

***Bradypallene espina*, New Genus and New Species, a Pycnogonid
from the East Sea of Korea (Pycnogonida)**

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동해 산 바다거미 1 신속신종, *Bradypallene espina*

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(Received April 9, 1987)

적 요

1981년 10월 2일에 울릉도 남양 인근의 수심 5~7m 해저에서 채집되어 해양 연구소에 보관되었던 바다거미류 중 4개체가 신속·신종입이 밝혀져 이를 *Bradypallene espina*로 명명하여 기재한다.

신종은 더듬이다리가 3마디이고(암수) 눈돌기가 머리마디의 앞쪽에 위치하며 다리에 결발톱이 있는 집, 포란지에 끝발톱이 없는 점으로 보아 기록된 타 속에 소속시킬 수가 없다.

***Bradypallene*, new genus**

DIAGNOSIS. Callipallenidae. Trunk smooth, compact and completely segmented. Ocular tubercle low, placed on the frontal part of cephalic segment. Proboscis robust, with the tip widened and truncated. Chelifores 2-segmented; chela chelate; chela fingers without teeth. Palps short, 3-segmented in both sexes. Ovigera 10-segmented in both sexes, without terminal claw and compound spines. Legs smooth, without propodal heel and heel spine; claw semi-vestigial; auxiliary claws well developed, much longer than claw; cement gland present.

TYPE SPECIES. *Bradypallene espina*, new species.

REMARKS. As indicated by several authors the differences between the families in Pycnogonida are not clear-cut, as is the case in the new genus. We had to hesitate to assign this pycnogonid to any known family. The shape of proboscis and chela, the position of ocular tubercle and the morphology of the cement glands are characteristic of the Phoxichilidiidae, whereas the presence of palps in both sexes and the long abdomen are shared with the

Ammotheidae. However, it disagrees from the Phoxichilidiidae in having 3-segmented palps in both sexes and 10-segmented ovigers in both sexes as well, and disagrees from the Ammotheidae in having less developed palps and prominent chela fingers. According to Hedgpeth (1948, p. 159), the Callipallenidae are midway between two groups (the families Nymphonidae, Ammotheidae and Colossendeidae, and the families Phoxichilidiidae and Pycnogonidae) of Pycnogonida. Because of this and its 3-segmented palps, completely chelate chela, 10-segmented oviger in both sexes and other callipallenid characters, we consider it a genus of the Callipallenidae.

The similarities with other callipallenid genera, *Stylopallene* Clark, 1963, *Siphopallene* Stock, 1968, *Spasmopallene* Stock, 1968 and *Pseudopallene* Wilson, 1878 in compact body forms and with *Seguapallene micronesica* Child, 1983 which has also a semi-vestigial claw on the legs, are superficial because of the lack of the palps in these genera. In nearly all genera of the Callipallenidae the palps are absent or strongly reduced vestiges in female, and the ocular tubercle is placed in the posterior half of the cephalic segment. From these facts the new genus is hardly allied to other known genera of the family.

ETYMOLOGY. The generic name, *Bradypallene* is from the Greek, "brady" (slow), alluding to the sluggish appearance of the animal, and "pallene", the ending of many generic name of the family. Gender is feminine.

***Bradypallene espina*, new species**

(Figs. 1, 2)

MATERIAL EXAMINED. 2 ovigerous males (1 is holotype) and 2 mature females (2 paratypes, 1 male and 1 female, are deposited in the Zoological Museum, University of Amsterdam, and other dissected types are deposited in the Department of Biology, Kangreung National University); from Namyang in Ullung-do Island (37°28'N, 130°51'E), in the East Sea (=the Sea of Japan), rocky bottom, 5~7m; 2/×/1981; J.-S. Hong collected.

DESCRIPTION. Body evenly convex dorsally. Trunk compact, robust, smooth and completely segmented. Lateral processes touching, as long as wide, without any setae or tubercles. Cephalic segment slightly longer than wide, bounded by a shallow groove from the 1st trunk segment. Ocular tubercle low, wide, not clearly defined, and positioned on frontal area of cephalic segment. Eye rather large, upper half weakly pigmented. Abdomen long, directed downward, reaches near the middle of coxa 2 of last legs.

Proboscis stout, directed downward at an angle of about 45°, about 1.4 times as long as distal width; the tip widened and truncated.

Chelifere 2-segmented, about 2/3 as long as proboscis. Scape broad, with 1 or more small setae distally. Chela unarmed, slightly longer than half length of scape. Chela fingers semicircularly curved, gaping, without teeth. Movable finger longer.

