

On the identity of *Cryptospira glauca* and the related  
*Cryptospira ventricosa* (Gastropoda: Marginellidae)

by

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INTRODUCTION

In his monograph of the Marginellidae Jousseume (1875:234-235, pl. 8 fig.1) described *Cryptospira glauca*; the type locality was unknown at that time. This species was described three years later by Weinkauff (1878:33, pl.5 figs. 9,12) as *Marginella loebbekeana*, from Singapore. Weinkauff (loc.cit.:132) considered *Marginella elegans* "Sowerby" (pars) (non Gmelin) and *M. burchardi* "Reeve" (non Dunker) to represent juveniles of *M. loebbekeana*. However, *Cryptospira glauca* should be distinct from *loebbekeana*.

Paetel (1888:193,194) followed Weinkauff, since he listed both names as separate species: *Marginella glauca* Jous. and *M. Löbbekeana* Kob(elt), introducing herewith errors in spelling and in the author's name. Tryon (1882-1883:30,198) was of the opinion that *M. loebbekeana* was a larger individual of *M. glauca*, and he considered both names synonyms of *Marginella elegans* (Gmelin).

Tomlin (1917) placed all species of the Marginellidae in the genus *Marginella*, and since the name *Marginella glauca* was used by G. Fischer (1807:172), *Marginella glauca* (Jousseume, 1875) became a homonym, and the first available name for this species should be *M. loebbekeana* Weinkauff, 1878. Tomlin (loc.cit.:256,277) did not consider *M. burchardi* Reeve a synonym of *M. loebbekeana*, and by mistake he placed the localities of Reeve's species (1864-1865:pl.2 fig.3) "East Africa, Nicobar Islands, and Ceylon" with *M. loebbekeana*. Tomlin was correct to put *M. burchardi* Reeve in the synonymy of *M. strigata* Dillwyn, since Reeve's shell is only a colourless specimen of *M. strigata*.

Jousseume had given an extensive description and excellent figures of *Cryptospira glauca*, in addition to remarks why this species is different from *Marginella quinqueplicata* and *M. hainesi* (both names are now considered synonyms of *C. ventricosa*). However, later authors did not recognize *Cryptospira glauca* (= *loebbekeana*) as distinct from *C. ventricosa*. Tomlin (1917:277) stated that *M. loebbekeana* was "rather doubtfully distinct from *ventricosa*", and

Wagner & Abbott (1967:156) were of the opinion that this species "may be *ventricosa* (fig.23-706)"

## SYNONYMY OF THE SPECIES DISCUSSED HERE

### Genus *Cryptospira*

*Cryptospira* Hinds, 1844. Proc.Zool.Soc.London 12:76. Type species *Marginella tricincta* Hinds, 1844 (Straits of Macassar).

#### *Cryptospira glauca* Jousseaume, 1875

Rev.Mag.Zool.(3) 3 (vol.38):234-235, pl.8 fig.1 (locality unknown). Non *Marginella glauca* G.Fischer, 1807 = *Bullata bullata* (Born, 1778).

*Marginella loebbekeana* Weinkauff, 1878. Syst.Conch.Cab.5 (4, *Marginella*):33, pl.5 figs.9,12 (Singapore).

*Marginella löbbekeana* "Kob.", Paetel, 1888.Cat.Conch.-Samml.:194. In error.

#### *Cryptospira ventricosa* (G.Fischer, 1807)

*Marginella ventricosa* G.Fischer, 1807. Museum Demidoff 3:172 (locality unknown).

*Marginella quinqueplicata* Lamarck, 1822. Anim.s.Vert.7:356 (locality unknown).

*Marginella hainesii* Petit, 1851. J.Conchyl. 2:260, pl.8 figs.5,6 (locality unknown). This is a callous form of *C.ventricosa*.

*Marginella vermiculata* Redfield, 1851. Catal.Coll. *Marginella*: pp. not numbered (locality unknown). This is a worn *C.ventricosa*.

