GABRYELLA, A NEW GENUS OF CLICK BEETLES FROM TEMPERATE SOUTH AMERICAN FORESTS (COLEOPTERA: ELATERIDAE)

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ABSTRACT. – Solier described *Deromecus* (Elateridae: Elaterinae: Pomachiliini) including 8 species and designated *Deromecus angustatus* as the type species. Since then Candèze, Fleutiaux and others added new species to this genus but many of them were not congeneric with *Deromecus*. I describe *Gabryella* as a new genus with *Deromecus attenuatus* Solier, 1851 as the the species and 4 new species: *G. elguetai* Arias, *G. nancyta* Arias, *G. terryae* Arias, *G. wulfklohnai* Arias. *Gabryella attenuata* (Solier 1851) and *G. umbilicata* (Candèze 1859) are new new combinations in the genus, been transferred from *Deromecus*. The geographic distribution of the species is mapped and a key to the species is provided.

ABSTRACT.- El género *Deromecus* (Elateridae) fue creado por Solier con 8 especies, y tiene como especie tipo a *Deromecus angustatus* Solier. Desde la creación del género *Deromecus* varios autores, como Candèze y Fleutiaux, han agregado nuevas especies siendo varias no congenéricas con *Deromecus*. En esta publicación he creado el género nuevo *Gabryella* con 4 especies: *Gabryella attenuata* (Solier 1851) nueva comb., *G. umbilicata* (Candèze 1859) nueva comb., *G. elguetai* Arias nueva especie, *G. nancyta* Arias nueva especie, *G. terryae* Arias nueva especie y *G. wulfklonhai* Arias nueva especie. Los tipos de dos especies previamente descritas fueron examinados. La descripción del género *Gabryella* y sus especies se incluyen, como también la distribución geográfica y la clave de estas.

Key words. - *Deromecus attenuatus, Deromecus umbilicatus, Gabryella*, Pomachiliini, Elaterinae, Elateridae.

Introduction

The systematics of temperate South American elaterids has been in a stagnant state since the work by early French naturalists such as Solier (1851), Candèze (1859, 1860, 1878, 1881, 1900), Fleutiaux (1907), and Fairmaire (1885). Unfortunately, their taxonomic descriptions lack complete and precise characterizations. During a review of the tribe Pomachiliini, as part of phylogenetic analyses, the need for re-arrangement and systematic treatment of species became evident.

The genus *Deromecus* (Elaterinae, Pomachiliini) as currently defined comprises 70% of all Pomachiliini (Blackwelder 1944). However, my studies have revealed that a great number of the species placed in this genus are not congeneric with *Deromecus* and need to be placed in new taxa (Arias 1999). I am proposing the new genus *Gabryella*, with the following species: *G. attemuatus* (Solier), *G. elguetai* Arias new species, *G. nancyta* Arias new species, *G. terryae* Arias new species, *G. umbilicatus* (Candèze) and *G. wulfklohnai* Arias new species. The genus *Gabryella* is distributed between 33° -43° South latitude and 73°-70° West longitude in central and southern Chile, and between 39°-41° South latitude and 71°-72° West longitude in southern Argentina. These species inhabit a variety of habitats, including sclerophyll vegetation, transitional temperate rain forests, temperate rain forests, and Valdivian forests. In this paper, I discuss only adult characteristics due to a lack of preserved immatures.

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The genus *Gabryella*, as well as *Deromecus* belongs, to the tribe Pomachiliini (Elaterinae). In 1859, Ernest Candèze, in "Monographie des Élatérides" (p. 4), created the taxonomic category "Pomachiliites." In 1860, Candèze continued with the series on elaterids and defined "Pomachiliites", translated as follows: front with raised edge anteriorly and very convex, labrum large, mouthparts downwards, prothorax often broad and always thickening towards third anterior rather than third posterior, prosternum more or less broad, prosternal sutures concave and excavate anteriorly, tarsi simple with one tarsomere enlarged or lamellate, scutellum not cordiform, body narrow and elongate.

Subsequently, in 1917, Hyslop gave a new classification, introducing the study of larval characters into natural classifications. Unfortunately, larvae are unknown for most pomachiliines. Hyslop (1917) described the subfamily Elaterinae with the following tribes: Agriotini, Elaterini, Physorrhini, Melanotini, Steatoderini and Pomachiliini.

At present, my study of Pomachiliini (Arias 1999) revealed that the adults are characterized by: the presence of a frontal carina across the frons (hereafter FCC) (Platia 1994), in some genera elevated or protruded or weak medially; antennomeres 1-2 conical, antennomere 3 conical, serrate, antennomere 4 conical, serrate or flabellate, remaining antennomeres conical, serrate in one or both sides or flabellate; pronotum convex or depressed, elongate or sub-quadrate; prosternum with sutures double, with or without a convex impression, with or without antennal pocket; pronotal sides completely carinate; anterior pronotal angles absent, posterior pronotal angles unicarinate, divergent or not; prosternal lobe bent; mesocoxal cavity open to mesepimeron and mesepisternum; elytral apex truncate, rounded, denticulate or spinose; tarsus simple or complex; and tarsal claws simple and asetose at base.

Materials and Methods

Specimens and primary types were borrowed from museums around the world to study morphological characters. Specimens compared with the type material were used to complete descriptions. When the type material was in poor condition dissections were conducted with compared material. Conditions of the type material are indicated under "Type material". Museums and institutions, which contributed to this work are indicated in the acknowledgements and, in the text, by the acronyms in brackets. Type specimen repositories are also indicated in descriptions.

Terminology

Antennal pocket: also referred to as antennal groove. Presence of a longitudinal groove in the apical portion of the prosternal sutures (Figure 1). Antennomeres 1 through 3 are accommodated in this groove; sometimes it also accommodates part of antennomere 4. Antennomere proportion [AP]: is based on the antennomere lengths, excluding antennomere 1 (due to its curved shape which is hard to measure), compared to the total antennal length. Length taken in a dorsal view.

Elytral-humeral area [EHA]: anterior elytral area as long as scutellum length.

Hindwing venation: terminology according to Kukalová-Peck and Lawrence1993 (Figure 2); rp_1, rp_2, rp_3: in the hindwing referring to sclerotized areas involved in the folder mechanism, (Figure 2).

Tarsomere proportion [TP]: is base on the tarsomere lengths as a proportion of the total tarsal length.

Total body length [TBL]: total length of the body (mm). Length taken in a dorsal view.

Indices

Body Index [BI] is obtained by dividing the total length of the body by the maximum width of the elytron. Eyes Index [EI] is obtained by sustracting the interocular head (frons) width from the maximum width of the head across the eyes and dividing the result by the maximum head width (Calder 1996). Pronotal elytral index [PEI] is obtained by dividing the length of the pronotum by the length of the elytra. Elytron index [ELI] is obtained by dividing the length of the elytron by the maximum width of the elytron. Pronotal index [PNI] is obtained by dividing the length of the pronotum, measured along the middle line, by the maximum width of the pronotum across the posterior angles (Calder 1996).

Dissecting techniques and illustrations

Specimens from which the genitalia and or the left hind wing were removed were first relaxed overnight in warm water (hot water damages muscles, and it was only used when internal structures were not studied) with a few drops of soap added. For examination of wing venation the hindwing of the specimen was removed, and then placed either in a transparent card under the specimen or on a microscope slide with a drop of water added to the surface. In both cases the hindwing was unfolded and spread out as much as possible, and then the water was allowed to evaporate until the wing adhered to the glass slide. In general the wings remained on the glass slide without the addition of an adhesive. For protection a glass cover slip was placed over the wing and attached at its edges with transparent methacrylate.

For examining male genitalia, the last abdominal segment was removed and placed in water with a few drops of soap in a Petri dish and left over night. Then, genitalia were extracted and glued to a point card on its lateral side with transparent methacrylate, and placed on the pin under the specimen. Female genitalia were not examined. Drawings were made using a camera lucida on a compound dissecting scope Heerbrugg Wild M5A type 245354. Measurements were made with a calibrated ocular micrometer. All dates in the records given were converted to a standard format of day.MONTH.year, with the month given in Roman numerals. Place names in the recorded labels are the original spellings.

Taxonomy

Gabryella Arias, new genus

Type species: *Deromecus attenuatus* Solier 1851:13.

