

Leafhoppers of the subfamily Coelidiinae of Peru with descriptions of new genus, new species, new records, checklist and distribution (Hemiptera: Cicadellidae)

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NIELSON M. W. & LOZADA P. W. 2015: Leafhoppers of the subfamily Coelidiinae of Peru with descriptions of new genus, new species, new records, checklist and distribution (Hemiptera: Cicadellidae). *Acta Musei Moraviae, Scientiae biologicae* (Brno) **100(2):** 159–216. – Five tribes, 42 genera and 181 species in the subfamily Coelidiinae (Hemiptera: Cicadomorpha: Cicadellidae) are currently recognized in Peru. One new genus, *Loretolidia* gen.nov., type species *Loretolidia basispinosa* sp.nov., and 25 new species in 16 genera in 3 tribes are described, illustrated and photographed: Coelidiini: *Codilia biquadrata* sp.nov., *Collasuyusana bispinata* sp.nov., *Crassinolanus subtumidus* sp.nov., *Dialodia angusta* sp.nov., *D. hirsuta* sp.nov., *Evansolidia complurea* sp.nov., *E. flangata* sp.nov., *E. minuta* sp.nov., *E. pectinis* sp.nov., *Spinolidia glabrosa* sp.nov., *Tinocripus minutus* sp.nov.; Teruliini: *Articoelidia humboldti* sp.nov., *Carinolidia hemicycla* sp.nov., *Loretolidia basispinosa* sp.nov., *Paracarinolidia distincta* sp.nov., *Pa. exilis* sp.nov., *Perulidia forameninis* sp.nov., *Pe. macrosetacea* sp.nov., *Pe. torqueresi* sp.nov., *Sapingia elongistyla* sp.nov., *Stalolidia membrana* sp.nov., *St. peruviana* sp.nov., *St. sinuata* sp.nov., *Terulia paradispar* sp.nov.; Sandersellini: *Sandersellus fissus* sp.nov. A key to 5 tribes of Coelidiinae of Peru is presented. A checklist of species with distribution is also given. *Coelidia* Germar, 1821; *Collasuyusana* Nielson, 2011; *Crassinolanus* Nielson, 1982; *Clypeolidia* Nielson, 1982; and *Pilosana* Nielson, 1983 are genera recorded from Peru for the first time. *Clypeolidia brunnea* (Osborn, 1924); *Coelidia* sp. (female); *Dialodia bispinata* Nielson, 2011; *Dialodia glabrosa* (Nielson, 1982); *Pilosana* sp. (female); and *Spinolidia spinolai* Nielson, 1982 are new species records for Peru.

Keywords. Auchenorrhyncha, Cicadomorpha, Coelidiinae, leafhoppers, taxonomy, Neotropical Region, Peru

Introduction

Peru has a very rich and diverse fauna of coelidiine leafhoppers. The earliest described species were recognized in mid 19th century by WALKER (1858a, b, c) and SPÅNGBERG (1878, 1879). Later, many additional new species were described (JACOBI 1905; OSBORN 1924; DELONG 1945; LINNAVUORI 1956; NIELSON 1975, 1979, 1982a, b, 1983a, b, c, d, e, 1986, 1988, 1989, 1990, 1992, 1996, 2010, 2011a, b; NIELSON & LOZADA 2013). METCALF (1964) catalogued the Peruvian species up to 1955 in which he assigned 7 species from Peru to the broadly based genus *Coelidia* Germar, 1821, renamed one preoccupied species and compiled notes on their distribution. *Davidna* Walker, 1858b: 108, suppressed synonym of *Coelidia* Germar, 1821 by EVANS (1947): 194 and METCALF (1964): 77, was reinstated in a revision of the subfamily (NIELSON 1982: 229).

In this paper we recognize 5 tribes, 42 genera and 181 species from Peru, including 1 new genus and 25 new species described in 16 genera and 3 tribes. Five genera,

Coelidia, *Collasuyusana* Nielson, 2011, *Crassinolanus* Nielson, 1982, *Clypeolidia* Nielson, 1982, and *Pilosana* Nielson, 1984, and additional six species, *Clypeolidia brunnea* (Osborn, 1924), *Coelidia* sp. (female), *Dialodia bispinata* Nielson, 2011, *Dialodia glabrosa* (Nielson, 1982), *Pilosana* sp. (female), and *Spinolidia spinolai* Nielson, 1982 are new records for Peru. We provide a checklist of species of Coelidiinae of Peru arranged by tribes and genera in alphabetical sequence. *Docalidia* Nielson, 1979, the richest and most diverse group with 82 known species from Peru, accounts for nearly half of all known species in the Neotropical region. Treatment of this genus is found in NIELSON (2011a) and a companion paper (NIELSON & LOZADA 2013).

Material and methods

Specimens for this study were provided by the junior author who also collected much of the material. Holotypes are deposited in the Museo de Historia Natural, Lima, Peru (UNMSM). A few determined specimens were retained for deposition in the Monte L. Bean Life Science Museum, Brigham Young University, Provo, UT (MLBM).

The taxonomy of the genera and species of Coelidiinae is based primarily on the male genitalia. Identifications of female specimens to genus are considered tentative. Male specimens were not available to associate with and assign many other female specimens to genus or species. Distribution records from references and from material in UNMSM are added with corresponding sources of the data shown in parentheses. New records for genera and species for Peru are bold face. Localities on labeled specimens of the holotypes that are in captions are spelled out and enclosed in brackets.

TAXONOMY

Key to known tribes of Coelidiinae of Peru

- 1 Base of forewings exposed; brachyptery rare. 2
- Base of forewings concealed; brachyptery common.
- **Tinobregmini Oman**
- 2(1) Pronotum unicarinate laterally. 3
- Pronotum bicarinate laterally. **Sandersellini DeLong**
- 3(2) Clypeus with complete median longitudinal carina. **Teruliini Nielson**
- Clypeus without complete median longitudinal carina, sometimes with partial carina. 4
- 4(3) Medium size to large, robust leafhoppers; subgenital plate rarely profusely setose. **Coelidiini Dohrn**
- Small, very slender leafhoppers; subgenital plate profusely setose.
- **Youngolidiini Nielson**

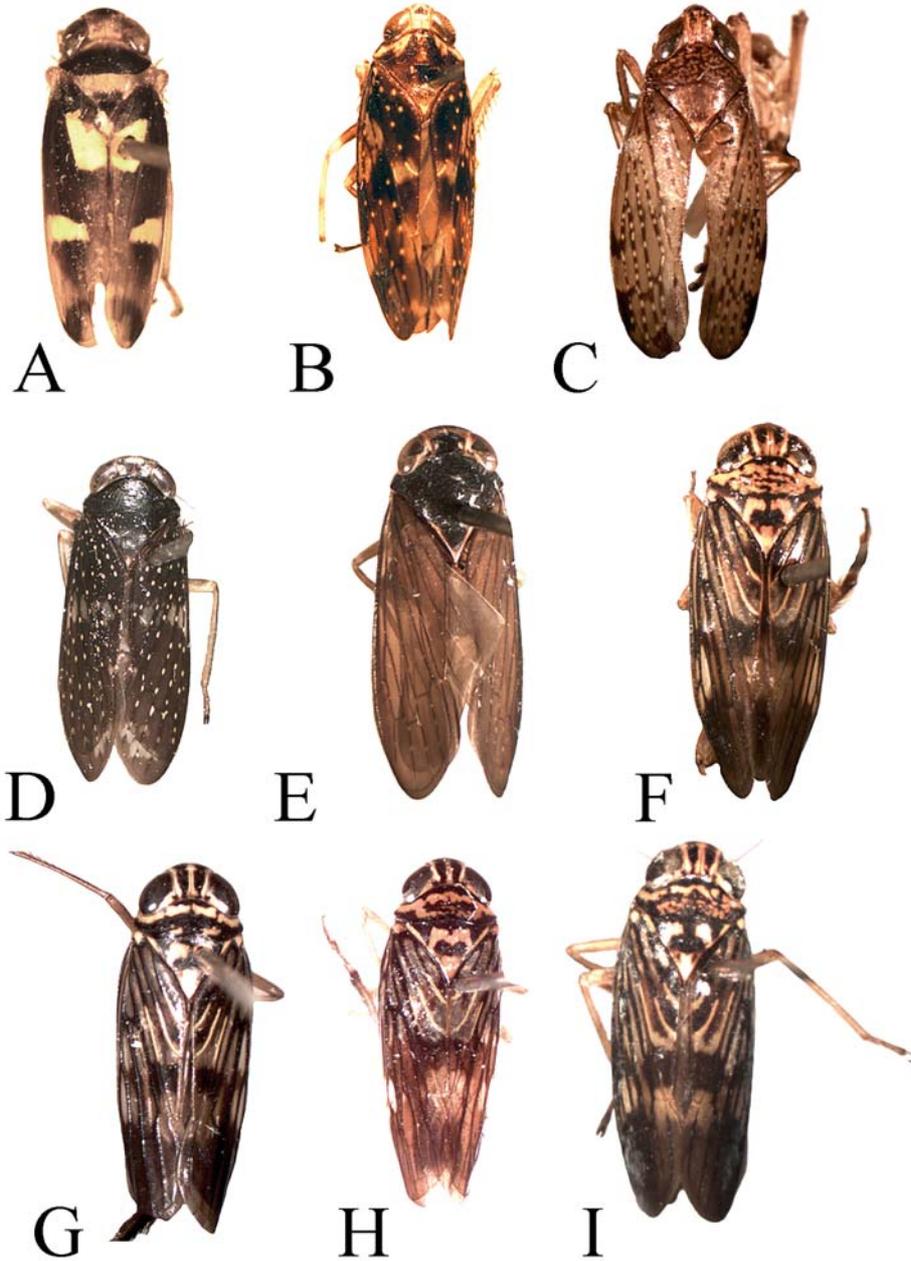


Plate 1, A-I. General habitus. A – *Codilia biquadrata* sp.nov.; B – *Collasuyusana bispinata* sp.nov.; C – *Crassinolanus subtumidus* sp.nov.; D – *Dialodia angusta* sp.nov.; E – *Dialodia hirsuta* sp.nov.; F – *Evansolidia complurea* sp.nov.; G – *Evansolidia flangata* sp.nov.; H – *Evansolidia minuta* sp.nov.; I – *Evansolidia pectinis* sp.nov.

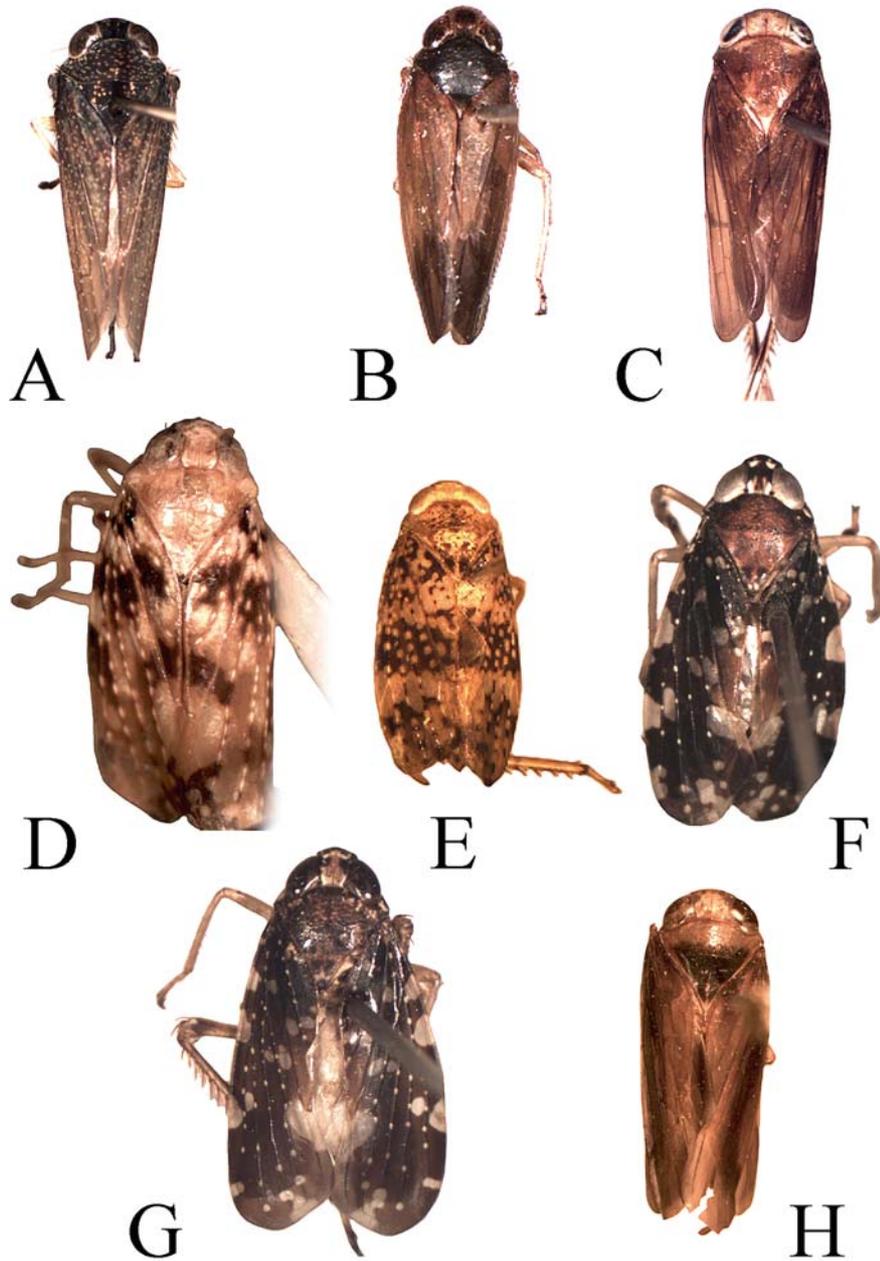


Plate 2, A–H. General habitus. A – *Spinolidia glabrosa* sp.nov.; B – *Tinocripus minutus* sp.nov.; C – *Articoelidia humboldti* sp.nov.; D – *Carinolidia hemicycla* sp.nov.; E – *Loretolidia basispinosa* sp.nov.; F – *Paracarinolidia distincta* sp.nov.; G – *Paracarinolidia exilis* sp.nov.; H – *Perulidia forameninis* sp.nov.

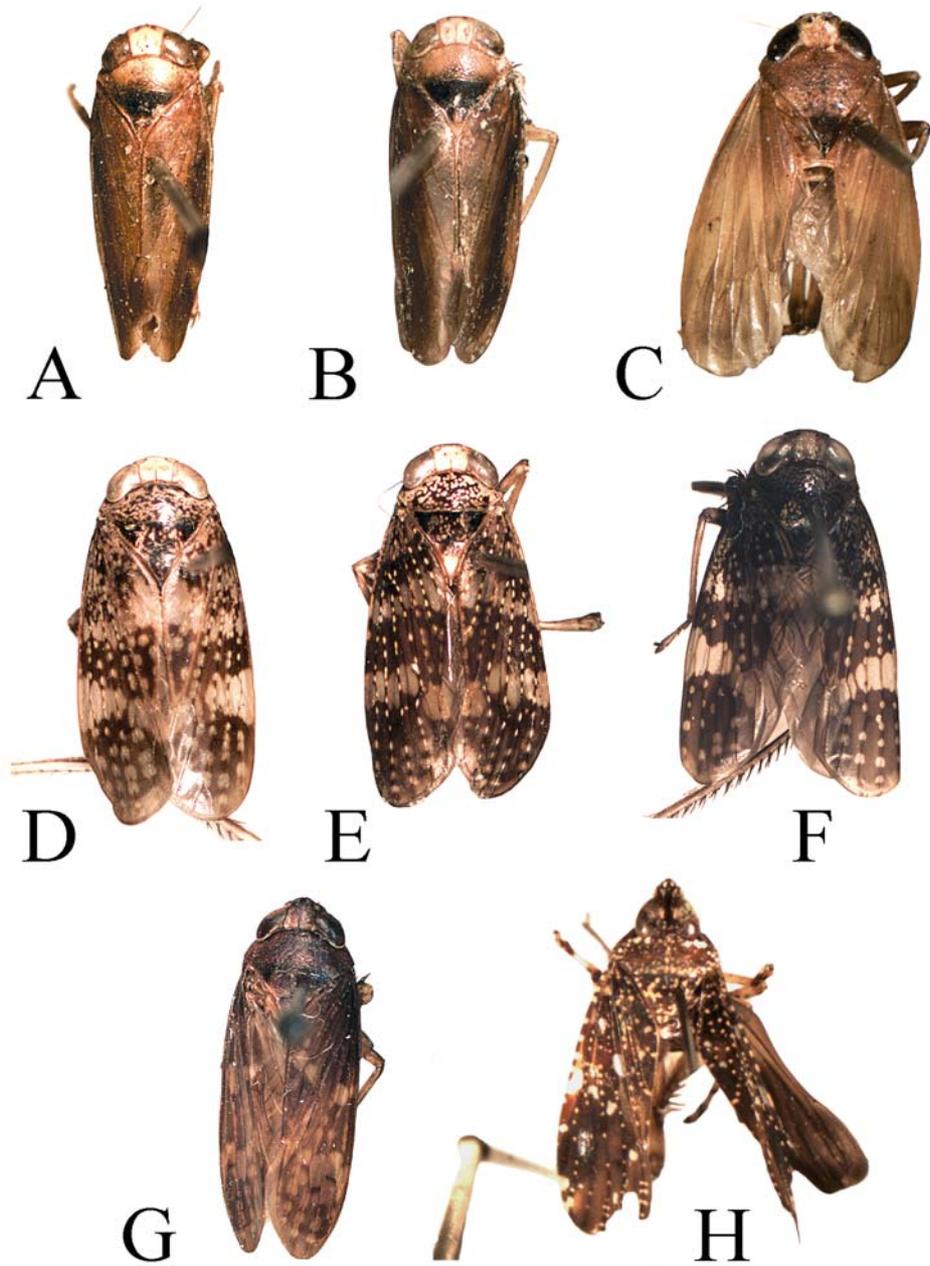


Plate 3, A–H. General habitus. A – *Perulidia macrosetacea* sp.nov.; B – *Perulidia torqueresi* sp.nov.; C – *Sapingia elongistyla* sp.nov.; D – *Stalolidia membrana* sp.nov.; E – *Stalolidia peruviensis* sp.nov.; F – *Stalolidia sinuata* sp.nov.; G – *Terulia paradispar* sp.nov.; H – *Sandersellus fissus* sp.nov.

Systematic account of Coelidiinae of Peru

TRIBE COELIDIINI DOHRN, 1859: 84

The tribe is cosmopolitan, chiefly in tropical areas of the Neotropical, Ethiopian, Oriental and Australian biogeographical regions. Intrusions into southern Nearctic and southern Palearctic zones are common. In the Neotropical region, 33 genera are currently recognized and keyed (NIELSON 2011b). Nearly half of the known genera occur in Peru which is indicative of the present richness of the fauna.

Genus *Boliviela* DeLong, 1969: 464

The range of the genus is restricted to northwestern South America (Bolivia, Colombia, Ecuador and Peru). Among seven known species, three occur in Peru listed below.

Boliviela angustiformis (Linnavuori, 1956): 33; NIELSON (1982a): 206 – Pasco, San Juan de Caozá (UNMSM); Callanga (LINNAVUORI 1956); Cusco, Santa Isabel, San Martin (NIELSON 1982a).

Boliviela linnavuorii Nielson, 1982a: 212 – Monson Valle, Tingo Maria (NIELSON 1982a).

Boliviela sp. (2 females) – Madre de Dios, Z. R. [Zona Reservada], Tambopata (UNMSM).

Genus *Calodicia* Nielson, 1982a: 266

The genus has a narrow distribution from Peru north to Colombia and Panama and is known from two species, one of which is shared by Peru and Colombia.

Calodicia maculipennis (Spångberg, 1878): 29; NIELSON (1982a): 267 – Peru (no specific locality) (METCALF 1964).

Genus *Carinoscapula* Nielson, 2011b: 14.

The genus is confined to Colombia and Peru. Among two known species, one is shared by Colombia and Peru and one occurs in Colombia.

Carinoscapula bispinosa (Nielson, 1988): 237; NIELSON (2011b): 14 – Madre de Dios, Z. R. [Zona Reservada], Tambopata (UNMSM); Tingo Maria (NIELSON 1988).

Genus *Clypeolidia* Nielson, 1982a: 246 (New record)

Clypeolidia, a monobasic genus confined to eastern South America (Brazil, Guyana, French Guiana), is reported in Peru for the first time. This genus is atypical in coelidiine head features (small eyes, very broad crown) and male genitalia characters (pygofer with dorsoventral fold, aedeagus with long ventral process). The genus was provisionally assigned to Coelidiini, avoiding recourse to a new subfamily group until additional genera and species come to light (NIELSON 1982a).

Clypeolidia brunnea (Osborn, 1924): 437; NIELSON (1982a): 248 – LO [Loreto], Requena, 4.5 km Carretera Jenaro, Herrera Puerto Angamos (UNMSM). (**New record**)

Genus *Codilia* Nielson, 1982a: 220

The genus is confined to western South America (Ecuador, Peru). Three species are known, one in Ecuador and two in Peru, one of which is shared by Peru and Ecuador and one new species described below.

***Codilia biquadrata* sp.nov.**

(Plate 1A, Figs 1–6)

Type material. Holotype ♂: PERU: MD [Madre de Dios], Z. R. [Zona Reservada], Tambopata, 290 m, 24.III.87, P. Lozada (UNMSM).

Description. Length. Male 6.78 mm, female unknown.

External morphology. Small, slender species. General color dark brown to black; forewings with two large, subbasal, subquadrate, yellow markings on clavus, two moderately broad, transverse yellow bands near middle, narrow suffused transverse yellow band subapically; mesonotum with light brown band on anterior margin, black basally; pronotum black, crown tan, light brown markings on disk, turning black apically; eyes dark brown; face light tan; clypeus with large black spot apically; clypellus with large black quadrate spot in apical 1/3. Head large, nearly as wide as pronotum, anterior margin rounded; crown broad, wider than eye width, slightly produced anteriorly, lateral margins parallel; eyes moderately large, semiglobular; clypeus long, broad, lateral margins slightly constricted medially; clypellus about 1/3 as long as clypeus, nearly wide as clypeus at juncture of clypeal suture, tapered distally to rounded apex.

