

**REVIEW OF NEARCTIC *RHICNOCOELIA* AND
CALLIMERISMUS WITH A DISCUSSION OF THEIR
PHYLOGENETIC RELATIONSHIPS
(HYMENOPTERA: PTEROMALIDAE)**

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Abstract.—The genera *Rhcnocoelia* Graham and *Callimerismus* Graham are delimited and their relationships with other genera of the Pteromalidae are discussed. Both genera are reported from the Nearctic region for the first time. *Rhcnocoelia* has two North American species—*R. punctifrons* n. sp., and the Holarctic species *R. constans* (Walker). A key to separate these species is given. The first host record for *Rhcnocoelia*, from a puparium of the chloropid *Meromyza americana* Fitch, is presented. *Callimerismus* has one Nearctic species, *C. inusitatus* n. sp. *Callimerismus latipennis* (Ashmead) is removed from the genus, but its correct generic placement is uncertain.

If one compares the numbers of species and genera of the pteromalid subfamily Miscogasterinae in the Palearctic region (summarized in Graham, 1969) with the number of genera and species in the Nearctic region (summarized in Burks, 1979), it might be surmised that the Nearctic miscogastrine fauna is depauperate relative to the Palearctic fauna. My continuing study of the Nearctic Pteromalidae has shown that this is not true, and that nearly all the Palearctic miscogasterine genera are present in the Nearctic region as well. This paper documents the first Nearctic records of two genera, *Rhcnocoelia* Graham and *Callimerismus* Graham. *Rhcnocoelia* is represented by the Holarctic species *R. constans* (Walker) and the new Nearctic species *R. punctifrons*. *Callimerismus* is represented by the new Nearctic species *C. inusitatus*. *Callimerismus latipennis* (Ashmead) previously transferred to *Callimerismus* by Hedqvist (1969) is removed from that genus.

The generic placement of new Nearctic miscogasterine species is often difficult because they show morphological variation not found in their Palearctic counterparts. As these new species are described, generic concepts need to be carefully reviewed. The following reanalysis of the characters used to separate *Rhcnocoelia* from *Callimerismus* is necessary since many of the characters given by Graham (1956b) to differentiate these two genera are either matters of degree rather than discrete differences, or now need to be supplemented based on the characters of the new species described in this paper.

Several characters Graham used to separate *Rhcnocoelia* from *Callimerismus* are not as distinctive now that more material of these genera is available. 1. Graham stated that the pronotal collar of *Rhcnocoelia* lacks the distinct transverse anterior carina found in *Callimerismus*. I find the strength of development of this carina varies greatly between specimens of *C. fronto* (Walker). Furthermore, *C. inusitatus* and an undescribed species of *Callimerismus* from Sweden in my personal collection have

the neck and collar meeting at a right angle, but clearly not carinate. Thus, the presence or absence of a pronotal carina is of little value for separating these two genera. 2. Graham reported that the spiracles of *Rhynocoelia* are smaller and more circular than those of *Callimerismus*. However, these differences in spiracular shape can be readily seen only when a series of specimens of both genera are available for comparison because of the variability in spiracular shape even in different specimens of the same species. 3. Graham also reported that *Rhynocoelia* has a rugose propodeum, while the propodeum of *Callimerismus* lacks rugae. However, the holotype of *C. inusitatus* has distinct rugae on the propodeum, and I find there is nearly as great a difference in the degree of rugosity of the propodeum between different specimens of *Rhynocoelia constans* and *R. punctifrons* as between those species and specimens of *Callimerismus* species. 4. Graham reported that the postmarginal vein is as long as the marginal vein in *Callimerismus*, but shorter than this in *Rhynocoelia*. I find little difference in the relative lengths of the marginal and postmarginal veins in these two genera; the postmarginal vein is sometimes shorter than the marginal vein in both genera.

