

***Astata nigricans* CAMERON, 1889 in Laos with description of the hitherto unknown female (Hymenoptera, Astatidae)**

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A b s t r a c t : *Astata nigricans* CAMERON, 1889 (Hymenoptera, Astatidae) is first recorded in Laos. The original description and further taxonomical notes are discussed. A redescription of the male is presented and the hitherto unknown female is described.

K e y w o r d s : *Astata*, Laos, male, female, redescription

Introduction

The male of *Astata nigricans* was described by CAMERON (1889) from Poona (now Pune) in Maharashtra, India. BINGHAM (1897) treated the species in his Fauna of British India with a redescription of the male. ROTHNEY (1903) reported *A. nigricans* from Barrackpore, West Bengal, India. NURSE (1909) published a short note on morphology and recorded a specimen with a "more or less red" metasoma, without mentioning where it was collected, but probably it belongs to a different species. WU & ZHOU (1996) and HUA (2006) (both cited after PULAWSKI 2022) listed *A. nigricans* as a member of Chinese fauna. The present paper presents the first record from Laos and a description of the hitherto unknown female.

Previous descriptions

CAMERON (1889): "*Astata nigricans*, sp. nov. Nigra, nitida, punctata, longe argenteo hirta; metanoto striolato; alis hyalinis, nervis, fuscis. ♂. Long, fere 8 mm. Antennae as long as the thorax, microscopically pilose, the joints dilated slightly at the apex; the third joint slightly longer than the fourth. Head (except the ocellar region) densely covered with long silvery hair, moderately punctured; the apex of clypeus rounded; mandibles piceous beyond the middle; the palpi fuscous. Mesonoto and pleurae punctured, the latter strongly; the metanotum strongly longitudinally striolated, and irregularly reticulated; the hair on the upper part moderately dense, on the sides long and thick; abdomen of the length of the pro- and mesothorax; shining, aciculated the sides and ventral surface densely covered with long cinereous hair; the segments broadly dull piceous, red at the apices. Legs densely covered with long cinereous hair; the tarsi piceous-red. Second cubital cellule at the top one fourth of the length of the third, and half the length of the space bounded by the recurrent nervures, which are received on either side of the middle of the cellule. The appendicular cellule is incomplete, the nervure ending not far from the radial cellule; the

third transverse cubital nervure is angled and issues a short nervure below the middle; the first is sharply angled below the middle. Hab. Poona (Wroughton)."

BINGHAM (1897): "*Astata nigricans*, Cam. Mem. Manch. L. Ph. Soc. (4) ii, 1889, p. 151. ♂. Head, thorax, and abdomen thinly pubescent, the pubescence denser on the sides of the face and sides and apex of the median segment; eyes strongly convergent and meeting on the vertex; the front convex, punctured, the anterior ocellus large, twice the size of the posterior ones, on the front beneath it an obscure T-shaped furrow; pro- and mesonotum, scutellum, and post-scutellum rather closely punctured, the disc of the scutellum smooth and shining; median segment long, slightly narrowed and sloping posteriorly; the apex truncate, above coarsely reticulate, with a medial longitudinal carina; abdomen shining, minutely punctured, the margins of the segments slightly depressed. Black, the pubescence hoary white, silvery on the sides of the face; the tarsi and the posterior margins of the basal five segments bronzy testaceous; wings hyaline and iridescent, nervures pale testaceous, tegulae black. Hab. Poona, Bombay Presidency, ♂. Length 8-9; exp. 16 mm. Type in coll. Rothney."

NURSE (1909): "*Astata nigricans* (CAM.). Bingham states that there is a carina on the median segment. But there is no mention of this in the original description, nor is there any in my specimens. I have one which has the abdomen more or less red, but agrees otherwise with Cameron's description."

R e m a r k : The specimen with the reddish abdomen mentioned by NURSE (1909) belongs with high probability to another species.

Redescription of male and first description of female

M a t e r i a l e x a m i n e d : 1♂, 3♀♀ "Laos c., Khamnouan prov., Ban Khoun Ngeun, 18°07'N 104°29'E, XI.2000, leg. E. Jendek" (coll. Oberösterreichisches Landesmuseum Linz).

M a l e : Figures 1-4, 8. 1 dorsal view, 2 lateral view, 3 head frontal, 4 antenna, 8 metasoma ventral.

Color: Head and mesosoma black Figs 1, 2). Mandibles black, reddish in the middle. Metasoma black, lateral and posterior margin of tergites I-V brownish. Legs black, tarsi dark brown. Fore wings pale yellowish hyaline, veins brown.

