

[단보, Short communication]

Three Unrecorded Sorbeoconchs (Gastropoda, Caenogastropoda) from Korean

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ABSTRACT

We report three new records Korean marine gastropods. The new record species are *Hipponix acuta*, *Lyncina (Ponda) carneola*, and *Velutina (Velutella) plicatilis cryptospira*. As a result, the family Hipponicidae in Korea turned out to be 5 species of 4 genera, Cypraeidae are 14 species of 8 genera, and Velutinidae are 7 species of 3 genera, respectively.

Keywords: New record, *Hipponix acuta*, *Lyncina (Ponda) carneola*, *Velutina (Velutella) plicatilis cryptospira*, Hipponicidae, Cypraeidae, Velutinidae

INTRODUCTION

Ponder & Lindberg (1997) recognized two major monophyletic groups at different levels among Caenogastropoda: the Sorbeoconcha and the Hypsogastropoda. Sorbeoconcha includes all caenogastropods with the exception of the Architaenioglossa. The family Hipponicidae, Cypraeidae, and Velutinidae are belong to the Sorbeoconcha.

The Hipponicidae have small, cap-shaped shells and horseshoe-shaped muscle scar, with an anterior opening both on the inner shell surface and the plate. Some species are gonochoristic, others are protandrous hermaphrodities. Some are commensal on shells of other mollusks, sometimes situated near the exhalant siphon where they can feed on fecal pellets of the host. Hipponicids are found from the lower intertidal zone to the deep waters of the continental slope. Four species

of 4 genera in Korean Hipponicidae were reported by Lee and Min (2002) so far.

The Cypraeidae are usually smooth, spotted and colorful bearing denticles along both the outer and inner lips. Most Cypraeids are herbivores or omnivores. Some are specialized browsers on sedentary colonial animals such as sponges and bryozoans. The majority of Cypraeids may be found in the intertidal and shallow sublittoral zone. 13 species of 8 genera in Korean Cypraeidae were reported by Lee and Min (2002).

The Velutinid shells are thin, depressed and have a wide, expanded aperture. The shells of *Velutina* species moderately thin and not enclosed by the mantle; it has a velvety periostracum. Most species are simultaneous hermaphrodites. Six species of 3 genera in Korean Velutinidae were reported by Lee and Min (2002).

In this study, we report a new records of *Hipponix acuta*, *Lyncina (Ponda) carneola*, and *Velutina (Velutella) plicatilis cryptospira* in the Korean waters. The specimens used in this study were deposited in Min Molluscan Research Institute in Seoul Korea.

SYSTEMATIC ACCOUNTS

Order Sorbeoconcha Ponder & Lindberg, 1997 흡강목
Family Hipponicidae Trochel, 1861 고갈고둥과

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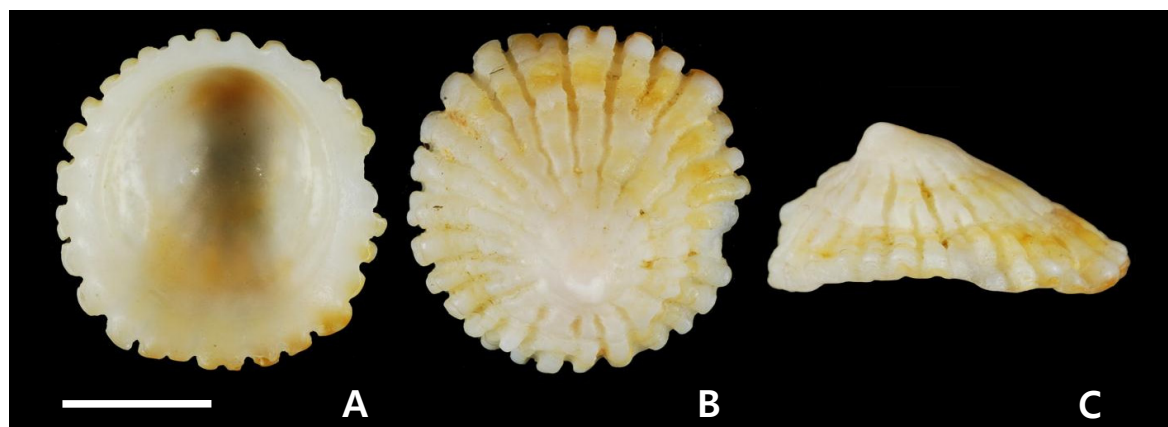


Fig. 1. *Hipponix acuta*. A. ventral view; B. dorsal view; C. lateral view. Scale: 7 mm.

Genus *Hipponix* DeFrance, 1819 기생고깔고둥속

***Hipponix acuta* Quoy & Gaimard, 1835 in 1832-35**
 납작기생고깔고둥 (신칭) (Fig. 1).

Hipponix acuta Quoy & Gaimard, 1835: 437.