Some of the differences between these genera recognized by Graham are still valid. 1. *Rhynocoelia* is somewhat unusual because the costal cell of the fore wing lacks any ventral setae in its basal half (Figs. 1, 3). *Callimerismus* has the more common condition with a ventral row of setae extending the length of the costal cell (Fig. 7). To my knowledge, among the Miscogasterinae, an incomplete ventral row of setae in the costal cell occurs only in *Rhynocoelia* and *Bubekia* Dalla Torre. 2. The hind margin of the first gastral tergum in *Rhynocoelia* is emarginate medially (Fig. 5) (except in *R. grahami*); in *Callimerismus*, it is always straight (Fig. 6). 3. Graham also notes that the petiole of *Rhynocoelia* differs from that of *Callimerismus* because the petiole of *Rhynocoelia* is shorter and not distinctly sculptured (Fig. 9). But the differences between the petioles are more fundamental than this. The short, smooth petiole of *Rhynocoelia* resembles those of the plesiomorphic miscogasterine genera such as *Seladerma* Walker and *Lamprotatus* Westwood (compare Figs. 8, 9). It is not sclerotized ventrally (Fig. 10) and its basal bracing consists of lateral reflexed lobes (Fig. 9). The structure of the petiole of *Callimerismus* is synapomorphic with that of the more advanced miscogasterine genera such as *Sphegigaster* Spinola and others in the Sphegigasterini (*sensu* Graham 1969). The petiole of *Rhynocoelia* is reticulate dorsally, elongate, tubular but with a median ventral sulcus, and is braced basally by an anteriorly directed flange which runs continuously laterally and ventrally except where it is interrupted medially by the sulcus (Fig. 11).

Despite the plesiomorphic petiole, *Rhynocoelia* is morphologically, and probably phylogenetically, transitional between the more primitive miscogasterine genera and the more apomorphic genera grouped in the Sphegigasterini with whom *Rhynocoelia* shares several apomorphic character states. These character states include the development of a horizontal posterior strip on the pronotum (called the collar), notauli that are relatively shallow and groove-like rather than deep and furrow-like, a scutellum that is only about as long as wide rather than elongate, a postmarginal vein at most about as long as the marginal vein rather than distinctly longer, a basal vein without obvious pigmentation or tracheolation, and a reduction in the distribution of setae in the basal cell.

For a detailed but preliminary evaluation of the exact phylogenetic relationships of *Rhcnocoelia* and *Callimerismus*, see Heydon (1988).

MATERIALS AND METHODS

Terminology in this paper generally follows that of Graham (1969), except that genal concavity is used instead of genal hollow, the lower ocular line (abbreviated LOcL) is an imaginary line across the face between the most ventral point of the orbits, club is used instead of clava, the elongate raised sensilla on the antennal flagellar segments are called multiporous plate (abbreviated MPP) sensilla, and the middle body tagma including the thorax and propodeum is called the mesosoma. In addition, the gastral terga are numbered 1–7 beginning with the first tergite after the petiole. The following abbreviations are used: median ocellar diameter is MOD, ocellular distance is OOL, posterior ocellar distance is POL, lateral ocellar distance is LOL, antennal funicular segments are F1 through F6, and the gastral terga are T1 through T7. Sculpturing is defined according to Harris (1979). The units of measurement given in the descriptions can be converted to millimeters by multiplying by 0.02. The acronyms used for the various museums can be found in the Acknowledgments; the acronym for my personal collection is SLH. My taxonomic arrangement of genera discussed generally follows Graham (1969) except *Merismus* and *Callimerismus* are transferred from the Miscogasterini to the Sphegigasterini because the petiole of these genera is sclerotized ventrally and has a basal ventral flange.

