

# Descriptions of New Taxa and Distribution Records of the Family Bethylidae (Insecta, Hymenoptera) II. Subfamily Bethylinae and Fossil Taxa

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**Abstract** Seven living bethylid wasps belonging to the subfamily Bethylinae are described as new to science from Asia and Australia: *Eupsenella ceciliae* sp. nov., *E. flavifemorata* sp. nov., *E. reticulata* sp. nov., *Goniozus hualienensis* sp. nov., *Bethylus himalayanus* sp. nov., *Sierola mawarajo* sp. nov. and *S.indra* sp. nov. *Eupsenella diemenensis* Dodd, 1916, is redescribed. A new fossil genus *Archaeopristocera* is described from the Dominican amber based on *Archaeopristocera miki* sp. nov. A fossil genus *Uromesitius* Brues, 1933, is removed from the Family Bethylidae to the subfamily Cleptinae of Family Chrysididae. World distribution of 6 genera of Bethylinae is also shown and commented.

## Introduction

In the present part, I describe 7 species belonging to the subfamily Bethylinae, and a new fossil genus and species from the Dominican amber.

Special terms used in this paper follow those in Terayama (1999). The following abbreviations are used in the descriptions: HL-head length; HW-head width; WF-width of frons; LM-length of mesosoma; PW-pronotal width in dorsal view; LP-length of propodeum in dorsal view; LPD-length of propodeal disc in dorsal view; WPD-width of propodeal disc in dorsal view; FWL-forewing length; TL-total body length; EL-eye length; POL-distance between posterior ocelli; AOL-distance between posterior ocellus and anterior ocellus; OOL-distance from a posterior ocellus to nearest eye margin; WOT-distance across and including posterior ocelli; DAO-diameter of anterior ocellus. The abbreviations of institutions are as follows: CNC- Bio-systematics Research Centre, Ottawa, Canada; SAM-South Australian Museum, Adelaide, Australia; NSMT- National Science Museum, Tokyo, Japan.

## Taxonomic accounts and distribution

### 1. Subfamily Bethylinae

#### 1-1. Genus *Eupsenella* Westwood

The genus *Eupsenella* is very small genus and a single species, *E. diemenensis*, has been known in Australia and New Zealand only (Fig. 34-C). For the kindness of the South Australian Museum, Australia, I examined 13 specimens of the genus *Eupsenella*. After careful examination, I recognized 4 species of which 3 are new to science describe herein.

#### *Eupsenella diemenensis* Dodd (Figs. 1-4, 14-16, 20)

*Eupsenella diemenensis* Dodd, 1916.

**Redescription.** Female. HL 0.70-0.88 mm; HW 0.73-0.88 mm; WF 0.43-0.55 mm; LM 1.40-1.55 mm; LPD 0.43-0.45 mm; WPD 0.60-0.70 mm; FWL 2.5-2.7 mm; TL 3.5-3.9 mm.

Body black; mandible black; antenna with upperside dark brown, underside light brown; coxae and

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femora blackish brown; tibiae and tarsi light brown.

Head almost as long as wide, with almost straight posterior margin in full face view; frons and vertex microreticulate. Median lobe of clypeus roundly produced. First 4 segments of antenna in a ratio of 2 : 1 : 1 : 1 in length; scape 1.3 times as long as wide. Eye 0.35-0.40 mm in length, with erect hairs sparsely; WF 1.24-1.38 times EL. Ocellar triangle flat, POL : AOL = 7 : 4; OOL 1.0 times WOT.

Pro- and mesonotal dorsa microreticulate with scattered shallow small punctures. Propodeal disc as in Figs. 14-16; a pair of submedian carinae present which are not reaching the transverse carina; relative length of the submedian carina varies in from 0.2 to 0.7 times the propodeal length; discal surface microreticulate; declivity moderately microreticulate.

Forewing as shown in Fig. 3.

**Specimens examined.** Mt. Wellington, Tas (Tasmania), Lea leg. (holotype, female, head and forewings mounted on a slide; SAM); 1 female, Upper stocol, S. A., 19.II.1953, G. F. Gross leg.; 2 females, Adelaide, N. B. Tindale leg.; 1 female, Hobart, 25.VI.16/17, C. Cole leg.; 2 females, Ardrossan, S. A., J. G. O. Tep leg.; 1 female, S. Australia, A. M. Lea leg.

**Remarks.** The holotype specimen from Tasmania is shown in the Figs. 1-4 and 14.

*Eupsenella ceciliae* sp. nov. (Figs. 5, 8, 11, 17, 21)

**Female (holotype).** HL 0.95 mm; HW 1.15 mm; WF 0.65 mm; LM 1.55 mm; LPD 0.55 mm; WPD 1.00 mm; FWL 3.0 mm; TL 4.5 mm.

Body blackish brown; mandible blackish brown; antennal scape blackish brown excepting yellowish brown apical 1/4; funiculus with dark brown upperside and brown to yellowish brown underside; femora blackish brown; tibiae and tarsi brown, somewhat yellowish.

Head wider than long, with convex posterior margin in full face view; frons and vertex punctate; interspaces relatively weakly microreticulate. Clypeus smooth and shining; median carina lacking; anterior margin roundly produced. First 4 segment of antenna in a ratio of 3 : 1 : 1 : 1 in length. Eye 0.45 mm in length, with erect hairs; WF 1.44 times EL. POL : WOT = 7 : 5; OOL 1.2 times WOT.

