Pacific Insects 9 (2): 187-196 20 June 1967

IMATHIA AND AMBLYCNEMUS

(Coleoptera: Curculionidae: Cryptorhynchinae) [1]

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Abstract: *Amblycnemus* Marshall, 1931, is reduced to a synonym of *Imathia* Pascoe, 1885, and a catalog of the species is given. *Imathia* is redescribed, with anatomical details illustrated, and it is placed in the Cleogonini which is raised to tribal rank. *Imathia bella* Pascoe (type-species), *unicolor* Pascoe, *brevis* Faust and *dentifera* (Zimmerman) are illustrated for the first time, and a map showing the geographical distribution of the genus is included.

Francis Pascoe, in 1885, described the genus *Imathia* for two small weevils from Hatam, New Guinea. In 1899, J. Faust described a third species, from Moroka, New Guinea, and he added additional details to the generic diagnosis. The genus then lay dormant until the publication of Junk and Schenkling's *Coleopterorum Catalogus*, pars 151, Curculionidae: Cryptorhynchinae, by Hustache in 1936. These three references constitute the literature on this genus in so far as I have been able to ascertain.

I have found that *Imathia* is the same as *Amblycnemus* Marshall, 1931, whose author assigned it incorrectly to the Anthonominae. The generic name *Amblycnemus*, therefore, falls as a **new synonym** of *Imathia*. It is probable that Sir Guy Marshall overlooked *Imathia* because he concluded that the group belonged to the Anthonominae, and nothing similar to it had been described in that subfamily. The suprageneric placement of curculionids is often extremely difficult, and the most careful taxonomists frequently are led astray by Curculionidae that belong to one group but confusingly resemble another.

The taxonomic position of *Imathia* has not been easy to determine because the weevils have characters that appear to be those of more than one subfamily. Pascoe, with hesitation, placed *Imathia* near *Melanterius* to the "Ithyporinae." Faust also evidently shared the same opinion, and Hustache followed Pascoe and Faust and placed *Imathia* after *Melanterius* in *Coleopterorum Catalogus*. I believe that Marshall was misled by the superficial appearance of the weevils, and this caused him to assign the group to the Anthonominae. He said (1931: 266) that the group is "A somewhat aberrant genus ... differing from all the other genera of the sub-family known to me in its excavate prosternum and narrowly separated front coxae." Pascoe said that *Imathia* has "no indication of a pectoral canal", but that statement is in error, unless he was referring to a canal extending

1. This is the tenth of a series of reports resulting from the project "Pacific Island Weevil Studies" made possible by National Science Foundation grant G-18933, for which I am most grateful.