GENERIC REVISIONS

Rhcnocoelia Graham

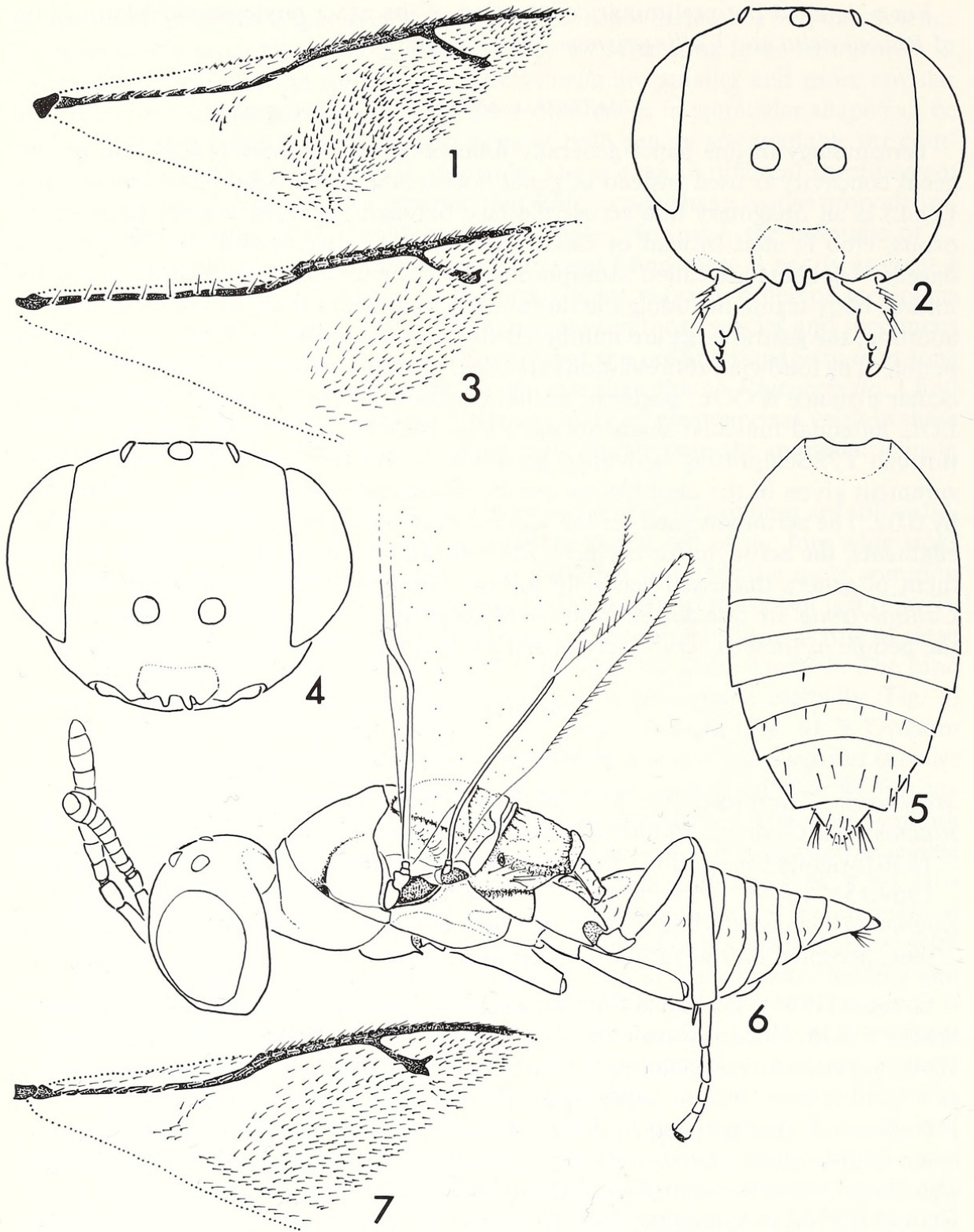
Megorismus Thomson, 1876:220, 240 [*nec* Walker, 1846].

Rhcnocoelia Graham, 1956b:262–263. Type species: *Pteromalus constans* Walker, 1836 (original designation). Peck, Bouček, and Hoffer, 1964:35, 38 (key). Graham, 1969:151, 168–171 (key, synonymy). Bouček, 1988:242, 469–470, 498.

