Lectotype Designation and Redescription of *Laemodonta exaratoides* Kawabe, 1992 (Gastropoda: Pulmonata: Ellobiidae)

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*Laemodonta* exaratoides is an ellobiid that is known from Japan and South Korea (Higo et al., 1999; Kurozumi, 2000; Min et al., 2008). Kuroda (1953, 1958, 1963) cited the unavailable Latin name as “Kuroda, MS.” in his lists of non-marine molluscs of Japan, with no morphological descriptions for the species. Kurozumi (2000) cited the author and year of *L. exaratoides* as “Kuroda, 1957” [the correct year of publication is 1958; see Malacological Society of Japan (1958: index 6; 1979: 115)]. This was followed by Masuda & Uchiyama (2004), Nakamoto et al. (2007), Hamada (2008), Hayase et al. (2009) and Noda et al. (2009). However, this is not adequate because Kuroda’s (1958) text constituted a brief mention of the distribution range alone and lacked any description.

One of us (Kawabe, 1992) gave the first description of the species with a photograph of the shell and *L. exaratoides* thereby became available under the International Code of Zoological Nomenclature. Unfortunately the original description was published only in Japanese and a holotype and paratypes were not designated therein. Since Kawabe (1992), the species has often been referred by Japanese and Korean authors, but an English description has been given only by Kurozumi (2000) up to the present time.

As shown in the synonymy below, the species has often been confused with other congeners, i.e. *L. exarata* (H. & A. Adams, 1854) [possible synonym of *L. octanflacta* (Jonas, 1845) according to Hubendick (1956)], *L. monilifera* (H. & A. Adams, 1854), *L. octanflacta*, and *L. siamensis* (Morelet, 1875), because of their similar shell characters. *L. exaratoides* is regarded as threatened in modern Japan and is listed in many regional Red Data Books (e.g. Fukuda, 1996; Matsukuma, 2001; Aichi Prefectural Government, 2002; Ishikawa, 2002; Hyogo Prefectural Government, 2003; Nakano, 2006) as an important species in the context of biodiversity conservation. A lectotype designation is therefore needed for the precise identification of the species.

We designate the lectotype of *L. exaratoides* and redescribe it in the following lines.

**Family Ellobiidae Pfeiffer, 1854**

**Subfamily Pythiinae Odhner, 1925**

**Genus Laemodonta Philippi, 1846**

*Laemodonta exaratoides* Kawabe, 1992


*Laemodonta* (Plecotrema) monilifera — Takahashi & Okamoto, 1969: 58, pl. 13, fig. 6 [misidentification].

*Laemodonta* (Plecotrema) exarata — Abe, 1981: 50–51, pl. 3, fig. 7, pl. 6, figs 6, 7 [misidentification].

*Laemodonta* sp. — Fukuda et al., 1990: 22, pl. 2, fig. 9; Fukuda, 1992: 4, 76, textfig. 2 [epithet
was hidden by a dot line]; Kimura & Masuda, 1996: 94–97, textfig. 1, pl. 1, figs 1–3.

*Laemodonta (Plecotrema) octanflata* [sic] — Yamashita, 1994: 19, fig. 3 [misidentification].

*Laemodenta* [sic] *exaratoides* — Kawai, 1999: 12, 13, fig. 1.

*Laemodonta* [sic] *octanfracta* [sic] — Kwon et al., 2001: 188, 189, fig. 716 [misidentification].

*Laemodonta siamensis* — Hamada, 2008: 60, pl. 60, fig. G5004 [misidentification].

**Lectotype** (Fig. 1): The syntype figured by Kawabe (1992: 6, fig. 1). Collected alive from crevices in a broken, old seawall in the upper intertidal zone on the northern shore of the innermost part of Koajiro Bay, Misaki-cho-Koajiro, Miura, Kanagawa Prefecture, Pacific coast of central Honshu, Japan, 35°09´49˝N, 139°37´37˝E (type locality), 30 May 1976, by K. Kawabe. Deposited in the National Museum of Nature and Science, Tokyo, with a catalog number NSMT-Mo 77001.