Description. Body: elongate, some species slightly stout anteriorly; [PEI: 2.8-3.6], length 6.7 -12.2 mm, width 1.8-3.4 mm; black, reddish brown or dark brown; integument shiny or dull. Head: declivous; alveolate, punctate; frontoclypeal region sloping to base of clypeus; FCC expanded laterally over eyes, weak medially; labral-clypeal suture curved; labrum fully exposed; mouthparts issuing from ventral surface of head; mandibles bidentate; maxilary and labial palp apical segment hatchet shaped; antenna 11-segmented, vestiture erect, semi-erect, short, gold, antennomere 1 longer than antennomere 2-3 together, separately antennomeres 1-3 conical, antennomere 4 conical or serrate, antennomeres 5 through 10 serrate, antennomere 11 serrate or tubular. Prothorax: sub-

quadrate; [PNI 0.8-1.2] pronotal sides unicarinate, sinuate or parallel-sided, explanate or not; punctate; pronotum dorsally convex entirely or anteriorly only, narrowed anteriorly to receive head; some species with a pronotal longitudinal medial impression posteriorly; basal pronotal margin straight or slightly curved; base of prescutum V- or U-shaped; prosternal sutures curved at procoxal cavities. Scutellum: parallel-sided, triangular, U-shaped; mesocoxae rounded, separated by posterior margin of mesosternal cavity; mesosternal cavity width 0.5-0.6 X mesocoxal diameter, sides slightly elevated at mesocoxae area; posterior lobe of mesosternal cavity present; mesocoxal cavity open to mesepimeron and mesepisternum; mesosternum and metasternum separated by a distinct external suture.

Elytra: parallel-sided in anterior 1/3 or 2/3; [ELI: 2.0-2.9]; elytral-humeral area striate or astriate, with or without punctures; elytral apex truncate or denticulate. Hindwing: well developed; 2.2-2.5 X as long as wide; radial cross vein (r3) present, radial cell present; rp_1, rp_2 and rp_3 present, wedge cell present (Figure 3). Metathoracic coxal plate widest region closest to medial body line 1.5 – 1.7 X its width. Leg: pro-, meso-, and meta-tibiae with small spurs apically, tarsi complex, vestiture dense. Abdomen: punctate, pinpoint punctures sparse; last abdominal sternite rounded. Genitalia: male aedeagus: median lobe 2.5-3.0 X as long as wide; paramere with setae apically, apex of paramere triangular, apex of median lobe exceeding apices of parameres.

Distribution. *Gabryella* is found in central and southern Chile and in southern Argentina.

Biology. Adults have been collected in temperate forest with *Nothofagus dombeyi*, mostly during summer months. Other aspects of the biology as well as the larval stages are unknown.

Etymology. This genus is dedicated to my niece Gabriella Antonia Urrutia Arias for her marvelous enthusiasm with insect collecting. Gender feminine.

Remarks. Because this genus shows no clear sexual dimorphism, specimens need to be dissected to determine the sex.

Included species. Six species are included in the genus, of which four are described as new.

Key to the species of *Gabryella*

1. Pronotum with sides sinuate, posterior angles long and divergent, integument dull... 4
-- Pronotum with sides straight, posterior angles short, integument shiny..... 2
2. Body black, elytra strongly narrowed in last third, apex strongly denticulate ..... ***attenuata*** (Solier)
-- Body reddish, elytra parallel-sided in anterior 2/3, apex not strongly denticulate 3
3. FCC broadly truncate anteriorly, labrum with a notch..... ***nancyta***, n. sp.
-- FCC triangular anteriorly, labrum without a notch..... ***terryae***, n. sp.
4. Body black, anterior part of the pronotum broader than elytra, FCC sinuate anteriorly ..... ***umbilicata*** (Candèze)
-- Body reddish brown, anterior part of the pronotum narrowed than elytra, FCC not sinuate anteriorly..... 5
5. Antennae light brown, antennomere 1 carinate (Figure 4), FCC truncate anteriorly .... ***elguetai,*** n. sp.

-- Antennae dark brown, antennomere 1 not carinate (Figure 8), FCC curved anteriorly .....***wulfklohnai***, n. sp.

***Gabryella attenuata* (Solier), new comb.**
(Figures 2, 3, 9, 15, 21, 27)

Deromecus attenuatus Solier 1851:13.

Description. Body elongate; black or reddish black, integument shiny; vestiture semi-erect, gold; [PEI: 2.9-3.3], 7.0-9.2 mm, width 2.0-2.5 mm (n=19). Head: convex; frontoclypeal region gradually sloping to base of clypeus, FCC triangular anteriorly; labrum rectangular, corners rounded, convex, punctate, 1.3 X as long as wide, with a transverse carina basally; antennomeres 10-11 extending to apex of posterior angles, antennomere 4 conical, remaining antennomeres serrate, [AP: 11-8-9-9-10-10-10-9-10-14], (Figure 2). Prothorax: parallel-sided, explanate; [PNI: 0.8-1.0], pronotum convex anteriorly; punctate, punctures sparse; pronotal longitudinal impression short over posterior half; pronotal base straight; posterior angles acute, carina slightly divergent; prescutum V-shaped; prosternum slightly convex, punctate; prosternal lobe triangular anteriorly, sides curved; prosternal sutures sinuate at procoxal margin; hypomeron punctate, not extending anteriorly beyond prosternum, hypomeral apical margin elevated, antennal pocket present (Figure 9); prosternal spine process straight, with 2 sided carinae meeting apically, length after procoxae 2.2 X procoxal diameter; prosternal area between procoxae flat, separated by 0.8 procoxal diameter. Scutellum: U-shaped, anterior margin curved; 1.2 X as long as wide; mesocoxae separated by 1.0 X mesocoxal diameter; posterior margin of mesosternal cavity quadrate, and 0.5 X mesocoxal diameter long. Elytra: strongly narrowed through last third; [ELI: 2.1-2.7]; elytral anterior border curved, carinate, with setae semi-decumbent; elytral-humeral area with pinpoint punctures, setae gold; striate, stria with punctures tear-shaped, confluent in first third, punctures sparse from the second third through last third; inter striae with setae dense, semi-erect, gold; apex bidenticulate. Leg: black; pro-, meso-, and metatarsomere 3 expanded ventrally, pro-, meso-, and metatarsomere 4 lobate, obliquely extended ventro-dorsally, [TP: 44-14-16-6-20] (Figure 15).

Male Genitalia. Aedeagus: median lobe parallel-sided, 2.6-3.0 X as long as wide, apex slightly rounded, paramere with apex triangular, (Figure 21).

Distribution. Provinces Valdivia, Osorno and Puerto Montt. Regions IX and X in Chile (Figure 27).

Biology. This species is very common; adults have been collected mostly in summer from September to February with an occasional specimen collected in March.

Type Material. Type. Chile. *Deromecus attenuatus* Solier 1851:13, thorax glued to elytra, sex unknown, 7.0 mm in length, orig. desig., examined, [MHNA].

Additional Material Examined. Chile. One female, Meltume, Valdivia, I.1987, L. E. Peña, [EAT]; one female, Anticura Osorno, 19-29.X.1985, L. E. Peña, [EAT]; one male, Valdivia Lago Riñihue, 10.I.1984, L. E. Peña, [EAT]; one male, Petrohue, Aguas Calientes, Osorno M. 500. 19.XII.1981, L. E. Peña, [EAT]; one male, Cile, Fundo Huachocopihué, Valdivia, 23.IX.1980, E. Krahmer, [EAT]; two males, Santo Domingo, Valdivia 07.X.1979, L. E. Peña, [EAT]; two males, Santo Domingo, Valdivia, 09.XII.1984, E. Krahmer, [MNNC]; one male, Valdivia, 16.XI.1976 L. E. Peña, [SRC]; one female, Puyehue, X Region, Aguas Calientes, Osorno, L. E. Peña, [SRC]; three

males: [CMNH] 1.XI.1978. L. E. Pena; one female: Las Lojas W La Unión, 9/13.I.1981. L. E. Peña, [SRC], one male, 8 Km of Termas de Puyehue on route 215 Site 24 A, 29.I.1979, Valdivian Rain Forests, on vegetation, A. C. Ashworth and J. W. Hoganson [NDSU]; 0ne male, Chamiza, Pto. Montt, 11.II.1971, Mario Pino, [UCCC]; one male: Sto. Domingo, Valdivia 7.X.1979, E. Krahmer, [UCCC]; one male: Sto. Domingo, Valdivia 09.XII.1984, Mario Pino, [UCCC]; one female: Chamiza, Pto. Montt, 11.II.1971, M. Pino, [UCCC].

