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Two new species of *Galathea* from Japan
and the East China Sea

(Crustacea, Anomura)*

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The recent studies will reveal two new species of *Galathea*, one of them from the East China Sea, and the other from the northern part of Kyushu. The material from the East China Sea agrees well with *G. australiensis* described by Balss (1913), however, we think that it belongs not to the true species of *G. australiensis* but to another species. All the specimens are deposited in the collection of the Zoological Laboratory, Faculty of Agriculture, Kyushu University. We wish to express our thanks to Mr. Hideo Yamashita of the Seikai Regional Fisheries Research Laboratory, and to Mr. Yoshinori Motomatsu, a primary school teacher in Ohshima, Fukuoka Pref., for their kindness to send us the materials.

*Galathea balssi* sp. nov.

(Figs. 1-2)

*Galathea australiensis*: Balss, 1913, p. 13, fig. 13.

*Description*. The carapace about as long as broad, exclusive of the rostrum. The number and arrangement of the transverse ridges as represented in Fig. 1. Two spines on the first stria on gastric region. Behind it there are two spines laterally on the second transverse stria. The rostrum about twice as long as broad, armed on each side with four teeth, of which the fourth is rather large. The upper surface sparsely furnished with fine setae. The outer orbital angle spinulated and directed outwards. Behind this are six spines or teeth, of which the first and fourth are larger. No spines behind the insertion of the antenna.

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The basal joint of the antennule bears three spines on the distal margin, one of which terminates midway between two anterior rostral teeth. The armature of the basal joints of the antenna is similar to that of other common species. The ischium of the third maxilliped about as long as the merus, and has an inner spine at the distal end. The merus has two spines on the inner margin, distal one is small, and also two spines on the outer margin. The outer margin of the carpus non spinose but protuberant. The ischium of the third maxilliped has about 23 closely placed denticles on the inner teethed ridge. The anterior sternal segments as represented in Fig. 2, D.

The right cheliped as represented in Fig. 2, E. The left one strongly gapped. The movable finger and wrist subequal in length. The upper surface of the palm less spinulated. The first to third ambulatory legs as represented in Fig. 2, F–H. They have no plumose setae but long normal one. No second row of spines to the outer side of the marginal carpal row.

Remarks. The sufficient data whether the Balss’s species was identical with G. australiensis Stimpson have not been investigated. Melin (1939) stated that the Balss’s description was not identical with and differed in the shape of the rostrum from G. australiensis. This specimen agrees with the Balss’s figure, and differs clearly from G. australiensis. At first in this specimen the outer orbital angle is not pyramid-like as that which Melin has precisely described for G. australiensis from Bonin Islands (=Ogasawara Islands). This specimen has only two spinules on the second transverse stria, but G. australiensis has usually four spinules which proved on examination to be almost always non variable. That the carapace and legs in G. australiensis are furnished with plumose setae to which Stimpson has not referred in his original description, is clear in Melin’s figure and also
in our specimens from Okinawa Island, Ryukyus (unpublished), and it seems to be an important character. On the other hand, this specimen has no plumose setae, in addition, has no bundle of setae on the anterior part of the carapace with which *G. australiensis* is usually furnished. *G. australiensis* has, as usual, two equal large spines on the inner margin of the merus of the third maxilliped,

![Diagram](image)

Fig. 2. *Galatheca balssi* sp. nov.

A: first joint of left antennule, ×11, B: basal joints of left antenna, ×11, B: endopodite of left third maxilliped, ×11, D: anterior part of sternal segments, ×11, E: right cheliped, ×6, F: right first ambulatory leg, ×6, G: right second ambulatory leg, ×6, H: right third ambulatory leg, ×6.

however, one of them in this specimen is small, and moreover, the outer margin of the merus is two-spinulated. This specimen has no second row of spines to the outer side of the marginal carpal row with which the other species of this genus are usually armed.
There is another question to be noted that Melin made the following suggestion: "Vielleicht ist die von Balss als G. australiensis abgebildete Form mit G. longimana Paulson identisch." However, this species may be distinguished from G. longimana Paulson by the number and arrangement of spines on the carapace, and by the length of joints of the third maxilliped.

**Type.** Holotype, male, Cat. No. 8513, Zoological Laboratory, Faculty of Agriculture, Kyushu University; from East China Sea (27° 01.2' N, 122 56' E), sandy bottom, 120-122 m deep; Feb. 21, 1961; collected by Mr. H. Yamashita.

