

# NEW GENUS AND SPECIES OF INTERTIDAL BRACHYGLUTINI (COLEOPTERA: PSELAPHIDAE) FROM JAPAN

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**ABSTRACT.** - Two new halobiont pselaphid beetles are described - *Thalassomerus reikoeae* from the pacific coast in Honshu and *T. miyakei* in southern Kyushu. The new genus *Thalassomerus* established for them, is a near relative of *Reichenbachia* Leach, 1826.

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## INTRODUCTION

Recently I described the halobiont pselaphid species *Halohermatus regulus* Sawada, 1991 from a coral reef in Okinawa. Here further halobiont species, *Thalassomerus reikoeae*, new genus and new species, from under stones on the intertidal zone, and *T. miyakei*, new species, from the night light of the jetty are described. The possibility of wide distribution over Southeast Asian and Pacific coasts is obvious. In addition to the usual characters I have found the macrochaetal arrangement of the body to be useful to separate the species even in material of the female sex in certain groups. However, among six subfamilies of Pselaphidae recognized in Newton & Chandler, 1989, most species of Pselaphinae and Clavigerinae cannot be separated on macrochaetotaxy because of the absence of primary body setae.

Holotype specimens of all species are deposited in the Zoological Reference Collection (ZRC), National University of Singapore and allotype of *Thalassomerus reikoeae* and some paratypes of *T. miyakei* are in the personal collection of the author (KS).

## TAXONOMY

### FAMILY PSELAPHIDAE SUBFAMILY GONIACERINAE

#### *Thalassomerus*, new genus

Type species. - *Thalassomerus reikoeae*, new species

**Diagnosis.** - Head oblong and with two foveae on vertex; frons broad and short, with a translucent fleck close to the antennal insertion; mentum with a strong carina in the middle;

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maxillary palpus stout; segment IV enlarged, elliptical in outline and with ca. five short macrosetae and short filamentous organ (= FO) near apex. Antenna short, with segments I, II subsequently short; XI forming a solid club. Pronotum cordate in outline, with three basal foveae which are similar in size and without connection between them; among 2+2 macrosetae the proximal row of setae is situated on the level of the basal foveae. Elytra bear two basal foveae with long sutural and discal striae; another fovea present on the reflected lateral margin. Abdomen subparallel-sided, with segment IV, V and VI nearly equal to one another. Male secondary sex characteristics appear usually on mesotibia and metasternum. Aedeagus symmetric and stout; basal capsule rounded basally and distally converted to a well sclerotized, laterally strongly dilated apophysis. The underside of the dilation is articulated to the style by a tendon on each side; style narrowly prolonged along the lateral side of basal capsule and distally curved and setigeous; copulatory piece rather simple, elongate and comeous. In female genitalia there is a transverse, divided hemisternite which is considered to be sternite IX. Connecting with it is a large vaginal pouch occurred.

**Etymology.** - *Thalassa* means the sea in Attic dialect and *meros*, a part in Greek. Thus, *Thalassomerus* is derived from a living thing of the sea.

