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Description of Two New Species of *Amalda*
 (Gastropoda : Olividae : Ancillinae)
from the South-Western Indian Ocean,
with a Note on *Amalda similis* (Sowerby, 1859)

BY

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(1 Plate; 1 Text figure)

Amalda (Alocospira) roscoae Kilburn, spec. nov.

(Figures 2, 5)

Diagnosis: A narrowly ovate-fusiform *Alocospira* with an acuminate spire, exposed protoconch and a very obscurely spirally striate spire callus; body whorl marked below suture and above siphonal fasciole with a series of brown squares.

Description: Shape narrowly ovate-fusiform, aperture longer than spire, periphery of body whorl situated well above middle. Spire completely covered by callus deposit, except for the blunt, mamillate protoconch, which consists of $2\frac{1}{2}$ whorls and is yellowish-white in colour; spire callus milky, with the underlying markings barely visible; surface with very faint traces of spiral grooves; this callus covers the last suture and extends down as a ridge-like deposit onto the paries and columella, where it is tinged with pale purplish pink. Base of columella narrow, sculptured by 2 oblique grooves of which the outer is the deeper; columella separated from rest of surface by a wide but shallow furrow. Siphonal fasciole wide, delimited posteriorly by a groove, and divided, as is usual for the subfamily Ancillinae, into 2 halves by an asymmetrical spiral groove; of these the basal half is buff, the other half light brown. Body whorl just posterior to fasciole with a series of irregular brown squares on a pale ground; this zone is delimited posteriorly by a shallow spiral groove, which, judging by the growth lines, originally terminated in a labral denticle (edge of lip here chipped in holotype). Posterior to this is a slightly wider uniform pale zone. Middle area of body whorl pale pinkish-brown with a

series of close axial brown streaks. Below the suture is a second zone of irregular brown squarish marks, partially covered by the spire callus; this zone is delimited anteriorly by a shallow groove.

Dimensions: 19.6×7.8 mm; aperture length 11.1 mm.
Operculum narrowly leaf-shaped, nucleus subterminal. Animal not preserved.

Type Material and Locality Data: Known only from the holotype (Natal Museum G 285) which was taken from the stomach of a scavenger fish [*Lathrinus miniatus* (Schneider, 1801)] caught off Ponta São Sebastião in the Inhambane district of Moçambique ($22^{\circ}05' S$; $35^{\circ}24' E$). It is named in honour of the discoverer, Mrs E. Roscoe.

Comparative Remarks: *Amalda roscoae* shows little affinity to any species yet described from South Africa or the western Indian Ocean, and its relationships appear to lie with Australian species of the subgenus *Alocospira* Cossmann, 1899. The closest is *Amalda rosea* (Macpherson, 1959) from Queensland, which possesses a colour form with subsutural and basal blotches very similar to those of *A. roscoae*; *A. rosea*, however, has a broader shell with distinct spiral ridges on the spire whorls. There is also a certain resemblance to *A. oblonga* (Sowerby, 1830) and *A. lineata* (Kiener, 1843)¹, from both of which *A. roscoae* is easily separated by its papillate apex, narrow form

¹ Modern Australian workers have followed IREDALE (1924) in using the later name *monilifera* Reeve, 1864, for this species, under the assumption that Kiener's *nomen* is a homonym. However, *Ancilla lineata* Perry, 1811 (a *Nassarius*) does not invalidate *Ancillaria lineata* Kiener, 1843 (an *Amalda*).

and different colouration. On the other hand it is not as narrow as *A. (Gracilispira) edithae* (Pritchard & Gatliff, 1898), which furthermore has a higher spire with distinct sculpture, and the markings are different; also the nucleus of the operculum in the subgenus *Gracilispira* Olson, 1956, is terminal (cf. PONDER, 1968). The only other *Alocospira* occurring in Southern Africa is *Amalda errorum* (Tomlin, 1921), which does not resemble *A. roscoae* very closely at all.

Amalda (Baryspira) trachyzonus Kilburn, spec. nov.

(Figures 1, 4, 7)

Diagnosis: A broad, low-spired *Baryspira* with a finely rugose shoulder callus; there is no depressed spiral band adjacent to the fasciole; flesh-coloured with a white adapical callus and dark brown posterior fasciole and dorsal sutural band.