Pronotum relatively weakly microreticulate with shallow punctures sparsely; anterior margin weakly convex in dorsal view; anterodorsal margin rounded, not forming an angle in lateral view. Propodeal disc as in Fig. 17; median area smooth and shining; lateral area moderately microreticulate.

Forewing as in Fig. 5.

**Variation.** One paratype specimen with the following measurements: HL 1.00 mm; HW 1.13 mm; WF 0.65 mm; LM 1.86 mm; LP 0.45 mm; WPD 0.75 mm; FWL 2.4 mm; TL 4.3 mm.

**Holotype.** Female, Adelaide, J. G. O. Tepper leg.

**Paratype.** 1 female, Ridgeway, 3.9.16/28, C. Cole leg.

**Type depository.** SAM.

**Remarks.** This is a peculiar species in lacking median clypeal carina in Bethyilidae. The loss of the carina is considered as a secondary fusion.

*Eupsenella flavifemorata* sp. nov. (Figs. 6, 9, 12, 18, 22, 23)

**Female (holotype).** HL 1.00 mm; HW 1.00 mm; WF 0.61 mm; LM 1.70 mm; LPD 62 mm; WPD 0.80 mm; FWL 2.9 mm; TL 3.9 mm.

Body blackish brown; 1st and 2nd metasomal segments much lighter; legs yellowish brown.

Head as long as wide, with gently convex posterior margin in full face view; frons and vertex

microreticulate with shallow sparse punctures. Clypeus broadly producing, with a median carina. First 4 segments of antenna in a ratio of 3 : 1 : 1 : 1 in length. Eye 0.45 mm in length, with erect hairs; WF 1.35 times EL. Ocellar triangle flat, POL : AOL = 3 : 2; OOL 0.75 times WOT.

Pronotal disc flat and trapezoidal; anterior margin straight in dorsal view; anterodorsal margin forming a dull angle in lateral view; discal surface moderately microreticulate with shallow punctures sparsely. Mesonotal dorsum flat; notauli parallel. Propodeal disc microreticulate; median carina almost reaching posterior margin; submedian carina short, ca. 1/5 of the length of propodeum.

Forewing as in Fig. 6.

**Variation.** The paratype specimen with the following measurements: HL 1.00 mm; HW 0.95 mm; WF 0.58 mm; LM 1.75 mm; LPD 60 mm; WPD 0.58 mm; FWL 2.9 mm; TL 4.5 mm.

**Holotype.** Female, NW Wood, Well. Coorong Nat. Pk. S.A., 11.I.1971, J.A. Hwrridge, G. F. & M. Gross leg.

**Paratype.** 1 female, same data as holotype.

**Type depository.** SAM.

***Eupsenella reticulata* sp. nov.** (Figs. 7, 10, 13, 19)

**Female (holotype).** HL 0.75 mm; HW 0.85 mm; WF 0.50 mm; LM 1.30 mm; LPD 0.50 mm; WPD 0.68 mm; FWL 2.5 mm.

Body black; mandible yellow; antenna with brownish yellow upperside and yellow underside; coxae and femora dark brown; tarsi and tibiae yellow.

Head wider than long, with moderately convex posterior margin in full face view; frons and vertex strongly microreticulate and with small punctures sparsely. Median lobe of clypeus rather broad, forming an obtuse angle. First 4 segment of antenna in a ratio of 2 : 1 : 1 : 1 in length; scape 1.4 times as long as wide. Eye 0.38 mm in length, with erect hairs; WF 1.30 times EL. Ocelli relatively large, forming a compact triangle; POL : AOL = 5 : 3; OOL 0.75 times WOT.

Pronotal disc strongly microreticulate, narrow and trapezoidal in dorsal view; anterodorsal margin not forming an angle in lateral view. Mesonotum microreticulate; notauli diverging toward the front. Propodeal disc as in Fig. 19; sublateral carina long, almost reaching the posterior margin of disc; median area reticulate; sublateral area with oblique rugulae.

Forewing as in Fig. 7

**Holotype.** Female, Eully, S. A., 16.XI.1958, R.V. Southcott leg.

**Type depository.** SAM.

**1-2. Genus Goniozus Foerster**

***Goniozus hualienensis* sp. nov.** (Figs. 24, 25)

**Female (holotype).** HL 0.65 mm; HW 0.65 mm; WF 0.48 mm; LM 1.13 mm; LPD 0.30 mm; WPD 0.50 mm; FWL 2.1 mm; TL 2.4 mm.

Body black; mandible and antenna yellowish brown; legs brown excepting yellowish brown tarsi; wings hyaline; wing veins pale yellowish brown; pterostigma and prostigma dark brown.

Head as long as wide, with weakly convex posterior margin in full face view; frons and vertex shagreened, and scattered with shallow weak punctures. Median lobe of clypeus triangular. First 5 segments of antenna in a ratio of 5 : 3.8 : 2.9 : 2 : 2 in length. Eye 0.35 mm in length, hairless; WF 0.86 times EL. Ocelli forming an obtuse triangle; POL : AOL = 9 : 5 ; OOL 0.8 times WOT.

Pronotal disc short, 0.58 times as long as wide, 0.60 mm in maximum width in dorsal view; surface shagreened. Mesonotum shagreened. Propodeal disc short, 0.60 times as long as wide; basal triangular area smooth, lateral and posterior areas shagreened; transverse carina distinct.

