

SPECIAL PUBLICATIONS FROM THE SETO  
MARINE BIOLOGICAL LABORATORY

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BIOLOGICAL RESULTS  
OF  
THE JAPANESE ANTARCTIC RESEARCH EXPEDITION  
7.

ON A CUMACEAN CRUSTACEA (*DIASTYLIS  
CORNICULATUS* HALE) OBTAINED BY  
THE SECOND JAPANESE ANTARCTIC  
RESEARCH EXPEDITION (1957-58)

BY

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FACULTY OF LIBERAL ARTS AND EDUCATION  
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KAMAKURA, KANAGAWA-KEN, JAPAN

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ON the Second Japanese Antarctic Research Expedition (1957-58) the zoologist of the expedition, Assistant Professor Riozo YOSII of the Kyoto University obtained a specimen of cumacean Crustacea from off Prince Harald Coast. The specimen was sent to me by Dr. Takasi TOKIOKA of the Seto Marine Biological Laboratory, Kyoto University, for examination.

On examining this I found that it may be referred to a young female of *Diastylis corniculatus* HALE, which was originally reported by HALE (1937) based on a subadult male specimen (length 16 mm) from off MacRobertson Land.

I wish to express my sincere thanks to Professor Tune SAKAI for his guidance and also to Dr. Takasi TOKIOKA for giving me the opportunity of examining this material. My thanks are also due to Dr. Huzio UTINOMI of the Seto Marine Biological Laboratory and Professor Masao IWASA of the Seikei University for their much helps and valuable advices.

*Diastylis corniculatus* HALE

(Figs. 1, 2)

*Diastylis corniculatus*, HALE (1937) p. 48, text-figs. 8a-c, 9a-j.

Young female specimen (length, about 6.9 mm): The integument of body is well calcified and armed with many spines and spinules. The carapace is two-fifths of the length of animal and slightly less than the combined lengths of all the free thoracic segments and first four abdominal segments. The lateral or lower margin of carapace is serrated. The antennal notch is absent. The pseudorostrum is one-fifth as long as carapace.

There are a pair of dorsal spines on each of the second to fifth free thoracic segments. The spines on the third are a little longer and larger than those on the other segments. The second and third free thoracic segments have one or two lateral spines and spinules on each lower portion.

Each of the first to fourth and sixth abdominal segments is furnished with two or three pairs of dorsal spines. On the fifth segment three dorsal spines are arranged in a median row.

The telson is nearly as long as the fourth and fifth abdominal segments combined, with a large dorsal spine on the pre-anal portion. The post-anal portion is one-half of the length of telson and furnished with two terminal spines and four pairs of lateral spines.

The first joint of peduncle of antennule is slightly longer than the second and third joints combined and furnished with two large spines on the terminal portion. The third is more than three-fourths as long as the second. Three-jointed accessory flagellum is nearly one-third as long as the three-jointed main flagellum. The first joint of main flagellum is slightly longer than the second.

The basis of third maxilliped is a little shorter than the remaining distal joints together and furnished with a large spine on the distal portion. There

