



The description of five new species of the genus *Pantolyta* (Hymenoptera, Diapriidae) from Africa

VASILISA G. CHEMYREVA^{1,*} & VICTOR A. KOLYADA²

¹Zoological Institute, Russian Academy of Sciences, 1 Universitetskaya Emb., St Petersburg 199034, Russia

✉ diapriidas.vas@gmail.com; <https://orcid.org/0000-0002-6547-6259>

²Paleontological Institute, Russian Academy of Sciences, 123 Profsoyuznaya St., Moscow 117647, Russia

✉ proctos@gmail.com; <https://orcid.org/0000-0001-8628-1365>

*Corresponding author

Abstract

The genus *Pantolyta* is recorded for the first time from Africa. Five new species: *Pantolyta gabonica* sp.n., *P. mostovskii* sp.n., *P. natalensis* sp.n., *P. noorti* sp.n., and *P. platycephala* sp.n. are described from South Africa and Gabon. All species are keyed and illustrated.

Key words: *Pantolyta*, Pantolytini, new species, South Africa, Gabon, Belytinae, Diapriidae

Introduction

Pantolyta Förster, 1856 is the largest genus in the tribe Pantolytini (Belytinae, Diapriidae). The species of the genera with known hosts were recorded as parasitoids of the dipteran family Sciaridae (Brischke, 1891; Kieffer, 1907; Tuomikoski, 1957; Hellén, 1964). Previously the tribe and the genus were studied only in the Holarctic Region and never mentioned from the other regions, except for one synanthropic species *Synacra pauper* Macek (Macek, 1995) which was recorded from the Holarctic and Oriental Regions. The present study shows that Pantolytini species are not rare in South Africa and can be determined using the diagnosis given by Macek (1989) and the generic keys in Macek (1989, 1990), considering the later proposed synonymy [*Pantolyta* Förster, 1856 = *Acropiesta* Förster, 1856] (Chemyreva & Kolyada 2021a).

Material and methods

Specimens used in this study were collected with Malaise traps (MT), yellow pan traps (YPT) and by sweeping. Type materials are kept in the Iziko South African Museum, Republic of South Africa (SAMC) and in the Zoological Institute of the Russian Academy of Sciences, St Petersburg, Russia (ZISP). The morphological terminology used follows Yoder (2004), Chemyreva & Kolyada (2021a, 2021b) and Hymenoptera Anatomy Ontology Portal (Yoder *et al.*, 2010). The term “subalar bridge” is used after Karlsson and Ronquist (2012) and it stands for the cuticular structure on the subalar area with a hole under it. All photographs were obtained using a combination of stereomicroscope (Olympus SZX10) and digital camera (Olympus OM-D). Final images were stacked composites generated using Helicon Focus 7.7.4 Pro. All images were post-processed for contrast and brightness using Adobe Photoshop.

Taxonomy part

Tribe Pantolytini

Genus *Pantolyta* Förster, 1856

Pantolyta Förster, 1856: 128, 130, 135. (Type species: *Pantolyta atrata* Förster, 1861).

Acropiesta Förster, 1856: 129, 131, 135. (Type species: *Acropiesta flavicauda* Ashmead, 1893). Synonymised by Chemyreva & Kolyada (2021a).

Pantopiesta Maneral, 1939: 170. (Type species: *Cinetus flaviventris* Thomson, 1858). Synonymised by Nixon (1957).

Diagnosis. Head transverse to elongate and nasiform in dorsal view, with mouth conus prominent or undeveloped; mandibles curved, crossed, more or less asymmetrical; antennal formula 15/14; mesosoma more or less compressed; epomia present or absent; epicnemial pit without tuft of pubescence inside; mesopleuron without mesopleural pit, with pubescent epicnemial pit and with epicnemial bridge antero-ventrally (epicnemial bridge absent in wingless form of *Pantolyta atrata* Förster); subalar bridge of mesopleuron present or absent; radial cell closed to open; petiole mainly cylindrical, transverse to elongate; S2 of female without protuberance at base and with belytoid line incomplete (Fig. 1B, green arrows); female T7–T8 and S6 distinctly compressed laterally and extended; ovipositor long, longer than T2; pubescence of body sparse.

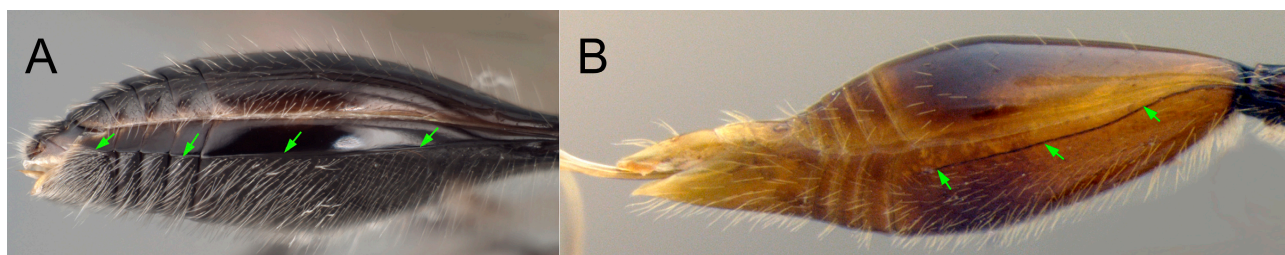


FIGURE 1. Metasoma without petiole in lateral view: A—*Therinopsilus* sp. (orig. photo by Matt Yoder); B—*Pantolyta* sp. Arrows—belytoid line.

