

# A New Record of Genus *Echinolampas* Sea Urchin (Echinoidea: Echinolampadoidea: Echinolampadidae) from Jeju Island, Korea

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**Abstract** - A sea urchin was collected from 140m deep at Gapado which is nearby Moseulpo in Jeju Island, Korea on 30 June 2010. This specimen was classified as *Echinolampas koreana* H.L. Clark 1925, belonging to family Echinolampadidae of order Echinolampadoidea based on its morphological characteristics. This order and lower categories are newly recorded from Korea. Distinct morphological characters of this species are as follows: test is relatively high. Abactical system has four large genital pores. Periproct is slightly sunken and situated below equator line. Peristome is very small and rather deeply sunken. Tridentate and ophiocephalous pedicellariae are present. Color in alcohol is light purple. These morphological characters are re-described with illustrations.

**Key words:** *Echinolampas koreana*, Echinolampadidae, Echinolampadoidea, sea urchin, Jeju Island, Korea

## INTRODUCTION

More than 285 species have been assigned to genus *Echinolampas* (Roman, 1965). Due to the very large numbers of species, several attempts have been made to subdivide this genus into subgenera or sections. Lambert and Thiery (1921) divided this genus into eight sections, distinguished on variable characters, as evidenced by the fact that different specimens of one species have been assigned to more than one section (Kier 1957). Smith (2013) divided *Echinolampas* into four subgenera, using reliable characters.

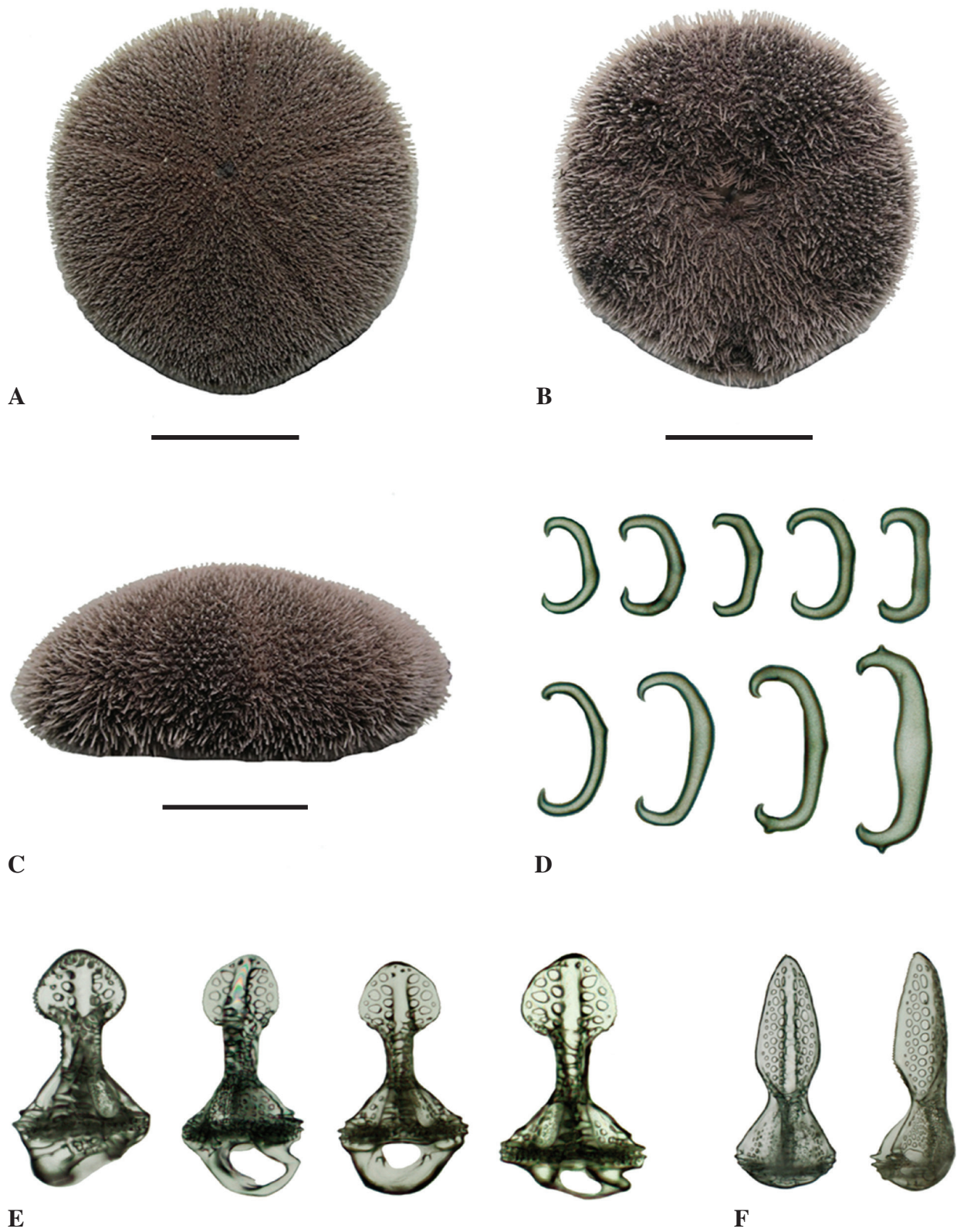
A sea urchin was collected from Gapado Island which is nearby Moseulpo in Jeju Island, Korea at 140 m deep with fishing nets on 30 June 2010. The collected specimen was preserved in 95% ethanol and was deposited in the Marine Echinoderm Resource Bank of Korea (MEBRK), Sahmyook