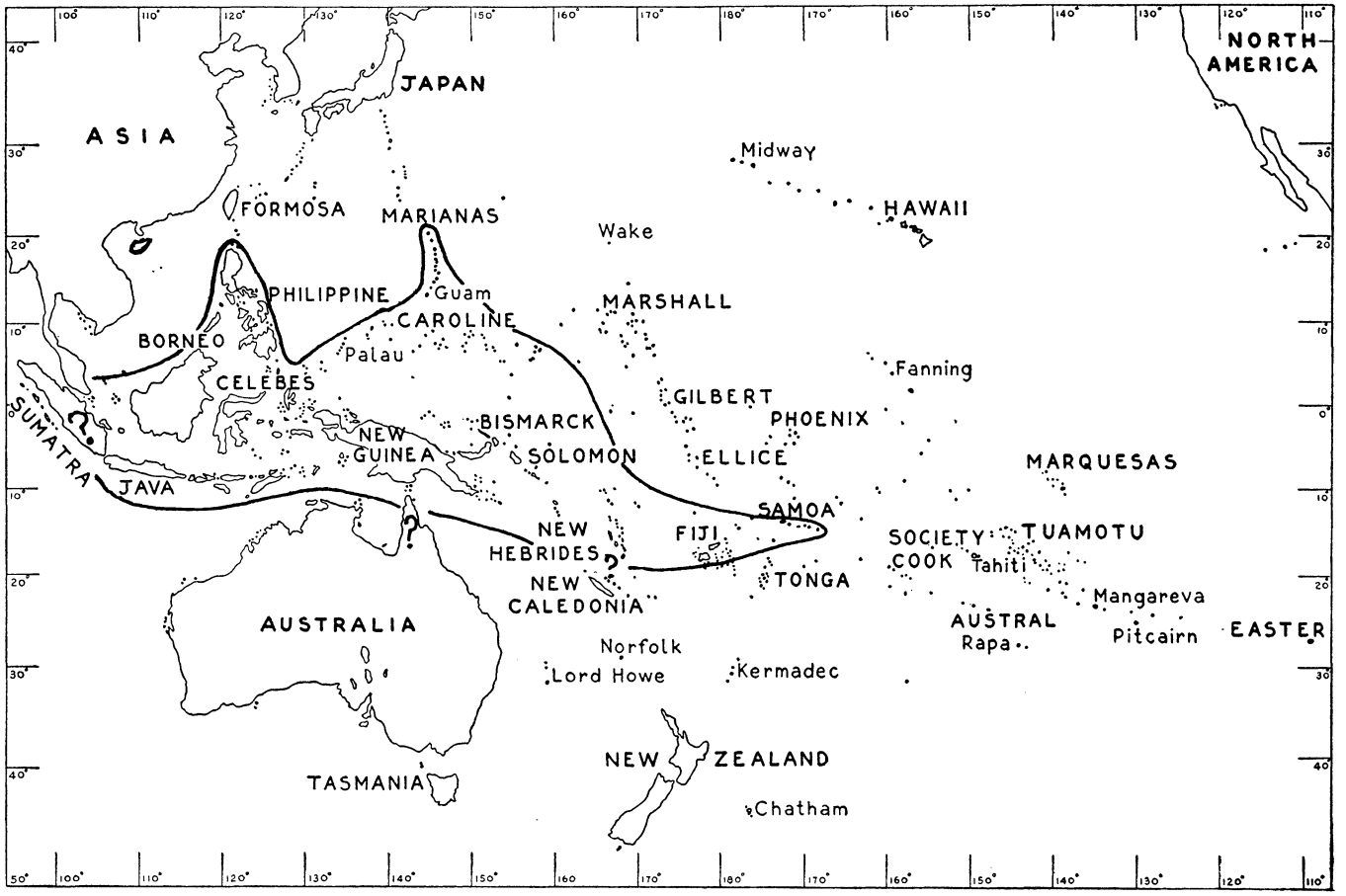


Fig. 1. Outline of the area known to be occupied by the genus *Imathia*. The western and southern limits of distribution remain to be determined, and the northern limit may extend farther than indicated.

between and behind the procoxae. *Imathia* has a prosternal canal with side walls of specifically variable development in front of the procoxae. *Imathia* and *Melanterius* are listed by Hustache, following Pascoe, under the subtribe Cleogonina of the tribe Ithyporini in the Cryptorhynchinae in *Coleopterorum Catalogus*. I now believe that *Imathia* belongs to the same group as the tropical American *Cleogonus*, but with the evidence available at this time, I do not consider the Cleogonina to be Ithyporini. I would, therefore, elevate the Cleogonina to tribal rank:—Cleogonini, **new status**. Further study is required to ascertain whether or not the Cleogonini are truly members of the Cryptorhynchinae which surely is a polyphyletic group as now constituted. The widely divaricate, appendiculate tarsal claws of *Imathia* and its associates are not typical of true Ithyporini or Cryptorhynchinae. *Cleogonus* has appendiculate tarsal claws. A number of other genera, now resting in several incorrect places in catalogues, are allied to *Imathia* and will be reclassified and transferred to association with *Imathia* as time and opportunity permit.

