

Two Unrecorded Veneroid species (Bivalvia, Heterodonta) from Korean Waters

Jun-Sang Lee, Yong-Seok Lee¹ and Duk-Ki Min²

Institute of Environmental Research, Kangwon National University, Chunchon 200-701

¹*Department of Life Science and Biotechnology, College of Natural Sciences, Soonchunhyang University*

²*Min Molluscan Research Institute, 771-11, Yeoksam-dong, Kangnam-gu, Seoul 135-928*

ABSTRACT

We report two new records Korean marine bivalves. The new record species are *Siliqua albida* (Adams & Reeve, 1850) and *Macoma (Macoma) middendorffi* Dall, 1884. As a result, the family Pharidae in Korea turned out to be 8 species of 4 genera and Tellinidae are 37 species of 15 genera.

Keywords: New record, *Siliqua albida*, *Macoma (Macoma) middendorffi*, Pharidae, Tellinidae

INTRODUCTION

The family Pharidae is widely known under the name Culellidae. About 65 species are known worldwide. Shells are generally similar to those of solenids in their narrow rectangular shape, but separated from the Solenidae proper mainly on the basis of cadial dentition and nonterminal umbos. Also, Pharids tend to be laterally compressed and wider, and the umbones are generally subterminal. Seven species of 4 genera in Korean Pharidae were reported by Siba (1934), Lee (1956), Choe & Park (1997), and Lee & Min (2002) so far.

The superfamily Tellinacea consist of Psammobiidae, Solecurtidae, Semelidae, Scrobiculariidae, and Donacidae, with fewer than 600 species in worldwide. Among them the Tellinidae were contains 2 subfamilies, about 20 genera, numerous subgenera,

and about 350 species. The subfamily Tellininae have lateral teeth and rather glossy shells, are usually found in tropical and subtropical waters, and include *Tellina*, *Arcopagia*, and *Strigilla*. The Macominae lack lateral teeth, have a more or less chalky shell, and are found mostly in the cold boreal and antiboreal seas, for example, *Macoma*, *Apolymetis*, and *Psammotreta*. 36 species of 15 genera in Korean Tellinidae were reported by Siba (1934), Lee (1956), Kang *et al.*, (1971), Choe & Park (1997), and Lee & Min (2002) so far.

SYSTEMATIC ACCOUNTS

Order Veneroida H. & A. Adams, 1856 백합목
Family Pharidae H. & A. Adams, 1858 작두콩가리맛조개과
Genus *Siliqua* Mühlfeld, 1811 보라맛조개속 (신칭)
***Siliqua albida* (Adams & Reeve, 1850 in 1848-50)**
작은비단가리맛 (신칭) (Fig. 1)
Solena albida Adams & Reeve, 1850: p. 84.
Cultellus hanleyi Dunker, 1861: p. 421.
Cultellus attenuatus Dunker, 1861: p. 422.
Cultellus scalpellum Sowerby II, 1874: *Cultellus*,
species 25, pl. 6.
Phaxas albida: Bernard *et al.*, 1993, p. 103.
Siliqua albida: Higo *et al.*, 1999, p. 480.
Solen albid: Xu & Zhang, 2008, p. 217.

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Corresponding author : Jun-Sang Lee

Tel: +82 (33) 250-7409 e-mail: sljun@kangwon.ac.kr
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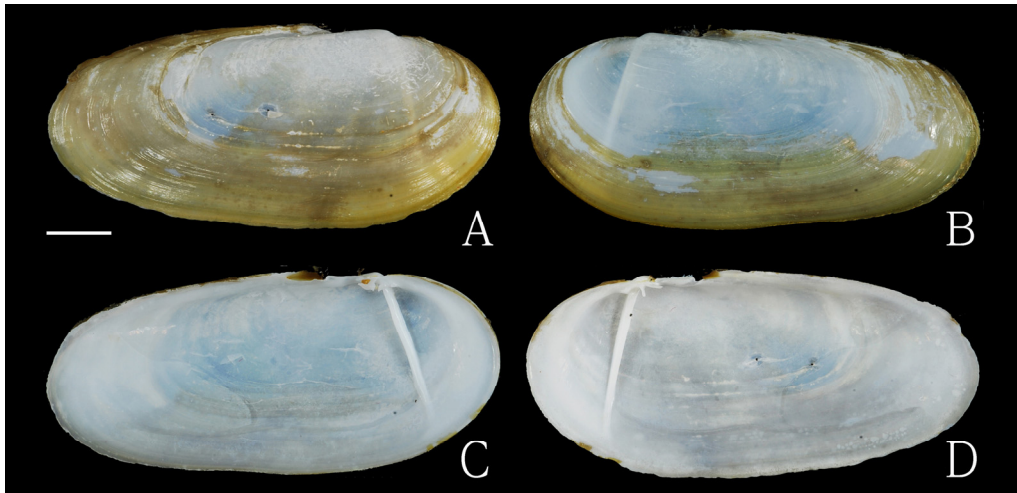


Fig. 1. *Siliqua albida*. A. exterior of right valve; B. exterior of left valve; C. interior of left valve; D. interior of right valve. Scale: 4 mm.