Remarks. *Gabryella attenuata* can be distinguished by its elongate body, shiny integument black, anteriorly convex pronotum, very narrowed posterior third of elytra, and bi-denticulate elytral apex.

Gabryella elguetai Arias, new species
(Figures 4, 10, 16, 22, 27)

Description. Body: stout anteriorly; reddish brown, integument dull; vestiture semi-decumbent, gold; [PEI: 3.2], 3.4 X as long as wide, length 11.7 mm, width 3.4 mm. Head: slightly convex, alveolate; frontoclypeal region declivous, not visible from above, FCC elevated over antennal sockets, truncate anteriorly; labrum convex, punctate, 2.2 X as long as wide, with an upper notch medially; antennomeres 1-6 present only, antennomeres 2-3 conical, remaining antennomeres serrate, [AP: 21-15-19-21-24] (Figure 4). Prothorax: sides sinuate, broad anteriorly; [PNI: 0.9]; pronotum entirely convex; areolate; posterior angles long, divergent; pronotal base straight; prescutum V-shaped; prosternum convex, punctate, with pinpoint punctures, sparse; prosternal lobe curved anteriorly, sides rounded; prosternal sutures straight, slightly divergent towards apex, sinuate at procoxal margin; hypomeron punctate, punctures sparse, extending anteriorly beyond prosternal lobe, hypomeral apical margin elevated; antennal pocket present, (Figure 10); length of prosternal spine process 2.3 X procoxal diameter, straight, keeled; area between procoxae flat, and separated by 1.5 X procoxal diameter. Scutellum: carinate anteriorly; 1.3 X as long as wide; mesocoxae rounded; posterior mesocoxae separated by 1.1 X of mesocoxal diameter; length of posterior margin of mesosternal cavity 0.5 X mesocoxal diameter. Elytra: parallel-sided through second third; [ELI: 2.0-2.5]; humeral elytral area border curved, carinate, carina black, with setae short, semi-erect, gold; EHA astriate, punctate; elytral striae punctate, punctures eliptical, confluent; apical margin not explanate, rounded. Leg: reddish brown, [TP: 33-17-15-10-25], (Figure 16).

Male Genitalia. Aedeagus: median lobe curved apically, paramere almost reaching apex of median lobe, 3.2 X as long as wide, (Figure 22).

Distribution. Talca Province. VII Region in Chile (Figure 27).

Biology. No aspects of the biology of this species are known except for the locality where it was collected.

Type Material. Chile. **Holotype**: Male, Los Cipreses, El Maule.I.1969, M. Pino, [TBL] 11.7 mm, [UCCC].

Etymology. The epithet of this species is named in honor of Mario Elgueta Donoso for his dedication to beetle systematics.

Remarks. *Gabryella elguetai* can be distinguished from other species by its reddish brown, dull integument, truncate FCC, upper circular excavation on labrum, parallel-sided pronotum, and truncate elytral apex.

Gabryella nancyta Arias, new species
(Figures 5, 11, 17, 23, 27)

Description. Body: elongate; reddish brown; integument shiny; vestiture semi-erect, yellowish, dense; [PEI: 3.0-3.4], length: 7.4-8.9 mm, width 2.2-2.6 mm (n=3). Head: convex; supracarina elevated over antennomere 1, FCC broadly truncate anteriorly, polished; labrum rectangular, convex, punctate, 2.1 X as long as wide; antennomere 11 not exceeding apex of posterior angles, antennomeres 2-3 conical, antennomeres 4 through 11 serrate, [AP: 8-8-10-9-10-10-10-10-9-16], (Figure 5). Prothorax: parallel-sided, sides explanate; [PNI: 0.8-1.0]; pronotum dorsally convex anteriorly only; punctate, punctures sparse; pronotal impression over posterior half; pronotal base straight; posterior angles acute, carina divergent; prescutum V-shaped; prosternum punctate, slightly convex; prosternal lobe triangular anteriorly, sides truncate; prosternal sutures straight, excavate throughout its length; hypomeron punctate, hypomeral margin elevated, not extending beyond prosternal lobe, antennal pocket present, (Figure 11); prosternal spine process straight, with ledge, 2 sided carinae meeting apically, length after procoxae 2.0 X procoxal diameter; prosternal area between procoxae flat, separated by 1.3 procoxal diameter. Scutellum: U-shaped, carinate anteriorly; 1.8 X as long as wide; mesocoxae separated by 1.1 X of mesocoxal diameter; length posterior margin of mesosternal cavity 0.6 X mesocoxal diameter. Elytra: parallel-sided; [ELI: 2.4-2.9]; elytral anterior border angulate carinate, with setae strong, semi-decumbent; elytral-humeral area striate, with setae; striae punctate, punctures circular, dense, covering almost half of interstria area; interstria area flat, rugulose; setae semi-erect, gold; apex slightly unidenticulate. Leg: reddish brown; tarsomeres 2 through 4 lobate, [TP: 37-19-14-7-24], (Figure 17).

Male Genitalia. Aedeagus: median lobe bent at middle, 2.5 X as long as wide, apex truncate, paramere with apex rounded, (Figure 23).

Distribution. Provinces Talca and Chillán. Cordillera of Region VIII in Chile, (Figure 27).

Biology. *Gabryella nancyta* has been collected in the Cordillera of Talca and Chillán in Nothofagus forests.

Type Material. Holotype. Chile. Male: Altos de Vilches, Talca. 09-11.X.1971. Mario Pino, 7.4 mm in length. [MNNC]. **Paratypes**: 2 females, Cordillera de Chillán, Las Trancas, (collector unknown). [MNNC].

Etymology. This species is in honor of my sister Nancy Virginia Arias Tobar, for her help in my studies and dedication to coleopteran illustrations.

Remarks. *Gabryella nancyta* can be distinguished from other species by its shiny integument, reddish; broadly truncate FCC anteriorly, parallel-sided pronotum, and unidenticulate elytral apex.

Gabryella terryae Arias, new species
(Figures 6, 12, 18, 24, 27)

Description. Body: elongate; reddish dark brown; parallel-sided; integument semi-shiny; vestiture semi-decumbent, gold; [PEI: 2.8-3.6], length 6.7-8.2 mm, width 1.8-2.0 mm. Head: FCC broadly truncate anteriorly; labrum oval, 2.4 X as long as wide, with 8 gold, aligned setae basally; antenna brown, antennomere 1 carinate, antennomeres 2 and 3 conical, remaining ones serrate, antennomere 11 reaching base of posterior angles; [AP: 7-7-10-9-11-11-10-11-11-13], (Figure 6). Prothorax: parallel-sided, sides explanate; [PNI: 0.9-1.0]; pronotum convex, narrowed anteriorly; punctate, pinpoint punctures; with a pronotal longitudinal medial impression posteriorly; pronotal base straight; posterior angles divergent; prescutum V-shaped; prosternum punctate, punctures sparse, convex; prosternal lobe broadly angulate anteriorly, sides curved; prosternal sutures straight, excavate; hypomeron punctate, punctures sparse, hypomeral apex not extending anteriorly beyond prosternal lobe, antennal pocket present, (Figure 12); prosternal spine process straight, length after procoxae 2.1 X procoxal diameter; prosternal area between procoxae separated by 1.3 X procoxal diameter. Scutellum: strongly curved, carinate anteriorly, vestiture long, gold, 1.2 X as long as wide; mesocoxae separated by 0.7 mesocoxal diameter; length of posterior margin of mesosternal cavity 0.4 X mesocoxal diameter. Elytra: parallel-sided; [ELI: 2.6-2.7]; elytral anterior border curved, with setae thin, short, semi-decumbent, gold; elytral-humeral area finely rugulose with setae, stria with punctures eliptical, confluent, interstria area almost flat, rugulose; apex with 2 well-developed teeth. Leg: dark brown; tarsomeres 3 and 4 lobed ventrally; [TP: 41-17-10-7-25], (Figure 18).