Forewing without closed areolet.

Metasoma smooth and shining.

**Holotype.** Female, Antung spa Hualien, Taiwan, 1. V. 1985, A. Sato leg.

**Type depository.** NSMT.

**Remarks.** This species resembles *G. japonicus* Ashmead from Japan, Korea, China, and Taiwan, but is separated from this by the short pronotum and propodeum, and the wide head.

### 1-3. Genus *Bethylus* Latreille

#### *Bethylus himalayanus* sp. nov.

**Female (Holotype).** HL 1.03 mm; HW 0.95 mm; WF 0.63 mm; LM 1.30 mm; LP 0.63 mm; DPW 0.60 mm; FWL 2.8 mm; TL 4.3 mm.

Head and mesosoma black; metasoma dark reddish brown; mandible black; antenna brown except for posterior 2/3 of scape and underside of funicular segments reddish; coxae, femora and most part of tibiae dark brown; trochanters, tip and base of tibiae and tarsi yellow; wings hyaline; pterostigma blackish brown.

Head rectangular, slightly longer than wide, with very weakly convex posterior margin in full face view; frons and vertex strongly microreticulate. Mandible microreticulate, with 4 teeth. Anterior margin of clypeus weakly convex. Antenna with 12 segments; first 5 segments in a ratio of about 9 : 4 : 3.5 : 3.5 : 3.5 in length; 2nd segment 3.0 times as long as wide; 3rd 2.8 times as long as wide. Eye flat, 0.35 mm in length; WF 1.8 times EL. Ocelli small, front angle of ocellar triangle less than a right angle; OOL 2.5 times WOT.

Pro- and mesonota strongly microreticulate. Propodeum 1.05 times as long as wide in dorsal view; disc strongly microreticulate; declivity only weakly microreticulate and partly smooth.

Metasoma subopaque; 0.98 mm in maximum width as seen from above.

**Paratype.** A single paratype female with the following measurements: HL 1.20 mm; HW 1.11 mm; WF 0.76 mm; LM 1.55 mm; LP 0.70 mm; WPD 0.70 mm; FWL 3.2 mm; TL 5.3mm.

**Holotype.** Female, Pasture, 10,000 ft. (27°56'N, 85°00'E), Nepal, V. 1967, [Can. Nepal Exped.]

**Paratype.** 1 female, Ktmd, Godavari, 15,000 ft., Nepal, 25. V. 1967, [Can. Nepal Exped.]

**Type depository.** CNC.

**Remarks.** A paratype specimen was captured at a Mallesse trap. This is the first record of this genus from Nepal and the latitudinally most southern distributional record (Fig. 34-A).

### 1-4. Genus *Sierola* Cameron

The genus *Sierola* contains about 100 species, and is mostly distributed in the Hawaii, the Marquesas and Australia, and a few from North America (1 species), Japan (2 species), Far East Russia (1 species), and southern China (1 species). I have examined the specimens of this genus from Chiang Mai, Thailand, and Bangalore, India, which represent 2nd and 3rd records of this genus from the Oriental region (Fig. 34-C), and the Indian record is the most eastern distribution in the genus.

#### *Sierola mawarajo* sp. nov. (Figs. 26-29)

**Female (Holotype).** HL 0.50 mm; HW 0.43 mm; WF 0.24 mm; LM 0.73 mm; LPD 0.21 mm; DPW

0.32 mm; FWL 1.2 mm; TL 1.9 mm.

Head and mesosoma black; metasoma dark brown; mandible black; antenna yellow; coxae and femora brown; trochanters, tibiae and tarsi yellow.

Head 1.18 times as long as wide, with weakly convex posterior margin in full face view; frons and vertex microreticulate. First 5 segments of antenna in a ratio of about 4.5 : 2 : 1 : 1 : 1.5 in length; 2nd segment 1.4 times as long as wide, 3rd to 5th segments each as long as wide. Eye 0.24 mm in length; WF 1.0 times EL. Ocelli forming an obtuse triangle; POL : AOL = 5 : 4; OOL 1.2 times WOT.

Mesosoma microreticulate; pronotal disc trapezoidal in dorsal view. Propodeal disc microreticulate, 0.68 times as long as wide, with subparallel sides and straight posterior margin in dorsal view; lateral and transverse carinae present.

Metasoma smooth and shining.

Forewing as in Fig. 28; basal vein thick; areolet thin and long.

**Holotype.** Female, Khao Yai, Thailand, 10-17. II. 1989, T. W. Thormin leg.

**Paratypes.** 2 females, same data as holotype.

**Type depository.** All the types are deposited in CNC.

***Sierola indra* sp. nov.** (Figs. 30-33)

**Female(Holotype).** HL 0.55 mm; HW 0.45 mm; WF 0.25 mm; LM 0.88 mm; LP 0.28 mm; DPW 0.33 mm; FWL 1.4 mm; TL 1.9 mm.

Head and mesosoma black; metasoma dark brown; mandible black; antenna yellow; coxae and femora brown; trochanters, tibiae and tarsi yellow.