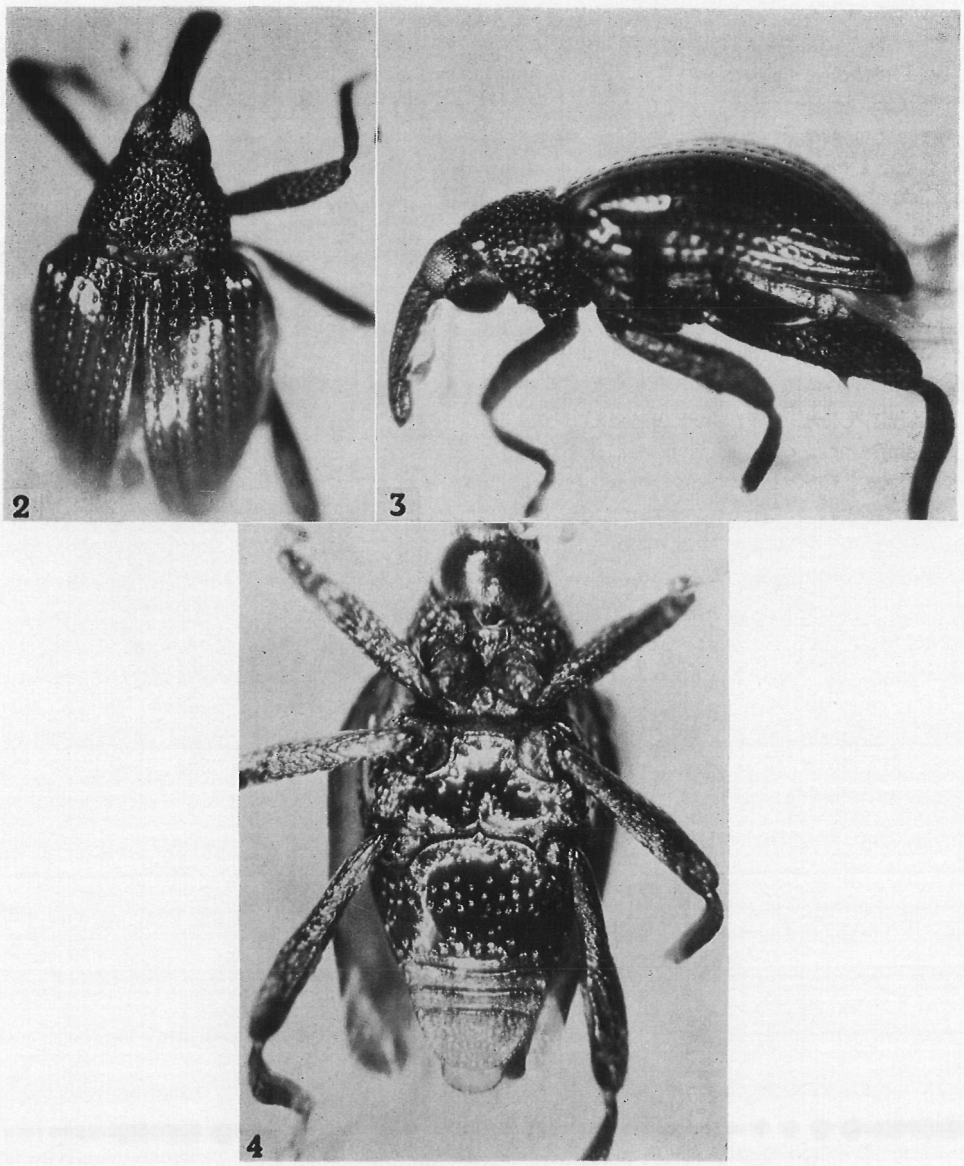
Marshall considered the supposed absence of tibial mucrones to be one of the most unusual characters of *Amblycnemus*, but he failed to note that this is a sexual character in this genus. On the type-species of Marshall's *Amblycnemus*, it is true that the females have no traces of tibial mucrones, but the males have the mid and hind tibiae mucronate. None of the tibiae are uncinate in either sex in *Imathia*. The femora may be strongly or feebly toothed, or, as in the type-species of *Amblycnemus*, they may be edentate.

I have been fortunate in being able to examine type material of the three species of *Imathia* described by Pascoe and Faust during visits to Genoa and London, and I am indebted to Dr Delfa Guiglia, Museo Civico Di Storia Naturale, Genova, for the opportunity to re-study specimens of *Imathia brevis* Faust and *Imathia unicolor* Pascoe during the final preparation of these notes. My friends R. T. Thompson and J. Balfour-Browne, of the British Museum, generously assisted with various problems and David Kissinger most kindly made the photographs.

A revised generic description, expanded from Marshall's description of *Amblycnemus*, follows:

Small, foliage-frequenting weevils, none known over 3.0 mm in length; variously adorned with setae and squamae. Larvae and larval habits unknown.