Male genitalia. Pygofer in lateral view small, subquadrate, glabrous with three caudal processes, caudodorsal process small, semiovate, caudomedial process very long, narrow, curved dorsally, caudoventral process short, digitate; segment X with ventral, lobe-like process (Fig. 1); aedeagus small, tubular with long, stout recurved apical process, subbasal flange armed with dorsal spine (Figs 2, 3); style small, about as long as aedeagus, very narrow in lateral view (Figs 4, 5); connective in dorsal view small, arms broad, stem absent (Fig. 4); dorsal connective moderately long, narrow (Figs 2, 3); subgenital plate long, narrowed in distal 1/4, with sparse setae on outer lateral margin (Fig. 6).

Etymology. The name of the species is descriptive for the two large, squared shape, yellow spots on the clavus of forewings.

Remarks. From *Codilia retrorsa* Nielson, 1982 and *C. retardata* Nielson, 1982, *C. biquadrata* sp.nov. can be distinguished by three distinctive caudal processes on the pygofer in opposition to one in *C. retrorsa* and two in *C. retardata*. In *C. biquadrata* sp.nov., the style in lateral view is much narrower, has two large quadrate, yellow spots on the clavus of the forewings which are absent in *C. retardata* and longitudinal in *C. retrorsa* (NIELSON 1982a).

Codilia retrorsa Nielson, 1982a: 220 – Piches & Perene Vs., 615–915 m (NIELSON 1982a).

Genus *Coelidia* Germar, 1821: 75 (New record)

The genus embraces 17 species and is widely distributed in South America and Central America. All species (male and female) are large and distinctly deltoid (triangulate) in general habitus which usually will separate the group from other genera. One species is known from a single female specimen from Peru.

Coelidia sp. – 1 female, Loreto, Requena, Jenaro Herrera (UNMSM). (**New record**)

Genus *Collasuyusana* Nielson, 2011b: 14 (New record)

The genus is confined to northwestern South America (Bolivia, Colombia and Peru). Nine species are known, including one new species from Peru described below.

***Collasuyusana bispinata* sp.nov.**

(Plate 1B, Figs 7–13)

Type material. Holotype ♂: PERU: JU [Junin], 1.3 km SW Mina Pachita, 2100 m, 25.viii.83, P. Lozada (UNMSM). Paratypes: 2 ♀♀, same data as holotype except 23.viii.83 in 1 specimen. (UNMSM, MLBM).

Description. Length. Male 9.40 mm, female 9.40–9.70 mm.

External morphology. Large, slender species. General color dark brown to black with several light tan markings; forewings with small, widely separated, yellowish spots on veins, two moderately large, quadrate, whitish translucent markings near middle of clavus and one below apex, two large irregular shaped, translucent markings in costal area; mesonotum light brown to dark brown with light yellow spots or markings; face light brown with dark brown to black reticulations confined to clypeus (Plate 1B), Head small, much narrower than pronotum, anterior margin obtusely rounded; crown narrow, narrower than eye width, produced anteriorly about 1/4 of entire length beyond anterior margin of eyes, disk elevated, lateral margins nearly parallel; eyes large, elongate ovoid; clypeus very long, lateral margins broadly convex, clypellus long, about 1/3 as long as clypeus, in male inflated in basal half, slightly wider than clypeus at juncture of clypeal

suture, constricted in distal half, in female narrow, flat, lateral margins slightly constricted medially.

Male genitalia. Pygofer in lateral view large, very narrow, glabrous with long robust caudodorsal process, small lobe near base of process, very long, slender caudoventral process nearly reaching apex of caudodorsal process; segment X without ventral process (Fig. 7); aedeagus long, narrowly tubular with two prominent, slender subapical spines projecting anteriorly, in lateral view shaft curved laterally in distal 1/4, recurved basally, in dorsal view shaft expanded in distal 1/4, shaft enclosed by arms of dorsal connective, attached to paired subbasal processes of aedeagus (Figs 8, 9); style long, apophysis very slender (Figs 10, 11); dorsal connective in dorsal view bifurcate, arms angle near middle, attached to subbasal processes of aedeagus (Figs 8, 9); connective in dorsal view short, arms short, narrow, stem short, rectangulate (Fig. 12); subgenital plate short, broad medially on outer lateral margin, profusely setose (Fig. 13).

Female. Segment VII with ventral sternite about twice as long as penultimate sternite, caudal margin with long, broad, slightly tapered, medial spatulate process.

Etymology. The name of this species is descriptive for two subapical, long spines on the aedeagus.

Remarks. Two subapical aedeagal processes broadens the generic concept of *Collasuyusana* and distinguishes *C. bispinata* sp.nov. from all other species in genus, each of which have only one apical, aedeagal process (NIELSON 2011b).

Genus *Crassinolanus* Nielson, 1982a: 217 (New record)

This former monobasic genus is known from two species confined to northwestern South America (Bolivia, Peru). One new species is described below.

***Crassinolanus subtumidus* sp.nov.**

(Plate 1C, Figs 14–19)

Type material. Holotype ♂: PERU: MD [Madre de Dios], P.V., Pakitsa, Zona Reservada Manu, 22.ix.1988, 400 m, Malaise trap, H. Blancas (UNMSM).

Description. Length: Male 7.00 mm, female unknown

External morphology. Moderate size, robust species. General color light to dark brown. Forewings with two large, dark brown markings on costa, veins with small yellow spots; mesonotum light brown throughout; pronotum dark brown with light brown rugulose markings; crown tannish with small, dark brown markings; eyes dark brown; face light brown throughout. Head large, narrower than pronotum, anterior margin acutely angled; crown narrow, narrower than eye width, produced about 1/3 of its entire length beyond anterior margin of eyes, lateral margins slightly convex, slightly carinate, disk depressed; eyes large, elongate ovoid; clypeus long, slightly broad, lateral margins broadly convex; clypellus inflated basally, tapered apically.

Male genitalia. Pygofer in lateral view small, short, triangulate, glabrous with small, curved caudodorsal lobe; segment X without ventral process (Fig. 14); aedeagus short,

tubular, inflated in basal 1/3 and apical 1/3 with short, curved, narrow subapical process, apex large, flanged with narrow lateral processes (Figs 15, 16); style short, apophysis long, slightly robust (Figs 17, 18); connective small, lateral arms small, narrow, stem digitate (Fig. 18); dorsal connective moderately long, narrow (Fig. 17); subgenital plate long, narrow, lateral projection at basal 1/3 on inner lateral margin, short row of very long microsetae near middle on outer lateral margin, very short microsetae on and near apex (Fig. 19).

Etymology. The name of the species is descriptive for the basally and apically inflated aedeagus.

Remarks. Two species, including *C. subtumidus* sp.nov., are known, thus relieving the genus from monobasic status. From *C. dementius* Nielson, 1982 to which it is similar in aedeagal features (NIELSON 1982a), *C. subtumidus* sp.nov. can be separated by the smaller, shorter triangulate pygofer, much shorter style and by the subgenital plate which is sparsely setose and has an inner lateral process at subbasal 1/3.

Genus *Daridna* Walker, 1858c: 319

This monobasic genus is broadly distributed in central South America. Color patterns and features of the male genitalia are highly variable. Only one species is known, listed below. Two additional species originally described in this genus by WALKER (1858a, c), *Daridna introducens* and *Daridna exoptata*, have been assigned type species of *Licontinia* Nielson, 1979 and *Korsigianus* Nielson, 1979, respectively, in the tribe Teruliini (NIELSON 1979). Only *K. exoptata* is known from Peru and is cited below.

Daridna subtangens Walker, 1858c: 320 – LO [Loreto] Tamishiyacu Tahuayo; MD [Madre de Dios, Zona Reservada, Tambopata (UNMSM); Marcapata (NIELSON 1982).

Genus *Dialodia* McKamey, 2006: 503

Dialodia occupies primarily northwestern South America (Brazil, Colombia, Ecuador, Peru). Fourteen species are recognized in the genus. Six species are known from Peru, including two new species described below.

***Dialodia angusta* sp.nov.**

(Plate 1D, Figs 20–26)

Type material. Holotype ♂: PERU: MD [Madre de Dios], Pakitsa, Zona Reservada Manu, 22.i.1988, 450 m., Malaise trap, H. Blancas (UNMSM). Paratypes: 2 ♂♂, same data as holotype (UNMSM, MLBM).

Description. Length. Male 8.60–8.70 mm, female unknown.

External morphology. Large, narrow species. General color dark brown to black; forewings with numerous small, yellow spots on veins, narrow, broken, transverse, translucent band near middle, broad translucent spots subapically, sometimes connected;

mesonotum black, with few small yellow spots; pronotum black; crown black with pale yellow spot on each side next to margins, narrow pale yellow transverse stripe on anterior margin; eyes dark brown; face black. Head short, narrower than pronotum, anterior margin broadly rounded; crown very broad, about 1/3 wider than eye width, slightly produced anteriorly, lateral margins convergent basally, disk depressed, anterior margin slightly inflated; eyes large, semiglobular; clypeus long, broad anteriorly, tapered posteriorly; clypellus about 1/3 as long as clypeus, basal half inflated at junction of clypeal suture, distal half nearly flat, with narrow medial longitudinal ridge.

Male genitalia. Pygofer in lateral view extremely narrow, glabrous, caudal margin without processes (Fig. 20); segment X without ventral processes (Fig. 20); aedeagus long, tubular, in lateral view inflated within distal 4/5, digitate in apical 1/5, in dorsal view inflated along 4/5 and apically, with two spines distad of middle arising laterally, one short, glabrous spine, one long with two secondary processes (Figs 21, 22); style long, in dorsal view narrow, sinuate in basal 1/3, in lateral view with large triangulate lobe medially (Figs 23, 24); connective, moderately large, lateral arms broad, medial ridge present, stem long, triangulate (Fig. 25); dorsal connective long, strap-shaped (Figs 21, 22); subgenital plate glabrous, long, broad medially, tapered apically (Fig. 26).

Etymology. The name of the species is descriptive for the very narrow pygofer.

Remarks. From *D. brevilobata* Nielson, 2011 to which it is similar in the pygofer and style (NIELSON 2011b), *D. angusta* sp.nov. can be separated by the configuration of the style with large, triangulate lateral lobe in lateral view, sharply triangulate in dorsal view. In *D. brevilobata* the lobe is small, lobate in lateral view, very long in dorsal view.

***Dialodia hirsuta* sp.nov.**

(Plate 1E, Figs 27–33)

Type material. Holotype ♂: PERU: JU [Junin], 0.8 km SW Puente Pan de Azucar, Rio Palca, 23.viii.1988, 1450 m., P. Lozada (UNMSM).

Description. Length. Male 7.30 mm, female unknown.

External morphology. Moderate size, narrow species. General color dark brown to black; forewings brown, veins black; mesonotum black, pronotum black; crown black anterior and lateral margins tannish; eyes dark brown; face black, ocello-ocular area tannish. Head short, narrower than pronotum, anterior margin evenly rounded; crown very broad, nearly twice as wide as eye width, slightly produced anteriorly, lateral margins slightly convergent basally, disk depressed medially to near lateral and anterior margins; eyes large, semiglobular; clypeus long, very broad in anterior 2/3, slightly tapered in posterior 1/3, lateral margins slightly sinuate; clypellus long, broad about 1/3 as long as clypeus, inflated in basal half, about as wide as clypeus at junction of clypeal suture, lateral margins constricted medially, apical half flat.

Male genitalia. Pygofer in lateral view large, triangulate, glabrous, without caudal processes (Fig. 27); segment without ventral process (Fig. 27); aedeagus moderately long, tubular in lateral view, in dorsal view constricted along middle and subapically, two medial processes arising laterally, basal one very short, distal one very long, slender,

without secondary accessory processes (Figs 28, 29); style moderately long, apophysis broad, in dorsal view with long, narrow, lateral lobe, lobe curved on outer margin (Figs 30, 31); connective with anterior arms broad, medial ridge absent, stem long, digitate (Fig. 32); dorsal connective moderately long, strap shaped (Figs 28, 29); subgenital plate long, narrow, finely setaceous (Fig. 33).

Etymology. The name of the species is descriptive for the finely setaceous subgenital plate.

Remarks. From *D. longilobata* Nielson, 2011 to which it is nearest, *D. hirsuta* sp.nov. can be distinguished by the complete lack of general habitus colorations (highly visible and very distinctive in *D. longilobata*: NIELSON 2011b), margin of outer lateral lobe of style curved in dorsal view, sharply triangulate pygofer and narrower, setaceous subgenital plate.

Dialodia bispinata Nielson, 2011b: 30 – Tamishiyacu, Tahuayo (UNMSM).

Dialodia glabrosa (Nielson, 1982a): 224 – Oxapampa (UNMSM).

Dialodia pectinata (Nielson, 1982a): 225 – Monson Valle, Tingo Maria, Cuzco; Huanuco, Cayumba, Puente, Rio Huaga Valle; Puerto Maldonado, Madre de Dios; Napo, Rio Pano near Tena (NIELSON 1982a).

Dialodia proxima (Nielson, 1982a): 227 – Tambo Enenas Campo Del Piches (NIELSON 1982a).

Genus *Evansolidia* Nielson 1982a: 279

The genus is widely distributed in South America (Bolivia, Brazil, Colombia, Guyana, French Guiana, Peru). Colombia and Peru are especially rich in species. Twenty one species, including four new species described herein comprise the genus. Six species occupy Peru. Species described herein have remarkably similar color patterns of black and yellow, striped markings with variation.

***Evansolidia complurea* sp.nov.**

(Plate 1F, Figs 34–40)

Type material. Holotype ♂: PERU: MD [Madre de Dios], Z.R. [Zona Reservada], Tambopata, 290 m, 14.iii.87, P. Lozado (UNMSM). Paratype: 1 ♂, same data as holotype, except 24–25.iii.87 (MLBM).

Description. Length. Male 7.60–7.80 mm, female unknown.

External morphology. Moderate size, robust species. General color similar to previously described species. Pronotum dominated by yellow with fewer black markings. Head large, narrower than pronotum, anterior margin obtusely rounded; crown longer than wide, narrower than width of eyes, slightly produced anteriorly, lateral margin convergent basally; clypeus long, narrow, lateral margins broadly convex; clypellus narrow, inflated in basal half, constricted medially, flared apically.

Male genitalia. Pygofer in lateral view triangulate, glabrous, with small lobe apically (Fig. 34); segment X without ventral process (Fig. 34); aedeagus moderately long, tubular with tuft of several setae medially, four scattered setae subapically (Figs 35, 36); style short, in lateral view broad in basal 2/3, narrowed, curved in distal 1/3, in dorsal view with small digitate subapical process (Figs 37, 38); connective small, anterior arms narrowed anteriorly, medial ridge present, stem small subovate (39); dorsal connective moderately long (Figs 35, 36); subgenital plate narrow, sinuate, glabrous (Fig. 40).

Etymology. The species name is descriptive for several setae on the aedeagal shaft grouped medially and subapically.

Remarks. This species is nearest to *E. gracilitas* Nielson, 2011 and can be distinguished by the narrowed, apical 1/3 of the style in lateral view and by the subgenital plate which is sinuate and longer than the aedeagus (*cf.* NIELSON 2011b).

***Evansolidia flangata* sp.nov.**

(Plate 1G, Figs 41–47)

Type material. Holotype ♂: PERU: LO [Loreto], Tamishiyacu, Tahuayo, August 2009, 04°37'16"/073°18'677, Malaise Trap, T. J. A. Faasen (UNMSM).

Description. Length. Male 7.50–7.70 mm, female unknown.

External morphology. Moderate size, robust species. General color black with yellow markings; forewings black with claval veins yellow in apical half, cells translucent in basal 2/3, black in apical 1/3, yellow spot at base; mesonotum yellow, black transverse band medially, one black, triangulate marking on each side of middle on anterior margin; pronotum black, narrow, transverse, yellow band anteriorly, short transverse black band below crown; crown yellow with black stripe on each side of middle; eyes dark brown; face yellow with two broad, black stripes on clypeus, joined above clypeal suture, black to apex of clypellus. Head large, narrower than pronotum, anterior margin obtusely rounded; crown narrower than width of eyes, longer than wide, produced about 1/4 entire length beyond anterior margin of eyes, lateral margins convergent basally; eyes large, semiglobular; clypeus long, narrow, lateral margins broadly convex; clypellus about 1/3 as long as clypeus, inflated in basal half, about as wide as clypeus at juncture of clypeal suture, constricted below middle, flared apically.

Male genitalia. Pygofer in lateral view somewhat quadrate, glabrous, small lobe apically (Fig. 41); segment X without ventral process (Fig. 41); aedeagus long, tubular, in lateral view with dorsal flange along basal 1/3, two long processes distad of flange, in lateral view two long processes distad of middle, one below middle, one subapical, each arising from lateral margin, gonopore distad of flange, exiting dorsally (Figs 42, 43); style long, robust, constricted along distal 1/4 (Figs 44, 45); connective with broad arms, tapered anteriorly, medial ridge present, stem small, oblong (Fig. 46); dorsal connective moderately, strap-shaped (Figs 42, 43); subgenital plate long, inflated in outer lateral margin along middle to tapered apex, glabrous (Fig. 47).

Etymology. The name of the species is descriptive for the translucent cells along the costa of the forewing.

Remarks. From *E. unilamina* Nielson, 2011 to which it is similar in aedeagal and stylar features, *E. flangata* sp.nov. can be separated by the flange and two spines situated subbasally on the dorsal margin of the aedeagus (flange absent, single long laminate spine in *E. unilamina*; NIELSON 2011b).

***Evansolidia minuta* sp.nov.**

(Plate 1H, Figs 48–54)

Type material. Holotype ♂: PERU: MD [Madre de Dios], Z.R. [Zona Reservada], Tambopata, 290 m, 7.iii.87, P. Lozada (UNMSM).

Description. Length. Male 7.00 mm, female unknown.

External morphology. Moderate size, slender species. General color throughout very similar to *E. flangata* sp.nov. with some variation in patterns; facial color and patterns similar to *E. flangata*. Head large, narrower than pronotum, anterior margin obtusely rounded; crown short (shorter than in *E. flangata*), slightly produced anteriorly, slightly narrower than width of eyes, lateral margins convergent basally; eyes large, semiglobular; clypeus long narrow, lateral margins broadly convex; clypellus as in *E. flangata*.

Male genitalia. Pygofer in lateral view broadly triangulate, few setae, small lobe caudodorsally (Fig. 48); segment X without ventral process (Fig. 48); aedeagus short, tubular with four short seta-like spines, two near base, two medially (Figs 49, 50); style short, slightly broad, in lateral view with flange on inner lateral margin of apophysis, small lobe subapically (Figs 51, 52); connective small, arms broad, medial ridge absent, stem large, ovate (Fig. 53); dorsal connective moderately long, strap-shaped (Fig. 49, 50); subgenital plate short, slightly narrow throughout, few setae apically (Fig. 54).

Etymology. The species name is descriptive for the very small, subapical lobe on each style.

Remarks. This species is most similar to *E. inflata* Nielson, 2011 and can be distinguished by the narrower aedeagal shaft, by the narrower style and much short apical process in dorsal view (*cf.* NIELSON 2011b).

***Evansolidia pectinis* sp.nov.**

(Plate 1I, Figs 55–61)

Type material. Holotype ♂: PERU: MD [Madre de Dios], 15 km E. Puerto Maldonado, 2.ii.1990, 200 m, P. Lozada (UNMSM).

Description. Length. Male 7.60 mm, female unknown.

External morphology. Moderate size, slender species. General color throughout similar to species described above with slight variation; facial color dark red instead of black. Head large, narrower than pronotum, anterior margin obtusely rounded; crown longer than wide, narrower than width of eyes, slightly produced anteriorly, lateral margins convergent basally; eyes large, semiglobular; clypeus long, narrow, lateral margins broadly convex; clypellus narrow, inflated in base half, narrowed medially, flared apically.

Male genitalia. Pygofer in lateral view broadly inflated along anterior and posterior margins, with few short, apical setae, small lobe apically, and short subapical mesal digitate lobe (Fig. 55); segment X without ventral process (Fig. 55); aedeagus moderately long, tubular, slightly inflated in distal 1/4 in dorsal view, large, spinaceous lobe subbasally on dorsal margin in lateral view, two short setae below on ventral margin, shaft with long row of short spines medially to near apex (Figs 56, 57); style broad, in lateral view strongly curved medially, apex asymmetrically bifurcate (Figs 58, 59); connective large, anterior arms broad, medial ridge present, stem semiovate (Fig. 60); dorsal connective, very long in lateral view (Fig. 58) subgenital plate short, sinuate, glabrous (Fig. 61).

Etymology. The species name is descriptive for the row of short spines on the aedeagal shaft.

Remarks. *Evansolidia pectinis* sp.nov. has a row of short teeth on aedeagal shaft similar to *E. recurvata* Nielson, 2011 and *E. inca* Nielson, 2011 but can be distinguished from both species by the presence of caudoventral pygofer process and the aedeagus in lateral and dorsal views with a large, setaceous, subbasal flange which are absent in both species (NIELSON 2011b).

Evansolidia setacea Nielson, 2011b: 33 – Madre de Dios, Rio Tambopata Res., 30 km (air) SW Pto. Maldonado (NIELSON 2011b).

Evansolidia inca Nielson, 2011b: 35 – Madre de Dios, Rio Tampapata Res., 30 km (air) SW Pto. Maldonado (NIELSON 2011b).

Evansolidia sp. – 2 females, MD [Madre de Dios], Z. R. [Zona Reservada], Tambopata (UNMSM).

Genus *Spinolidia* Nielson 1982a: 286

Spinolidia occupies primarily northwestern South America (Bolivia, Brazil, Colombia, Ecuador, Peru). Six species are known in the genus; three occur in Peru including one new species described below.

Spinolidia glabrosa sp.nov.

(Plate 2A, Figs 62–68)

Type material. Holotype ♂: PERU: JU [Junin], 1–3 km SW Mina Pachita, 2100 m, 26.viii.83, P. Lozada (UNMSM).

Description. Length. Male 8.20 mm, female unknown.

External morphology. Moderate size, robust species. General color uniform black to dark brown with numerous, nearly uniform, small yellow spots; eyes dark brown; face black, most of clypeus and basal half of clypellus light yellow, anterior margin of clypeus and distal half of clypellus black. Head small, distinctly narrower than pronotum, anterior

margin broadly rounded, slightly produced anteriorly; crown short, about as wide as long, narrower than eye width, lateral margins convergent basally; eyes large, elongate ovoid; clypeus long, broad anteriorly, slightly tapered to clypeal suture; clypellus narrow, slightly inflated basally, apex flared.

