

Contribution to the knowledge of the genus *Ardistomis* Putzeys, 1846 from Central America (Coleoptera: Carabidae: Scaritinae: Clivinini)

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Taxonomy, new species, key, Coleoptera, Carabidae, Clivinini, *Ardistomina*, *Ardistomis*, Central America, Panama, Costa Rica, Guatemala, Honduras

Abstract. Twelve Central American flightless species in the genus *Ardistomis* Putzeys, 1846 are described, diagnosed, and their habitus and male or female genitalia are illustrated. A key to all known species of the *A. muelleri* species group is provided. New findings of *A. samyni* Valdés, 2009 from Honduras and *Ardistomis bulirschii* Valdés, 2009 from Ecuador, both to date known only by the types, are provided.

INTRODUCTION

To date the clivinini genus *Ardistomis* Putzeys, 1846 is poorly known and a modern revision is still needed. According to Valdés (2009) and Bulirsch & Magrini (2024), it comprises about 47 valid species (one of them with 2 subspecies) widespread almost exclusively in the Neotropical region, only two species occur in North America. Limited manuscripts with new descriptions were published e.g. by Kult (1950), Nichols (1988), and most recently eight species were described by Valdés (2007, 2009) from South and Central America, one by Makhan (2010) as well as Balkenohl et al. (2018) and Bulirsch & Magrini (2024), who described three species from South America. Kult (1950) established 13 new species groups of the genus *Ardistomis* s. l.: four of them in the subgenus *Ardistomis* s. str. and nine in the new subgenus *Semiardistomis* Kult, 1950 (= *Ardistomiellus* Kult, 1950). Later Valdés (2009) considered *Semiardistomis* as a separate genus and Valdés (2012) revised its species. Valdés (2009) listed the known *Ardistomis* species with their synonymy and general distribution, (re)defined some of Kult's *Ardistomini* groups (including the *A. muelleri* group), transferred Kult's groups 5th (*A. rotundipennis* Putzeys, 1867), 6th (*A. muelleri* Kult, 1950) and 7th (*A. ovatus* Putzeys, 1846) to the genus *Ardistomis* s. str. and keyed all five species of the *A. muelleri* group known at that time. Altogether eight *Ardistomis* species are known from Central America including Mexico.

During the study of unidentified specimens of Central American *Ardistomis*, we have discovered 12 new species, which are described below: 11 of them belong to *A. muelleri* group sensu Valdés (2009); the one remaining species cannot be clearly placed in any known group.

MATERIAL AND METHODS

The study of dry-mounted specimens, including measurements and examination of microsculpture, was done at a magnification up to 98×. Aedeagi and female styli were fixed in Euparal or with water soluble glue on a label and placed on the same pin below the beetle. Measurements: length of body is measured from the anterior margin of the closed mandibles to the apex of the elytra along the suture; length of the pronotum along its midline; width of the pronotum at widest point; length of the elytra from its base to its apex along the suture; width of the elytra at its widest point. Length of body is given with 0.05 mm accuracy; other measurements including ratios and means are rounded to two decimal places. Label locality data are quoted verbatim except for the use of standardized dates.

Macrophotographs were taken by the second author using a Nikon D2X or D800 digital camera, applied to a Nikon Labophot II binocular optical microscope or a Nikon SMZ 1000 stereomicroscope, with diaphragmed lenses.

The terms and methods mentioned in Valdés (2009) are followed as closely as possible except measurements of the head and the body length so that the body length used in this article is about one fifth larger compared to Valdés (2009).

The following abbreviations are used to indicate the depository of specimens:

CMNC Canadian Museum of Nature, Gatineau, Québec, Canada (R.S. Anderson, F. Génier);

FMNH Field Museum of Natural History, Chicago, U.S.A. (A. Newton);

PBPC Petr Bulirsch collection, Praha, Czech Republic;

PMTF Pierre Moret collection, Toulouse, France;

PMFI Paolo Magrini collection, Firenze, Italy;

RFBN Ron F.F.L. Felix collection (Berkel Enschoot, The Netherlands).

Other abbreviations:

SP: setiferous puncture(s); BSP: basal setiferous puncture(s); DSP: dorsal setiferous puncture(s); HT: holotype(s); PT: paratype(s); /, // by locality labels: end of line, label; L.: body length of specimen(s).

RESULTS

Genus *Ardistomis* Putzeys, 1846

Type species: *Ardistomis fasciolatus* Putzeys, 1846.

***Ardistomis muelleri* species group**

Type species: *A. muelleri* Kult, 1950, p. 302, 308: described as *A. (Semiardistomis) mülleri*, and assigned as a single species in author's "6th group".

Diagnosis of group. Valdés (2009) transferred *A. muelleri* to the genus *Ardistomis* s. str. and assigned it as a type species of his newly named *A. muelleri* group and assigned to this group four additional species, described in his article - two new species from Ecuador and

two from Central America: flight-capable species *A. dostali* from Costa Rica, and flightless *A. samyni* from Honduras. He defined the *A. muelleri* group as follows: “Sternum VII with an irregular row of accessory setae near base, and phallus elongate, tubular, with reduced and blunt apical portion, reduced endophallus with few sparse microtrichia and distinctly developed basal sclerite. color fuscous to ferruginous, elytra unspotted, labial palpomere 3 longer than palpomere 2. The members of the *muelleri* group that inhabit montane wet forest habitats show a tendency to metathoracic wing and eye reduction”.

All characters of the 11 species described below are in line with the definition of the *A. muelleri* group sensu Valdés (2009).

***Ardistomis struyvei* sp. nov.**

(Figs. 1-4)

Type material. Holotype (♂): Panama, Forest nr. Lago / Bayano, 9.18°N 78.76°W / 8.viii.2014, T. Struyve leg., (PBPC).

Description. Habitus as in Fig. 1. Measurements: Length in HT 3.25 mm; pronotum 1.05 times as broad as long; elytra 1.48 times as long as broad, 1.36 times as broad as pronotum; pronotum 1.61 times as broad as head.

Color. Body dark ferruginous, without metallic tinge; elytra unicolored, unspotted; legs ferruginous, anterior ones slightly darker, antennae and mouthparts yellowish.

Microsculpture. Antero-median part of head up to vertex with distinct isodiametric microsculpture, supraantennal plates and genae with mesh pattern much finer, irregularly isodiametric; gula without reticulation. Mandibles with rather rough, almost isodiametric mesh pattern; proepisterna, submentum and especially mentum with rough isodiametric reticulation. Pronotum with slightly transverse, moderately fine, on disc almost disappearing mesh pattern; submarginal band of microsculpture indistinct; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytral disc shiny, with very fine microlines longitudinally oriented; irregular, fine reticulation on elytral apex and more distinct in lateral channel, on base and humeri. Abdominal sterna with mesh pattern moderately deep, transverse.

Chaetotaxy. Anterior marginal SP on pronotal disc distinctly closer to anterior angles than to posterior SP. Elytral base with basal SP, disc with five DSP in interval 3. Terminal abdominal sternum with ambulatory setae near base; preapical SP almost equidistant from each other.

Head. Clypeus with anterior margin slightly, regularly convex. Vertex without transverse groove between posterior supraorbital SP. Supraantennal lobes with deep and long medio-basal depressions. Eyes strongly reduced with indistinct facets, moderately vaulted, more than twice shorter than very distinct genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 about 1.5-1.4 times as long as wide.

Mouthparts. Labrum with anterior margin projected medially in blunt angle. Mandibles moderately long, regularly, directly narrowed to indistinctly curved tip (slightly abraded?). Labium with labial palpomeres 3 longer than 2.

Thorax. Pronotum subovate; in lateral view on disc rather slightly, apically moderately

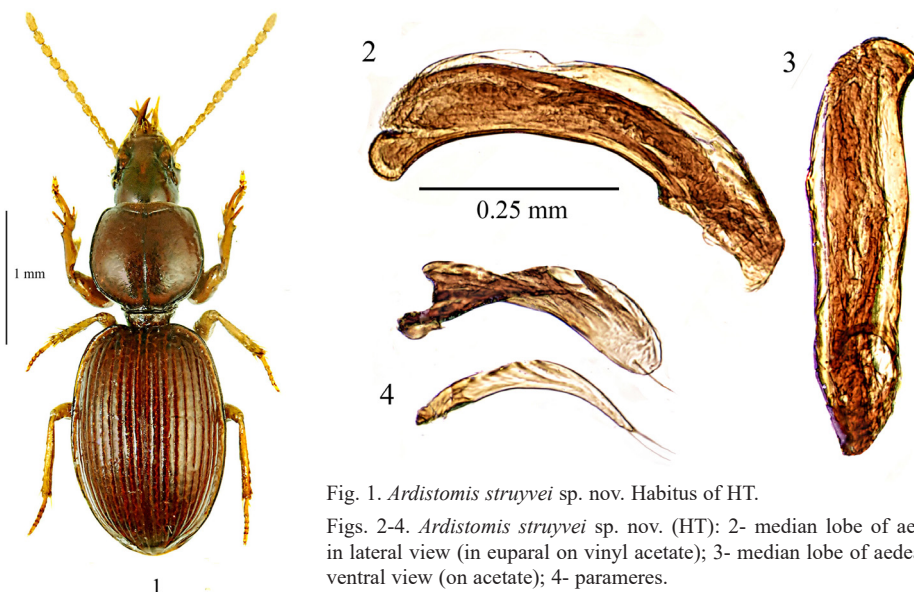


Fig. 1. *Ardistomis struyvei* sp. nov. Habitus of HT.

Figs. 2-4. *Ardistomis struyvei* sp. nov. (HT): 2- median lobe of aedeagus in lateral view (in euparal on vinyl acetate); 3- median lobe of aedeagus in ventral view (on acetate); 4- parameres.

strongly convex, lateral margins almost directly, rather strongly narrowed anteriorly to blunt, not protruded anterior angles; anterior transverse and median longitudinal impressions narrow, moderately deep, latter deepened basally. Proepipleura narrowly visible from above in about posterior third. Metasternum posteriad to mesocoxa more than twice shorter than metacoxa.

Elytra. Subovate; in lateral view barely convex, especially basally; humeri broadly rounded; lateral margin without denticulation, slightly convexly broadened posteriad mid-length; apex moderately broadly rounded; striae distinct, narrow and moderately deep throughout their length, very finely and densely punctured; intervals moderately convex on disc, more distinctly latero-apically, outer intervals, especially 5 and 7 subcarinate on apex.

Metathoracic wings. Reduced.

Male genitalia (Figs. 2-4). Phallus somewhat tubular, rather broad in lateral view, upper outline almost regularly, moderately strongly convex (Fig. 2), laterally apex broadly rounded, barely bent ventrad; in ventral view phallus broad, with very broad tip (Fig. 3), slightly turned right. Parameres as in Fig. 4; paramere 1 (larger) with apical portion wide and broadly rounded, with one subapical seta, lateral apophysis large, broadly rounded, basal apophysis acute. Paramere 2 (smaller) much slender, almost as long as paramere 1, apex acute, tip with two apical setae.

Differential diagnosis. *A. struyvei* sp. nov. has the body small; the eyes are strongly reduced, with indistinct facets, more than twice shorter than the very distinct genae; the vertex has no transverse groove; the elytra are short ovate, barely vaulted in the lateral view, the humeri are broadly rounded; the metasternum posteriad to the mesocoxa is more than twice shorter than the metacoxa, and finally, the terminal abdominal sternum has a row of the ambulatory setae so that according to Valdés (2009) the new species clearly belongs to *A. muelleri* group.

It differs from the most similar *A. newtoni* sp. nov. described below by the body being larger and especially by having the elytra much longer, and from *A. andersoni* sp. nov. described here from Costa Rica by the body being distinctly smaller and the head having no transverse furrow. The differences against the remaining species of the group are mentioned in the key below.

Name derivation. Named after entomologist Tim Struyve (Muizen, Belgium), the collector of the type specimen.