Male Genitalia. Aedeagus: median lobe 2.9 X as long as wide, rounded apically, spoon-shaped; paramere curved apically, basally convex, (Figure 24).

Distribution. Southern Argentina (Figure 27).

Biology. Adults have been collected in Nothofagus forests.

Type material. **Holotype**. Argentina: male, Neuquén, Parque Lanín, XII-1970, Schajowskoi, 8.2 mm in length. [IMLA]. **Paratypes**: one male, Neuquén, Pucará, San Martín de los Andes, 08.XII.1952, Schajowskoi, [IMLA]; one male, Neuquén, Parque Lanín, XII.1970, Schajowskoi, [IMLA], one female, Neuquén, Parque Lanín, XII.1970, Schajowskoi; one female, Nahuel-huapí, Isla Victoria, 01.III.1945, F. Monrós.

Etymology. This species honors my friend Terry Diana Cuneo because of her fascination with insects.

Remarks. *Gabryella terryae* can be distinguished by its reddish coloration and semi-shiny integument; parallel-sided and anteriorly strongly convex pronotum, and well-developed teeth on the elytral apex.

Gabryella umbilicata (Candèze), new comb.
(Figures 1, 7, 13, 19, 25, 27)

Deromecus umbilicatus Candèze 1881:16.

Description. Body: elongate, stout anteriorly; black to brownish black; integument dull; vestiture semi-erect, reddish gold; [BI: 3.5], [PEI: 2.9-3.], [TBL]: 10.3-12.2 mm, width 3.0-3.4 mm (n=6). Head: alveolate; FCC truncate anteriorly, carina well devel-

oped, shiny; labrum oval, with an upper notch medially, notch U-shaped; antennomere 11 reaching apex of posterior angles, [AP: 10-8-10-10-10-9-9-10-11-13] (Figure 7). Prothorax: elongate; [PNI: 0.9-1.2]; areolate; pronotum dorsally convex entirely; broad anteriorly, sinuate at posterior angles; posterior angles long, divergent; pronotal base slightly curved; prescutum U-shaped; prosternum convex, rugulose; prosternal lobe curved anteriorly, sides rounded; prosternal sutures divergent; hypomeron rugulose, apex not extending beyond prosternal lobe; hypomeral apical margin elevated, antennal pocket present, (Figure 13); prosternal spine process short, bent, length after procoxae 0.6 X procoxal diameter; prosternal area between procoxae flat, separated by 0.5 X procoxal diameter. Scutellum: elongate, U-shaped, anteriorly slightly excavate medially, 1.5 X as long as wide, vestiture long, gold; mesosternal cavity elongate, narrowed posteriorly; mesocoxae separated by 0.5 X mesocoxal diameter; length of posterior margin of mesosternal cavity 0.4 X mesocoxal diameter. Elytra: parallel-sided through second third; [ELI: 2.3-2.7]; elitral anterior border rounded, with setae short, erect, gold; elytral-humeral area punctate, striate, stria with punctures elliptical, confluent; interstria area rugulose; apex explanate, denticulate. Leg: tarsomere 4 lobate ventrally; tarsi complex, tarsomere 4 obliquely extended ventrodorsally, [TP: 38-22-13-7-22] (Figure 19).

Male Genitalia. Aedeagus: median lobe 3.0 X as long as wide, slightly pointed apically; paramere triangular apically, with 2 long strong, semi-erect setae dorsally (Figure 25).

Distribution. CHILE: Provinces Valdivia and Llanquihue; Region IX. ARGENTINA: Neuquén (Figure 27).

Biology. Adults have been collected during the summer in December in Argentina, and in December and January in Chile.

Type material. Holotype. Chile. Deromecus umbilicatus Candèze 1881:16, (sex unknown), orig. desig., 10.7 mm in length, examined, [ISNB].

Additional Material Studied. ARGENTINA. One male, Neuquén, Pucará, Parque Lanín, XII.1953, Schajowskoi, [IMLA]; one female, Río Negro. Cipoletti, 10.I.1957, [IMLA]. CHILE. One male, Valdivia, 18/30.VI.1987. E. Krahmer, [UCCC]; one female, Lago Chapo Llanquihue L. E. Peña, [EAT]; one female, L. Caburga. 31.XII.1967. Cekalovic, [EAT].

Remarks. *Gabryella umbilicata* can be distinguished by its elongate body, dull integument, divergent posterior angles, U-shaped upper notch on the labrum, and rounded elytral apex.

Gabryella wulfklohnai Arias, new species
(Figures 8, 14, 20, 26, 27)

Description. Body: elongate, stout anteriorly; reddish brown; integument dull; vestiture semi-decumbent, gold; [BI: 4.1], [PEI: 3.0], length 10.2 mm, width 2.6 mm. Head: areolate; frontoclypeal region gradually sloping to base of clypeus, FCC broadly truncate anteriorly, polished; labrum convex, oval, 2.4 X as long as wide, with an upper notch U-shaped; antennae light brown, antennomeres 2-3 conical, remaining ones serrate, antennomere 3 smaller (0.7 X) than antennomere 4, antennomere 10 reaching apex of posterior angles; [AP: 9-6-9-11-10-9-11-10-11-14], (Figure 8). Prothorax: elongate; sides sinuate, explanate; [PNI: 0.9]; alveolate; posterior angles divergent, carina slightly

explanate; [PNI: 0.9]; alveolate; posterior angles divergent, carina slightly divergent; pronotal base curved; prescutum V-shaped; prosternum punctate, punctures sparse, convex; prosternal lobe curved anteriorly, sides truncate; prosternal sutures sinuate at procoxal margin, suture area polished, strongly concave laterally in anterior half, carinate; hypomeron alveolate; hypomeral apex extending anteriorly beyond prosternal lobe; antennal pocket present, (Figure 14); prosternal spine process straight, length after procoxae 2.5 X procoxal diameter; prosternal area between procoxae flat, separated by 1.0 X procoxal; diameter. Scutellum: U-shaped, 1.6 X as long as wide; vestiture short, gold; mesocoxae separated by 0.7 mesocoxal diameter; length of posterior margin of mesosternal cavity 0.5 X mesocoxal diameter. Elytra: parallel-sided; [ELI: 2.7]; elytral anterior border rounded, with setae short, erect, gold; elytral-humeral area with setae, astriate; stria strongly impressed, with punctures tear-drop shape, confluent, interstria area almost flat, rugulose; apex rounded with a teeth internally. Leg: femur with small teeth aligned ventrally; pro-, meso-, and meta tibiae with combed apical spurs dorsally, tarsus not lobed, combed apically; tarsomere 4 smaller than tarsomere 3; [TP: 37-18-15-11-19] (Figure 20).

Male Genitalia. Aedeagus: median lobe 3.1 X as long as wide, slightly orbiculate apically; paramere rounded apically (Figure 26).

Distribution. VIII Region in Chile (Figure 27).

Biology. All aspects of the biology of this species are unknown.

Type Material. Holotype. Chile. Male, Trancas Negras, Curanilahue, 07.II. 1972. M. Pino, [TBL] 10.2 mm, [EAT].

Etymology. This species is named in honor of Wulf Klohn for his help with my studies and his memories about beetles.

Remarks. *Gabryella wulfklonai* can be distinguished by its short gold vestiture, U-shaped labral notch; anteriorly curved FCC, divergent posterior angles, and rounded elytron apex.

Comments

Phylogenetic analyses (Arias 1999) shows that the genus *Gabryella* is closely related to *Deromecus*, and both genera belong to the tribe Pomachiliini. The tribe Pomachiliini form a distinct clade within the subfamily Elaterinae (Arias in preparation). *Gabryella* differs from *Deromecus* in having the body stout instead of elongate and cylindrical; clypeus covered by FCC instead of clypeus visible and not covered by FCC; pronotum and elytra not equal in width; and mesosternal cavity subquadrate, with sides slightly elevated.

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(Jaques Cooles); [MCZC] Entomology Department, Museum of Comparative Zoology, Harvard University, Cambridge, MA, USA (Philip D. Perkins); [MHNA] Museum National D'Histoire Naturelle, Paris, France (Claude Girard); [MNNC] Colección Nacional de Insectos, Museo Nacional de Historia Natural, Santiago, Chile (Mario Elgueta D., and Ariel Camousseight M.); [SRC] Private Collection, Genoa, Italy (Sergio Riese); [UCCC] Museo de Zoología, Universidad de Concepción, Concepción, Chile (Vivian Jeréz and Luis Parra).

