# *Xentor*, a New Endemic Genus from Fiji (Hymenoptera: Platygastroidea: Scelionidae) and Description of Three New Species<sup>1</sup>

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Abstract. A new genus known only from the Fijian archipelago, *Xentor* **n. gen**. (Hymenoptera: Platygastroidea, Scelionidae) is described with three new species: *X. schlingeri* **n. sp**. (type species of the genus), *X. convexifrons* **n. sp**., and *X. filicornis* **n. sp**. The unusual insertion of the antennae, far dorsad of the clypeus and close to the inner orbits of the compound eyes, is unique within the superfamily.

### INTRODUCTION

The synapomorphies that characterize the parasitoid wasps of the superfamily Platygastroidea (Masner, 1993; Austin *et al.*, 2005) include the position at which the antennae are inserted into the head: the toruli are located at the dorsal margin of the clypeus and are close together in the midline of the head, narrowly separated by the interantennal process, and therefore distant from the inner orbits of the eyes. The three new species described below as a new genus represent the only departure from this configuration in the superfamily. We interpret this as an apomorphic feature, which implies a moderate expansion in the taxonomic delimitation of the superfamily. This new genus otherwise is comfortably classified within the Scelioninae. One species exhibits a very peculiar structure of the mandible, never previously observed in our collective experience with platygastroids.

#### MATERIALS

The material examined in this study derives primarily from specimens collected under the auspices of the NSF-funded "Fiji Arthropods Survey" and the Schlinger Foundation-funded Fiji Biodiversity of Arthropods study (Evenhuis & Bickel, 2005). Primary types will be deposited in the Fiji National Insect Collection, Suva (FNIC). Other material is deposited in the Canadian National Collection of Insects, Ottawa, Ontario, (CNCI); the C.A. Triplehorn Insect Collection at The Ohio State University, Columbus, Ohio (OSUC); and the Queensland Museum, Brisbane (QMBA). A total of 37 specimens are known.

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Abbreviations and terms used in text: A1, A2, ... A11: antennomere 1, 2, ... 11; claval formula: distribution of the large, multiporous basiconic sensilla on the underside of apical antennomeres of the female, with the segment interval specified followed by the number of sensilla per segment (Bin, 1981); T1, T2: metasomatic terga 1, 2. Morphological terminology follows Masner (1980). Extended focus imaging was done using AutoMontage<sup>™</sup> software and GT-Vision hardware.

#### SYSTEMATICS

## Xentor Masner & Johnson, new genus (Figs. 1–16)

**Diagnosis:** Toruli widely separated from dorsum of clypeus, far from one another, close to inner orbits (Figs. 3, 7, 10, 13, 16); T2 moderately to distinctly the longest tergite, 2.0–6.0 times length of T3. Some species of *Calliscelio* Ashmead and *Probaryconus* Kieffer have T2 slightly longer than T3, and T2 is distinctly the longest in *Yunkara* Galloway and *Phoenoteleia* Kieffer. *Xentor* may be distinguished from these by the position of the toruli. Additionally, *Calliscelio* species have the metanotum expanded into a lamella and the propodeum is unarmed; *Probaryconus* has the lateral corners of the propodeum, and T1 is not produced into a horn. *Phoenoteleia* females have the T1 horn remarkably elongate, fitting into a longitudinal furrow on the dorsum of the mesothorax so that the upper side of the horn is nearly flush with the mesoscutum, and the horn bears a V-shaped carina; in addition, the hind basitarsus of both sexes is enlarged.

**Description:** Small, length 2.4–2.9 mm; body moderately elongate, gracile (Figs. 1, 5, 11), with relatively long, slender legs, antenna elongate, all antennomeres longer than wide; head, body yellow to brown; macropterous.