**Paralectotypes** (Figs. 2, 3): 4 shells, all collected alive from the same locality as the lectotype. Paralectotype 1: same data as the lectotype, NSMT-Mo 77002. Paralectotypes 2–4: several meters east of the seawall on which the lectotype and paralectotype 1 were found, under rocks scattered on wet mud in a small reed field, 31 May 1971, by K. Kawabe. NSMT-Mo 77003, 77004, 77005.

Measurements for the lectotype and paralectotypes are shown in Table 1.

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consisting of 8.5 whorls, weakly convex, suture shallow, surface sculptured with many (38 on body whorl, 8 on penultimate whorl) narrow, incised spiral cords. Body whorl about 76% shell length. 

Aperture elongate oval; inner lip with three evenly spaced, strong teeth; columellar tooth oblique toward base, strong; anterior parietal tooth longest; posterior parietal tooth small; outer lip sharp, inside heavily thickened, with one low, ridge-like tooth opposite parietal teeth. Protoconch eroded, details unknown.

Remarks: The lectotype is quite large in size for the species. The paralectotypes 1–3 (6.0 to 6.5 mm in length) are of average size for the species by comparison with other specimens recorded in the references cited in the above synonymy.

The lectotype and four paralectotypes are fully mature, with a thickened outer lip, and they lack periostracal hair on the shell surface. However, it is known that this species has many short hairs with regular intervals along the spiral cords (well illustrated by Abe, 1981: pl. 6, fig. 7). The hairs are usually observed in juveniles but lost in old specimens.

The posterior parietal tooth is variable in size and shape. It is large and strong in the lectotype and paralectotypes 2, 3 and 4 (Fig. 3), but very weak and almost invisible in paralectotype 1 (Fig. 2). The outer lip of the last specimen is thinner than all other specimens, and therefore the size of the posterior parietal tooth may depend on age.

Miura (2008: 144, text figs) illustrated “L. exaratoides”, but his specimens are identifiable as L. siamensis because they have a heavily eroded apex, wavy spiral cords and a less developed umbilical keel, and lack periostracal hairs, all of which are diagnostic characters of the latter species.

Although Toki et al. (1998) illustrated the head-foot of L. exaratoides, other characters of the soft-parts of the species have never been published, as with all other Japanese species of Laemodonta. To confirm the relationships of these species, anatomical and molecular work is needed.

References


河辺（1992）はこの学名とともに形態の記載文及び殻の写真を公表したため、その時点で国際動物命名規約上の適格名となった。しかし、河辺の原記載は簡素な日本語のみで、ホロタイプやパラタイプの指定も行っていない。これ以後本種は多くの著者によって言及されてきたが、英文による記載は黒住（2000）を除いていまだ存在しない。

本種は同属の L. exarata (H. & A. Adams, 1854)（恐らくイササコミミガイ）、L. monilifera (H. & A. Adams, 1854) やマキスジコミミガイ、L. octanflatia (Jonas, 1845) やイササコミミガイ、L. siamensis (Morelet, 1875) クリイロコミミガイと殻の形態が近似するため、従来よりしばしば同定が混乱していた。その一方で、ウスコミミガイは近年絶滅が危惧され、生物多様性保全上の重要種として多数のレッドデータブックに登載されるようになった。

このため、本種の同定を今後より確実なものとするために、河辺（1992: 6, fig. 1）で図示された個体をレクトタイプ（国立科学博物館所蔵 NSMT-Mo 77001）に選定する。タイプ産地は神奈川県三浦市三崎町小網代町北網代（北緯 35°09′49″、東経 139°37′37″）である。レクトタイプはこの種としては著しく大型（殻長 8.7 mm、殻径 5.1 mm）の老成個体で、体渦に上 8 枚、次体渦に 8 枚の螺肋を巡らし、本種の幼若個体に見られる殻表の微細な螺肋は失われている。