University, Seoul, Korea. The morphological features were photographed using a stereo microscope (Nikon SMZ1000, Nikon Co., Tokyo, Japan) and digital camera (Nikon D7000). This specimen was classified as *Echinolampas koreana* H.L. Clark 1925 belonging to family Echinolampadidae of order Echinolampadoidea based on its morphological characteristics, and was re-described with illustrations. A morphological identification of *Echinolampas* specimen collected was performed in this study.

## SYSTEMATIC ACCOUNTS

Class Echinoidea Leske, 1778  
Subclass Euechinoidea Bronn, 1860  
Infraclass Irregularia Latreille, 1825  
Order Echinolampadoidea Kroh and Smith, 2010  
만두등성계목 (신칭)

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**Fig. 1.** *Echinolampas koreana*. A, dorsal view; B, ventral view; C, lateral view; D, spicules of tubefeet; E, ophiocephalous pedicellariae; F, tridentate pedicellariae. Scale bars: A-C = 3 cm, D = 300  $\mu$ m, E, F = 100  $\mu$ m.

Family Echinolampadidae Gray, 1851

만두등성게과 (신칭)

Test circular to ovate with flattened ventral side. Ambulacra petaloid aborally, ambulacral plates beyond petals with single pores. Phyllodes widened adorally, with an inner and outer series of pores. Buccal pores present, opening at edge of peristome.

Genus *Echinolampas* Gray, 1825 만두등성게속 (신칭)

Test medium size, domed with relatively flat dorsal side. Petals straight or bowed and open distally. Two columns of pore-pairs in each petal of unequal lengths. Phyllodes short but developed, with two or three series in each half ambulacrum. Peristome subcentral. Periproct transverse.

Type species. *Echinanthus ovatus* Leske, 1778.

***Echinolampas koreana* H.L. Clark, 1925**

한국만두등성게 (신칭) (Fig. 1A-F)

*Echinolampas koreana* HL Clark, 1925: 183, pl. 10, figs. 4, 5; Mortensen, 1948: 281, pl. 4, fig. 9; Kier and Lawson, 1978: 78; Kroh, 2015: 513238.

**Material examined:** 1 specimen, Gapado, Jeju Island, 30 June 2010, at 140 m deep with fishing net.

**Description:** Abactinal system only 17 mm from anterior margin of test, closely tuberculated, with four large genital pores. Petals I and V with outer poriferous area about 21 mm. long, with 35 or more pore-pairs, and inner only about 12 mm with 24 or more pore-pairs. Petals II and IV with posterior poriferous area about 18 mm with 36 or more pore-pairs and the anterior about 11 mm with 23 or more pore-pairs. Petal III has left-hand poriferous area about 17 mm with some 30 pore-pairs, and right-hand area a little shorter, but with about same number of porepairs. Tuberculation rather fine, about 50 primary tubercles of 25 mm. Periproct somewhat sunken, below ambitus, and overhung by test on its upper margin. Peristome very small, only 3.5 mm, wide, very deeply sunken. Ophiocephalous and tridentate pedicellariae present.

**Size:** Test length 76 mm, width 66 mm and height 33 mm.

**Color:** Body color was light purple in alcohol.

**Distribution:** Korea (Jeju Island), Japan (Korea Strait, eastern channel between South Korea and southwest Japan).

**Deposition:** These specimens were deposited in the Marine Echinoderm Resource Bank of Korea (MEBRK), Sahmyook University, Seoul, Korea.

**Remarks:** This species was firstly collected only one specimen in adjacent water of Ojika Island (33°14'N, 128°53'E) in Japan side of Korea Strait by H.L. Clark (1925). Nevertheless it was denominated as *Echinolampas koreana*. And only one specimen was collected with fishing net at 140 m deep of Gapado which is a southern island near Moseulpo of Jeju Island in June 2010. This order and lower categories such as family and genus are newly recorded from Korea, and this species is newly reported in marine fauna of Korea.

## ACKNOWLEDGEMENT

This study was supported by the Survey of Korean Indigenous species, NIBR, a grant from the Marine Biotechnology Program (MERBK: Marine Echinoderm Resource Bank of Korea), and the program of Management of Marine Organisms causing Ecological Disturbance and Harmful Effects, funded by KIMST/MOF, Korea.

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Received: 13 May 2015

Revised: 12 June 2015

Revision accepted: 12 June 2015