Key to the African *Pantolyta* species

1. Radial cell closed (Fig. 8A); pronotum smooth, without transverse keel between pronotal shoulders (Figs 4C, E) *Pantolyta natalensis* sp.n.
- Radial cell open or absent (Figs 8B–F); pronotum with transverse keel extending between pronotal shoulders (Figs 2G, 3C, 5C, 6D) 2
2. Head strongly flattened dorso-ventrally, distinctly wider than mesosoma in dorsal view (Fig. 6D); mesosoma 1.4 times as high as wide; post-marginal vein totally absent (Fig. 8D); mouth conus undeveloped (Fig. 6A); female antennae stout, A4–A9 strongly transverse (Fig. 6F); male antennae submoniliform, A4–A12 less than twice as long as wide (Fig. 6E); female and male hind femora short and stout with basal stalk indistinct *Pantolyta platycephala* sp.n.
- Head not flattened dorso-ventrally, slightly wider than mesosoma in dorsal view (Figs 2G, 3C, 5C); mesosoma less than 1.2 times as high as wide; postmarginal vein present (Figs 8B, C, E); mouth conus developed (Figs 2A, 3A, 5A); female antennae slender, more or less clavate, A4–A9 elongate; male antennae slender, filiform, A4–A12 more than twice as long as wide (Figs 7A–C); female and male hind femora slender with basal stalk distinct 3
3. Pronotal pit with epomia inside (Fig. 5E); postmarginal and stigmal veins form acute angle (Fig. 8B); female petiole about 1.5 times as long as wide *Pantolyta noorti* sp.n.
- Pronotal pit without epomia inside (Figs 2F, 3E); postmarginal and stigmal veins situated perpendicular to each other (Figs 8C, 8E); female petiole twice or more than twice as long as wide 4
4. Eye enlarged, malar space 0.7 times as long as largest diameter of eye (Fig. 2A, G); female A10–A11 as wide as long, A12–A13 slightly transverse (Fig. 2C); median keel of metascutellum distinctly prominent *Pantolyta gabonica* sp.n.
- Eye not enlarged, malar space at least 0.85 times as long as largest diameter of eye (Figs 3A, C); female A10–A13 elongate (Fig. 3D); median keel of metascutellum very low *Pantolyta mostovskii* sp.n.



FIGURE 2. *Pantolyta gabonica* sp.n. female, holotype: **A**—face; **B**—habitus; **C**, **E**—antennae, dorsal (**C**) and lateral (**E**) views; **D**—mesosoma and petiole, dorsal view; **F**, **G**—head and mesosoma, lateral (**F**) and dorsal (**G**) views. Scale bars: **B**—1 mm; **E**—0.5 mm; **A**, **D**, **F**, **G**—0.2 mm.

***Pantolyta gabonica* sp.n.**

(Fig. 2)

Holotype. Female: “Gabon, Prov. Ogoove-Maritime, Reserve des Monts Doudou, 25.2 km 304° NW Doussala, 2°13.63’S 10°23.67’E, 660m, 16.iii.2000, S. van Noort, Sweep, GA00-S133, Coastal Lowland Rainforest, under-growth, low canopy in forest.” (SAM-HYM-P102961).

Diagnosis. *Pantolyta gabonica* sp.n. can be distinguished from all known species of *Pantolyta* by the combination of the following characters: head not nasiform (Fig. 2G) and hypognathous (Fig. 2B), with distinct mouth conus (Fig. 2A); eye bare and enlarged; genae behind eye short in dorsal view (Fig. 2G); female antennae slender, broadened apically, A3–A13 brown, with two apical and two basal segments yellow; A10–A11 subquadrate, A12–A13 slightly transverse (Fig. 2C); pronotal pit bare, without epomia inside; pronotal shoulders with small pointed projections directed upward (Fig. 2F); pronotal collar with sharp straight transverse carina between pronotal shoulders (Fig. 2G); each axillar depression with two verrucate tubercles (Fig. 2D); mesopleuron without subalar bridge (Fig. 2F); median propodeal keel simple; upper and lower posterior propodeal projections small (Fig. 2D); fore wing with open radial cell and short postmarginal vein (Fig. 9E).

Description. *Female* (holotype). Body length 2.4 mm; fore wing length 1.7 mm; antenna length 1.5 mm. Coloration. Head, mesosoma, A3–A13 brown; tegulae, veins, propodeum, petiole, T2 and S2 pale brown; A1–A2, A13–A15, palpi, legs, T3–T8 and S3–S6 yellowish brown.

Head in dorsal view 0.8 times as long as wide, 1.25 times as wide as mesosoma. Occipital flange narrow, pubescent. Malar space 0.6 times as long as largest diameter of eye. Labrum semicircular without distinct middle groove (Fig. 2A). Ratios of length to width of A1–A15 in dorsal view as in Fig. 2C.

Mesosoma 1.17 times as high as wide, in dorsal view 1.9 times as long as wide. Pronotum with epomia strongly prominent on pronotal shoulders and absent lower. Mesoscutum 0.85 times as long as wide, convex. Anterior scutellar pit deep and rounded. Scutellum large, widened posteriorly. Metanotum narrow, bare laterally but metascutellum setose, with three longitudinal keels, median keel the most prominent. Propodeum sparsely pubescent; lateral side of propodeum with three longitudinal carinae below plica (Fig. 2F). Legs slender. Venation as in Figs 8E, 8F.

Petiole cylindrical, 2.3 times as long as wide, with longitudinal keels and sparse long pubescence laterally and ventrally, and one verrucate tubercle posteroventrally. T2 anteriorly with short striation, median groove the longest; T3–T6 narrow, with a few setae. S2 smooth, with only short striation at base and with numerous semirecumbent scattered setae, S2 setae lines distinct anteriorly; S3–S5 short, smooth, with scattered setae.

Male. Unknown

Etymology. The species name refers to the country where it was first found (Gabon, Africa).

Distribution. West Africa (Gabon).

***Pantolyta mostovskii* sp.n.**

(Fig. 3)

Holotype. Female: “SAR., Kwazulu-Natal, Louwsberg, Sanyati Farm, 1090 m, 27°34’S 31°17.9’E, 19–31.III.2005, YPT, M. Mostovski leg.” (SAM-HYM-P102962) (SAMC). Paratypes: same locality as holotype, 2♂ (SAM-HYM-P102963 and SAM-HYM-P102964); same locality as holotype, 2♀, 3♂ (ZISP).

Diagnosis. *Pantolyta mostovskii* sp.n. can be distinguished from all known species of *Pantolyta* by the combination of the following characters: head not nasiform (Fig. 3C) and hypognathous (Fig. 3B), with distinct mouth conus (Fig. 3A); eye with a few and very short setae; female antennae slender, broadened apically, A3–A15 brown, with two basal segments yellow; in dorsal view A14 about as long as wide, all other antennomeres elongate (Fig. 3D); pronotal pit bare, without epomia inside (Fig. 3E); pronotal collar with sharp straight transverse carina between prominent pronotal shoulders (Fig. 3C); each axillar depression with two verrucate tubercle (Fig. 3C); mesopleuron without subalar bridge (Fig. 3E); median keel of metascutellum low, not higher than lateral one; median propodeal keel simple; upper and lower posterior propodeal projections are not developed (Fig. 3F); fore wing with open radial cell and short postmarginal vein (Fig. 8C).