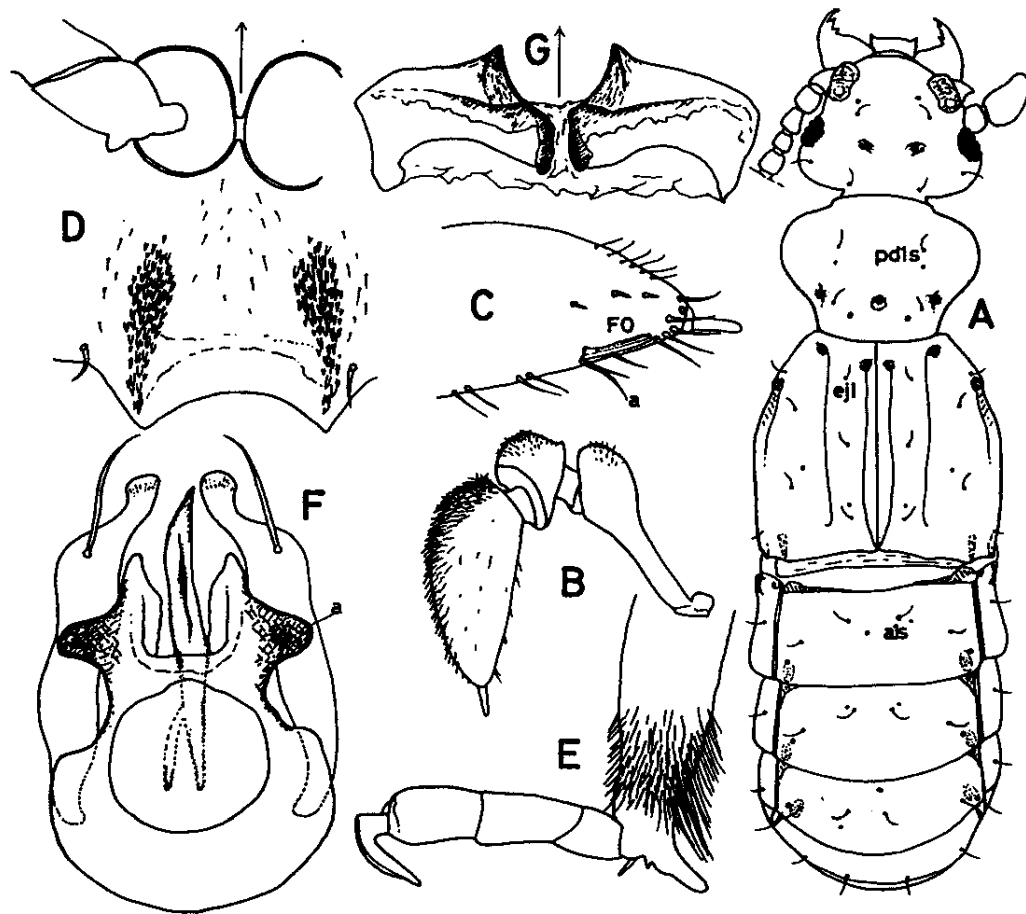
**Remarks.** - In the cordate pronotum and the isometric abdominal tergites it is similar to *Halorabyxis* Jeannel, 1953 from Mauritius, but differs in the simple post-gena and in the abdomen without "hemisternites". The aedeagus is also different. *Thalassomerus* n. has a large median fovea of pronotum. With respect to this character it resembles *Brachygluta* Thomson, 1859, from which it differs in the proximally situated discal row of macrosetae. In the setal arrangement above mentioned *Thalassomerus* is similar to that of *Reichenbachia* Leach, 1825, but differs in the head having two foveae instead of three. In this new genus the highly carinate mentum and well-developed apophyses of aedeagus are distinctive.

*Thalassomerus reikoeae*, new species

(Fig.1 A-G)

**Material.** - Holotype - male, under stone in intertidal zone at Manazuru Cape, Kanagawa Pref. Honshu, Japan, leg. R. Sawada, 4.iv.1991; allotype female, same locality as in the holotype, leg. K. Sawada, 18.ix.1990.

**Description.** - Male: Length up to 1.70 mm (head 0.26 mm long x 0.36 mm wide; pronotum 0.32 mm x 0.42 mm; elytra 0.41 mm x 0.52 mm). Head weakly flattened above and broadly depressed in the middle; paired basal foveae well-defined. Eyes small, composed of several coarse facets; post-gena short and rather dilated laterally. Antenna rather short; segment III longer than wide; IX, X distinctly transverse; XI enlarged to form a solid club and ventrally with a tuft of numerous, long filamentous sensillae. Labrum finely denticulate at the lateral corner. Maxillary palpus (Figs.1B,C) is short and stout as a whole; segment IV thick, elliptical in outline, on the outer surface furnished densely with short, curved setulae all over; its lower margin bears FO close to apex, and ca. five macrosetae around it, one of which is located near by the base of FO. Mentum highly carinate along the middle. Pronotum flattened above, widely rounded anteriorly, then suddenly constricted posteriorly and shallowly depressed in the middle. Elytra long; the humeral corner effaced, then nearly straight to the apex; two basal foveae with a long discal stria; the epipleural fovea and sulcus are present. Abdomen elongate, subparallel, with segments IV to VII nearly equal to one another; IV neither foveolate nor



Figs. 1A-G. *Thalassomerus reikoeae*, new species. A, habitus; B, C, maxillary palpus and its apex; D, metasternum; E, mesotibia and mesotarsus; F, aedeagus; G, genitalia in female.