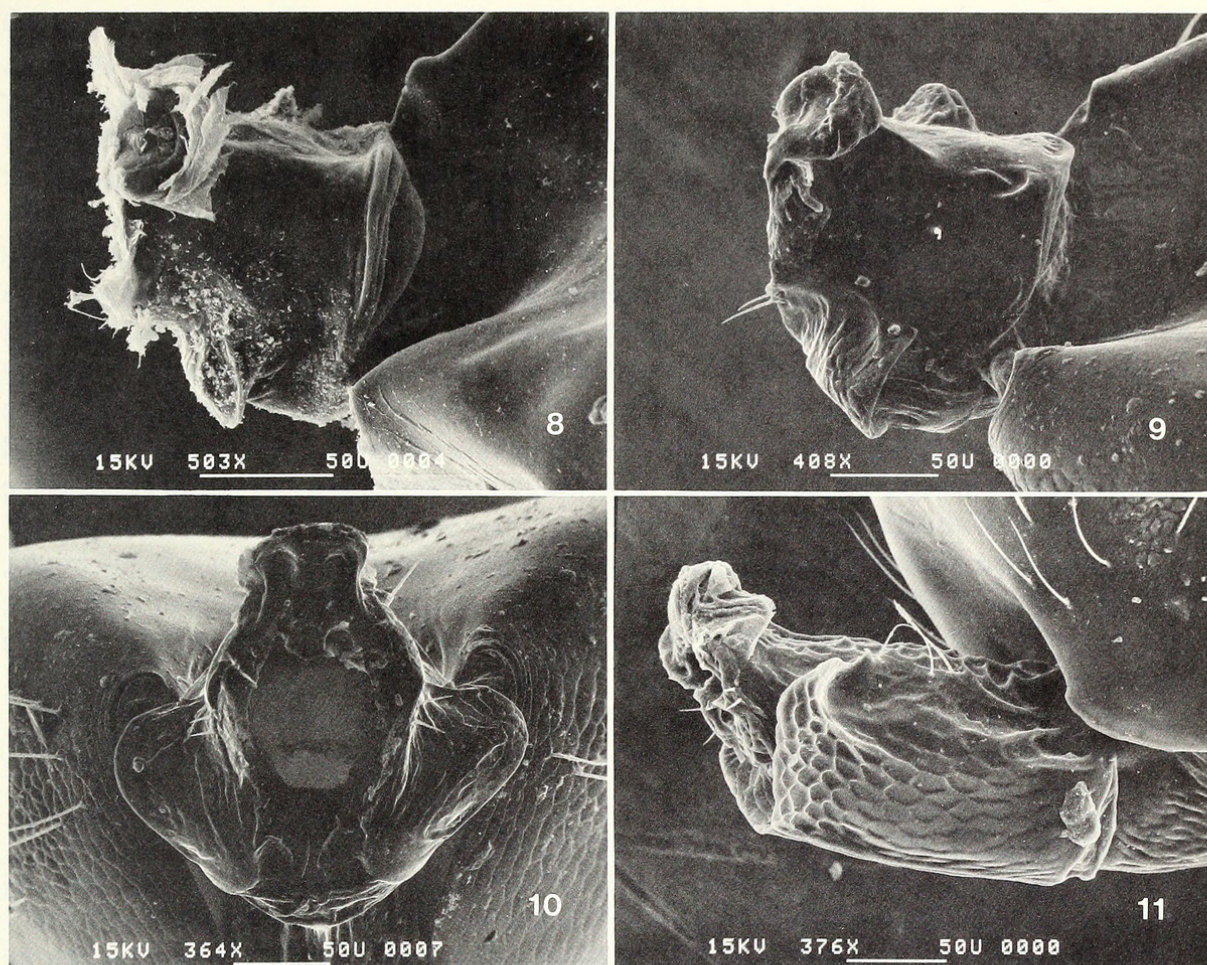
Dogmiella Delucchi, 1962:7. Type species: *Dogmiella viridis* Delucchi, 1962 (not seen, accepted on the authority of Graham, 1969).

Graham (1956b) described *Rhcnocoelia* with the type species *Pteromalus constans* Walker, 1836. He also transferred *Lamprotatus coretas* Walker, 1848 and six other Walker species into *Rhcnocoelia* in that paper. Graham (1969) retained *R. coretas* as a valid species, but the other seven *Rhcnocoelia* species were collapsed into the two species *R. constans* and *R. impar* (Walker), 1836 and Graham further expressed some doubt whether even these two species were really separable. Graham (1969) also placed the monotypic genus *Dogmiella* Delucchi, with its type species, *D. viridis* Delucchi, 1962 in synonymy with *Rhcnocoelia*. *Rhcnocoelia constans*, *R. coretas*, *R. grahami* Bouček, 1970 and *R. impar* all occur in Europe, and *R. viridis* occurs in Morocco. *Rhcnocoelia incisa* Bouček, 1988 was recently described from Australia. I extend the range of this genus to the New World with the description of a new Nearctic species, *R. punctifrons* n. sp., and the first Nearctic record of *R. constans*.

Description. Species metallic blue or green to dark green. Head with clypeus coriaceous, apical margin with three distinct and asymmetrically arranged denticles



Figs. 1-7. *Rhicnocoelia constans* (Walker). 1, Female fore wing. *Rhicnocoelia punctifrons* n. sp. 2, Female head (anterior view). 3, Female fore wing. *Rhicnocoelia constans* (Walker). 4, Female head (anterior view). 5, Female gaster (dorsal view). *Callimerismus inusitatus* n. sp. 6, Female whole body. 7, Female fore wing.



Figs. 8–11. Petioles. 8, *Seladerma* sp., female (dorsolateral view). 9, 10, *Rhicnocoelia constants* (Walker), male. 9, (dorsolateral view). 10, (anterior view). 11, *Callimerismus* sp., female (ventrolateral view).