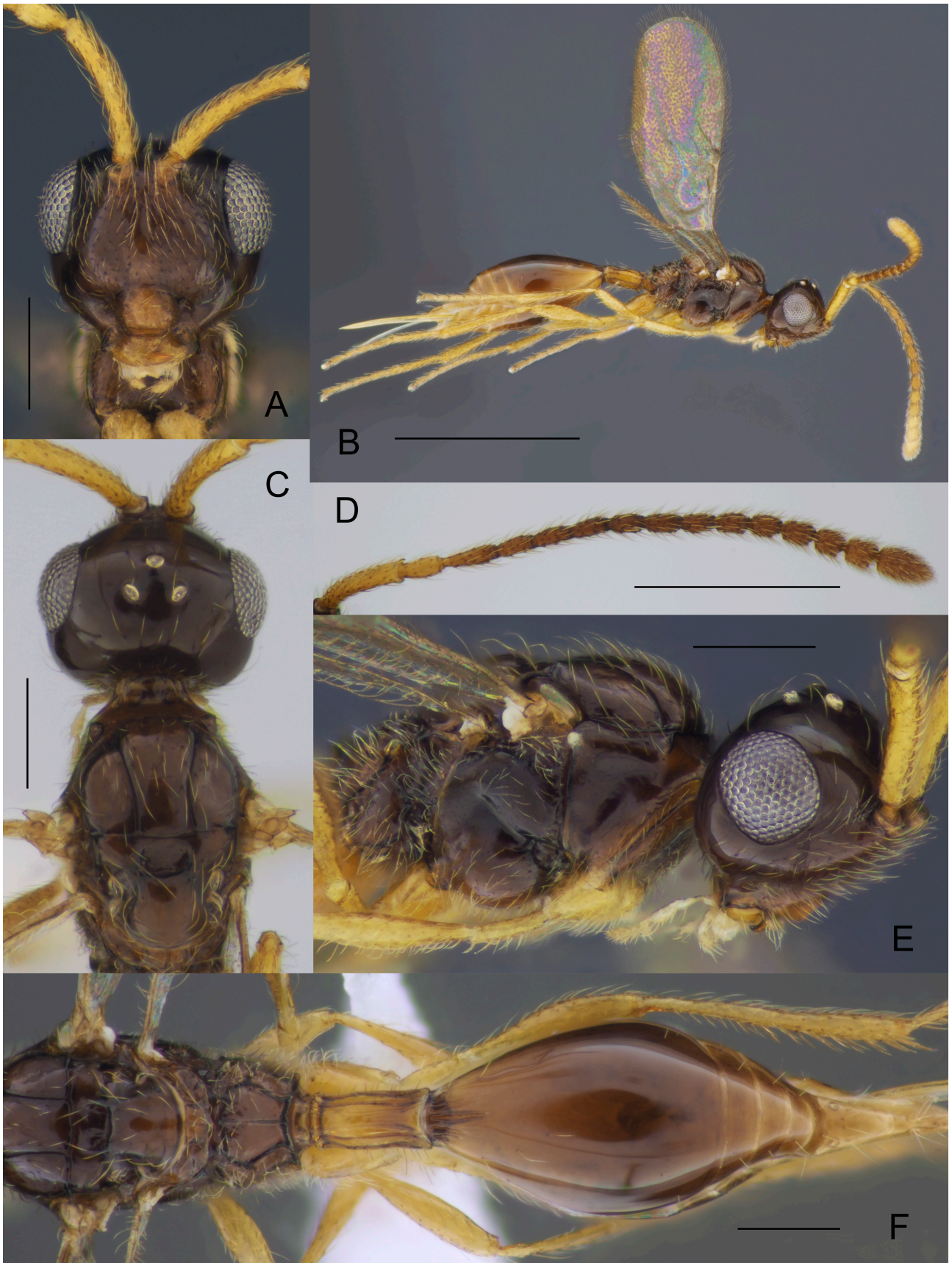


FIGURE 3. *Pantolyta mostovskii* sp.n. female, holotype: **A**—face; **B**—habitus; **C**, **E**—head and mesosoma, dorsal (**C**) and lateral (**E**) views; **D**—antenna, dorsal view; **F**—metasoma, dorsal view. Scale bars: **B**—1 mm; **D**—0.5 mm; **A**, **C**, **E**, **F**—0.2 mm.

Description. *Female* (holotype). Body length 2.2 mm; fore wing length 1.6 mm; antenna length 1.5 mm. Coloration: head, mesosoma, T2 and S2 brown; A3–A15, tegula, veins, petiole, T3–T6 and S3–S5 pale brown; A1–A2, palpi, legs, T7–T8 and S6 yellowish brown.

Head in dorsal view, 0.8 times as long as wide, 1.2 times as wide as mesosoma. Occipital flange narrow, setose. Malar space 0.86 times as long as largest diameter of eye. Labrum semicircular without middle groove. Ratios of length to width of A2–A15 in dorsal view as in Fig. 3D.

Mesosoma 1.2 times as high as wide, in dorsal view 1.7 times as long as wide. Mesoscutum 0.77 times as long as wide, convex. Metanotum narrow, bare laterally but metascutellum with a few setae and three low longitudinal keels. Propodeum pubescent laterally, smooth and mainly bare dorsally; sides of propodeum with three longitudinal carinae below plica. Legs slender. Venation as in Fig. 8C.

Petiole cylindrical, sparsely pubescent laterally and ventrally, twice as long as wide, covered with longitudinal keels; with one verrucate tubercle postero-ventrally. T2 anteriorly with striation of variable length, median groove the longest; T3–T6 short, with a few setae. S2 mainly smooth, with short striation at base and with numerous erect scattered setae, S2 setae lines distinct anteriorly; S3–S5 short, smooth, with scattered semirecumbent setae.

Male. Body length 1.6–1.7 mm. Similar to female except following characters: antenna filiform, longer than body; antennomeres cylindrical, A3 weakly emarginate, with keel extending to half of A3 length (Fig. 7B); ratios of length to width of A1–A5 in lateral view: A1 (24 : 6); A2 (10 : 6); A3 (18 : 5); A4 (20 : 4); A5 (20 : 4); petiole elongate, 2.3 times as long as wide; T7 short, not compressed; S3–S7 short; T8 and S8 subtriangular, rounded apically.

