

Notes on the history of the malacological collection of the Nationaal Natuurhistorisch Museum, Leiden, The Netherlands, 1.

The rediscovery of type-material of *Bulla albocincta* Van der Hoeven, 1839 (Mollusca: Gastropoda: Opisthobranchia: Hydatinidae)

A.N. VAN DER BIJL

Instituut voor Taxonomische Zoölogie (Zoölogisch Museum), P.O. Box 94766, 1090 GT Amsterdam,
The Netherlands

& R.P.A. VOSKUIL

Houthaak 2, 2611 LE Delft, The Netherlands

A study on the history of malacological collections in the Netherlands, undertaken by one of the authors (AB), revealed that the whereabouts of type material of *Bulla albocincta* Van der Hoeven, 1839, were unknown. Two specimens, representing a syntype and a possible syntype, were discovered in the collections of the Nationaal Natuurhistorisch Museum, Leiden, The Netherlands. In this paper the history of the Dalen collection, from which the two specimens originated, is discussed. A lectotype of *Bulla albocincta* is designated. Furthermore, an English translation of the original diagnosis, which was published in Dutch, is given.

Key words: Gastropoda, Opisthobranchia, Hydatinidae, *Hydatina*, history of malacology, Indo-Pacific, China.

Dutch contributions to the development of malacology were very few during the 19th century. Many people will be able to mention M.M. Schepman (Smit, 1986: 241) only, who was active mainly during the last quarter of the 19th and the beginning of the 20th century. Less well known are the malacological activities of Jan van der Hoeven (Smit, 1986: 124), professor of zoology at Leiden university. He was very interested in *Nautilus pompilius* L., 1758, on which species he published two papers (Van der Hoeven, 1847, 1856). Together with a colleague from Amsterdam, W.H. de Vriese (Smit, 1986: 296), Van der Hoeven edited the journal "Tijdschrift voor natuurlijke geschiedenis en physiologie", in which he published, in 1839, a description of a new molluscan species, from the collection of C. Dalen (Smit, 1986: 354), a medical doctor living in Rotterdam and, from 1810 to 1852, director of the "Bataafsche Genootschap" in that city (Van Lieburg & Snelders, 1989).

The new species was named *Bulla albocincta* and the type species material remained in the collection of C. Dalen. Dalen died on 24 October 1852 and his collection, consisting of shells, books and insects, was auctioned on 23 June 1853 and several subsequent days, under supervision of Van Baalen & Zn. An annotated copy of the auction catalogue (Anonymus, 1853) is kept in the Löbbecke-Museum, Düsseldorf, Germany.

According to the preface of the auction catalogue (p. 62), Dalen had contact with several English conchologists, of whom Hugh Cuming alone is mentioned by name. The

latter enriched the Dalen collection several times with specimens of newly discovered species.