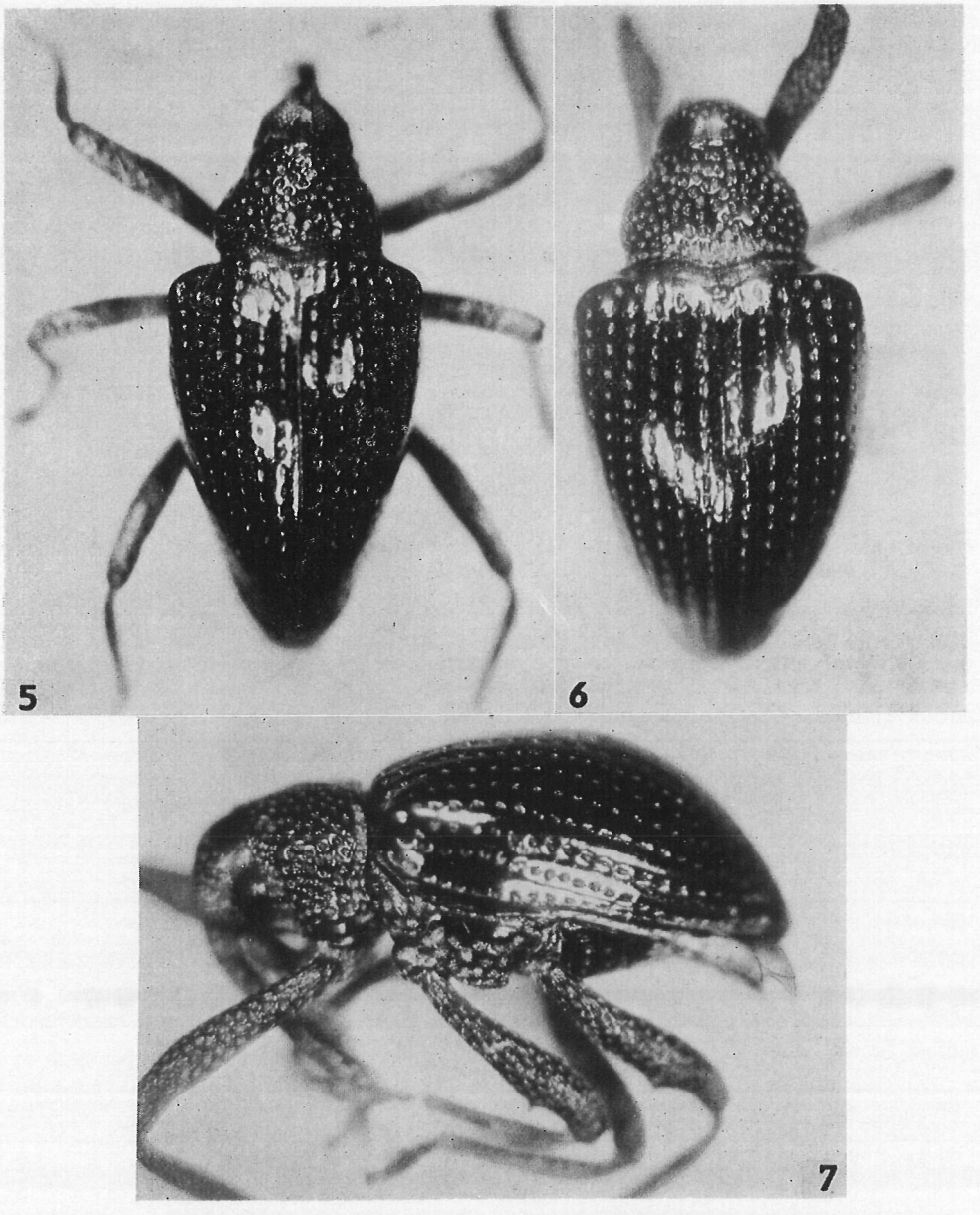
Head subglobular, exposed, the interocular area narrower than base of rostrum; eyes fronto-lateral, widely separated beneath, well separated from prothorax, not or only slightly protuberant, their contours subcontinuous with that of the head in most species. *Rostrum* longer than pronotum, gently arcuate, rather slender, narrowest at base, antennae inserted much distad of middle in both sexes; scrobes strong, passing rapidly beneath the rostrum, apex of dorsal scrobal margin directed slightly below lower corner of eye; mandibles tri-dentate, the posterior tooth small (as figured), decussate. *Antenna* (as figured) slender; scape reaching to near base of rostrum, gently clavate; funiculus 6-segmented, shorter than scape, first 2 (or more) segments elongate; club elongate-ovate. *Prothorax* with anterior side margins straight and without postocular lobes. *Scutellum* distinct. *Elytra* much broader across the strong humeri than pronotum; with 10 striae, the 10th complete or abbreviated; without calli on declivity; suture curving to left caudad, thus making interval one of right elytron much broader caudad than that of left elytron. *Wings* fully developed. *Sternum* with prosternum canaliculate in front of procoxae, anterior margin at most shallowly concave and not deeply emarginate, lateral walls of canal usu-



