NEW SPECIES AND RECORDS OF ASTIEAE (ARANEAE: SALTICIDAE)
FROM AUSTRALIA AND PAPUA NEW GUINEA

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_Arasia eucalypti_ sp. nov. and _Helpis minitabunda_ (Koch) are first records of each genus from Papua New Guinea. _Helpis gracilis_ sp. nov. and _Tauala aethronensis_ sp. nov. are described from NEQueensland. □ Astieae, Arasias, Helpis, Tanala, Australia, Papua New Guinea.

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Wanless (1988) listed 6 genera of Astieae comprising 32 species, to which Zabka (1995) added monotypic _Megalosatia mainae_; all are of Australian origin. Some genera (Astia, Helpis, Arasia) are associated with _Eucalyptus_ forests, others (_Sondra, Jacksonoides, Tauala_) are rainforest dwellers. The genera are endemic to Australia except _Helpis_ which extends to New Zealand. It is not surprising to find some in Papua New Guinea, an island with a common geological history with Australia, especially in its southern part with similar floristic characteristics (_Eucalyptus savannah_) to NE Australia (Zabka, 1990, 1991, 1993).

MATERIAL AND METHODS

Material from PNG is deposited in the Queensland Museum, Brisbane (QM). Comparative material was borrowed from the Australian Museum, Sydney (AMS). Measurements are in millimetres. The drawings were made using a grid system. Dissected epigynies were digested in lactic acid. Abbreviations used are: AEW=anterior eye width, ag=accessory gland, AL=abdominal length, CH=cephalothorax height, CL=cephalothorax length, co=copulatory opening, CW=cephalothorax width, e=embolus, EFL=eye field length, fd=fertilisation duct, id=insinuation duct, mk=membranous keel, PEW=posterior eyes width, s=sperrmatheca, sr=seminal reservoir, ta=retrolateral tibial apophysis, tg=tegulum, tl=tegular lobe.

Order ARANEAE
Family SALTICIDAE
Tribe ASTIEAE
_Arasia_ Simon, 1901

_Astia_ Koch, 1880: 1158, (part)


TYPE SPECIES. _Astia mollicoma_ Koch, 1880, by original designation.

_Arasia eucalypti_ sp. nov. (Figs 1A-E, 2A-D)

MATERIAL EXAMINED. PNG: HOLOTYPE, QMS28896, ♂, National Capital District, Waigani, University campus, under _Eucalyptus_ bark, 15.07.1988, D.J. Court, M. Zabka. PARATYPES, QMS28897, ♂, same data except 28.06.1988; QMS28898, 5 ♂, 2 ♀; QMS30725, ♂; QMS30726, ♀, 2 juveniles, same data except 25.06.88-14.09.88; QMS28899, ♀, Central Province, Sinum Dam., 1.05.88, D.J. Court. QMS30723, ♂, ♂, 2 juveniles, Port Moresby, 25.06.88. D.J. Court, M. Zabka; QMS30724, ♀, ♂, Boroko, 14.09.86, D.J. Court.

DESCRIPTION. Compared to _A. mollicoma_ (Fig. 1F), larger, body lighter coloured (Figs 1A, 2A). Tegulum of the palpal organ more robust, seminal reservoir curved, membranous keel accompanying embolus not distinctive (Fig. 1D,E,G,H). Distal part of the insemination ducts in epigynies shorter and wider apart (Fig. 2D,E).

MALE. Cephalothorax (Fig. 1A,B) wide and flat, orange beige with narrow darker margin, covered with scattered stiff brown hairs and white fine marginal hairs. Eyes surroundings black; light guanine spots in the centre of the eye field; eyes fringed by white hairs. Abdomen (Fig. 1A) pale greyish, with pattern of darker markings and white guanine spots, with scattered white and brown hairs. Spinnerets pale grey. Clypeus orange beige with numerous white hairs. Chelicerae of similar colour, plurident, with 3 promarginal and 4 retrormarginal teeth (Fig. 1C).
Maxillae and labium orange with lighter tips. Sternum pale yellow with darker margins. Venter yellow-grey. Legs yellowish-orange or pale yellow, anteriors darker, clothed in white and amber hairs, spines moderately strong; tibia I with 6 prolateral and 6 retrolateral spines, metatarsus I with 3 prolateral and 3 retrolateral spines. Pedipalps yellow with long white and amber hairs, their structure shown in Fig. 1D,E.

**Dimensions.** CL 2.70, CW 2.50, CH 0.80, EFL 1.10, AEW 1.60, PEW 1.40, AL 3.90.

FEMALE. Cephalothorax (Fig. 2A) similar in colour and shape to that in the ♂, however, abdomen little darker. Chelicerae robust with 2 or 3 promarginal and 5 retromarginal teeth (Fig. 2B). Legs yellow-orange, darker on tarsi and metatarsi; tibia I with 5 prolateral and 5 or 6 retrolateral spines, metatarsus I with 3 or 4 prolateral and 4 retrolateral spines. Palps yellow with darker tips, clothed in long whitish hairs. Epigyne (Fig. 2C,D) is similar to that in *A. mollicoma* (see arrows on Fig. 2E), except for different course of

Dimensions. CL 3.60, CW 3.30, CH 1.30, EFL 1.40, AEW 2.00, PEW 1.90, AL 6.00.

DISTRIBUTION. Southern PNG, on Eucalyptus tree trunks.

Helpis Simon, 1901

Astia Koch, 1880: 1160.(part)

Helpis minitabunda (Koch, 1880) (Figs 3,4,5F)

Astia minitabunda Koch, 1880: 1160.