***Ardistomis felixi* sp. nov.**

(Figs. 5-9)

Type material. Holotype (♂): Panama, Volcan Baru / 8.848°N 82.526°W / 2300-2500 m, 1.v.2014 / gezeefd T. Struyve leg., (PBPC). Paratypes: (9 spec.): with the same data as HT, (RFBN, PBPC, PMFI); (4 spec.): Panama, Volcan Baru / 8.85°N 82.52°W / 20.vii.2014 / T. Struyve leg., (RFBN); (2 sp.): Panama: Chiriquí / 30.7 km W Volcan / Hartmann's Finca, 1800 m / 16.vi.1995-28B[or E] / R.S. Anderson / mixed oak for. litt., (CMNC, PBPC); (2 sp.): Panama: Chiriquí / 12 km NE Santa Clara / Cerro Pando, 8°54.74'N / 82°43.29'W 1850 m, 96-136 / 17.vi.1996, R. Anderson / oak forest litter, (CNMC, PBPC); (1 sp.): Panama: Chiriquí / 12 km NE Santa Clara / Cerro Pando, 8°54.74'N / 82°43.29'W 1850 m, 96-139A / 18.vi.1996, R. Anderson / oak forest litter, (CNMC); (3 spec.): Panama: Chiriquí / P. Nac. Volcan Baru, 5.9 / km E Cerro Punta, 2400 m / 14.vi.1995-21E[or F,G] / R.S. Anderson / oak ridge bamboo for. litt., (CNMC, PBPC); (4 sp.): Panama: Chiriquí / Pk. Int. La Amistad Las / Nubes, 5.3 km W Cerro / Punta, 2150 m, 15.vi. / 1995-26A[or B], R.S. Anderson / cloud forest litter, (CNMC, PBPC); (1 sp.): Panama: Chiriquí / 12 km NE Santa Clara / Cerro Pando, 8°54.74'N / 82°43.29'W, 2000 m, 96-135C / 17.vi.1996, R. Anderson / wet cloud forest litter, (CNMC); (1 sp.): Panama: Chiriquí / 12 km NE Santa Clara / Cerro Pando, 8°54.74'N / 82°43.29'W, 2120 m, 96-134B / 17.vi.1996, R. Anderson / wet cloud forest litter, (CNMC).

Description. Habitus as in Fig. 5. Measurement. Length 4.10-4.85 mm (mean 4.56 mm, HT 4.50 mm, n=18); pronotum 1.07-1.12 (mean 1.09, HT 1.08) times as broad as long; elytra 1.36-1.44 (mean 1.42, HT 1.37) times as long as broad, 1.46-1.54 (mean 1.50, HT 1.51) times as broad as pronotum; pronotum 1.58-1.65 (mean 1.62, HT 1.62) times as broad as head.

Color. Body dark ferruginous to light fuscous, without metallic tinge; elytra unicolored, unspotted; antennae and legs ferruginous, mouthparts yellowish.

Microsculpture. Clypeus anteriorly and postero-laterally with fine microsculpture; vertex and genae with mesh pattern fine, irregularly transverse. Mandibles with rough, almost isodiametric reticulated; gula with fine, proepisterna, submentum and especially mentum with very rough isodiametric reticulation. Pronotum with slightly transverse, moderately fine, on disc almost disappearing mesh pattern; submarginal band of microsculpture very broad, indistinctly elevated; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytra disc shiny, not reticulated, irregular, fine reticulation on very apex and more distinct in lateral channel, on base and humeri. Abdominal sterna with mesh pattern transverse.

Chaetotaxy. Anterior marginal SP on pronotal disc just closer to posterior SP than to anterior angles. Elytral base with basal SP, disc with 4-5 fine DSP in interval 3. Terminal abdominal sternum with ambulatory setae near base; inner pair of preapical setae separated by about 1.1 times distance between inner and outer setae.

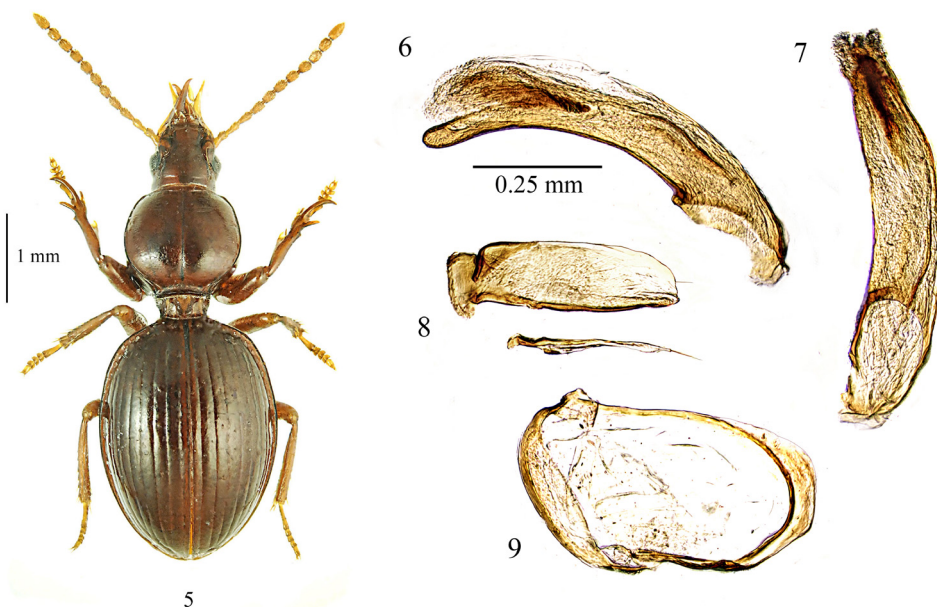


Fig. 5. *Ardistomis felixi* sp. nov. Habitus of HT.

Figs. 6-9. *Ardistomis felixi* sp. nov. (HT): 6- median lobe of aedeagus in lateral view (in euparal on vinyl acetate); 7- median lobe of aedeagus in ventral view (on acetate); 8- parameres; 9- urite IX.

Head. Clypeus with anterior margin slightly, regularly convex. Vertex with rather fine and narrow transverse groove between posterior supraorbital SP. Supraantennal lobes with basal, broad median depressions. Eyes reduced, rather slightly vaulted, about twice longer than flat genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 about 1.4-1.3 times as long as wide.

Mouthparts. Labrum with anterior margin projected medially in very blunt angle. Mandibles moderately long, regularly, directly narrowed to short, slightly curved tip. Labium with labial palpomeres 3 longer than 2.

Thorax. Pronotum subovate; in lateral view on disc rather strongly, apically strongly convex, lateral margins slightly convexly, moderately strongly narrowed anteriorly to very blunt, not protruded anterior angles; anterior transverse and median longitudinal impressions narrow, moderately deep, latter slightly broadened apically. Proepipleura narrowly visible from above in about posterior third. Metasternum posteriad to the mesocoxa more than twice shorter than metacoxa.

Elytra. Short ovate; in lateral view basally rather slightly convex, apically moderately strongly convex; humeri very broadly rounded; lateral margin without denticulation, convexly broadened almost up to mid-length; apex moderately broadly rounded; striae distinct, narrow and moderately deep throughout their length, indistinctly punctured; intervals slightly convex on disc, more distinctly latero-apically and very basally. Interval 7 on apex as vaulted as others, not forming elevated keel.

Metathoracic wings. Strongly reduced.

Male genitalia (Figs. 6-9). Phallus rather long, somewhat tubular, rather narrow in lateral view, upper outline irregularly, moderately strongly convex, apex long and rather narrow, very slightly bent ventrad (Figs. 6); in ventral view phallus moderately broad, narrowed to apex (Fig. 7); latter long, narrowly rounded, not turned right. Parameres as in Fig. 8; paramere 1 (larger) broad, with apical portion wide and broadly rounded, with one seta apically, lateral apophysis reduced, broadly rounded, basal apophysis blunt. Paramere 2 (smaller) very thin, almost as long as paramere 1, apex acute, one apical seta. Urite IX as in Fig. 9, rounded, with blunt lateral protrusion.

Differential diagnosis. *A. felixi* sp. nov. has moderately small body; the eyes are reduced, about twice longer than the distinct genae; the elytra are very short ovate, moderately strongly vaulted in the lateral view, the humeri are very broadly rounded, the metasternum posteriad to the mesocoxa is more than twice shorter than the metacoxa, and finally, the terminal abdominal sternum has a row of the ambulatory setae so according to Valdés (2009) the new species belongs to *A. muelleri* group and according to his key it is only related to *A. muelleri* Kult, 1950 from Mexico. It can be easily differentiated from the latter species by having the elytra much shorter and by the different shape of the median lobe of the aedeagus (Figs. 6-8 versus Figs. 17-18 in Valdés (2009)).

The differences against the remaining species of the group are mentioned in the key below.

Name derivation. Named after our friend Ron F. F. L. Felix (Berkel Enschoot, The Netherlands) who kindly loaned and donated us several unidentified *Ardistomis* species.

***Ardistomis darienensis* sp. nov.**
(Figs. 10-11)

Type material. Holotype (♀): Panama: Darien / Estacion Ambiental Cana / 7°45.32'N 77°41.07'W / Cerro Pirre, 1450 m, 6.vi.1996 / R.S. Anderson, 96-112A / cloud forest litter, (CNMC). Paratype: (1 ♀): with the same data as HT, (PBPC).

Description. Habitus as in Fig. 10. Measurement. Length of HT 5.10 mm, PT 4.90 mm; pronotum in HT 1.16, in PT 1.14 times as broad as long; elytra in HT and PT 1.44 times as long as broad, in HT 1.30, in PT 1.33 times as broad as pronotum; pronotum in HT 1.87, in PT 1.84 times as broad as head.

Color. Body light fuscous, without metallic tinge; elytra unspotted, lateral channel and almost indistinct strip along sutura barely lighter, supraantennal plates laterally slightly translucent; antennae and legs ferruginous, mouthparts dark yellowish.

Microsculpture. Clypeus with distinct mesh pattern, barely finer posteriorly up to vertex; supraantennal plates and genae with mesh pattern almost indistinct. Mandibles and gula with rather fine reticulation, submentum and especially mentum with very rough isodiametric reticulation. Pronotal disc with slightly transverse, moderately deep reticulation, proepisterna with isodiametric mesh pattern; submarginal band of microsculpture almost indistinct; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytral disc

with very fine microlines longitudinally oriented, irregular, fine reticulation on apex and more distinct on base, lateral intervals 7-8 and humeri. Abdominal sterna with rather rough, slightly transverse mesh pattern.

Chaetotaxy. Anterior marginal SP on pronotal disc closer to anterior angles than to posterior SP. Elytral base with basal SP, disc with 3-4 DSP in interval 3 (in HT four DSP on left and three on right elytron). Terminal abdominal sternum laterally with 1-2 indistinct ambulatory setae; preapical SP almost equidistant to each other.

Head. Clypeus with anterior margin moderately, regularly convex. Vertex without transverse groove between posterior supraorbital SP. Supraantennal lobes with basal rather long, broad and deep median depressions. Eyes slightly reduced, distinctly flattened, about twice longer than flat genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 about 1.5-1.4 times as long as wide.

Mouthparts. Labrum with anterior margin projected medially in very blunt angle. Mandibles rather short, regularly, directly narrowed to short, slightly curved tip. Labium with labial palpomeres 3 longer than 2.

Thorax. Pronotum distinctly trapezoidal; in lateral view on disc moderately, apically rather strongly convex, lateral margins almost directly, strongly narrowed anteriorly to very narrowly rounded, indistinctly protruded anterior angles; anterior transverse and median longitudinal impressions narrow, moderately deep, latter slightly broadened just before basal inclination. Proepipleura very narrowly visible from above in about posterior half. Metasternum posteriad to mesocoxa distinctly more than twice shorter than metacoxa.

Elytra. Slightly ovate; in lateral view anteriorly rather slightly, apically moderately strongly convex; humeri rather narrowly rounded; lateral margin without denticulation, slightly convexly, almost indistinctly broadened barely posteriad mid-length; apex rather narrowly rounded; striae distinct, deep throughout their length, very densely and very finely punctured; intervals moderately convex medio-basally, slightly more convex latero-apically, especially outer ones at apex.

Metathoracic wings. Reduced.

