

A LIST OF MARINE SHELLS OCCURRING AT CHRISTMAS ISLAND,  
INDIAN OCEAN, WITH DESCRIPTIONS OF NEW SPECIES.

By E. A. SMITH, I.S.O.

Read 7th April, 1911.

IN these Proceedings (Vol. VIII, pp. 369-72) I gave a list of the shells collected at Christmas Island by Dr. C. W. Andrews on his second visit to that island. A few species obtained by him on his first visit are now included in the following catalogue, also those enumerated at the above reference. Mr. R. Kirkpatrick when at the island last autumn collected nineteen species, of which thirteen were not found by Dr. Andrews, four of them being undescribed. These were dredged in 30 to 100 fathoms, and doubtless many other interesting new forms remain to be discovered. Dredging operations around the island, however, are very difficult owing to the rocky nature of the bottom.

I. LIST OF SPECIES.

- |   |  |
|---|--|
| 1. <i>Glyphis Singaporensis</i> (Reeve).  | 32. <i>Engina mendicaria</i> (Lamk.).      |
| 2. <i>Haliotis</i> , sp. juv.             | 33. <i>Nassa papillosa</i> (Linn.).        |
| 3. <i>Trochus Niloticus</i> , Linn.       | 34. <i>N. exulata</i> , n.sp.              |
| 4. <i>Turbo Lajonkairii</i> , Desh.       | 35. <i>Columbella varians</i> , var.       |
| 5. <i>Nerita grossa</i> , Linn.           | 36. <i>Thais armigera</i> (Lamk.).         |
| 6. <i>N. costata</i> , Gmel.              | 37. <i>Drupa horrida</i> (Lamk.).          |
| 7. <i>N. polita</i> , Linn.               | 38. <i>D. clathrata</i> (Lamk.).           |
| 8. <i>Plesiotrochus Fischeri</i> , Smith. | 39. <i>D. morus</i> (Lamk.).               |
| 9. <i>Truncatella valida</i> , Pfr.       | 40. <i>D. Andrewsii</i> (Smith).           |
| 10. <i>Amalthea australis</i> (Lamk.).    | 41. <i>Coralliophila neritoidea</i> , jun. |
| 11. <i>Mitralaria diaphana</i> (Reeve).   | 42. <i>Conus hebraeus</i> , Linn., and     |
| 12. <i>Cypraea arabica</i> , Linn., and   | var. <i>vermiculatus</i> , Lamk.           |
| var. <i>Gillei</i> , Jousseaume.          | 43. <i>C. minimus</i> , Linn.              |
| 13. <i>C. vitellus</i> , Linn.            | 44. <i>Terebra undulata</i> , Gray.        |
| 14. <i>C. Mauritiana</i> , Linn.          | 45. <i>Smaragdinella viridis</i> (Rang).   |
| 15. <i>C. lynx</i> , Linn.                | 46. <i>Siphonaria ferruginea</i> , Reeve.  |
| 16. <i>C. moneta</i> , Linn.              | 47. <i>Arca maculata</i> , Sow.            |
| 17. <i>C. annulus</i> , Linn.             | 48. <i>A. imbricata</i> , Brug.            |
| 18. <i>C. poraria</i> , Linn.             | 49. <i>A. decussata</i> , Sow.             |
| 19. <i>Cerithium zebra</i> , var.         | 50. <i>Brachydontes (Hormomya)</i>         |
| 20. <i>Triphora triticea</i> , Pease.     | var. <i>rufolineatus</i> , n.sp.           |
| 21. <i>Planaxis longispira</i> , Smith.   | 51. <i>Septifer bilocularis</i> (Linn.).   |
| 22. <i>Latirus nodatus</i> (Martyn).      | 52. <i>S. excisus</i> (Wiegmann).          |
| 23. <i>Leucozoniasmaragdula</i> (Linn.).  | 53. <i>Melina perna</i> (Linn.).           |
| 24. <i>Peristernia nassatula</i> (Lamk.). | 54. <i>Libitina oblonga</i> (Linn.).       |
| 25. <i>P. venusta</i> , n.sp.             | 55. <i>Tellina scobinata</i> , Linn.       |
| 26. <i>Mitra fulva</i> , Swainson.        | 56. <i>Cardium rubescens</i> , n.sp.       |
| 27. <i>Mitra</i> , sp. juv.               | 57. <i>Tridacna gigas</i> , jun.           |
| 28. <i>M. retusa</i> , Lamk.              | 58. <i>Teredo</i> sp.                      |
| 29. <i>M. paupereula</i> , Lamk.          | 59. <i>Xylotrya</i> sp.                    |
| 30. <i>M. literata</i> , Lamk.            | 60. <i>Xylotrya</i> sp.                    |
| 31. <i>Tritonidea undosa</i> (Linn.).     | 61. <i>Polypus granulatus</i> (Lamk.).     |

## 2. DESCRIPTION OF NEW SPECIES.

## PERISTERIA VENUSTA, n.sp.

Testa minima, breviter fusiformis, albida, ad apicem et antice rosacea, circa medium anfractuum linea fusca cincta, infra suturam inter costas roseo maculata; anfractus 7, duo apicales læves convexi mammillæ-formi, cæteri oblique rotunde costati et spiraliter lirati, lineis incrementi conspicuis sculpti; anfr. ultimus costis septem infra medium evanescentibus instructus, liris spiralibus circiter undecim (quarto, sexto, et octavo fuscis) ornatus, inter liras spiraliter striatus; apertura parva, antice oblique canaliculata; labrum intus tenuiter denticulatum; columella in medio buplicata, rosacea. Long. 7, diam. 3 mm.; apertura cum canali 3 mm. longa, 1.25 lata.



