

## NON MARINE MOLLUSCA OF ENGGANO ISLAND.

By

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The island of Enggano is the largest of a group of 7 small islands lying in the Indian Ocean at about 100 geographical miles off the SW point of Sumatra, between  $102^{\circ} 7'$  and  $102^{\circ} 23'$  E, and  $5^{\circ} 18'$  and  $5^{\circ} 30'$  S. (HELFRICH, Tijdschr. Aardr. Gen. (2) Vol. 5, 1888, p. 272 - 314 and OUDEMANS, ibid. (2) Vol. 6, 1889, p. 109 - 164).

The first non marine mollusc ever described from Enggano was *Amphidromus enganoensis* by FULTON in 1896 (1). Two years later J. B. HENDERSON Jr. when reporting on the collection made by WILLIAM DOHERTY in the island, arrived at a total of 21 species (2). After this SYKES (3) and FRUHSTORFER (5) published a few additions, while ANCEY (4) introduced a new name, *Macrochlamys hendersoni*, to replace *Macrochlamys dohertyi* HENDERSON, the latter being preoccupied.

In 1936, from the end of May till the beginning of July, Enggano was visited by a party of Dutch scientists for botanical and zoological collecting purposes. The zoologist of the expedition, Dr. J. K. DE JONG, succeeded in obtaining 14 species of land and fresh water snails from three different localities, viz. Boeah-Boeah, Meok and Kajaäpoe. The exact situation of these collecting places is indicated on the accompanying sketch-map.

The samples were delivered to the Zoological Museum at Buitenzorg (Java) whence they were transmitted to me for identification and reporting. At the same time I could include in my account two sets of Enggano shells collected by the late Major P. A. OUWENS in previous years. The material I had before me is preserved in the Zoological Museum at Amsterdam. Duplicates are placed in the Zoological Museum at Buitenzorg.

In the following survey I give a list of all the non marine molluscs known from Enggano up till the present day. The species collected by Dr. DE JONG and Major OUWENS are printed in heavy type. The species not secured by these gentlemen, but recorded in literature only are printed in italics.

**Neritina subsulcata** Sow. — Boeah-Boeah, 11 spec. New record for Enggano.

**Neritina variegata** LESSON — Boeah-Boeah, 7 spec. New record for Enggano.

*Neritina cornec* L. — (HENDERSON, p. 15).

*Neritina turrita* CHEMN. — (HENDERSON, p. 15).

*Neritina ziczac* LAM. — (HENDERSON, p. 15).

**Septaria suborbicularis** Sow. — Meok, 1 spec. New record for Enggano.

*Helicina* spec. indet. — (HENDERSON, p. 17).