Male genitalia. Unknown.

Female genitalia (Fig. 11). Gonocoxae with broad basal half with distinct latero-apical protrusion; apical part thin, strongly curved, its tip with two setae.

Differential diagnosis. *A. darienensis* sp. nov. has moderately large body; the eyes are reduced, about twice longer than the distinct genae; the elytra are slightly ovate, moderately vaulted in the lateral view, the humeri are rather shortly rounded, the metasternum posteriad to the mesocoxa is more than twice shorter than the metacoxa, the pronotum is somewhat trapezoid, and finally, the terminal abdominal sternum has laterally 1-2 almost indistinct ambulatory setae so according to Valdés (2009) the new species belongs to the *A. muelleri* group.

It belongs to a small group of species with flattened eyes being about twice longer than distinct gena and it can be distinguished from all of them by the missing transverse groove on the head. The differences against all species of the group are mentioned in the key below.

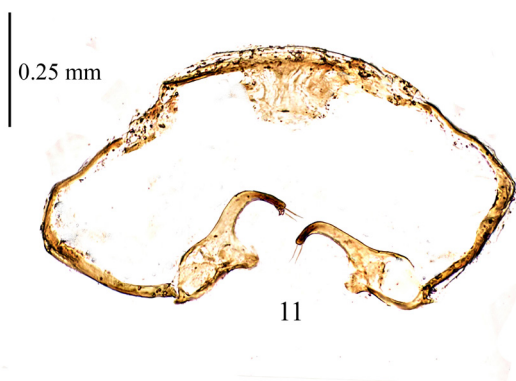
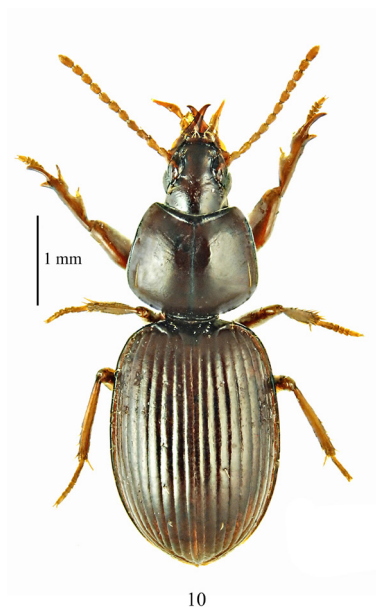


Fig. 10. *Ardistomis darienensis* sp. nov. Habitus of HT.

Fig. 11. *Ardistomis darienensis* sp. nov. Styli of HT.

Name derivation. Named after the Province Darién in South Panama, place of the type locality.

***Ardistomis guatemalensis* sp. nov.**

(Figs. 12-13)

Type material. Holotype (♀): Guat[emala]: Baja Verapaz / 3.5 km S Purulha / Ranchito El Quetzal / 1770 m, 1.vii.1993, R. Anderson, cloud / for. litter, 93-31H, (CMNC). Paratypes: (2 ♀♀): Guat[emala]: Baja Verapaz / 3.5 km S Purulha / Ranchito El Quetzal / 1770 m, 1.vii.1993, R. Anderson, cloud / for. litter, 93-31H, (CMNC, PBPC); (2 ♀♀): Guat[emala]: Baja Verapaz / 4.5 km S Purulha, 1630 m / 21.v.1991, R. Anderson / cloud forest litter, 91-6, (CMNC, PBPC).

Description. Habitus as in Fig. 12. Measurement. Length 4.70-5.10 mm (mean 4.89 mm, HT 4.80 mm, n=5); pronotum 1.02-1.05 (mean 1.03, HT 1.04) times as broad as long; elytra 1.55-1.58 (mean 1.56, HT 1.56) times as long as broad, 1.47-1.51 (mean 1.49, HT 1.49) times as broad as pronotum; pronotum 1.58-1.64 (mean 1.62, HT 1.60) times as broad as head.

Color. Body dark brownish, without metallic tinge; elytra unspotted; antennae and legs ferruginous, mouthparts dark yellowish.

Microsculpture. Clypeus with fine mesh pattern, latter irregularly advanced posteriorly up to vertex; supraantennal plates with almost indistinct mesh pattern; genae without reticulation. Mandibles with rather fine, almost isodiametric reticulation, gula and submentum with moderately fine, mentum with very rough isodiametric reticulation. Pronotum disc with slightly transverse, moderately rough reticulation, finer on pronotal disc, proepisterna with isodiametric mesh pattern; submarginal band of microsculpture distinct, rather narrowly raised; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytral disc shiny, almost not reticulated, with just recognizable microlines

longitudinally oriented; very fine reticulation on apex, two lateral intervals and more distinct on base and humeri. Abdominal sterna with mesh pattern transverse and moderately fine.

Chaetotaxy. Anterior marginal SP on pronotal disc distinctly closer to anterior angles than to posterior SP. Elytral base with basal SP, disc with 4-5 fine DSP in interval 3. Terminal abdominal sternum with two irregular lines of few ambulatory setae near base and in mid-length; preapical SP almost equidistant to each other.

Head. Clypeus with anterior margin rather slightly, regularly convex. Vertex with deep and narrow transverse groove between posterior supraorbital SP. Supraantennal lobes with long, deep and narrow median depressions. Eyes reduced, barely vaulted laterally, barely more than twice longer than elongate genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 1.8-1.7 times as long as wide.

Mouthparts. Labrum with anterior margin distinctly projected medially in blunt angle. Mandibles rather short, regularly, directly narrowed to short, slightly curved tip. Labium with palpomeres 3 distinctly longer than 2.

Thorax. Pronotum subovate; in lateral view on disc rather slightly, apically moderately convex, lateral margins convexly, moderately strongly narrowed anteriorly to narrowly rounded, indistinctly protruded anterior angles; anterior transverse and median longitudinal impressions narrow, moderately deep, latter broadened basally. Proepipleura narrowly visible from above in about posterior third. Metasternum posteriad to mesocoxa barely longer than metacoxa.

Elytra. Slightly ovate; in lateral view anteriorly almost not convex, apically moderately strongly convex; base rather slightly sloping to rather narrowly rounded humeri; lateral margin without denticulation, slightly, almost directly broadened distinctly posteriad mid-length; apex rather narrowly rounded; striae distinct, deep throughout their length, very densely and very finely punctured; intervals moderately convex medio-basally, more distinctly latero-apically, (5)7-8 (sub)carinate at apex.

Metathoracic wings. Reduced.

Female genitalia (Fig. 13). Gonocoxae with broad basal half with indistinct latero-apical protrusion; apical part thin, slightly curved, tip with two terminal and one long lateral seta.

Differential diagnosis. *A. guatemalensis* sp. nov. has moderately large body; the eyes are reduced, about twice longer than the distinct genae; the elytra are moderately long ovate, slightly vaulted in the lateral view, the humeri are rather shortly rounded, the metasternum posteriad to the mesocoxa is barely longer than the metacoxa, and finally, the terminal abdominal sternum has two irregular lines of a few ambulatory setae near the base and in mid-length, so that according to Valdés (2009) the new species belongs to the *A. muelleri* group. It belongs to a small group of species with flattened eyes being about twice longer than distinct gena, with the epipleura having a narrow keel.

It can be distinguished from the nearest species, *A. tommasolisai* sp. nov., by having distinctly larger body; by the elytral base being less strongly sloping to the more narrowly rounded humeri and by the pronotum having the lateral margin more convex. The differences against all species of the group are mentioned in the key below.

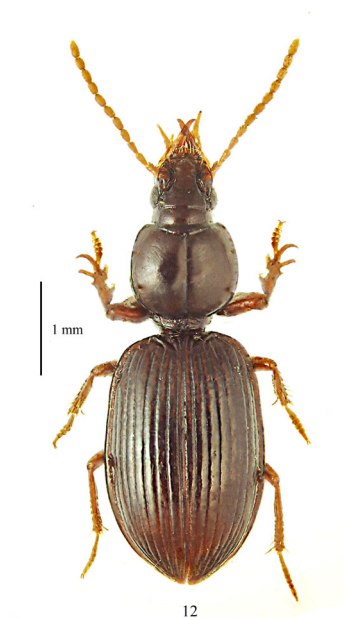


Fig. 12. *Ardistomis guatemalensis* sp. nov. Habitus of HT.

Fig. 13. *Ardistomis guatemalensis* sp. nov. Styli of PT.

Name derivation. Named after the country of Guatemala, in which the new species was found.

***Ardistomis tommasolisai* sp. nov.**
(Figs. 14-18)

Type material. Holotype (♂): Costa Rica: Cartago / P.N. Tapanti, 1500 m / 9°45'N 83°49'W / 4.vi.1997, R. Anderson / trop. mont. evergreen / forest litter, 97-001C, (CMNC). Paratypes: (4 spec.): with the same label data except 97-001A[or D, F], (CMNC, PBPC).

Description. Habitus as in Fig. 14. Measurement. Length 4.10-4.55 mm (mean 4.29 mm, HT 4.10 mm, n=5); pronotum 1.02-1.05 (mean 1.03, HT 1.04) times as broad as long; elytra 1.53-1.58 (mean 1.52, HT 1.54) times as long as broad, 1.41-1.45 (mean 1.43, HT 1.45) times as broad as pronotum; head 1.53-1.57 (mean 1.55, HT 1.55) times as broad as pronotum.

Color. Body moderately fuscous, without metallic tinge; elytra unspotted; antennae and legs ferruginous, mouthparts yellowish.

Microsculpture. Clypeus with fine, irregular mesh pattern, latter distinctly deeper posteriorly up to vertex; supraantennal plates and genae with mesh pattern almost indistinct. Mandibles and gula, with rather fine reticulation, submentum and especially mentum with very rough isodiametric reticulation. Pronotal disc with barely transverse, moderately deep reticulation, proepisterna with isodiametric mesh pattern; submarginal band of microsculpture distinct, narrowly elevated anteriorly; proepisterna with rough isodiametric reticulation; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytral disc moderately shiny, with fine microlines longitudinally oriented; irregular, fine reticulation on very apex and more distinct on base and humeri. Abdominal sterna with mesh pattern transverse and fine.

Chaetotaxy. Anterior marginal SP on pronotal disc barely closer to posterior SP than to anterior angles. Elytral base with basal SP, disc with five distinct DSP in interval 3. Terminal sternum with two irregular lines of ambulatory setae near base and few in mid-length; preapical setae separated by about 1.2 times distance between inner and outer setae.

Head. Clypeus with anterior margin irregularly, slightly convex. Vertex with deep and narrow transverse groove between posterior supraorbital SP. Supraantennal lobes with basal, narrow median depressions. Eyes slightly reduced, barely vaulted laterally, about twice longer than rather flat genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 about 1.7-1.6 times as long as wide.

Mouthparts. Labrum with anterior margin indistinctly projected medially in very blunt angle. Mandibles rather short, regularly, directly narrowed to very short, slightly curved tip. Labium with palpomeres 3 distinctly longer than 2.

Thorax. Pronotum subovate; in lateral view on disc moderately strongly, apically strongly convex, lateral margins slightly convexly, moderately strongly narrowed anteriorly to narrowly rounded, indistinctly protruded anterior angles; anterior transverse and median longitudinal impressions narrow, moderately deep, latter broadened posteriorly. Proepipleura narrowly visible from above in about anterior third. Metasternum posteriad to mesocoxa barely shorter than metacoxa.

Elytra. Slightly ovate; in lateral view anteriorly slightly, apically moderately strongly convex; base distinctly sloping to moderately broadly rounded humeri; lateral margin without denticulation, slightly, almost directly broadened almost up to posterior third; apex rather narrowly rounded; striae distinct, deep throughout their length, very densely and very finely punctured; intervals moderately convex medio-basally, more distinctly latero-apically, outer ones subcarinate at apex.

Metathoracic wings. Reduced.