Male genitalia. Pygofer in lateral view subquadrate, glabrous with small caudodorsal lobe (Fig. 62); aedeagus long, tubular, sinuate, glabrous, flange near middle (Figs 63, 64); style short, apophysis broad (Figs 65, 66); connective broadly U-shaped, membrane, middle ridge not apparent, stem long, digitate (Fig. 67); dorsal connective long, narrow (Figs 63, 64); subgenital plate long, narrow, sinuate, setaceous apically (Fig. 68).

Etymology. The name of the species is descriptive for the lack of processes on the aedeagus.

Remarks. This species can be distinguished from all known species by the glabrous aedeagus.

Spinolidia osborni Nielson, 1982a: 288 – SW Tingo Maria; Utcuyacu, Tarma (NIELSON 1982a).

Spinolidia spinolai Nielson, 1982a: 292 – PA [Pasco], Oxapampa, San Juan de Cacazu (UNMSM). (**New record**)

Genus *Tinocripus* Nielson, 1982a: 212

The genus is confined primarily to northwestern South America (Brazil, Colombia, Ecuador, Peru). Nine species are known; four species occur in Peru, including one new species described below.

***Tinocripus minutus* sp.nov.**

(Plate 2B, Figs 69–75)

Type material. Holotype ♂: PERU: JU [Junin], 1.3 km SE Mina Pichita, 2100 m, 24.viii.88, P. Lozada (UNMSM).

Description. Length. Male 7.30 mm, female unknown.

External morphology. Moderate size, slender species. General color dark brown throughout; face dark brown. Head small, distinctly narrower than pronotum, anterior margin acutely angled; crown narrower than eyes; longer than wide, produced anteriorly beyond anterior margin of eyes about 1/3 entire length, elevated, lateral margins slightly convergent basally; eyes large, semiglobular; clypeus long, lateral margin narrow anteriorly, slightly expanded posteriorly before juncture of clypeal suture; clypellus inflated basally, slightly wider than clypeus at juncture of clypeal suture, tapered to rounded apex.

Male genitalia. Pygofer in lateral view narrow, with long curved caudodorsal process and long narrow caudoventral process (Fig. 69); segment X without ventral

process (Fig. 69); aedeagus moderately long tubular, glabrous, in lateral view abruptly curved laterally in distal 1/5 (Figs 70, 71); style short, apophysis long very narrow (Figs 72, 73); connective small, lateral arms very narrow, with membrane or medial ridge, stem large, subovate with two short apical processes (Fig. 74); dorsal connective long, narrow (Figs 70, 71); subgenital plate long, broad, sinuate, glabrous (Fig. 75).

Etymology. The name of the species is descriptive for the small male genitalia.

Remarks. From *T. gladius* Nielson, 1982 to which it is most similar in aedeagal features, *T. minutus* sp.nov. can be distinguished by the very slender apophysis (robust in *T. gladius*) of the style and small, short connective (very broad in *T. gladius*: NIELSON 1982a).

Tinocripus spinosus Nielson, 1982a: 214 – Monson Valley, Tingo Maria (NIELSON 1982a).

Tinocripus gladius Nielson, 1982a: 214 – Torentoy Canyon (base of Machu Pichu (NIELSON 1982a).

Tinocripus schlingeri Nielson, 1982a: 217 – 17 km NE of Huanuco (NIELSON 1982a).

TRIBE TERULIINI NIELSON, 1979: 10

The tribe is restricted to the New World except for one introduced species (*Biadorus africanus* (Spångberg, 1878)) in West Africa (Ivory Coast, Ghana, Sierra Leone, Cameroon, Nigeria, Guinea, Congo). A revised key covering the Peruvian genera, except *Loretolidia* gen.nov., is presented in NIELSON (2011a).

Genus *Articoelidia* Nielson 1979: 97

Articoelidia is restricted to northwestern South America (Bolivia, Ecuador, Peru). Five species are known, including three from Peru and one new species described below.

Articoelidia humboldti sp.nov.

(Plate 2C, Figs 76–82)

Type material. Holotype ♂: PERU: UC [Ucayali], Bosque Alexander Humboldt, 31.vii.1986, D. Silva (UNMSM).

Description. Length. Male 8.80 mm, female unknown.

External morphology. Moderately large, robust species. General color light reddish brown; forewing venation dark brown; mesonotum light brown; pronotum light brown, anterior margin tannish; crown tannish, eyes tannish, suffused with dark brown markings; face light tannish, clypeus bordered with longitudinal reddish band. Head short, broad, narrower than pronotum, anterior margin broadly rounded; crown short, broad, wider than width of eyes, lateral margins nearly parallel; eyes moderately large, semiglobular;

clypeus long, very broad, lateral margin broadly convex; clypellus narrow in basal 2/3, flared in apical 1/3.

Male genitalia. Pygofer in lateral view large, with very long, robust caudodorsal process (Fig. 76); segment X with short, ventrally curved, ventral process (Fig. 76); aedeagus long, tubular, in lateral view long broadly curved, somewhat sinuate, glabrous (Figs 77, 78); style long, somewhat robust, slightly bulbous subapically, small spine apically (Figs 79, 80); dorsal connective very long, slender (Figs 77, 78); connective moderately large, lateral arms narrow, medial ridge present, stem long, bulbous apically (Fig. 81); subgenital plate long, broad, tapered apically, curved laterally, setaceous in distal 1/3 on outer lateral margin (Fig. 82).

Etymology. This species is named in honor of Alexander von Humboldt (1769–1859), prominent explorer of South America.

Remarks. All species of *Articoelidia* have aedeagal configurations so similar in lateral view that other genitalia characters are necessary to separate the species. This species is nearest to *A. tumida* Nielson, 1983 (from Ecuador) and can be separated by the broader subgenital plate and tapered caudodorsal pygofer process (inflated apically in *A. tumida*: NIELSON 1983d).

Articoelidia bicurvata Nielson, 1979: 98 – Monson Valle, Tingo Maria; Hacienda Puma, Rio Azul Bridge, Puente Azul E of Tingo Maria (NIELSON 1979).

Articoelidia elongata Nielson, 1979: 100 – Monson Valle, Tingo Maria; Rio Santiago (NIELSON 1979).

Articoelidia ensigera (Osborn, 1924): 435; NIELSON (1979): 101 – Callanga; Cusco, Hacienda Maria; Cusco, Santa Isabel; Madre de Dios; Rio Maranon; Upper Rio Maranon (NIELSON 1979).

Articoelidia sp. – 1 female, Yarimacocha, Rio Uenyeli (UNMSM).

Genus *Carinolidia* Nielson, 1979: 17

This genus, formerly monobasic, is recognized only in Peru. Two species are known, including one new species described below.

***Carinolidia hemicycla* sp.nov.**

(Plate 2D, Figs 83–89)

Type material. Holotype ♂: PERU: MD [Madre de Dios], Puerto Maldonado, 27.i.1990, 200 m, P. Lozada.

Description. Length. Male 7.40 mm, female unknown.

External morphology. Moderate size, slender species. General color yellow with large, dark brown markings on forewings; mesonotum yellow tinged with white; pronotum yellow; crown yellow, eyes light brown; face light yellow with light brown

markings; clypeus light brown, medial carina yellowish, clypellus tinged with light brown. Head moderately large, distinctly narrower than pronotum, anterior margin obtusely rounded; crown narrow, slightly narrower than eyes, distinctly produced anteriorly about 1/3 entire length beyond anterior margin of eyes, lateral margins highly carinate, lateral margins concave; eyes large, semiglobular; clypeus long, broad, lateral margins broadly convex; clypellus narrow, lateral margins slightly concave.

Male genitalia. Pygofer in lateral view subquadrate, caudodorsal process long, digitate, caudoventral process absent (Fig. 83); segment X without ventral process (Fig. 83); aedeagus long, narrow, tubular, broadly curved in lateral view with row of long setae distad of middle on ventral margin, base semicircular, gonopore near middle, exiting laterally (Figs 84, 85); style very long, longer than aedeagus, apophysis narrow, spinate apically (Figs 86, 87); dorsal connective short, narrow in lateral view, broad, basally, tapered apically (Figs 84, 85); connective broad, arms narrow, membrane small, middle ridge absent, stem long, very narrow (Fig. 88); subgenital plate long, narrow, glabrous (Fig. 89).

Etymology. The name of the species is descriptive for the semicircular base of the aedeagus in lateral view (angulate in the related *C. nervosa* (Fabricius, 1803)).

Remarks. The following features will further distinguish the species from *C. nervosa* (F.): style with single apical spine and pygofer without caudoventral process (*cf.* NIELSON 1979).

Carinolidia nervosa (Fabricius, 1803): 85; NIELSON (1979): 15 – San Martin, Bella Vista (NIELSON 1979).

Genus *Derriblocera* Nielson, 1983e: 560

This genus is known only from Peru from one species listed below.

Derriblocera ornata Nielson, 1983e: 561 – Madre de Dios, Atalaya (NIELSON 1983e).

Genus *Docalidia* Nielson 1979: 179

This genus is the largest group of coelidiine leafhoppers in the New World, now comprised of 179 known species. In Peru, 78 species have been recorded and are treated in NIELSON 2011a (with key) and in NIELSON & LOZADA (2013) (with 19 new species).

Genus *Hastalidia* Nielson 1996: 136

Two species are known in this rare genus, one each confined to Brazil and Peru.

Hastalidia acinaca Nielson, 2011a: 21 – Madre de Dios, Rio Tambopata Res., 30 km (air) SW Pto. Maldonado (NIELSON 2011a).

Genus *Korsigianus* Nielson, 1979: 319

Only one species is known in the genus from Peru and Guyana.

Korsigianus exoptatus (Walker, 1858c): 320; NIELSON (1979): 320 – San Martin, Bella Vista (NIELSON 1979).

***Loretolidia* gen.nov.**

Type-species. *Loretolidia basispinosa* sp.nov., here designated.

Description. Moderately large, slightly robust leafhoppers. General color yellow with three broad, transverse, brown bands on forewings; face yellow with large brown marking medially on clypeus. Head short, narrower than pronotum, anterior margin broadly rounded; crown broad, slightly narrower than width of eyes, slightly produced anteriorly; eyes large, elongate ovoid; pronotum moderately large, slightly longer medially than crown; mesonotum large, nearly twice as long medially as pronotum, forewings broad, venation typical of subfamily; clypeus and clypellus typical. Male pygofer with caudodorsal and caudoventral processes; aedeagus very long, narrow, style long, very narrow; dorsal connective short; connective small, arms broad, membrane and middle ridge present; subgenital plate long, arrow with patch of setae restricted to base.

Etymology. Named for the province of Loreto in Peru.

Remarks. The monobasic genus is similar to *Docalidia* in general habitus and can be distinguished by the presence of long, subbasal aedeagal spine, narrow subgenital plate with patch of basal setae, long narrow style and long aedeagal shaft with bulbous, spinate apex.

***Loretolidia basispinosa* sp.nov.**

(Plate 2E, Figs 90–96)

Type material. Holotype ♂: PERU: LO [Loreto], Requena, Jenaro Herrera, 73°40'W 4°55'S, 1.ix.1990, P. Lozada. (UNSMN).

Description. Length. Male 8.00 mm, female unknown.

External morphology. General habitus as in description of genus.

Male genitalia. Pygofer in lateral view large, glabrous, caudodorsal process long, narrow, curved dorsally; caudoventral process long, narrow, straight (Fig. 90); segment X with large ventral process, apex with small dentate spines (Fig. 90); aedeagus in dorsal view very long, very slender, in lateral view, bulbous apically with small apical spine and long spine subbasally (Figs 91, 92); style in dorsal and lateral views with long, very slender apophysis (Figs 93, 94); dorsal connective short, strap-shaped (Figs 91, 92); connective with broad arms, stem small, semiovate (Fig. 95); subgenital plate long, narrow, sinuate with patch of short setae basally along inner lateral margin (Fig. 96).

Etymology. The name of the species is descriptive for the prominent, subbasal spine on the aedeagus.

Remarks. *Loretolidia basispinosa* sp.nov. is the only known species in the genus.

Genus *Marcapatiana* Nielson, 1979: 139

Marcapatiana remains a monobasic genus known only from Peru.

Marcapatiana emmrichi Nielson, 1979: 139 – PA [Pasco], San Juan de Cacazu, 830 m. (UNMSM); Marcapata; Tingo Maria, Varias-Aguaytia (NIELSON 1979).

Genus *Paracarinolidia* Nielson, 1979: 26

This small genus has 9 known species, including two species reassigned to the genus by NIELSON & ZAHNISER (2012) and two new species described below. The genus is broadly distributed from French Guiana and Brazil westward to Peru, Colombia and Ecuador. Three species occur in Peru, one of which shares the countries of Ecuador and Colombia.

***Paracarinolidia distincta* sp.nov.**

(Plate 2F, Figs 97–103)

Type material. Holotype ♂: PERU; LO [Loreto], Requena, 4.5 km Carretera Jenaro Herrera-Puerto Angamos, 31.viii.1990, P. Lozada (UNMSM). Paratypes: 1 ♂, same data as holotype, except 73°40'W 4°55'S, 21.viii.1990 (UNMSM); 1 ♂ (damaged), LO [Loreto], Centro de Investigacion, Jenaro Herrera, 73°45'W 4°55'S, 20.viii.1990, P. Lozada (MLBM); 2 ♀♀, LO [Loreto], Centro de Investigacion, Jenaro Herrera, 73°45'W 4°55'S, 25.x.1989, P. Lozada (UNMSM); 1 ♀, LO [Loreto], Requena Jenaro Herrera, 73°40'W 4°55'S, 20.viii.1990, P. Lozada (MLBM).

Description. Length. Male 7.40–7.60 mm, female 7.90 mm.

External morphology. Moderate size, slender species. General color brown to black with numerous small to large yellow to ivory markings; forewings black with few small, yellow spots on veins, numerous small to large, irregular size, ivory markings, four large along costa, one large at apex of clavus, remainder scattered; mesonotum dark brown, sometimes with 1–3 small ivory spots apically; pronotum dark brown; crown black with two yellow, subapical spots near anterior margin, two yellow stripes on each side of middle on posterior margin; eyes light grey (holotype) to dark brown; face ivory to light brown (female) except for black anterior 1/3 of clypeus. Head moderately large, produced, much narrower than pronotum, anterior margin acutely angle; crown narrow, much narrower than width of eyes, distinctly produced anteriorly about 1/3 entire length beyond anterior margin of eyes, anterior margin angled, lateral margins parallel, distinctly carinate; clypeus long, narrow, lateral margins broadly convex; clypellus narrower than clypeus, lateral margins parallel.

Male genitalia. Pygofer in lateral view narrowly triangulate, glabrous, caudodorsal process short, broad basally, tapered apically, curved dorsally, caudoventral process small, lobe-like (Fig. 97); segment X with narrow ventral process (Fig. 97); aedeagus long, tubular, in lateral view curved dorsally at basal and apical 1/5, with one very long

subapical process directed basally, cluster of seven short to long processes basad of subapical process (Figs 98, 99); style long, nearly as long as aedeagus, apophysis very long, narrow (Figs 100, 101); dorsal connective short, digitate (Figs 98, 99); connective atypical, small, in dorsal view broad basally, vase-shaped, medial ridge present, two short digitate processes on anterior margin (Fig. 102); subgenital plate long, broad along middle, glabrous (Fig. 103).

Female. Sternite VII large, about twice as long as penultimate segment, posteriolateral margins produced to distinct sharp point.

Etymology. The name of the species is descriptive for the distinctive vase-like connective.

Remarks. From *P. exilis* sp.nov. to which it is similar in aedeagal and styler features, *P. distincta* sp.nov. can be distinguished by the digitate caudoventral pygofer process and the vase-shaped connective.

***Paracariniolia exilis* sp.nov.**

(Plate 2G, Figs 104–111)

Type material. Holotype ♂: PERU: PA [Pasco], Qbde. Castilla, 345 m, 1010°S. 7515'W. [Error?] l.xi.86, P. Lozada (UNMSM).

Description. Length. Male 7.70 mm, female unknown.

External morphology. Moderate size, slender species. General color brown to black with numerous small, pale ivory spots on veins, numerous pale ivory, irregularly shaped markings in cells on forewings; mesonotum dark brown with several very small yellow markings; pronotum dark brown, bullae yellow; crown yellow with suffused light brown band medially and on anterior margin; eyes dark brown; face yellow with light to dark brown markings; clypeus yellow, anterior 1/3 dark brown, short lateral, brown stripes below on lateral margins, apex of face tinged with light brown. Head large, distinctly narrower than width of eyes, anterior margin obtusely angled; crown long, narrower than width of eyes, produced anteriorly about 1/3 entire length beyond margin of eyes, lateral margins distinctly carinate; eyes large, semiglobular; clypeus long, broad, lateral margins convex, clypellus broad, narrower than clypeus, lateral margins nearly parallel.

Male genitalia. Pygofer in lateral view large, triangulate elongate, glabrous, caudodorsal process short, caudoventral process short, broadly bifurcate apically, ventral arm sharply pointed, dorsal arm digitate (Fig. 104); segment X with digitate ventral process (Fig. 104); aedeagus in dorsal view long, base broad, shaft very narrow, in lateral view broadly curved, armed with several moderately long to very long processes (Figs 105, 106); style nearly as long as aedeagus, apophysis very narrow (Figs 107, 108); dorsal connective short, strap-shaped (Fig. 105); connective atypical, in dorsal view broadly constricted medially, in lateral view broad basally, narrowed apically (Figs 109, 110); subgenital plate long, narrow, broad in middle 3/5, glabrous (Fig. 111).

Etymology. The name of the species is descriptive for the thin apophysis of the style and shaft of the aedeagus.

Remarks. From *P. distincta* sp.nov., to which it is similar in male genitalia, *P. exilis* sp.nov. can be separated by the broadly bifurcate pygofer caudoventral process (single,

lobe-like in *P. distincta*) and by the longer, narrower connective in dorsal view (short, broad, narrowly constricted medially in *P. distincta*).

Paracarinolidia differta Nielson, 1979: 29 – Cusco, Hacienda Maia; Putu, Mayo Dist., La Charra (NIELSON 1979).

Genus *Perulidia* Nielson, 1979: 103

The genus is comprised of 8 species, including three new species described below. The range is primarily western South America. Five species occupy Peru, including one shared by Peru and Brazil, one in Brazil, one in Bolivia and one in Ecuador.

Perulidia forameninis sp.nov.

(Plate 2H, Figs 112–118)

Type material. Holotype ♂: PERU: MD [Madre de Dios], Z.R. [Zona Reservada], Tambopata, 290 m, 21.iii.87, P. Lozada (UNMSM).

Description. Length. Male 8.20 mm, female unknown.

External morphology. Moderately large, robust species. General color light brown to black; forewings light brown on clavus and costa, black between; mesonotum black, pronotum light brown; crown yellow, eyes dark brown; face light brown. Head large, narrower than pronotum, anterior margin broadly rounded; crown broad, wider than width of eyes, slightly produced anteriorly, lateral margins slightly convergent basally; eyes large, semiglobular; clypeus long, broad, lateral margins broadly convex; clypellus narrower than clypeus, lateral margins parallel.

Male genitalia. Pygofer in lateral view large, broadly triangulate, caudodorsal process very small, lobe-like with several macrosetae apically, caudoventral process absent (Fig. 112); segment X absent (Fig. 112); aedeagus long, broadly tubular, in lateral view broadly curved, with small lobe apically, gonopore medial (Figs 113, 114); style very long, much longer than aedeagus, robust, in lateral view with longitudinal foramen medially, row of short microsetae on lateral margin and apex in distal 3/7, in dorsal view microsetae covering in distal 1/7 (Figs 115, 116); dorsal connective very long, sinuate in lateral view (Figs 113, 114); connective large, anterior arms narrow, curved anteriorly, membrane and medial ridge absent, stem large, subquadrate (Fig. 117); subgenital plate very long, narrow, glabrous, row of setal pits in distal 2/7, long, linear indentation in distal half (Fig. 118).

Etymology. The name of the species is descriptive for the elongate excavation along the middle of the style.

Remarks. From *P. macrosetacea* sp.nov., to which it is most closely related, *P. forameninis* sp. nov. can be separated by the evaginated style and narrow, straight, glabrous subgenital plate (curved with apical macrosetae in *P. macrosetacea*).

***Perulidia macrosetacea* sp.nov.**

(Plate 3A, Figs 119–125)

Type material. Holotype ♂: PERU: Yarinacocha (Rio Ucayeli), 17.viii.51, F. Hocking (UNMSM).

Description. Length. Male 8.20 mm, female unknown.

External morphology. Moderately large, robust species. General color tannish to dark brown; forewings tannish in clavus and costa, dark brown between; mesonotum dark brown; pronotum light brown; crown tannish, eyes brown; face light tannish; clypeus tannish with red, longitudinal stripe on lateral margins. Head large, narrower than pronotum, anterior margin broadly rounded; crown broad, slightly wider than width of eyes, slightly produced anteriorly, lateral margins slightly convergent basally; eyes large, semiglobular; clypeus long, broad, lateral margins broadly convex; clypeus narrow, lateral margins parallel to flared apex.

Male genitalia. Pygofer in lateral view narrowly triangulate, caudodorsal process very short, digitate with few macrosetae apically, caudoventral process absent (Fig. 119); segment X without ventral process (Fig. 119); aedeagus long, tubular, robust, glabrous, in lateral view broadly convex, with small triangulate lobe medially, gonopore medial (Figs 120, 121); style very long, longer than aedeagus, robust with row of short, dense microsetae on distal 4/5 of lateral margin, small subapical lobe in dorsal view (Figs 122, 123); dorsal connective very long, broad in lateral view (Figs 120, 121); connective large, arms narrow, projecting caudolaterally, membrane absent, medial ridge present, stem long, pendulate (Fig. 124); subgenital plate very long, broadly convex, long linear indentation adjacent to outer lateral margin, few long, subapical macrosetae on outer lateral margin, few subapical microsetae on inner lateral margin (Fig. 125).

Etymology. The name of the species is descriptive for the macrosetae on the subgenital plate.

Remarks. Among five *Perulidia* species from Peru, *P. macrosetacea* sp.nov. is nearest to *P. forameninis* sp.nov. and can be separated by the subgenital macrosetae (absent in *P. forameninis*) and the long linear indentation that parallels the outer lateral margin (apical to middle of inner lateral margin in *P. forameninis*).