#### †*Cryptospira ventricosa minor* (Martin, 1895)

*Marginella (Cryptospira) quinqueplicata* Lamarck var. *minor* Martin, 1895. Samml. Geol.Reichs-Mus. Leiden (N.F.) 1(2-5):70, pl.10 figs.156-160 (a fossil from the younger Tertiary of Java).

#### *Cryptospira strigata* (Dillwyn, 1817)

*Voluta strigata* Dillwyn, 1817. Descr.catal.rec. shells 1:530 (coasts of Guinea).

*Marginella elegans* "Gmelin" Sowerby (pars), 1846. Thes.Conch. 1 (*Marginella*) 385, pl.77 fig.149 (locality unknown). Non *Marginella elegans* (Gmelin, 1791).

*Marginella burchardi* "Dunker" Reeve, 1864. Conch.Icon.15 (*Marginella*):pl.2 fig.3 (East Africa, Nicobar Islands, Cey-

lon). Non *Marginella burchardi* Dunker, 1852 = *Prunum sapotilla* (Hinds, 1844).

*Cryptospira elegans* (Gmelin, 1791)

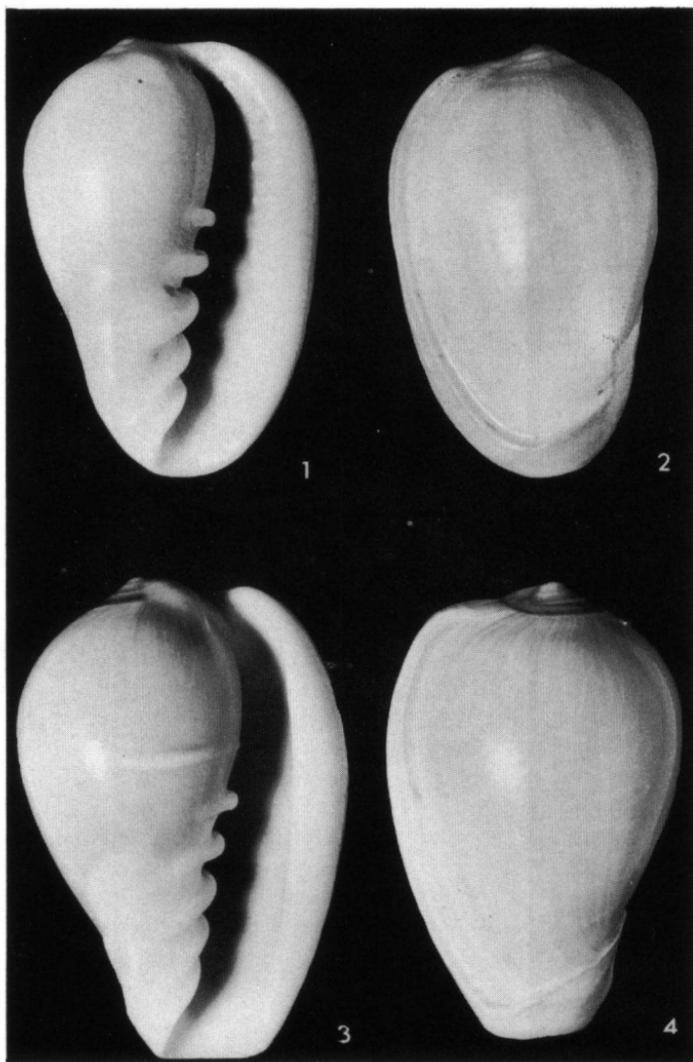
*Voluta elegans* Gmelin, 1791. Syst. Nat., ed.13:3448 (locality unknown).

*Voluta porcellana* Perry, 1811. Conchology: pl.17 fig.2 (Southern Ocean). Some authors consider this name a synonym of *Cryptospira ventricosa*; with Tryon (1882-1883:234) we place it in the synonymy of *C. elegans*.

