

La Conchiglia

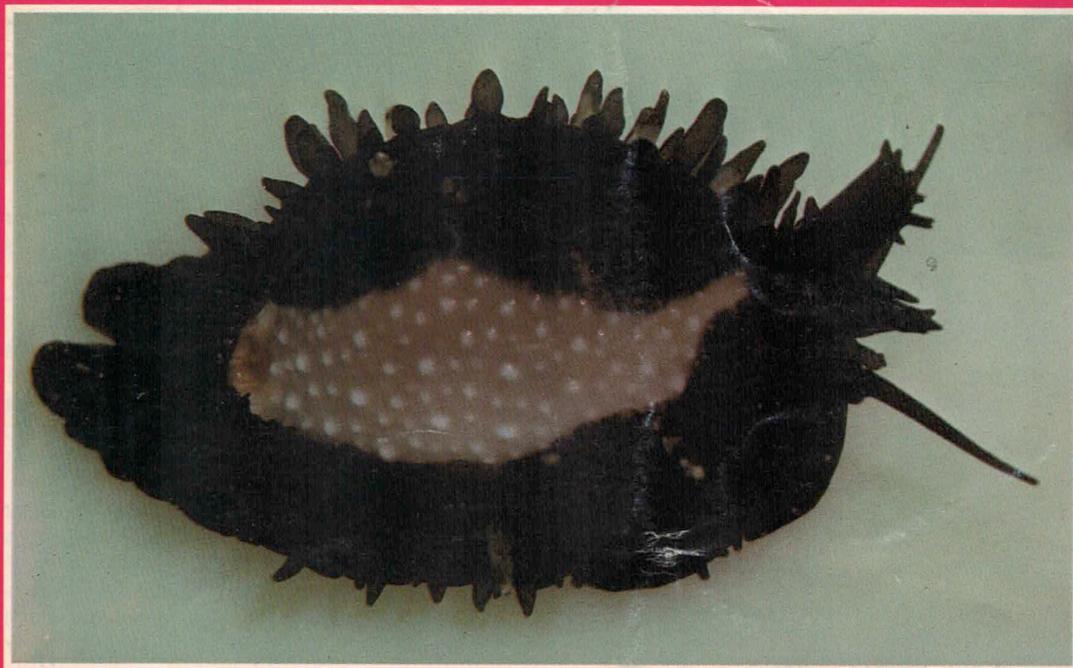
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The Shell

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Staphylaea limacina Lamarck, 1810 in the Western Indian Ocean

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It has always been a favourite sport of mine to collect and compare as many specimens as possible of the one species - variations in shape and pattern, unusual teeth, rare origins and any other characteristic which has caught my attention. Over the years that I have been collecting cowries from all over the world, but especially from Tanzania and South Africa, *Staphylea limacina* Lamarck, 1810 has particularly fascinated me. Although, from the beauty point of view, this cowry cannot stand up to other congeners, it becomes extremely interesting if it is examined with care. It shows quite a number of different forms and variations in dentition, in the shape and structure of the shell and this is what I wish to present and illustrate in this article.

Before dealing with the African *limacina*, I give here a short systematic scheme of the genus *Staphylaea* Jousseaume, 1884 which includes the following three species, with a few subspecies, in my opinion valid, as well as the most important forms: - *S. semiplota* (Mighels, 1845)
Synonyms: *spadix* Mighels, 1845
polita Roberts, 1868
and many others

Important forms: *annae* Roberts, 1968, is used to indicate the larger more inflated form of *semiplota*. No subspecies are recognised. Endemic to the Hawaiian archipelago.

- *S. staphylea staphylea* (Linnaeus, 1758) (Andaman, Malaysia, Japan)

Synonyms: *nukulau* Steadman & Cotton, 1943
atrata Gray, 1825
lactea Coen, 1949
and many others

Subspec. *consobrina* Garret, 1879 (Pacific Islands)

laevigata Dautzenberg, 1932 (Africa)
descripta Iredale, 1935 (Queensland)

- *S. limacina* (Lamarck, 1810)
Synonyms: *lilacina* Weinkauff, 1881
jenningsia Perry, 1811
Important form: *mostrans* Iredale, 1935
Subspec. *facifer* Iredale 1935 (Australia)
interstincta Wood 1828 (Africa)

Limacina limacina: shell usually heavy, with thick rostrated extremities. The shape can vary from oblong oval to depressed round in small or gerontic specimens. The dorsal colouring varies from yellowish grey to dark brown, sometimes blue grey, especially in specimens from Taiwan. The extremities are always darker than the dorsum and vary from pale tan to black. The teeth are always strong and cut regularly; on the columellar side they extend as far as the centre of the base or they cross it with their whole length. Shells with strong dorsal tubercles growing out of white blotches are very common in this subspecies. Its distribution covers the whole range of the species in the Indian Ocean and in the western Pacific, except for Australia where it is substituted by for Australia where it is substituted by for Australia whstant race, probably endemic to the Australian waters, from Albany to Darwin and to Sydney. The shape of the shell is similar to that of the nominal subspecies, but the extremities are slightly less rostrated. The dorsum is often paler, sometimes even white. The teeth are well cut, speckled in orange-red and on the columellar side they usually reach the middle of the base, but they can be shorter in the central part. A striking variation has been called *mostrans*; in these shells, which I know only from Kappel Bay, Queensland, the dorsum is covered by a translucent callosity.