Head 1.22 times as long as wide, with almost straight posterior margin in full face view; frons and vertex microreticulate. First 5 segments of antenna in a ratio of about 5 : 2.5 : 1 : 1 : 1.2 in length; 2nd segment 1.6 times as long as wide; 3rd to 5th segments each as long as wide. Eye 0.28 mm in length; WF 0.9 times EL. Ocelli forming an obtuse triangle; POL : AOL = 6 : 4.5; OOL 1.2 times WOT.

Pronotum microreticulate; disc trapezoidal in dorsal view. Mesonotum microreticulate excepting smooth posterior 1/3. Propodeal disc 0.85 times as long as wide, with parallel sides and weakly concave posterior margin in dorsal view; lateral carinae present; transverse carina present, but even weak; disc microreticulate, with a smooth median longitudinal band medially.

Metasoma smooth and shining.

Forewing as in Fig. 32; areolet 0.3 times as long as wide.

**Holotype.** Female, Bangalore, 916 m, Karnataka, India, 1-31. VIII. 1987, K. Ghorpade leg.

**Type depository.** CNC.

**Remarks.** Known from the type only.

**2. Fossil genus and species**

**2-1. Description of a new genus and species**

The age of the Dominican amber is suggested that it is either late Oligocene or early Miocene. I have a chance to examine a bethyrid wasp of the Dominican amber. The wasp is female and is a member of the subfamily Pristocerinae. After careful examination, I concluded that it is a new genus and species described herein.

***Archaeopristocera* gen. nov.**

**Type species:** *Archaeopristocera miki* gen. et sp. nov. **Gender:** Feminine. **Etymology:** *Archaeo*, Gr. + *Pristocera*.

**Diagnosis.** Moderate-sized bethylid wasp in the following combinations of characteristics in female: 1) Head elongate, with strongly concave posterior margin in full face view; 2) mandible long, with strongly angulate shaft; 3) anterior margin of clypeus concave, with a pair of teeth laterally; 4) frontal lobe produced to the level of clypeus; 5) antenna short, not reaching posterior margin of head; 6) eye small, consist of several facets; 7) ocelli lacking; 8) wings and tegra absent; 9) mesopreuron produced laterally; 10) propodeal disc narrowest at anterior 1/3; 11) metasoma sessile; 12) middle tibia setose; 13) tarsus longer than tibia.

**Remarks.** This genus is included in the subfamily Pristocerinae by the characters 6), 7), and 8). Characters 2), 3) and 13) are autoapomorphies of the genus in this subfamily.

*Archaeopristocera miki* gen. et sp. nov. (Figs. 35-38)

**Female (Holotype).** HL 1.35 mm; HW 0.99 bmm; LM 1.80 mm; PW 1.43 mm; LPD 0.80 mm; WPD 0.46 mm; TL 6.0 mm.

Head long, 1.37 times as long as wide, with parallel sides and deeply concave posterior margin in full face view; posterolateral corner acutely angulate; frons and vertex impunctate. Mandible long and strong; shaft strongly curved, with 4 acute apical teeth. Anterior margin of clypeus convex, with a pair of lateral teeth. Antennal lobe produced, and forming an acute angle anteriorly. First 5 segments of antenna in a ratio of 17 : 2.5 : 2 : 2 : 2 in length; scape clavate, 2.14 times as long as wide; 2nd segment as long as wide; 3rd to 12th segments each wider than long; terminal segment 2.7 times as long as wide. Eye 0.08 mm in diameter.

Pronotal disc 1.41 times as long as wide; mesonotum 0.62 times as long as wide; propodeum 1.74 times as long as wide, narrowest at anterior 1/3 and broadest at posterior end; maximum width of disc 1.84 times its minimum width.

Metasoma sessile, 2.35 mm in maximum dorsal width, and 2.78 mm in length. Femora and tibiae wide and flat; middle tibia 0.64 mm in length, with ca. 7 pairs of erect setae at outer margin, and 4 pairs of setae and a spinose spur at distal margin; middle and hind tarsus long, ca. 0.73 and 0.75 mm in length, respectively.