Morphology: Clypeus and frons irregularly punctate, vertex and gena nearly without punctures, smooth and shining (Fig. 3). Antennomeres 6–10 with flat tyloids, straight in profile (Fig. 4). Pronotum smooth with shallow punctures on the distal half, without transverse stripes. Scutum shining, densely punctate on the proximal half (distances between punctures narrower or as wide as puncture diameter), less dense on the distal half (distances between punctures distinctly wider than puncture diameter). Scutellum smooth, densely punctate distally and laterally. Dorsal area of propodeum glabrous, reticulated, with distinct oblique longitudinal striae. Prepectus densely punctate, central and distal part of mesopleuron and metapleuron with scattered punctures (distances between punctures distinctly wider than puncture diameter), smooth and shiny. Lateral parts of propodeum proximally smooth and shiny, without punctures; distally shiny with dense punctures. Declivity of propodeum on the upper part with triangular smooth impression, otherwise with irregular punctures. Tergites with microscopical oblique striae, without distinct

punctures. Sternites with microscopical punctures; the proximal ones scattered, the distal ones denser. Sternites IV-VII with median impression distally, covered with short setae. Sternites II-V with long greyish setae along the posterior margin (Fig. 8). Occiput, mesosoma except dorsal area of propodeum, tergite I and fore femora with long erect whitish setae. Tergites II-VI with short white setae laterally. Mid and hind femora with short white setae, shorter than diameter of femur. Body length 8 mm.

F e m a l e : Figures 5-7. 5 dorsal view, 6 lateral view, 7 head frontal.

Color: Head and mesosoma black (Figs 5, 6). Mandibles black, yellowish red in the middle. Metasoma dark brown, often hind margin of tergites I-V brownish (Figs 5, 6). Tergite VI and pygidial plate basally yellowish brown, the latter with brownish tip; sometimes metasoma completely black. Coxae and trochanters black, femora dark brown, tibiae and tarsi paler brown; sometimes legs black. Fore wings pale hyaline, veins brown.

Morphology: Antennomere 3 about as long as 4. Clypeus with short lamella, front margin straight (Fig. 7). Lower half of frons above the antennal insertion with coarse punctures and stiff upturned white bristles, remaining parts of the head shiny, smooth and without punctures. Occiput with long white setae. Pronotum smooth, with scattered fine punctures. Scutum shiny, on the basal quarter with coarse punctures and stiff white erect setae; the posterior part smooth and glabrous, without punctures. Scutellum and metanotum shiny, smooth and glabrous. Prepectus punctate-reticulate. Mesopleuron smooth and shiny, anterior upper part without punctures, posterior and lower part with very scattered fine punctures bearing white setae. Propodeum dorsally glabrous, reticulated, moderately shiny. Lateral parts of propodeum shiny, smooth, distally with some rugae; declivity irregularly reticulate-rugose. Fore basitarsus with four rake spines. Spines on the underside of fore basitarsus evenly extended to the tip, with fine cilia between the spines along the full length. Tergites of metasoma with microscopical oblique striae, IV-V with few scattered punctures. Pygidial area with concave lateral margins. Lateral parts of mesosoma and legs with long erect white setae. Body length 6-7 mm.