**Dimensions in holotype (in mm):**

- Length of carapace including rostrum: 9.55
- Breadth of carapace: 6.00
- Length of rostrum: 3.60
- Breadth of rostrum: 2.00
- Length of cheliped: 21.35
- Length of wrist: 3.35
- Breadth of wrist: 3.00
- Length of palm: 5.13
- Breadth of palm: 3.70
- Length of movable finger: 1.30
- Breadth of movable finger: 1.60

**Galathea genkai** sp. nov.

(Figs. 3-4)

**Description.** The carapace nearly as long as broad, the rostrum excluded. The striaion of the carapace weak and sparsely provided with rather large setae among a row of fine setae. All the transverse ridges incomplete. On the hepatic region the striaion is wavy and scale-like. Immediately behind the second transverse stria stand six strong setae. The arrangement of the transverse ridges as represented in Fig. 3. No spines on the gastric region which is not defined. Four spinules on the hepatic region. On the median transverse ridge lie two spinules laterally.

The rostrum about twice as long as broad, armed on each side with three short and broad teeth of subequal size and a small one at the base. The upper surface of the rostrum furnished with short setae. There is no tooth which forms the external angle of the orbit. Behind this the carapace armed with inconstant number of spines and teeth.
on each side. The marginal spines and teeth of the carapace vary
from dorsal to ventral in position so that they are not arranged
in a longitudinal row of spines along the lateral margin. Behind the
insertion of the antenna there is a rather small spine which is not
seen from a dorsal view.

The form of the anterior sternal
segments as represented in Fig. 4, D.
The first joint of the antennular
peduncles bears three spines directed
forwards on the distal margin, one
of which is setose and extends to
the tip of the second rostral tooth.
The second peduncle of the antenna
is furnished with an outer distal and
an inner distal spine, the third with
an inner distal spine.

The ischium of the third max-
illiped as long as the merus, armed
at its inner distal angle with a small
spine, and its outer distal angle
well developed. The inner teethed
ridge of the ischium armed with 10
closely placed denticles. The merus
of the third maxilliped two-spined
on each margin, spines sharp, elon-
gated, and directed rather inwards.

The chelipeds subequal in length
and very similar. The movable finger
and wrist subequal in length and about
two thirds the length of the palm.
The movable finger about twice as
long as broad. The upper surface of
the palm and wrist spinose. The arm
and wrist have a large and rather
depressed spine on each inner distal
angle.

The first and second ambulatory legs armed with a row of spines
along the outer margins of the merus, carpus, and proximal half of
the propodus. A second row of spines lies on the outer sides of the
marginal meral, carpal and propodal rows. There are spines on the
lower margins of the merus, propodus and dactylus. In the third
ambulatory legs the armature is not so much emphasized but each
joint except the merus is rather in evidence.
Remarks. This species is allied to *G. subsquamata* Stimpson in the arrangement of the transverse ridges on the carapace, but it is easily distinguished from the latter by the armature of the rostrum and by lacking gastric spines. The number and arrangement of lateral marginal spines and teeth on the carapace, and the armature of the marginal spines on the ischium and merus of the third maxilliped are remarkably different from other members of this genus.

Types. Holotype, female, Cat. No. 5336, Zool. Lab., Fac. Agr., Kyushu Univ.; off Ohshima, in the Sea of Genkai, the northern part of Kyushu (33° 45'N, 130° 25'E), sandy bottom, ca. 10 m deep; July 3, 1958; collected by Mr. Y. Motomatsu. Paratype: a female, Cat. No. 8041, Zool. Lab., Fac. Agr., Kyushu Univ.; from the same locality as

![Fig. 4. *Galathea genkai* sp. nov.](image)

A: first peduncle of left antennule, ×19, B: basal joints of left antenna, ×18, C: endopodite of right third maxilliped, ×16, D: anterior part of sternal segments, ×14, E: left cheliped, ×7, F: right first ambulatory leg, ×7, G: right second ambulatory leg, ×7, H: right third ambulatory leg, ×7.
in the holotype; Feb. 1958; collected by Mr. Y. Motomatsu.

*Dimensions in holotype (in mm)*:

- Length of carapace including rostrum: 9.95
- Breadth of carapace: 5.65
- Length of rostrum: 3.50
- Breadth of rostrum: 2.00
- Length of cheliped: 15.90
- Length of wrist: 2.25
- Breadth of wrist: 1.65
- Length of palm: 4.10
- Breadth of palm: 2.25
- Length of movable finger: 2.50
- Breadth of movable finger: 1.00

**References**