(Figs. 2, 4); gena with weak concavities or lacking them entirely. Antenna inserted one torular diameter above LOcL; antennal formula 1:1:2:6:3; scape cylindrical, length approximately 5–6 × width; flagellum usually clavate in females, parallel-sided in males; MPP sensilla prominent; female club with small patch of micropilosity ventrally on apical segment, no terminal spine. Male maxilla without lobes off stipites, palps slender. Mandibles with three teeth on left, four on right. Mesosoma elongate, length 1.6 or more times width (but usually 2 × as long as wide or more); pronotum long (length about ½ width), with short horizontal collar lacking anterior transverse carina; mesoscutum alveolate, notauli traceable to hind margin but shallow posteriorly; prepectus flat, without distinct carina setting off posterior corner; scutellum just longer than wide, no anterior median sulcus present, frenal sulcus distinct, frenum reticulate (reticulations either impressed or raised); propodeum reticulate-rugose, with median portion projecting between hind coxae, nucha set off anteriorly by sharp carina from which a series of short carinae extend anteriorly, median carina rugiform when traceable, plicae fading out in anterior ⅓, spiracles circular or shortly ovate. Legs stout, fore femur four or less times as long as wide. Fore wing (Figs. 1, 3) with marginal vein approximately as long as postmarginal vein; stigma hardly wider than

stigmal vein; costal cell with broad basal interruption in ventral setal row; basal cell usually setose distally; speculum open posteriorly. Petiole very short, conical, smooth, unsclerotized ventrally, with a pair of lateral reflexed lobes (Figs. 9, 10). Gaster tapering in females, ovate in males; hind margin of T1 usually shallowly emarginate (Fig. 5), straight in *R. grahami*. A dorsal view of *R. incisa* is given in Bouček (1988: 498), and of *R. grahami* in Bouček (1970:51).

Discussion. *Rhynocoelia* and *Callimerismus* are phenetically similar genera. These two genera have nearly identical head structure; a similar elongate mesosoma which is alveolately sculptured dorsally; a long pronotum which is half as long as wide; shallow notauli; similar propodeal structure with the median portion reticulate, protruding posteriorly far between the hind coxae, and with the region between the spiracular sulci raised above the level of the lateral regions; and an elongate and rather acuminate gaster. Characters to separate these genera are discussed in the introduction of this paper.

Biology. The hosts of the described species in this genus are unknown; however, a male of an undescribed Nearctic species in the USNM collection from Danville, Pennsylvania, was reared from a puparium of the wheat stem maggot, *Meromyza americana* Fitch (Diptera: Chloropidae).

KEY TO NEARCTIC SPECIES OF *RHYNOCOELIA* GRAHAM

1. Scutellum and frenum both coriaceous; eye height less than 2.7 times the malar distance (Fig. 2); frons and vertex with piliferous punctures across the entire width; basal cell usually bare (Fig. 3) *punctifrons*
- Scutellum alveolate, frenum coriaceous; eye height 2.8 or more times malar distance (Fig. 4); piliferous punctures restricted to inner orbits; basal cell setate at least over apical one-fourth (Fig. 1) *constans*

***Rhynocoelia punctifrons*, new species**

Figs. 2–3

Description. Holotype, female. Color: Head, scape, pedicel, mesosoma, gaster metallic green; head and pedicel with coppery, gena with red reflections; flagellum dark brown; mandible amber, teeth dark reddish brown. Legs with femora, tibiae orange-yellow, middle femur with metallic green strip mid-dorsally; pretarsi dark brown, fore tarsi brown, middle and hind basitarsi cream-colored, remainder orange-yellow. Wing veins yellow-brown, parastigma and stigma reddish brown.

Sculpture: Clypeus finely coriaceous, remainder of head coriaceous, frons and vertex with scattered punctures along orbits; pronotum, anterior part of mesoscutum imbricate; disc of middle lobe of mesoscutum alveolate; side lobes, axilla, scutellum, frenum coriaceous; dorsellum alveolate; propodeum alveolate rugose; gastral T1–3 smooth, T4–7 coriaceous; prominent MPP sensilla give the antennal flagellum coarse texture.

Structure: Body length 3.1 mm. Head (Fig. 2) width $1.2 \times$ height (43.5:35.0), $1.8 \times$ length (43.5:24.0); eye height $1.3 \times$ length (21:16), $2.5 \times$ malar distance (21.0:8.5), length $2.7 \times$ temple length (16:6); ratio of MOD, OOL, POL, LOL as 2.5:7.5:11.0:5.5; torulus located a little over one diameter above LOcL. Antenna with length of