**Holotype.** Female, from Dominican amber with no further locality.

**Type depository.** NSMT.

## 2-2. Species transferred to the Chrysididae

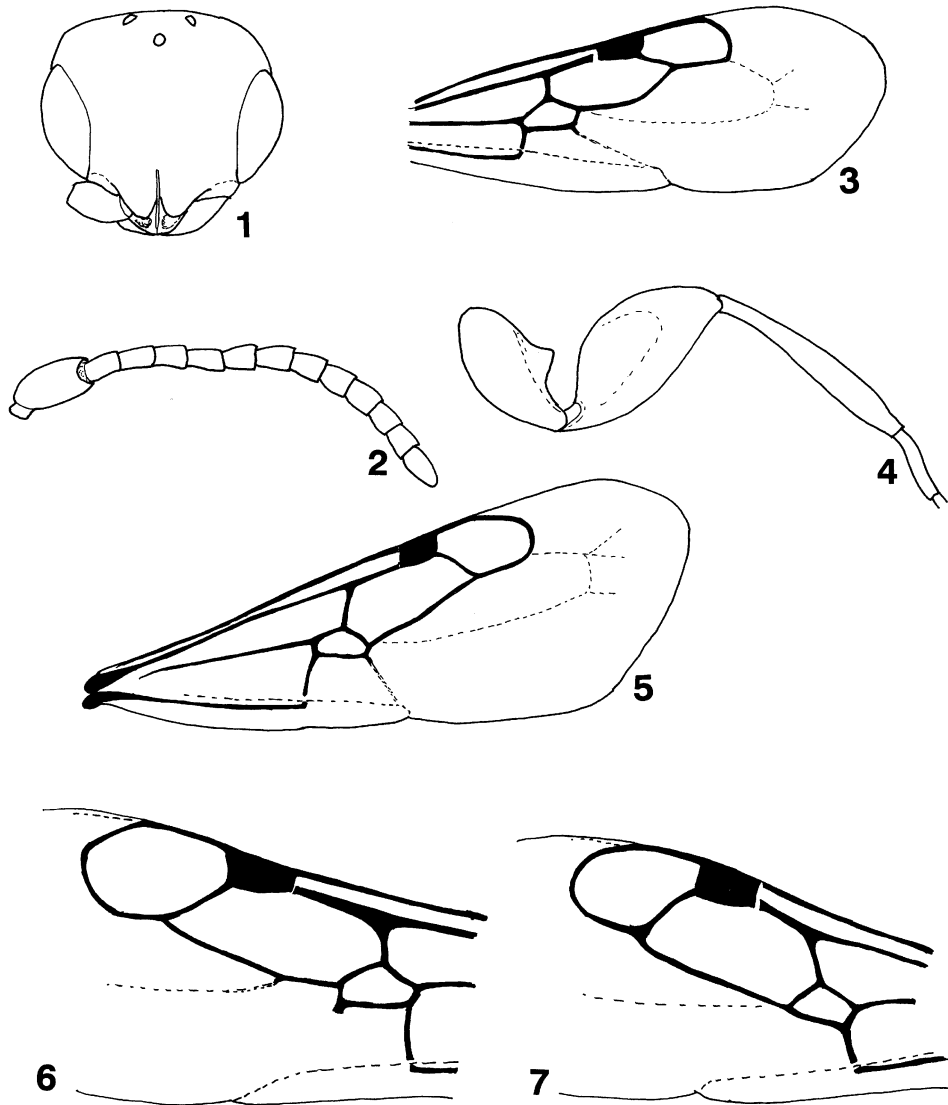
The fossile genus *Uromesitius* established by Brues in 1933 is contained a single species *U. caudatus* from Lower Oligocene. This species has chrysidid like characteristics, rather those of Bethyidae. It is strongly suggested that this species is a member of the subfamily Cleptinae in the family Chrysididae by the 4-segmented metasoma and the robust ovipositor tube. Thus, this genus is transferred from the Bethyidae to the Chrysididae.