Limacina interstincta: This is the name of the African race. Typical *interstincta* are pyriform and have a

moderately light shell with a wider aperture than in the preceding species. Tuberculated specimens are very rare in this subspecies, the dorsal colour is normally from grey-bluish to dark brown, sometimes black. The extremities are thinner and more delicate than in the other subspecies, the teeth are closer together and more numerous. In their "Prodrom" the Schilders list other differences which, in my opinion, are not always constant. However, I consider it is opportune to quote here briefly the Schilders' description of *interstincta* (pg. 129): "In the western *interstincta*... however, the tubercles are replaced by equally small and rather distant white specks, the left side is rounded instead of pitted throughout, the columellar teeth (especially the central teeth) are still shorter, finer and closer, the terminal ridge is less dilated, the aperture is wider, the fossula is always flattened (...)".

In my opinion, the Schilders have reached to hasty conclusions in their description: many specimens, in fact, may be pitted along the whole edge of the shell, others have a concave fossula etc., but, on the whole, the description matches well. To complete the information, the dimensions of *interstincta* go from 13 to 39 mm., the distribution is from southern Somalia, Tanzania, Zanzibar as far as Nacala, Mozambique. It has not been recorded south of Mozambique.

Now follows the presentation of a few new forms of *limacina* from East Africa and from South Africa. The separation of these shells has been made after examining hundreds of shells, extracting many radulas from dried molluscs of the various forms and finally on the basis of observations in loco between 1978 and 1987. For convenience and due to the fact that these were already in frequent use among collectors, it seemed to me useful to give these forms names, which of course have no taxonomical value:

1a) *limacina* f. *nana*

Size: 13-18 mm (adult spec.)

Distribution: probably endemic to the west coast of the island of Zanzibar.

Shape: usually cylindrical, slightly depressed. Teeth often finer and sometimes shorter towards the

centre of the aperture on both sides. The dorsum is light tan, the white blotches often flow into each other or are indistinct or even absent. Sometimes slightly granulous. The extremities are reddish tan, the teeth often completely white.

This interesting little shell is found, along with specimens, also these very small, of *Staphylea staphylea laevigata*, in a spot on the coast of Zanzibar, which I have not been able to localize; it seems that it is very abundant there.

1b) *limacina f. staphyleae formis*

Size: 14-30 mm.

Distribution: Is. of Zanzibar and coasts of Tanzania. One specimen from Kenya and two from Nacala (Mozambique) have been recorded; it does not exist in South Africa.

Cylindrical to elongated oval shape, never pyriform. The spire is usually covered with callosity. The dorsum is granulous, with a well cut groove. Also the columellar teeth are well cut, fine and sometimes branched and reaching far across the base. Aperture very narrow.

This form is unmistakable, for the structure, the tubercles and the dentition which resembles that of *Staphylea laevigata* to such an extent that it was considered an intermediate form (hybrid or mutation). But in this field too little is known to go further than making a simple hypothesis. Therefore I prefer to deal with it as a form of *limacina interstincta*.