***Perulidia torqueresi* sp.nov.**

(Plate 3B, Figs 126–132)

Type material. Holotype ♂: PERU: MD [Madre de Dios], 15 km E. Puerto Maldonado, 6.ii.1990, 200 m, P. Lozada (UNMSM). Paratype: 1 ♂, MD [Madre de Dios], Z. R. [Zona Reservada], Tambopata, 290 m, 10.iii.87, P. Lozada (MLBM).

Description. Length. Male 8.20 mm, female unknown.

External morphology. Moderately large, robust species. General color tannish to black; forewings as in *P. macrosetacea* sp.nov., mesonotum black; pronotum light brown; crown tannish; eyes light brown; face light brown; clypeus with longitudinal red stripe on lateral margins; clypellus dark brown. Head large, narrower than pronotum, anterior margin broadly rounded, crown broad, slightly wider than width of eyes, slightly produced anteriorly, lateral margins parallel; eyes large, semiglobular; clypeus long, broad, lateral margins broadly convex; clypellus narrow, lateral margins nearly parallel, apex flared.

Male genitalia. Pygofer in lateral view large, triangulate, few macrosetae apically, one seta below, caudodorsal process very short, bulbous (Fig. 126), caudoventral process absent (Fig. 126); aedeagus long, tubular, in lateral view broadly convex, gonopore medial, in dorsal view shaft slightly constricted along middle (Figs 127, 128); style very long, robust, twisted apically, in lateral view with row of short, dense microsetae at distal 2/7 crossing over from one margin to next, rounding apex in distal 1/7 (Figs 129, 130); dorsal connective long, narrow (Figs 127, 128) connective large, nearly T-shaped, lateral arms narrow, with medial ridge or membrane, stem large, with medial ridge (Fig. 131); subgenital plate very long, broad, with line of scattered microsetae in distal 1/3 (Fig. 132).

Etymology. The name of the species is descriptive for the twisted apex of the style.

Remarks. *Perulidia torqueresi* sp.nov. can be separated from all other species by the unique combination of twisted style and a line of scattered setae in the apical 1/3 of the subgenital plate.

Perulidia crista Nielson, 1979: 105 – Yurac; Marcapata (NIELSON 1979).

Perulidia dentata Nielson, 1983a: 371 – Jurimaguas; Pachita (NIELSON 1983a).

Genus *Sapingia* Nielson, 1979: 117

This widely distributed genus has 12 species including one new species described below. Four species occupy Peru, four are known in Bolivia, two in Brazil, one in Venezuela and one is widely distributed in Argentina, Bolivia, Brazil, Paraguay and Uruguay.

Sapingia elongistyla sp.nov.

(Plate 3C, Figs 133–139)

Type material. Holotype ♂: PERU: LO [Loreto], Requena, km 4.5 Carretera Jenaro, Herrera-Puerto Angamos, 28.viii.1990, P. Lozada (UNMSM).

Description. Length. Male 7.00 mm, female unknown.

External morphology. Small, robust species. General color light brown throughout with dark brown markings on mesonotum and crown; eyes dark brown; face light to dark brown, clypeus dark brown. Head large, narrower than pronotum, anterior margin broadly rounded; crown broad, slightly wider than width of eyes, produced about 1/3 beyond anterior margin of eyes, lateral margins slightly convergent basally; eyes large, semiglobular; clypeus long, broad, lateral margins broadly convex, clypellus narrow, flared apically.

Male genitalia. Pygofer in lateral view triangulate, caudodorsal process short, digitate, few short, microsetae on dorsal margin, caudoventral process short, digitate (Fig. 133); segment X without ventral process (Fig. 133); aedeagus long, shaft narrow, tubular, in lateral view curved abruptly dorsally in basal 1/5 and apical 1/5, base large, cluster of moderately long processes near middle of shaft, two very long processes distad of cluster,

two short spines in apical 1/5 (Figs 134, 135); style very long, longer than aedeagus, apophysis very slender (Figs 136, 137); dorsal connective in lateral view short (Fig. 134); connective large, anterior arms broad, two short processes on anterior margin, ventral process (medial ridge) elongate/triangulate, stem very long, triangulate (Fig. 138); subgenital plate long, very broad to narrowed subapex, few short microsetae apically (Fig. 139).

Etymology. The name of the species is descriptive for the very long style.

Remarks. *Sapingia elongistyla* sp.nov. can be separated by the length of the style which is longer than in all other known species.

Sapingia ornatipennis (Linnavuori, 1956): 26; NIELSON (1979): 118 – Marcapata (NIELSON 1979).

Sapingia veprecula Nielson, 1979: 125 – Torentoy Canyon, Machu Pichu: Callanga (NIELSON 1979).

Sapingia inversa Nielson, 1979: 128 – Callanga (NIELSON 1979).

Genus *Stalolidia* Nielson, 1979: 146

Stalolidia is widely distributed in South America. Sixteen species are known, including three new species described below. Eight species occur in Peru, one of which is shared with Brazil and one with Bolivia.

***Stalolidia membrana* sp.nov.**

(Plate 3D, Figs 140–146)

Type material. Holotype ♂: PERU: MD [Madre de Dios], Pakitza, Zona Reservada Manu, 28.vi.1988, P. Lozada (UNMSM).

Description. Length. Male 9.20 mm, female unknown.

External morphology. Large, robust species. General color light brown to black with two tannish broad, transverse bands and numerous tannish spots on forewings; mesonotum black with few tannish spots; pronotum black, surface bullae tannish; crown tannish; eyes light brown; face tannish, clypeus black with longitudinal carina tannish, lateral margins marked with short, curved, transverse tannish stripes; clypellus with broad, black stripe in basal half on each side of middle, lorae black, outer submargins of genae broadly to narrowly black.

Male genitalia. Pygofer in lateral view large, triangulate, strongly chitinized except for broad caudoventral margin with few apical microsetae, caudodorsal process very short, caudoventral process very long, broad, closely appressed to margin of caudodorsal process (Fig. 140); segment X without ventral process (Fig. 140); aedeagus short, robust, in lateral view base recurved, bulbous, shaft tubular with linear set of setae distad of middle and apically, very long setae at apex of near medial group (Figs 141, 142); style

long, robust, apophysis narrow, apex bulbous (Figs 143, 144); dorsal connective short, broad (Figs 141, 142); connective large, anterior arms moderately broad, membrane present, medial ridge absent, stem moderately long, narrow with elliptical apex (Fig. 145); subgenital plate short, broad, setaceous apically (Fig. 146).

Etymology. The name of the species is descriptive for the weakly chitinized (submembranous), caudoventral pygofer process.

Remarks. From all other known species of *Stalolidia*, *S. membrana* sp.nov. can be separated by the unique, submembranous caudoventral pygofer process.

***Stalolidia peruviansis* sp.nov.**

(Plate 3E, Figs 147–153)

Type material. Holotype ♂: PERU: LO [Loreto], Requena, km 4.5 Carretera Jenaro Herrera-Puerto Angamos, 31.viii.1990, P. Lozada (UNMSM).

Description. Length. Male 9.40 mm, female unknown.

External morphology. Large, robust species. General color light brown to black with two broad, transverse light ivory bands and numerous yellow spots on forewings; mesonotum black in basal 2/3, yellow in apical 1/3, with tannish spots; pronotum black, surface bullae yellow; crown yellow, eyes grey; face yellow with numerous black markings; clypeus mostly black with few yellow spots; clypellus yellow with broad, black stripe basally on each side of middle. Head large, broad, narrower than pronotum, anterior margin broadly rounded; crown broad, slightly wider than width of eyes, slightly produced anteriorly, lateral margins nearly parallel; eyes large, semiglobular; clypeus long, broad, lateral margins broadly convex; clypellus broad, narrower than clypeus, slightly inflated basally, apex slightly flared.

Male genitalia. Pygofer in lateral view large, triangulate overall, without typical caudodorsal process, few microsetae apically, caudoventral process long, broad, closely appressed to margin of pygofer, apex triangulate (Fig. 147); segment X without ventral process (Fig. 147); aedeagus long, shaft broad, tubular with numerous setae more or less scattered in dorsal view, in lateral view in two separate groups, subbasally and subapically (Figs 148, 149); style long, about as long as aedeagus, robust, in dorsal view with digitate lobe medially on outer lateral margin, short spines on inner lateral margin (Figs 150, 151); dorsal connective short, broad (Figs 148, 149); connective large, anterior arms narrow, membrane present, medial ridge absent, stem long, subglobular apically (Fig. 152); subgenital plate long, narrow, tapered in distal 1/5, with few short, subapical microsetae on outer lateral margin (Fig. 153).

Etymology. The species is named for the country of Peru.

Remarks. From *S. linnavuorii* Nielson, 1979 to which it is similar in features of the style, *S. peruviansis* sp.nov. can be separated by the lack of typical caudodorsal pygofer process, by the narrower and more tubular shaft of the aedeagus and arrangement of the setal processes (*cf.* NIELSON 1979).

***Stalolidia sinuata* sp.nov.**

(Plate 3F, Figs 154–160)

Type material. Holotype ♂: PERU: LO [Loreto], Tamishiyacu, Tahuayo, August 2009, 04°23'16"/073°18'677, Malaise trap, T. J. A. Faasen (UNMSM).

Description. Length. Male 8.85 mm, female unknown.

External morphology. Large, robust species. General color black with two translucent, transverse bands and numerous translucent spots on forewings, anterior band distinctly narrower than posterior band; mesonotum black with several yellow markings; pronotum black, surface bullae yellow; crown tannish, eyes translucent; face generally brown to black with light brown markings. Head large, broad, narrower than pronotum; anterior margin broadly rounded; crown broad, slightly narrower than width of eyes, slightly produced anteriorly, lateral margins slightly convergent basally, depressed medially; eyes large, semiglobular; clypeus long, broad, lateral margins broadly convex; clypellus narrow in basal half, widely flared in apical half.

Male genitalia. Pygofer in lateral view broadly triangulate, few setae on dorsal margin, caudodorsal process narrowed apically, caudoventral margin very long, broad, exceeding apex of caudodorsal process (Fig. 154); segment X ventral process absent (Fig. 154); aedeagus long, tubular, in lateral view base large, triangulate, shaft sinuate, with group of short seta distad of middle, long, subapical seta and with several short, apical setae (Figs 155, 156); style long, robust (Figs 157, 158); dorsal connective long, narrow in basal half, broad toward bifurcate apex (Figs 155, 156); connective large, anterior arms broad basally, membrane present, medial ridge absent, stem pendulate (Fig. 159); subgenital plate short, broad, with long microsetae in distal 1/5 (Fig. 160).

Etymology. The name of the species is descriptive for the sinuate aedeagus.

Remarks. From *S. cingulata* (Stål, 1862) to which it is very similar in male genitalia, *S. sinuata* sp.nov. can be distinguished by the very large, triangulate base and sinuate shaft of the aedeagus in lateral view (very small base and straight shaft in *S. cingulata*, cf. NIELSON 1979).

Stalolidia linnavuorii Nielson, 1979: 152 – Huanuco, Yurac, Putu Mayo Dist. (NIELSON 1979).

Stalolidia stali Nielson, 1979: 156 – Chapada (NIELSON 1979).

Stalolidia dissoluta (Jacobi, 1905): 186; NIELSON (1979): 159 – Marcapata; Cusca, Hacienda Maria; San Martin, Bella; Pucallpa (NIELSON 1979).

Stalolidia paracingulata (Linnavuori, 1956): 23; NIELSON (1979): 161 – Monson Vallley, Tingo Maria; San Martin; Rio Tapiche (NIELSON 1979).

Stalolidia bulbata Nielson 2011a: 17 – Madre de Dios, Tambopata Res. (NIELSON 2011a).

Genus *Terulia* Stål, 1862: 50

This small genus is widely distributed from Brazil north to Nicaragua. Seven species are known, two of which occur in Peru including one new species described below.

***Terulia paradispar* sp.nov.**

(Plate 3G, Figs 161–167)

Type material. Holotype ♂: PERU: JU [Junín], 1–3 km SW Mina Pichita, 2100 m, 23.viii.88, P. Lozada (UNMSM).

Description. Length. Male 11.00 mm, female unknown.

External morphology. Large, robust species. General color dark brown to black with pale, translucent markings on forewings (left clavus missing); mesonotum black; pronotum black; crown brown with small light brown spots; eyes dark brown; face pale ivory, marked with dark brown band along outer lateral margins. Head large, narrower than pronotum, anterior margin obtusely angled; crown broad, slightly narrower than width of eyes, produced anteriorly nearly 1/2 of entire median length beyond anterior margin of eyes, disk elevated, lateral margins carinate, nearly parallel, depressed latero-anteriorly; clypeus long, broad, lateral margins broadly convex, median longitudinal carina weak, incomplete; clypellus broad, narrower than clypeus, slightly inflated basally, lateral margins sinuate, apex flared.

Male genitalia. Pygofer in lateral view triangulate, glabrous, caudodorsal process very short, broad basally; caudoventral process absent (Fig. 161); segment X without ventral process (Fig. 161); aedeagus long, tubular, shaft with four spines, broad basally sharply pointed apically (Figs 162, 163); style long, apophysis narrow (Figs 164, 165); dorsal connective moderately long, narrow (Fig. 162); connective large, anterior arms broad basally, membrane present, medial ridge incomplete, stem small, semioval (Fig. 166); subgenital plate very long, narrow, tapered toward apex, profusely setose on outer lateral margin in distal half (Fig. 167).

Etymology. The name of the species is descriptive for its close relationship to aedeagal features of *T. dispar* Nielson, 1979.

Remarks. From *T. dispar* to which it is similar in aedeagal features, *T. paradispar* sp.nov. can be separated by the much longer and narrower subgenital plate and the triangular pygofer (*cf.* NIELSON 1979).

Terulia tergipicta (Jacobi, 1905): 188; NIELSON (1979): 21 – Pachitea; Upper Rio Huallaga; Callanga; Monson Valley, Tingo Maria (NIELSON 1979)

TRIBE SANDERSELLINI DELONG, 1945: 414

Members of the tribe are known only from Brazil westward to Bolivia, Peru and northward to Panama. Only the nominate genus is known.

Genus *Sandersellus* DeLong, 1945: 414

Thirteen species are known in the genus, including one new species described below. Six species are recognized from Peru. A key to 12 species is available in NIELSON (2010).

***Sandersellus fissus* sp.nov.**

(Plate 3H, Figs 16–175)

Type material. Holotype ♂: PERU: PA [Pasco], Oxapampa, Comparachimas, Rio Chuchurras, 500 m, 14.x.1986, P. Hocking. (UNMSM).

Description. Length. Male 6.60 mm, female unknown.

External morphology. Small, slender species. General color black with numerous small to medium size, ivory spots throughout dorsum and face, some coalescent on pronotum. Head large, very much narrower than pronotum, anterior margin acutely angled; crown very long, produced anteriorly about 1/3 of entire length beyond anterior margin of eyes, very narrow, about 1/2 as wide as width of eyes, lateral margins strongly carinate; eyes large, elongate ovoid; clypeus very long, broad posteriorly, narrowed anteriorly; clypellus short, inflated basally, tapered apically.

Male genitalia. Pygofer in lateral view small, subquadrate, glabrous, caudodorsal process very small, small process on apicodorsal margin, caudoventral process broad, curved lateral in apical 1/3, apex obliquely truncate, long curved fissure below base of caudoventral process (Fig. 168); segment X without ventral process (Fig. 168); aedeagus short, tubular, in dorsal view shaft inflated along middle, in lateral view sinuate, with lateral serrate flange along middle (Figs 169, 170); style very long, much longer than aedeagus, with long, lateral, apical bifurcate process halfway between middle and apex, small triangulate spine below (Figs 171, 172); dorsal connective in lateral view long, narrow in lateral view, base very narrow in basal half, broadly expanded in distal half in dorsal view (Fig. 169); connective large, arms very narrow, without membrane or medial ridge, stem very small in dorsal view (Fig. 173); narrowed in apical half, very broad in basal half in lateral view (Fig. 174); subgenital plate short, broad, basal 1/3 very narrow, glabrous (Fig. 175).

Etymology. The name of the species is descriptive for the long fissure on the pygofer below the base of the caudoventral process.

Remarks. This species is nearest to *S. ornatus* Nielson, 1975 and can be separated by the much longer and narrower subapical, bifurcate spine on the style and by the presence of the pygofer fissure (*cf.* NIELSON 1975).

Sandersellus simplex Nielson, 1975: 23 – Monson Valley, Tingo Maria (NIELSON 1975).

Sandersellus ornatus Nielson, 1975: 27 – Yurac (NIELSON 1975).

Sandersellus peniculus Nielson, 1975: 27 – Cusco, Hacienda Maria (NIELSON 1975).

Sandersellus carinatus DeLong, 1945: 415 – Sinchona (NIELSON 1975).

Sandersellus bilanceus Nielson, 2010: 46 – Madre de Dios, Rio de Tambopata Res. (NIELSON 2010).

TRIBE TINOBREGMINI OMAN, 1949: 54

This tribe is restricted to the New World but has wide range from Chile north to southern United States. Five genera are now recognized, one of which occurs in Peru.

Genus *Corilidia* Nielson, 1982a: 424

Corilidia lenta Nielson, 1982a: 424 – Cajamarca, 2670 m (NIELSON 1982a).

TRIBE YOUNGOLIDIINI NIELSON, 1983: 48

This tribe is known in the Ethiopian region and widely distributed in the Neotropical region.

Genus *Rikana* Nielson, 1983b: 27

This rare genus is restricted to Guyana and Peru. Two species are known. Only one occurs in Peru listed below. A revised key to species is presented in NIELSON (1992).

Rikana larseni Nielson, 1983b: 29 – Tingo Maria (NIELSON 1983b).

Genus *Pilosana* Nielson, 1983b: 30 (New record)

This fairly large genus of 17 species is broadly distributed from Brazil to Mexico. The majority of the species occur in Brazil. Only one species is recorded from Peru cited below. A revised key to known species is presented in NIELSON (1992).

Pilosana sp. – 1 ♀, LO [Loreto], Requena, Jenaro Herrera, 73°40' W. 4°55' S, 19.viii.1990, P. Lozada (UNMSM).

Genus *Youngolidia* Nielson, 1983b: 51

This moderately large genus of 16 species is restricted to northwestern South America. Five or six species are recognized from Peru. A revised key to known species is presented in NIELSON (1992).

Youngolidia hasta Nielson 1983b: 53 – Colonia; Chancha Mayo (NIELSON 1983).

Youngolidia ampla Nielson 1983b: 56 – Tingo Maria (NIELSON 1983).

Youngolidia lateralis Nielson 1983b: 63 – Monson Valley, Tingo Maria; Sinchona; Puerto Bermudes (NIELSON 1983).

Youngolidia hirsuta Nielson 1992: 294 – Napo River (NIELSON 1992).

Youngolidia unica Nielson 1992: 295 – Junin, Sapito (NIELSON 1992).

Youngolidia sp. – 1 female, MD [Madre de Dios], Rio Tambopata, 14.viii.1986, I. Bohorquez (UNMSM).

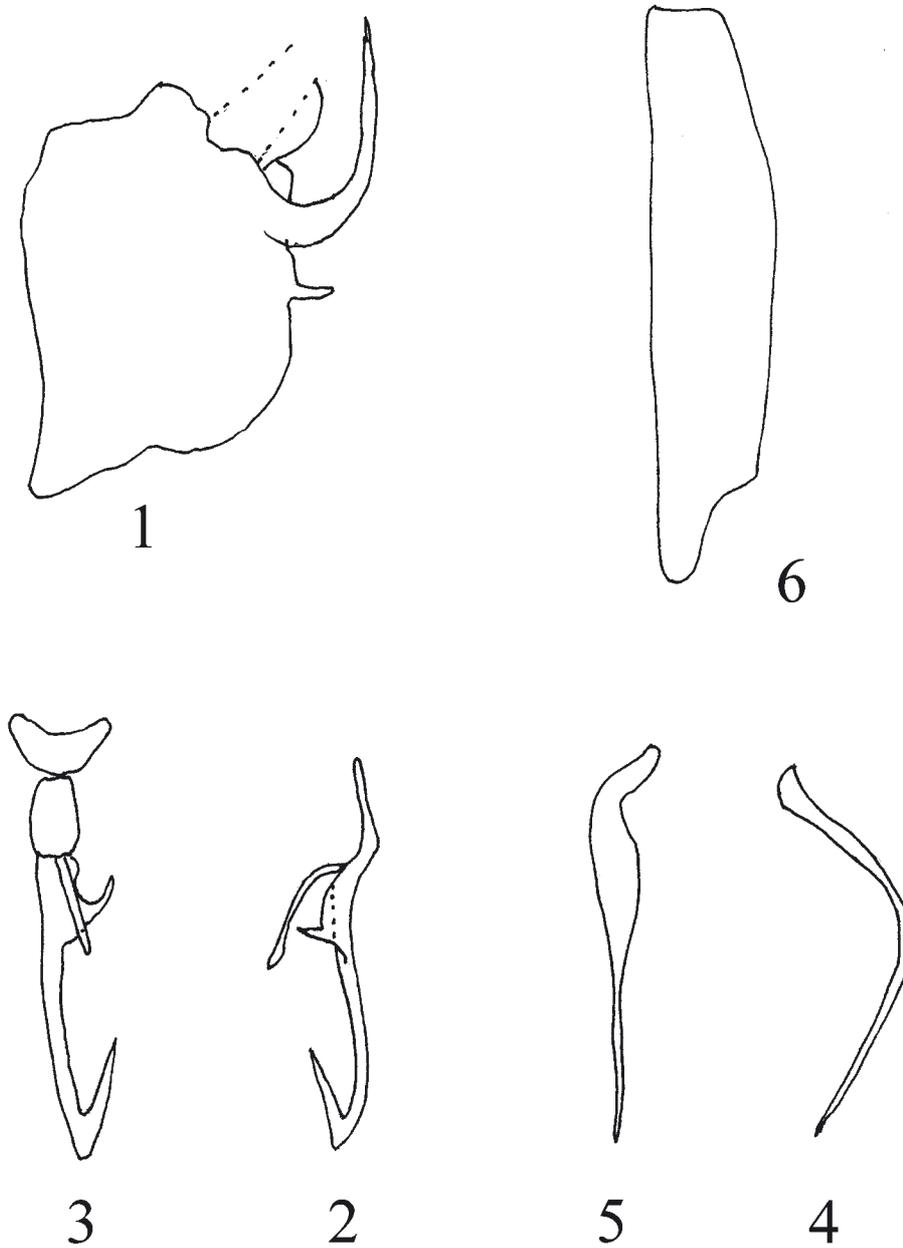
Acknowledgements

Leisha Rohwer prepared plates of adult general habitus photos and line drawings of the male genitalia for printing. Paul Freytag and Gabriel Mejdalani offered comments which markedly improved the content of the paper. To them we express our sincere appreciation. I express my sincere appreciation to Dr. Igor Malenovsky of the Moravian Museum, Brno, Czech Republic for his editorial comments and suggestions which greatly improved the contents and scope of this paper.