Head (Figs. 3, 6, 7, 10, 13, 16) in dorsal view weakly transverse; vertex smooth, sparsely setose; hyperoccipital carina absent; occipital carina well-developed, continuous medially, finely crenulate; lateral ocellus nearly contiguous with inner orbit of compound eye, OOL varying from less than 0.5 times to nearly 2.0 times diameter of lateral ocellus; compound eye large, glabrous; frons shape variable, deeply concave to broadly convex; antenna inserted close to inner orbit, high above clypeus, torulus opening anteriorly to anterolaterally; interantennal process absent; submedian carina absent; orbital carina absent; lower frons, including cheek, without fanlike striae; interocular space slightly shorter than eye height; inner orbits diverging ventrally; clypeus variable in shape, broadly convex or raised in strong dorsoventral crest, strongly transverse to pentagonal, apically pointed, not divided into anteclypeus and postclypeus; malar sulcus present; gena strongly expanded, convex, smooth, sparsely setose; labrum hidden behind clypeus and mandibles; mandible basically short, apex with three apical, acute, subequal teeth, sometimes with additional, dorsal, broadly truncate tooth (X. filicornis n.sp., Fig. 7, dtt), or with strong acute dorsal projection from upper margin of mandible (X. schlingeri, n.sp., Figs. 13, 14, dma); maxillary palpus 3-segmented, all segments cylindrical; labial palpus 2-segmented; antenna 12-merous in both sexes; radicle inserted apically into A1, nearly parallel to longitudinal axis of A1; A1 distinctly flattened; A3 distinctlylonger than A2; female antenna with or without (X. filicornis, n.sp.) distinct clava; gustatory sensilla on female antenna arranged in longitudinal pairs on apical antennomeres; claval formula either A8-A12 2-2-2-1 or A4-A12 1-2-2-2-2-2-1; male antenna with tyloid on A5.

*Mesosoma* in dorsal view longer than wide (Figs. 4, 9, 15), in lateral view longer than high (Figs. 2, 5, 12); pronotum in dorsal view very narrow laterally, anterolateral corners weakly angulate; transverse pronotal carina absent; vertical epomial carina absent; dorsal epomial carina present; anterior face of pronotum short, visible in dorsal view; lateral face of pronotum nearly flat below dorsal

epomial carina, facing anterolaterally, without distinct scrobe for reception of foreleg; netrion present, open ventrally; anterior margin of mesoscutum flexed ventrally to meet pronotum; mesoscutum pentagonal in outline, posterorlateral corner rounded; parapsidal lines absent; notauli present, percurrent; skaphion absent; transscutal articulation well-developed, crenulate; scutellum wider than long, unarmed laterally, weakly convex; axilla small, dorsal margin sinuate; metanotum narrow, dorsellum clearly differentiated, unarmed; dorsal surface of propodeum with dense, fine pilosity; keels, plicae of propodeum variably developed, propodeum produced medially into narrow triangular prominence or flat, apically rounded lamella; posterior face of propodeum smooth, glabrous; mesopleural depression well-developed; mesopleural carina absent; sternaulus absent; mesopleural pit present, distinct; anterior margin of ventral portion of mesepisternum and acetabular carina transverse, not extended forward between forecoxae; mesepisternum and mesepimeron separated by line of well-developed foveae; episternal foveae absent; dorsal corner of mesepimeron produced into rounded or angulate, not produced into tooth; anteroventral portion of metapleuron continuous with lateral face, glabrous; metapleuron without distinct pit, with oblique, narrow, deep furrow extending from anterodorsal corner to posterior margin; posterior margin of metapleuron narowly lamellate; propodeum with longitudinal carinae variably developed, setose throughout, posterolateral corners not projecting posteriorly; legs slender, femora weakly incrassate; posterior surface of hind coxa with smooth, setose; trochantellus present on all legs; outer surface of fore-, midtibia short, semidecumbent setae; tibial spur formula 1-1-1; tarsal formula 5-5-5; tarsomeres tapering in width apically; pretarsal claws simple; apex of forewing extending beyond apex of metasoma, hyaline; R straight, extending beyond basal 0.5 of length of forewing, with strong bristles arising throughout its length, at apex curved to meet costal margin forming distinct marginal vein; bulla absent; R1 extending far along costal margin to form elongate postmarginal vein, longer than both marginal and stigmal veins; r-rs (stigmal vein) straight, arising from costal margin; basal vein strongly indicated, sharply defined; no other tracheate veins in forewing; hindwing with R tracheate from base of wing to hamuli and costal margin; with two strong dark bristles on R basally; three hamuli present.