*Hab.*—Flying Fish Cove, in 45 fathoms. One specimen.

One of the smallest species of the genus and allied to *P. iniuensis*, Melvill, from Savage Island, Oceania. It is, however, a little narrower than that species, has more numerous and finer spiral liræ, and is also distinguished by the brown thread-like line, which, passing round the body-whorl, revolves up the spire. The rosy spots between the upper ends of the costæ also constitute a distinguishing feature.

The lines of growth are well marked and sufficiently strong on crossing the spiral liræ to give them a crenulated appearance. The two plicæ on the columella are, in fact, the continuation of two liræ upon the end of the whorl.

## NASSA EXULATA, n.sp.

Testa elongata, angusta, acuminata, alba, dilute fusco interrupte balteata; spira elongata, acuminata; anfractus 9, tres apicales læves, convexi, cæteri minus convexi, sutura profunda sejuncti; anfr. superiores costis obliquis 16–18 instructi, liris tenuibus spiralibus circiter 6 cincti, liris in anfr. anterioribus 2–3 sensim evanescentibus; anfractus ultimus lævis, circa basim striis paucis sculptus, zonis tribus interruptis pallide fuscis ornatus, infra suturam spiraliter striatus, lineis incrementi tenuibus sculptus; apertura parva, ovalis, albida; labrum extra incrassatum, album, intus denticulis 9–10 vix conspicuis instructum; columella arcuata, callo albo, superne tenui unidenticulato, antice incrassato, induta. Long. 13, diam. 5.5 mm.; apertura cum labro 5 mm. longa, intus 2.5 lata.

*Hab.*—Off Margaret Beaches, in 100 fathoms. One specimen.

A slender form of *Nassa* with a small aperture and long spire. About three and a half of the upper whorls are prettily sculptured,

and then the ornamentation begins to die away, so that the last and penultimate whorls appear almost smooth to the naked eye, except a few striæ round the lower part of the former. The colour-markings are pale brown, and consist on the penultimate whorl of two indistinct,



rather interrupted zones, one below the upper suture and the other above the lower suture. These two bands are continued on the body-whorl, and there is a third around the base. As in many species, the upper margin of the whorls is somewhat distinctly marked off.

*CARDIUM (FRAGUM) RUBESCENS*, n.sp.

Testa parva, tenuis, valde inæquilateralis, trigono-cordata, antice brevissima, alba, postice producta, leviter acuminata, rubescens, interdum omnino rubescens, costis radiantibus circiter 38 instructi; costæ supra medium valvarum fere planæ, delicate squamulatæ, longe latiores quam sulcis separantibus; costæ anteriores et posteriores angustiores, fortius squamosæ, magis prominentes, sulcis latioribus profundioribus transversim sculptis separatæ; valvæ tenues, ad marginem ventralem leviter denticulatæ, postice fortiter dentatæ; pagina interna antice alba, postice rubescens vel undique rubescens, radiatim sulcata. Long. 8, alt. 6.5, diam. 5.5 mm.



*Hab.*—Flying Fish Cove, in 30 fathoms.

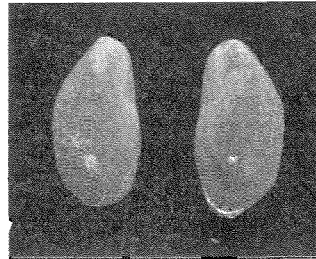
Allied to *C. crenelloides*, Melvill, and *carditaformis*, Reeve, both Indian Ocean species; there are differences, however, of form, colour, and sculpture, which distinguish these three one from the other. *C. carditaformis* is longer, the ribs are finer and more numerous, and the colour different. *C. crenelloides* is narrower in front, and less acuminate behind, has more ribs, and is devoid of colour.

Two specimens were obtained by Mr. Kirkpatrick, one entirely rosy-red, the other with the front half of the valves almost white, and the

hinder portion stained with rosaceous, the colour in two more or less suffused rays. The radiating riblets upon the middle of the valves are very faintly convex, and separated by mere impressed lines. These become more distinct grooves both anteriorly and behind. The lines of growth are distinct in the grooves, and in the impressed striae produce an almost punctate appearance.

*BRACHYDONTES (HORMOMYA) RUFOLINEATUS*, n.sp.

Testa elongata, radiatim et concentricè lirata, undique granulata, periostraco hirsuto induta, sordide albida, postice rufo maculata et lineata; margo cardinalis supra ligamentum brevis, rectus, postice vix angulatus; margo ventralis leviter incurvatus; valvæ tenues, ad marginem intus denticulatæ, iridescentes, rufo lineatæ et variegatæ; margo cardinis ante ligamentum dentibus tribus validis, quatuor minoribus posticis instructus; umbones pallidi, nitentes, concentricè striati, haud radiatim sculpti. Long. 10·5, alt. 5·5, diam. 5·3 mm.



*Hab.*—Flying Fish Cove, in 30 fathoms.

Allied to *Brachydontes (Hormomya) Karachiensis*, Melvill & Standen, but different in form, owing to the shorter hinge-line and the less marked dorsal angle. The concentric sculpture in the present species is also stronger, causing the radiating liræ to be more granulous. The colour-markings constitute another distinguishing feature, and the periostracum in *Karachiensis* appears to be of a less hairy nature.

The margin of the valves is most strongly denticulate along the dorsal and hinder edges, and somewhat more finely on the ventral side, excepting at the byssal opening, which is smooth.