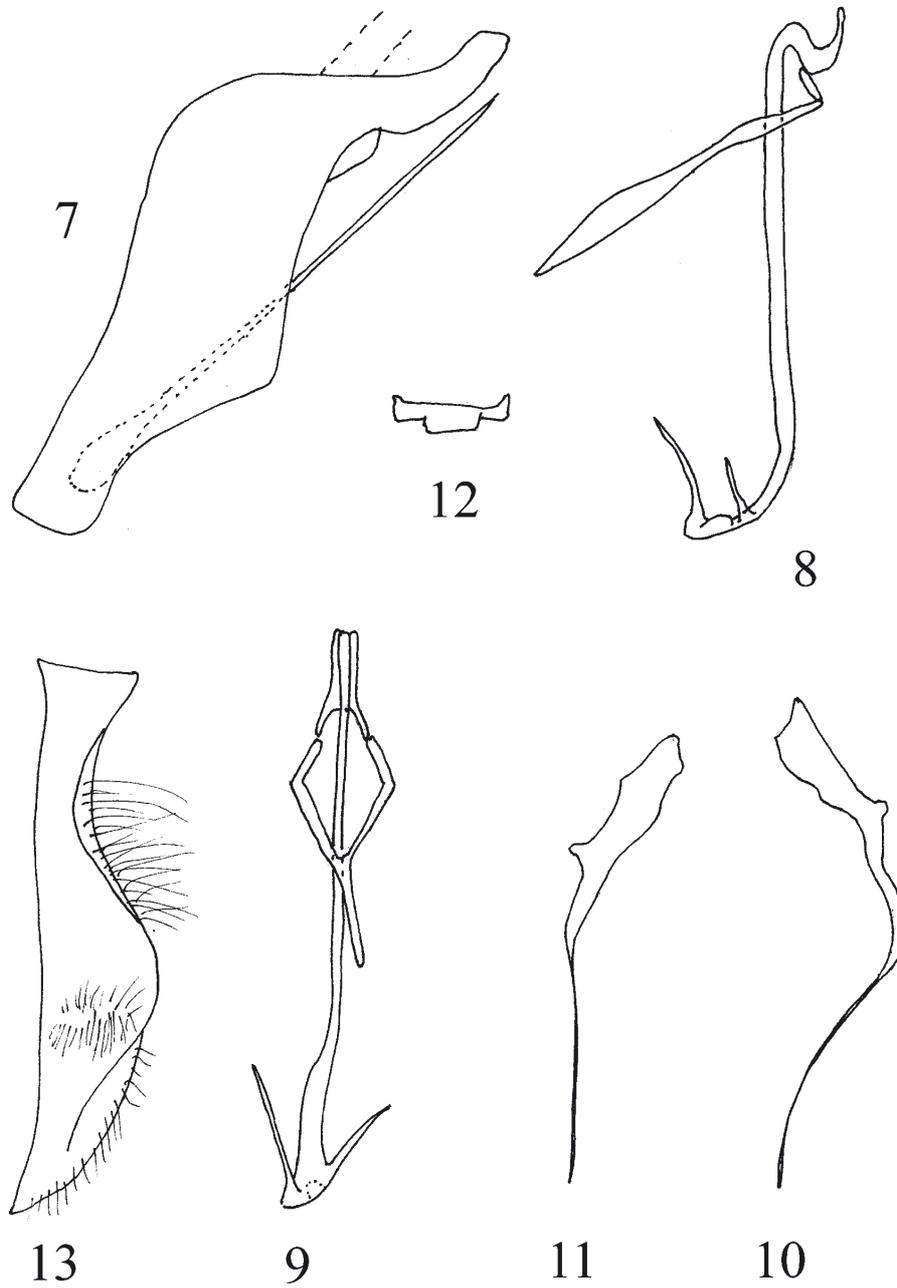
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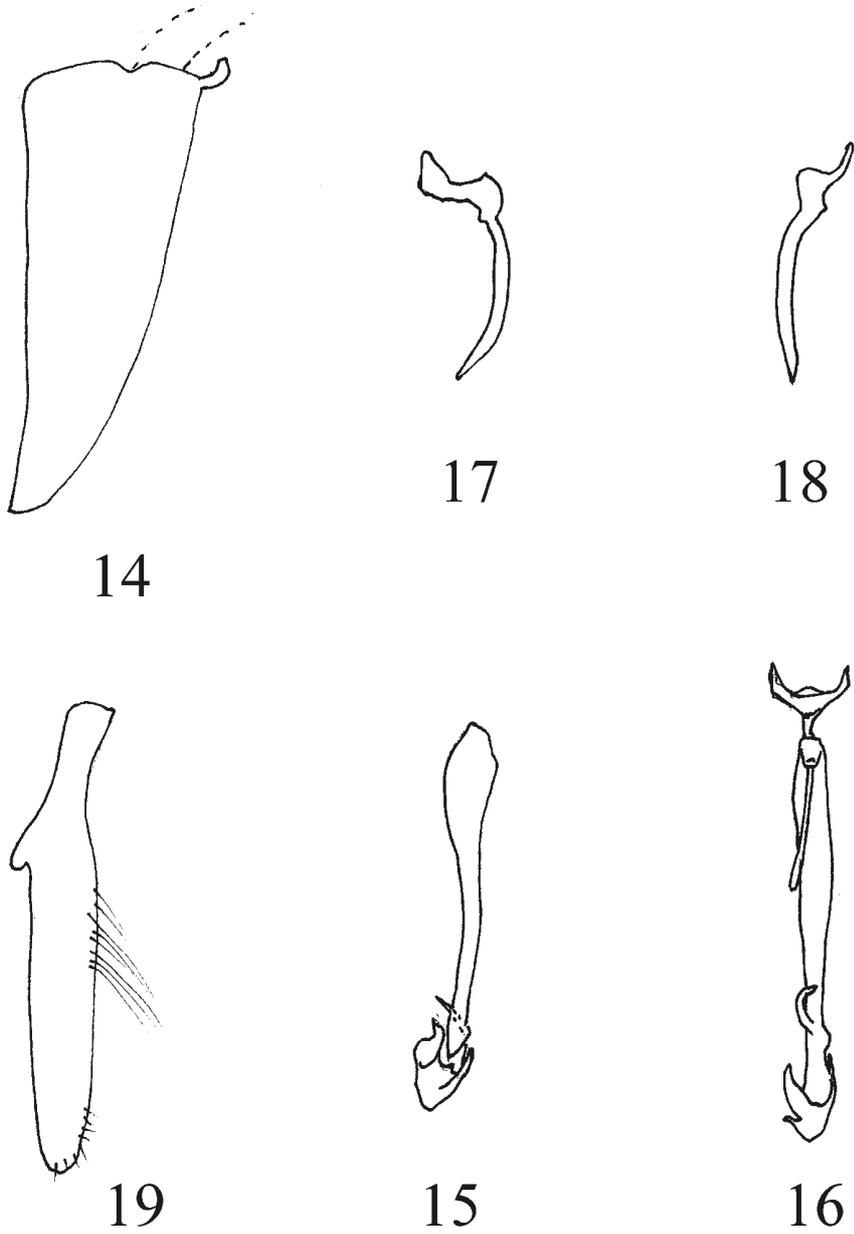
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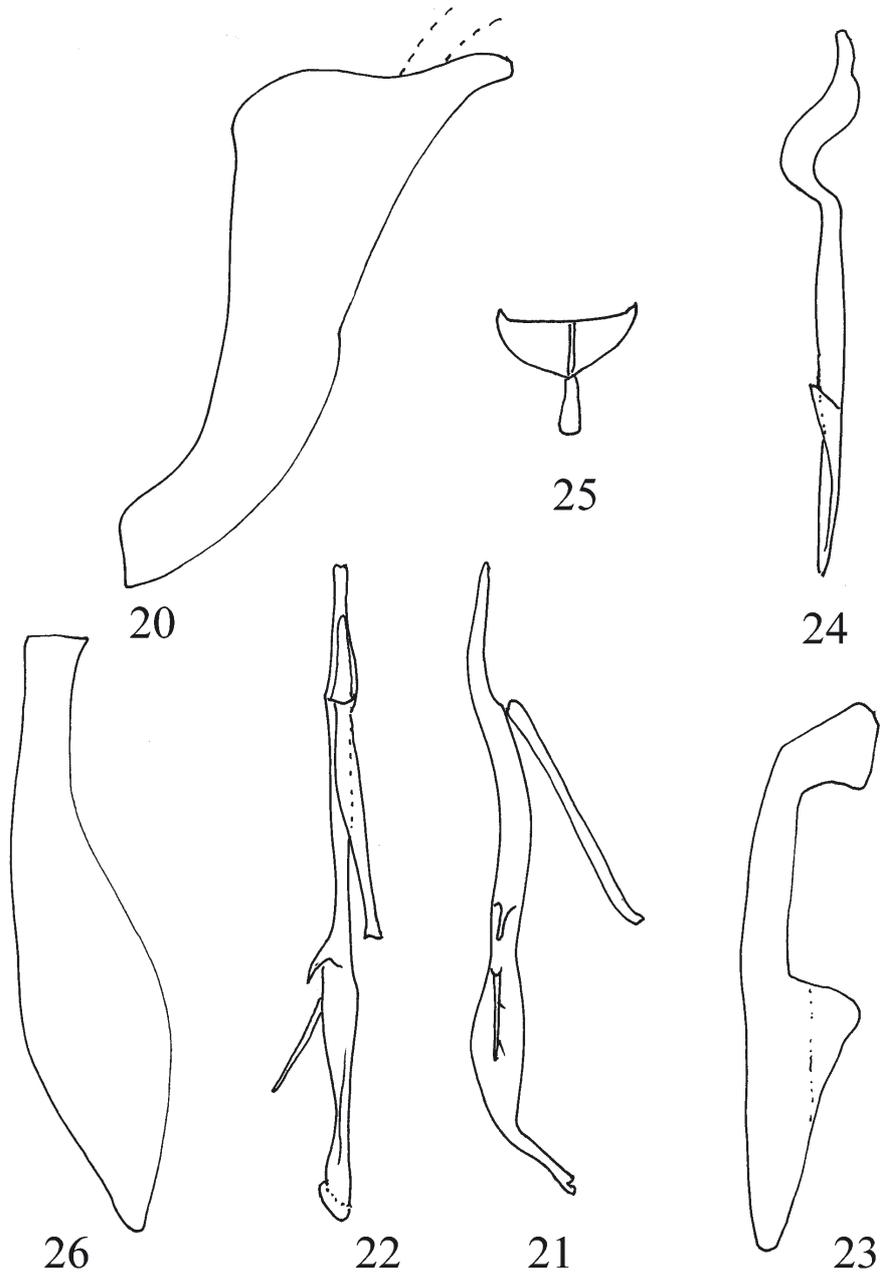
Figs 1–6. *Codilia biquadrata* sp.nov. 1 – male pygofer, lateral view; 2 – aedeagus and dorsal connective, lateral view; 3 – aedeagus, dorsal connective and connective, dorsal view; 4 – style, lateral view; 5 – style, dorsal view; 6 – subgenital plate, ventral view.



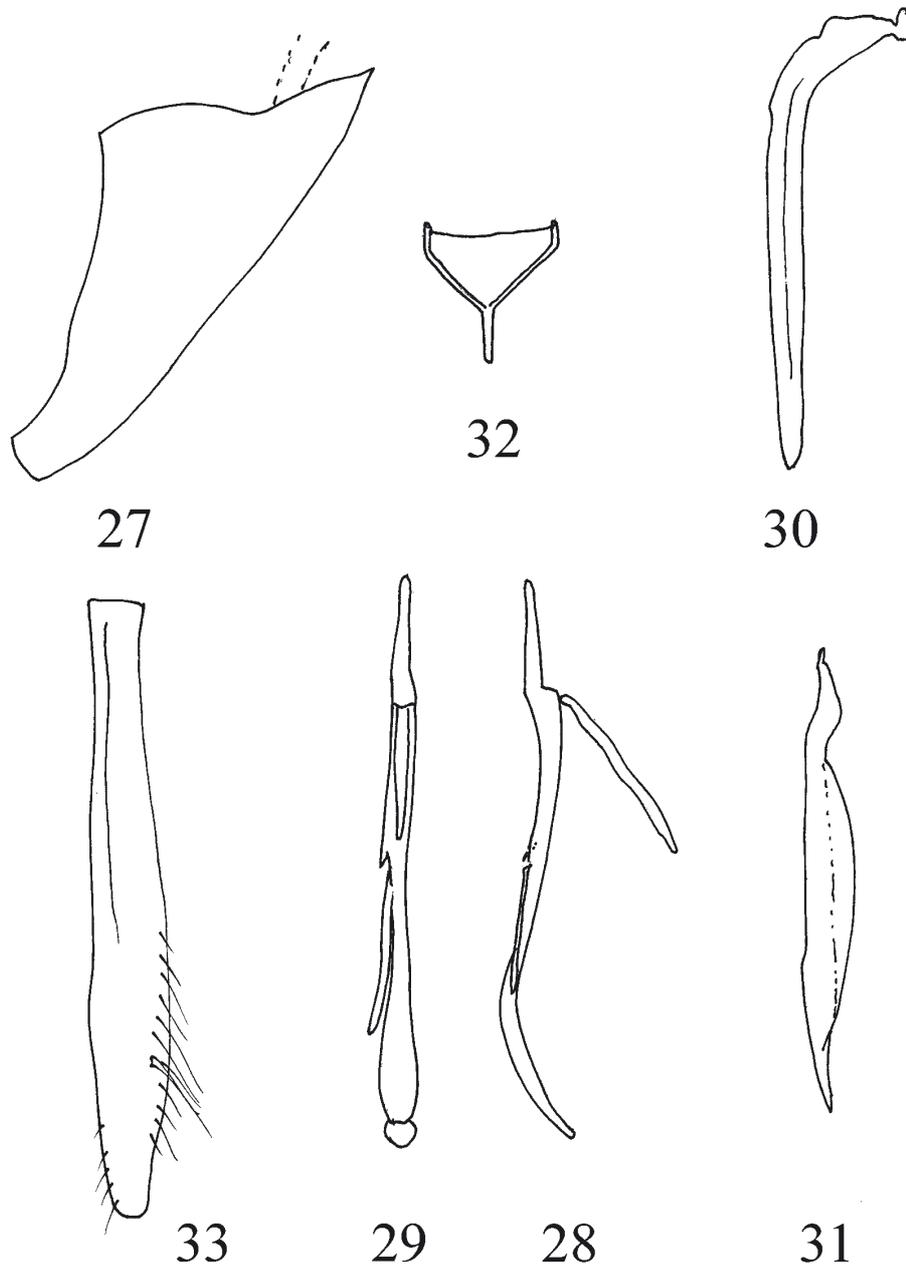
Figs 7–13. *Collasuyusana bispinata* sp.nov. 7 – male pygofer, lateral view; 8 – aedeagus and dorsal connective, lateral view; 9 – aedeagus and dorsal connective, dorsal view; 10 – style, lateral view; 11 – style, dorsal view; 12 – connective, dorsal view; 13 – subgenital plate, ventral view.



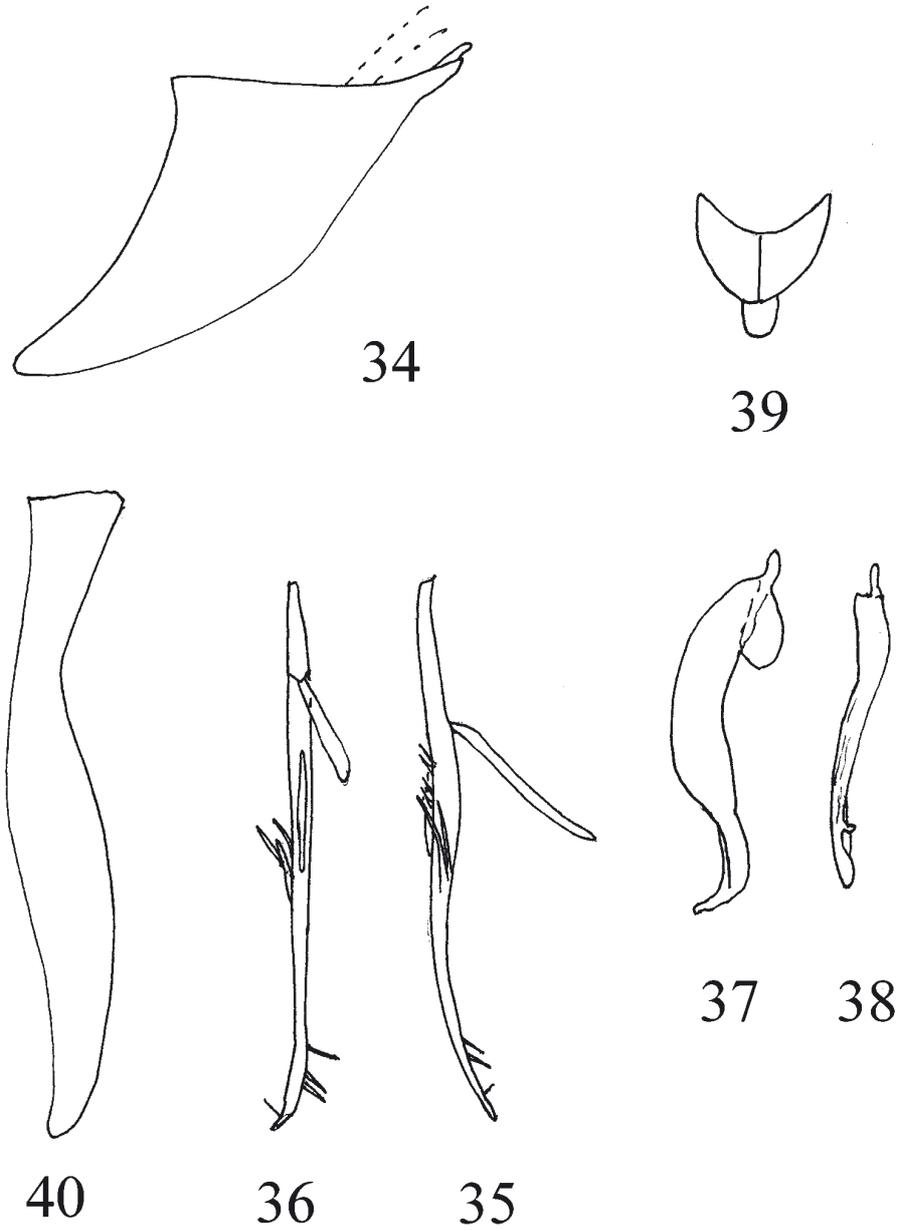
Figs 14–19. *Crassinolanus subtumidus* sp.nov. 14 – male pygofer, lateral view; 15 – aedeagus, lateral view; 16 – aedeagus, dorsal connective and connective, dorsal view; 17 – style, lateral view; 18 – style, dorsal view; 19 – subgenital plate, ventral view.



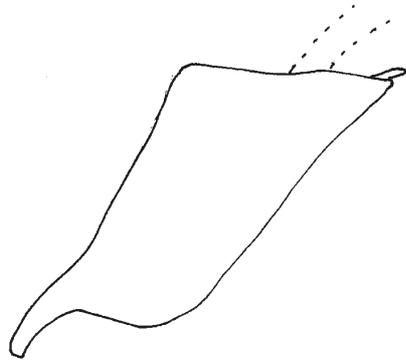
Figs 20–26. *Dialodia angusta* sp.nov. 20 – male pygofer, lateral view; 21 – aedeagus and dorsal connective, lateral view; 22 – aedeagus and dorsal connective, dorsal view; 23 – style, lateral view; 24 – style, dorsal view; 25 – connective, dorsal view; 26 – subgenital plate, ventral view.



Figs 27–33. *Dialodia hirsuta* sp.nov. 27 – male pygofer, lateral view; 28 – aedeagus and dorsal connective, lateral view; 29 – aedeagus and dorsal connective, dorsal view; 30 – style, lateral view; 31 – style, dorsal view; 32 – connective, dorsal view; 33 – subgenital plate, ventral view.



Figs 34–40. *Evansolidia complurea* sp.nov. 34 – male pygofer, lateral view; 35 – aedeagus and dorsal connective, lateral view; 36 – aedeagus and dorsal connective, dorsal view; 37 – style, lateral view; 38 – style, dorsal view; 39 – connective, dorsal view; 40 – subgenital plate, ventral view.



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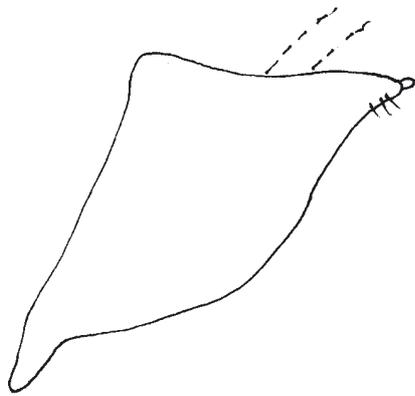


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Figs 41–47. *Evansolidia flangata* sp.nov. 41 – male pygofer, lateral view; 42 – aedeagus and dorsal connective, lateral view; 43 – aedeagus and dorsal connective, dorsal view; 44 – style, lateral view; 45 – style, dorsal view; 46 – connective, dorsal view; 47 – subgenital plate, ventral view.