carinate basally except for a small stigma on each side. Metasternum (Fig. 1D) is broadly, deeply depressed in the middle, on each side of the depression being raised and beset with short, spindle-like thick spinules which are arranged in an elongate mass. Legs relatively short; mesotibia (Fig. 1E) bears a short, stout apical hook, whose inner base is finely denticulated; mesotarsus (Fig. 1E) 3-segmented, in which segment II is a little longer than III and with claws which are short, suddenly curved, each claw may be connate for the most part. Macrochaetotaxy as follows: Head, 3+3 (cfls, cil, col). Pronotum, 2+2 (pdls-2s). Elytra, 7+7 (ejl-3s, edl-2s, eml-2). Abdomen, 2+2 (als, pls). Where, the letters used indicate as: c, cephalic, f, frontal, i, circum-ocular, o, occipital, p, pronotal, d, discal, s, sensillum placodeum, e, elytral, j, juxta-sutural, m, marginal, a, p, anterior & posterior, (both always applied to those of the tergites), 1, 2, 3... number of setae. Aedeagus (Fig. 1F) 0.36 mm long, in dorsal view the basal capsule is rounded, thick and with a well-sclerotized, large apophysis (a in Fig. 1F) which is strongly expanded to form a lateral dilation to which the style is articulated below; copulatory piece long spiniform, bifid in the middle and becoming bifurcate basally; stylus narrowly elongate, sinuate laterally and then incurved ending in spatulate apex; a long spine is present before the apex.

Female. - Sexual characters - genitalia (Fig. 1G) with a transverse divided hemisternite whose anterior divided part is deeply emarginate and with projected lateral corner.

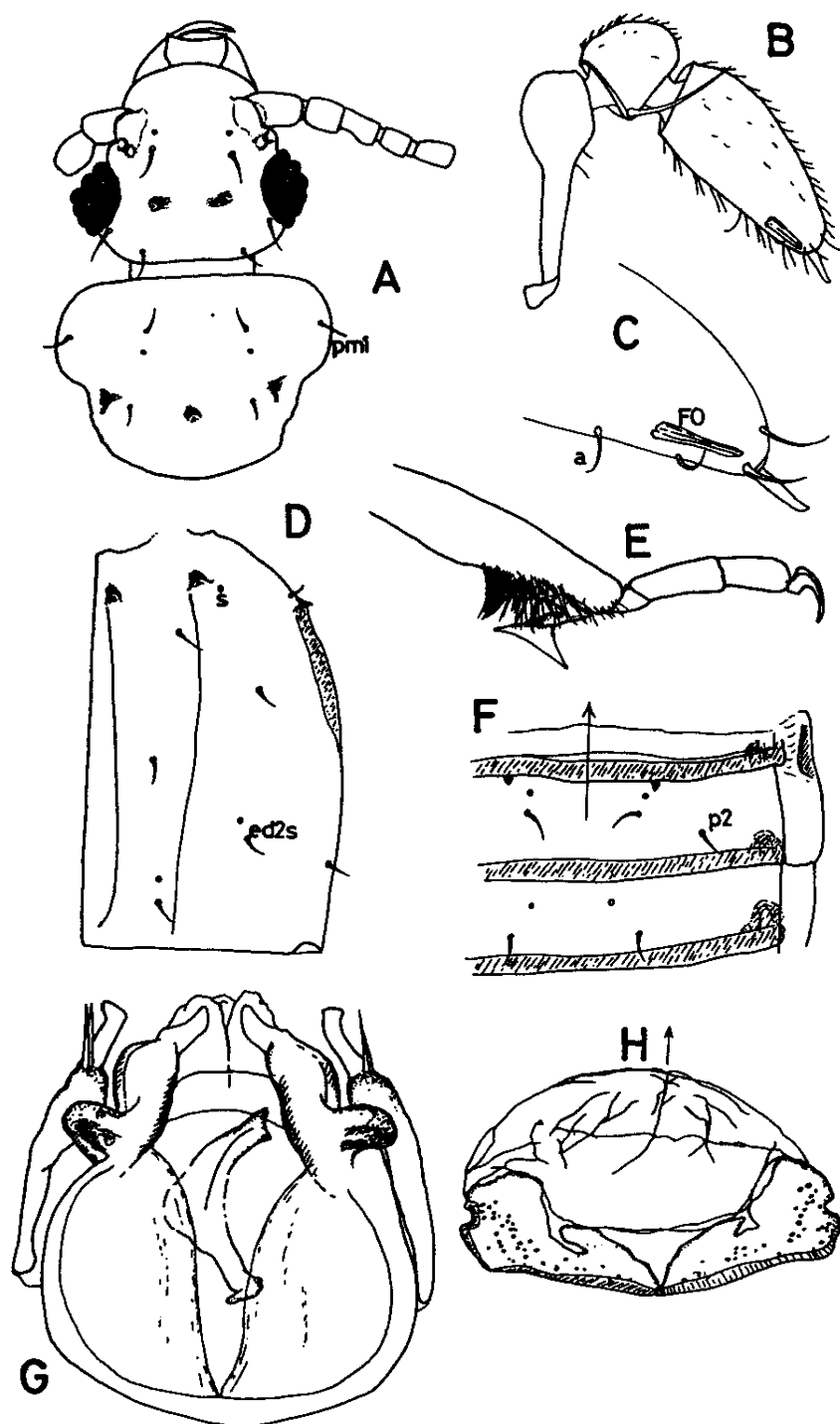
**Etymology.** - I give the name of this species to my wife who collected the holotype specimen of the species and for her constant support and encouragement.