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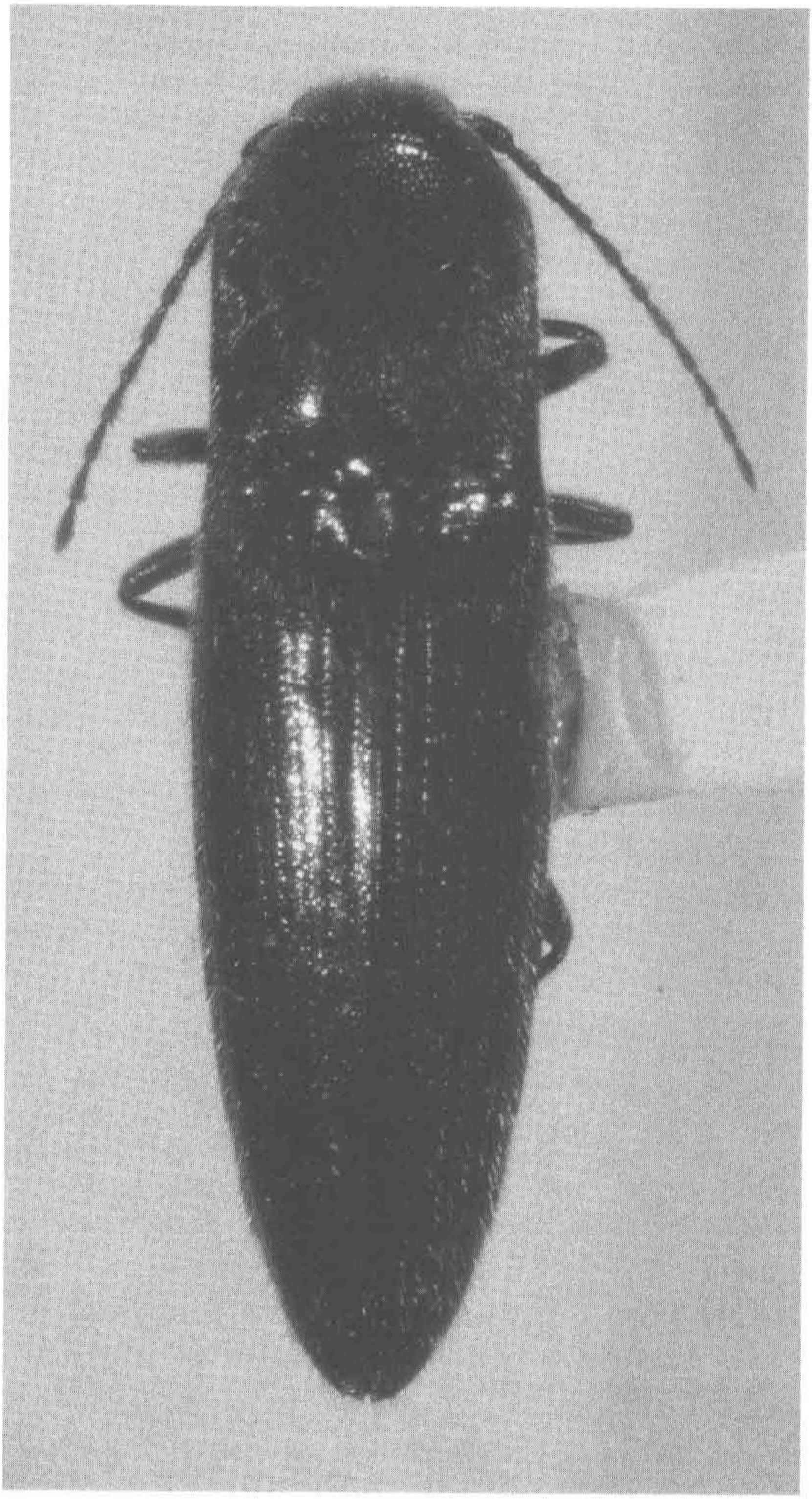


Figure 1a. Dorsal habitus of *Gabryella attenuata,* [TBL] 8.5 mm.

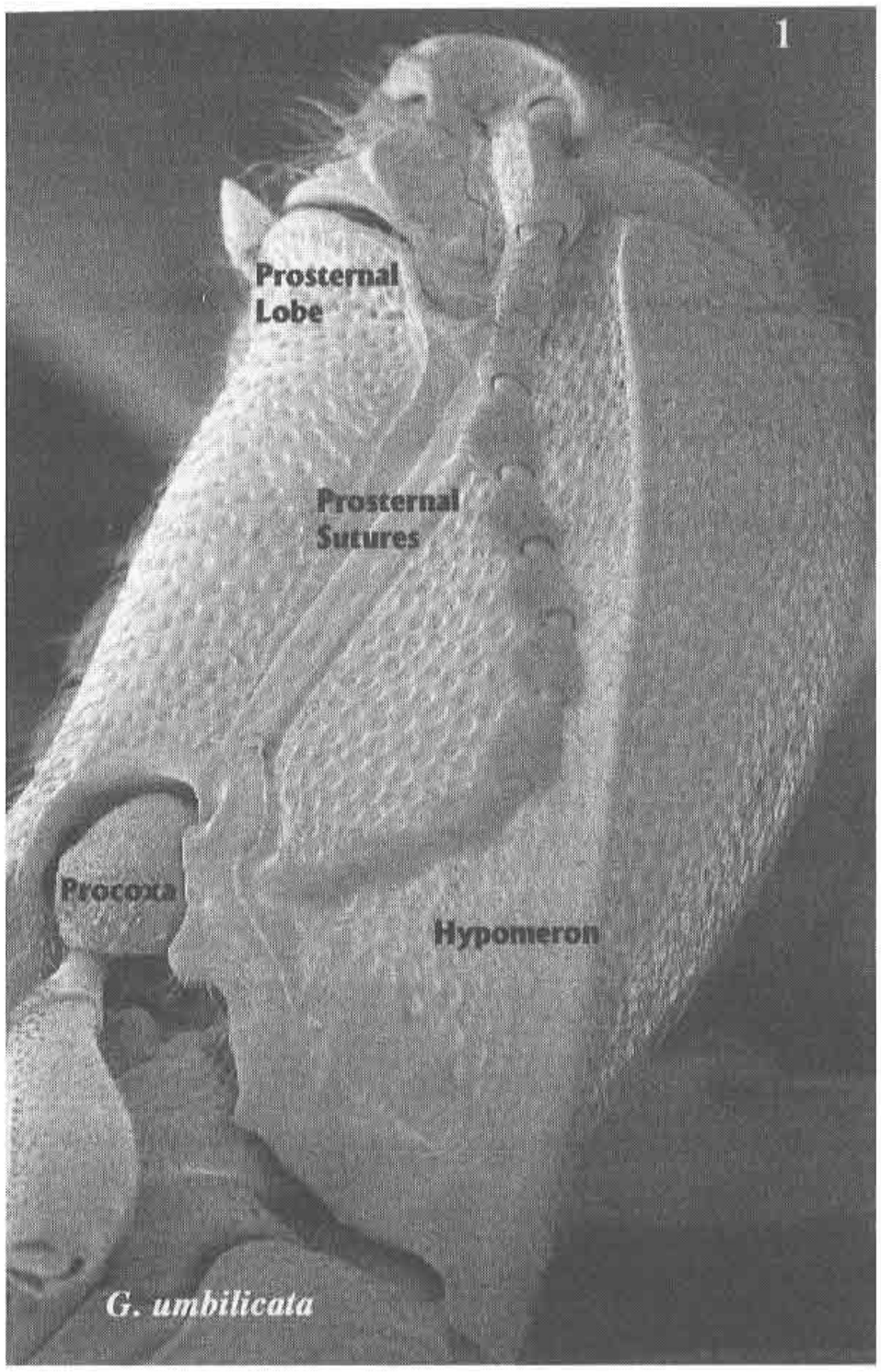


Figure 1b. Scanning electron micrograph of *Gabryella umbilicata* lateral view.