Figs. 2–4. *Imathia bella* Pascoe, the type-species. Dorsal, lateral and ventral views of the holotype, ♂, length 2.9 mm. (Hatam, New Guinea). (Photographs by David Kissinger.)

ally distinctly elevated, but specifically variable, and with a specifically variable impression near anterior corner of outer side of each lateral wall; length of prosternum in front of procoxae usually distinctly greater than that behind coxae, procoxae contiguous to distinctly separated; mesosternum with episternum and epimeron fused but suture distinct, epimeron less than 1/2 as broad as episternum, intercoxal process slanting steeply for-

ward, very broad, nearly as broad as a mesocoxa; metasternum with distance between a meso- and metacoxa as long or longer than longitudinal diameter of a metacoxa, metacoxae more widely separated than mesocoxae and separated from elytra by metepister-



Figs. 5–7. *Imathia unicolor* Pascoe: 5, dorsal view of holotype, length 2.4 mm, and dorsal (6) and lateral (7) views of a ♀ paratype, total length 2.3 mm. (Hatam VI, New Guinea). (Photographs by David Kissinger.)

num whose suture is complete and distinct. *Legs* comparatively long and slender, metacoxae eye-shaped, trochanters lacking a long, erect, specialized tactile seta; femora moderate, variably toothed or edentate, posterior pair reaching about to or slightly caudad of elytral apices; tibiae narrowly carinate, inner edges nearly straight, unci absent, ♀♀ without mucrones, ♂♂ with mucrones on meso- and metatibiae only, apical articulating area of metatibia with acetabulum oblique, tarsal groove oblique internally, both internal and external setal combs well developed, dorsal carina obsolescent in corbel area; tarsi with segment I nearly as long as II+III, II transverse, III broad, deeply bilobed, claw segment extending beyond apex of segment III, claws strongly divaricate, basally variably appendiculate. *Venter* with intercoxal process gently arcuate, about as wide or wider than transverse diameter of a metacoxa; ventrites I and II fused; ventrite II longer at middle than III+IV; ventrite V about as long as III+IV; pygidium concealed at rest.

A catalogue of the genus follows:

Tribe CLEOGONINI (Lecordaire), **new status**

Tribe *Cryptorhynchides*, Subtribe *Ithyporides*, Group *Cleogonides* Lacordaire, 1866 : 63.
Tribe *Ithyporini*, Subtribe *Cleogonina* (Lacordaire) Hustache, 1936 : 40.

Genus **Imathia** Pascoe

Imathia Pascoe, 1885 : 251 (type-species: *Imathia bella* Pascoe, by present designation).—Faust, 1899 : 51, emended description.—Hustache, 1936 : 45, list.

Amblycnemus Marshall, 1931 : 265 (type-species: *Amblycnemus stevensoni* Marshall, 1931 : 266, designated by Marshall and originally monotypic).—Zimmerman, 1942 : 96, emendations to generic diagnosis. **New Synonymy.**

Imathia albiseta (Zimmerman), new combination.

Amblycnemus albisetus Zimmerman, 1946 : 193, figs. 2, a, b. (Holotype in BISHOP).

Philippine Islands (Mindanao and Sulu Archipelago).

Imathia bella Pascoe Figs. 1–3.

Imathia bella Pascoe, 1885 : 251 (Holotype in BMNH).

New Guinea (Hatam).