pedicel plus flagellum $1.3 \times$ head width (55.0:43.5); ratio of lengths of scape, pedicel, anelli, F1–6, club as 16.0:6.0:2.0:7.5:6.5:6.0:5.5:5.0:5.0:8.0; widths of F1, F6, club as 4.0:5.0:5.5; MPP sensilla long, in single irregular row on F1, two partially overlapping rows on F2–6; apical club segment with ventral patch of micropilosity. Mesosoma $2.2 \times$ as long as wide (75:34); dorsellum nearly $\frac{1}{2}$ length of frenum; propodeum with series of short longitudinal carinae anteriorly, rugae diverging from sharp median carina; spiracles ovate, $1 \times$ own diameter from anterior margin of propodeum, callus with very few setae. Legs stout, fore femur length $3.4 \times$ width (31:9). Fore wing (Fig. 3) length $2.8 \times$ width (130:47); ratio of submarginal, marginal, postmarginal, stigmal veins as 55:22:24:12; basal cell and basal vein bare. Gaster broadly fusiform in dorsal view, length $1.8 \times$ width (55:31); length $1.1 \times$ height (55:50); hind margin of T1 with broad median emargination.

Allotype, male. Color: Similar to holotype female except legs brownish yellow, middle femur with dorsal brown patch, not metallic. Structure: Body length 2.9 mm. Head width $1.8 \times$ length (37.0:20.5). Antenna with lengths of pedicel plus flagellum $1.9 \times$ head width (72:37); ratio of lengths of scape, pedicel, anelli, F1–6, club as 8.5:5.5:1.5:9.0:9.0:9.0:8.0:8.0:7.0:15.0; widths of F1, F6, club as 3.5:4.0:4.0; funicular segments cylindrical, thickly covered with fine light colored hairs which are curved toward the apex so that their tips lie parallel to long axis of the segment, MPP sensilla in two irregular rows on each segment. Fore wing with basal vein with one seta on left wing and three on right wing. Gaster ovate, length $1.9 \times$ width (55:29).

Variation. Specimens of both sexes may have the pronotum, side lobes of the mesoscutum, and axilla bluish green to brilliant blue. The male from Colorado has extensive red areas on the face. The body length of females varies from 2.7 to 3.5 mm; males from 2.4 to 3.2 mm. The temple length is up to 0.55 times the length of the eye in females; in males, the ratio of temple length to eye length varies between 0.53 and 0.69. Females usually have a more or less well developed patch of metallic coloration on the posterior surface of the middle femur, but this patch is nearly lacking in 2 of the 7 type females. The allotype is the only specimen in the paratype series with setae on the basal vein.

Diagnosis. This species keys to *R. constans* in Graham (1969) but is readily distinguishable from that species by the large head (head width being only about two times length), the lack of raised sculpturing on the head and scutellum (including frenum), the lack of setae on the basal cell, and by having the parastigma and stigma distinctly darker than the marginal and stigmal veins. Males of both *R. punctifrons* and *R. constans* have cylindrical antennal funicular segments thickly covered with fine light colored hairs which are curved toward the apex so that their tips lie parallel to the long axis of the segment.

Etymology. The species name is a conjunction of the Latin words *punctum*, meaning small hole, and *frons*, meaning brow or forehead, and refers to the prominent piliferous punctures on the head of this species.

Type Material. The holotype female (USNM), allotype male (USNM), and five female and seven male paratypes (USNM) were collected at Springer, New Mexico in 1909 by C. N. Ainslie. Two additional paratypes were collected as follows (USNM): United States. COLORADO: Fort Collins, 10·VII·1896, 1♂; Moffat Co., 1♀.

Host. Unknown.

Rhcnocoelia constans (Walker)

Figs. 1, 4-5, 9-10

Pteromalus constants Walker, 1836:468-469. Lectotype, ♀; BMNH, Hym. Type No. 5.1696 [examined]. Graham, 1956b:263 (synonymy).

Pteromalus cliens Walker, 1836:469 [type not seen]. Graham, 1956b:263 (synonymy).

Megorismus chloris Thomson, 1876:241 [type not seen]. Graham, 1956b:263 (synonymy).

Rhcnocoelia constans (Walker): Graham, 1956b:263; 1969:169-170. Bouček, 1970:48-49; 1977:51.

Graham (1969) also cites the possible synonymy of *Pteromalus vindalius* Walker, 1839; *Pteromalus archidemus* Walker, 1839; *Pteromalus orsippus* Walker, 1839; *Lamprotatus labaris* Walker, 1848; and *Pteromalus phalasarna* Walker, 1848 with *Rhcnocoelia constans*. The type material of the first four of these species consists of unassociated males which he says are difficult to positively determine to species.

Diagnosis. Characters to distinguish *R. constans* from *R. punctifrons* are given in the discussion section for that species.