*Metasoma* with first segment cylindrical, otherwise flattened; T2 distinctly longest tergite; female with 6 terga, 6 sterna visible externally, male with 8 terga, 6 sterna visible externally; submarginal ridge well-developed, defined by narrow laterotergites to form deep submarginal rim; no spiracles visible; base of segment 1 generally longitudinally costate, horn, if present, smooth basally; suture between segments 1 and 2 basally crenulate; otherwise sutures between segments 6 simple; female T6 without median raised field of microsetae or secretion; S1 not laterally compressed; anterior margin of S2 straight; no felt fields present on sterna.

Type species: Xentor schlingeri Masner & Johnson, n. sp.

**Etymology:** The name *Xentor* is a combination derived from the Greek *xenos*, different, and *tor*, for torulus, referring to the unique position of the antennal insertions. The name is masculine in gender.

Geographic distribution: Collected from the Fijian islands of Taveuni, Vanua Levu, and Viti Levu.

Host: Unknown.

**Comments**: This new genus seems to fall best within the concept of the tribe Calliscelionini (*sensu* Masner 1976). The relationships among the genera of the tribe have not been resolved, and the monophyly of the tribe itself is uncertain. Therefore, specification of the phylogenetic position of *Xentor* is not possible at this time.

We can only speculate on possible function of the modifications of the head and mandibles in *X. filicornis*, n.sp. (Figs. 6, 7) and *X. schlingeri* n.sp. (Fig. 13). The most likely scenario seems to be that they are somehow involved with emergence from the host egg.

KEY TO SPECIES OF XENTOR

### Females

1.	Frons between toruli distinctly convex, not excavate (Fig. 3), and without distinct black bristles; T1 without hump, entirely longitudinally costate (Fig. 4, <i>T1</i> ) convexifrons Masner & Johnson, n. sp.
	Frons between toruli deeply excavate, strongly raised laterad of depression, with distinct black bristles (Figs. 6, 7, 13); T1 with distinct hump, its apex smooth (Figs. 9, 15, <i>T1</i> )
2.	Antenna threadlike, without distinct clava; antennomeres 4–12 with specialized spikelike sensilla on underside (Fig. 8, <i>gs</i> ); mandible tridentate, sharply truncate, without dorsal toothlike appendage (Fig. 7, <i>dtt</i> ); median propodeal lamina with sharply pointed triangular plate (Fig. 9, <i>pl</i> ); clypeus posteriorly reflexed filicornis Masner & Johnson, <b>n. sp.</b>
	Antenna with distinct 5-merous clava (Fig. 11); antennomeres 8–12 with typical basiconic sensilla on underside; mandible with additional dorsal truncate tooth and moderate to large acute dorsal appendage (Figs. 13, 14, <i>dtt, dma</i> ); median propodeal lamina broadly rounded to truncate (Fig. 15, <i>pl</i> ); clypeus vertical, parallel with frons schlingeri Masner & Johnson, n. sp.
Males	
1.	Clypeus with strong median longitudinal keel, apex beaklike (Fig. 16, <i>cc</i> ); anterior margin of mesopleuron marked by column of elongate foveae (as in Fig. 12, <i>mf</i> ) schlingeri Masner and Johnson, n. sp.
	Clypeus flat, without longitudinal keel (Fig. 10); mesopleuron anteriorly with lon- gitudinal rugulae dorsally, lacking column of foveae (as in Fig. 6)

..... filicornis Masner & Johnson, n. sp.

## Xentor convexifrons Masner & Johnson, new species (Figs. 1–4)

**Diagnosis:** Distinguished from other species of *Xentor* by the simple, broadly convex frons and the absence of a horn on T1.