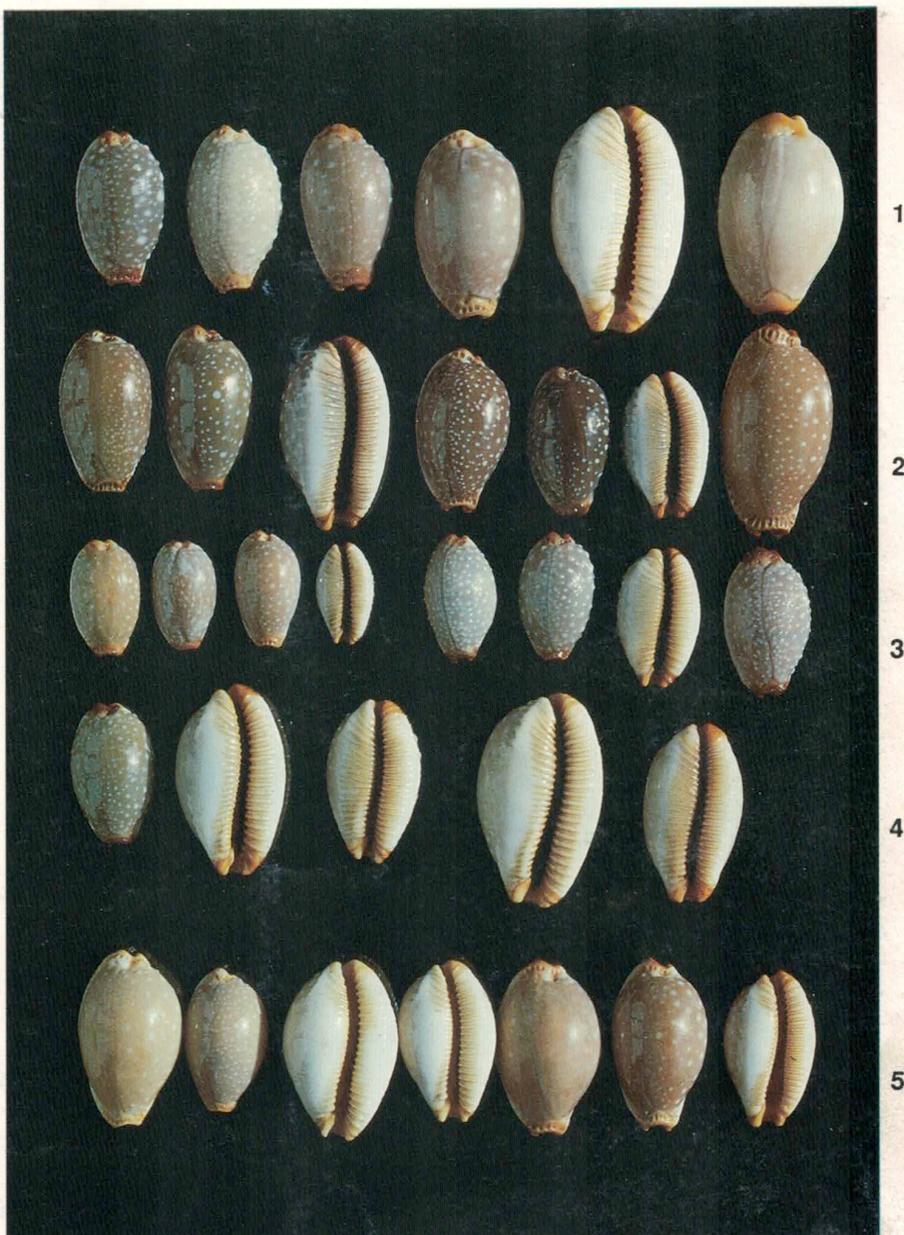
From not very common to rare, specimens in good condition with very raised granules are particularly attractive: shells similar to these are found, much more commonly, in some Philippine populations. However, they are, on an average, larger, with the teeth and the extremities much thicker.

2. *limacina f. nungwiensis*

Size: 17-38 mm.

Distribution: This form is definitely endemic to the north of Zanzibar and is the most common in the channel of the island of Tumbatu on the west and on the Nungwi reef in the north of the island.

Elongated shape, sometimes pyriform, rarely swollen oval. Very callous structure with the extremities hardly jutting out at all. Some gran-



First row, from the left: 3 spec. of *Limacina limacina* (Philippines) - 2 spec. of *limacina facifer* (Queensland) - 1 spec. of *l. facifer monstrans* (Qld) - Second row: 7 spec. of *limacina interstincta* (Zanzibar) - Third row, from the left: 4 spec. of *limacina f. nana* (W. Zanzibar) - 4 spec. of *limacina f. staphyleaeformis* (Zanzibar) - Forth row: 5 spec. of *limacina f. nungwiensis* (Nungwi, N. Zanzibar) - Fifth row, from the left: 4 spec. of *limacina f. clarissa* (Zanzibar, deep water) - 4 spec. of *limacina f. clarissa* (S. Africa, ex pisce)

ulosity is always present towards the extremities, while some specimens are strongly granulous over the whole surface. The colour of the dorsum is pale tan-gray, rarely blue. The spire is slightly raised and the dorsal groove forks at the extremities forming a kind of V. This characteristic contributes considerably to the possibility of picking out at first glance this form from amongst a lot of mixed limacinas. The teeth are strong and shaped in a way which can be considered almost unique among all cowries: at the two ex-

tremities they are fused together forming a thick ridge. A similar characteristic can be found only in very few other cowries of other genera: *Paulonaria beckii*, *P. dillwini*, *P. bernardi*, *Nesiocypraea lisetae*, *N. maricola*. *C. limacina nungwiensis* is the largest of the species in which this characteristic is present. Unfortunately, only one half-dried animal has been available for study: the mantle is dark brown, without spots or pattern, with very few hair-like papillae. The foot and tentacles are pale red-brown. No

living mollusc has been found and therefore I have not even attempted a comparative study with other similar species as I do not consider the material available to be sufficient. Dead shells of *nungwiensis* have been collected on the inner side of the famous Diana Beach near Mombasa, Kenya together with other dead shells of *limacina interstincta* and *staphylea laevigata*.