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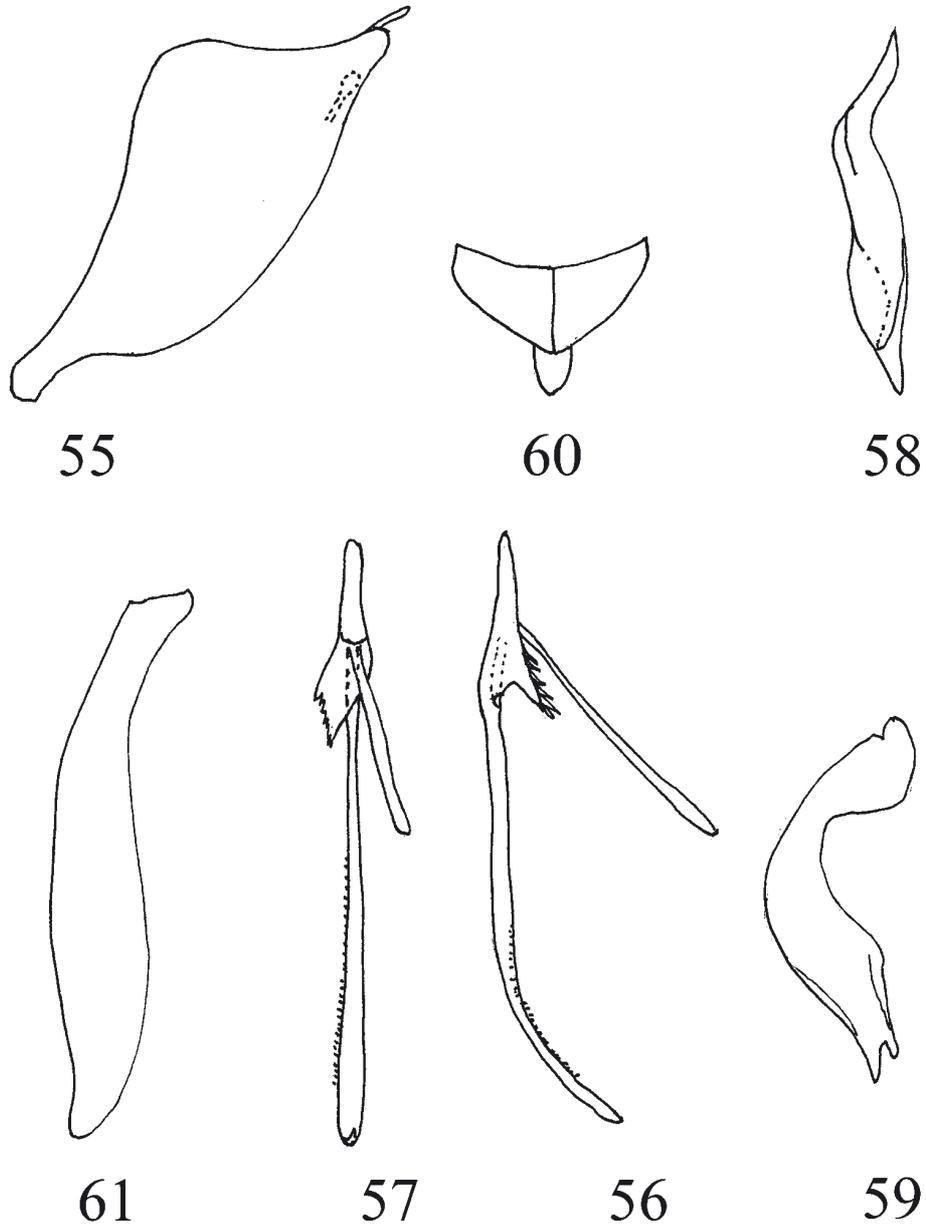


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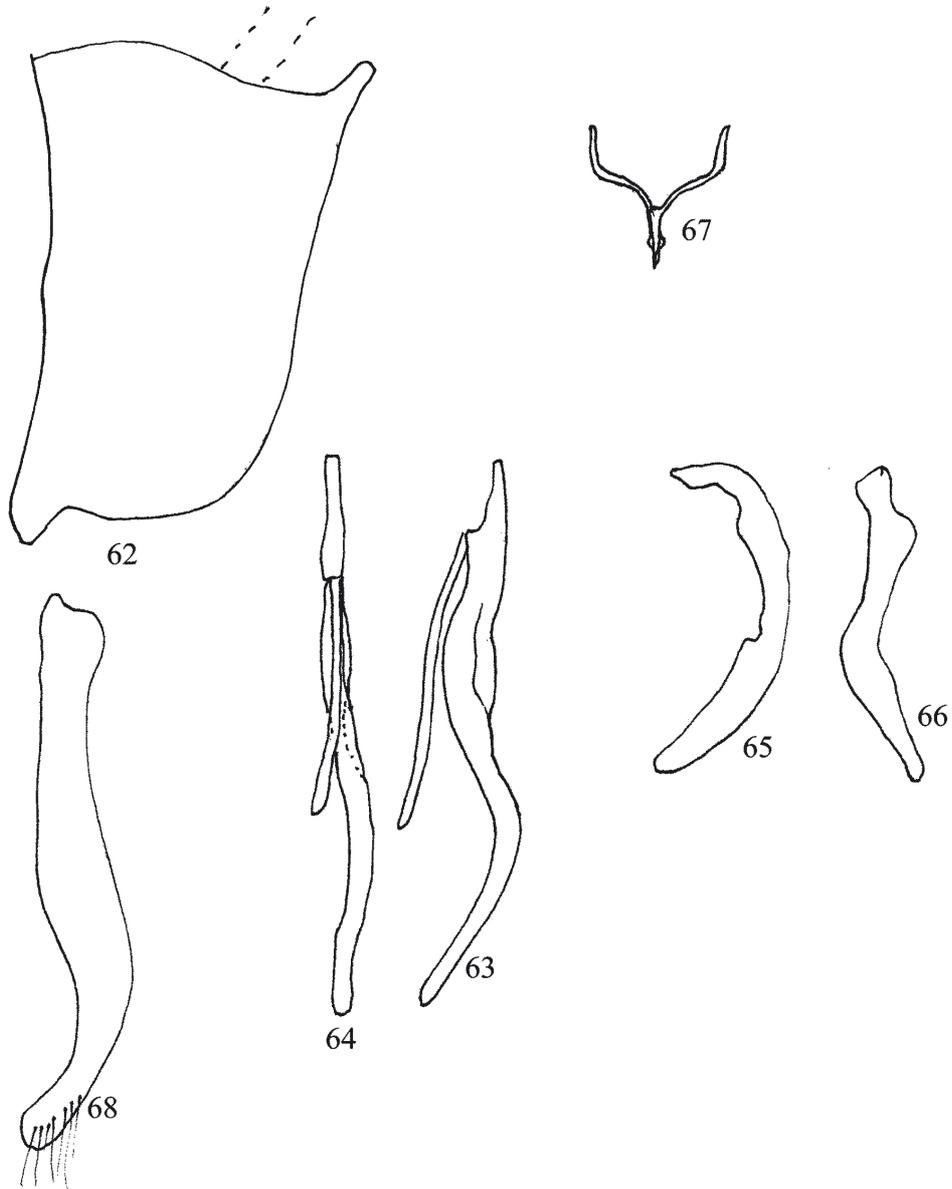


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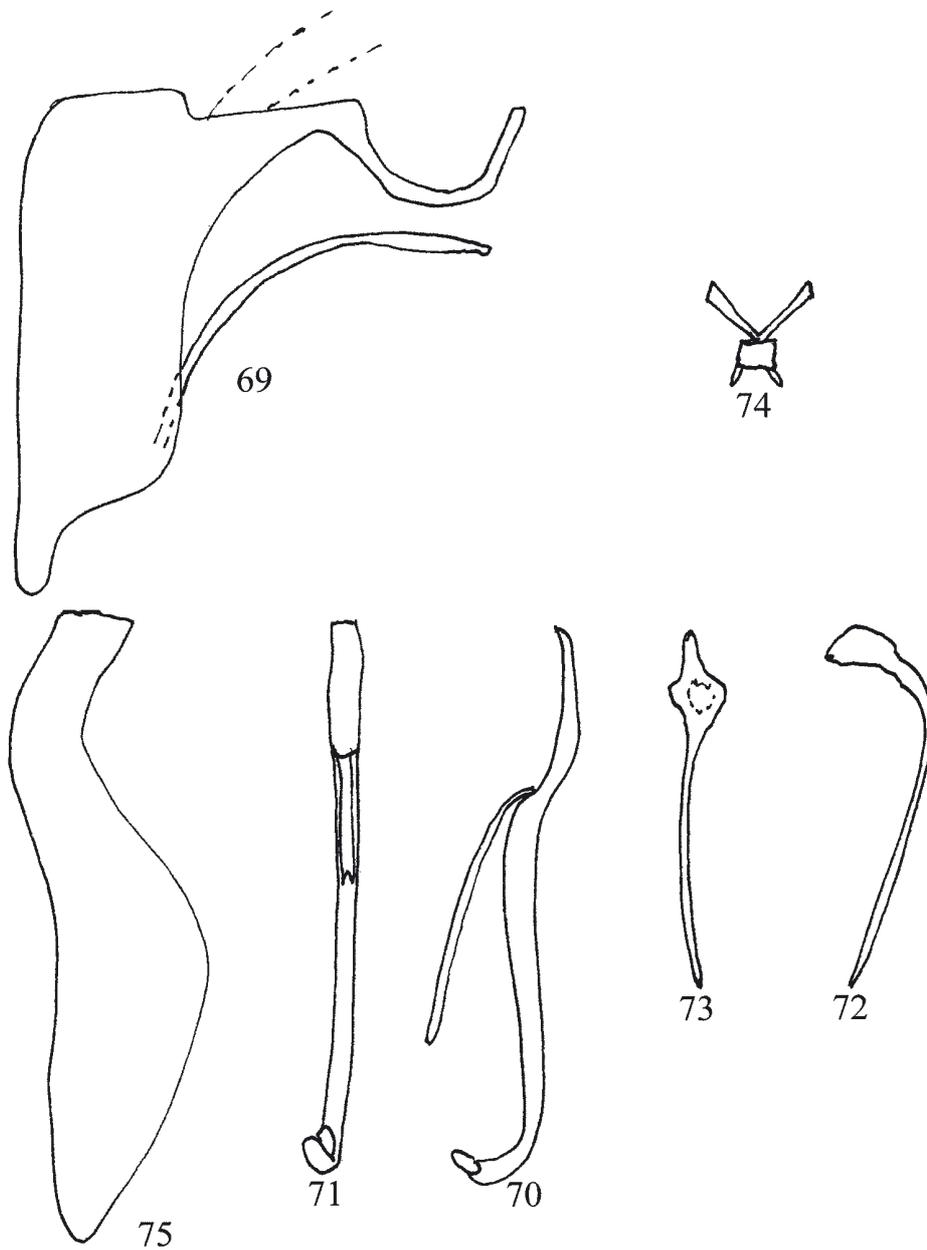
Figs 48–54. *Evansolidia minuta* sp.nov. 48 – male pygofer, lateral view; 49 – aedeagus and dorsal connective, lateral view; 50 – aedeagus and dorsal connective, dorsal view; 51 – style, lateral view; 52 – style, dorsal view; 53 – connective, dorsal view; 54 – subgenital plate, ventral view.



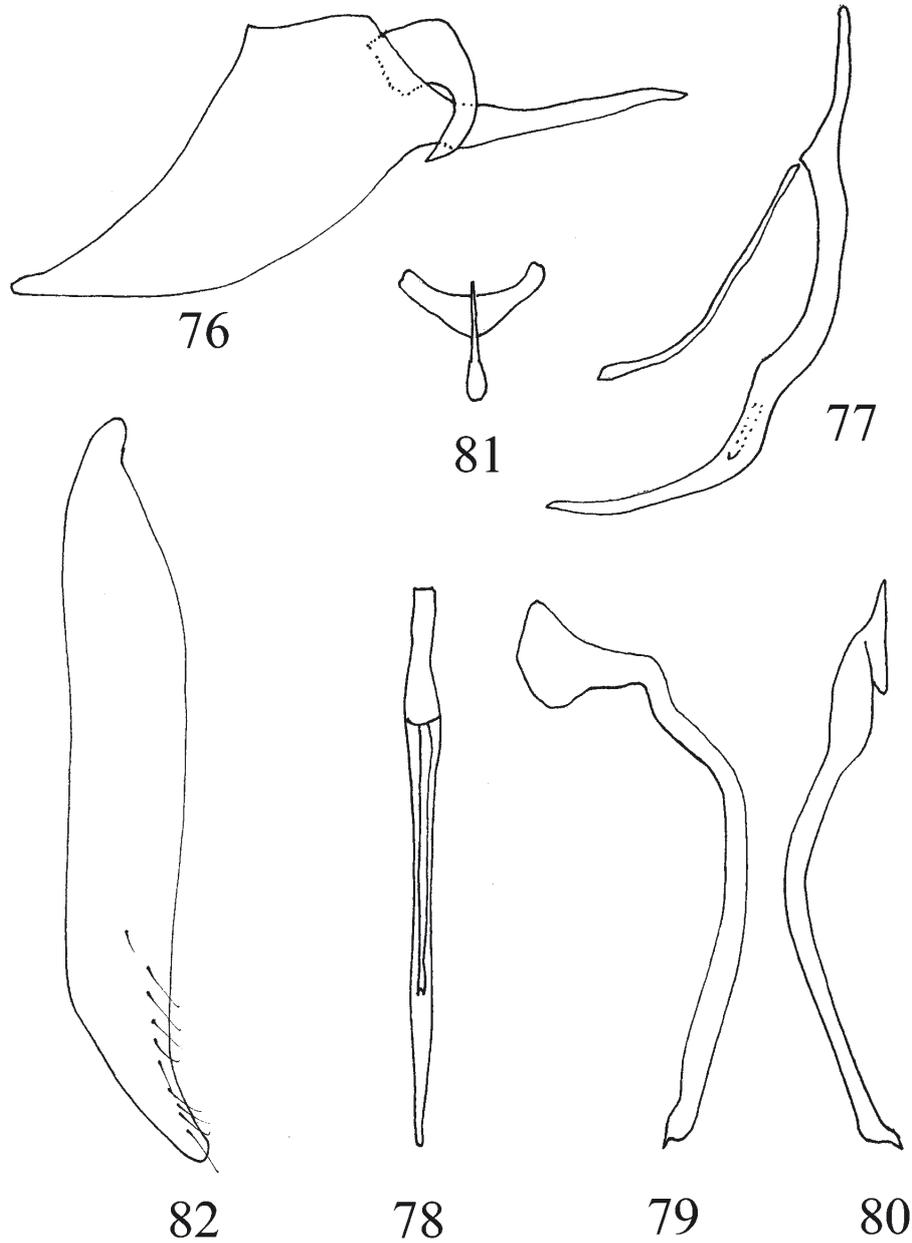
Figs 55–61. *Evansolidia pectinis* sp.nov. 55 – male pygofer, lateral view; 56 – aedeagus and dorsal connective, lateral view; 57 – aedeagus and dorsal connective, dorsal view; 58 – style, lateral view; 59 – style, dorsal view; 60 – connective, dorsal view; 61 – subgenital plate, ventral view.



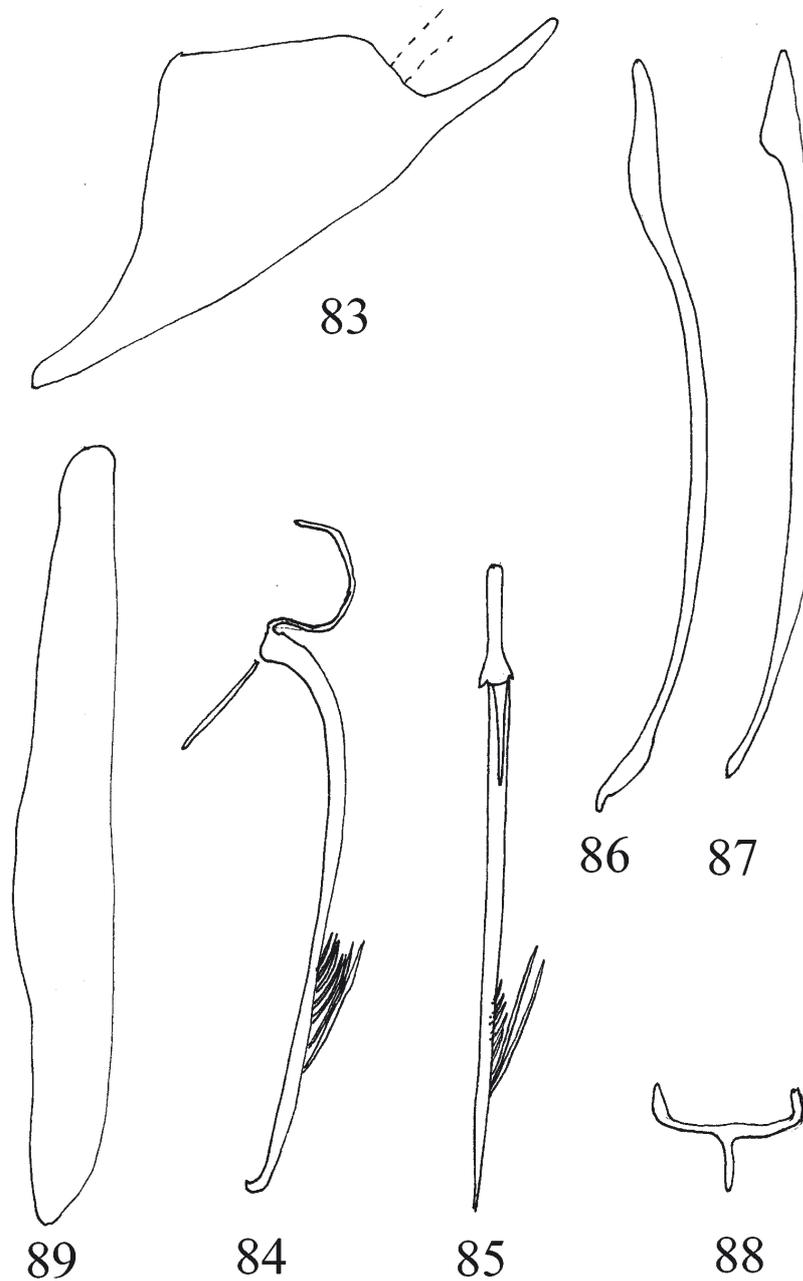
Figs 62–68. *Spinolidia glabrosa* sp.nov. 62 – male pygofer, lateral view; 63 – aedeagus and dorsal connective, lateral view; 64 – aedeagus and dorsal connective, dorsal view; 65 – style, lateral view; 66 – style, dorsal view; 67 – connective, dorsal view; 68 – subgenital plate, ventral view.



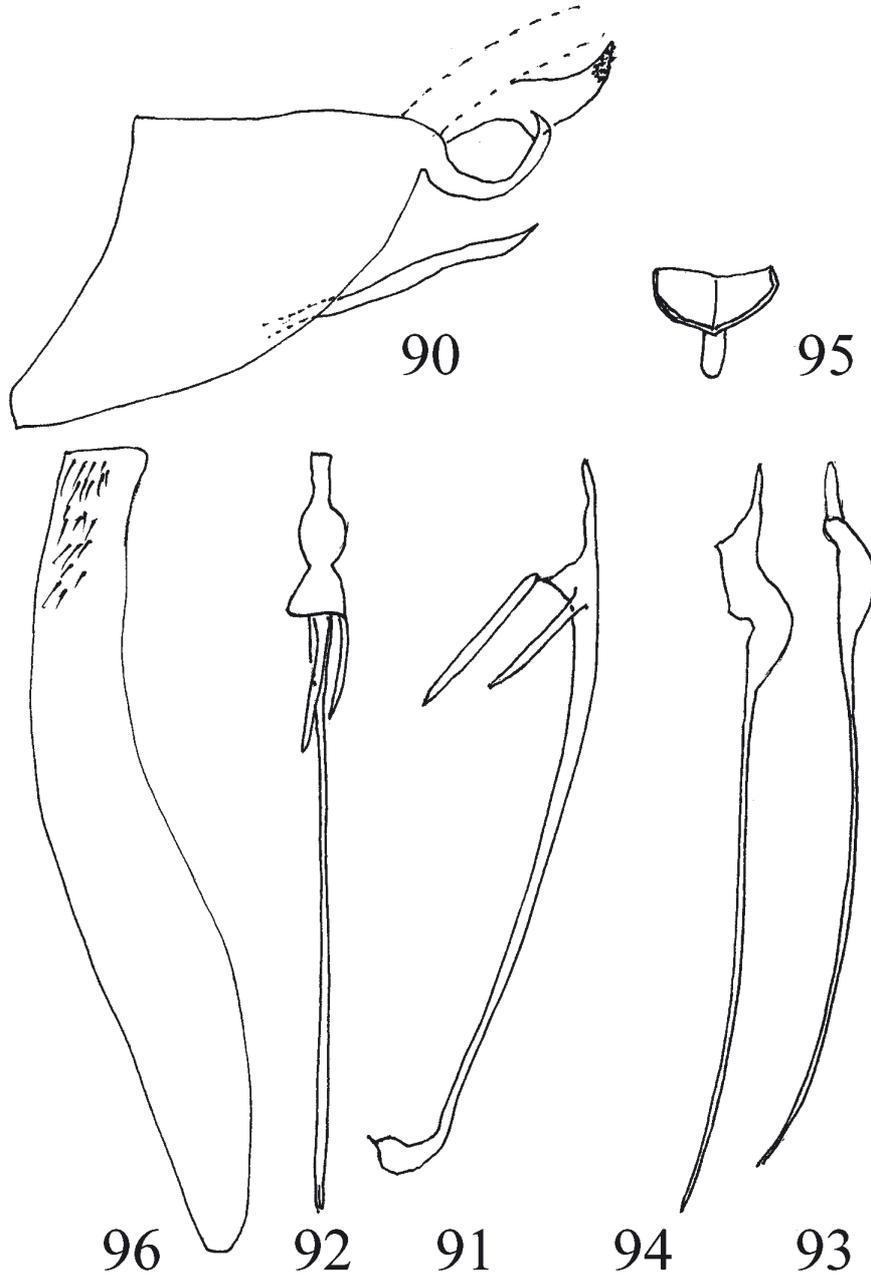
Figs 69–75. *Tinocripus minutus* sp.nov. 69 – male pygofer, lateral view; 70 – aedeagus and dorsal connective, lateral view; 71 – aedeagus and dorsal connective, dorsal view; 72 – style, lateral view; 73 – style, dorsal view; 74 – connective, dorsal view; 75 – subgenital plate, ventral view.