**Description:** *Female*: Length: 2.7 mm; head and body dark brown dorsally, light brown ventrally; radicle, A1 light brown; A2-A12 dark brown; legs light brown; wing membrane hyaline; apex of mandible tridentate, dorsal margin not elaborated (Fig. 3); median portion of frons convex (Fig. 3, c); frontal lobes absent, frons evenly convex, setose, without strong black bristles; lateral ocelli close to inner orbits, LOL less than one ocellar diameter; clypeus pentagonal, weakly convex; antennal clava clearly developed, elongate, laterally flattened; claval formula: A8-A12 2-2-2-2-1; mesoscutum (Fig. 4) with finely incised reticulate microsculpture; notauli nearly parallel; propodeal excavation very shallow, emarginate only at extreme apex; propodeum with acute triangular tooth formed by confluence of expanded submedial plicae (Fig. 4, pl); dorsal epomial carina well developed throughout its length, surface dorsal to carina rugulose; anterior mesopleural margin: predominantly simple, with few elongate longitudinal rugulae dorsally; T1 nearly cylindrical (Figs. 1, 2, TI), without horn, longitudinally costate throughout its length.

## Male: unknown.

Etymology: The epithet *convexifrons* refers to the shape of the front of the head.



**Figures 1–4.** *Xentor convexifrons* Masner & Johnson, new species, holotype female (FBA 040460). **1**, lateral habitus; **2**, head and mesosoma, lateral view; **3**, head, frontal view; **4**, head and mesosoma, dorsal view. *cl*, clypeus; *pl*, propodeal lamella; *t*, torulus; *Tl*, first metasomatic tergite. Scale bars in millimeters.

**Material Examined:** Holotype female: **FIJI**: Vanua Levu, Bua Prov., Kilaka; 146 m; FJ-58A; 16° 48.927'S 178° 59.110' E; 3.VI–10.VI.2004, M.E. Irwin, E. Schlinger, M. Tokota'a; Malaise [FBA 040460]. To be deposited in FNIC; temporarily in BPBM.

## Xentor filicornis Masner & Johnson, new species (Figs. 5–10)

**Diagnosis:** The female may be distinguished by its elongate filiform antenna; the presence of large paired ventral sensilla on A5-7, and a single such sensillum on A4; the strong transverse ridge defining the dorsal margin of the clypeus, and the two pairs of frontal projections.

**Description:** *Female:* Length: 2.7 mm; head, body, appendages light brown, slightly darker dorsally; wing membrane hyaline; apex of mandible tridentate, with additional broadly truncate, transversely oriented tooth dorsal to normal dentition (Fig, 7, dtt); median portion of frons deeply excavate; two pairs of frontal lobes present (Fig. 5–7, fl), strongly raised above surface of frons, dorsal lobe bearing the torulus, this lobe separated from the ventral lobe by a deep incision (Fig. 7, fl); frons with thick dark bristles on both frontal lobes, clypeal margin; lateral ocelli distinctly separated from inner orbits, LOL much greater than ocellar diameter (Fig. 9); clypeus with dorsal margin marked by strong transverse ridge, otherwise strongly reflexed, hidden behind mandibles (Fig. 6); antennal clava absent, all antennomeres strongly elongate, generally cylindrical; claval formula: A4-A12



Figures 5–10. *Xentor filicornis* Masner & Johnson, new species. 5, head and mesosoma, lateral view, holotype female (FBA 164917); 6, head, oblique lateral view, holotype female; 7, head, frontal view, paratype female (FBA 105149); 8, A7–A10 (right to left), paratype female (FBA 105149); 9, head and mesosoma, dorsal view, paratype female (FBA 105149); 10, head, frontal view, paratype male (FBA 105155). *dtt*, dorsal truncate tooth of mandible; *fl*, frontal lobe; *gs*, gustatory sensilla; *pl*, propodeal lamella; *t*, torulus; *T1*, first metasomatic tergite. Scale bar in millimeters.

1-2-2-2-2-2-1 (Fig. 8, *gs*); mesoscutum with finely incised reticulate microsculpture (Fig. 9); notauli distinctly converging posteriorly; propodeum distinctly, but incompletely excavate; propodeal armature in form of flat triangle (Fig. 9, *pl*); dorsal epomial carina fading posteriorly, surface dorsal to carina smooth; anterior mesopleural margin predominantly simple, with few elongate longitudinal rugulae; T1 base produced into moderately developed horn, T1 smooth anteriorly, otherwise longitudinally costate (Fig. 9, *T1*).