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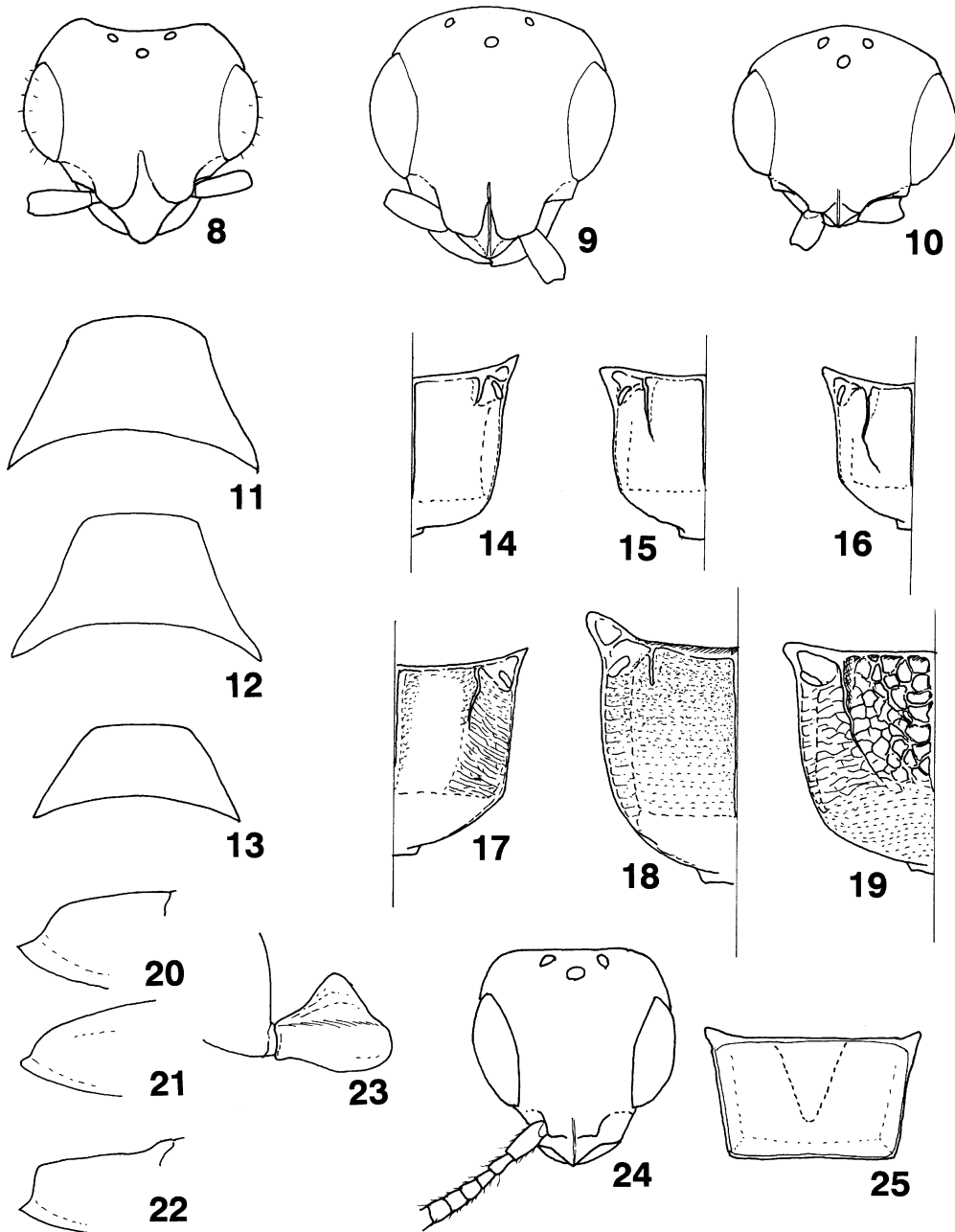
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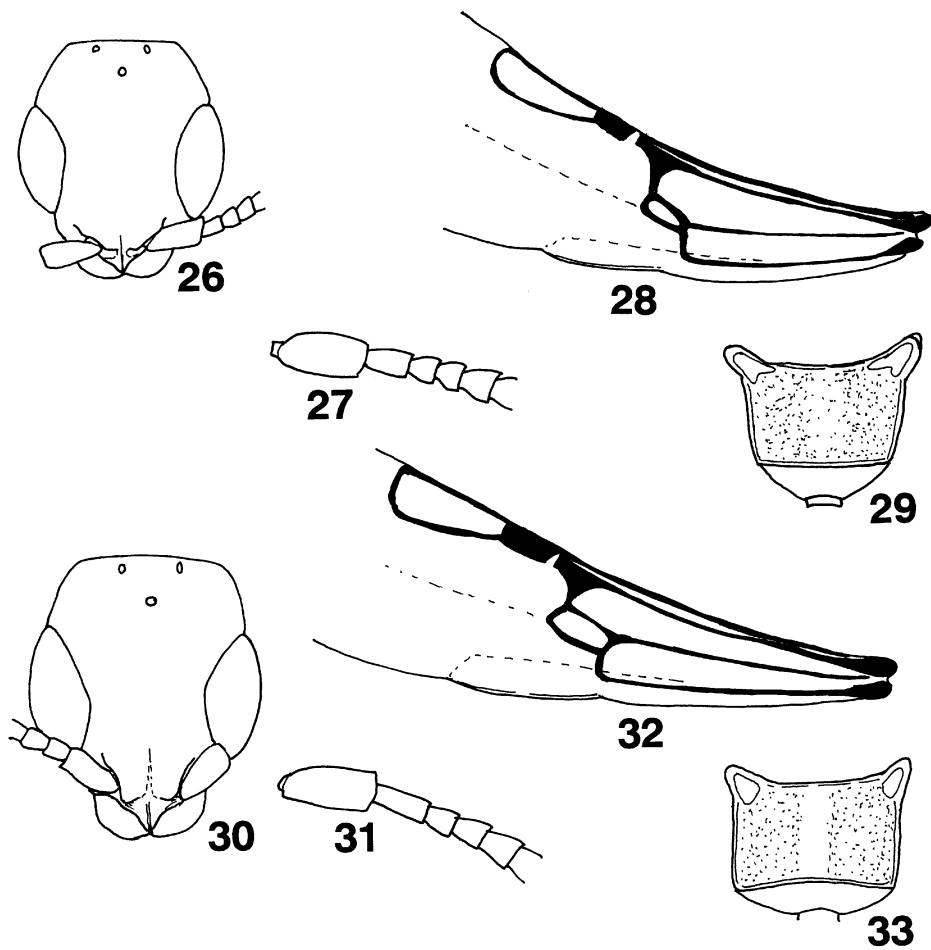


**Plate I.** Figs. 1-4, *Eupsenella diemensis* Dodd, 1916 (drawn from holotype); 5, *E. cecilliae* sp. nov.; 6, *E. flavifemorata* sp. nov.; 7, *E. rticulata* sp. nov. 1, Head, full face view; 2, antenna; 3, 5-7, forewing; 4, hind leg.