Etymology. The new species is named in honor of the entomologist and famous dipterologist Mike Mostovski, who collected all known specimens of this species.

Distribution. Republic of South Africa.

***Pantolyta natalensis* sp.n.**

(Fig. 4)

Holotype. Female: “SAR, Kwazulu-Natal, Nhlosane Farm, 29°35'S 29°58'E, 1700–1900 m, pitfalls, II.1994, J. Kotze leg.” (SAM-HYM-P102965) (SAMC). Paratypes: same locality as holotype, 2♂ (SAM-HYM-P102966 and SAM-HYM-P102967); same locality as holotype, 3♂ (ZISP); SAR, Kwazulu-Natal, Royal Natal NR., Rainbow Gorge, 1050 m, 28°45.4'S 29°56.3'E, 3–15.XII.2005, MT, M. Mostovski leg., 4♀ (ZISP); Nkandla NR, 28°44.4'S 31°08'E, 22–24.XI.2007, MT, M. Mostovski leg., 1♀ (SAM-HYM-P102968).

Diagnosis. *Pantolyta natalensis* sp.n. can be distinguished from all known species of *Pantolyta* by the combination of the following characters: head not nasiform (Fig. 4C) and hypognathous (Fig. 4B); mouth conus weakly developed (Fig. 4A); eye bare; female antennae slender, slightly broadened apically, A1–A11 brown, with four apical antennomeres yellow; all antennomeres elongate (Fig. 4D); pronotum smooth and bare (Fig. 4C); pronotal shoulders prominent, smooth; each axillar depression with two verrucate tubercles (Fig. 4F); mesopleural subalar bridge absent (Fig. 4E); median keel of metascutellum prominent, distinctly higher than lateral ones; median propodeal keel simple; upper and lower posterior propodeal projections are not developed (Fig. 4F); forewing with close radial cell, distinctly shorter than marginal vein (Fig. 8A).

Description. *Female* (holotype). Body length 2.5 mm; fore wing length 2.1 mm; antenna length 2.1 mm. Coloration: body mainly dark brown; A1–A11, palpi, legs, T7–T8 and S6 pale brown; A12–A15 yellow.

Head in dorsal view 0.7 times as long as wide, 1.2 times as wide as mesosoma. Occipital flange narrow, setose. Malar space 0.9 times as long as largest diameter of eye. Labrum semicircular, hardly visible, with weak middle groove. Ratios of length to width of antennomeres as in Fig. 4D, width of apical antennomeres same in lateral and dorsal views.

Mesosoma 1.1 times as high as wide, in dorsal view 1.75 times as long as wide. Mesoscutum 0.8 times as long as wide, convex. Metanotum narrow, bare laterally but metascutellum setose, with three low longitudinal keels. Propodeum with sparse long pubescence, smooth between plicae; sides of propodeum with only two longitudinal carinae below plica. Legs slender. Venation as in Fig. 8A.

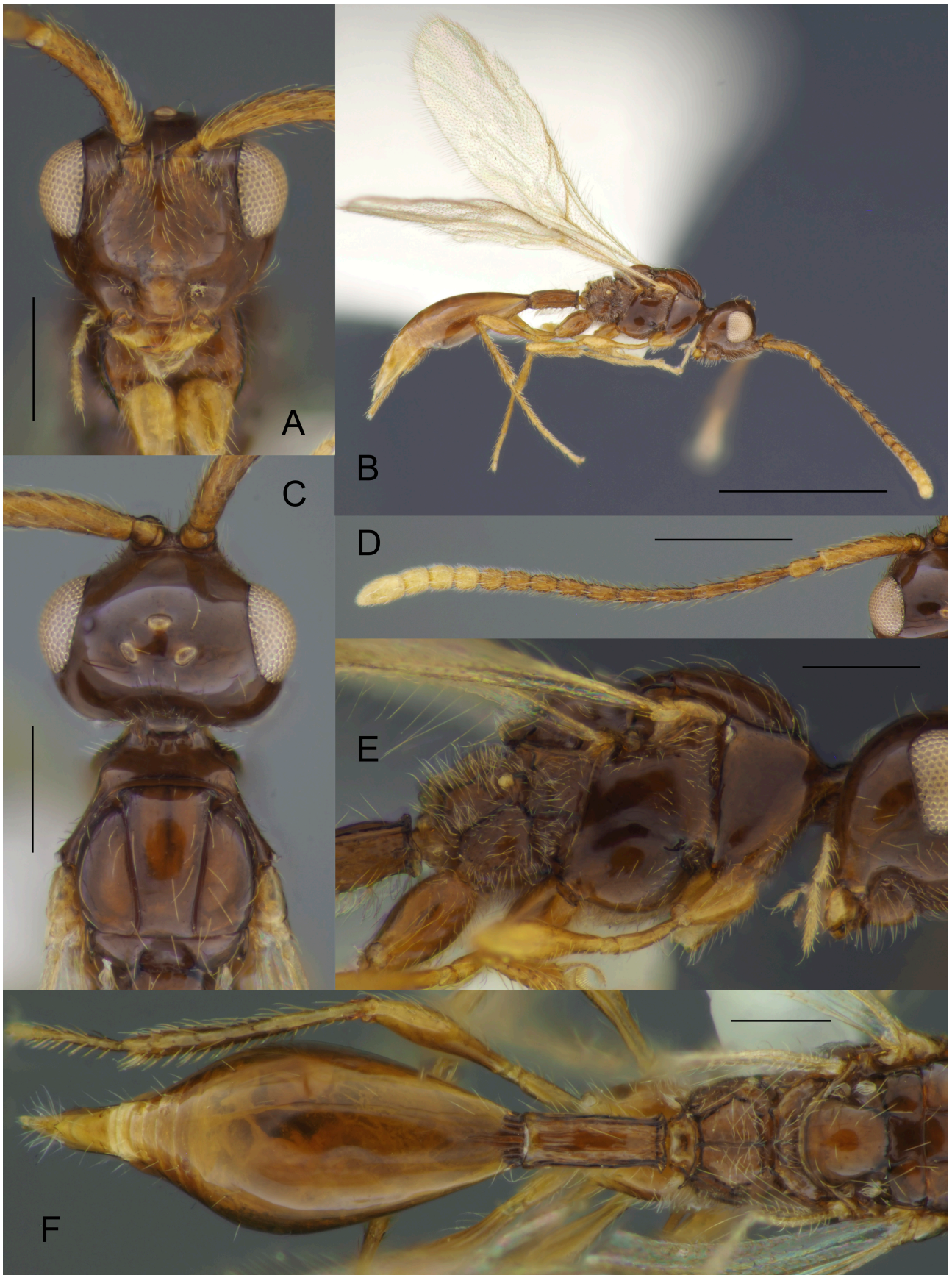


FIGURE 4. *Pantolyta natalensis* sp.n. female, holotype: **A**—face; **B**—habitus; **C**, **E**—head and mesosoma, dorsal (**C**) and lateral (**E**) views; **D**—antenna, lateral view; **F**—metasoma, dorsal view. Scale bars: **B**—1 mm; **D**—0.5 mm; **A**, **C**, **E**, **F**—0.2 mm.