*Male*: Length: 2.6–2.8 mm; differing from female as follows: flagellum dark brown; frontal lobes weakly developed; clypeus broadly convex, apex rounded, without median carina (Fig. 10); T1 cylindrical, longitudinally costate throughout its length.

Etymology: The epithet *filicornis* refers to the unusual shape of the female antenna. Material Examined: *Holotype* female from FIJI: Taveuni: 5.3 km SE Tavuki Vlg.,
Mt. Devo, 1187 m, 16.843°S, 179.966°W, 24-31.X.2002, Malaise 1, Schlinger, Tokota'a,
[FBA 164917]; to be deposited in FNIC, temporarily in BPBM. *Paratypes*: FIJI: Taveuni: one female with same data as holotype [FBA 147878]. Vanua Levu: Batiqere Range, 5 km NW Kilaka Village, 146 m; 16.815°S 178.986°E; 28.VI–21.VII.2004, Schlinger, Tokota'a; Malaise 1, one female, three males, [FBA 105149, FBA 105140, FBA 105145, FBA 105155]; Batiqere Range, 6 km NW Kilaka Village, 61 m, 16.811°S, 178.988°E, 3–10.VI.2004, Malaise 3, Schlinger, Tokota'a, one male, one female [FBA 115166, FBA 115175]. Viti Levu: Lomaiviti, Nadarivatu, Naqaranabuluti Park, Mt. Lomalagi, 1140 m; 17.573°S 177.973°E; 24–26.VI.2005, Malaise 01, Bennett, Tokota'a; one male [FBA 181268] (in OSUC); 3.5 km N Veisari Stlmt., logging rd. to Waivudawa, 300 m, 18.068°S, 178.367°E, 14.II-8.III.03, Malaise 3, E. Schlinger, M. Tokota'a, one male [FBA 136308]. (in BPBM).

**Comments:** The shape of the antenna of the holotype initally led us to believe that the specimen was a male. However, instead of a single tyloid on A5, we found a series of strong, elongate, downward projecting sensilla on the undersides of A4–A12 (Figs. 5, 8, *gs*). These probably correspond to the gustatory sensilla found on the apical clavomeres of all female platygastroids. The number of antennomeres involved, however, is unusually high. To our knowledge, such a large number is known only in the genus *Nixonia* Masner, in which the sensilla is found on A5–A14 (Johnson & Masner, 2006).

In one female (FBA 105149, Fig. 7) the frontal lobes are distinctly smaller than those in the other two females (Fig. 6). In addition, the frontal bristles are finer and lighter in color.

We associated the males with females on the basis of the simple anterior margin of the mesopleuron and the presence of frontal lobes and bristles on the face.

## Xentor schlingeri Masner & Johnson, new species (Figs. 11–16)

**Diagnosis:** The female may be immediately distinguished from the other two species of *Xentor* by the elongate dorsal mandibular appendage (Figs. 13, 14, *dma*). The male may be distinguished by the presence of a column of elongate foveae at the anterior margin of the mesopleuron (as in Fig. 12, *mf*).

**Description**: *Female*: Length: 2.4–2.9 mm; head dark brown; body brown ventrally, dark brown dorsally; radicle, A1 light brown; A2–A12 dark brown; legs uniformly brown; wing membrane hyaline; apex of mandible tridentate, dorsal margin produced into elongate acute process, mesal margin with truncate tooth ventrally, triangular tooth dorsally (Figs. 13, 14, *dtt, dma*); median portion of frons deeply excavate; frontal lobes present, strongly raised above surface of frons (Fig. 13, *fl*), in some specimens with dorsal portion separated from surface of frons; frons with thick dark bristles on frontal lobes, clypeal margin; lateral ocelli close to inner orbits, LOL less than or equal to 1 ocellar diameter (Fig. 15); clypeus flat, largely hidden behind mandibles, without strong transverse dorsal ridge (Fig. 13); antennal clava clearly developed (Fig. 11), elongate, laterally flattened; claval formula: A8-A12 2-2-2-2-1; mesoscutum largely smooth and shining, especially on median lobe (Fig. 15); notauli distinctly converging posteriorly; propodeum entire excavate medially; propodeal arma-