Male genitalia (Figs. 15-18). Phallus rather long, somewhat tubular, rather narrow in lateral view, upper margin irregularly, moderately strongly convex, apex laterally narrowly semicircular, barely bent ventrad (Fig. 15); in ventral view phallus laterally broadly rounded, apex moderately broadly rounded, slightly turned right (Fig. 16). Parameres as in Fig. 17; paramere 1 (larger) with apical portion in basal half wide and broadly rounded, apical part abruptly narrowed, moderately acute, with one fine apical and one fine subapical seta, lateral apophysis large, broadly rounded, basal apophysis moderately acute. Paramere 2 (smaller) very slender, narrow, apex moderately acute, with one apical and one much finer subapical seta. Urite IX as in Fig. 18, rounded, with distinct lateral protrusion.

Differential diagnosis. *A. tommasolisai* sp. nov. has moderately large body; the eyes are reduced, about twice longer than the distinct genae; the elytra are moderately long ovate, slightly vaulted in the lateral view, the humeri are moderately broadly rounded, the metasternum posteriad to the mesocoxa is barely shorter than the metacoxa, and finally, the terminal abdominal sternum has a row of the ambulatory setae so that according to Valdés (2009) the new species belongs to the *A. muelleri* group.

It belongs to a small group of species with flattened eyes being about twice longer than distinct gena, with the epipleura having narrow keel. The new species differs from the

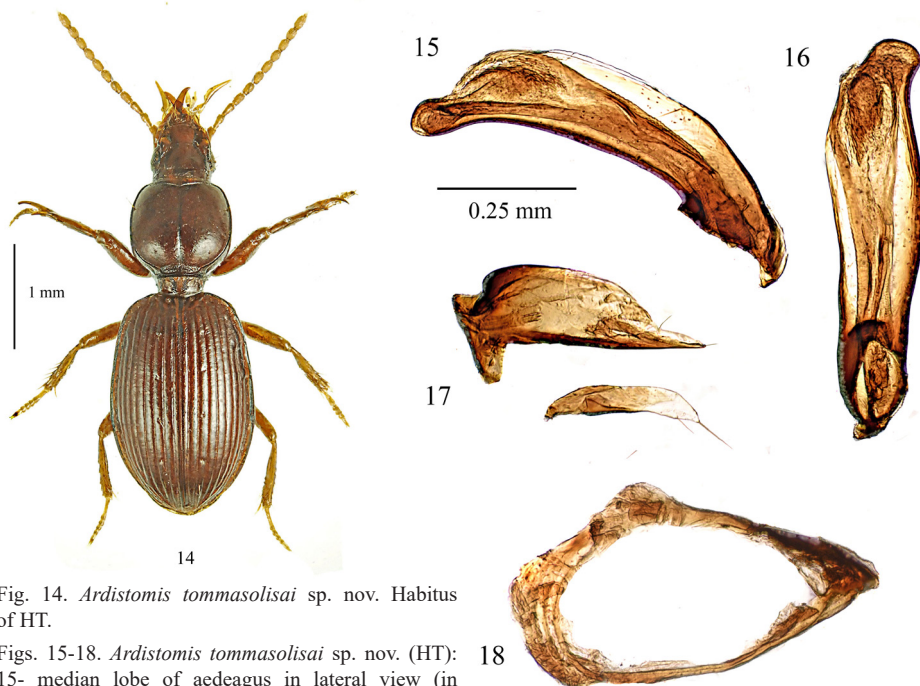


Fig. 14. *Ardistomis tommasolisai* sp. nov. Habitus of HT.

Figs. 15-18. *Ardistomis tommasolisai* sp. nov. (HT): 15- median lobe of aedeagus in lateral view (in euparal on vinyl acetate); 16- median lobe of aedeagus in ventral view (on acetate); 17- parameres; 18- urite IX.

nearest species, *A. guatemalensis* sp. nov. as stated in the Diagnosis of the latter species. The differences against all species of the group are mentioned in the key below.

Name derivation. Named after our friend, entomologist Tommaso Lisa (Firenze, Italy).

***Ardistomis andersoni* sp. nov.**

(Figs. 19-23)

Type material. Holotype (♂): Costa Rica: San Jose / km 117 Pan-Am. Hwy / 19 km N San Isidro / 9°28'N 83°42'20''W / 1800 m, 25.vi.1997 / R.S. Anderson, cloud for. / litter, 97-035B, (CMNC). Paratypes: (7 spec.): with the same label data (one of them with 97-035D), (CMNC, PBPC); (1 spec.): with the same label data except 20.vi.1997, 97-021E (CMNC).

Description. Habitus as in Fig. 19. Measurement. Length 4.15-4.55 mm (mean 4.36 mm, HT 4.15 mm, n=9); pronotum 1.03-1.07 (mean 1.05, HT 1.07) times as broad as long; elytra 1.47-1.54 (mean 1.52, HT 1.47) times as long as broad, 1.37-1.40 (mean 1.39, HT 1.39) times as broad as pronotum; head 1.59-1.65 (mean 1.62, HT 1.64) times as broad as pronotum.

Color. Body light fuscous, without metallic tinge; elytra unspotted, lateral channel and very narrow strip along sutura barely lighter; supraantennal plates laterally slightly translucent; antennae and legs ferruginous, mouthparts yellowish.

Microsculpture. Clypeus with distinct mesh pattern, latter barely finer posteriorly up to vertex; supraantennal plates and genae with mesh pattern indistinct. Mandibles with moderately rough, almost isodiametric reticulation, submentum and especially mentum with very rough isodiametric reticulation. Pronotal disc with slightly transverse, moderately fine reticulation, proepisterna with isodiametric mesh pattern; submarginal band of microsculpture broad and barely elevated; proepisterna with rough isodiametric reticulation; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytra disc moderately shiny, with very fine microlines longitudinally oriented, irregular, fine reticulation on very apex and more distinct on base and humeri. Abdominal sterna with mesh pattern transverse and moderately rough.

Chaetotaxy. Anterior marginal SP on pronotal disc distinctly closer to posterior SP than to anterior angles. Elytral base with basal SP, disc with 5-(6) distinct DSP in interval 3; in HT six DSP on left and five on right elytron. Terminal abdominal sternum with two irregular lines of ambulatory setae near base and in mid-length; inner pair of preapical setae separated by about 1.5 times distance between inner and outer setae.

Head. Clypeus with anterior margin moderately, regularly convex. Vertex with deep and narrow transverse groove between posterior supraorbital SP. Supraantennal lobes with very basal, narrow median depressions. Eyes strongly reduced, almost unfaceted, narrowly vaulted laterally, about twice shorter than distinct genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 1.7-1.4 times as long as wide.

Mouthparts. Labrum with anterior margin projected medially in very blunt angle. Mandibles moderately long, regularly, directly narrowed to short, slightly curved tip. Labium with palpomeres 3 distinctly longer than 2.

Thorax. Pronotum subovate; in lateral view on disc moderately, apically rather strongly convex, lateral margins convexly, moderately strongly narrowed anteriorly to narrowly rounded, indistinctly protruded anterior angles; anterior transverse and median longitudinal impressions narrow, moderately deep. Proepipleura narrowly visible from above in about anterior third. Metasternum posteriad to mesocoxa almost twice shorter than metacoxa.

Elytra. Slightly ovate; in lateral view anteriorly moderately, apically strongly convex; base strongly sloping to moderately broadly rounded humeri, latter in middle with very blunt, narrowly rounded curvature; lateral margin without denticulation, almost directly broadened posteriad mid-length; apex rather narrowly rounded; striae distinct, deep throughout their length, very densely and very finely punctured; intervals moderately convex medio-basally, more distinctly latero-apically, especially outer ones at apex.

Metathoracic wings. Reduced.

Male genitalia (Figs. 20-23). Phallus long, somewhat tubular, narrow in lateral view, upper margin irregularly, rather slightly convex, apex laterally long, narrowly rounded, not bent ventrad (Fig. 20); in ventral view phallus moderately broad, apex rather narrowly rounded, slightly turned right (Fig. 21). Parameres as in Fig. 22; paramere 1 (larger) with apical portion wide and very broadly rounded, with one fine apical and one distinct subapical seta, lateral apophysis large, broadly rounded, basal apophysis moderately acute; paramere 2 (smaller) very slender, narrow, its apical half acicular, with one apical seta. Urite IX as in Fig. 23, rounded, with rounded lateral protrusion.

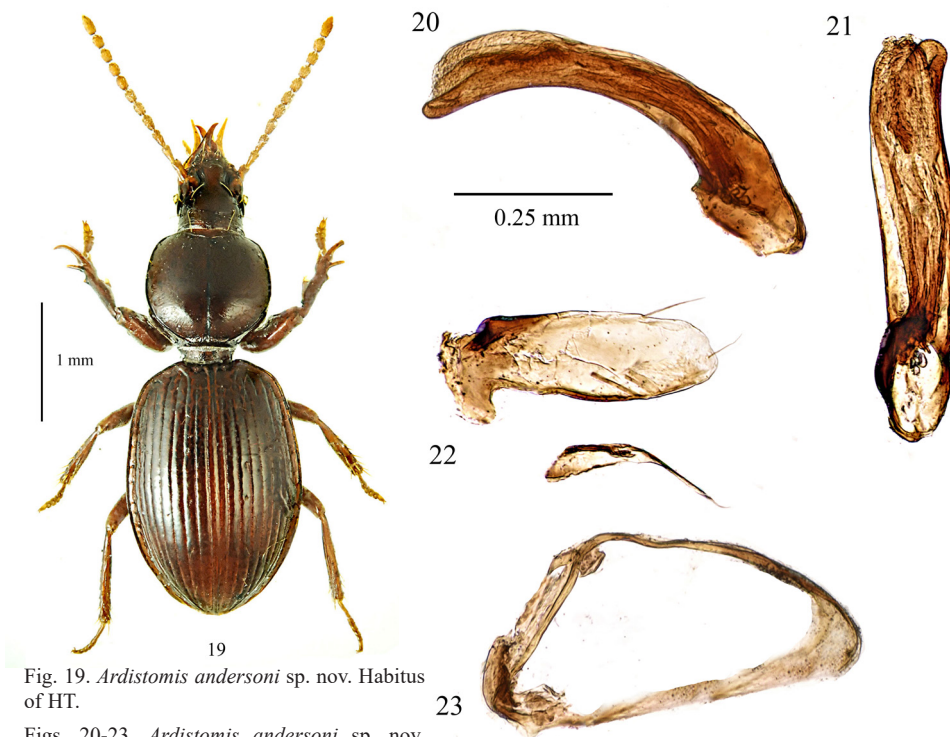


Fig. 19. *Ardistomis andersoni* sp. nov. Habitus of HT.

Figs. 20-23. *Ardistomis andersoni* sp. nov. (HT): 20- median lobe of aedeagus in lateral view (in euparal on vinyl acetate); 21- median lobe of aedeagus in ventral view (on acetate); 22- parameres; 23- urite IX.

Differential diagnosis. *A. andersoni* sp. nov. has the body moderately large; the eyes are strongly reduced, distinctly narrowly vaulted, about twice shorter than the genae; the vertex has the deep and narrow transverse groove; the metasternum posteriad to the mesocoxa is about twice shorter than the metacoxal; the elytra are moderately vaulted in the lateral view, the humeri moderately rounded, and finally, the apical sternum has rows of the ambulatory setae so according to Valdés (2009) the new species belongs to the *A. muelleri* group.

A. andersoni sp. nov. differs from the nearest species, *A. struyvei* sp. nov. as stated in the diagnosis of the latter species. It can be distinguished from *A. newtoni* sp. nov. by having much larger body and distinct transverse groove on the vertex. The differences against the remaining species of the group are mentioned in the key below.

Name derivation. Named in honor of Robert S. Anderson (CMNC, Canada), who collected all type specimens.

Ardistomis chiriquiensis sp. nov.

(Figs. 24-28)

Type material. Holotype (♂): Panama: Chiriquí / 5.6 km N Boquete / La Culebra Trail / 1800 m, 15.vi.1996 / R. Anderson 96-131F / wet cloud forest litter, (CMNC).

Description. Habitus as in Fig. 24. Measurement. Length in HT 5.30 mm; pronotum 1.06 times as broad as long; elytra 1.46 times as long as broad, 1.41 times as broad as pronotum; pronotum 1.60 times as broad as head.