Petiole cylindrical, 2.8 times as long as wide, with longitudinal keels, sparse pubescence laterally and a row of verruculate tubercle ventrally. T2 anteriorly with short striation, median groove distinctly longer than lateral ones; T3–T6 short, with scattered setae. S2 mainly smooth, with short striation at base and numerous scattered setae, S2 setae lines hardly visible anteriorly; S3–S5 short, smooth, with a sparse pubescence.

Variation (female). Body and A1–A11 brown to dark brown. A12 pale brown to yellow. Antennae more or less slender with A10 1.4–2.0 times as long as wide in dorsal view.

Male. Body length 2.3–2.4 mm. Similar to female except following characters: antenna filiform, longer than body; antennomeres cylindrical, A3 with slight margination basally, with keel extending to 0.73 of A3 length (Fig. 7A); ratios of length to width of A1–A5 in lateral view: A1 (18 : 5); A2 (5 : 4); A3 (16 : 4); A4 (19 : 3); A5 (18 : 3); petiole elongate, 2.9–3.0 times as long as wide; T7 short, not compressed; S3–S7 short; T8 and S8 subtriangular, rounded apically.

Etymology. Named after the type locality, South African province, KwaZulu-Natal.

Distribution. Republic of South Africa.

Pantolyta noorti sp.n.

(Fig. 5)

Holotype. Female: “South Africa, Kwazulu-Natal, Triscombe, 18 km SW Underberg, YPT, 2–8.XII.2001, S. van Noort leg.” (SAM-HYM-P102969) (SAMC). Paratypes: same locality as holotype, 1♂ SAM-HYM-P102970; same locality as holotype, 1♀, 1♂ (ZISP); Kwazulu-Natal, Pietermaritzburg, Hilton, 15–26.I.2004 and 27.I–16.II.2004, MT, M. Mostovski leg., 3♂ (SAM-HYM-P102971–SAM-HYM-P102973); Nhlosane Farm, 29°35'S 29°58'E, 1700–1900 m, pitfalls, II, IV, V, VI.1994, J. Kotze leg., 4♂ (ZISP); Karkloof, before turn to Braco, 29°19'S 30°19'E, 15–24.III.2004, V. Kolyada & M. Mostovski legs, 1♂ (SAM-HYM-P102974).

Diagnosis. *Pantolyta noorti* sp.n. can be distinguished from all known species of *Pantolyta* by the combination of the following characters: head not nasiform (Fig. 5C), hypognathous (Fig. 5B); mouth conus developed (Fig. 5A); eye with a few and short setae; female antennae slender, broadened and compressed apically; A1 and A2 yellow, color of A3–A15 gradually change from brown to yellow; in dorsal view A13 and A14 slightly transverse, A12 about as long as wide, all other antennomeres elongate; pronotal pit bare, with distinct epomia inside (Fig. 5E); pronotal collar with sharp straight transverse carina between pronotal shoulders (Fig. 5C); pronotal shoulders with sharp, spine-like projections (Fig. 5E); each axillar depression with two verruculate tubercle (Fig. 5C); mesopleural subalar bridge absent (Fig. 5E); median keel of metascutellum significantly higher than lateral one; median propodeal keel simple; upper and lower posterior propodeal projections are not developed (Fig. 5F); fore wing with open radial cell and present postmarginal vein (Fig. 8B).

Description. *Female* (holotype). Body length 1.9 mm; fore wing length 1.5 mm; antenna length 1.4 mm. Coloration: A3–A7 and body mainly brown; another antennomeres, palpi, legs, T7–T8 and S6 yellowish.

Head in dorsal view, 0.9 times as long as wide, 1.1 times as wide as mesosoma. Occipital flange narrow, setose. Malar space 0.7 times as long as largest diameter of eye. Labrum semicircular without middle groove. Ratios of length to width of A10–A15 in dorsal view: A10 (10 : 8); A11 (10 : 8); A12 (11 : 9); A13 (11 : 10); A14 (12 : 11); A15 (22 : 11).

Mesosoma 1.2 times as high as wide, in dorsal view 1.9 times as long as wide. Mesoscutum 0.8 times as long as wide, convex. Metanotum narrow, bare laterally but metascutellum setose, with three low longitudinal keels. Propodeum sparsely pubescent; sides of propodeum with three longitudinal carinae below plica. Legs slender. Venation as in Fig. 8B.

Petiole cylindrical, sparsely pubescent dorsally and laterally, ventrally with several verruculate tubercle, 1.2 times as long as wide, covered with longitudinal rugosity. T2 anteriorly with striation which longer medially and shorter laterally; T3–T6 short, with sparse pubescence. S2 mainly smooth, with moderately long striation at base and numerous scattered setae, S2 setae lines distinct anteriorly; S3–S5 short, smooth, with a few erect setae.