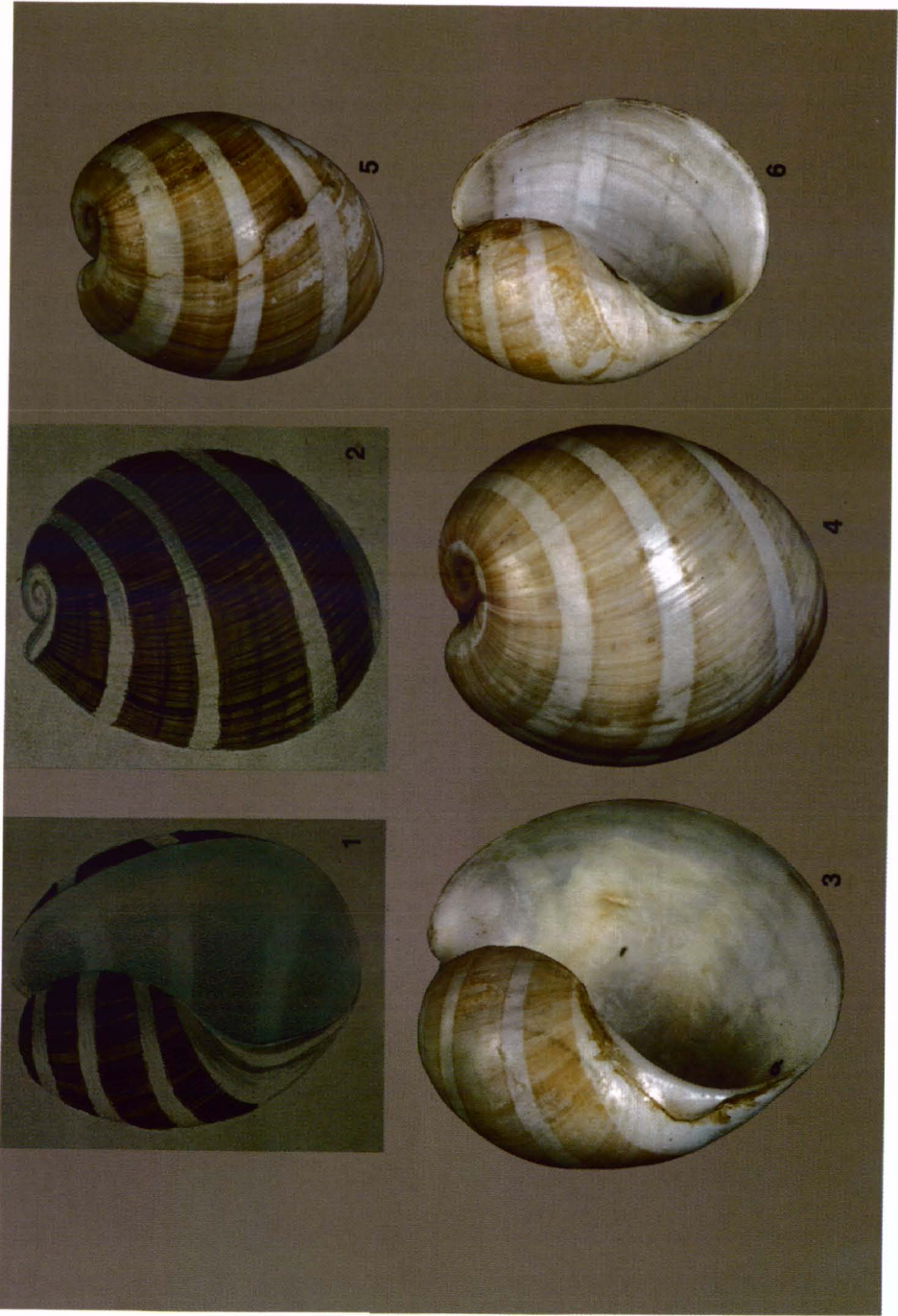
Dalen belonged to the buyers at the auction of the J. Raye de Breukelerwaard collection (Smit, 1986: 218) in 1827. The Rijksmuseum van Natuurlijke Historie, Leiden (RMNH, now Nationaal Natuurhistorisch Museum), obtained, during this event, its first specimen of *Conus gloriamaris* Chemnitz, 1777 (Van der Feen-Van Benthem Jutting, 1949: 154).

The auction of the Dalen collection was attended by many important collectors of that time. The Rijksmuseum van Natuurlijke Historie was also represented. In the annual report of the museum, published on 10 July 1853, contentment was expressed with the acquisition of several samples at the auction (Gijzen, 1938: 164). To these samples belonged, among others, the lot numbers 160 and 161 (catalogue p. 74), each consisting of one specimen of *Bulla albocincta*. Together with lot numbers 159 (a specimen of *Bulla ovoidea* Quoy & Gaimard, 1833) and 162 (a shell of *Bulla soluta* Gmelin, 1791) a total amount of Hfl. 3.60 was paid.

Recently the collection of the Nationaal Natuurhistorisch Museum was inspected to trace the Dalen specimens. Among some other samples of what is now called *Hydatina albocincta*, we found a sample, containing two specimens, which originated, according to an original label, from the Dalen collection. The larger of the two specimens agrees in detail with the description and illustration by Van der Hoeven (1839: 25-27, figs. 2-3). The second specimen might well be the other specimen obtained during the auction. Although it is well possible that Van der Hoeven established the taxon on the illustrated specimen alone, there is no way to be certain and we therefore follow recommendation 73F of the International Code of Zoological Nomenclature by selecting the largest specimen (figs. 3-4), RMNH 56617, as lectotype rather than assuming it to be the holotype. The smaller specimen (figs. 5-6), RMNH 56618, remains as paralectotype. The presence of type specimens of *Bulla albocincta* was as yet unknown (Van Bruggen, 1977: 17-18) so that this discovery deserves to be published.

We hereby reproduce the original Latin diagnosis, and an English translation of the Dutch diagnosis of *Bulla albocincta* Van der Hoeven: "*B. testâ ovato-subglobosâ tenui, pallide bruneâ, spirâ, fasciis tribus et apertura albis, spirâ retusâ*. This nice-looking species comes from China and is preserved in the collection of Mr. C. Dalen, Medical Dr. at Rotterdam. This shell is thin; the apex or the origin of the whorls is depressed. The basic colour is light brown and becomes lighter towards the outer margin. Oblique, fine, brown and blackish stripes, which are curved, are running parallel all over the shell; these stripes are interrupted by three, milky white, cross-bands; the apex is also white, as well as the anterior margin and the inner side of the aperture (*margo columellaris*). The aperture is, like the whole shell, dirty white, slightly nacreous, the three white external bands are slightly shining through. This shell is over 1½ Paris Inch long. Within this genus this species should be placed between *Bulla physis* and *Bulla fasciata*, with which two species it is most closely related." The publication is dated September 1839.