Material Examined: Palearctic Region (BMNH, CNC, INHS, SLH, USNM): England, Sweden, France, Germany, Hungary, Cyprus. Nearctic Region (CNC, USNM): United States. ALASKA: Anchorage, 31·VII·1951, 1♀. MICHIGAN: Delta Co., 25·VIII·1952, 1♀. Canada. ALBERTA: McMurray, 7·VIII·1953, 1♂; 10·VIII·1953, 1♀. The following unassociated males probably belong to this species (CNC, USNM): United States. COLORADO: 1♂; Doolittle Ranch, Mt. Evans, 10·VIII·1961, 1♂. Canada. YUKON TERRITORY: Mile 87, Dempster Highway, 4-8·VIII·1973, 1♂.

Callimerismus Graham

Callimerismus Graham, 1956a:78. Type species *Merismus fronto* Walker, 1833 (original designation). Graham, 1969:151, 176-179.

Callimerismus Graham was created for a single British species, *Merismus fronto* Walker, 1833 (Graham, 1956a). Graham (1969) later described a second species, *Callimerismus suecicus*, from Sweden. I am extending the geographic range of this genus to the Nearctic region with the description of a new Nearctic species, *Callimerismus inusitatus* n. sp.

Dipara latipennis Ashmead, 1890 was transferred to *Callimerismus* by Hedqvist (1969). This species is known only from the male holotype and its generic placement is problematic. In most respects, it resembles the other *Callimerismus* species, but it differs from them in three critical ways. The petiole of *C. latipennis* is structured much as in *Miscogaster* Walker—slender, elongate, sculptured, but slightly convergent anteriorly and with no basal bracing of any kind. The other species of *Callimerismus* have a basal flange bracing the petiole basally (Fig. 11), a characteristic of genera in the Sphegigasterini. *Callimerismus latipennis* also has a shiny swollen apical ventral shiny strip on the scape (called a boss) which is characteristic of many genera of the Miscogasterini such as *Seladerma*, *Sphaeripalpus* Förster, *Stictomischus* Thomson, *Miscogaster*, *Lamprotatus*, and *Skelocerus* Delucchi. A boss is very rare in any species of the Sphegigasterini. Finally, the hind margin of the first tergum is sinuous laterally, again similar to the first tergum in *Miscogaster*; the hind margin of the first tergum

is straight in other *Callimerismus* species. *Callimerismus latipennis* will not be treated as a *Callimerismus* species further in this paper. Its eventual generic placement will have to await a critical study of the genera similar to *Miscogaster*.

Description. Body color metallic blue or green. Head with anterior margin of clypeus with three distinct asymmetrically arranged apical denticles; mouth margin arched laterally; gena with short concavity. Antenna inserted well above LOcL; antennal formula 1:1:2:6:3; scape cylindrical, length about $5 \times$ width; MPP sensilla in single row; female club lacking any micropilosity or terminal spine. Mandibles with three teeth on left, four on right. Mesosoma elongate; pronotum elongate (length about $\frac{1}{2}$ width), collar short and weakly carinate or crested anteriorly; mesoscutum alveolate, notauli complete but sometimes shallow posteriorly; prepectus nearly flat, reticulate, lacking carina delimiting hind corner; scutellum just longer than wide, without anterior median sulcus, with distinct frenal sulcus, frenum reticulate; propodeum reticulate, protruding between hind coxae, portion between spiracular sulci distinctly raised above lateral regions, median carina complete or not, plicae incomplete, spiracles ovate. Fore wing (Fig. 7) with marginal vein longer than postmarginal vein; stigma twice as wide as stigmal vein; costal cell with complete ventral row of setae; basal cell bare; basal vein setate; speculum open posteriorly. Petiole cylindrical, longer than wide, reticulate; sclerotized ventrally; lateral setae present; with basal flange. Gaster with hind margin of T1 straight.

Diagnosis. *Callimerismus* is probably most closely related to a group of genera including *Merismus* Walker, *Toxeuma* Walker, and *Cryptoprymna* Förster. All these genera have an elongate propodeum that is distinctly raised between the spiracular sulci and extends posteriorly between the hind coxae. *Callimerismus* differs from *Merismus* by having the anterior transverse carina on the pronotal collar developed to a much lesser degree (if at all) and by having the prepectus uniformly reticulate; *Merismus* has the prepectus smooth and with a carina setting off its hind corner. *Callimerismus* differs from *Toxeuma* by having the anterior margin of the clypeus with three asymmetrically arranged denticles, and the anterior transverse carina on the pronotal collar developed to a much lesser degree; *Toxeuma* has no anterior denticles on the clypeus, and a strongly developed anterior transverse carina on the collar. *Callimerismus* differs from *Cryptoprymna* by having a metallic green or blue body, distinct denticles on the anterior margin of the clypeus, no large patch of micropilosity on the female club, and the first gastral tergite not covering the entire gaster; *Cryptoprymna* species are black, have a weakly truncate clypeus, a large patch of micropilosity on the female club, and T1 virtually covers the gaster. The differences between *Callimerismus* and the phenetically similar genus *Rhichnocelesia* are given in the discussion section for that genus.

