with phalloid apophysis; main lobe of right dorsal phallomere with notch near apex.

Measurements. Total length 53 mm. Head width 6 mm. Head depth 4.5 mm. Pronotal length 13.3 mm. Pronotal width 4.2 mm. Length forecoxa 9 mm. Length forefemur 11mm.

Etymology. Specific epithet from the Greek *pardalotos* meaning spotted like a leopard.

Distribution. Known only from the type locality where the vegetation is primary rain forest (Max Moulds, personal communication). Therefore the species is likely to be rather restricted in Australia but may be expected to occur in New Guinea.

Discussion. Using the keys of Beier (1964, 1968), *Scolodera pardalotus* keys out to family Mantidae, subfamily Mantinae. The spinal formation of the foreleg is fairly typical of that subfamily except that *S. pardalotus* possesses three discoidal spines, a feature shared by only one other genus in the Mantinae, i.e. *Omomantis* Saussure. This feature also appears more or less frequently in almost half of the subfamilies of the Mantidae listed by Beier. The form of the pronotum of *S. pardalotus*, i.e. the two large spiniform tubercles on the metazone of the pronotum is unique among the Mantinae. A similar form of pronotum is found in a group of three apparently related genera, *Mellierella* Giglio-Tos from New Guinea, and *Melliera* Saussure and *Xystropeltis* Rehn from Central America. Giglio-Tos (1927) erected the small subfamily Mellierinae to contain *Melliera* and *Mellierella*, partly on the basis of the bituberculate pronotum. Rehn (1935, 1951) added *Xystropeltis* to this subfamily, however Beier (1935, 1964, 1968) placed these genera in his larger Liturgusinae principally on the basis of the possession of a pit between outer spines 1 and 2 of the forefemur. I have examined two male specimens of *Mellierella biroi* Giglio-Tos one of which has this pit obvious on both femora, the other has the pit fairly obvious on the right femur but not apparent on the left. This feature is completely absent in the holotype of *S. pardalotus*. Further material is needed for study to



Figs 1-6. *Scolodera pardalotus* n.sp., holotype, male. **1:** whole animal, dorsal; **2:** head, anterior; **3:** pronotum, lateral; **4:** right foreleg, inner face.;**5:** genitalia, dorsal; **6:** genitalia, ventral.

determine the variability of this feature and whether the pronotal similarities between *S. pardalotus* and the *Melliera* group indicate true relationship. For the present *S. pardalotus* may tentatively be placed in the Mantinae. Roy (1987) noted that the most recent classification of the Mantodea as a whole (Beier 1964, 1968), is not entirely satisfactory. This may be a case where some rearrangement is necessary.

ACKNOWLEDGEMENTS. I thank Dr D.K. McAlpine of the Australian Museum, Sydney, for the loan of the type specimen; J. Balderson of the ANIC, Canberra for the loan of *Mellierella* specimens; and Dr G. Poore for reading the manuscript.

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Accepted 15 February 1989