**Remarks.** - That the head is distinctly dilated behind the eyes which are relatively small with several coarse setigerous facets, and in the pronotum seta pml is absent (always?) are characteristic. The Japanese name proposed for this species would be Hirazu-iso-arizukamushi.

***Thalassomerus miyakei*, new species**  
(Figs. 2A-H)

**Material.** - Holotype - male, allotype and 2 paratypes, at night light on the Onkachi harbour, Amami-Oshima Is. Kagoshima Pref. Japan. Leg. Y. Miyake, 22.v. 1962.

**Description.** - Male: length up to 1.80 mm (head 0.25 mm long x 0.38 mm wide; pronotum 0.32 mm x 0.47 mm; elytra 0.53 mm x 0.69 mm). Head lightly convex, uneven above and with two large foveae on vertex; part of the antennal insertion is raised to a callus; just behind the callus there is a small, translucent fenestration, and the integument shining and smooth leaving fine pubescence. Eyes normal in size and with coarse facet; post-gena abruptly constricted basally. Antenna rather long; segments III to V similarly elongate; VIII a little smaller than others and as wide as long; IX much broader, but still much smaller than the last segment. Maxillary palpus (Figs. 2B,C) is like that of the preceding species except segment IV less densely pubescent on the outer surface, and FO lying along the inner margin near the apex, where there are ca. five macrosetae one of which is standing separately from the base of FO. Labrum feebly trisinate in front and finely pointed on each side. Mentum with a median carina. Pronotum broader than long, distinctly dilated and rounded in the anterior half, then briefly retracted behind and with the ante-basal median fovea as big as the cephalic one; the integument furnished with dense short pubescence all over. Elytra ample and broadly rounded laterally from the humeral corner, where it is acutely marked with the base of the epipleural fovea; the remaining two basal foveae situated far remote from one another and each with a well-marked stria on the



Figs. 2A-H. *Thalassomerus miyakei*, new species. A, head & pronotum; B, C, maxillary palpus and its apical part; D, right elytron; E, mesotibia and mesotarsus; F, abdominal tergites IV, V; G, aedeagus in dors. view; H, genitalia in female.

disc. Abdomen nearly parallel-sided; segment III short, but visible from above; IV-VI similar to each other and declivous towards the extremity; IV is neither foveolate nor carinate leaving a pair of very small sclerites at base. Metasternum deeply depressed in the middle, the lateral side of the depression densely pubescent with usual setae. Protibia with a toothlet in the middle of its inner margin. Mesotibia modified by having the inner surface before the apex excised and armed with a reflected, thin plate-like appendage whose apical part is triangularly pointed, and basal to this appendage a tuft of some ten, spiniform setae. Macrochaetotaxy as follows: Head, 3+3 (cfls, cil, col). Pronotum, 3+3 (pdl-2s, pml), elytra, 7+7 (ejl-3s, edl-2s, eml-2), abdomen, 2+2 (al, pls). Aedeagus (Fig.2G) 0.42 mm long, in dorsal view the basal capsule ovate, voluminous and distally with a large, elongate apophysis whose apical part becomes narrow and end obtusely; there is a lateral dilation at the base of the apophysis; stylus gradually dilated distally and then suddenly becomes narrow to form an elongation ending in a truncate apex; copulatory piece long, styliform and curved to the right hand, unfortunately it was not observed in detail as thick musculature is present within the basal capsule.

Female: - Sexual characters.- genitalia (Fig.2H) composed mainly of the transverse, divided hemisternite whose anterior divided part is widely diverging with a curved incision on each side.

**Etymology.**- The specific name is dedicated to our colleague, Mr Y. Miyake, who collected this insect.

**Remarks.**- In general facies this species is near *T. reikoe* new species, but differs from it in the antennae with longer segments and in the much larger eyes with hardly dilated post-gena as seen from above. In addition the male protibia has a tooth in the middle. The Japanese name is Amami-iso-arizukamushi.

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