Hipponix acuta: Iredale, 1934, p. 252, pl. 14, fig. 8;
 Higo *et al.*, 1999, p. 112; Okutani *et al.*, 2000, p. 189,
 pl. 94, fig. 2.

Sabia acuta: Higo & Gotto, 1993, p. 114.

Sabia conica acuta: Kira, 1977, p. 29, pl. 13, fig. 2.

Type locality: Kilinaiaiu (Carteret) island, off
 Bougainville. Solomon island.

Materials examined: 12 specimens (Seongsan, Jeju-do:
 7.i.2000); 23 specimens (Hwasun, Jeju-do: 18.viii.2009;
 29.vi.2010); 6 specimens (Sagae, Jeju-do: 29.vi.2010;
 19.i.2011); 2 specimens (Jongdalri, Jeju-do: 20.i.2011).

Measurement: Height 5 mm, Length 13 mm, Width 12
 mm.

Description: Shell conical, not coiled, mostly yellowish
 white in color. Shell considerably thick, surface
 sculptured with broad radial ribs and irregular
 concentric ribs. Apex pointed and posteriorly recurved.
 Aperture ovate, without internal border. Interior of
 shell porcelaneous and quiet glossed, without a
 calcareous septum but with a horseshoe-shaped muscle
 scar. No operculum.

Habitat: Intertidal and subtidal zones, adhering to
Turbo and *Nordotis* spp. etc.

Distribution: Korea, Japan, China, Southeast Asia.

Remark: Shell considerably thicker and more flattens
 than *H. conica* (Schumacher, 1817). However, possibly
 an ecological form of *H. conica* (Okutani *et al.*, 2000).

Family Cypraeidae Rafinesque, 1815 개오지과

Genus *Lyncina* Troschel, 1863 제주개오지속

***Lyncina (Ponda) carneola* (Linnaeus, 1758)**
 홍옥수개오지 (신칭) (Fig. 2).

Cypraea carneola Linnaeus, 1758: 719.

Cypraea carneola: Habe & Okutani, 1975, p. 89, 198;
 Wilson, 1993, p. 183, pl. 34, fig. 7 a-c; Carpenter &
 Niem, 1998, p. 499.

Cypraea (Lyncina) carneola carneola: Okutani *et al.*,
 2000, p. 227, pl. 113, fig. 11.

Lyncina (Ponda) carneola: Higo *et al.*, 1999, p. 129.

Ponda carneola: Kira, 1977, p. 50, pl. 20, fig. 10.

Ponda (Ponda) carneola: Higo & Gotto, 1993, p. 129.

Type locality: in Asia.

Materials examined: 2 specimens (Munseom, Jeju-do:
 16.xi.2003).

Measurement: Height 45 mm, Width 31 mm.

Description: Shell moderately medium, maximum shell
 length 6 cm, commonly to 4 cm, almost cylindrical in
 outline, with widely convex to poorly straight lateral
 margins and slightly produced anterior and posterior
 extremities. Dorsal side well swollen, without a mantle
 groove. Ventral side flattish, rounded laterally, with a
 narrow, straight aperture which is only a little curved
 posteriorly. Apertural teeth numerous, short and fine.
 Dorsal side of shell yellowish brown, with 5 wide,
 transverse bands of reddish brown. Ventral side of
 shell yellowish white. Interstices of teeth stained with
 purple or brown.

Habitat: Intertidal and subtidal to 20 m in depth.
 Under slabs and small corals in reefs.