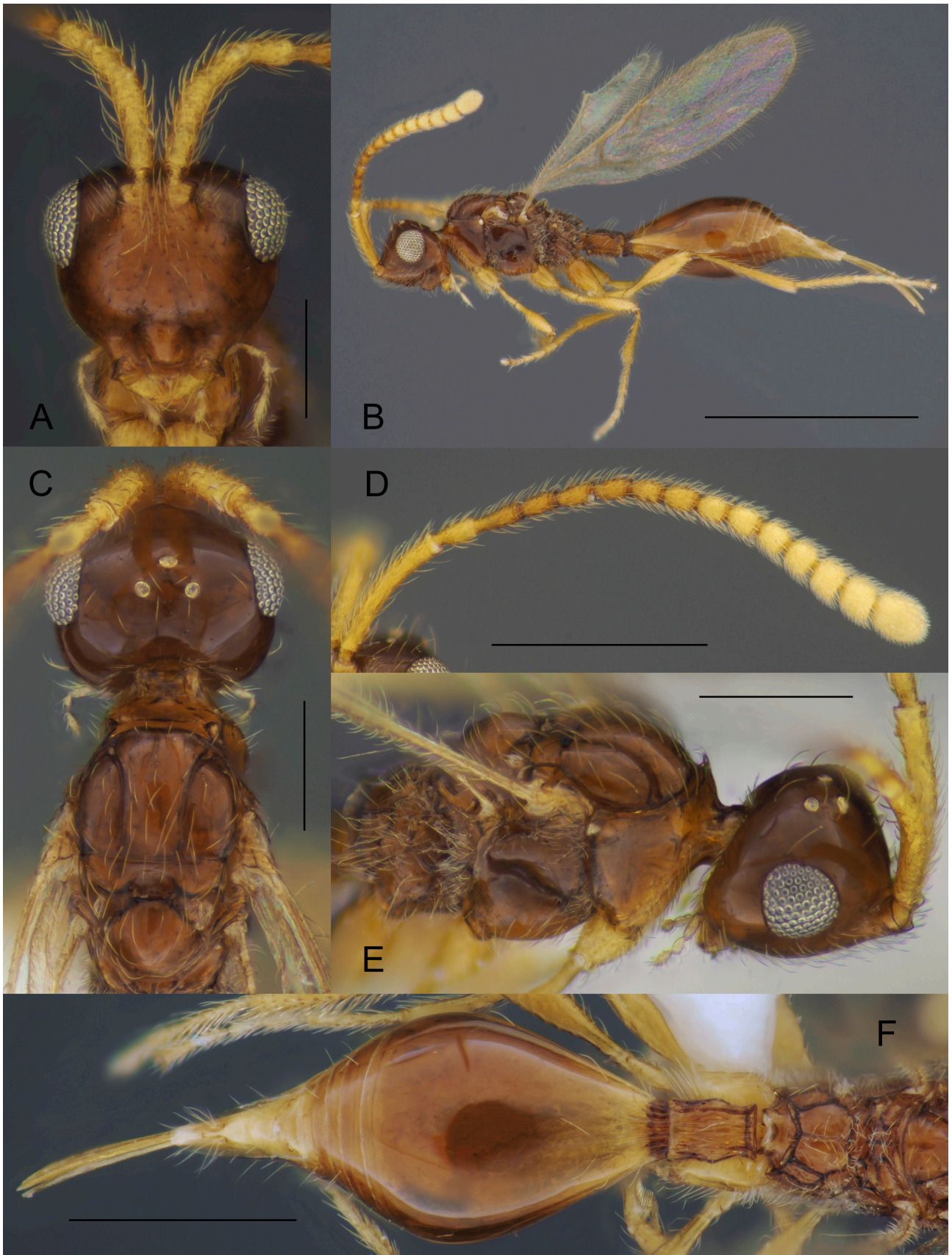


FIGURE 5. *Pantolyta noorti* sp.n. female: **A**—face; **B**—habitus; **C**, **E**—head and mesosoma, dorsal (**C**) and lateral (**E**) views; **D**—antenna, lateral view; **F**—metasoma, dorsal view. Scale bars: **B**—1 mm; **D**, **F**—0.5 mm; **A**, **C**, **E**—0.2 mm. **A**, **B**, **D**—paratype; **C**, **E**, **F**—holotype.

Male. Body length 1.9–2.2 mm. Similar to female except following characters: antenna filiform, longer than body; antennomeres cylindrical, A3 slightly emarginate, with keel extending to 0.4 of A3 length (Fig. 7C); ratios of length to width of A1–A5 in lateral view: A1 (32 : 7); A2 (10 : 7); A3 (24 : 5); A4 (26 : 5); A5 (26 : 5); petiole more elongate, 2.4 times as long as wide; T7, S3–S7 short; T8 and S8 subtriangular, rounded apically.

Etymology. The new species is named in honor of the famous entomologist and collector Simon van Noort, who collected many specimens of this species.

Distribution. Republic of South Africa.

Pantolyta platycephala sp.n.

(Fig. 6)

Holotype. Female: “South Africa, Cape P. Springfield Farm, 34°44’S 19°54’E, 16–18.X.1992, S van Noort” (SAM-HYM-P0022957) (SAMC). Paratypes: same locality as holotype, 1♂ (SAM-HYM-P0022956).

Diagnosis. *Pantolyta platycephala* sp.n. can be distinguished from all known species of *Pantolyta* by the combination of the following characters: head not nasiform (Fig. 6D) and distinctly opisthognathous (Fig. 6C); mouth conus not prominent (Fig. 6A); eyes bare; head 1.4 times as wide as mesosoma; female antennae stout and short, A4–A14 strongly transverse; color of antenna gradually changes from brown to dark brown; ventral side of A10–A15 with MGS brush (Fig. 6B); male antennae stout, submoniliform (Fig. 6E); mesosoma 1.4 times as high as wide; pronotal pit with distinct epomia inside (Fig. 6C); pronotal collar with sharp straight transverse carina between pronotal shoulders (Fig. 6D); anterior scutellar pit triangular; each axillar depression with two verrucate tubercles (Figs 6D, 6G); mesopleuron without subalar bridge (Fig. 6C); median propodeal keel simple; upper and lower posterior propodeal projections are not developed (Figs 6D, 6G); sides of propodeum with two longitudinal keels below plica; propodeal spiracle enlarged and open upwards (Fig. 6G); fore wing without radial cell, postmarginal and radial veins totally absent (Fig. 8D); female and male hind femora broadened, basal stalk indistinct.

Description. *Female* (holotype). Body length 2.4 mm; fore wing length 1.7 mm; antenna length 1.1 mm. Coloration. Head and mesosoma dark brown; mandibles, palpi, tegula, veins, legs and metasoma pale brown; antennomeres gradually change from brown basally to dark brown apically.

Head in dorsal view 0.9 times as long as wide, 1.3 times as wide as mesosoma. Occipital flange narrow, setose. Malar space as long as largest diameter of eye. Labrum semicircular with weak middle groove (Fig. 6A). Ratios of length to width of A2–A15 in dorsal view as in Fig. 6F.