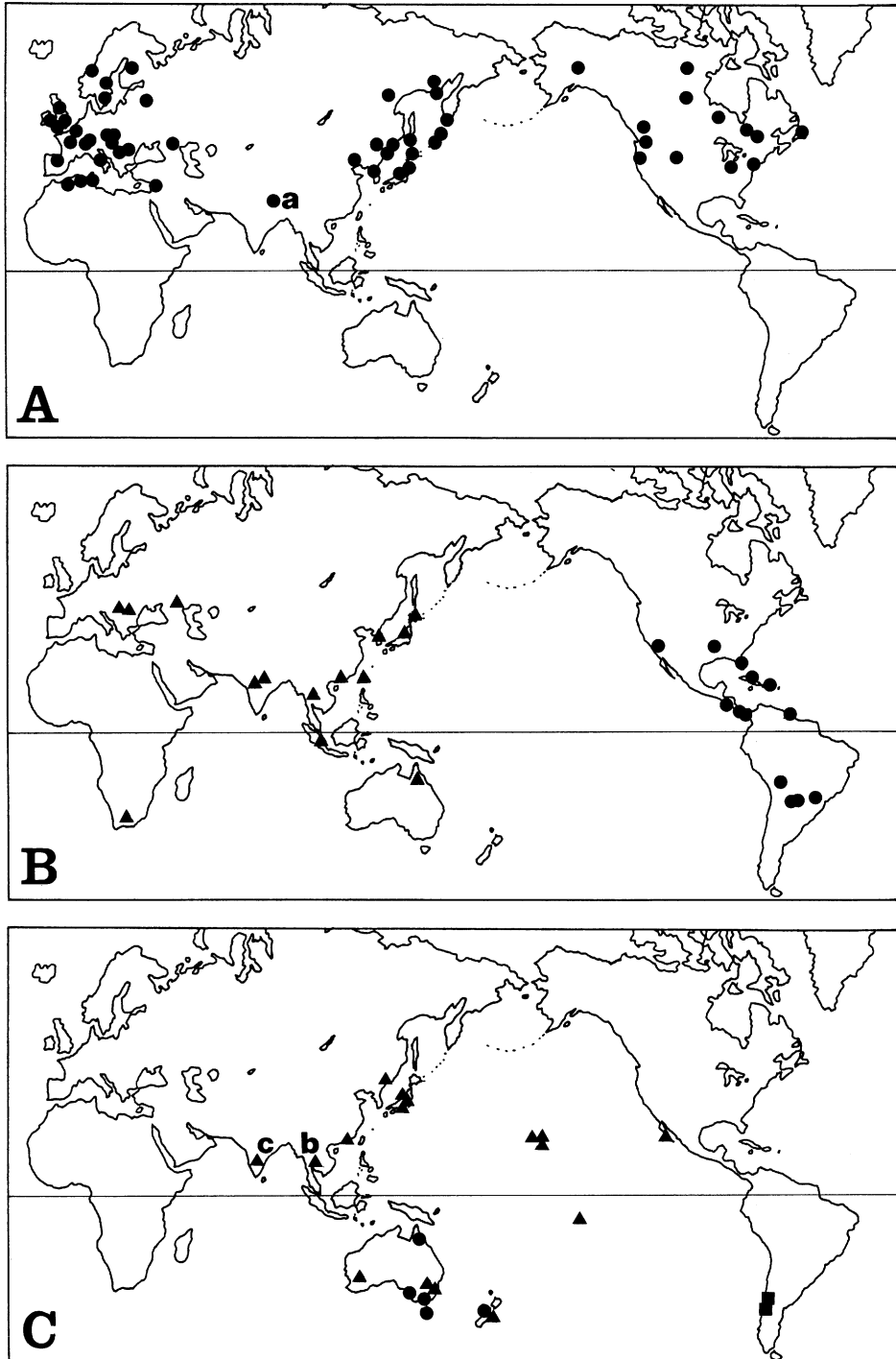




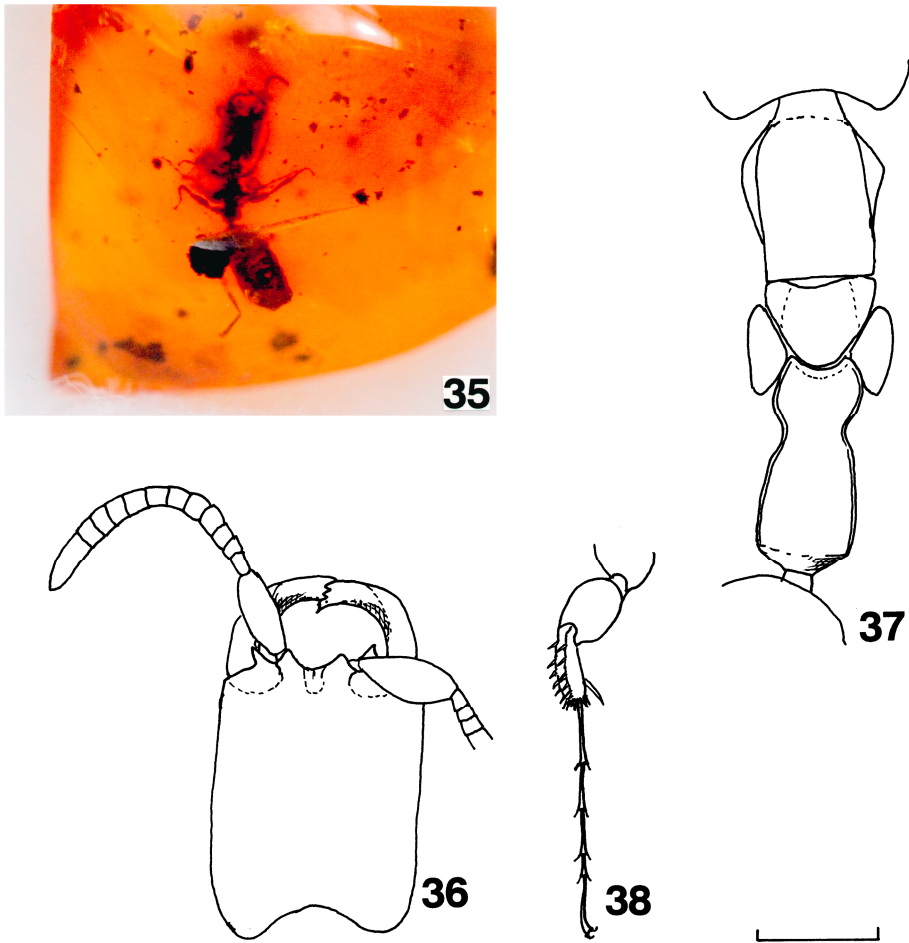
**Plate II.** Figs. 8, 11, 17, 21, *Eupsenella cecilliae* sp. nov.; 9, 12, 18, 22, 23, *E. flavifemorata* sp. nov.; 10, 13, 19, *E. reticulata* sp. nov.; 14-16, 20, *Eupsenella diemensis* Dodd, 1916; 24, 25, *Goniozus hualienensis* sp. nov. 8-10, 24, Head, full face view; 11-13, pronotum, dorsal view; 20-22, *ditto*, lateral view; 14-19, 25, propodeum, dorsal view; 23, hind trochanter.



