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ON SOUTH AFRICAN MARINE SHELLS, WITH
DESCRIPTIONS OF NEW SPECIES.

BY EDGAR A. SMITH.

(Read before the Society, June 12th, 1901.)

(PLATE I.)

It was proposed in a former paper¹ to issue from time to time others dealing with the marine mollusca of South Africa. Through the energy of Mr. J. H. Ponsoy, who has got together from his South African correspondents the material upon which the present paper is based, I am enabled to make a first fulfilment of that proposal. Specimens of nearly all the species described or referred to, are in the British Museum, having been presented by Mr. Ponsoy.

1. *Glyphis spreta*. (Pl. I., fig. 18).

Fissurella fimbriata Sowerby (nec Reeve), Mar. Shells South Africa, p. 48, 1892.

Testa elongato-ovata, antice paulo angustata, depressa, costis gracilibus numerosis (quarum paucis posticis aliis majoribus), et incrementi lineis elatis squamosis cancellata, albida, rufo picta et variegata; foramen multo ante medium situm, ovatum vel rotunde ovatum; pagina interna albida, rufo obscure nebulosa, radiatim haud profunde sulcata, ad marginem crenulata. Longit. 25 mm., diam. 16, alt. 8.

Hab., Mossel Bay, Cape Colony (J. Crawford).

Quite distinct from *Fissurella fimbriata* of Reeve, with which it was confounded in the "Marine Shells of South Africa." It is a longer and narrower and more depressed species, with the foramen much less central. The sculpture is very similar, although not absolutely identical. The edge of the interior is much less deeply notched than in *F. fimbriata*, which exhibits a fine radiating striation within, which is less observable in the present species.

2. *Glyphis elizabethæ*. (Pl. I., fig. 12).

Fissurella sieboldii Sowerby (nec Reeve), Mar. Shells South Africa, p. 47, 1892.

Testa elongato-ovata, antice paulo angustata, depressa, costis præcipuis novem (quorum duo posticis aliis majoribus) et costellis numerosis gracilioribus in interstitiis instructa, lineis incrementi concentricis squamosè tenuiter cancellata, pallida, costis rufis, vel albis rufo maculatis, ornata, in interstitiis interdum nigro obscure radiata; foramen subcirculare, multo ante medium situm; pagina interna albida, infra

costas præcipuas sulcata, sulcis ad marginem profundis et prolongatis, inter sulcos crenulata. Longit. 44 mm., diam. 28, alt. 13.

Hab., Port Elizabeth (J. Crawford).

This species is quite distinct from *Fissurella sieboldii*, differing in colour, form, and sculpture. It is a longer shell and more depressed, and not arched behind the foramen, the central of the posterior costæ being depressed and not elevated. The costæ also are radiately striated, not acute, but broader, especially the three posterior ones. These are conspicuously prolonged, producing a strongly festooned margin behind. They have a roughish subnodose appearance, caused by strong marks of arrested growth. The intervening costellæ are much finer and vary in thickness, sometimes being alternately finer and coarser. They are beautifully scaled by the crossing of the close-set lines of growth which produce a finely cancellated surface. The apical hole is surrounded within by a circumscribed callus, which is truncate, but hardly pitted behind. The interior is white, or may show faintly the dark rays which sometimes occur on the outer surface. Young shells exhibit only eight principal costæ, the ninth, the posterior central one, not developing until later in life.

3. *Glyphis elevata* Dunker.

Fissurella elevata Dunker; Philippi's Abbild., vol. ii., p. 67, pl. II., fig. 4, 1845; non Pilsbry, Man. Conch., vol. xii., p. 217, pl. 39, figs. 8, 82-85, 1890.

Hab., Cape of Good Hope (Dkr.).

Mr. Pilsbry considers this species, together with *F. imbricata* Sowerby, *F. australis* Krauss, and *F. nigriradiata* Reeve, as synonyms of *F. rüppellii* Sowerby. This is a most unfortunate lumping, and would not have occurred if he had examined the types. I believe he is right as regard *F. nigriradiata*, which evidently is only a small or half-grown specimen of *rüppellii*. On the contrary, both *australis*, *imbricata*, and *elevata* are perfectly distinct from it and one another. The last species, besides a slight difference in form, has a greatly superior number of much finer costæ, and a very differently shaped foramen. Dunker gives the number of ribs at 180,¹ but in the shells before me, which I regard as belonging to his species, I find only about 100-114. On the contrary, *F. rüppellii* has only 40 to 50. The apical callus within in *F. elevata* is peculiarly truncate and deeply pitted behind, and very different to that of *F. rüppellii*.