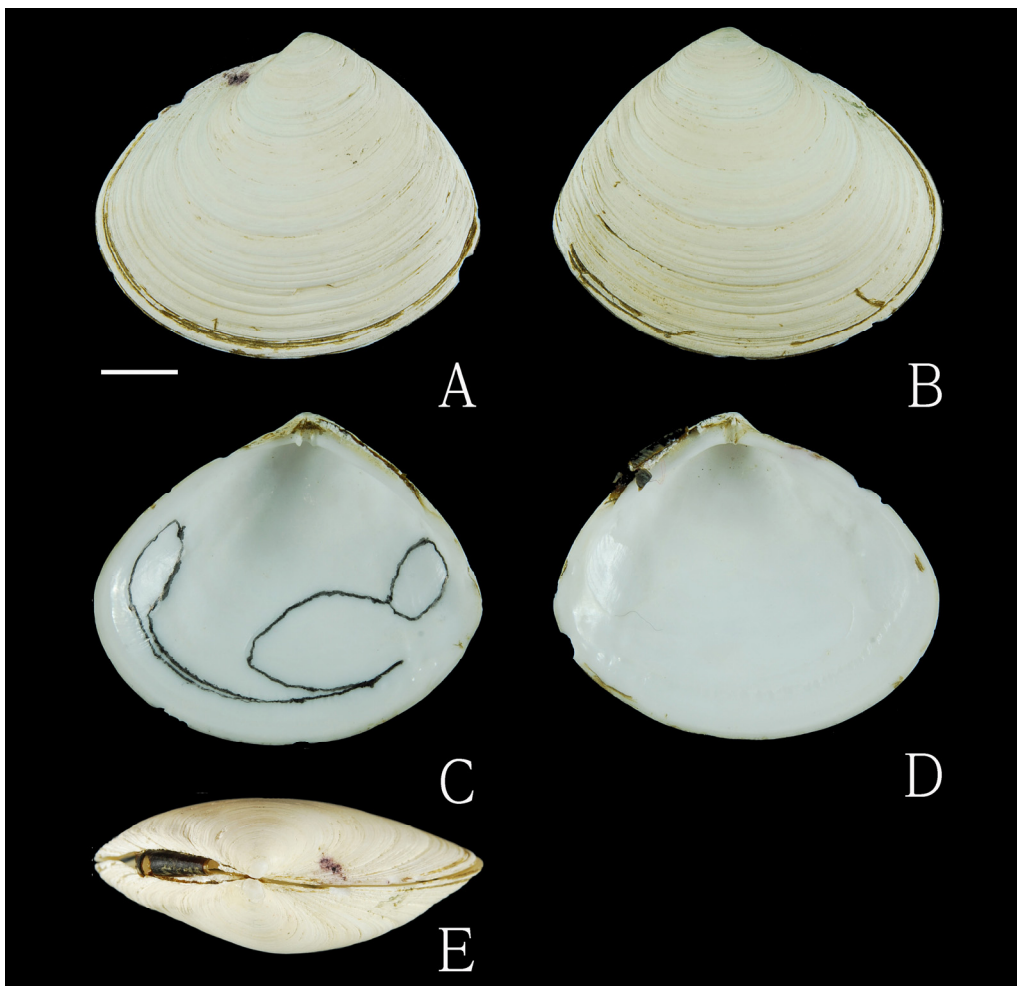


Fig. 2. *Macoma (Macoma) middendorffi*. A. exterior of right valve; B. exterior of left valve; C. interior of left valve; D. interior of right valve; E. dorsal view. Scale: 8 mm.

Type locality: Korea.

Materials examined: 86 specimens (Balpo beach, Goheung-gun, Jeollanam-do: 23 May 1998).

Measurement: Height 15 mm, Length 31 mm, Width 7 mm.

Description: Shell rather thin and flat, elongated elliptical in shape. Anterior side shore and rounded, posterior side elongated and rounded, dorsal margin slightly oblique, ventral margin straight or slightly concave at middle. Beaks situated at about 1/4 distance from front. Color of shell whitish gray, covered externally with a very thin, chestnut-brown, glossy periostracum. Inner side of shell white and hinge small, with a white fold running vertically from umbo to ventral margin.