Color. Body dark brownish, without metallic tinge; elytra barely lighter, unspotted; antennae and legs ferruginous, mouthparts dark yellowish.

Microsculpture. Clypeus with rather rough mesh pattern, latter finely advanced posteriorly up to vertex; supraantennal plates with very fine mesh pattern; genae without reticulation. Mandibles with fine, almost isodiametric reticulation, gula and submentum with moderately fine, mentum with very rough isodiametric reticulation. Pronotal disc with slightly transverse, moderately fine reticulation, latter rough anteriorly anterior transverse furrow and at basal inclination; proepisterna with isodiametric mesh pattern; submarginal band of microsculpture almost indistinct, superficially raised; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytral disc moderately shiny, indistinctly reticulated, fine reticulation on apex, two lateral intervals and more distinct on base and humeri. Abdominal sterna with mesh pattern transverse and moderately fine.

Chaetotaxy. Anterior marginal SP on pronotal disc distinctly closer to anterior angles than to posterior SP. Elytral base with basal SP, disc with five DSP in interval 3. Terminal abdominal sternum with two irregular lines of few ambulatory setae near base and in mid-length; inner pair of preapical setae separated by about 1.2 times distance between inner and outer setae.

Head. Clypeus with anterior margin moderately, regularly convex. Vertex with moderately deep and narrow transverse groove between posterior supraorbital SP. Supraantennal lobes posteriorly with long and narrow median depressions. Eyes slightly reduced, barely vaulted laterally, almost twice longer than elongate genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 about 1.5 times as long as wide.

Mouthparts. Labrum with anterior margin distinctly projected medially in blunt angle. Mandibles moderately long, regularly, directly narrowed to short, very slightly curved tip. Labium with palpomeres 3 distinctly longer than 2.

Thorax. Pronotum subovate; in lateral view on disc rather slightly, apically strongly convex, lateral margins barely convexly, moderately strongly narrowed anteriorly to blunt, indistinctly protruded anterior angles; anterior transverse and median longitudinal impressions narrow, moderately deep, latter slightly broadened basally. Proepipleura very narrowly, just visible from above in about posterior third. Metasternum posteriad to mesocoxa about twice shorter than metacoxa.

Elytra. Slightly ovate; in lateral view anteriorly moderately convex, apically strongly convex; base moderately sloping to moderately rounded humeri; lateral margin without denticulation moderately, almost directly broadened up to posterior two fifths; apex narrowly

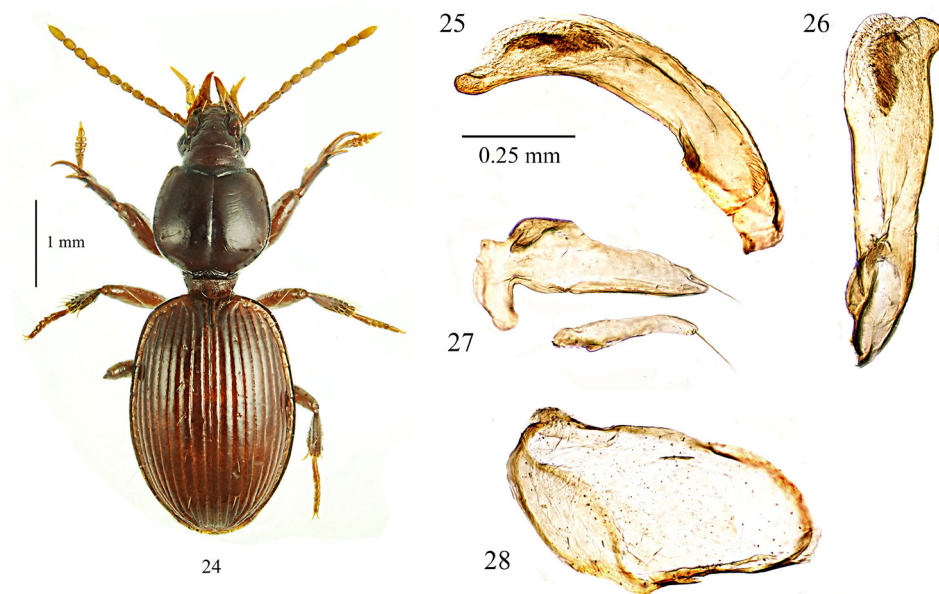


Fig. 24. *Ardistomis chiriquiensis* sp. nov. Habitus of HT.

Figs. 25-28. *Ardistomis chiriquiensis* sp. nov. (HT): 25- median lobe of aedeagus in lateral view (in euparal on vinyl acetate); 26- median lobe of aedeagus in ventral view (on acetate); 27- parameres; 28- urite IX.

rounded; striae distinct, deep throughout their length, almost indistinctly punctured; intervals moderately convex medio-basally, more distinctly latero-apically, 7-8 subcarinate at apex.

Metathoracic wings. Reduced.

Male genitalia (Figs. 25-28). Phallus long, somewhat tubular, narrow in lateral view, upper margin almost regularly, moderately strongly convex, apex laterally long, narrowly rounded, broadly bent ventrad (Fig. 25); in ventral view phallus apically very broad, apex short, distinctly turned right (Fig. 26). Parameres as in Fig. 27; paramere 1 (larger) with apical portion wide, irregularly narrowed to narrow tip, with one subapical seta, lateral apophysis very large, broadly rounded, basal apophysis small, moderately acute; paramere 2 (smaller) very slender, narrowly subparallel, with one apical seta. Urite IX as in Fig. 28, rounded, with rather blunt lateral protrusion.

Differential diagnosis. *A. chiriquiensis* sp. nov. has rather large body; the eyes are reduced, about twice longer than the distinct genae; the elytra are rather short ovate, rather strongly vaulted in the lateral view, the humeri are moderately narrowly rounded, the metasternum posteriad to the mesocoxa is about twice shorter than the metacoxa, and finally, the terminal abdominal sternum has a row of the ambulatory setae so according to Valdés (2009) the new species belongs to the *A. muelleri* group.

It can be differentiated from the *A. muelleri*, the most similar species of the group with the flattened eyes, with the metasternum posteriad to the mesocoxa almost twice shorter than the metacoxa and with the submarginal band of microsculpture broadly, almost indistinctly

elevated, by having the humeri more distinct; by the elytra being shorter and by the pronotal lateral margin being less convex, more strongly attenuated anteriorly. The differences against the remaining species of the group are mentioned in the key below.

Name derivation. Named after the Panamanian province of Chiriquí, the place of the type locality.

Ardistomis otto sp. nov.

(Figs. 29-30)

Type material. Holotype (♀): Panama, Forest nr. Lago / Bayano, 9.18°N 78.76°W / 8.viii.2014, T. Struyve leg. (PBPC). Paratypes: (2 spec.): with the same data as HT, (RFBN, PBPC).

Description. Habitus as in Fig. 29. Measurement. Length 4.30-4.70 mm (HT 4.70 mm, n=3); pronotum 1.09-1.13 (HT 1.13) times as broad as long; elytra 1.38-1.42 (HT 1.39) times as long as broad, 1.35-1.38 (HT 1.38) times as broad as pronotum; pronotum 1.70-1.73 (HT 1.70) times as broad as head.

Color. Body fuscous, without metallic tinge; elytra unspotted, lateral channel and narrow strip along suture lighter; antennae and legs ferruginous, mouthparts dark yellowish.

Microsculpture. Clypeus with fine mesh pattern, latter finely irregularly advanced posteriorly up to vertex; supraantennal plates and genae without mesh pattern. Mandibles with very fine, irregular reticulation, gula without reticulation, submentum with moderately fine, mentum with very rough isodiametric reticulation. Pronotum with slightly transverse, fine reticulation, on disc almost diminished, proepisterna with isodiametric mesh pattern; submarginal band of microsculpture distinct, moderately broadly raised; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytral disc with fine microlines longitudinally oriented; with fine reticulation on apex, in two lateral intervals and with more distinct reticulation on base and humeri. Abdominal sterna with mesh pattern transverse and especially medially very fine.

Chaetotaxy. Anterior marginal SP on pronotal disc distinctly closer to anterior angles than to posterior SP. Elytral base with basal SP, disc with (3)-4 very fine DSP in interval 3. Terminal abdominal sternum with few ambulatory setae near base; inner pair of preapical setae separated by almost two times distance between inner and outer setae.

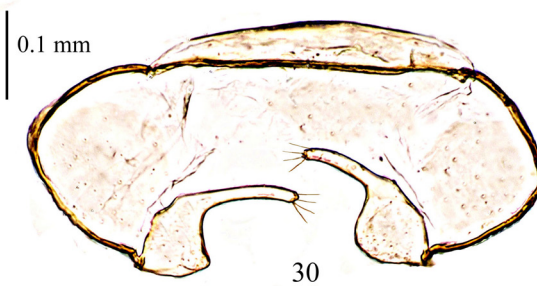
Head. Clypeus with anterior margin slightly, regularly convex. Vertex with moderately deep and rather narrow transverse groove between posterior supraorbital SP. Supraantennal lobes with rudimental median depressions. Eyes slightly reduced, barely vaulted laterally, about twice longer than flat genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 long, about 1.9-1.7 times as long as wide.

Mouthparts. Labrum with anterior margin distinctly projected medially in blunt angle. Mandibles moderately long, regularly narrowed to short, slightly curved tip. Labium with palpomeres 3 barely longer than 2.

Thorax. Pronotum subovate; in lateral view on disc moderately, apically rather strongly convex, lateral margins in HT almost directly, in PT slightly convexly, moderately strongly narrowed anteriorly to narrowly rounded, indistinctly protruded anterior angles;



29



30

Fig. 29. *Ardistomis ottoi* sp. nov. Habitus of HT.

Fig. 30. *Ardistomis ottoi* sp. nov. Styli of HT.

anterior transverse impression narrow, moderately deep, median longitudinal impressions deeper and broader. Proepipleura narrowly visible from above in about posterior third. Metasternum posteriad to mesocoxa more than twice shorter than metacoxa.

Elytra. Slightly ovate; in lateral view anteriorly moderately convex, apically moderately strongly convex; base rather slightly sloping to rather narrowly rounded humeri; lateral margin without denticulation, slightly convexly broadened posteriad to mid-length; apex rather narrowly rounded; striae distinct, deep throughout their length, very densely and very finely punctured; intervals moderately convex medio-basally, more distinctly latero-apically, 5 and especially 7-8 more strongly vaulted at apex.

Metathoracic wings. Reduced.

Male genitalia. Unknown.

Female genitalia (Fig. 30). Gonocoxae with broad basal part abruptly and strongly narrowed to narrow and long, very slightly curved apical part with narrowly rounded apex, tip with four setae.

Differential diagnosis. *A. ottoi* sp. nov. has moderately large body; the eyes are reduced, about twice longer than the distinct genae; the elytra are short ovate, moderately vaulted in the lateral view, the humeri are rather narrowly rounded, the metasternum posteriad to the mesocoxa is twice shorter than the metacoxa, and finally, the terminal abdominal sternum has a row of the ambulatory setae so that according to Valdés (2009) the new species belongs to the *A. muelleri* group.

It belongs to a small group of species with flattened eyes being about twice longer than distinct gena and with the epipleura having the narrow keel. It can be distinguished from all these species by the elytra being very short and by the metasternum posteriad to the mesocoxa being more than twice shorter than the metacoxa. The differences against all species of the group are mentioned in the key below.

Name derivation. The new species is named in commemoration of first author's father Otto, who passed away in 2024.

***Ardistomis rakovici* sp. nov.**

(Figs. 31-35)

Type material. Holotype (♂): Panama: Chiriquí / 5.6 km N Boquete / La Culebra Trail / 1800 m, 15.vi.1996 / R. Anderson 96-131C / wet cloud forest litter, (CNMC). Paratypes (4 spec.): with the same label data as HT, except 96-131B [or C, E], (CNMC, PBPC).