Palp 3-segmented in both sexes, shorter than chelifere and about half as long as proboscis. First segment shortest, shorter than wide; 2nd segment longest, slightly curved

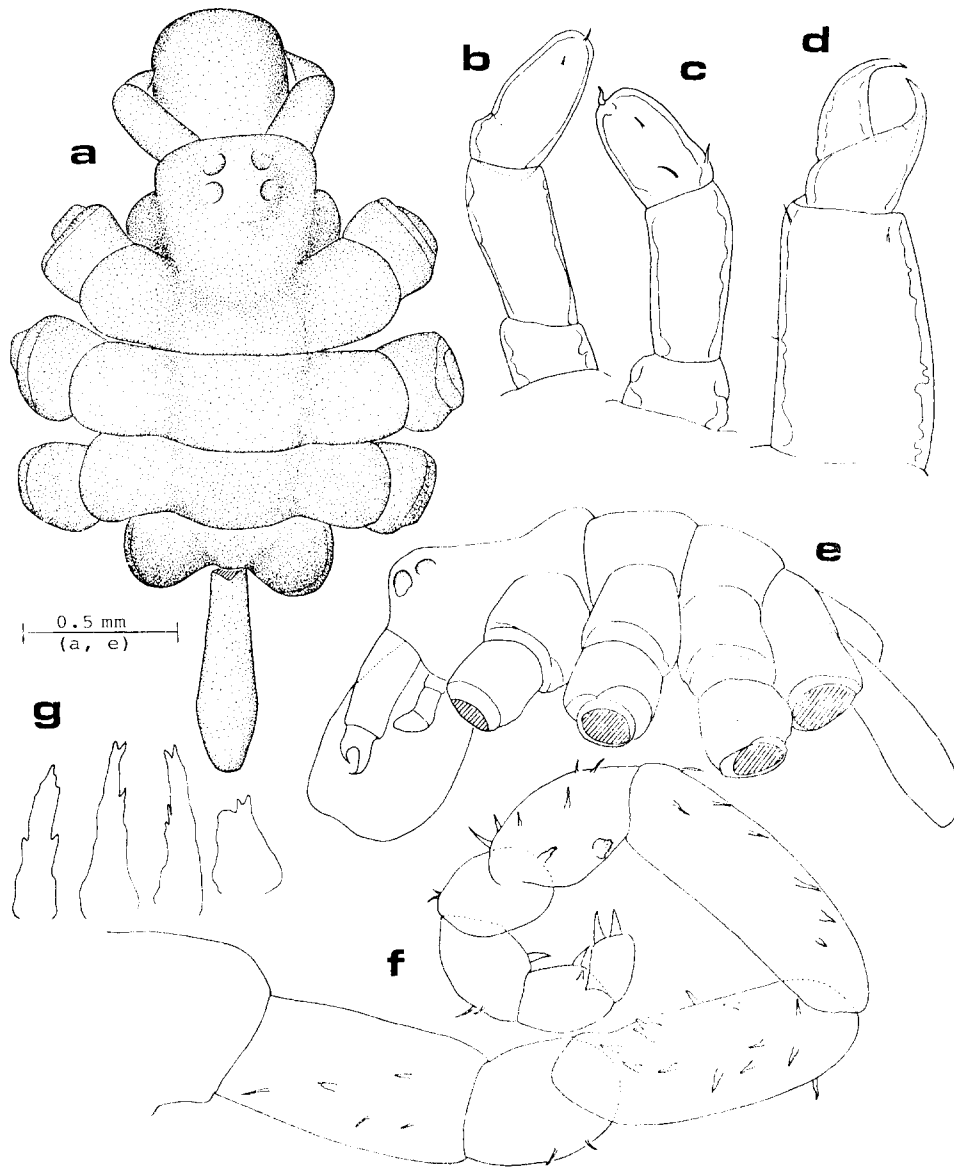


Fig. 1. *Bradypallene espina*, new genus, new species.

a, dorsal view of trunk; b, c, palps; d, chelifore; e, lateral view of trunk; f, oviger; g, spinules of oviger (a, c-g; holotype, male; b, female).

upward distally; 3rd segment longer than or as long as wide, the tip finger-shaped and armed with a spinule.