Description: Shape truncately conical, spire low, obtuse and rather mamilliform, covered by a smooth white callus deposit which completely masks the sutures. In addition to this, a large tongue-shaped callus pad covers all or most of the adapertural surface posterior to the siphonal fasciole; this continues down behind the labrum as a varicoid thickening, with a small lobe behind the adapical end of the lip, and also extends down the columella, forming a low axial ridge in the parietal region. The columella callus is thick and white, its base showing 3 weak, diagonal, slash-like grooves anteriorly and 2 posteriorly, the latter being more or less fused into a single wide furrow; this furrow contains a group of minute pustules, and at a point on the labium corresponding to its posterior termination there is a slight boss, almost suggestive of a columella pleat. On the abapertural side the shoulder is rendered prominent by a belt-like callous ridge, rough to the touch due to the presence of minute pustules; it is tinged or mottled with light golden-brown. At the last suture on the adapertural side between the spire callus and the shoulder there lies a C-shaped band of chestnut-brown. The siphonal fasciole, which is separated by a narrow lunate groove from the base of the columella, is bisected by an asymmetrical groove; the anterior half of the fas-

ciole is white and bears traces of a few very fine spiral striations, while the posterior half is chestnut brown and is raised slightly above the surface of the body whorl. There is no basal groove, depressed band or labral denticle. The median zone of the body whorl is pale flesh in colour, the aperture darker flesh.

Dimensions: 23.5×14.7 mm, aperture length 16.6 mm (holotype); 22.1×12.7 mm, aperture length 14.3 mm; 19.9×10.8 mm, aperture 12.6 mm (paratypes).

Type Locality: Gonubie ($32^{\circ}56' S$; $28^{\circ}01' E$), East London area, Cape Province, Republic of South Africa.

Type Material: Holotype, Natal Museum No. 6811, paratypes, 2, Natal Museum No. 6813. All 3 are beach specimens, the holotype in fresh condition, the paratypes somewhat beachworm.

Remarks: The 3 specimens known show considerable variation in shape. Whereas in form the holotype closely resembles *Baryspira stortha* Olson, 1956, type-species of the subgenus *Spinaspira* Olson, 1956, the larger paratype approximates to *B. robusta* Marwick, 1924, type-species of *Gemaspira* Olson, 1956. In view of this the two subgeneric names are obviously synonymous. However, BEU (1970) points out that *Gemaspira* in turn intergrades with *Baryspira* Fischer, 1883, and both must therefore be rejected as synonyms of that.

Comparative Discussion: Only one other *Baryspira* of the *Spinaspira-Gemaspira* type is known, namely *Amalda (B.) raoulensis* (POWELL, 1967: 198; plt. 38, figs. 4, 5) from the Kermadec Islands. This appears to be a larger, narrower species than *A. trachyzonus*, with a higher spire, a smooth shoulder callus and different colouration. *Amalda (B.) glandiformis* (Lamarck, 1811), from the Miocene of France, is a distinctly more biconical species (cf. CHENU, 1859: fig. 884). Of the 12 species described or recorded from the Oligocene-Pliocene of New Zealand by OLSON (1956) there is, as has been stated, some resemblance to both *A. stortha* (Olson) and to *A. robusta* (Marwick). *Amalda trachyzonus* differs from these, *inter alia*, in the absence of a depressed spiral band above the fasciole.

Explanation of Figures 1 to 7

Figures 1, 4: *Amalda trachyzonus* Kilburn, spec. nov., holotype, dimensions 23.5×14.7 mm

Figures 2, 5: *Amalda roscoae* Kilburn, spec. nov., holotype, dimensions 19.6×7.8 mm

Figures 3, 6: *Amalda similis* (Sowerby, 1859). Santa Carolina Island, Moçambique, dimensions 57.3×26.4 mm