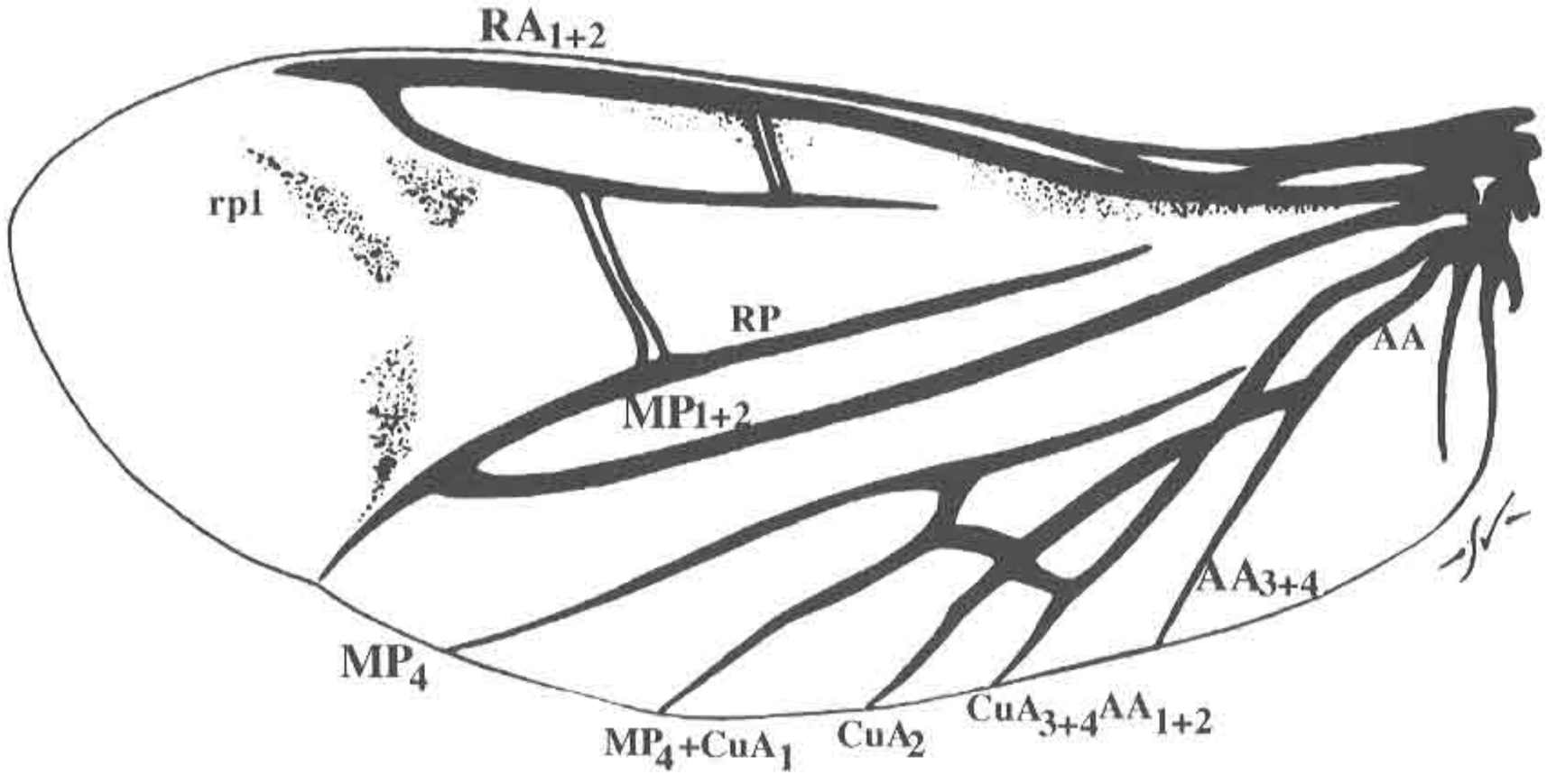
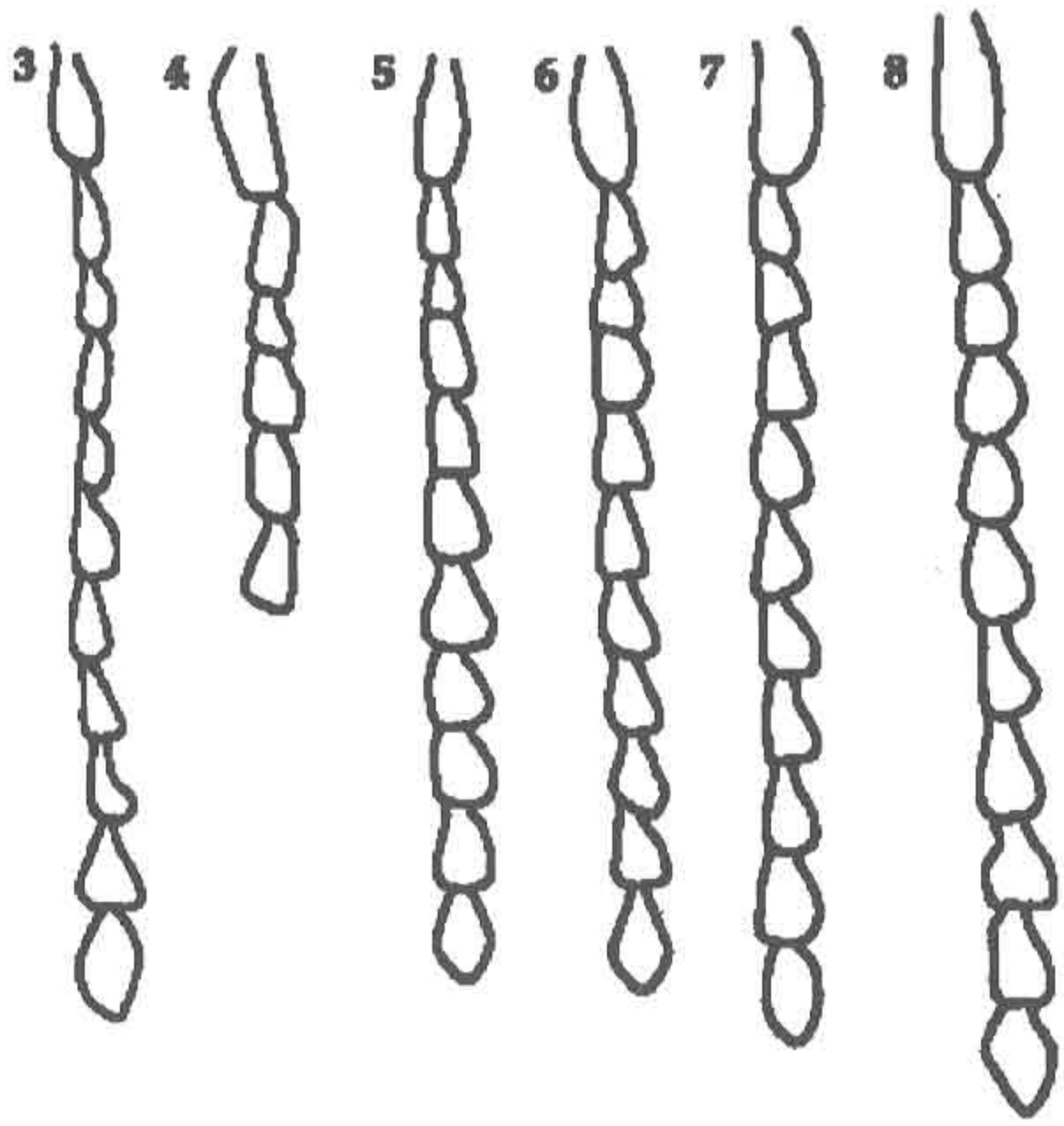
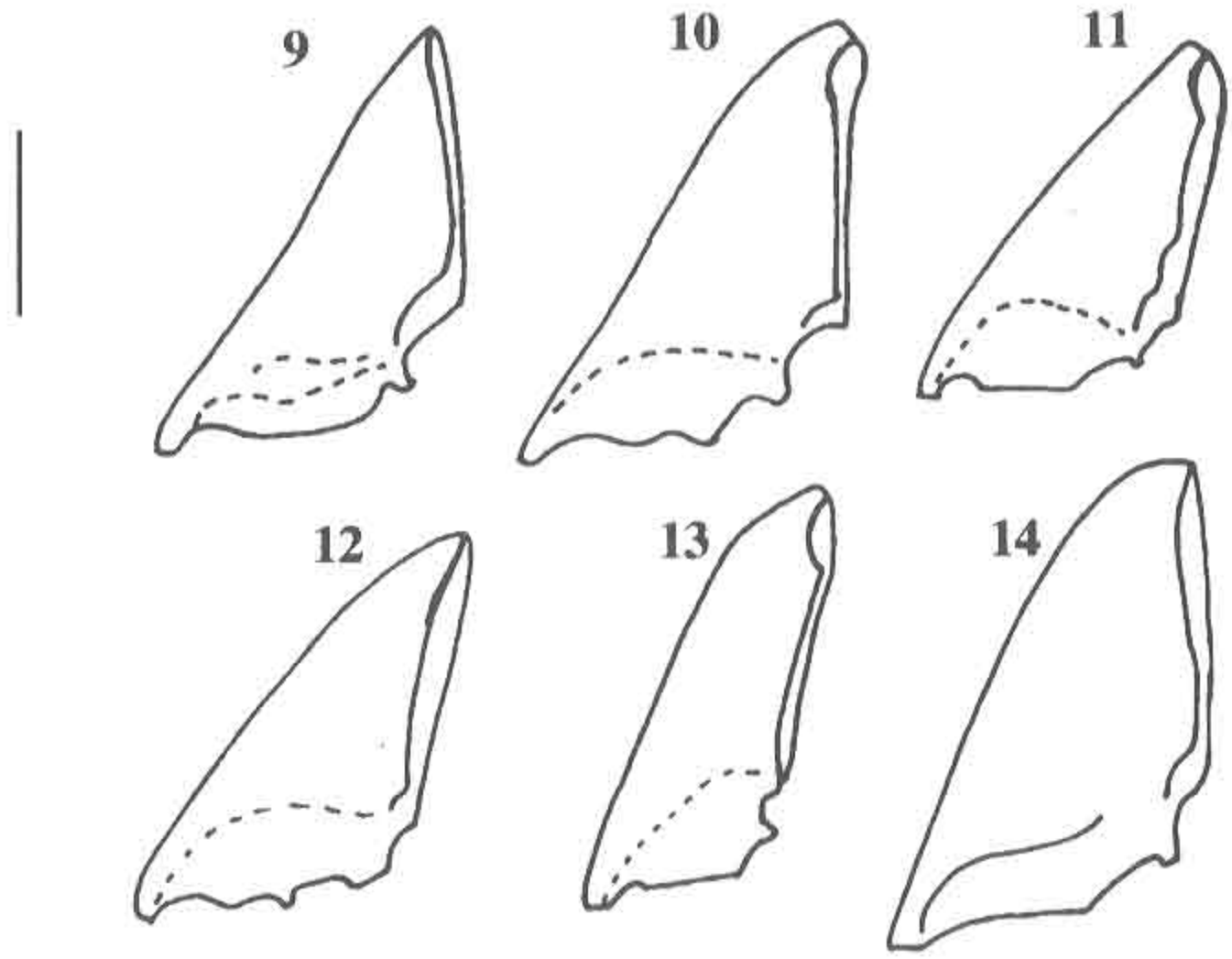