Mesosoma 1.4 times as high as wide, in dorsal view 2.2 times as long as wide. Pronotum with developed epomia and angular pronotal shoulders. Mesoscutum as long as wide, convex. Metanotum narrow, bare laterally; metascutellum scarcely pubescent, with three low longitudinal keels; median keel slightly higher than lateral one. Propodeum entirely sculptured and pubescent (Fig. 6G). Venation as in Fig. 8D.

Petiole cylindrical, sparsely pubescent, 1.9 times as long as wide, with longitudinal rugosity; ventrally without verrucate tubercles. T2 anteriorly with very short even striation; T3–T6 short, with singly scattered setae laterally. S2 smooth, with very short striation at base and with numerous scattered setae medially, S2 setae lines indistinct; S3–S5 short, smooth, with a few scattered setae.

Male. Body length 2.3 mm. Similar to female except following characters: antenna submoniliform, antennomeres cylindrical; A3 deeply emarginate, with keel extending to one-third of A3 length (Fig. 7D); ratios of length to width of A1–A5 in dorsal view as on Fig. 6E; petiole 1.7 as long as wide (Fig. 6G); T6 and T7 short, T8 subtriangular, rounded apically, almost as wide as long; S2 setae lines distinct anteriorly; S3–S7 short, S8 subtriangular, rounded apically.

Etymology. This species name is derived from the Greek words *platys* (flat) and *kephale* (head).

Distribution. Republic of South Africa.



FIGURE 6. *Pantolyta platycephala* sp.n.: **A**—face; **B**—habitus; **C**, **D**—head and mesosoma, lateral (**C**) and dorsal (**D**) views; **E**, **F**—antennae in dorsal view, male (**E**) and female (**F**); **G**—metasoma, dorsal view. Scale bars: **B**—1 mm; **D**—0.5 mm; **A**, **C**, **E**—0.2 mm. **A**—**D**, **F**—holotype, female; **E**, **G**—paratype, male.

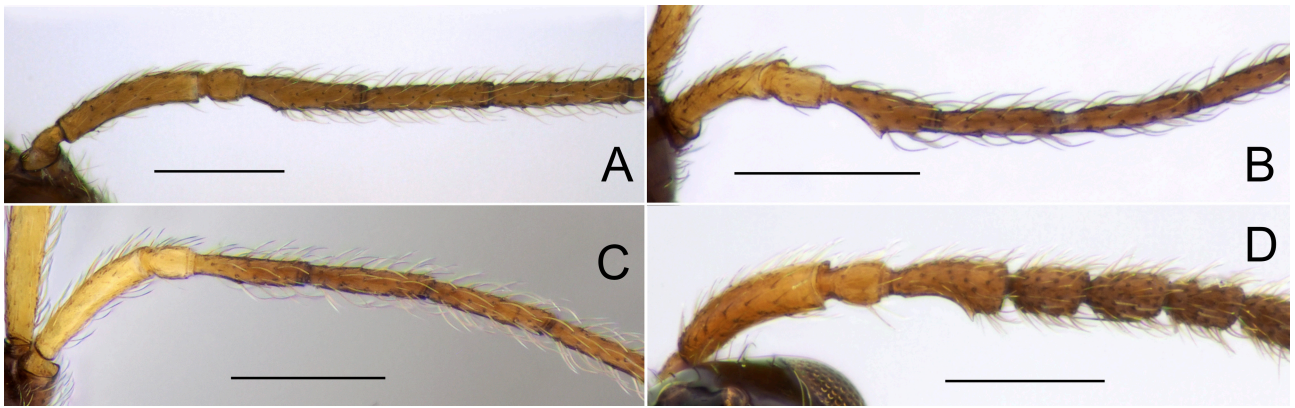


FIGURE 7. Male antennae: **A**—*Pantolyta natalensis* sp.n.; **B**—*P. mostovskii* sp.n.; **C**—*P. noorti* sp.n.; **D**—*P. platycephala* sp.n. Scale bars 0.2 mm.