Figure 7: *Amalda trachyzonus*, paratype, dimensions 22.1×12.7 mm



Figure 1

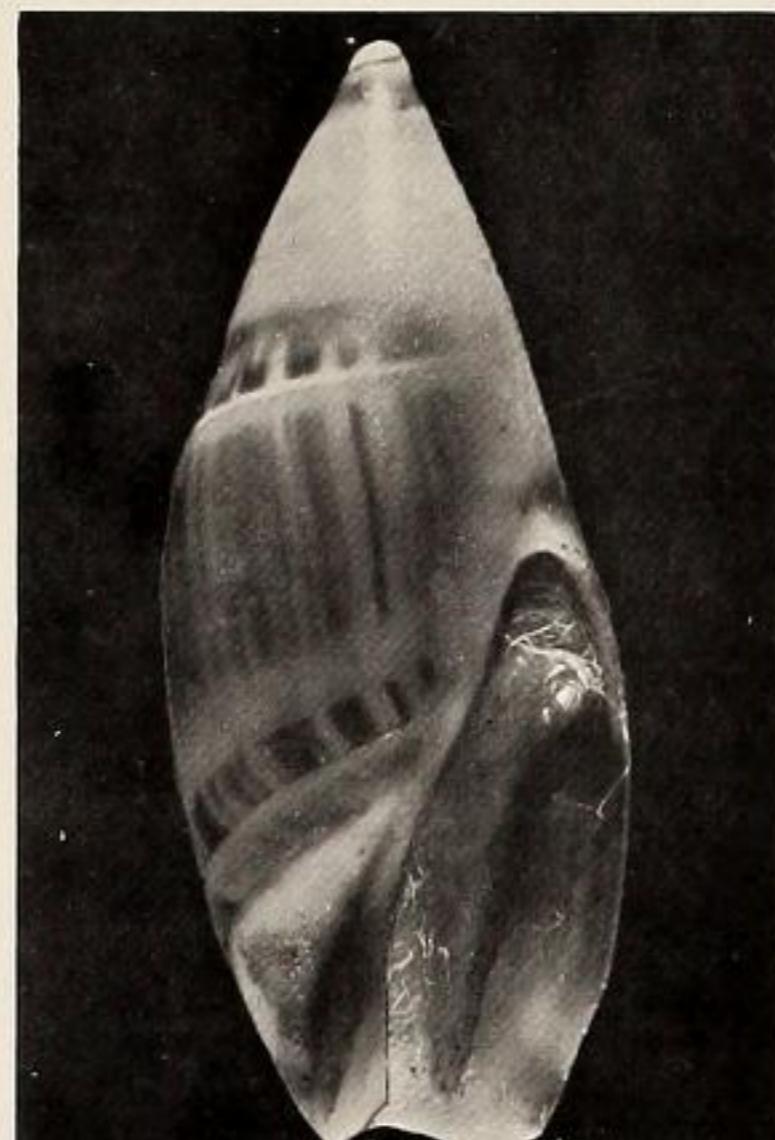