**Figures 11–16.** *Xentor schlingeri* Masner & Johnson, new species. **11**, lateral habitus, holotype female (FBA 047915); **12**, head and mesosoma, lateral view, holotype female; **13**, head, frontal view, holotype female; **14**, head and mandible, lateral view, paratype female (OSUC 148459); **15**, head and mesosoma, dorsal view, holotype female; **16**, head, frontal view, paratype male (FBA 042199). *at*, apical teeth of mandible; *cc*, central clypeal carina; *dma*, dorsal mandibular appendage; *dtt*, dorsal truncate tooth of mandible; *fl*, frontal lobe; *mf*, mesopleural foveae; *pl*, propodeal lamella; *t*, torulus; *Tl*, first metasomatic tergite. Scale bar in millimeters.

ture in form of broad, flat lamella, rounded or emarginate at apex, overlapping base of T1 horn (Fig. 15, pl); dorsal epomial carina well developed throughout its length, surface dorsal to carina rugulose; anterior mesopleural margin marked by series of 6-8 longitudinally elongate foveae (Fig. 12, mf); T1 with base produced into moderately developed horn, T1 smooth basally, otherwise longitudinally costate (Fig. 15, TI).

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*Male*: Length: 2.5–2.6 mm; differing from female as follows: radicle, A1, A2 light brown; A3–A12 dark brown; free frontal lobes absent, frons broadly convex; clypeus with strong median crest (Fig. 16, *cc*), apex sharply pointed medially; mesoscutum with finely incised reticulate microsculpture; T1 cylindrical, longitudinally costate throughout its length.

**Etymology**: Named in honor of Dr. Evert Schlinger for his leadership and support of studies of the arthropod biodiversity of Fiji.

Material Examined: Holotype female: FIJI: Taveuni: Cakadrove [sic: misspelling for Cakaudrove], 5.6 km SE Tavuki Village, 1187 m, 16.843°S 179.965°W; 3-10.I.2003; Schlinger, Tokota'a; rainforest; Malaise; FJTA8a M01 12 [FBA 058980]. Paratypes: FIJI: Taveuni: male, female with same data as holotype [FBA 058990, FBA 058995]; 5.5 km SE Tavuki Village, 1188 m; 16.843°S, 179.966°W, 30.VI-14.VIII.2004, Malaise, rainforest, FJTA8B M02 02, Schlinger, Tokota'a, female [FBA 070880]; Devo Peak Radio Tower, 1200 m, 16°51'S 179°58'E, 2.X-10.X.2002, Malaise in rainforest, FJ-8, M. Irwin, E. Schlinger, M. Tokota'a, female [FBA 021441]; 5.3 km SE Tavuki, Devo Peak, 1064 m, 16.8431°S 179.9681°E, 14.XI-21.XI.2002, Malaise, FJTA9c MO3 07, Schlinger, Tokota'a, female [FBA 054135]; 5.3 km SE Tavuki Vlg., Mt. Devo, 1064 m, 16.841°S, 179.968°W, 31.X-14.XI.02, Malaise 3, coll. Schlinger, M. Tokota'a, two females [FBA 149375, FBA 149377]; 5.3 km SE Tavuki Vlg., Mt. Devo, 1064 m, 16.841°S, 179.968°W, 3-20.XII.2002, Malaise 3, Schlinger, M. Tokota'a, two females [FBA 154042, FBA 154045]; 5.3 km SE Tavuki Vlg., Mt. Devo, 1064 m, 16.841°S, 179.968°W, 27.XII.2002– 3.I.2003, Malaise 3, Schlinger, M. Tokota'a, four females [FBA 146509–146512]; 5.3 km SE Tavuki Vlg., Mt. Devo, 1187 m, 16.843°S, 179.966°W, 27.XII.2002–3.I.2003, Malaise 1, Schlinger, Tokota'a, one male [FBA 164887]; Devo Forest Reserve, 800 m; 16°50'S 179°59'E; 3.I-10.I.2003, M. Irwin, E. Schlinger, M. Tokota'a, FJ-9 Malaise, male, female [FBA 042199, FBA 042149]; Soqulu House in Soqulu Estate, 140 m; 15.833°S 180°W, 13-20.XII.2002, E.I. Schlinger, M. Tokota'a, Malaise 1, female [FBA 121077]. Vanua Levu: Bua, Batigere Range, 6 km NW Kilaka, 113 m, 16.7317°S, 178.9997°E, 3.VI-15.VI.2004, Schlinger, Tokota'a, Malaise, FJVN58c\_M02\_05, female [FBA 069480]; Batiqere Range, 6 km NW Kilaka Village, 61 m, 16.811°S, 178.988°E, 3-10.VI.2004, Malaise 3, Schlinger, Tokota'a, female [FBA 115165]; Kilaka, 146 m; 16° 48.927'S 178° 59.110'E; 3.VI-10.VI.04, M. Irwin, E. Schlinger, M. Tokota'a, Malaise, FJ-58A, male, female [FBA 040449, FBA 040459]; Kilaka, 154 m; 16°48.412'S 178°59.017'E, 28.VI-2.VII.04, M. Irwin, E. Schlinger, M. Tokota'a, Malaise, FJ-58D, female [FBA 047915]; Batigere Range, 6 km NW Kilaka Village, 146 m; 16.815°S, 178.986°E, 28.VI-21.VII.2004, Schlinger, Tokota'a, Malaise 1, female [FBA 105147]. Viti Levu: Nadarivatu Res., 850 m, 11.VII.1987; G. & S. Monteith, Pyrethrum/trees and logs, female [OSUC 148459]; Naitasiri, 3.8 km N Veisari Stlmt., log rd. to Waivudawa, 300 m, 18.079°S 178.363°E, 12.XII.2002–3.I.2003, Schlinger, Tokota'a, Malaise 2, female [FBA 104318]. Specimen OSUC 148459 is deposited in QMBA; FBA 105147 in CNCI; FBA 069480 in OSUC; all others will be deposited in FNIC and BPBM.