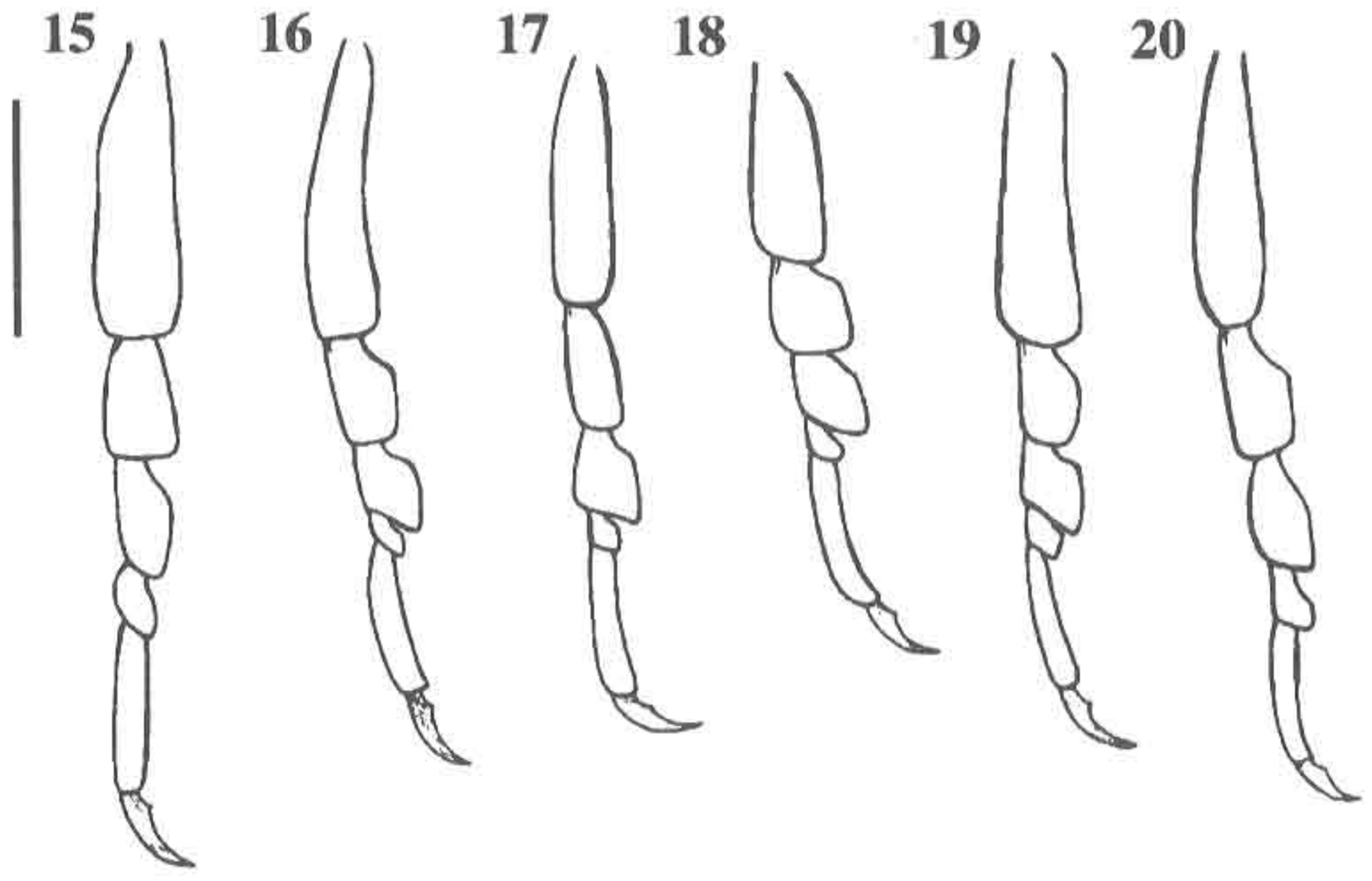
Figure 2. Hindwing venation of *Gabryella attenuata*.