Description. Habitus as in Fig. 31. Measurement. Length 4.10-4.95 mm (mean 4.74 mm, HT 4.10 mm, n=5); pronotum 1.06-1.11 (mean 1.08, HT 1.10) times as broad as long; elytra 1.40-1.48 (mean 1.44, HT 1.41) times as long as broad, 1.36-1.42 (mean 1.39, HT 1.39) times as broad as pronotum; pronotum 1.59-1.67 (mean 1.63, HT 1.62) times as broad as head.

Color. Body fuscous, without metallic tinge; elytra unspotted, anterior part of head and elytra barely lighter; antennae and legs dark ferruginous, mouthparts dark yellowish.

Microsculpture. Clypeus anteriorly with fine to very fine microreticulation recognizable posteriorly up to vertex, supraantennal plates with mesh pattern indistinct. Mandibles with very fine reticulation, gula and submentum with moderately fine, mentum with very rough isodiametric reticulation. Pronotum latero-basally with fine reticulation, pronotal disc shiny, without reticulation, proepisterna with isodiametric mesh pattern; submarginal band of microsculpture broadly, almost indistinctly elevated; prosternum with fine, transverse and metasternum with slightly transverse mesh pattern. Elytral disc shiny, not reticulated, almost indistinct fine reticulation in lateral channel and more distinct on base and humeri. Abdominal sterna with mesh pattern transverse and very fine.

Chaetotaxy. Anterior marginal SP on pronotal disc closer to posterior SP than to anterior angles. SP. Elytral base with basal SP, disc with 3-4(5) DSP (HT with four DSP) in interval 3. Terminal abdominal sternum with additional ambulatory setae; inner pair of preapical setae slightly more separated than distance between outer setae.

Head. Clypeus with anterior margin rather slightly, regularly convex. Vertex with moderately deep and narrow transverse groove between posterior supraorbital SP. Supraantennal lobes posteriorly with distinct median depressions. Eyes slightly reduced, flattened, about twice longer than genae. Antennomere 2 almost subequal in length to antennomere 3; antennomeres 4-10 about 1.6-1.4 times as long as wide.

Mouthparts. Labrum with anterior margin moderately projected medially in blunt angle. Mandibles narrow, moderately long, regularly, directly narrowed to short, slightly curved tip. Labium with labial palpomeres 3 distinctly longer than 2.

Thorax. Pronotum subovate; in lateral view on disc rather strongly, apically strongly convex, lateral margins barely convex, moderately strongly narrowed anteriorly to narrowly rounded, anterior angles not protruding; anterior transverse impressions narrow, median longitudinal impressions posteriorly deeper and broader. Proepipleura almost not visible from above in posterior third. Metasternum posteriad to mesocoxa almost twice shorter than metacoxa.

Elytra. Short ovate; in lateral view regularly, strongly convex, especially on apex; base in HT very slightly, in PT slightly sloping to rather narrowly rounded humeri; outline without denticulation, barely convexly broadened up to posterior two fifths, then convexly, regularly

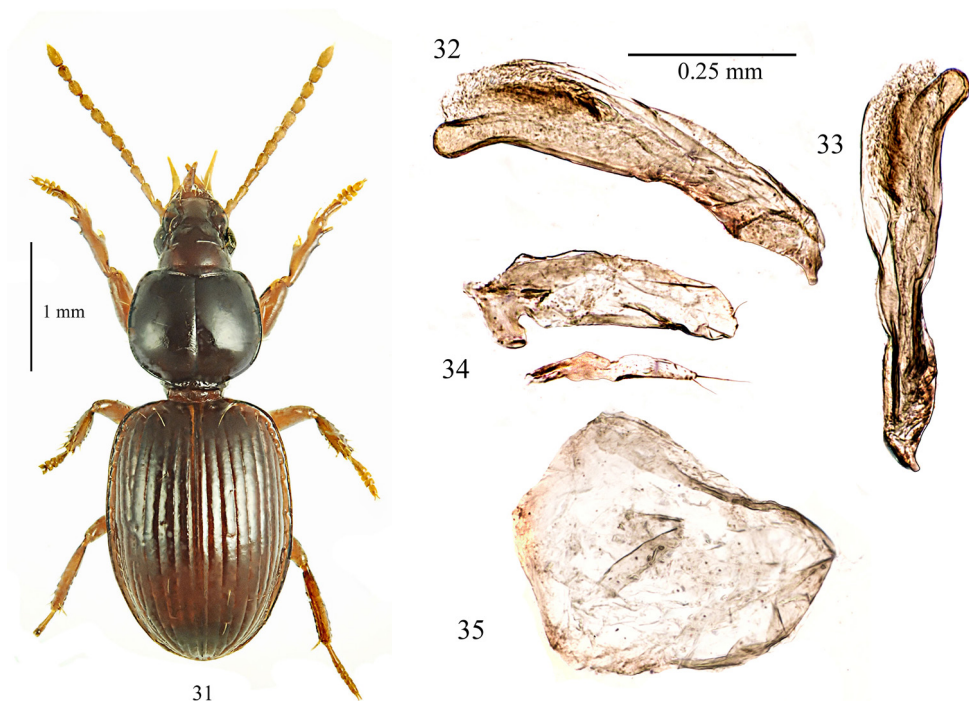


Fig. 31. *Ardistomis rakovici* sp. nov. Habitus of HT.

Figs. 32-35. *Ardistomis rakovici* sp. nov. (HT): 32- median lobe of aedeagus in lateral view (in euparal on vinyl acetate); 33- median lobe of aedeagus in ventral view (on acetate); 34- parameres; 35- urite IX.

narrowed to narrowly rounded apex; striae distinct, deep throughout their length, almost indistinctly punctured; intervals moderately convex medio-basally, rather strongly convex latero-apically, especially outer ones at apex.

Metathoracic wings. Reduced.

Male genitalia (Figs. 32-35). Slightly immature. Phallus moderately long, somewhat tubular, broad in lateral view, upper outline almost direct (Fig. 32) to moderately short and broad apex, latter slightly bent ventrad; in ventral view (Fig. 33) with moderately broad tip, distinctly turned right. Parameres as in Fig. 34; paramere 1 (larger) with apical portion wide and broadly rounded, with one seta subapically, lateral apophysis large, broadly rounded, basal apophysis acute. Paramere 2 (smaller) slender, shorter than paramere 1, apex rather acute, with two apical setae. Urite IX as in Fig. 35.

Differential diagnosis. *A. rakovici* sp. nov. has moderately large body; the eyes are reduced, about twice longer than the distinct genae; the elytra are short ovate, rather strongly vaulted in the lateral view, the humeri are rather narrowly rounded, the metasternum posteriad to the mesocoxa is about twice shorter than the metacoxa, and finally, the terminal abdominal sternum has a row of the ambulatory setae so according to Valdés (2009) the new species belongs to the *A. muelleri* group.

It can be differentiated from the next species of the group with the flattened eyes, with the metasternum posteriad to the mesocoxa almost twice shorter than the metacoxal and with the submarginal band of microsculpture broadly, almost indistinctly elevated, by having the base slightly sloping to the narrowly rounded humeri and by the prosterna being almost not visible from above. The differences against the remaining species of the group are mentioned in the key below.

Etymology. Patronymy, dedicated in memoriam to Prof. Miloslav Rakovič (*28.9.1935 - †26.12.2024).

***Ardistomis genieri* sp. nov.**
(Figs. 36-41)

Type material. Holotype (♂): Costa Rica: Cartago / P.N. Tapanti, 1740 m / 9°44'30''N 83°48'30''W / 4.vi.1997, R. Anderson / trop. mont. evergreen / cloud for. litter, 97-002CF, (CMNC). Paratypes: (10 spec.): Costa Rica: Cartago / P.N. Tapanti, 1500 m / 9°45'N 83°49'W / 4.vi.1997, R. Anderson / trop. mont. evergreen / forest litter, 97-001A[or B, C, F, H], (CNMC, PBPC, PMFI); (14 spec.): Costa Rica: Cartago / P.N. Tapanti, 1740 m / 9°44'30''N 83°48'30''W / 4.vi.1997, R. Anderson / trop. mont. evergreen / cloud for. litter, 97-002A[or C, D]; (16 spec.) Costa Rica: S. Jose-Cart. / km 45 Int. Amer. Hwy / 6 km NE El Empalme / 9°45'N 83°58'30''W / 1975 m, 8.vi.1997, R. Anderson / mixed alder-oak litter, 97-007B [or C, D], all in (CMNC, PBPC, PMFI).

Description. Habitus as in Fig. 36. Measurement. Length 4.20-4.55 mm (mean 4.36 mm, HT 4.30 mm, n=15); pronotum 1.06-1.11 (mean 1.09, HT 1.11) times as broad as long; elytra 1.36-1.41 (mean 1.39, HT 1.36) times as long as broad, 1.38-1.43 (mean 1.40, HT 1.38) times as broad as pronotum; head 1.59-1.66 (mean 1.62, HT 1.66) times as broad as pronotum.

Color. Body (in mature specimens) fuscous, without metallic tinge; elytra unspotted, antero-lateral parts of head, elytral interval 1, elytral lateral channel and especially epipleura slightly lighter; antennae and legs reddish-brown, anterior legs slightly darker, mouthparts dark yellowish.

Microsculpture. Clypeus with distinct, slightly transverse mesh pattern, latter barely finer posteriorly up to vertex; supraantennal plates and genae with mesh pattern almost indistinct. Mandibles and gula, with fine reticulation, submentum and especially mentum with very rough isodiametric reticulation. Pronotum except its middle with moderately fine isodiametric reticulation, proepisterna with isodiametric mesh pattern; submarginal band of microsculpture almost indistinct; proepisterna with rough isodiametric reticulation; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytral disc shiny, not reticulated, irregular, fine reticulation on very apex and barely more distinct on base and humeri. Abdominal sterna with mesh pattern transverse and fine.

Chaetotaxy. Anterior marginal SP on pronotal disc not to barely closer to anterior angles than to posterior SP. Elytral base with basal SP, disc with 3-4 DSP (HT with three DSP) in interval 3. Terminal abdominal sternum with two or few fine ambulatory setae on each side near base, in one PT setae indistinct; inner pair of preapical setae separated by about 1.3-1.4 times distance between inner and outer setae.

Head. Clypeus with anterior margin irregularly, very slightly convex. Vertex with moderately fine and narrow transverse groove between posterior supraorbital SP.

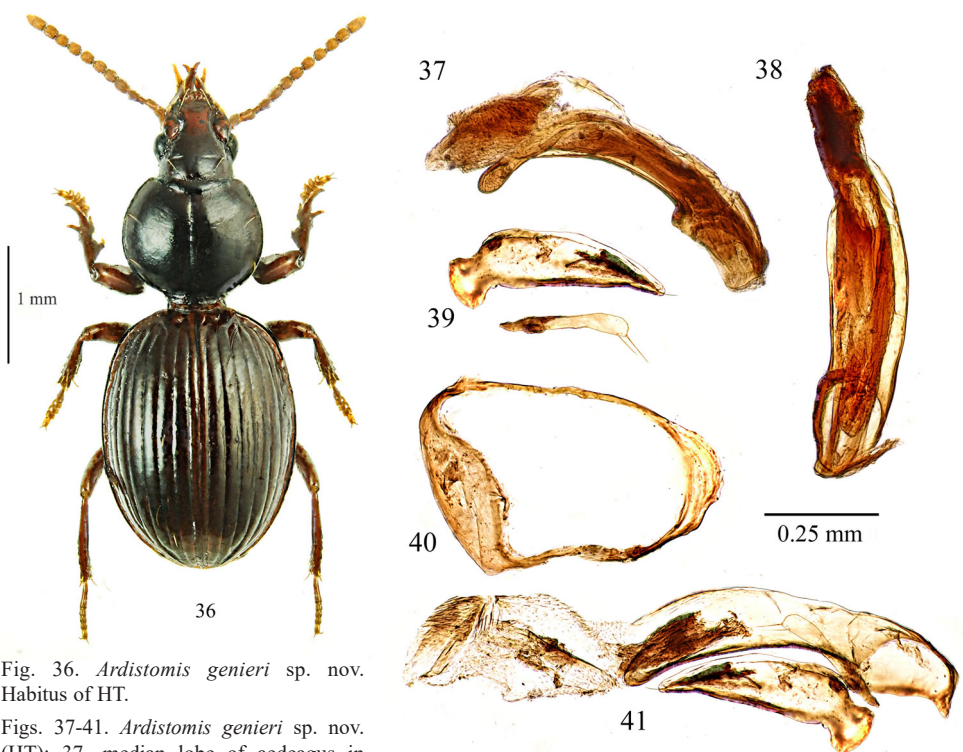


Fig. 36. *Ardistomis genieri* sp. nov. Habitus of HT.