***Callimerismus inusitatus*, new species**

Figs. 6–7

Description. Holotype, female. Color: Clypeus blue in lower half; remainder of head yellow-green, vertex with coppery reflections; pronotum, pleural region yellow-green; dorsum of mesosoma green; propodeum, petiole blue-green; gaster dark brown, basal half of T1 with blue-green reflections, T4–7 with yellow-green reflections. Antenna with scape yellow, remainder brown. Legs yellow-brown, femora and middle

and hind tibiae with weak yellow-green reflections, pretarsi dark brown. Wing veins yellow-brown.

Sculpture: Clypeus smooth; remainder of head, pronotum, mesoscutum, scutellum, axilla, dorsellum alveolate; propodeum alveolate with a few fine but sharp rugae; petiole finely alveolate; T1–5 smooth, T6–7 coriaceous.

Structure: Body length 2.2 mm. Head width $1.3 \times$ height (32:35), $1.7 \times$ length (32:19); eye height $1.3 \times$ length (18:14), $5.1 \times$ malar distance (18.0:3.5), length $4.0 \times$ temple length (14.0:3.5); genal concavity extending $\frac{1}{3}$ malar distance; ratio of MOD, OOL, POL, LOL as 3:4:7:4; distance from median ocellus to front of head equal to distance from lateral ocellus to occiput; torulus inserted $2 \times$ inside diameter above LOcL. Antenna with length of pedicel plus flagellum $0.91 \times$ head width (29:32); scape cylindrical, length $5.0 \times$ width (10:2); ratio of lengths of scape, pedicel, anelli, F1–6, club as 10.0:4.0:1.5:2.5:3.0:3.0:3.0:3.0:8.0; widths of F1, F6, club as 3.0:3.5:4.0; funicular segments cylindrical, MPP sensilla sparse, length about equal to length of funicular segments. Mesosoma length $2.0 \times$ width (29:24); collar with anterior edge crested; propodeum with nuchal region set off anteriorly by fine carina, spiracles $1 \times$ own diameter from anterior margin of propodeum. Fore wing (Fig. 7) length $2.4 \times$ width (86:36); ratio of lengths of submarginal, marginal, postmarginal, stigmal veins as 33:19:16:8; basal vein with one complete and a partial second row of setae. Petiole length $1.2 \times$ width (8.5:7.0); median carina weak; pair of fine setae extending laterally. Gaster fusiform; length $2.1 \times$ width (41.0:19.5).

Variation. The body length of the paratype female is 2.4 mm. Its body color is generally similar to the holotype, but the scape is brown apically, the legs are darker with brown femora and tibiae, and the lateral regions of the scutellum are blue. The combined length of the scape and pedicel is 0.91 times the head width. The head width is 1.8 times its length. The dorsellum of the holotype is obscured, but in the paratype, the dorsellum is bandlike, carinate anteriorly, and short [its width 3.6 times its length (9.0:2.5)]. The petiole length is 1.3 times its width in the paratype.

Discussion. This species will key out with *C. fronto* in the key to European species given by Graham (1969). *Callimerismus inusitatus* differs from *C. fronto* in the following: 1. The scutellum in *C. inusitatus* is moderately arched; it is strongly arched in *C. fronto*. 2. The scape of *C. inusitatus* is non-metallic; it is metallic in *C. fronto*. 3. The eye height is about five times the malar distance in *C. inusitatus*; it is 3.5 times the malar distance in *C. fronto*. 4. The petiole has a single or no pairs of lateral setae in *C. inusitatus*; there are several pairs present in *C. fronto*.

Type material. The holotype (CNC) is a female, from Ancaster, Ontario, Canada, and was collected 24 June 1955 by O. Peck. The paratype female (CMNH) is from Keron Hill, Pittsburgh, Pennsylvania, and was collected on 16 June 1940 by G. E. Wallace.

Etymology. The species name comes from the Latin word *inusitatus*, meaning rare or unusual, and refers to the rareness of this species.

Host. Unknown.

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