Habitat: 10-100 m in depth, sandy mud bottom.

Distribution: Yellow Sea, Philippines, South China Sea, Southeast Asia.

Family Tellinidae Wilkes, 1810 접시조개과

Genus *Macoma* Leach, 1819 대양조개속 (신칭)

***Macoma (Macoma) middendorffi* Dall, 1884**

녹껍질높은대양조개 (신칭)(Fig. 2)

Macoma middendorffi Dall, 1884: 347.

Macoma middendorffi: Habe & Ito, 1975, p. 144, pl. 50, fig. 3, 4; Okutani *et al.*, 2000, p. 981, pl. 488, fig. 53; Evseev & Yakovlev, 2006, p. 84.

Macoma (Macoma) middendorffi: Habe, 1977, p. 209.

Type locality: Bering Sea.

Materials examined: 6 specimens (Jumunjin, Gangneung-si, Kangwon-do: 26 Jan. 1995); 4 specimens (Namae, Yangyang-gun, Kangwon-do: 28 April 1995).

Measurement: Height 38 mm, Length 43 mm, Width 14 mm.

Description: This species is characterized by the more or less flat left valve, rather well-inflated right valve and the wide and relatively shore ligament which is sunk partially into the shell. Color cream to white. Beaks slightly nearer the anterior end. Posterior dorsal margin short and straight. Concentric sculpture of fine, irregular threads. Periostracum remaining on the margins is brownish gray. Pallial sinus large, rounded at its reaching beyond the center of the valve.

Habitat: Subtidal to 30 m in depth. fine sand and mud bottom.

Distribution: East Sea, Okhotsk Sea, Bering Sea, Alaska.

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REFERENCES

- Adams, A. and Reeve, L. (1848-1850) Mollusca. The zoology of the voyage of H.M.S. Samarang; under the command of Captain Sir Edward Belcher. London. Part 1. x +24 pp, pls 1-9 (1848); part 2. 25-40, pls 10-17 (1850); part 3. 45-87, pls. 18-24 (1850).
- Bernard, F.R., Cai Ying-Ya and Morton, B. (1993) Catalogue of the Living Marine Bivalve Molluscs of China. Hong Kong University Press, pp. 1-146.
- Choi, B.R. and Park, J.K. (1997) Mollusca. *In*: List of animals in Korea. *The Korean Society of Systematic Zoology*, Seoul, pp. 1-489.
- Dall, W.H. (1884) Contributions to the history of the Commander islands No. 3: Report on the mollusca of the Commander islands, Bering Sea, collected by Leonhard Stejneger in 1882 and 1883. *Proceedings of the United States National Museum*, 7(442): 340-349, pl. 2.
- Dunker, W. (1861) Solenacea nova collections Cumingianae descripta. *Proceedings of the Zoological Science of London*. pp. 418-427.
- Evseev, G.A and Yakovlev, Yu.M. (2006) The Bivalve Molluscs of Far Eastern Seas of Russia. Vladivostok, Polikon, pp. 1-120. [In Russian].
- Habe, T. (1977) Systematics of Mollusca in Japan (Bivalvia and Scaphopoda). Hokuryukan, Japan. pp. 1-372. [In Japanese].
- Habe, T. and Ito, K. (1975) Shells of the world in color vol I. The Northern Pacific. Hoikusha Publishing Company, Osaka. [In Japanese].
- Higo, S., Callomon, P. and Goto, Y. (1999) Catalogue and bibliography of the marine shell bearing mollusca of Japan. Elle Scientific Publications. Osaka, pp. 1-749.
- Kang, Y.S. (ed.) (1971) Nomina Animalium Koreanorum. Hyang Moon Co, Seoul. Vol. 3, pp. 1-180. [In Korean].
- Lee, B.D. (1956) The catalogue of molluscan shell of Korea. *Bulletin of Pusan Fisheries College*, 1(1): 53-100.[in Korean]
- Lee, J.S. and Min, D.K. (2002) A catalogue of molluscan fauna in Korea. *Korean Journal of Malacology*, 18(2): 93-217.
- Okutani, T. (ed.) (2000) Marine Mollusks in Japan. Tokai Univ., Tokyo. pp. 1-1171. [In Japanese and English].

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Sowerby, G.B.II. (1871) Monograph of the genus *Ostraea*.
In: Sowerby, G.B.II (1865-78). *Conchologia Iconica*.
18: 1-33.

Sowerby, G.B.II. (1865-78) *Conchologia Iconica: or*
Illustrations of the Shells of Molluscuous Animals.
London. vol. 19, (1874).

Xu, F. and Zhang, S. (2008) An Illustrated Bivalvia
Mollusca Fauna of China Seas. pp. 336. Science
Press, Beijing.