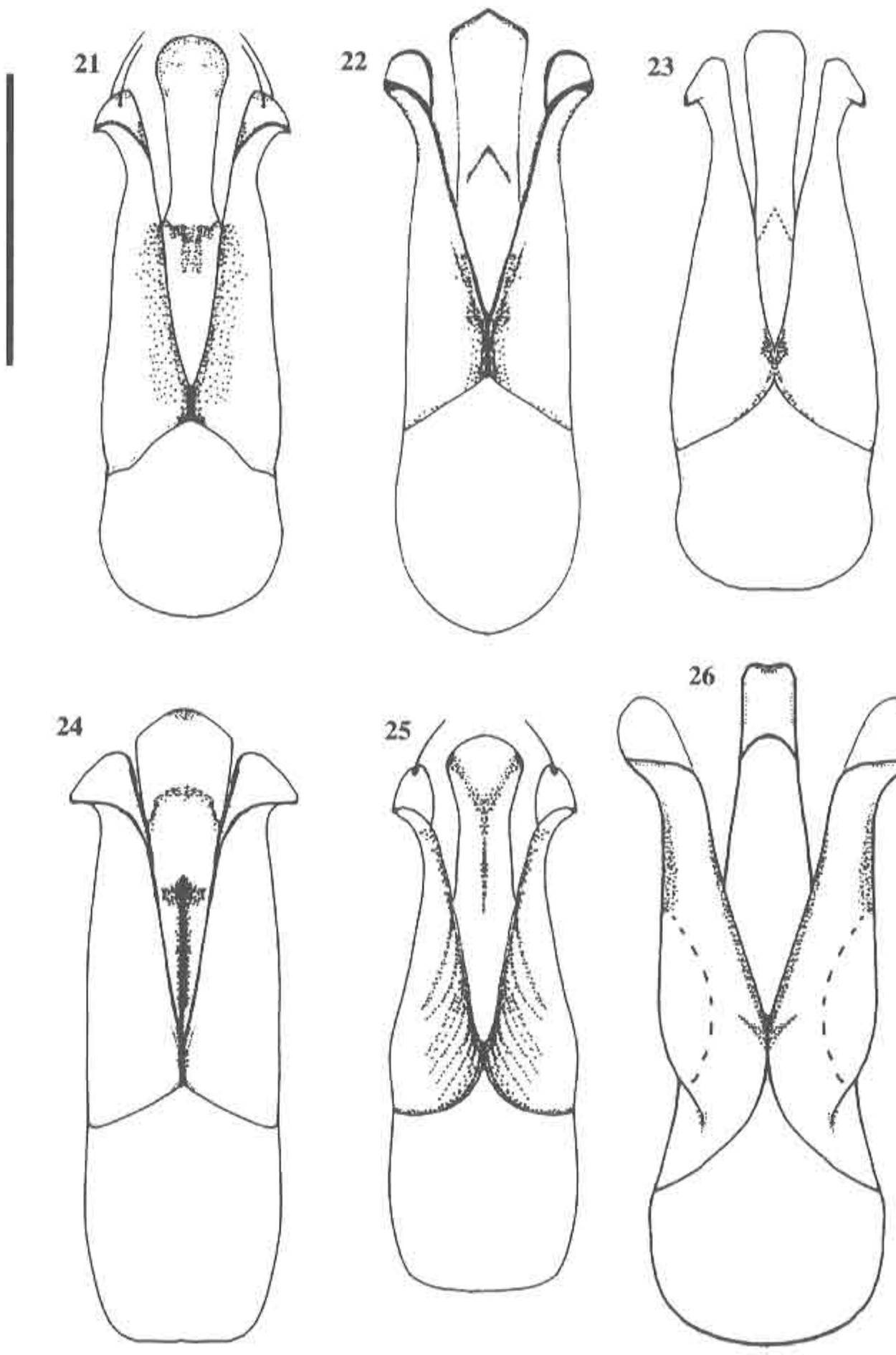
Figures 3-8. Antennae of *Gabryella* species: Fig. 3 *attenuata* (Solier); Fig. 4 *elguetai* n. sp., Fig. 5 *nancyta* n. sp., Fig. 6 *terryae* n. sp., Fig. 7 *umbilicata* (Candèze); Fig. 8 *wulfk-lohnai* n. sp. (Scale bar 0.5 mm).



Figures 9-14. Hypomera of *Gabryella species*. Fig. 9 *attenuata* (Solier); Fig. 10 *elguetai* n. sp., Fig. 11 *nancyta* n. sp., Fig. 12 *terryae* n. sp., Fig. 13 *umbilicata* (Candèze); Fig. 14 *wulfklohnai* n. sp., (Scale bar 1.0 mm)



Figures. 15-20. Tarsi of *Gabryella species*. Fig. 15 *attenuata* (Solier); Fig. 16 ***elguetai*** n. sp., Fig. 17 *nancyta* n. sp., Fig. 18 *terryae* n. sp., Fig. 19 *umbilicata* (Candèze); Fig. 20 *wulfklohnai* n. sp., (Scale bar 0.5 mm).



Figures. 21-26. Aedeagus of *Gabryella species*. Fig. 21 *attenuata* (Solier), Fig. 22 *elguetai* n. sp., Fig. 23 *nancyta* n. sp., Fig. 24 *terryae* n. sp., Fig. 25 *umbilicata* (Candèze); Fig. 26 *wulfklohnai* n. sp., (Scale bar 0.5 mm).

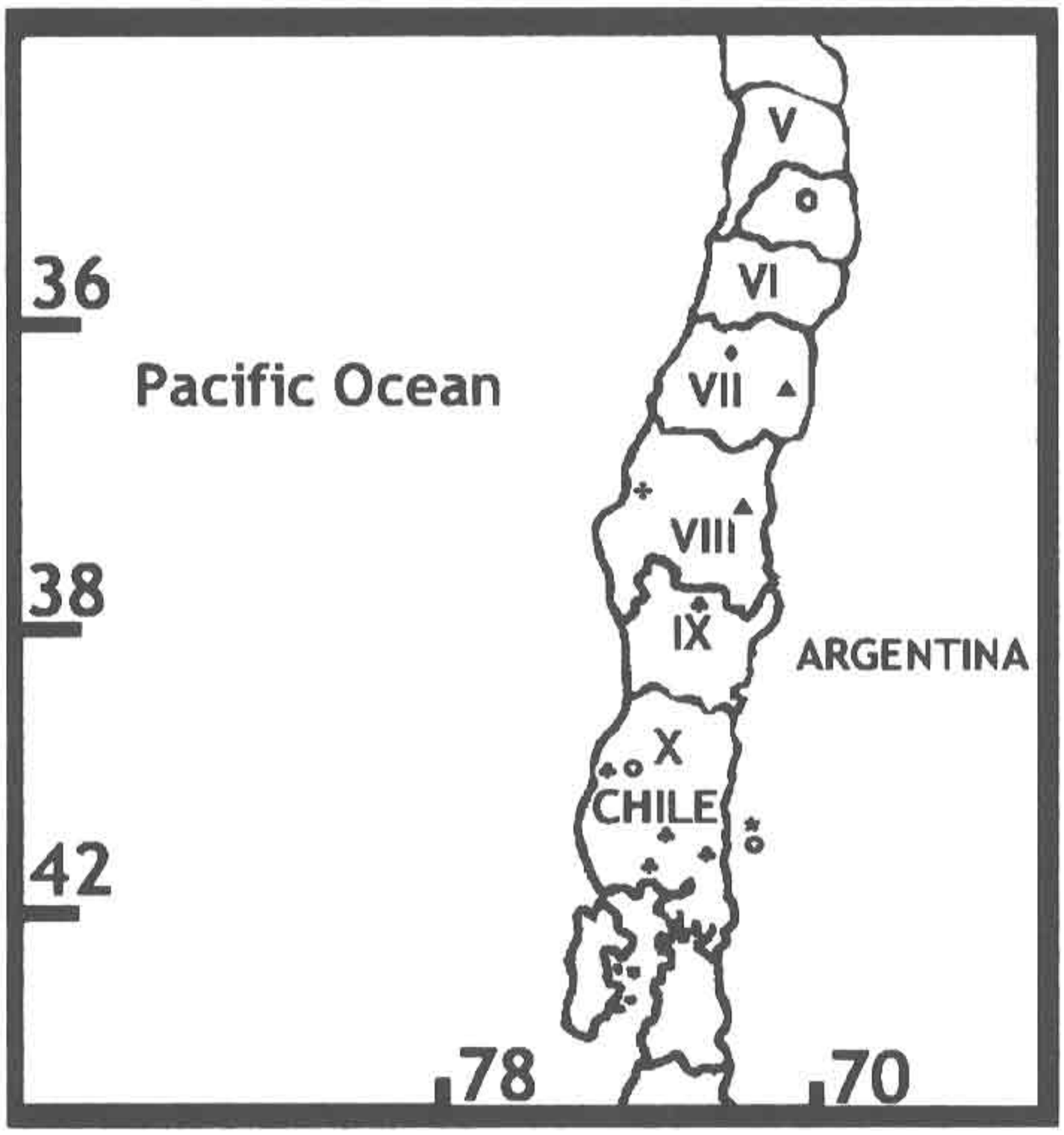


Figure 27. Map of distribution of the species of *Gabryella*: *attenuata* (♣); *elguetai* (♦), *nancyta* (▲), *terryae* (✷); *umbilicata* (✪); *wulfklohnai* (✣).