MATERIAL EXAMINED. PNG: QMS28900, 30728, 5, Mt. Hagen, Hagen Park Hotel, under Eucalyptus bark, 4.07.1986, D.J. Court; QMS28901, 6, Calanthe, Goroke, Norman Cruttwell’s residence, 11.04.87, D.J. Court.

DESCRIPTION. Male. Cephalothorax (Fig. 3A,B) moderately low, pale brown-orange, darker marginally with orange guanine spots in the centre of eye field and scattered whitish and pale brown hairs. Surroundings of eyes black with fine white hairs. Abdomen (Fig. 3A) grey with pattern of white guanine spots and grey-brown markings. Spinnerets grey. Clypeus, chelicerae (Fig. 3C) and maxillae and labium orange-brown. Sternum pale orange-brown with darker margins. Venter light grey with light spots. First legs orange with brown markings on femora, tibiae and patellae; other legs paler; tibia I with 3 prolateral and 3 retrolateral spines, metatarsus with 2 prolateral and 2 retrolateral ones. Palpal organ (Figs 3D,E).

Dimensions. CL 2.70, CW 2.10, CH 1.40, EFL 1.40, AEW 1.80, PEW 1.60, AL 3.70.

FEMALE. Cephalothorax (Fig. 4A) yellow-brown, paler in the centre; eye region with yellow guanine spots. Surroundings of lateral eyes I, II, and III black with white hairs. Abdomen pale grey with brown and white spots. Clypeus orange brown with rows of white hairs. Chelicerae of similar colour with 5 promarginal and 6 retromar-

ginal teeth (Fig. 4B). Maxillae and labium as in the ♂. Sternum orange-brown, Venter light grey. Legs similar in colour and spination to those in the ♂. Pedipalps generally yellow, darker distally, clothed in white hairs. Epigyne (Fig. 4C,D).

Dimensions. CL 3.80, CW 3.30, CH 1.50, EFL 1.50, AEW 2.20, PEW 2.00, AL 7.20.

COMPARISON. H. minitabunda differs from other species by the shape of embolus and tegular lobe in the ♂ palpal organ (Figs 3D,E, 5D,E,G). Accessory glands of the epigyne more distant from the spermathecae (Figs 4D, 6D,E).

DISTRIBUTION. NSW, QLD, TAS, NZ, PNG.

Helpis gracilis sp. nov. (Figs 5A-E, 6A-D)

MATERIAL EXAMINED. Holotype: ♂, New South Wales, Morton National Park, SW Nowra, Sally Creek Valley, under bark of snow gums, 23.04.1988, M. Zabka. Allotype: ♂, same data. Paratype ♂, same data. All AMS.

DIAGNOSIS. Shape of embolus and tegular lobe distinctive within the genus (Fig. 5D-G). In comparison to H. minitabunda the accessory glands more distant from the spermathecae (Figs 4D, 6D).

MALE. Cephalothorax (Fig. 5A,B) chestnut-brown with paler median stripe, eye field dark orange. Surroundings of eyes black, covered with brown hairs. Abdomen (Fig. 5A) pale grey, darker laterally, covered with brown hairs. Spinnerets grey. Clypeus orange-brown, fringed by white hairs. Chelicerae relatively long, pale brown, with 5 promarginal and 6 retromarginal teeth (Fig. 5C). Maxillae and labium brown with paler tips, clothed in brown hairs. Sternum orange with narrow darker margins. Venter dark grey. Legs: anteriors orange-brown with brown mark-
ings, especially around the spines, others yellow with brown markings; tibia I with 3 prolateral and 3 retrolateral spines, metatarsus I with 2 prolateral and 2 retrolateral ones. Pedipalps brown-beige with dense, rather long hairs on basal segments (Fig. 5D,E).

**Dimensions.** CL 3.10, CW 2.75, CH 2.30, EFL 1.40, AEW 2.15, PEW 1.85, AL 4.50.

Female. Cephalothorax (Fig. 6A) orange-beige-brown clothed in short white and brown hairs, with orange spots on the eye field. Surroundings of eyes black. Abdomen pale yellow-grey with pattern of darker spots, covered with brown hairs. Spinnerets pale yellow-grey. Clypeus pale brown with white long hairs. Chelicerae of similar colour, with 4 teeth on
promargin and 6 on retromargin (Fig. 6B). Maxillae and labium pale brown with pale yellow tips. Sternum light yellow with brown margins. Venter pale yellow-grey, centrally darker. Legs: first pair pale brown-orange with some darker spots, others yellow with brown markings; spination of leg I as in the ♂. Pedipalps yellow, clothed in white hairs. Epigyne (Fig. 6C,D) very similar to *H. occidentalis* (Fig. 6E).

**Dimensions.** CL 3.40, CW 2.70, CH 1.60, EFL 1.50, AEW 2.20, PEW 1.95, AL 4.65.

**DISTRIBUTION.** Morton National Park, New South Wales.

**Tauala** Wanless, 1988

with paler inner margins, labium similar, with paler tips. Sternum yellow with darker margins. Legs yellow with brown markings on femora, tibiae and patellae; tarsi and metatarsi darker; tibia I with 4 prolateral and 3 retrolateral spines, metatarsus I with 2 prolateral and 2 retrolateral ones. Pedipalps pale yellow. Epigyne (Fig. 7D,E) with long, narrow insemination ducts, oval spermathecae accompanied by the accessory glands. Diagnostic characters marked with arrows.

Dimensions. CL 1.90, CW 1.50, CH 0.90, EFL 0.90, AEW 1.50, PEW 1.20, AL 2.50.

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LITERATURE CITED


1987. Diagnostic drawings of less known Salticidae...