Ovigers 10-segmented in both sexes, without terminal claw. In male oviger, 1st segment wider than long; 2nd with several reversed setae; 3rd a little longer than wide; 4th slightly

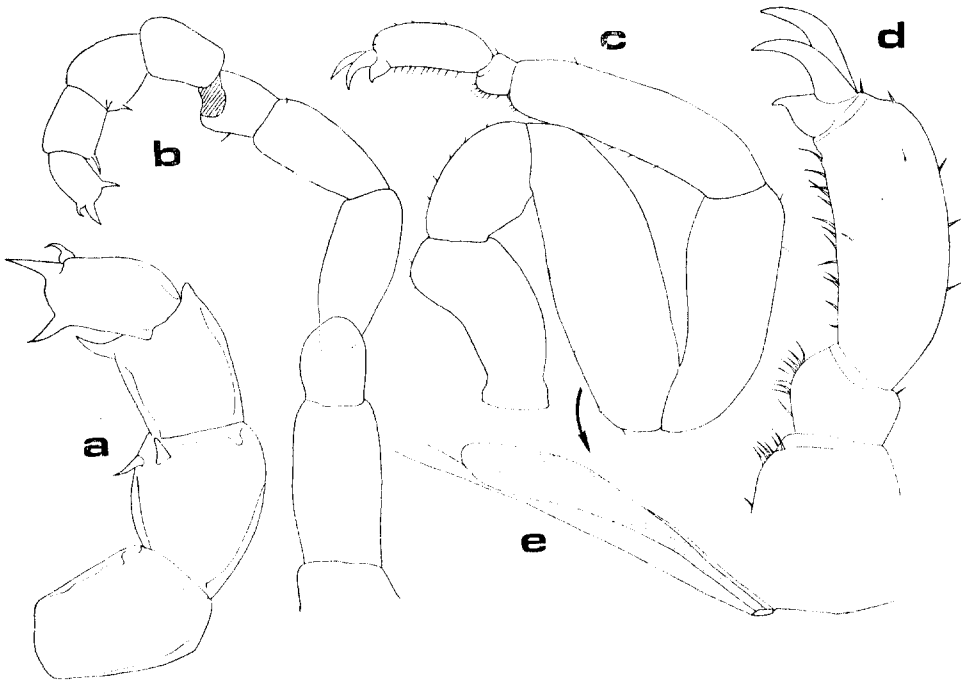


Fig. 2. *Bradypallene espina*, new genus, new species.

a, distal segments of female oviger; b, female oviger; c, 3rd leg, male; d, distal portion of 3rd leg, male; e, cement gland of 3rd leg.

longer than 2nd, armed with about 10, reversed, irregular spinules, some of which are distinctly wider or ramified; 5th longest, with several irregular spinules on outer margin, without distal apophysis or swelling; 6th armed with several spinules on outer margin and 1 or 2 thick, irregular and feebly serrate spines on inner side; distal 4 segments gradually shorter and narrower; 7th with 2 distal setae on outer margin; 8th with 1 inner distal spine and 2 outer setae near distal corner; 9th with 2 inner spines; 10th terminates in 2 simple spines. Egg clusters large, globular, 1 in holotype and 2 in other male.

Female oviger less setose; 2nd and 4th segments nearly equal in lengths; 1st to 4th segments without setae or spine; 6th to 10th subequal in length; 8th with 2 simple spines, and 9th with 1, each on inner distal corner; 10th with 2 distal well-separated spines, and smaller 1 near distal outer corner. All spines simple, not denticulate or serrate.

Legs rather short, glabrous, only a few setae on each segment. Coxa 1 as long as wide. Coxa 2 more than twice coxa 1, with rounded ventrodiscal genital prominence in 3rd and 4th legs of male. Cement gland small, with long tube, opens directly to dorsodistal corner of femur, and present in all legs at distal a fourth of femur. Tibia 2 a little longer than tibia 1, with a few setae vntally. Propodus less than 3 times its distal width; straight sole, without heel or heel spine, armed only with setae. Claw short, semi-vestigial, slightly

longer than its basal width. Auxiliary claws strong, curved, about twice as long as claw.

Legs of female more swollen. Genital opening on coxa 2 present in all legs.

Measurement of holotype (mm). Trunk length (anterior margin of cephalic segment to tip of 4th lateral processes, straight course), 1.90; trunk width (across 2nd lateral processes), 1.13; proboscis, 0.63; abdomen, 0.68; 3rd leg (coxa 1, 0.23; coxa 2, 0.60; coxa 3, 0.38; femur, 0.92; tibia 1, 0.72; tibia 2, 0.83; tarsus, 0.10; claw, 0.07; auxiliary claw, 0.15).

ETYMOLOGY. Named for the glabrous body of the animal, from the Greek, "e" (absence of something) and "spina" (spine).

ABSTRACT

The pycnogonid *Bradypallene espina*, known from four specimens taken on the infralittoral rocky shore at Namyang in Ullung-do in the eastern sea of Korea, is assigned to a new genus in the family Callipallenidae. The new genus is characterized by the combination of four major characters: the presence of 3-segmented palps in both sexes, the frontal position of ocular tubercle on the cephalic segment, the presence of auxiliary claw and the absence of terminal oviger claw.

ACKNOWLEDGMENT

We express our gratitude to Prof. Dr. Jan H. Stock, University of Amsterdam, for his critical review of the manuscript.

REFERENCE

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