#### IDENTITY OF CRYPTOSPIRA GLAUCA AND C. VENTRICOSA

In revising the Marginellidae of the Zoological Museum in Amsterdam we found one specimen of *Cryptospira glauca*, and more specimens were found to be present in the Rijksmuseum van Natuurlijke Historie in Leiden. We were able to compare these specimens with a great number of *C.ventricosa* and we must conclude that they are two distinct species. They can be separated from each other on the following characters:

<i>Cryptospira glauca</i> Jousseume	<i>Cryptospira ventricosa</i> (G.Fischer)
figs. 1,2	figs. 3,4
length 15-32 mm (table 1)	length 25-45 mm (table 1)
shell egg-shaped	shell pear-shaped
colour yellowish gray	colour gray
base rounded	base truncated
5 columellar plicae	6 (or 5) columellar plicae
no callus between the apex and aperture	a white callus is formed between the apex and upper part of the aperture
inside of outer lip with teeth	inside of outer lip smooth
margin of the outer lip duplicated	margin of the outer lip not duplicated



Figs. 1-4. *Cryptospira*. 1-2. *C. glauca* Jousseaume, Singapore, length 22 mm; 3-4. *C. ventricosa* (G. Fischer), Surabaja, Java, length 33 mm. Both specimens in collection Zoölogisch Museum, Amsterdam. Photographs L.R. Hafkamp.

<i>Cryptospira glauca</i>			<i>Cryptospira ventricosa</i>		
length in mm	width in mm	locality	length in mm	width in mm	locality
15	10	Ceylon (RMNH)	23.5	14	Sukalelo, Java (ZMA)
20	13	"Ambon" (RMNH)	26.5	18	Malacca (ZMA)
20	13	Adyar, Madras, India (RMNH)	30	21	Malacca (ZMA)
21	13.5	Adyar, Madras, India (RMNH)	33	22	Surabaja, Java (ZMA) (figs. 3,4)
22	14.5	Singapore (ZMA) (figs. 1,2)	36	23.5	Surabaja, Java (ZMA)
23	15	Singapore (RMNH)	43	27	Sukalelo, Java (ZMA)
24.5	16	Singapore (RMNH)			
24	15.5	? (holotype in Mus. Hist. Nat., Paris)			
31	19	Singapore (holotype of <i>M. loebbeckeana</i> , in Löbbecke Museum, Düsseldorf)			
31.5	20	Sumatra, Tapaktuan (RMNH)			

Table 1. Measurements of some specimens of *Cryptospira glauca* and *C. ventricosa*.

RMNH = Rijksmuseum van Natuurlijke Historie, Leiden,  
ZMA = Zoölogisch Museum Amsterdam.

#### DISTRIBUTION

From specimens studied, and from locality records in the literature, the distribution of *Cryptospira glauca* extends from Ceylon via India (Gulf of Bengal) to the Straits of Malacca as far as Singapore and northwest Sumatra (fig.5).

The Leiden Museum has one specimen from Ambon; according to Dr. C.O. van Regteren Altena this locality record is doubtful. Fossil records of *C. glauca* are not known to us.

The distribution of *Cryptospira ventricosa* covers the Straits of Malacca (cf. Hawaiian Shell News 16 (5):6, May 1968), north and east Sumatra (Oostingh, 1930:1-2), the north coast of Java (Oostingh, 1923:123), and east Borneo (fig. 5). The Zoological Museum in Amsterdam has specimens from the following localities: Malacca (4 specimens); Sumatra, Deli (1), Banka (6), and from Java,

Cheribon (5), Surabaya (19), Sukalelo (7). In the Leiden Museum material is present from P. Weh (2); Sumatra, Deli (1); Singapore (2); Java, Tandjong Priok (7) and Tji Lamaja (2); Borneo, Samarinda (1).