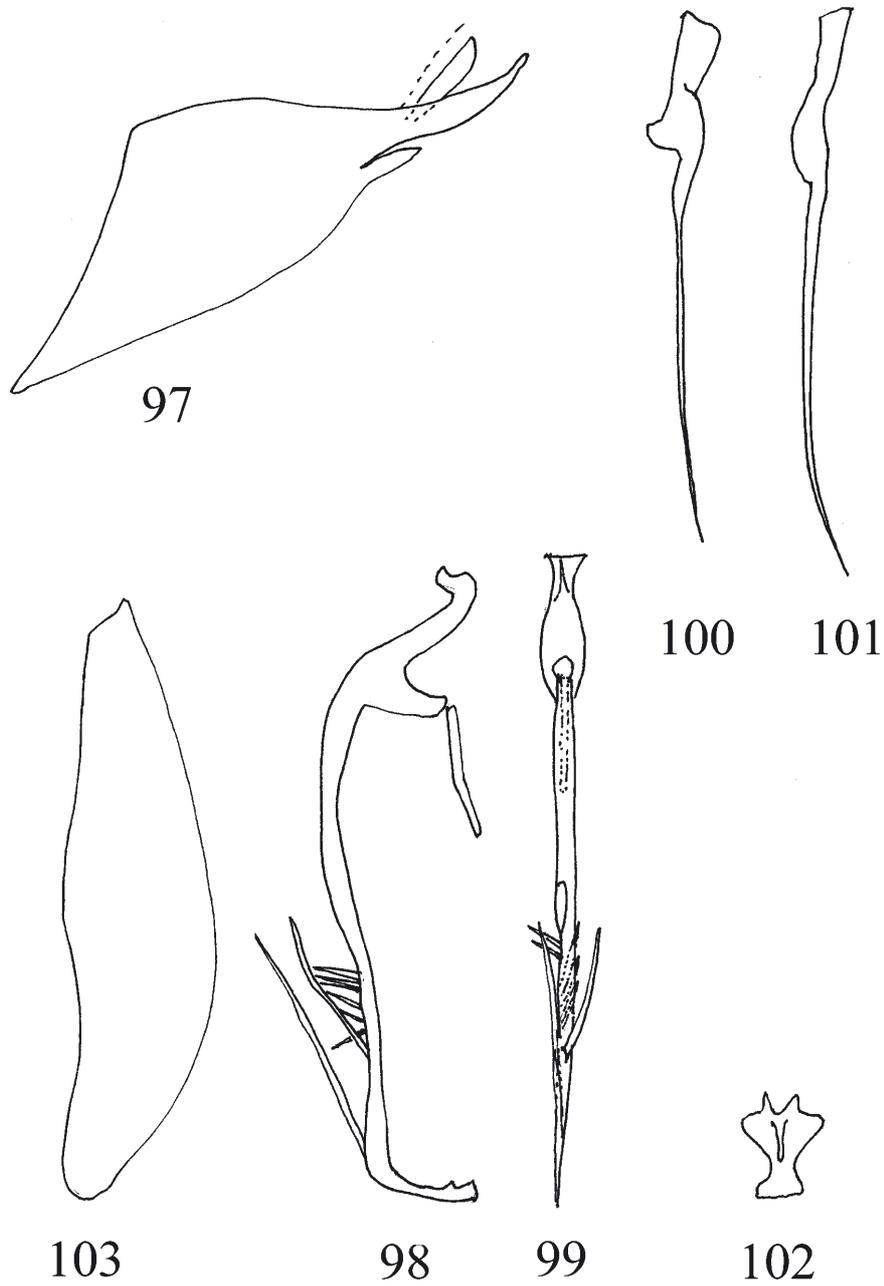
Figs 76–82. *Articoelidia humboldti* sp.nov. 76 – male pygofer, lateral view; 77 – aedeagus and dorsal connective, lateral view; 78 – aedeagus and dorsal connective, dorsal view; 79 – style, lateral view; 80 – style, dorsal view; 81 – connective, dorsal view; 82 – subgenital plate, ventral view.



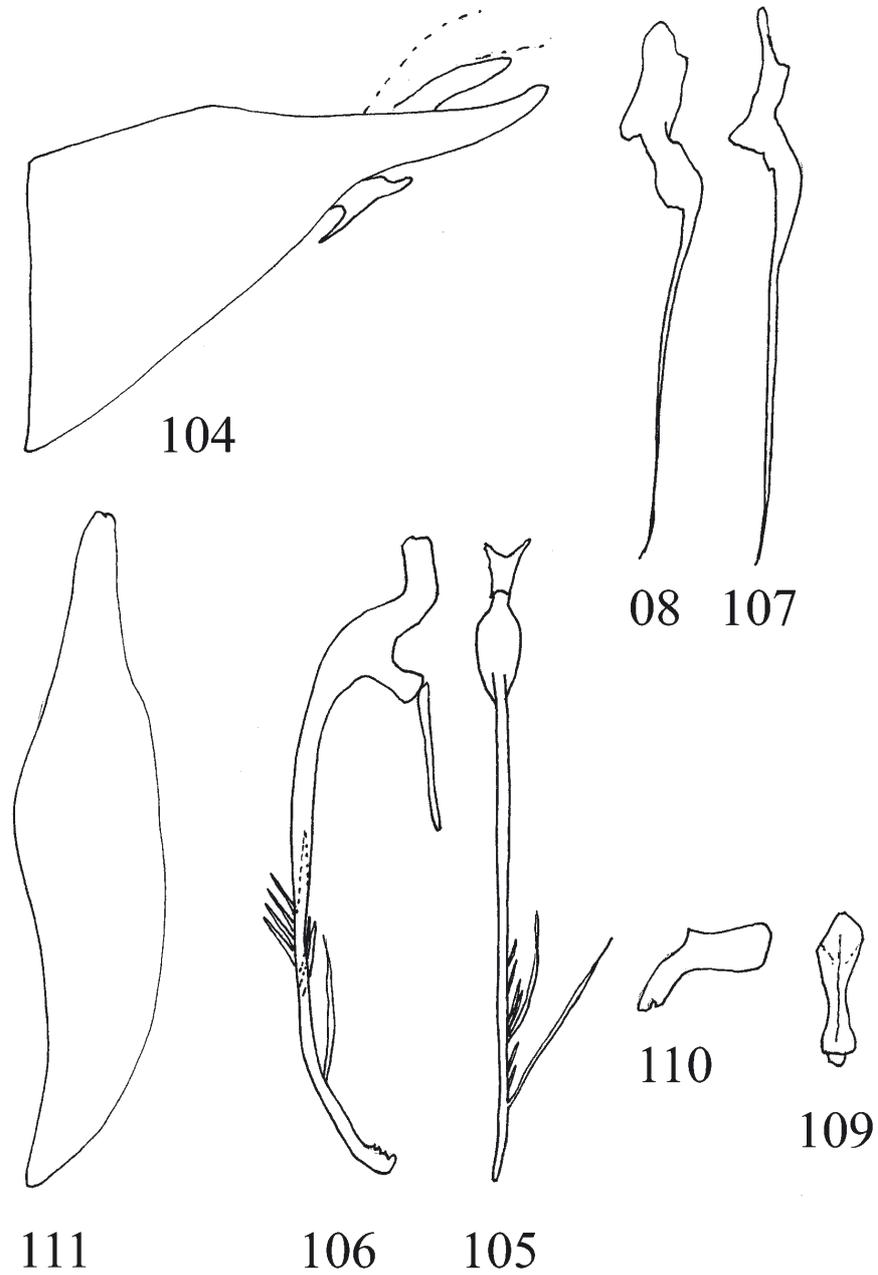
Figs 83–89. *Carinolidia hemicycla* sp.nov. 83 – male pygofer, lateral view; 84 – aedeagus and dorsal connective, lateral view; 85 – aedeagus and dorsal connective, dorsal view; 86 – style, lateral view; 87 – style, dorsal view; 88 – connective, dorsal view; 89 – subgenital plate, ventral view.



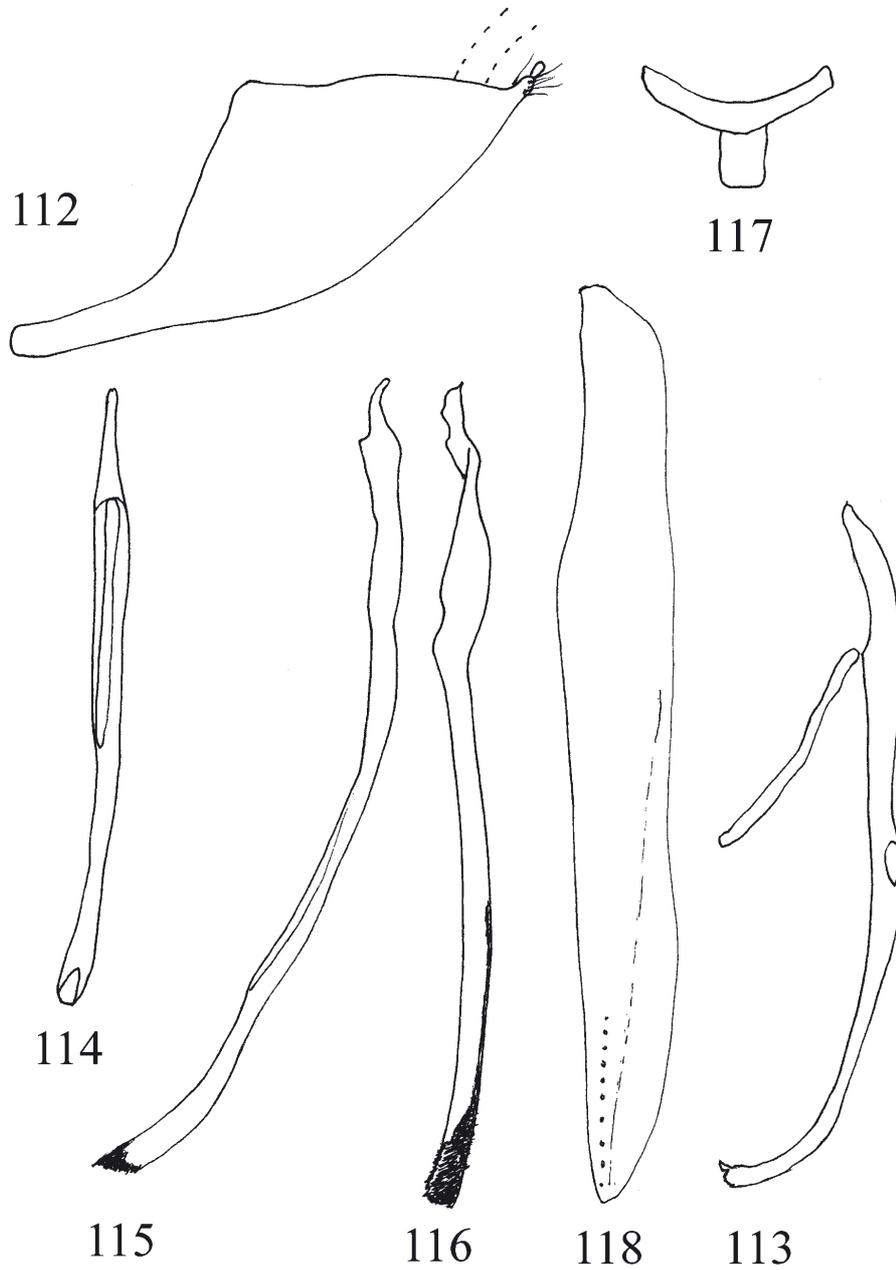
Figs 90–96. *Loretolidia basispinosa* sp.nov. 90 – male pygofer, lateral view; 91 – aedeagus and dorsal connective, lateral view; 92 – aedeagus and dorsal connective; 93 – style, lateral view; 94 – style, dorsal view; 95 – connective, dorsal view; 96 – subgenital plate, ventral view.



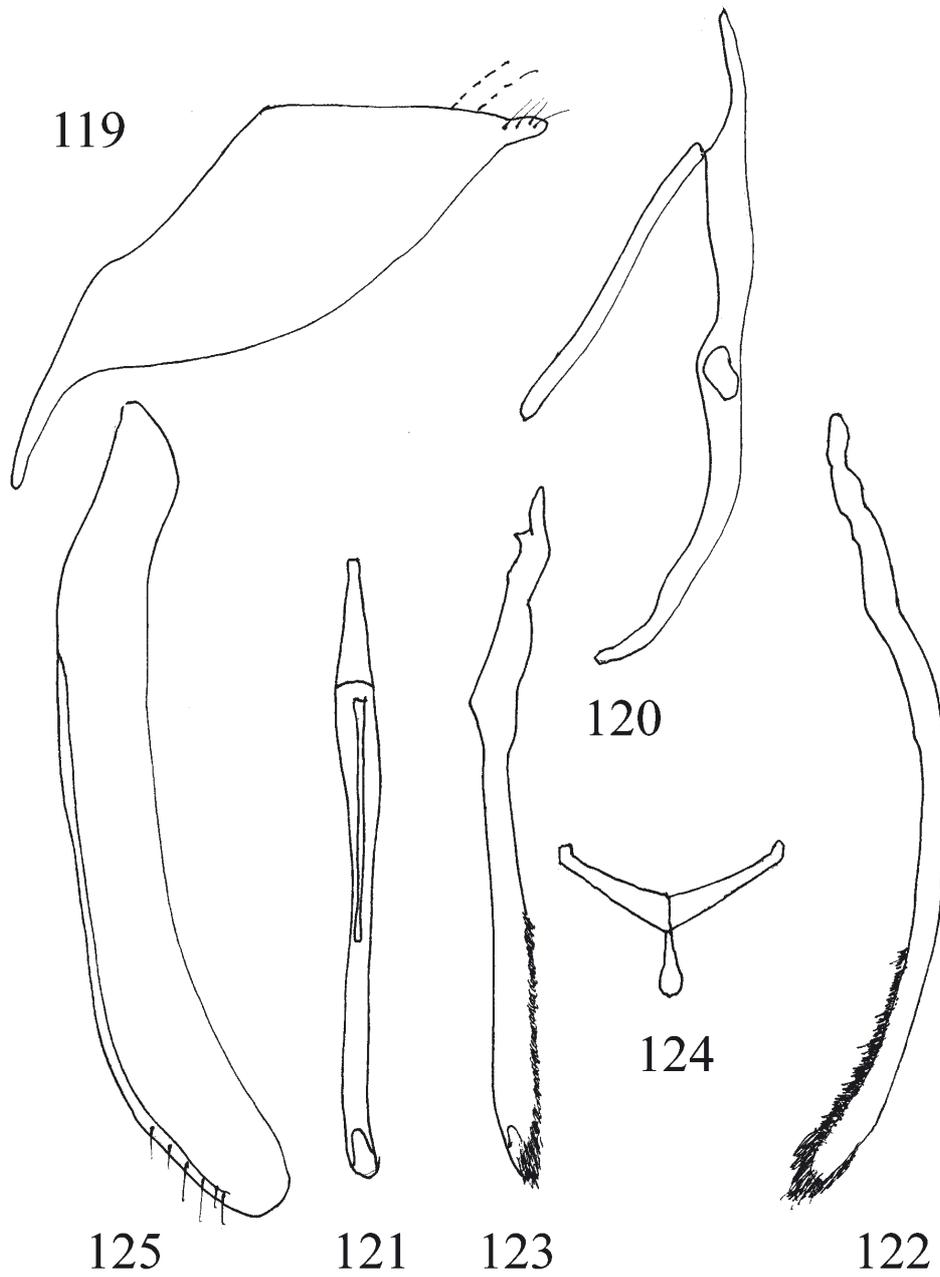
Figs 97–103. *Paracariniolia distincta* sp.nov. 97 – male pygofer, lateral view; 98 – aedeagus and dorsal connective, lateral view; 99 – aedeagus and dorsal connective, dorsal view; 100 – style, lateral view; 101 – style, dorsal view; 102 – connective, dorsal view; 103 – subgenital plate, ventral view.



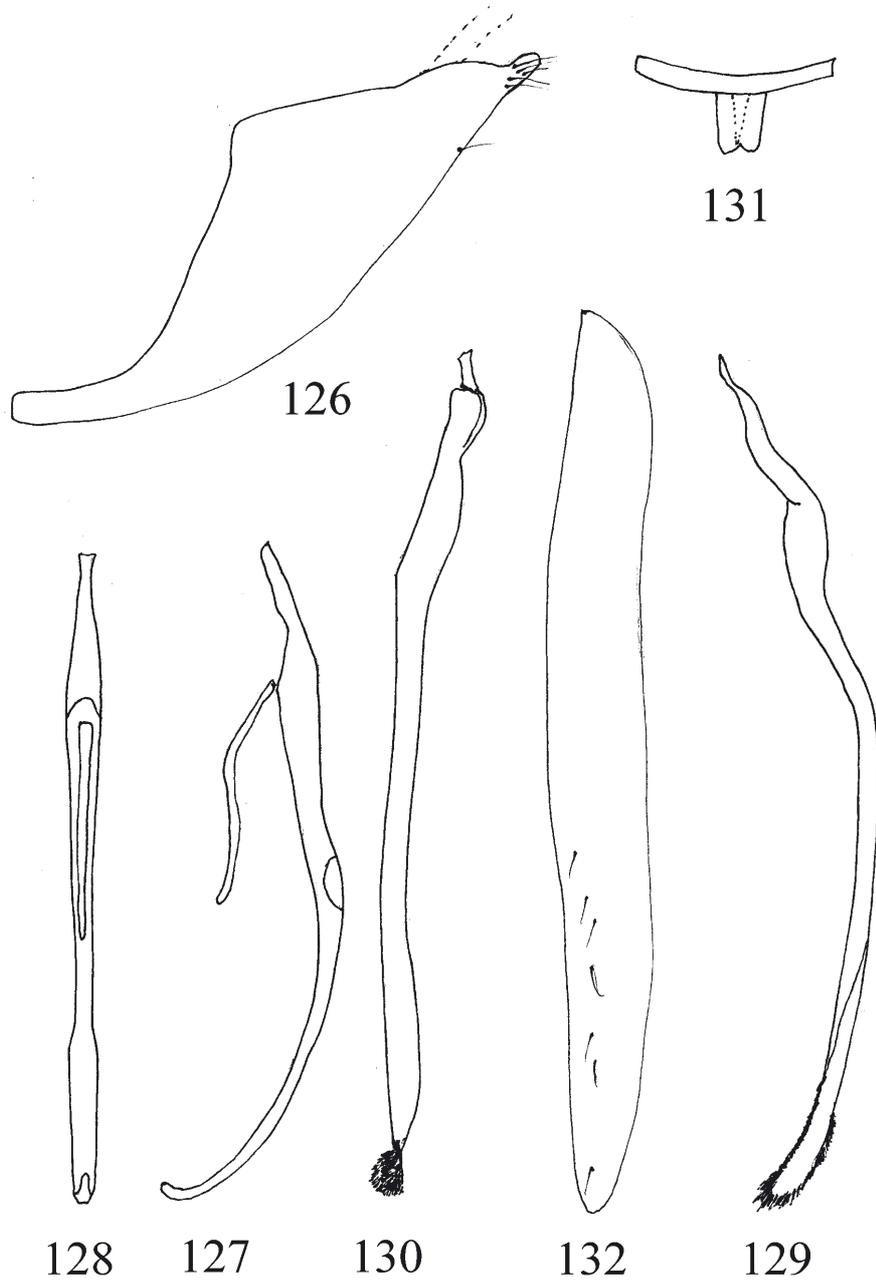
Figs 104–111. *Paracariniolia exilis* sp.nov. 104 – male pygofer, lateral view; 105 – aedeagus and dorsal connective, lateral view; 106 – aedeagus and dorsal connective, dorsal view; 107 – style, lateral view; 108 – style, dorsal view; 109 – connective, dorsal view; 110 – connective, lateral view; 111 – subgenital plate, ventral view.



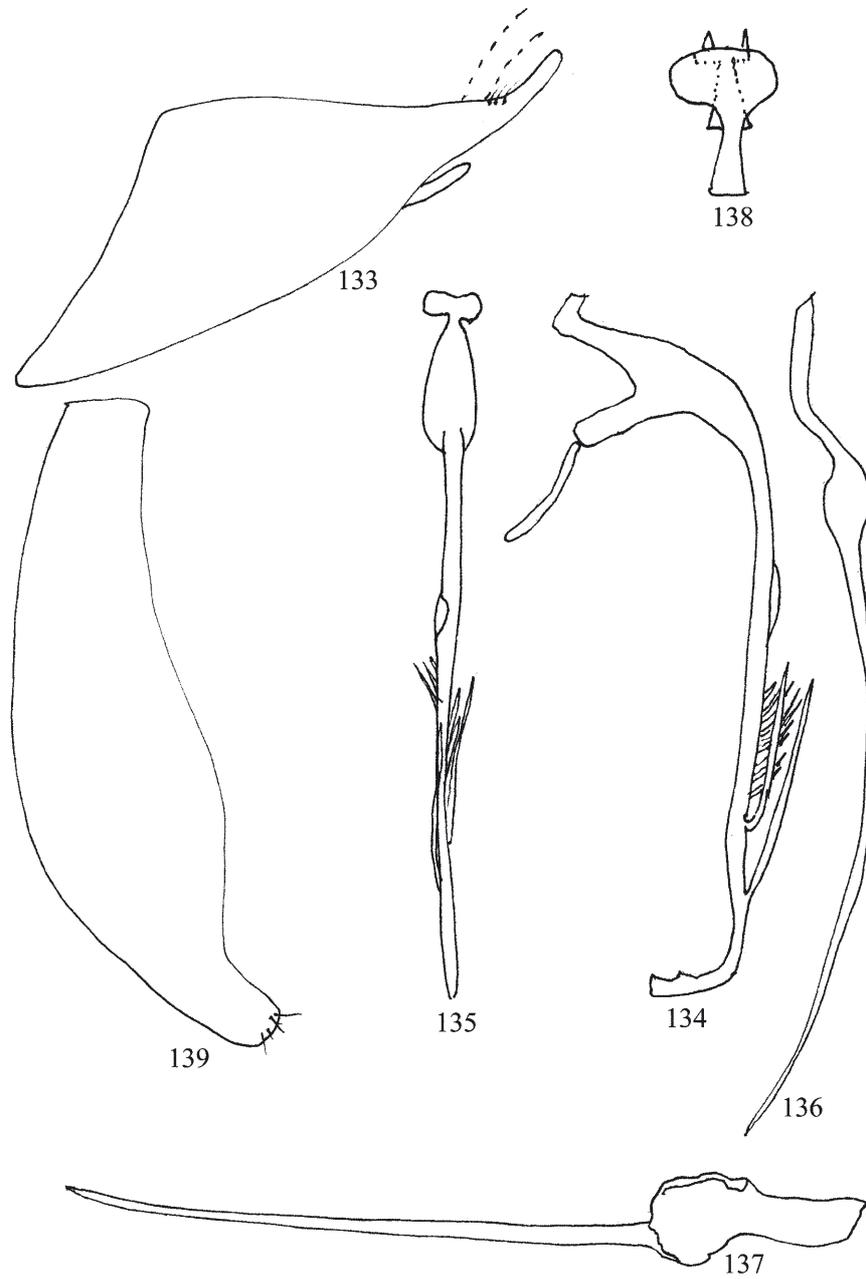
Figs 112–118. *Perulidia forameninis* sp.nov. 112 – male pygofer, lateral view; 113 – aedeagus and dorsal connective, lateral view; 114 – aedeagus and dorsal connective, dorsal view; 115 – style, lateral view; 116 – style, dorsal view; 117 – connective, dorsal view; 118 – subgenital plate, ventral view.