Figure 2

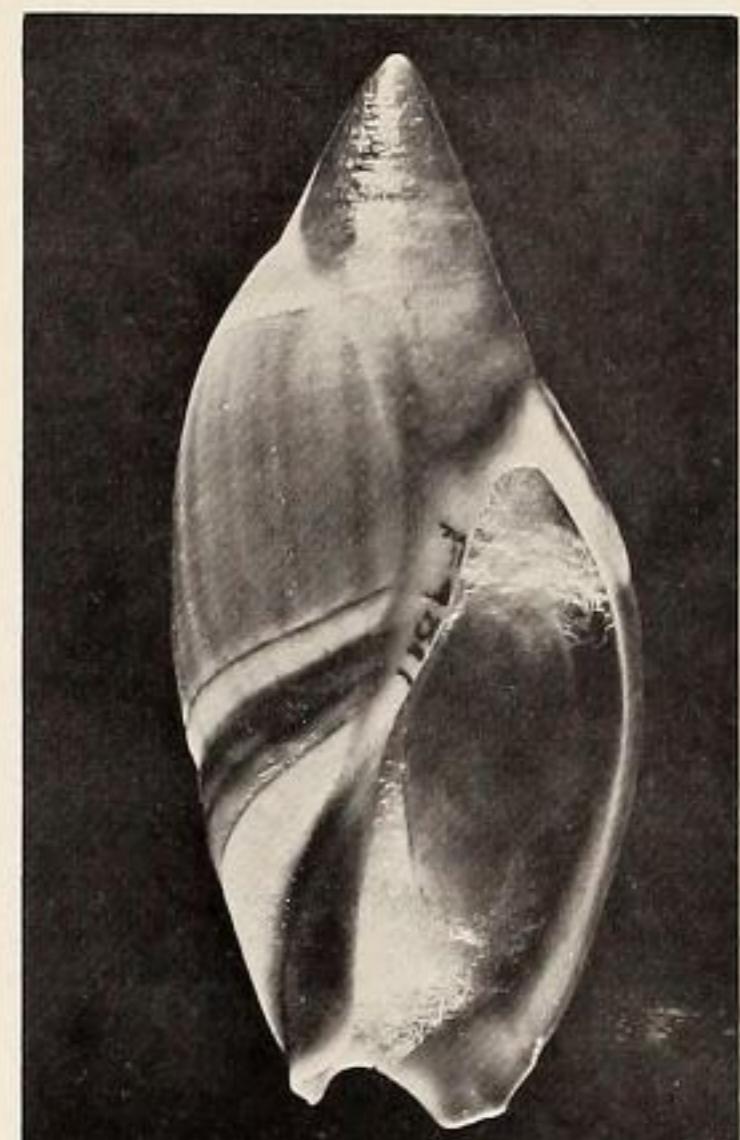


Figure 3

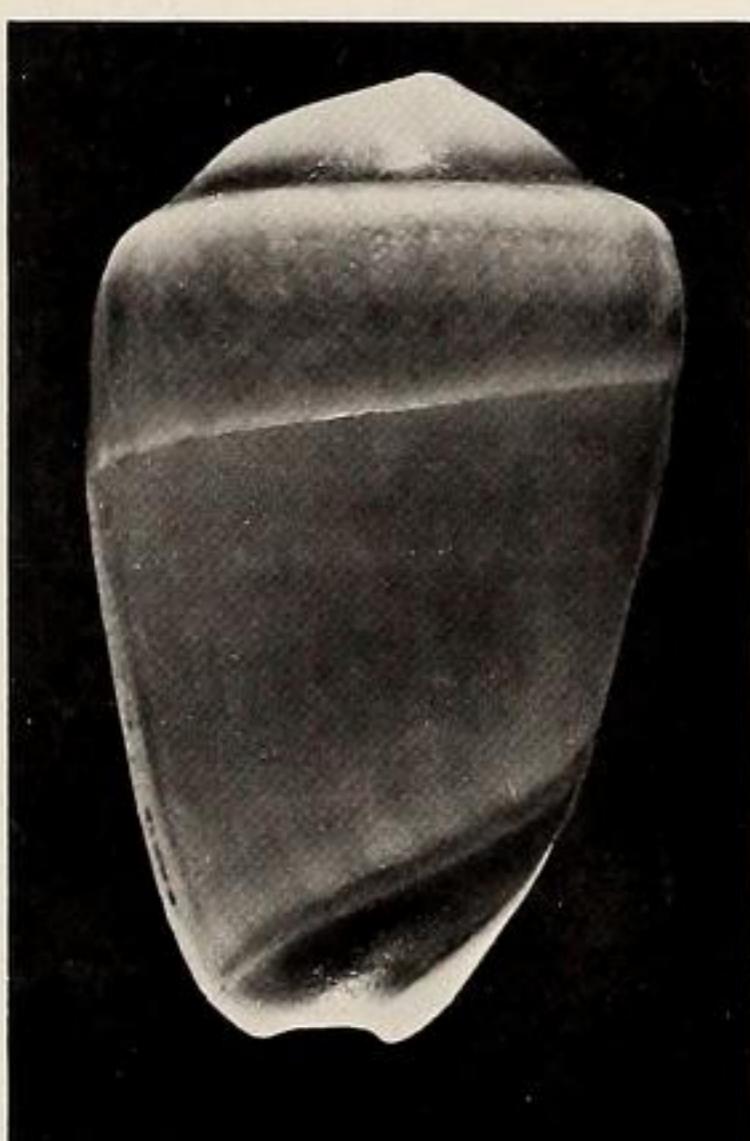