Figs. 37-41. *Ardistomis genieri* sp. nov.

(HT): 37- median lobe of aedeagus in

lateral view (in euparal on vinyl acetate); (PT): 38- median lobe of aedeagus in ventral view (on acetate); 39- parameres; 40- urite IX; 41- median lobe of aedeagus in lateral view (with everted inner sac).

Supraantennal lobes with narrow and very fine to almost indistinct basal depressions. Eyes slightly reduced, barely vaulted laterally, about twice as long as flat genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 short, about 1.2 times as long as wide.

Mouthparts. Labrum with anterior margin projected medially in very blunt angle. Mandibles relatively short regularly, directly narrowed to very short, slightly curved tip. Labium with palpomeres 3 distinctly longer than 2.

Thorax. Pronotum subovate; in lateral view on disc rather strongly, apically strongly convex, lateral margins convex, slightly to moderately strongly narrowed anteriorly to narrowly rounded, indistinctly protruded anterior angles; anterior transverse and median longitudinal impressions narrow, moderately deep, latter slightly broadened basally. Proepipleura almost invisible from above. Metasternum posteriad to mesocoxa more than twice shorter than metacoxa.

Elytra. Short ovate; in lateral view regularly, strongly convex; base laterally strongly sloping to very broadly rounded humeri; lateral margin without denticulation, convexly broadened posteriad mid-length; apex rather narrowly rounded; striae distinct, moderately deep throughout their length, not punctured; intervals moderately convex medio-basally, lateral intervals more strongly vaulted at apex.

Metathoracic wings. Reduced.

Male genitalia (Figs. 37-41). Phallus in lateral view rather long and narrow, upper outline irregularly, moderately strongly convex (Figs. 37, 41), apex long, narrowly rounded, slightly bent ventrad; in ventral view (Fig. 38) phallus rather narrow, apex narrow. Parameres as in Fig. 39; paramere 1 (larger) with apical portion wide at base, regularly narrowed to narrow tip with one apical seta, lateral apophysis short, broadly rounded, basal apophysis rounded. Paramere 2 (smaller) much slender, narrow, apex rounded, with two (sub)apical setae. Urite IX as in Fig. 40, rounded, with indistinct lateral teeth.

Differential diagnosis. *A. genieri* sp. nov. has the moderately small body; the eyes are reduced, about twice longer than the distinct genae; the elytra are short ovate, rather strongly vaulted in the lateral view, the humeri are very broadly rounded, the metasternum posterior to the mesocoxa is more than twice shorter than the metacoxa, and finally, the terminal abdominal sternum has a row of the ambulatory setae so according to Valdés (2009) the new species belongs to the *A. muelleri* group.

A. genieri sp. nov. is most related to *A. felixi* sp. nov. described here from Panama. It could be differentiated from the latter species by the epipleura not being visible in the dorsal view (in *A. felixi* sp. nov. the epipleura are visible in the posterior third of the pronotum), and by the very different shape of the larger paramera of the aedeagus (Fig. 39 versus Fig. 8). The differences against the remaining species of the group are mentioned in the key below.

Name derivation. Named after entomologist François Génier (CMNC, Canada), who loaned us several undetermined *Ardistomis* specimens including the type series of this species.

***Ardistomis newtoni* sp. nov.**

(Figs. 42-46)

Type material. Holotype (♂): Panama / Almirante / Bocas del Toro Prov. / 26.iii.1959 // FMNH(HD)#59-269 / Berlese: B#622 / concentrated floor / litter in forest // Col. & pres. / by H. Dybas, (FMNH). Paratypes: (2 spec.): with the same label data as HT, (FMNH, PBPC); (1 spec.): Pan[ama] Chiriqui Prov. / Almirante, 30.iii. / 1959 // FMNH#59-3001 / conc. / for. floor litter on / hill H. Dybas, (FMNH).

Description. Habitus as in Fig. 42. Measurement. Length 2.65-2.90 mm (mean 2.78 mm, HT 2.65 mm, n=4); pronotum 1.18-1.21 (mean 1.20, HT 1.18) times as broad as long; elytra 1.32-1.35 (mean 1.34, HT 1.32) times as long as broad, 1.27-1.33 (mean 1.30, HT 1.29) times as broad as pronotum; pronotum 1.57-1.62 (mean 1.59, HT 1.58) times as broad as head.

Color. Body ferruginous, without metallic tinge; elytra unicolored, unspotted; legs ferruginous, antennae and mouthparts yellowish.

Microsculpture. Antero-median part of head up to vertex with distinct isodiametric microsculpture, mandibles, supraantennal plates and genae with mesh pattern almost indistinct; gula with fine reticulation. Proepisterna, submentum and especially mentum with rough isodiametric reticulation. Pronotum with slightly transverse, moderately fine on disc almost disappearing mesh pattern; submarginal band of microsculpture very broad,

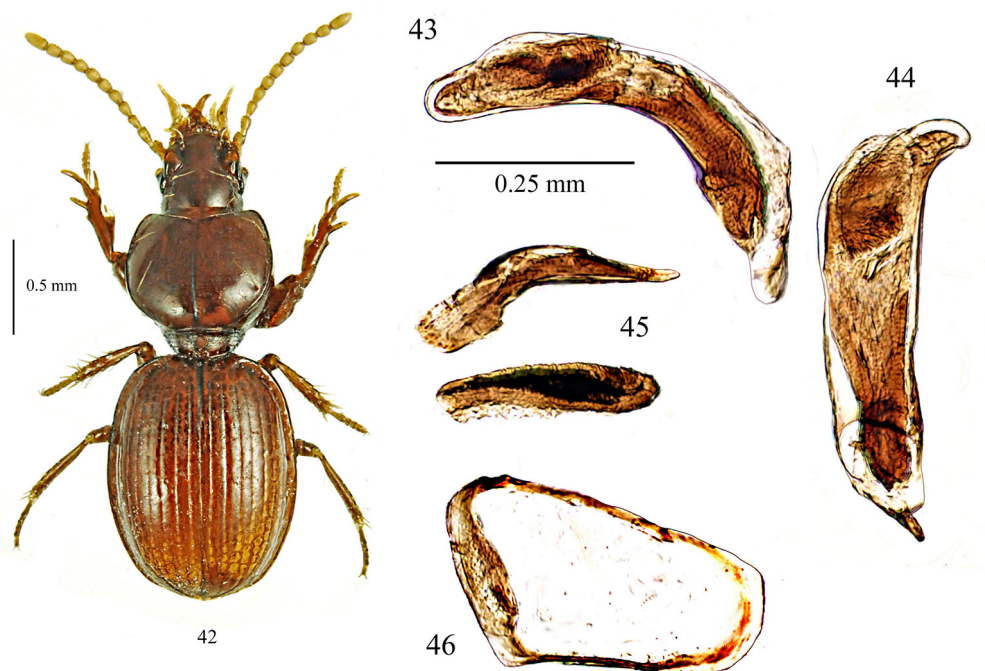


Fig. 42. *Ardistomis newtoni* sp. nov. Habitus of HT.

Figs. 43-46. *Ardistomis newtoni* sp. nov. (HT): 43- median lobe of aedeagus in lateral view (in euparal on vinyl acetate); 44- median lobe of aedeagus in ventral view (on acetate); 45- parameres; 46- urite IX.

almost indistinct; prosternum with fine, transverse and metasternum with transverse mesh pattern. Elytral disc shiny, not reticulated; irregular, very fine reticulation on its very apex and slightly more distinct in lateral channel and on base and humeri. Abdominal sterna with mesh pattern moderately deep to rather fine, transverse.

Chaetotaxy. Anterior marginal SP on pronotal disc distinctly closer to anterior angles than to posterior SP. Elytral base with basal SP, disc with four fine DSP in interval 3. Terminal abdominal sternum with ambulatory setae on each side near base; inner pair of preapical setae separated by about 1.2 times distance between inner and outer setae.

Head. Clypeus with anterior margin very slightly, regularly convex. Vertex without transverse groove between posterior supraorbital SP. Supraantennal lobes with deep and long medio-basal depressions. Eyes strongly reduced without distinct facets, moderately vaulted, almost three times shorter than distinct, anteriorly divergent genae. Antennomere 2 subequal in length to antennomere 3; antennomeres 4-10 about 1.4-1.2 longer than wide.

Mouthparts. Labrum with anterior margin projected medially in blunt angle. Mandibles short, regularly, directly narrowed to slightly curved tip. Labium with labial palpomeres 3 longer than 2.

Thorax. Pronotum transversely subovate; in lateral view on disc rather slightly, apically moderately strongly convex, lateral margins in lateral view sparsely, almost indistinctly incised and slightly convexly narrowed anteriorly to narrowly rounded, barely protruded

anterior angles; anterior margin regularly concave; transverse and median longitudinal impressions narrow, moderately deep, latter slightly broadened basally. Proepipleura narrowly visible from above in about posterior third. Metasternum posteriad to mesocoxa more than 2.5 times shorter than metacoxa.

Elytra. Very shortly subovate; in lateral view moderately convex, apex strongly convex; humeri broadly rounded; lateral margin without denticulation, slightly convexly broadened up to about anterior three fifths of length; apex rather broadly rounded; striae narrow and moderately fine throughout their length, indistinctly punctured; intervals very slightly convex on disc, slightly convex latero-apically, outer intervals, especially 5 and 7 moderately convex on apex.

Metathoracic wings. Reduced.

Male genitalia (Figs. 43-46). Phallus moderately long, somewhat tubular, moderately broad in lateral view, upper outline almost regularly, moderately strongly convex (Fig. 43); apex broadly rounded, not bent ventrad; in ventral view with rather narrow tip, distinctly turned right. Parameres as in Fig. 45. Urite IX as in Fig. 46, rounded, with lateral blunt protrusion.

Remark. Male genitalia were earlier extracted and put in glycerine for a very long time so the parameres are partially abraded.

Differential diagnosis. *A. newtoni* sp. nov. has the body very small; the eyes are strongly reduced, with indistinct facets, almost three times shorter than the very distinct genae; the vertex is without transverse groove; the metasternum posteriad to the mesocoxa is more than twice shorter than the metacoxa; the elytra are very short ovate, moderately vaulted in the lateral view, the humeri are broadly rounded, and finally, the terminal abdominal sternum has a row of the ambulatory setae so that according to Valdés (2009) the new species clearly belongs to the *A. muelleri* group.

The differences from the most similar species, *A. struyvei* sp. nov. and *A. andersoni* sp. nov. are mentioned within the diagnosis of these species and differences from the remaining species of the group are in the key below.

Name derivation. Named in honour of entomologist Alfred Francis Newton (FMNH) who loaned us all type specimens.

Ardistomis i. s. group

Ardistomis tenuistriatus sp. nov.

(Figs. 47-48)

Type material. Holotype (♀): Panama: Chiriquí / 5.6 km N Boquete / La Culebra Trail / 1800 m, 15.vi.1996 / R. Anderson 96-131D / wet cloud forest litter, (CNMC). Paratypes: (3 ♀♀): Panama: Chiriquí / 5.6 km N Boquete / La Culebra Trail / 1800 m, 15.vi.1996 / R. Anderson 96-131D[or A, F] / wet cloud forest litter, (CNMC, PBPC).

Description. Habitus as in Fig. 47. Measurement. Length 3.70-4.00 mm (mean 3.86 mm, HT 3.70 mm, n=4); pronotum 1.06-1.12 (mean 1.08, HT 1.09) times as broad as long; elytra



Fig. 47. *Ardistomis tenuistriatus* sp. nov. Habitus of HT.

Fig. 48. *Ardistomis tenuistriatus* sp. nov. Styli of HT.