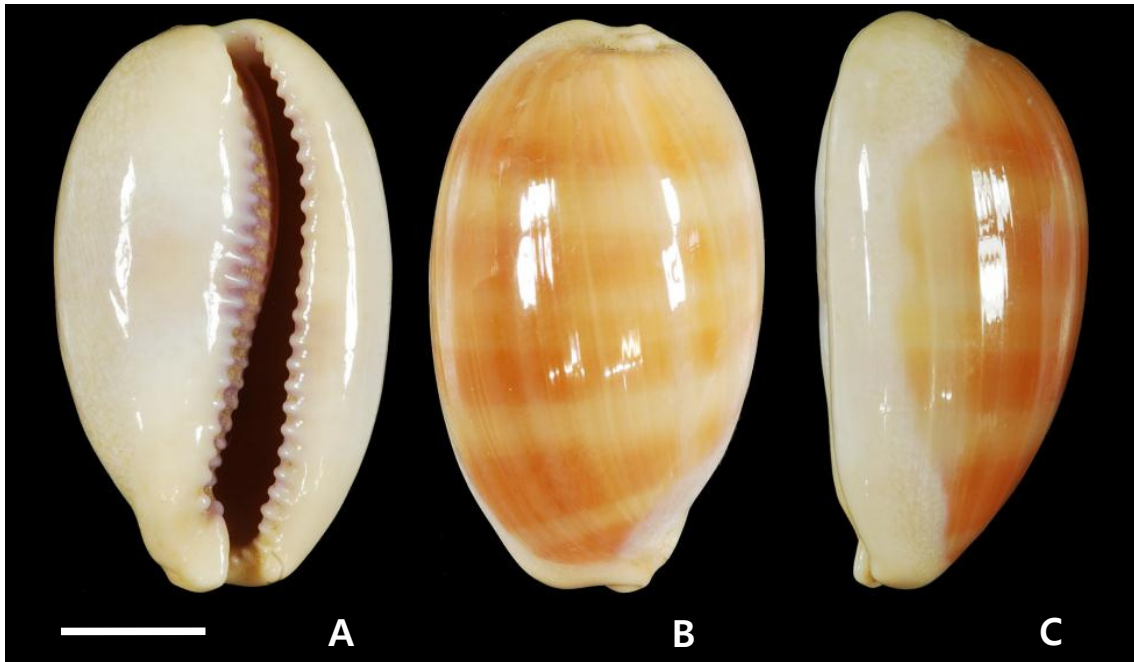


Fig. 2. *Lyncina (Ponda) carneola*. A. ventral view; B. dorsal view; C. lateral view. Scale: 15 mm.

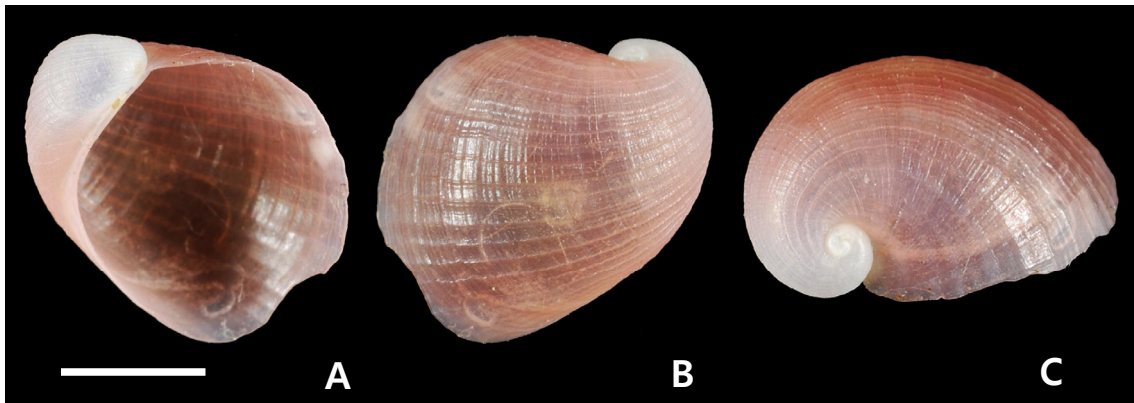


Fig. 3. *Velutina (Velutella) plicatilis cryptospira*. A. ventral view; B. dorsal view; C. apical view. Scale: 7 mm.

Distribution: East Sea, Philippines, Indo-Pacific.

Family Velutinidae 배고둥불이과

Genus *Velutina* Fleming, 1821 큰입배고둥불이속

***Velutina (Velutella) plicatilis cryptospira* Middendorff, 1848** 얇은큰입배고둥 (신칭) (Fig. 3).

Velutina cryptospira Middendorff, 1848: 2.

Velutina cryptospira: Middendorff, 1851, p. 216-218, pl. 25, figs. 8-10; Kantor & Sysoev, 2006, p. 124, pl. 57, fig. A.

Velutina (Velutella) plicatilis cryptospira: Habe & Ito,

1975, p. 26, pl. 7, fig. 10; Higo *et al.*, 1999, p. 142; Okutani *et al.*, 2000, p. 249, pl. 124, fig. 10.

Type locality: Shantar islands and northern coast of the Okhotsk Sea.

Materials examined: 1 specimen (Hwasun, Jeju: 17.x.1998); 1 specimen (Museum, Jeju: 12.x.2003).

Measurement: Height 15 mm, Width 12 mm.

Description: Shell thin and fragile, globse, with dull periostracum and low spiral ribs. Outside of shell uniformly reddish brown. Apex dressed, body whorl very large, occupied most of height of shell. Aperture

long ovate, outer lip of aperture with sharp outer edge and rounded. Columella rounded, upper portions slightly thick, without umblicus.

Habitat: Intertidal and shallow sublittoral zones, to a depth of about 20 m.

Distribution: Southern Okhotsk Sea, Kuril Island.

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