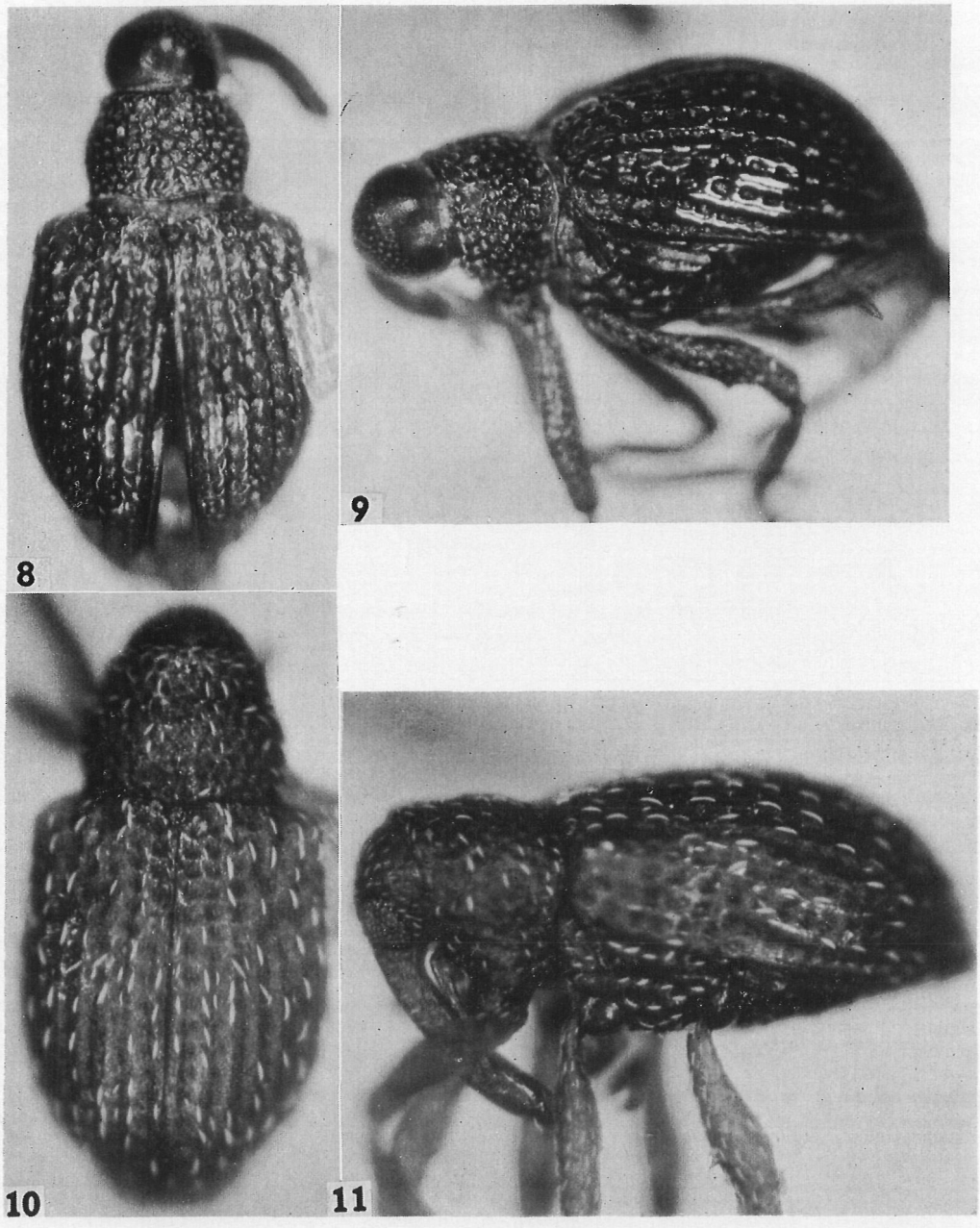
S. Dillon Ripley has told me that the Hatam locality is probably SW of Manokwari in the Arfak Mountains.

Imathia brevis Faust Figs. 8, 9.