1.35-1.40 (mean 1.37, HT 1.35) times as long as broad, 1.43-1.51 (mean 1.47, HT 1.51) times as broad as pronotum; pronotum 1.52-1.60 (mean 1.55, HT 1.54) times as broad as head.

Color. Body dark fuscous, without metallic tinge; elytra unspotted, with suture and epipleura slightly lighter; antennae and legs ferruginous, mouthparts yellowish.

Microsculpture. Clypeus, vertex, supraantennal plates and genae with mesh pattern indistinct. Mandibles with very fine reticulation, gula and submentum with moderately fine, mentum with very rough isodiametric reticulation. Pronotal disc shiny, without reticulation, proepisterna with isodiametric mesh pattern; submarginal band of microsculpture almost indistinctly elevated; prosternum with very fine, transverse and metasternum with slightly transverse mesh pattern. Elytral disc shiny, not reticulated, almost indistinct fine reticulation in lateral channel, on base and humeri. Abdominal sterna with mesh pattern transverse and fine.

Chaetotaxy. Anterior marginal SP on pronotal disc closer to anterior angles than to posterior SP. Elytral base with basal SP, disc with four very fine DSP in interval 3. Terminal abdominal sternum without additional ambulatory setae; inner pair of preapical setae slightly more separated than distance between outer setae.

Head. Clypeus with anterior margin moderately, regularly convex. Vertex with moderately deep and narrow transverse groove between posterior supraorbital SP. Supraantennal lobes with very superficial median depressions. Eyes slightly reduced, flattened, almost twice longer than genae. Antennomere 2 almost subequal in length to antennomere 3; antennomeres 4-10 about 1.5-1.3 times as long as wide.

Mouthparts. Labrum with anterior margin moderately projected medially in blunt angle. Mandibles narrow, moderately long, regularly, directly narrowed to short, slightly curved tip. Labium with labial palpomeres 3 indistinctly longer than 2.

Thorax. Pronotum subcircular; in lateral view on disc moderately, apically strongly convex, lateral margins strongly, regularly convex, moderately strongly narrowed anteriorly to narrowly rounded, anterior angles not protruding; anterior transverse and median longitudinal impressions rather narrow, moderately deep, latter broadened basally. Proepipleura invisible

from above. Metasternum posteriad to mesocoxa more than twice shorter than metacoxa.

Elytra. Short ovate; in lateral view regularly, rather strongly convex; humeri broadly rounded; outline without denticulation, convexly broadened up to about mid-length, then convexly, regularly narrowed to narrowly rounded apex; striae fine throughout their length, indistinctly punctured; intervals very slightly convex medio-basally, barely more convex latero-apically.

Metathoracic wings. Reduced.

Male genitalia. Unknown.

Female genitalia (Fig. 48). Gonocoxae with broadly convex basal half and with abruptly, strongly narrowed, subparallel, long, slightly curved apical part, tip with one long seta.

Differential diagnosis. *A. tenuistriatus* sp. nov. has rather small body; the eyes are slightly reduced and flattened, about twice longer than the distinct genae; the labial palpomere 3 is indistinctly longer than 2; the elytra are very short ovate, strongly vaulted in the lateral view, the humeri are very broadly rounded, the discal elytral striae are very fine, and finally, the terminal abdominal sternum has no row of the ambulatory setae latero-basally. The new species cannot be clearly placed in any group established by Valdés (2009). It could be easily distinguished from the species of the *A. muelleri* group (including those described here) by the missing ambulatory setae on the terminal sternum and by the labial palpomere 3 only indistinctly longer than 2. The shape of the body especially of the elytra is very similar to the almost sympatric *A. felixi* sp. nov. nevertheless except both differences quoted above *A. tenuistriatus* sp. nov. can be distinguished also by having much finer elytral striae.

Name derivation. The name is derived from the very fine striae of the elytra, and is combined from the Latin terms *tenuis* and *striatus*.

KEY TO SPECIES OF THE *ARDISTOMIS MUELLERI* GROUP

This key is based on a key in Valdés (2009) and study of all flightless species of this group (except *A. muelleri*). Unlike in Valdés (2009) the length of the body is measured from the anterior margin of the closed mandibles to the apex of the elytra along the suture so that is significantly larger than in Valdés article. In the following key includes all species described above except *A. tenuistriatus* sp. nov. which differs from the remaining species in the key by the terminal abdominal sternum being without ambulatory setae near the base. Species of the keyed group occurring outside of Central American mainland are quoted in the parentheses.

- 1(4) Eyes normal, genae dorsally almost indistinct; elytral humeri narrowly rounded, metathoracic wings present. L. distinctly over 5 mm.
- 2(3) Anterior margin of clypeus arcuate. L. over 6 mm. Costa Rica. *A. dostali* Valdés, 2009
- 3(2) Anterior margin of clypeus emarginate. L. about 5.5 mm. Ecuador. (*A. bulirschi* Valdés, 2009)
- 4(1) Eyes reduced, genae distinct; elytral humeri from narrowly to broadly rounded; metathoracic wings vestigial. L. 2.6-5.8 mm.
- 5(6) Eyes very slightly reduced, slightly flattened, about five times as long as almost indistinct genae. Ecuador. (*A. onorei* Valdés, 2009)

- 6(5) Eyes slightly to strongly reduced at most two times longer than distinct genae.
- 7(14) Eyes perceptible as a small, unfaceted, vaulted field on antero-lateral part of very distinct genae. Genae about 2-3 times as long as eyes.
- 8(9) Very small species, L. 2.7-2.9 mm, elytra very short, 1.32-1.35 times as long as broad; vertex without transverse groove between posterior supraorbital SP. Panama. *A. newtoni* sp. nov.
- 9(8) Small to moderately large species, L. 3.2-4.9 mm, elytra longer, 1.48-1.60 times as long as broad; vertex with or without transverse groove between posterior supraorbital SP. Panama, Costa Rica or Ecuador.
- 10(11) Smaller, L. 3.2 mm. Vertex without transverse groove between posterior supraorbital SP; elytra 1.48 times as long as broad Panama. *A. struyvei* sp. nov.
- 11(10) Larger, L. 4.2-4.9 mm. Vertex with transverse groove between posterior supraorbital SP. Costa Rica or Ecuador.
- 12(13) Elytra 1.47-1.54 times as long as broad, pronotal margin convexly, barely narrowed anteriorly. L. 4.2-4.5 mm. Costa Rica. *A. andersoni* sp. nov.
- 13(2) Elytra 1.55-1.60 times as long as broad, pronotal margin almost directly, rather strongly narrowed anteriorly. L. 4.5-4.9 mm. Ecuador. (*A. allegrói* Bulirsch & Magrini, 2024)
- 14(5) Eyes slightly reduced, distinctly flattened, about twice longer than flat genae.
- 15(16) Vertex without transverse groove between posterior supraorbital SP; abdominal setae on terminal sternum vestigial, almost indistinct. L. 4.9-5.1 mm. Panama. *A. darienensis* sp. nov.
- 16(15) Vertex with transverse groove between posterior supraorbital SP; abdominal setae on terminal sternum distinct. Panama, Costa Rica, S Mexico, Guatemala, Honduras.
- 17(24) Epipleura with submarginal band of microsculpture forming narrow keel.
- 18(19) Elytra short, 1.35-1.38 times as long as broad; metasternum posteriad to mesocoxa more than twice shorter than metacoxa. L. 4.2-4.7 mm. Panama. *A. ottoí* sp. nov.
- 19(18) Elytra longer, more than 1.5 times as long as broad; metasternum posteriad to mesocoxa about as long as metacoxa.
- 20(21) Humeri broadly rounded, elytral margin posteriad humeri in dorsal view distinctly convex. L. 3.9-4.4 mm. Honduras. *A. samyni* Valdés, 2009
- 21(22) Humeri rather narrowly to moderately rounded, elytral margin posteriad humeri in dorsal view almost directly broadened. L. 4.1-5.1 mm. Guatemala, Costa Rica.
- 22(23) Smaller species, L. 4.1-4.5 mm; elytral base more strongly sloping to moderately broadly rounded humeri; elytral margin posteriad humeri in dorsal view more broadened. Costa Rica. *A. tommasolisai* sp. nov.
- 23(22) Larger species, L. 4.7-5.1 mm; elytral base less strongly sloping to rather narrowly rounded humeri; elytral margin posteriad humeri in dorsal view less broadened. Guatemala. *A. guatemalensis* sp. nov.
- 24(17) Epipleura with submarginal band of microsculpture forming very broad, almost indistinct elevation.
- 25(28) Humeri very broadly rounded, elytral margin posteriad humeri broadly convex (Figs. 5, 36).
- 26(27) Elytra in lateral view in basal half slightly vaulted; epipleura distinctly visible from above in posterior third of pronotum. L. 4.1-4.9 mm. Larger paramera with very broadly rounded tip (Fig. 8). Panama. *A. felixi* sp. nov.
- 27(26) Elytra in lateral view in basal half strongly vaulted; epipleura almost invisible from above in posterior third of pronotum. L. 4.2-4.5 mm. Larger paramera with very narrowly rounded tip (Fig. 39). Costa Rica. *A. genieri* sp. nov.
- 28(25) Humeri moderately to narrowly rounded; elytral margin posteriad humeri slightly convex (Figs. 24, 31).
- 29(30) Smaller species, L. 4.1-4.8 mm. Base slightly sloping to narrowly rounded humeri, elytral lateral margin in mid-length very slightly convex. Panama. *A. rakovici* sp. nov.
- 30(29) Larger species, L. 5.2-5.8 mm. Base moderately sloping to moderately or rather broadly rounded humeri, elytral lateral margin in mid-length moderately convex. Mexico, Panama.
- 31(32) Humeri more distinct; elytra shorter, 1.46 times as long as broad; pronotal lateral margin less convex, more strongly attenuated anteriorly. L. 5.3 mm. Panama. *A. chiriquiensis* sp. nov.
- 32(31) Humeri regularly, moderately broadly rounded; elytral longer, about 1.6 times as long as broad. L. about 5.2-5.8 mm. S Mexico. *A. muelleri* Kult, 1950

NEW FINDINGS

Ardistomis samyni Valdés, 2009

Literary date. Valdés (2009), p. 65: described from a single male from Honduras, Olancho, La Muralla National Park (CMNC) and assigned to the *A. muelleri* group.

New finding: Topotypes: (6 spec.), Honduras: Olancho / La Muralla N.P., 14 km N / La Union, 1450 m, 25.vi. / 1994-130D[or E], R. Anderson / mont. wet evergr. for. litt., (CMNC, PBPC).

Ardistomis bulirschii Valdés, 2009

Literary data. Valdés (2009), p. 66: described from a single male and female from Ecuador (HT in PBPC) and assigned to *A. muelleri* group. Moret & Allegro (2025), p. 4: cited general distribution in Ecuador, Otonga NP, partially based on specimens mentioned below.

New findings: (3 spec.), Ecuador-Napo / km 37 Tena-Baeza / Cocodrilos, 1860 m / 21.vii.1998; P. Moret leg. // litière de feuilles / en sous bois (PMTF, PBPC); (1 spec.), Ecuador 12.iv.1985 / Prov. Zamora- Ch. / km 30 Logá-Zamora / Ripa rivuli, 1900 m / Pierre Moret legit, (PMTF); (2 spec.), Ecuador Cotopaxi / Otonga, 2000 m / 7.vii.1998, I. Tapia [leg.], (PMTF, PBPC); (2 spec.), Ecuador Cotopaxi / Otonga, 1800 m / Rio Esmeraldas - Las Damas / 3-5.vii.2001, P. Moret [leg.]

ACKNOWLEDGEMENTS. Our heartfelt thanks are due to R. Felix (Berkel Enschoot, The Netherlands), F. Génier (CMNC, Canada), P. Moret (Toulouse, France) and A. Newton (FMNH, United States) for loans of mainly unidentified specimens and for donating of specimens and Larry G. Bezark (California, USA) for the comments and English revision to the manuscript.

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Received: 5.5.2025

Accepted: 10.6.2025

Printed: 5.10.2025