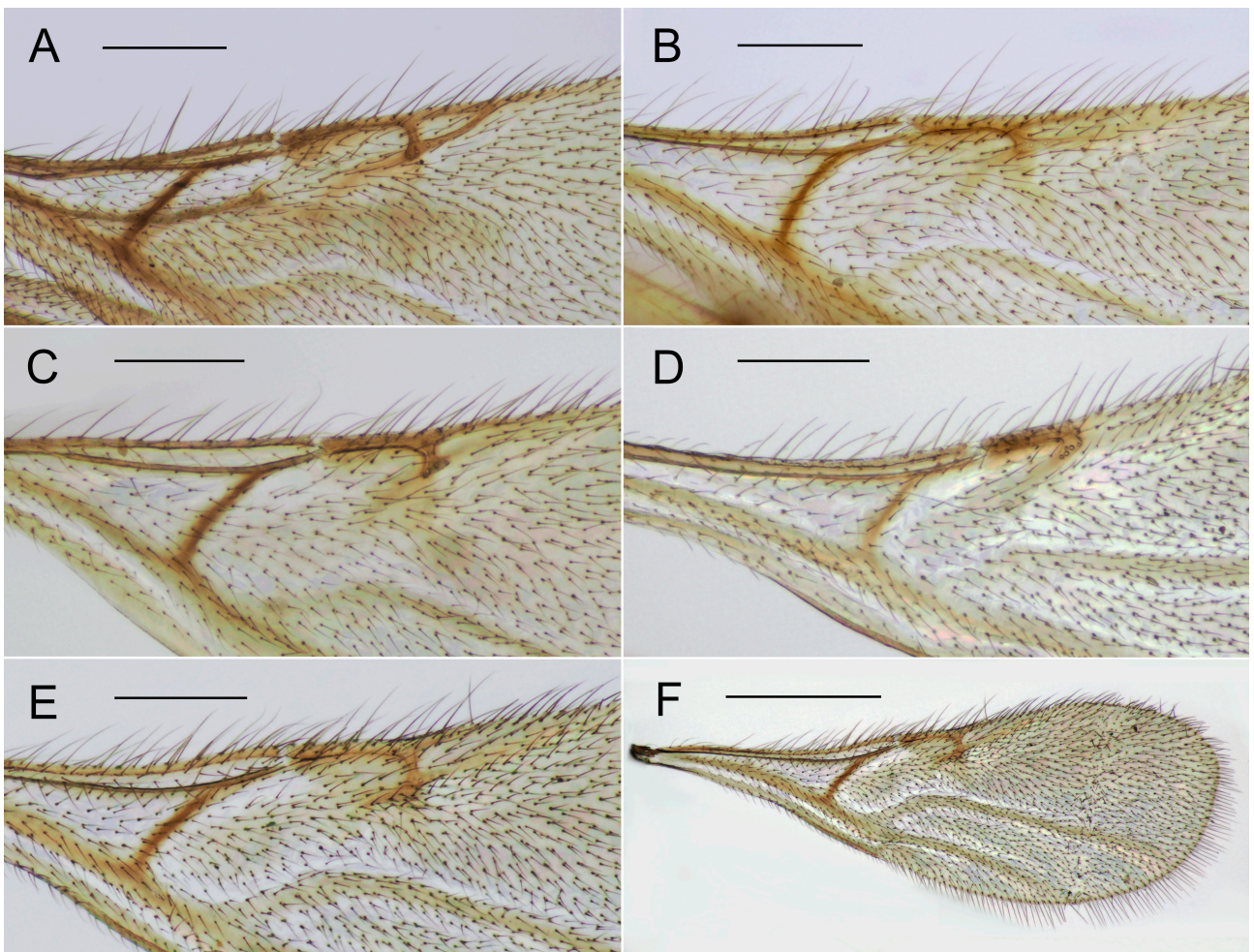


FIGURE 8. Forewing venation: **A**—*Pantolyta natalensis* sp.n.; **B**—*P. noorti* sp.n.; **C**—*P. mostovskii* sp.n.; **D**—*P. platycephala* sp.n.; **E, F**—*P. gabonica* sp.n. Scale bars: **A–E**—0.2 mm, **F**—0.5 mm.

Conclusion

The new African *Pantolyta* species show an interesting morphological tendency inside the Pantolytini tribe. The character “compressed mesosoma” is specific to all genera of this tribe except *Psilomma* (Macek, 1990; Chemyreva & Kolyada, 2021). The strong flattening of the body is a common morphological adaptation that occurs in many Diapriidae taxa, but usually it is achieved by depression of the head and mesosoma. We know only two described

species from the Pantolytini tribe, where the strong flattening of the body appears: *Synacra giraudi* (Kieffer) and *Pantolyta platycephala* sp.n. *Synacra giraudi* has a compressed head and mesosoma while the new species *P. platycephala* has a depressed head and compressed mesosoma. The two examples show evolutionary plasticity in changing the shape of the head and conservatism in changing the shape of the mesosoma.

There are other undescribed species of *Pantolyta* with a strongly depressed head and compressed mesosoma in Africa but the material is not available for detailed research by the authors of the present study. However, all the specific features of these wasps are consequences of the compression of the body, while all other important features correspond with the diagnosis of *Pantolyta*.

Acknowledgments

We thank Simon van Noort (SAMC) and Mike Mostovski (Tel Aviv University, Israel) for material this article is based on. We also thank Jan Macek (Natural History Museum, Prague, Czech Republic) and John Early (Auckland War Memorial Museum, Auckland, New Zealand) for their useful comments on this manuscript. This work was partly supported by Russian State Research (project 122031100272-3).

References

- Brischke, D. (1891) Dipterenlarven-Gänge im Erlen-holz. *Schriften der Naturforschenden Gesellschaft in Danzig*, 7, 27–29.
- Chemyreva, V.G. & Kolyada, V.A. (2021a) Taxonomy of the genera *Acropiasta*, *Anommatium*, *Erasikea* and *Pantolyta* (Diapriidae: Belytinae) with review of species occurring in Russia. *Zoosystematica Rossica*, 30 (1), 137–162.
<https://doi.org/10.31610/zsr/2021.30.1.137>
- Chemyreva, V.G. & Kolyada, V.A. (2021b) Review of the subtribe Psilommina (Hymenoptera: Diapriidae, Belytinae) from Russian fauna. *Far Eastern Entomologist*, 436, 1–34.
<https://doi.org/10.25221/fee.436.1>
- Hellén, W. (1964) Die Ismarinen und Belytinen Finn-lands (Hymenoptera: Proctotrupoidea). *Fauna Fennica*, 18, 68.
- Johnson, N.F. (1992) Catalog of World species of Proctotrupoidea, exclusive of Platygastridae (Hymenoptera). *Memoirs of the American Entomological Institute*, 51, 1–825.
- Karlsson, D. & Ronquist, F. (2012) Skeletal Morphology of *Opius dissitus* and *Biosteres carbonarius* (Hymenoptera: Braconidae), with a Discussion of Terminology. *PLoS ONE*, 7 (4), e32573.
<https://doi.org/10.1371/journal.pone.0032573>
- Kieffer, J.-J. (1907) Beschreibung neuer im Naturhistorischen Museum zu Hamburg aufbewahrter Proctotrypiden [sic!] und Evaniiden. *Berliner entomologische Zeitschrift*, 51, 258–278.
<https://doi.org/10.1002/mmnd.47919060305>
- Macek, J. (1989) Studies on the Diapriidae (Hymenoptera, Proctotrupoidea). Part 1. Taxonomic remarks on the subfamily Belytinae with particular reference to the tribus Pantolytini. *Annales Zoologici*, 42, 353–362.
- Macek, J. (1990) Revision of European Psilommina (Hymenoptera, Diapriidae). 1. *Psilomma* and *Acanosema* Complex. *Acta Entomologica Musei Nationalis Pragae*, 43, 335–360.
- Macek, J. (1995) A Taxonomic Revision of European Psilommina (Hymenoptera: Diapriidae). Part 2. The *Synacra* Complex. *European Journal of Entomology*, 92, 469–482.
- Sundholm, A. (1970) Hymenoptera: Proctotrupoidea. *South African Animal Life*, 14, 306–401.
- Tuomikoski, R. (1957) Beobachtungen über einige Sciariiden (Dipt.), deren Larven in faulem Holz der unter der Rinde abgestorbener Bäume leben. *Annales Entomologici Fennici*, 23, 3–5.
- Yoder, M.J. (2004) Revision of the North American species of the genus *Entomacis* (Hymenoptera: Diapriidae). *The Canadian Entomologist*, 136 (3), 323–405.
<https://doi.org/10.4039/n03-061>
- Yoder, M.J., Mikó, I., Seltmann, K.C., Bertone, M.A. & Deans, A.R. (2010) A gross anatomy ontology for Hymenoptera. *PLoS ONE*, 5, e15991.
<https://doi.org/10.1371/journal.pone.0015991>