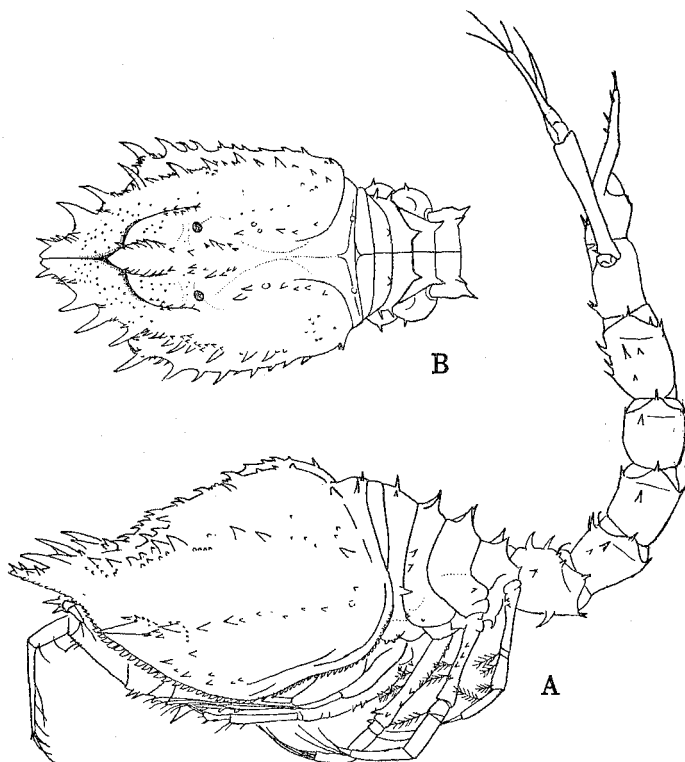


Fig. 1. *Diastylis corniculatus* HALE. Young female.  
A, side view; B, anterior portion of body, from above.

are spines, plumous hairs and fine hairs on the inner border and fine hairs on the outer. The ischium has a large spine on the lower surface and three small spines on the dorsal. The merus has a spine on the lower side and two small spines on the outer edge. The ischium, merus and carpus are subequal in length.

The basis of first pereiopod is nearly three-fourths as long as the total length of remaining distal joints together. On the lower surface there are four spines, one of which is larger than the others. There are spinules,

On a Cumacean Crustacea (*Diastylis corniculatus* HALE)