Figure 4

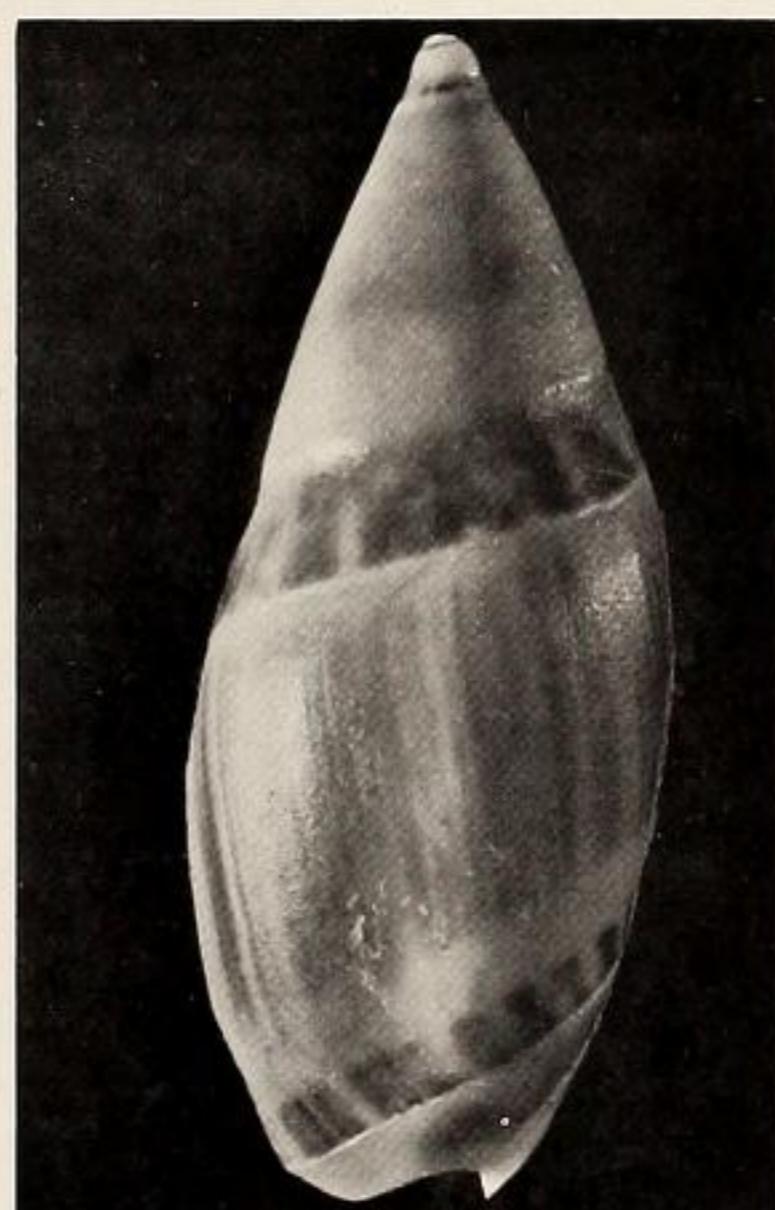


Figure 5

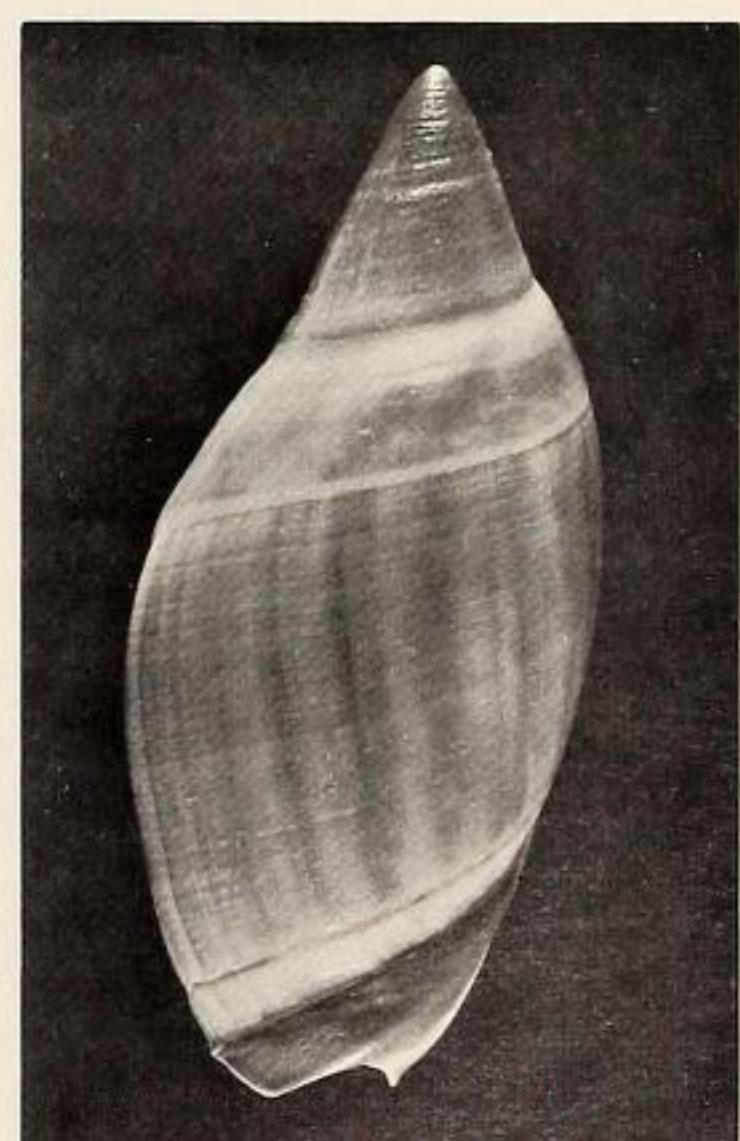