Martin (1895:70, pl. 10 figs.156-160) described a dwarf form, *C.ventricosa minor* (Martin), from the younger Tertiary of Java. This fossil subspecies is known from Sumatra, Java, and Borneo (Oostingh, 1935:96-98).

From the distribution of *C.glauca* and *C.ventricosa* it is obvious that both species are found in different areas, while the Straits of Malacca is an overlapping zone.

#### TYPE MATERIAL AND DESIGNATION OF TYPE LOCALITIES

The holotype of *Cryptospira glauca* is in the Jousseume collection in the Muséum National d'Histoire Naturelle in Paris, where it was recovered recently by Dr.E.Fischer-Piette upon our request to look for it. The holotype was not known to exist in Paris for some

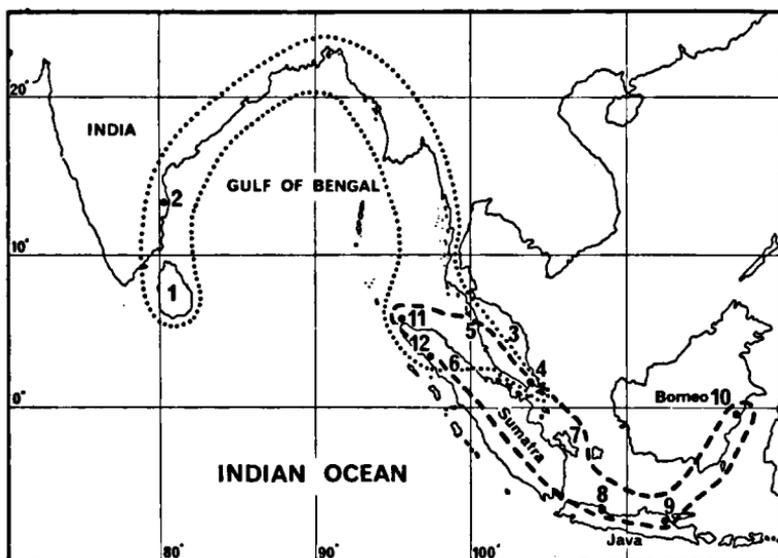


Fig. 5. Distribution of *Cryptospira glauca* (dotted line) and *C.ventricosa* (broken line). 1, Ceylon; 2, Madras; 3, Malacca; 4, Singapore; 5, Straits of Malacca; 6, Deli; 7, Banka Island; 8, Cheribon; 9, Surabaya; 10, Samarinda; 11, P. Weh; 12, Tapaktuan.

time (Fischer-Piette & Beigbeder, 1944:451-458). The type locality of *C. glauca* is not known, and since we have studied specimens from Singapore, we herewith designate Singapore as type locality for *C. glauca*. Singapore was also the type locality of the synonym *C. loebbeckeana*.

Unfortunately the type specimen of *Marginella loebbeckeana* could not be studied. The species was described from a specimen in the collection of Theodor Loebbecke (1821-1901) and it is now preserved in the Löbbecke-Museum in Düsseldorf, Germany. Dr. Zahn, director of the Löbbecke-Museum, informed us that the mollusc collection is not available for research, since there is no curator for this department.

The type of *Marginella ventricosa* is kept in the Zoological Museum of the University of Moscow, being a part of the collection Demidoff (Palmer, 1956:35), from which it was described by G. Fischer. The type locality was not known, and also its synonyms (*M. quinqueplicata*, *M. hainesi*, and *M. vermiculata*) had no type localities. To our knowledge no author has ever designated a type locality for this species. From specimens studied we learned that *Cryptospira ventricosa* is common around Surabaja on the island of Java, and this place is here selected as type locality.

#### SUMMARY

*Cryptospira glauca* Jousseaume, 1875, and *Marginella ventricosa* G. Fischer, 1807, are often considered to represent only one species. It is proved that they are distinct, and their synonymy and distribution are discussed. Type localities for both species are here designated.

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