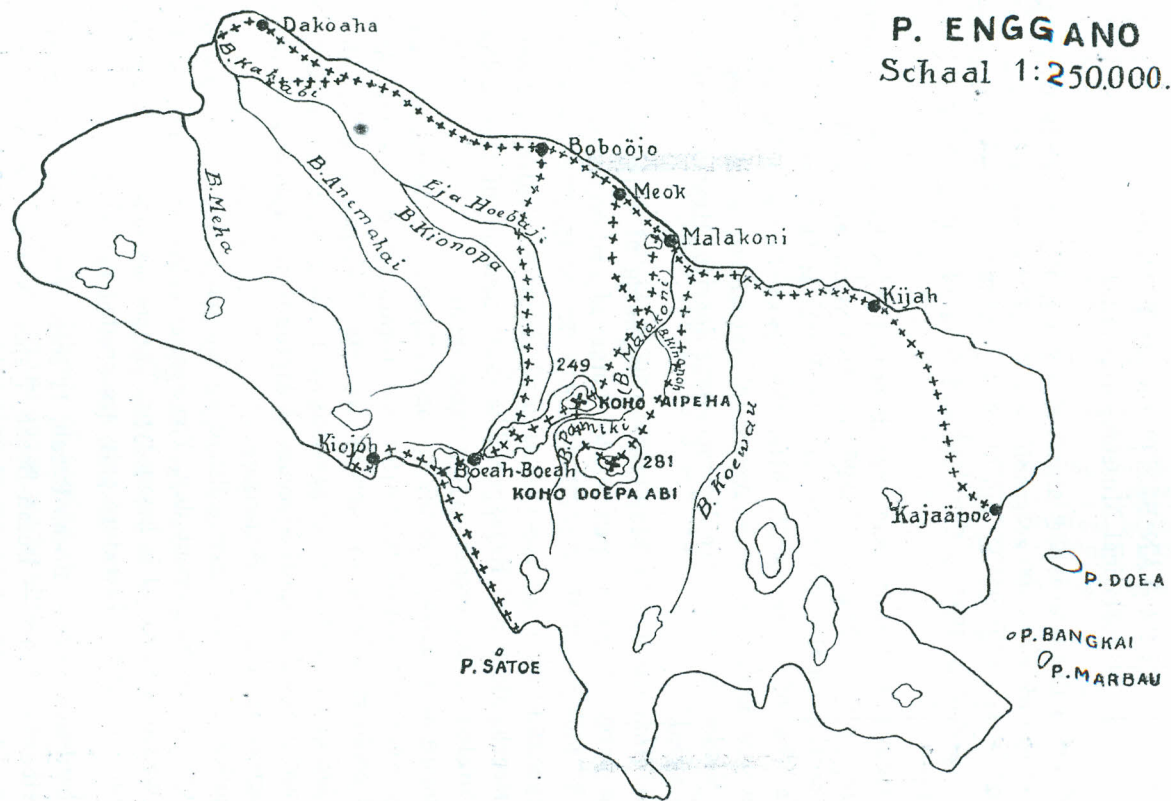


Fig. 1. Sketch-map of Enggano Id. ++++++ = foot-paths.

**Leptopoma vitreum** LESSON — Boeah-Boeah, 3 spec. (also HENDERSON, p. 17).

*Japonia cilifera* (MOUSS.) — (HENDERSON, p. 17).

**Crossopoma enganoense** HENDERSON — Boeah-Boeah, 1 spec.; Meok, 1 spec. (also HENDERSON, p. 17).

*Truncatella ceylonica* PFR. — (HENDERSON, p. 17).

**Thiara badia** (HENDERSON) — Boeah-Boeah, 45 spec. (also HENDERSON, p. 14).

The species is very much related to *Thiara sobria* (LEA) and might perhaps prove to be identical with it.

**Thiara scabra** (MÜLL.) — Boeah-Boeah, 34 spec. New record for Enggano.

**Thiara tuberculata** (MÜLL.) — Boeah-Boeah, 5 spec. New record for Enggano.

**Thiara** spec. juv. — Meok, 3 spec. Very young and slender shells.

*Thiara hastula* (LEA) — (HENDERSON, p. 15).

*Thiara herculea* (GOULD) — (HENDERSON, p. 14).

*Cassidula mustellina* DESH. — (HENDERSON, p. 15).

*Melampus fasciatus* DESH. — (HENDERSON, p. 15).

**Pythia pantherina** (A. ADS.) — Meok, 14 spec. New record for Enggano.

*Pythia striata* REEVE — (HENDERSON, p. 15).

**Trochomorpha dautzenbergi** SYKES — Meok, 4 spec. (also SYKES, p. 87).

**Trochomorpha gulielmi** SYKES — Boeah-Boeah, 7 spec.; Meok, 1 spec.; Enggano (OUWENS) 5 spec. (also SYKES, p. 87).

*Trochomorpha hartmanni* (PFR.) — (HENDERSON, p. 15).

*Trochomorpha hartmanni* is a species from Morotai Id., north of Halmahera (Moluccas). In his "Ostasiatische Landschnecken", von MARTENS (1867, p. 248) doubted already the locality Java which was mentioned by REEVE (Conch. Icon. Vol. VII, 1852, no. 489). HENDERSON's specimens should probably be united with one of the preceding species of SYKES. Without having seen the shells it is difficult to decide with which of the two it is identical, the two species differing only in minor details.