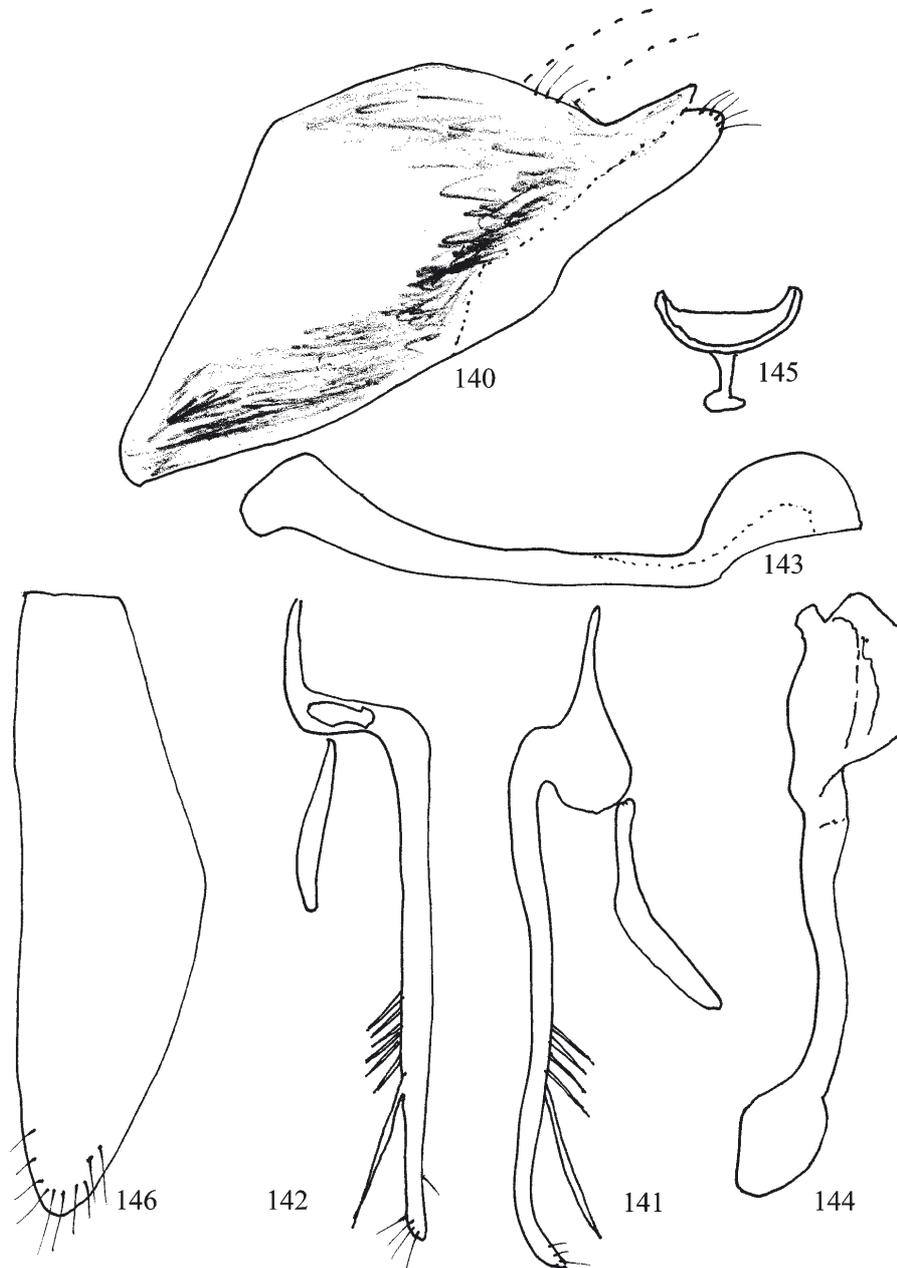
Figs 119–125. *Perulidia macrosetacea* sp.nov. 119 – male pygofer, lateral view; 120 – aedeagus and dorsal connective, lateral view; 121 – aedeagus and dorsal connective, dorsal view; 122 – style, lateral view; 123 – style, dorsal view; 124 – connective, dorsal view; 125 – subgenital plate, ventral view.



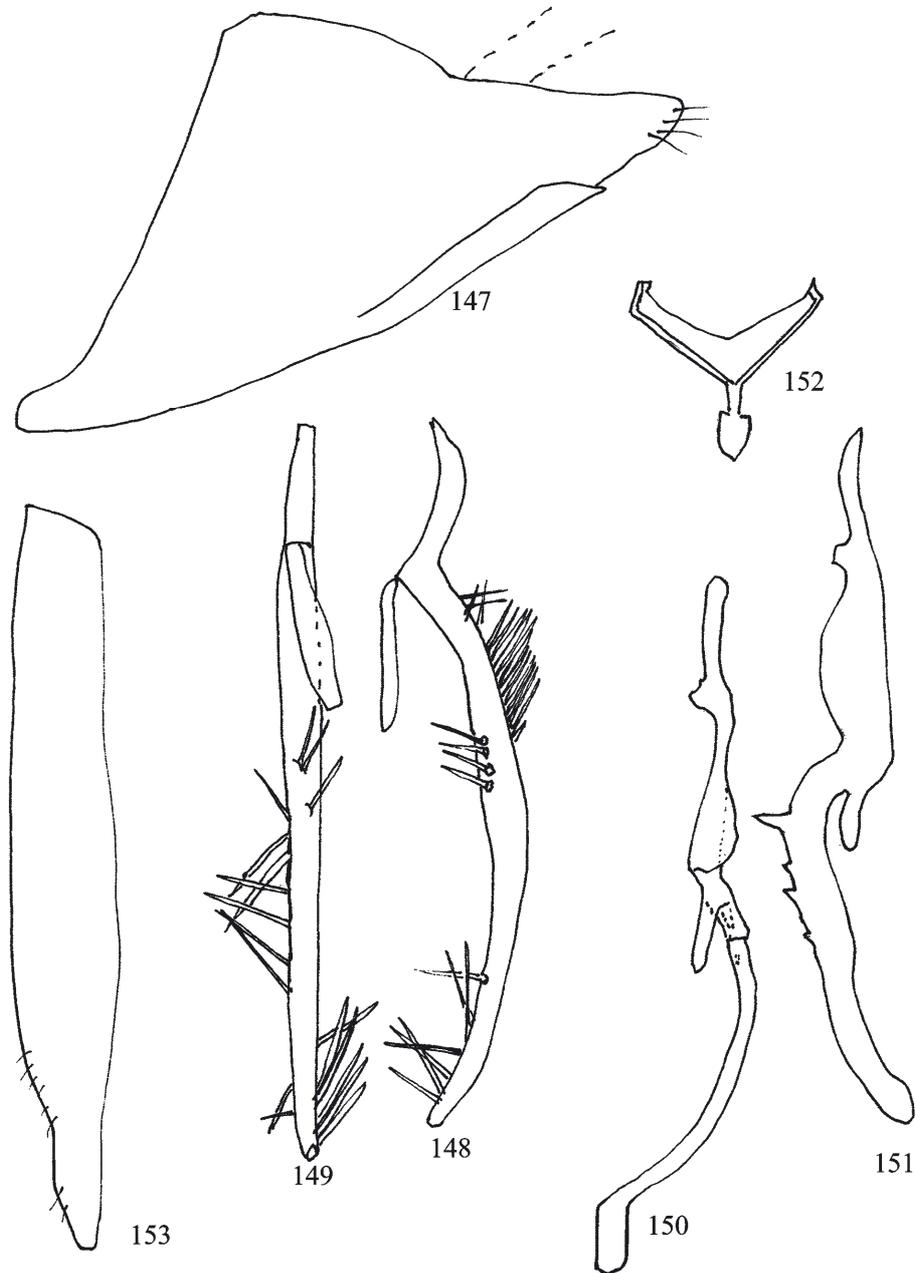
Figs 126–132. *Perulidia torqueresi* sp.nov. 126 – male pygofer, lateral view; 127 – aedeagus and dorsal connective, lateral view; 128 – aedeagus and dorsal connective, dorsal view; 129 – style, lateral view; 130 – style, dorsal view; 131 – connective, dorsal view; 132 – subgenital plate, ventral view.



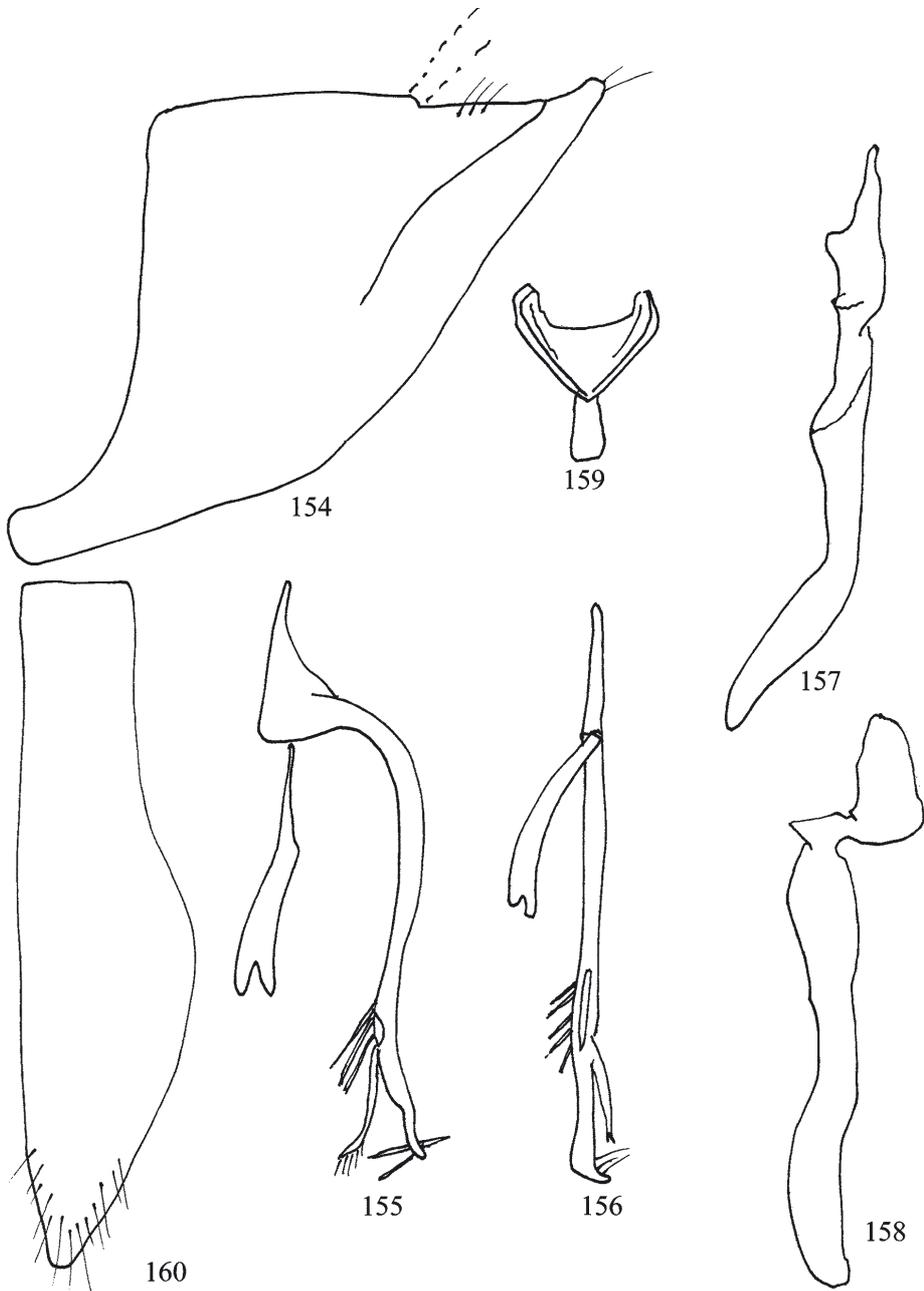
Figs 133–139. *Sapingia elongistyla* sp.nov. 133 – male pygofer, lateral view; 134 – aedeagus and dorsal connective, lateral view; 135 – aedeagus and dorsal connective, dorsal view; 136 – style, lateral view; 137 – style, dorsal view; 138 – connective, dorsal view; 139 – subgenital plate, ventral view.



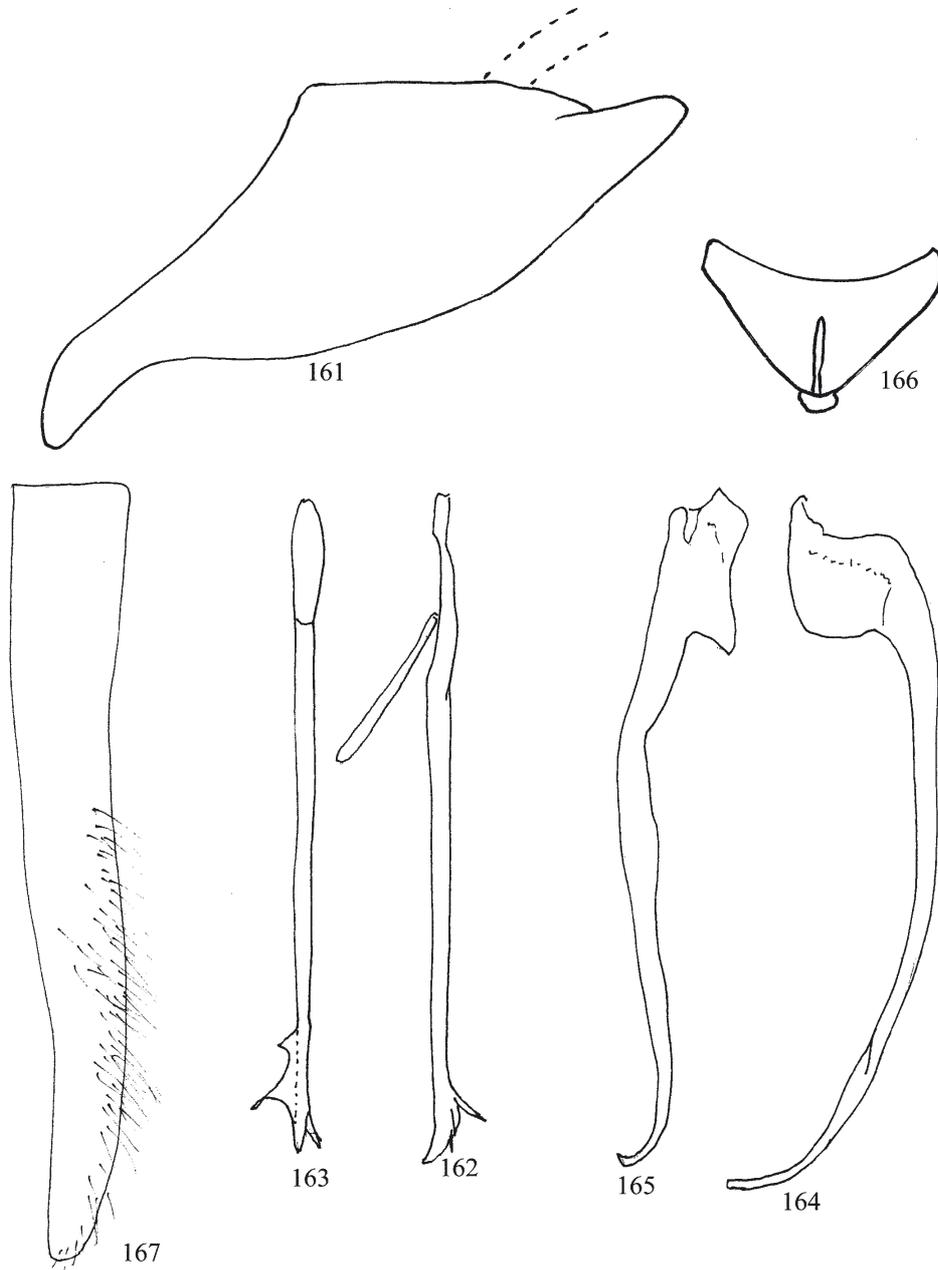
Figs 140–146. *Staloidia membrana* sp.nov. 140 – male pygofer, lateral view; 141 – aedeagus and dorsal connective, lateral view; 142 – aedeagus and dorsal connective, dorsal view; 143 – style, lateral view; 144 – style, dorsal view; 145 – connective, dorsal view; 146 – subgenital plate, ventral view.



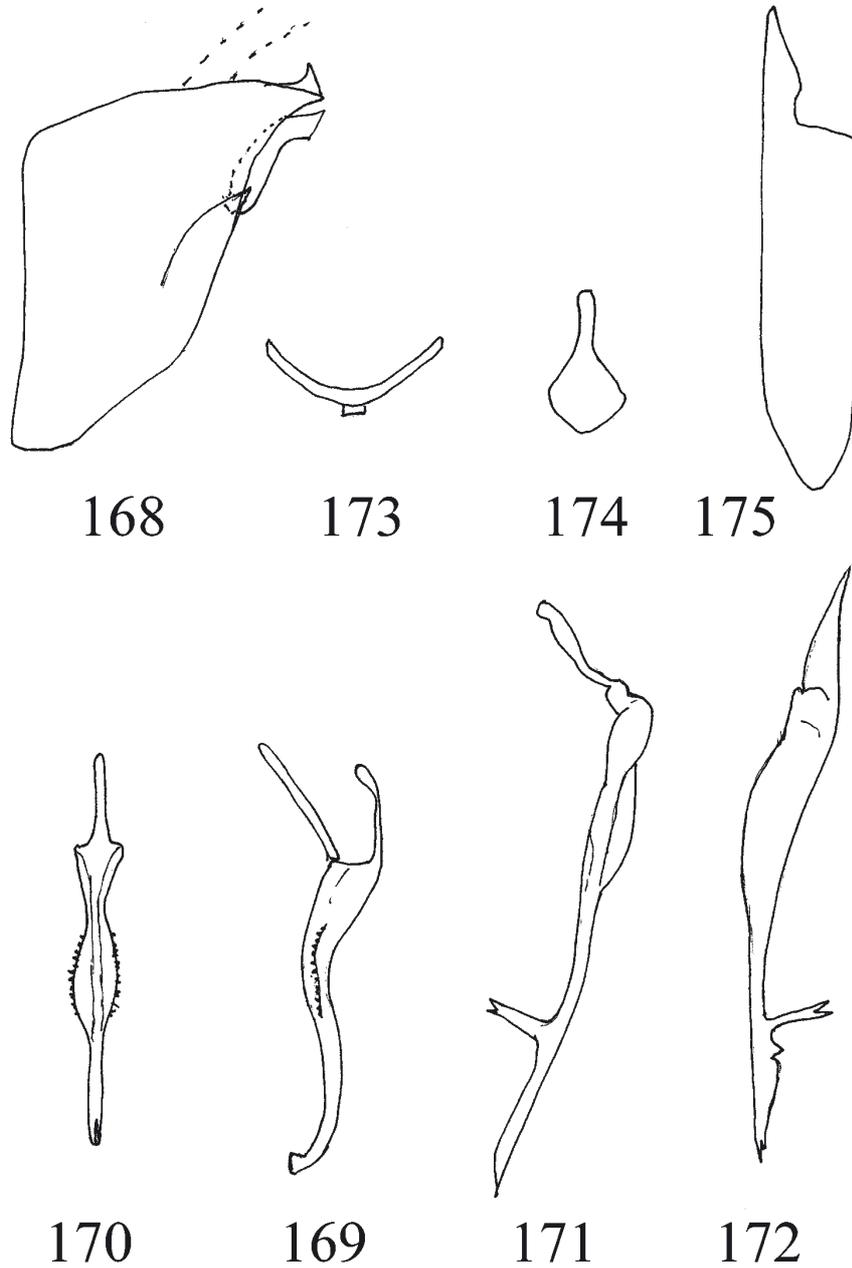
Figs 147–153. *Stalolidia peruviana* sp.nov. 147 – male pygofer, lateral view; 148 – aedeagus and dorsal connective, lateral view; 149 – aedeagus and dorsal connective, dorsal view; 150 – style, lateral view; 151 – style, dorsal view; 152 – connective, dorsal view; 153 – subgenital plate, ventral view.



Figs 154–160. *Staloidia sinuata* sp.nov. 154 – male pygofer, lateral view; 155 – aedeagus and dorsal connective, lateral view; 156 – aedeagus and dorsal connective, dorsal view; 157 – style, lateral view; 158 – style, dorsal view; 159 – connective, dorsal view; 160 – subgenital plate, ventral view.



Figs 161–167. *Terulia paradispar* sp.nov. 161 – male pygofer, lateral view; 162 – aedeagus and dorsal connective, lateral view; 163 – aedeagus and dorsal connective, dorsal view; 164 – style, lateral view; 165 – style, dorsal view; 166 – connective, dorsal view; 167 – subgenital plate, ventral view.



Figs 168–175. *Sandersellus fissus* sp.nov. 168 – male pygofer, lateral view; 169 – aedeagus and dorsal connective, lateral view; 170 – aedeagus and dorsal connective, dorsal view; 171 – style, lateral view; 172 – style, dorsal view; 173 – connective, dorsal view; 174 – connective, lateral view; 175 – subgenital plate, ventral view.