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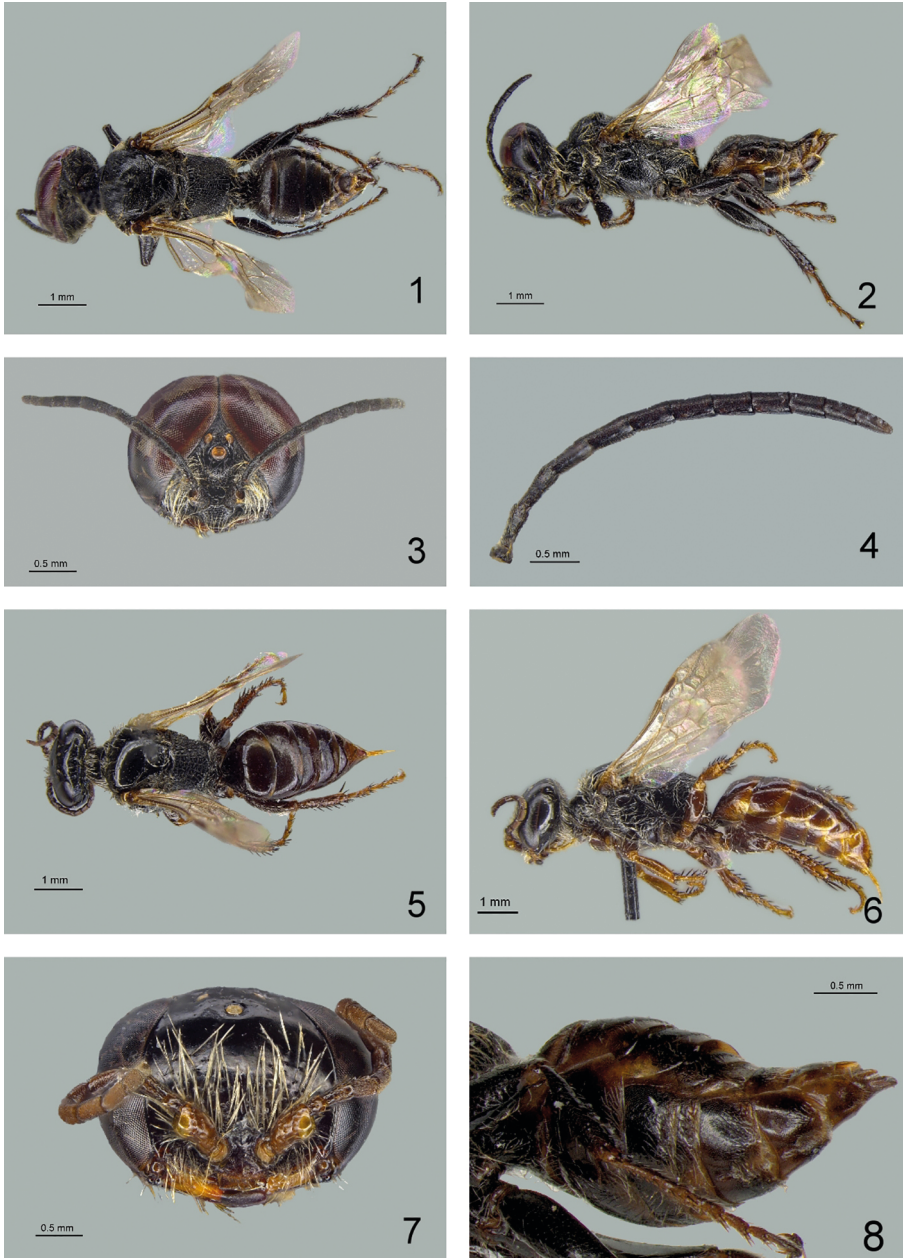
Zusammenfassung

Astata nigricans wird erstmalig aus Laos gemeldet. Die Originalbeschreibung und nachfolgende taxonomische Ausführungen werden diskutiert. Das Männchen und das bisher unbekannte Weibchen werden beschrieben und abgebildet.

References

- BINGHAM C.T. (1897): Hymenoptera. – Vol. I. Wasps and bees. — In: BLANFORD W.T. (editor): Fauna of British India, including Ceylon and Burma. Taylor and Francis, London, XXIX + 579 pp.
- CAMERON P. (1889): Hymenoptera Orientalis; or contributions to a knowledge of the Hymenoptera of the Oriental Zoological Region. — Memoirs and Proceedings of the Manchester Literary & Philosophical Society (Series 4) 2: 91-152, Errata.
- HUA L. (2006): Superfamily Apoidea (Sphecoidea), pp. 274-299 — In: Hua L. List of Chinese insects. Vol. IV. Sun-Yat-sen University Press, Guangzhou. 539 pp.
- NURSE C.G. (1909): New and little known Indian Hymenoptera. — The Journal of the Bombay Natural History Society 19: 510-517.
- PULAWSKI W.J. (2022): Catalog of genera and species: Astatina — In: https://researcharchive.calacademy.org/research/entomology/entomology_resources/hymenoptera/sphecidae/genera/index.html [accessed 20221009]
- ROTHNEY G.A.J. (1903): The aculeate Hymenoptera of Barrackpore, Bengal. — The Transactions of the Entomological Society of London 1903: 93-116.
- WU Y.-R. & Q. ZHOU (1996): Economic Insect Fauna of China. — Fasc. 52. Hymenoptera: Sphecidae. — Science Press, Beijing. 197 pp., 14 unnumbered color pls.

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Figs 1-4, 8: *Astata nigricans* male: (1) dorsal view, (2) lateral view, (3) head frontal, (4) antenna, (8) metasoma ventral. **Figs 5-7:** *Astata nigricans* female: (5) dorsal view, (6) lateral view, (7) head frontal.

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