

Notes on caenozoic and recent mollusca from the Dutch  
East Indies 4—5 (Naticidae) <sup>1)</sup>

by

C. O. VAN REGTEREN ALTENA, Geologisch Instituut, Amsterdam

4. Fossil faeces of NATICA from East Java

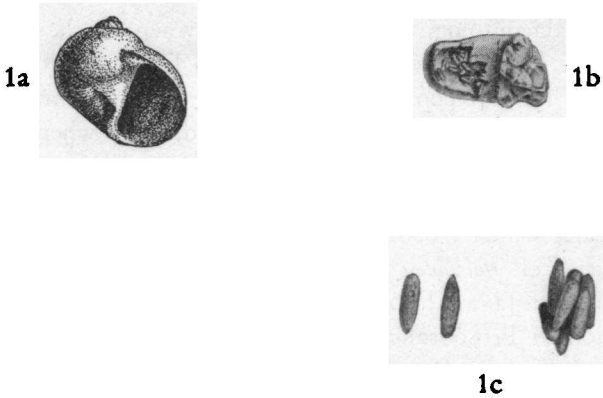
The palaeontologist is always glad, when to the generally scanty remains of former faunas, which are his only hold when he has to reconstruct an image of life in former epochs, something unexpected and new is added, even when the new find only confirms his opinion about life in the period from which it derives. So I was very glad to find a number of corpuscles which I believe to be fossil faecal pellets, in a shell of *Natica* cf. *helvacea* L a m a r c k deriving from pleistocene beds in East Java, although I had never doubted of the normal digestion of Prosobranchs which lived so many centuries ago, ending in the production of faecal pellets just as we know to be produced by Prosobranchs actually.

The shell (fig. 1a) was found in the lowest of three fossiliferous horizons in the lower pleistocene Poetjangan layers NW. of Modjokerto (Residence of Soerabaja, Java)<sup>2)</sup>. As to its identification, I think it is too young to be quite sure about the species, because it is difficult to separate juvenile *Natica helvacea* L a m a r c k from young *N. vitellus* L i n n é. The shell was filled by the hard, fine grained matrix and when removing this cast (fig. 1b), I found the fossilised faecal pellets (fig. 1c), which were situated at a distance of about  $\frac{1}{4}$  to  $\frac{1}{2}$  of the last whorl from the aperture. They were about 90 in number; several of them were clustered together in parcels of 3 or 4 in a characteristic way. The pellets themselves have a cylindrical shape with rounded ends; frequently one end is slightly more pointed than the other. Their length is scarcely more than 1 mm., the diameter slightly under 0,5 mm.

<sup>1)</sup> Number 2—3 see: Basteria, 4, pp. 45—46, pl. 3, figs. 1a—c, 1939.

<sup>2)</sup> More exactly: at one of the localities M 292 or M 293 of my tabel in Leidsche Geol. Meded., 10, p. 257, 1938.

## Plate 4.



Figures 1a, b, c. *Natica* cf. *helvacea* L a m a r c k, pleistocene, NW. of Modjokerto, Java, L. P. P o u d e r o y e n del. a: shell  $\times 2$ , b: cast containing fossilised faecal pellets  $\times 2$ , c: fossilised faecal pellets  $\times 15$ .



Figures 2a, b. *Polinices* (*Neverita*) *perobliquus* (D a u t z e n b e r g & H. F i s c h e r). Siboga Station 294, L. P. P o u d e r o y e n del. a: front view, b: side view, both  $\times 1\frac{1}{2}$ .

I sought in vain for a description or figure of the faeces of any recent Naticid, and thus a comparison with the recent faeces of this or a related species is for the time being impossible. As professor Dr. W. E. Ankel of Darmstadt kindly affirmed this seems to be the first record of coprolites produced by a Prosobranch.

#### 5. Note on *Sigaretus* (*Eunaticina*) *perobliquus* Dautzenberg & H. Fischer

In the collection of the Zoological Museum at Amsterdam I recently inspected a shell dredged by the Siboga near the S. coast of Timor at a depth of 73 m (Station 294) and recorded as „*Sigaretus linneanus* Recluz” by Schepman (1909, p. 218). It appeared, however, that the specimen does not belong to the said species, but agrees with *Sigaretus* (*Eunaticina*) *perobliquus* of Dautzenberg & H. Fischer (1907, p. 178, pl. 5, figs. 4, 5). A comparison of the drawings made from the Siboga specimen (figs. 2a, b) with the description and figures published by Dautzenberg & H. Fischer will show this identity. From *Sinum linneanum* (Récluz) (1843, p. 8, pl. 1, figs. 4a, b) this species differs by its habitus, its more solid shell, the presence of a funiculus in the umbilicus, and by the possession of a not canaliculate suture.

A closely related form occurs in the pliocene of Java and has been described by K. Martin as *Natica* (*Neverita*) *sulcifera* (1905, p. 262, pl. 39, figs. 630, 630a, b). It differs from the recent species mainly by its more pointed spire. Besides Martin's type I could examine a second specimen of this fossil species, deriving from the same pliocene beds in the Residence of Madioen (Java). This second shell agrees exactly with the type.

In my opinion K. Martin was right in ranging his new species in *Neverita* Risso, as the solid shell and the conformation of the umbilical callus and funiculus make it impossible to include it in the genus *Sinum* Roeding (= *Sigaretus*

Lamarck). Therefore the recent species may be referred to as *Polinices (Neverita) perobliquus* (Dautzenberg & H. Fischer).

Pilsbry, considering *Neverita* Risso as a genus, recently (1929, p. 113) described a new section *Glossaulax* for those species of which the umbilical callus is grooved. As this is also the case in the two species discussed here, they should be ranged in Pilsbry's group. On the other hand the type of *Neverita* Risso (*Neverita josephinia* Risso) and that of *Glossaulax* Pilsbry (*Natica reclusiana* Deshayes) seem more closely related to one another than to the two species dealt with here, which differ from all other *Neverita* by the possession of a spiral sculpture. Therefore, if we follow Pilsbry, a third section of *Neverita* Risso would be necessary. It seems, however, more rational to leave the group *Neverita* unsplit than to increase the number of sectional divisions more than necessary.

#### Literature

- Dautzenberg, Ph. & H. Fischer, 1907, Contribution à la fauna malacologique de l'Indo-Chine. Journ. de Conch., 54, pp. 145—226, pls. 5—7.
- Martin, K., 1905, Die Fossilien von Java. Samml. Geol. Reichsmus. Leiden, N.S., 1, part. 9.
- Pilsbry, H. A., 1929, *Neverita reclusiana* (Desh.) and its allies. Nautilus, 42, pp. 109—113.
- Récluz, C. A., 1843, Genre *Sigaretus*, *Sigaret*, Lamarck; in: Chenu, J. C., 1842—1858, Illustrations conchyliologiques.
- Schepman, M. M., 1909, The Prosobranchia of the Siboga Expedition, part 2. Uitkomsten op zoöl. etc. gebied Siboga, Monographie XLIX<sup>4b</sup>.