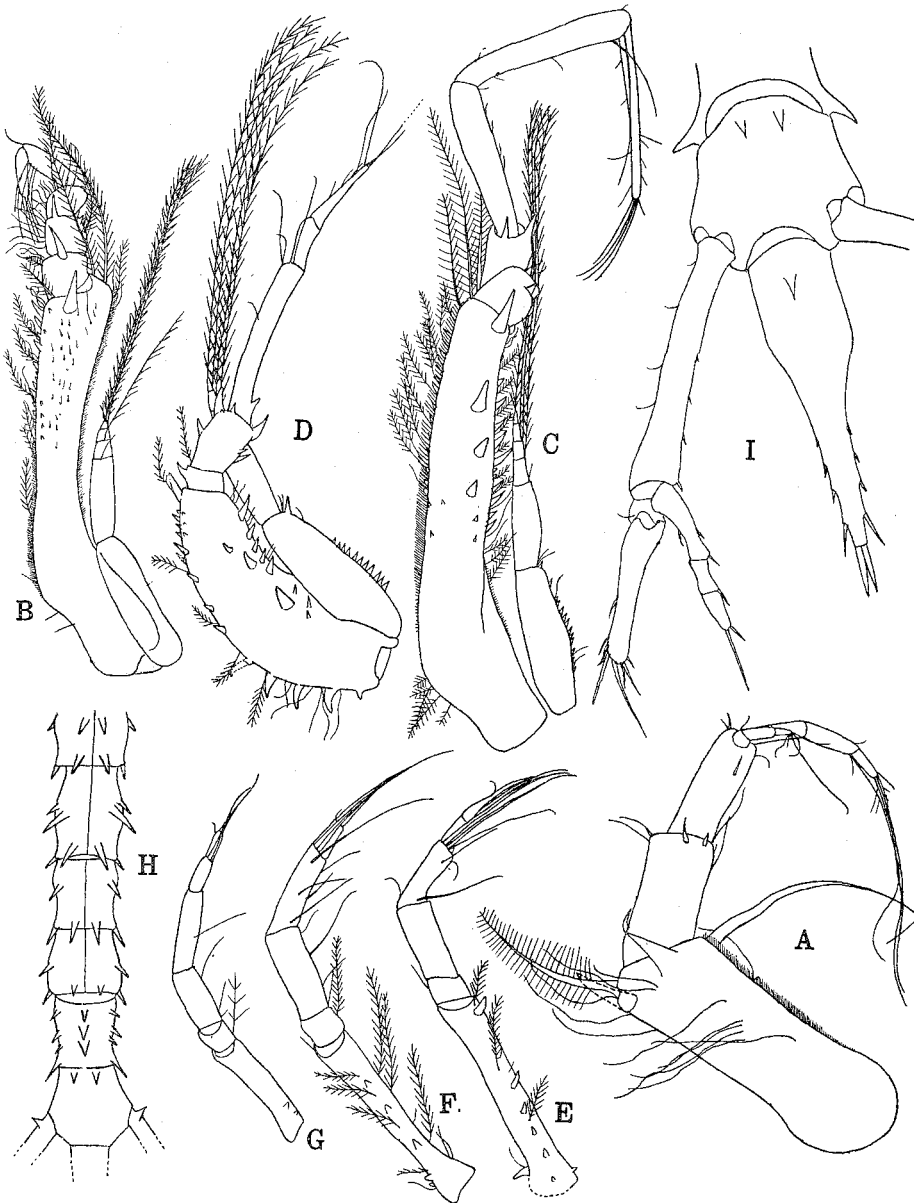


Fig. 2. *Diastylis corniculatus* HALE. Young female.

A, antennule; B, third maxilliped; C-G, first to fifth pereopods; H, dorsal spines on the abdominal segments; I, telson and left uropod.

plumous hairs and fine hairs on the lateral borders. One or two spines are on each distal end of the ischium and merus. The dactylus is slightly shorter than the propodus, which is a little longer than the carpus. On the outer border of exopod there are about fourteen or fifteen spinules.

The basis of second peraeopod is a little longer than the ischium, merus and carpus combined, furnished with rows of spines on the lower surface and on the lateral borders. The ischium is short, one-third as long as the merus and furnished with a spine on the inner border. The merus is one-third as long as the carpus and furnished with three spines on the lateral borders. The carpus is much longer than the propodus and dactylus combined and has a small spine on the proximal outer border. The dactylus is one and a half times as long as the propodus. The peduncle of exopod is furnished with a spine and about ten spinules on the distal end.

The third to fifth peraeopods without exopods. The basis of third peraeopod is slender, furnished with about nine spines and nearly as long as the next four joints together. The ischium has a spine. The basis of fourth peraeopod is furnished with about eight spines and about as long as the next three joints together.

The peduncle of uropod is shorter than the telson, which is nearly twice as long as the sixth abdominal segment. There are four spines on the inner border. The exopod is a little longer than the endopod and also slightly more than one-half as long as the peduncle. The first joint of endopod is as long as the combined length of distal two joints, which are subequal in length.

*Remarks:* The specimen differs from the HALE's original description of subadult male in the following points of characters.

In HALE's original description of a subadult male specimen from off MacRobertson Land, the length of carapace is as long as all the free thoracic segments and first three abdominal segments together. There are a pair of spinules on the distal ends of pseudorostrum. The dorsal spines of the fourth and fifth free thoracic segments are long and stout. The telson has six pairs of lateral spines. The peduncle of uropod is twice as long as the sixth abdominal segment and furnished with about eight spines on the inner border.

In a young female specimen from off Prince Harald Coast, the carapace is as long as all the free thoracic segments and first four abdominal segments together. A pair of spines on the distal ends of pseudorostrum are large. The dorsal spines of the fourth and fifth thoracic segments are comparatively short. The telson has four pairs of lateral spines. The peduncle of uropod is less than twice as long as the sixth abdominal segment and furnished with four spines on the inner border. The distal ends of the first joint of peduncle of antennule is provided with two large spines, which are not described and illustrated in the HALE's original description.

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The above-mentioned differences may be due to the individual variations, such as sexual and growth variations.

*Occurrence*: 1 ♀ (immature), Off Prince Harald Coast (Lat. 68°60' S., long. 32° W.), depth, about 350 m, muddy sand bottom, January 31, 1958. (The specimen will be preserved in the National Science Museum, Tokyo, Japan.)

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