As mentioned above, the correct generic assignment of the species is within the genus *Hydatina* Schumacher, 1817. A junior synonym might be *Hydatina cinctoria* (Perry, 1811), according to Iredale & McMichael (1962: 88), although Cernohorsky (1972: 206) stated that Perry's figure probably represents the Indian Ocean species *Hydatina zonata* Lightfoot, 1786. The anatomy of the genus was studied by Rudman (1972). The genus is distributed, with only four of five extant species, in the entire Indo-Pacific and the tropical Atlantic Ocean. Photographs of living specimens of *Hydatina physis* (L., 1758) and *H. amplustre* (L., 1758), were published by Wells & Bryce (1985: 135).



Figs. 1-6. *Bulla albocincta* Van der Hoeven, 1839. 1, 2, reproduction of the original illustration, height of aperture 42.5 mm; 3, 4, lectotype (here selected), "China" RMNH 56617), height of aperture 42.0 mm; 5, 6, paralectotype, "China" (RMNH 56618), height of aperture 33.5 mm.

We wish to express our gratitude to Dr. J. Bosscheinen of the Löbbecke-Museum, Düsseldorf, for making available a copy of the annotated auction-catalogue of the Dalen collection. We are also grateful to Dr. E. Gittenberger of the Nationaal Natuurhistorisch Museum, Leiden, and R.G. Moolenbeek of the Zoölogisch Museum, Amsterdam, for critically reading the manuscript.

The printing costs of the plate have been covered by a subsidy from the Prof. Dr. Jan van der Hoeven Stichting voor Theoretische Biologie (Prof. Dr. P. Dullemeijer, Leiden).

REFERENCES

- ANONYMUS, 1853. Catalogue ... d'une collection magnifique de mollusques ... qui ont formé le célèbre cabinet de feu mr. C. Dalen, ... la vente publique se fera jeudi 23 juin 1853 et jours suivants ... à Rotterdam, sous la direction de mm. J. van Baalen & Fils, et par le ministère des notaires mm. P.G. Dalen & N. Lambert: 1-111. Rotterdam.
- BRUGGEN, A.C. VAN, ed., 1977. Malacology in the Netherlands: 1-53. Leiden.
- CERNOHORSKY, W.O., 1972. Marine shells of the Pacific 2: 1-411. Sydney.
- FEEN-VAN BENTHEM JUTTING, W.S.S. VAN DER, 1949. Revised list of the specimens of *Conus gloriamaris* Chemnitz in the collections of the world. — *Bijdr. Dierk.* 28: 153-163.
- GIJZEN, A., 1938. 's Rijks Museum van Natuurlijke Historie 1820-1915: I-XII, 1-335. Rotterdam.
- HOEVEN, J. VAN DER, 1839. *Bulla albocincta*, n. sp. — *Tijdschr. Natuurl. Gesch. Physiol.* 6: 25-27, pl. 10.
- , 1847. Eenige afwijkingen in den vorm van het hoofd, waargenomen bij een mannelijk voorwerp van *Nautilus pompilius*. — *Tijdschr. Wis. Natuurk. Wet.* 1: 67-73.
- , 1853. Boekbespreking. — *Algemeene Konst- en Letterbode* 1: 340-342.
- , 1856. Bijdragen tot de ontleedkundige kennis aangaande *Nautilus pompilius* L., vooral met betrekking tot het mannelijk dier. — *Verh. Koninkl. Akad. Wet. Natuurk.* 3: 1-29.
- IREDALE, T., & D.F. McMICHAEL, 1962. A reference list of the marine Mollusca of New South Wales: 1-109. Sydney.
- LIEBURG, M.J. VAN, & H.A.M. SNELDERS, 1989. De bevordering en volmaking der proefondervindelijke wijsbegeerte; de rol van het Bataafsch Genootschap te Rotterdam in de geschiedenis van de natuurwetenschappen, geneeskunde en techniek (1769-1988). — *Nieuwe Verh. Bataafsch Gen. Proefonderv. Wijsbeg.* Rotterdam (3)4: 1-270.
- RUDMAN, W.B., 1972. The anatomy of the opisthobranch genus *Hydatina* and the functioning of the mantle cavity and alimentary canal. — *Zool. J. Linn. Soc.* 51: 121-139.
- SMIT, P., 1986. Hendrik Engel's alphabetical list of Dutch zoological cabinets and menageries. — *Nederl. Bijdr. Gesch. Geneesk. Natuurw.* 19: 1-340.
- WELLS, F.E., & C.W. BRYCE, 1985. Seashells of Western Australia: 1-207. Perth.