Figure 6

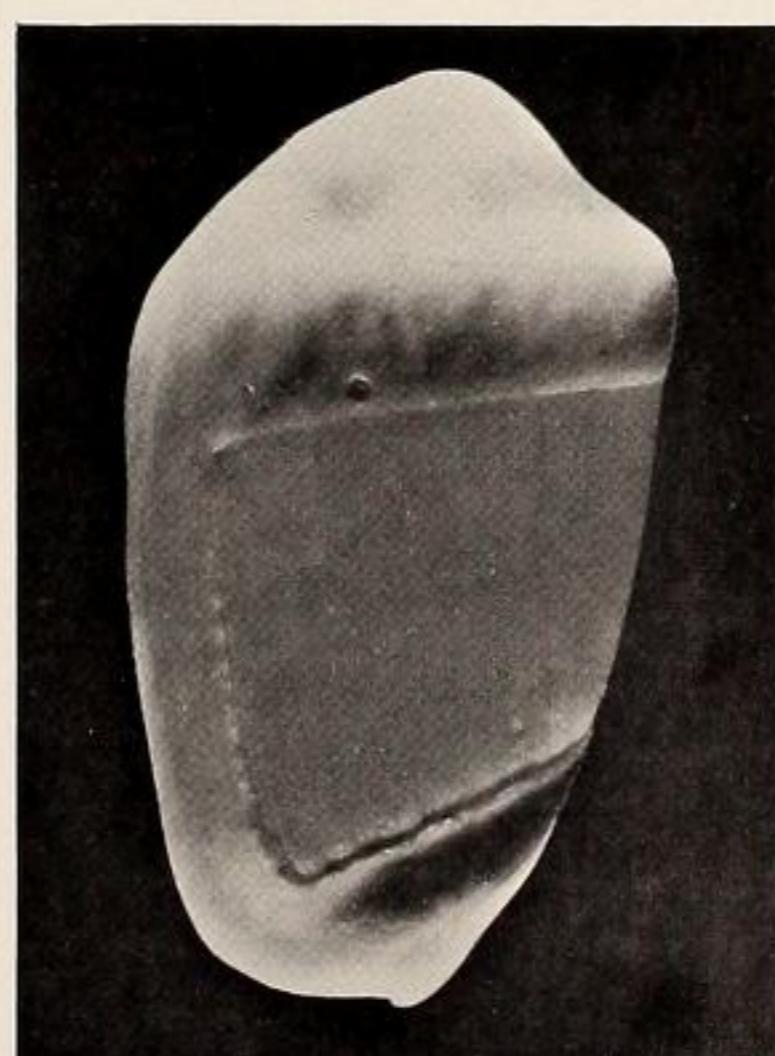
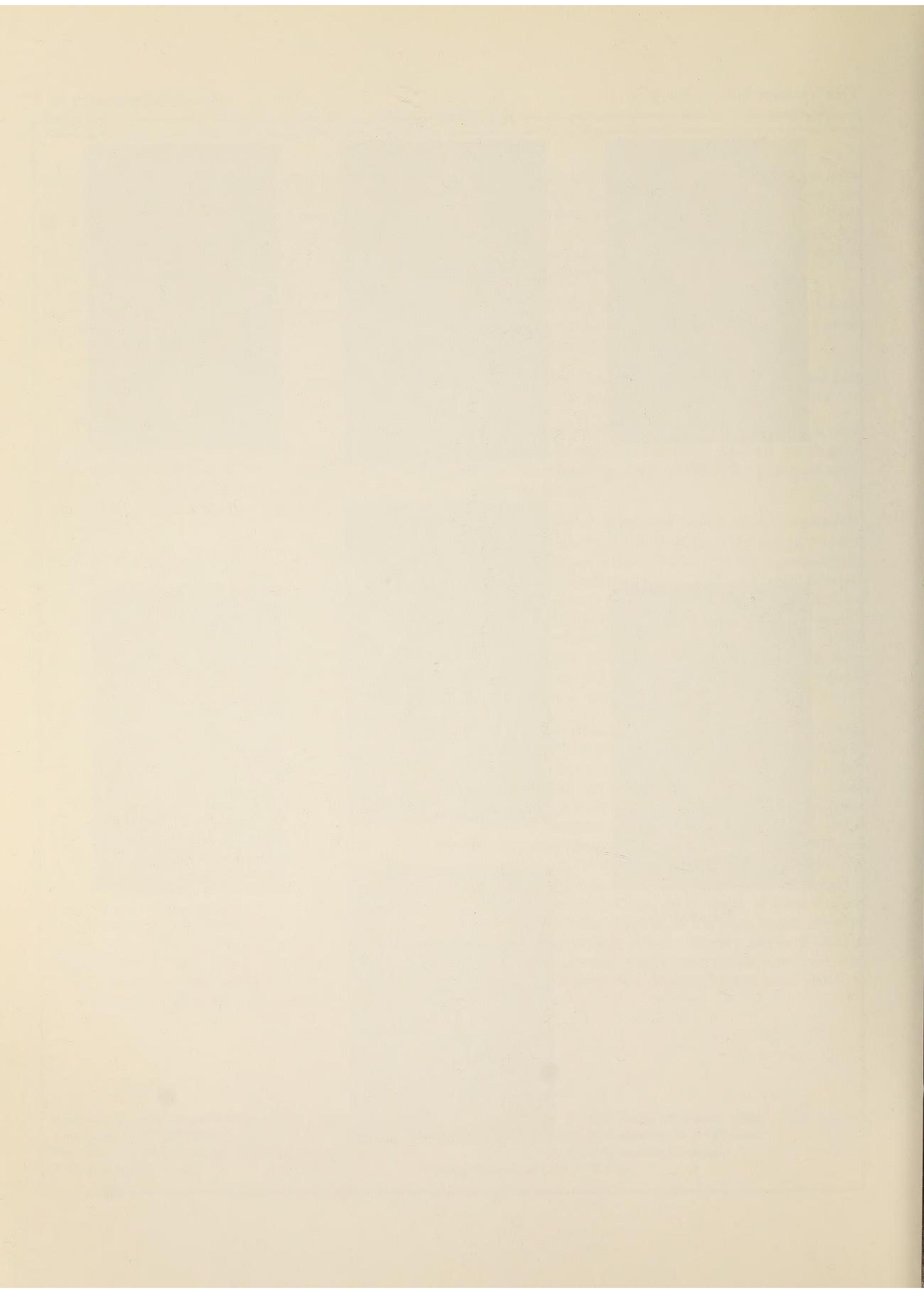