*Macrochlamys hendersoni* ANCEY — (HENDERSON, p. 16, s.n. *Macrochlamys dohertyi*; ANCEY, p. 320).

**Helicarion lineolatus** MARTENS — Boeah-Boeah, 3 spec. New record for Enggano.

*Helicarion abellus* MARTENS — (HENDERSON, p. 16). HENDERSON is not quite sure of his identification, and mentions the comparatively short spire of his specimen(s). Could he have had shell(s) of the preceding species before him?

*Glessula* spec. indet. — (HENDERSON, p. 16).

*Prosopias argentea* HENDERSON — (HENDERSON, p. 16).

**Planispira aldrichi** HENDERSON — Boeah-Boeah, 7 spec. (also HENDERSON, p. 15). In the original description the dimensions are running: alt. 15, greater diam. 28, lesser diam. 23 mm. The adult shells collected at Boeah-Boeah are measuring: height 16, max. diam. 29, min. diam. 25 mm.

"	12,	"	26,	"	22 "
"	11,	"	24,	"	20 "
"	11,	"	23,	"	19 "

The 3 others are immature and have not been measured. It is remarkable that even those full grown shells are so diverging in capacity.

**Amphidromus enganoensis** FULTON — Enggano (OUWENS) 8 spec.; Kajaäpoe, 16 spec.; Boeah-Boeah, 25 spec. (also FULTON, p. 71 and HENDERSON, p. 15). In the latter set 9 shells are approaching the forma *sykesi* as proposed by FRUHSTORFER (p. 200). FULTON described and figured only the sinistral form, but in my samples both sinistral and dextral shells occur, the latter in a minority. The three sets are analysed hereafter according to age and colour and according to left- or right-handed condition of the spiral. Enggano 8 adults, all uniform rich brown, 6 sinistral, 2 dextral. Kajaäpoe 8 adults, 8 juv., all uniform yellow, all sinistral.

Boeah-Boeah	}	20 adults, 5 juv. (total)
		13 ad. 3 juv. yellow to rich brown (colours merging into each other), 11 sinistral, 5 dextral
		7 ad. 2 juv. forma <i>sykesi</i> , 8 sinistral, 1 dextral.

From the little island Poeloe Doea, lying in the Enggano group, FRUHSTORFER (p. 200) described a small form of *Amphidromus enganoensis* to which he gave the subspecific name *gracilior*.

By the preceding list we arrive at a total of 31 species of non marine mollusca occurring in Enggano. Of this number 3 are not identified specifically and one is probably wrongly named (*Trochomorpha hartmanni*). Subtracting these 4 there remain 27 species which can serve for a zoogeographical analysis.

The most interesting species are the endemics of which Enggano contains 8 (*Crossopoma enganoense*, *Thiara badia*, *Trochomorpha dautzenbergi*, *Tr. gulielmi*, *Macrochlamys hendersoni*, *Prosopaea argentea*, *Planispira aldrichi* and *Amphidromus enganoensis*). Of the remaining 19 there are 16 common inhabitants of a great many islands in the Malay Archipelago (the *Neritina*'s, *Septaria suborbicularis*, *Leptopoma vitreum*, *Truncatella ceylonica*, *Thiara scabra*, *tuberculata*, *hastula* and *herculea*, *Cassidula mustellina*, *Melampus fasciatus*, *Pythia pantherina* and *striata*). The last three (*Japonia cilifera*, *Helicarion lineolatus* and *albellus*) are recorded from both Java and Sumatra and point to a previous connection with at least one of these islands.

#### LITERATURE

1. 1896 FULTON, Ann. Mag. Nat. Hist. (6) Vol. 17, p. 66-94.
2. 1898 HENDERSON, The Nautilus, Vol. 12, p. 13-17.
3. 1904 SYKES, Journ. Malac. Vol. 11, p. 87-92.
4. 1905 ANCEY, Journ. de Conch. Vol. 53, p. 310-327.
5. 1905 FRUHSTORFER, Nachr. Blatt, Vol. 37, p. 198-201.