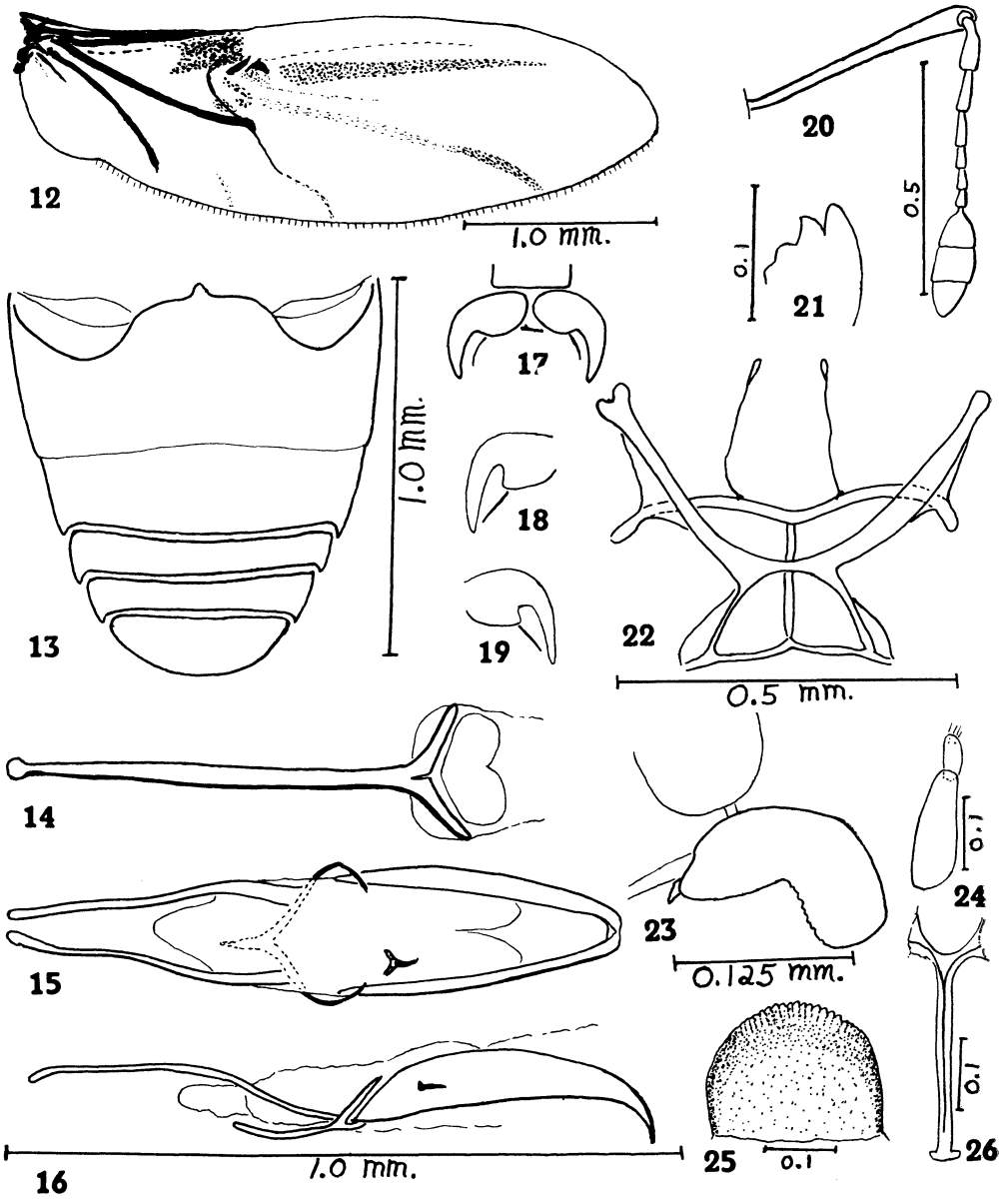
Imathia brevis Faust, 1899 : 51. (Holotype in Faust collection, Staatliches Museum für Tierkunde, Dresden).

New Guinea (Moroka, 1300 m).

There is a note on a "cotype" examined that states that Moroka is in SE New Guinea, and S. Dillon Ripley has told me that it is possible that this is a locality on a trail that extends from Port Moresby to the north coast of Papua.



Figs. 8–11. Dorsal (8) and lateral (9) views of *Imathia brevis* Faust, paratype ♀, total length 2.3 mm. (Moroka, 1300 m, New Guinea), and dorsal (10) and lateral (11) views of *Imathia dentifera* (Zimmerman), paratype ♀, total length 1.7 mm. (Truk, Caroline Is.). (Photographs by David Kissinger.)