3. *Limacina* f. *clarissa*

Size: 19-28 mm.

Distribution: Island of Zanzibar, probably at depths of 20 m. and over; Dar-es-Salaam, Transkey (Mbotyi, Pondoland Wild Coast) ex pisce at depths of 40 m. off the port of Durban, Richard Bay and Port Grosvenor. Subfossil from Bagamoyo (Tanzania). Its presence in the island of Pemba needs confirmation.

Form very variable according to locality and depth, from cylindrical to oval, often depressed. Very calous, convex base, wider than in the

other forms. Dorsal groove absent, but the V forking found in *nungwiensis*, is often present at the extremities. The colour of the dorsum is always pale, tannish grey, never bluish, sometimes orangish or pale grey, the white blotches are indistinct, often absent. There is no granulation at all. The teeth become shorter at the centre of the aperture in 99% of the cases, a characteristic which is typical of *C. semiplota* from Hawaii. *Clarissa* is very similar to this latter but differs from it in the paler colouring and the lack of dark lines on the teeth. This is the only form of *limacina* the distribution of which goes further south than Mozambique as far as Gonubia, north of East London (beached). To my knowledge it has never been collected live in South Africa, even if fresh specimens can be obtained ex pisce. In Tanzania its presence is sporadic and scarce literature is available.

Some dealers have offered and sold this shell as "*semiplota* from Tanzania": the least that can be said

of this is that it is due to ignorance.

Apart from those dealt with above, there are, along the African coasts, other not less interesting forms of *limacina*. Most of these are anomalies, ecophenotypes, individuals modified by particular environmental conditions (pollution?); others seem to be mutations, but these are always a few specimens, sometimes only one, so it is necessary to wait for more concrete information coming from further accurate research to ascertain the reasons for such wide variability in this, as in other species from Zanzibar and in East Africa.

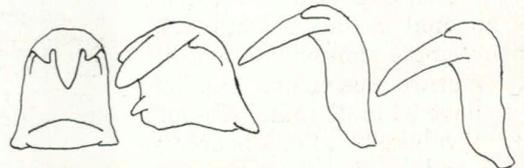
As a conclusion I would like to express my thanks to the following people: my father Cap. Felix Lorenz for his continuous accurate observations in loco in the various areas of East Africa; Noggs Newman and Nolan Webb for the beautiful series of *limacina* from South Africa and lastly Olive Peel and Graham Melvin from the rare ex pisce material from Natal.



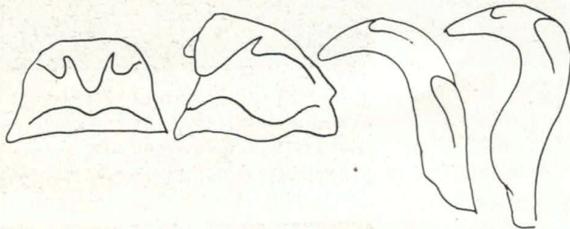
Radulae



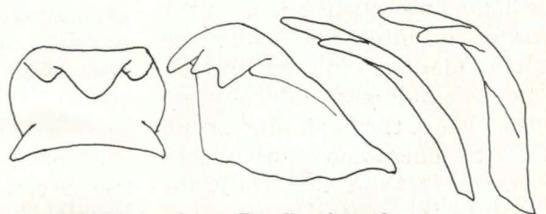
S. limacina interstincta, Dar-es-Salam



S. semiplota, Ewa Beach, Hawaii



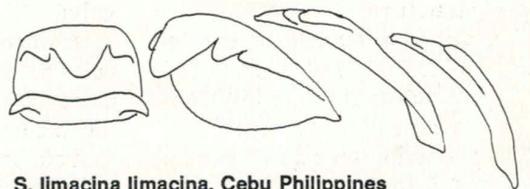
S. limacina interstincta f. *staphylaeaeformis*, Zanzibar Is.



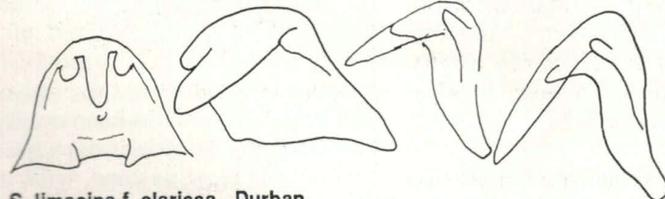
S. staphylea laevigata, Zanzibar Island



S. limacina f. *nungwiensis*, Zanzibar Is.



S. limacina limacina, Cebu Philippines



S. limacina f. *clarissa*, Durban