**Comments:** The extraordinary modifications of the front of the head of this species are unlike anything we have seen in the Scelionidae. In some ways the enlarged frontal lobes, especially those with the free apices, and the black bristles remind one of a small drosophilid fly! The exact shape of the frontal lobes varies from those in which the upper portion merges smoothly with the dorsal portion of the frons, to those in which the lobe appears as a free appendage. These lobes are not elaborated in the males. They, in contrast, have an enlarged, beaklike clypeus that is especially prominent in lateral view.

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#### LITERATURE CITED

- Austin, A.D., N.F. Johnson, & M. Dowton. 2005. Systematics, evolution, and biology of scelionid and platygastrid wasps. *Annual Review of Entomology* 50: 553–582.
- Bin, F. 1981. Definition of female antennal clava based on its plate sensilla in Hymenoptera Scelionidae Telenominae. *Redia* 64: 245–261.
- Evenhuis, N.L. & D.J. Bickel. 2005. The NSF-Fiji Terrestrial Arthropod Survey: overview. *In*: Evenhuis, N.L. & Bickel, D.J. (eds.), Fiji Arthropods I. *Bishop Museum Occasional Papers* 82: 3–25.
- Johnson, N.F. & L. Masner. 2006. Revision of world species of the genus Nixonia Masner (Hymenoptera: Platygastroidea, Scelionidae). American Museum Novitates 3518:1–32.
- Masner, L. 1976. Revisionary notes and keys to world genera of Scelionidae (Hymenoptera: Proctotrupoidea). *Memoirs of the Entomological Society of Canada* 97: 1–87.

—. 1980. Key to the genera of Scelionidae of the Holarctic region, with descriptions of new genera and species (Hymenoptera: Proctotrupoidea). *Memoirs of the Entomological Society of Canada* **113**: 1–54.

—. 1993. Superfamily Platygastroidea, p. 558–565. *In*: Goulet, H. & J. T. Huber, *Hymenoptera of the world: an identification guide to families*. Research Branch, Agriculture Canada Publication 1894/E, Ottawa. 668 pp.