Figure 7



Of Southern African species, the only remotely comparable members of the genus *Amalda* are *A. (Baryspira) obtusa* (Swainson, 1825), *A. (B.) optima* (Sowerby, 1897) and *A. (B.) contusa* (Reeve, 1864). All of these show a much higher spire, a markedly more oblong-ovate or ovate-biconical shape, a deeper siphonal notch and different colouration, and they lack the characteristic rugose shoulder belt.

Amalda (Baryspira) similis (Sowerby, 1859)
(Figures 3, 6, 8)

Ancillaria rubiginosa var. SOWERBY, 1830: 8; fig 51
Ancillaria similis SOWERBY, 1859: 64; plt. 211, fig. 17

The type locality of this species was originally cited as "North Australia", but its occurrence in that region does not appear ever to have been confirmed, and the only specimens seen by me have come from Moçambique localities. In view of the extremely restricted ranges which characterise members of the Ancillinae, one must formally doubt the correctness of Sowerby's original locality. All subsequent literature records seem to have been based on Reeve's misinterpretation of the species (1864: plt. 5, figs. 12a, 12b), which shows a thin, white shell with a feebly calloused spire and rather conspicuous sculpture, probably allied to the West Australian *Olivula muscae* (Pilsbry, 1926) (= *Ancillaria elongata* Gray, 1847, non Deshayes, 1830).