**Plate III.** Figs. 26-29, *Sierola mawarajo* sp. nov.; 30-33, *Sierola indra* sp. nov. 26, 30, Head, full face view; 27, 31, first 5 segments of antenna; 28, 32, forewing; 29, 33, propodeum, dorsal view.



**Plate IV.** Fig. 34, World distribution of 6 genera of the subfamily Bethylinae. A, Genus *Bethylus* (a; *Bethylus nepalensis* sp. nov.); B, genera *Odontepyrus* (▲) and *Prosierola* (●); C, genera *Sierola* (▲; b, *Sierola mawarajo* sp. nov.; c, *S. indra* sp. nov.), *Eupsenella* (●) and *Lytopsenella* (■).



**Plate V.** Figs. 35-38. *Archaeopristerocera miki* gen. et sp. nov., female. 35, Specimen in amber; 36, head, dorsal view; 37, mesosoma, dorsal view; 38, middle leg, Bar: 0.5 mm for Figs. 36-38.

**Appendix. Fossil records of Family Bethylidae.**

Taxa	Geological age
<b>Subfamily Protopristocerinae*</b>	
# <i>Archaepyrus minutus</i> Evans 1973	Upper Cretaceous
# <i>Bethylitella cylidrella</i> Brues 1933	Miocene
# <i>Bethylopteron ambignum</i> Brues 1933	Lower Oligocene
# <i>Palaeobethyloides longiceps</i> Breus 1933	Lower Oligocene
# <i>Protopristocera sucini</i> Breuse 1923	Lower Oligocene
<b>Subfamily Pristocerinae</b>	
<i>Apenesia electrophila</i> Cockerell 1917	Miocene
# <i>Parapristocera skwarrae</i> Breus 1933	Lower Oligocene
# <i>Pristapenesia primaeva</i> Breus 1933	Lower Oligocene
<i>Pseudisobrachium oligocenicum</i> Theobald 1937	Oligocene
<b>Subfamily Epyrinae</b>	
# <i>Celonophamia taimyria</i> Evans 1973	Upper Cretaceous
# <i>Ctenobethylus succinalis</i> Breus 1939	Oligocene
<i>Epyris kiefferi</i> (Brues 1933)	Oligocene
<i>E. atavellus</i> Cockerell 1920	Miocene
<i>E. deletus</i> Breus 1910	Miocene
<i>E. inhabilis</i> (Breus 1923)	Oligocene
<i>E. longipes</i> (Breus 1923)	Oligocene
<i>E. bifossatus</i> (Breus 1939)	Lower Oligocene
<i>E. rectinervis</i> (Cockerell 1921)	Oligocene
<i>E. tenellus</i> Stotz 1938	Oligocene
<i>Holepyris dubius</i> (Breus 1933)	Lower Oligocene
<i>H. minor</i> (Breus 1933)	Lower Oligocene
<i>H. planiceps</i> Breus 1933	Lower Oligocene
<i>H. precursor</i> Breus 1933	Lower Oligocene
<i>H. robustus</i> (Breus 1933)	Lower Oligocene
<i>Isobrachium concaptum</i> Breus 1933	Lower Oligocene
<i>I. invelatum</i> Breus 1933	Lower Oligocene
<i>Laelius nudipennis</i> Brues 1933	Lower Oligocene
<i>L. pallidus</i> Breus 1933	Lower Oligocene
# <i>Messoria copalina</i> Menuier 1916	Uncertain
<i>Rhabdepyris elatus</i> Breus 1933	Lower Oligocene
<i>R. setosus</i> Breus 1933	Lower Oligocene
<i>Sclerodermus quadridentatus</i> Cockerell 1917	Miocene
<b>Subfamily Bethylinae</b>	
<i>Goniozus contracta</i> Breus 1933	Lower Oligocene
<i>Prosierola submersa</i> Breus 1933	Lower Oligocene
<i>Eupsenella crastina</i> (Breus 1923)	Oligocene
<i>E. setigera</i> (Breus 1923)	Oligocene

*E. simplex* (Breus 1923)

Oligocene

**Genera of uncertain placement**

#*Palaeobethylus brevicollis* Breus 1933

Lower Oligocene

#*P. politus* Breus 1923

Lower Oligocene

#*P. longicollis* Breus 1923

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Lower Oligocene

#: Genera known from fossil only. \*<sup>1</sup>: Judging from the comparison with the external morphology among the genera, I presume that this fossil subfamily is not monophyly.