Figs. 12–26. Sketches of anatomical details of *Imathia*. All figures excepting 18 and 19 are of *Imathia stevensoni* (Marshall) from Upolu, Samoa. 12, wing of ♂; 13, ventral view of ♂ abdomen; 14, ♂ urosternite ("spiculum gastrale"); 15 and 16, dorsal and lateral views of aedeagus with phallobase in situ (the scale applies also to figs. 14 and 15); 17, tarsal claws; 18 and 19, tarsal claws of *Imathia brevis* Faust (18), paratype, and *Imathia unicolor* Pascoe, (19), paratype; 20, antenna; 21, right mandible; 22, metendosternite; 23, spermatheca; 24, one lobe of ovipositor; 25, eighth tergite of ♀; 26, urosternite of ♀.

Imathia dentifera (Zimmerman), new combination Figs. 10, 11.
Amblycnemus dentifer Zimmerman, 1941 : 95. (Holotype in BISHOP).
Caroline Islands (Truk), Palau (Melekeiok).

Imathia dentipes (Zimmerman), new combination
Amblycnemus dentipes Zimmerman, 1942 : 96, pl. 6, F. (Holotype in BISHOP).
Mariana Islands (Guam).

Imathia fasciata (Zimmerman), new combination
Amblycnemus fasciatus Zimmerman, 1944 : 207, figs. 2, 3. (Holotype in BISHOP).
Tenimbar Islands (Larat).

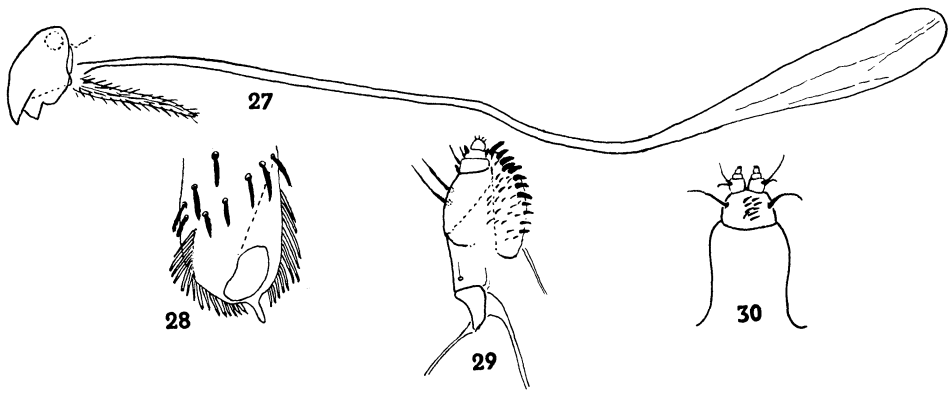
Imathia fulgida (Zimmerman), new combination
Amblycnemus fulgidus Zimmerman, 1943 : 185, figs. a, b. (Holotype in BISHOP).
Rotuma Island (N of Fiji).

Imathia javaae (Zimmerman), new combination
Amblycnemus javaae Zimmerman, 1946 : 196, figs. 3, a, b. (Holotype in BISHOP).
Java (Tengah, West Java).

Imathia laratensis (Zimmerman), new combination
Amblycnemus laratensis Zimmerman, 1944 : 210, figs. 4, 5. (Holotype in BISHOP).
Tenimbar Islands (Larat).

Imathia stevensoni (Marshall), new combination Figs. 12-30.
Amblycnemus stevensoni Marshall, 1931 : 266, fig. 6. (Holotype in the BMNH).
Samoa (Tutuila, Upolu).

Imathia unicolor Pascoe. Figs. 5-7.



Figs. 27-30. Sketches of anatomical details of *Imathia stevensoni* Marshall. 27, right mandible with adductor tendon and pharyngeal process attached; 28, dorso-caudal view of apex of ♂ metatibia with tarsus removed, note mucro; 29, maxilla; 30, labium.

Imathia unicolor Pascoe, 1885 : 251 (a typographical error in *Coleopterorum Catalogus* 151 : 45, gives this as p. 252). (Holotype in BMNH).

New Guinea (Hatam); see the note under *bella*, above, for the location of Hatam.

In addition to these species, I have under study species, which I hope to describe later, from Malaya, the Philippines, Borneo, New Guinea, Fiji and various islands of Melanesia and Micronesia. The genus is a large and widespread one in the Pacific.

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