Amalda similis was originally (1830) said to be pale brown in colour, but was subsequently described as white with a brown-tinged spire and columella callus. It seems likely that Sowerby's specimens were either abnormal or bleached, as fresh Moçambique shells are usually richly marked with deep brown. However, a live-taken juvenile from Inhagondo ($21^{\circ}46'S$; $35^{\circ}26'E$) is pale orange-buff with a slightly darker fasciole and subsutural zone, and a faded shell from Santa Carolina Island is cream with a light brown spire callus and fasciole, and a faintly violaceous-tinged columella. In the average example, however, the middle of the body whorl is light brown in ground colour, with a more or less dense pattern of fine axial strigations of a darker brown; this area is delimited basally by a rather deep spiral groove, terminating in a labral denticle; the band between this and the fasciole is pale in colour; the siphonal fasciole itself is divided into two, consisting of a deep brown, medially ridged posterior part and a convex light brown or buff anterior one. The whole spire is overlaid by a dark-brown callous wash, paler at the suture of the body whorl and bordered a short distance below the latter by a white line followed by a shal-

low groove. A callus of a deep chestnut colour overlies the right and adapertural side of the spire; this continues anteriorly to line the peristome, but narrows and becomes paler in the region of the paries and the posterior end of the labrum; the basal part of the columella callus is light violaceous in colour. The whole surface is covered by fine spiral striae, which are strong enough on the spire to give the surface a rugose appearance. The base of the columella is sometimes smooth or it may have as many as 5 oblique grooves. The dimensions of 2 large examples from Santa Carolina Island are: 57.3×26.4 mm, aperture length 35.4 mm; 52.2×23 mm, aperture length 32.2 mm.

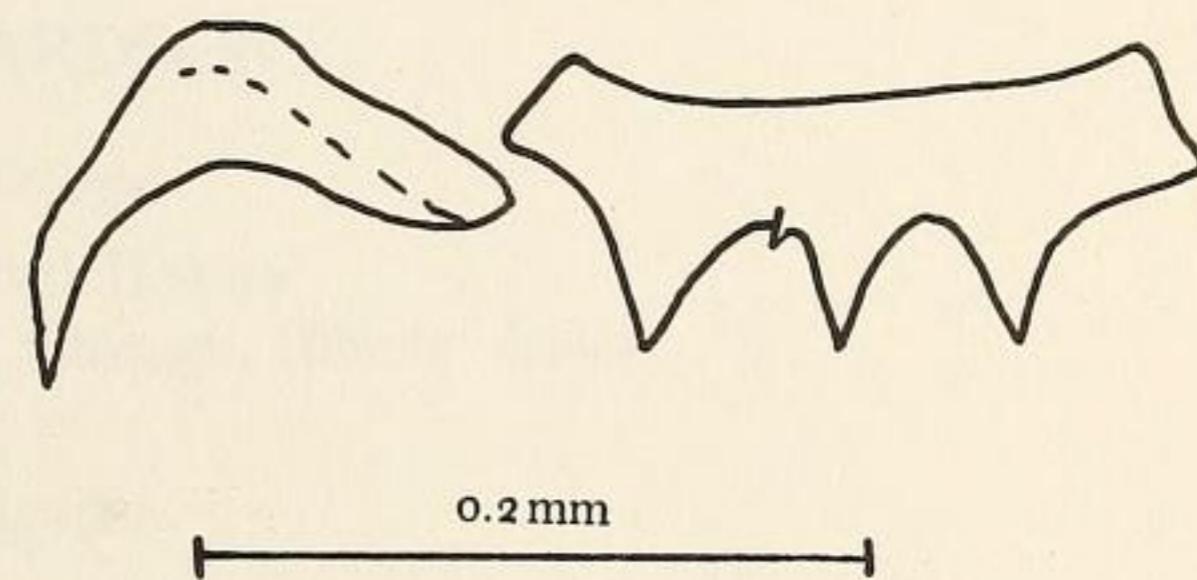


Figure 8
Amalda similis (Sowerby, 1859)
Rachidian and lateral plate of radula measured line = 0.2 mm

Animal white, lightly speckled with pale brown. Tentacles short triangular flaps, without eyes; only females examined. Radula typical of genus, rachidian tricuspidate with 1 or 2 fine intermediary denticles, varying along length of ribbon.

Operculum of normal *Baryspira* type with the nucleus subterminal.

Material examined (all Moçambique): Inhambane (Natal Museum, leg. R. Cruickshank); Santa Carolina Island (Natal Museum, leg. Mrs E. Roscoe, Mrs T. Trow, R. Cruickshank) and Magaruque Island (in A. Jenner collection), both Bazaruto Archipelago; Ponta Inhagondo (in Mrs E. Roscoe collection); Port Amelia, Cabo Delgado district (in A. Jenner collection).

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