4. *Macrochisma producta* var.

Macrochisma producta A. Adams; Pilsbry, Man. Conch., vol. xii., p. 194, pl. 59, fig. 62, 1890.

¹ It seems probable that the 8 and 0 have been transposed and that the number intended was 108.

Hab., Umkomaas, Natal (H. Burnup); Kingsmill Islands (Pease); Philippine Island and Sarawak (Brit. Mus.).

The somewhat worn specimens from Natal have all the rows of nodules blackish, the interstices being yellowish, whereas in the typical form only the first and third rows are black, the second and fourth being white. The Philippine and Bornean examples resemble the South African form. The species is variable not only in colour but also in form and in the acuteness or obtuseness of the nodules, &c.

24. *Marginella burnupi* Sowerby.

Marginella burnupi Sowerby, Mar. Shells South Africa, appendix, p. 10, pl. 6, fig. 35, 1897.

M. inconspicua Sowerby, junior (non Sowerby, senior), *op. cit.*, p. 20.

M. cinerea Sowerby (non Jousseume), *op. cit.* append., p. 9.

Hab., Port Elizabeth.

In this species there are always six columellar folds and sometimes a trace of a seventh, although Mr. Sowerby quotes only five. The two anterior ones are conspicuously larger than the rest. The outer lip is not greatly thickened, and it is finely but not conspicuously denticulate within. The spire is more elevated in some specimens than in others and is far from being "almost flat." The shells referred to *M. inconspicua* and *M. cinerea* by Mr. Sowerby are quite distinct from those species, and, in my opinion, are small examples of *M. burnupi*. Having the types of the two species referred to in the Museum for comparison, I can speak with certainty upon this point. I have already shown (*Proc. Zool. Soc.*, 1890, p. 266) that *M. cinerea* has only three folds on the columella, not four, as stated by Reeve, and that it occurs at the island of St. Helena. As originally described by Sowerby, *M. inconspicua* has four folds, and the outer lip is smooth. It appears to have been somewhat tinted and not a pure white shell like *burnupi* and *cinerea*. It is possible that *Cystiscus capensis* of Stimpson may be the same as the present species, but the description is so meagre that the identification is quite impossible.

25. *Marginella algoensis*. (Pl. I., fig. 4).

Testa parva, alba, breviter piriformis; spira brevissima, obtusa, vix supra anfractum ultimum elatum; anfractus tres, celeriter accrescentes, sutura conspicua sejuncti; primus convexus, obtusus, ultimus piriformis, mediocriter convexus; labrum incrassatum, usque ad apicem fere productum, intus læve; columella callo tenni induta, plicis parvis circiter 7 instructa; apertura angusta, antice latior. Longit. 4 mm., lat. 3.

Hab., Algoa Bay, Cape Colony.

The anterior columellar fold or that which passes round the end of the aperture into the outer lip is rather larger than the rest. The

species is allied to *Marginella (Prsicula) polyodonta* Vélain.¹

26. *Marginella epigrus* Reeve.

M. epigrus Reeve; Sowerby, Marine Shells South Africa, p. 20; appendix, p. 32, 1892.

Hab., Port Elizabeth.

A single specimen, presented by Mr. Ponsonby to the Museum, appears to be inseparable from this Mogador species. Six folds on the columella are generally present, although Reeve mentions only four. The two upper ones are, however, very small, and might easily be overlooked.

27. *Clavatula parilis*. (Pl. I., fig. 7).

Testa elongato-pyramidalis, alba, lineis et maculis pallide rufis picta; spira subulata, ad apicem parvum mamillata; anfractus 11, duo superiores læves, convexi, cæteri planiusculi, infra suturam cingulo prominente convexo cincti, læves, lineis incrementi tenuibus undulatis striati, ultimus convexusculus, infra medium contractus; apertura alba, longit. totius $\frac{2}{3}$ adæquans, antice late canaliculata; labrum tenue, infra cingulum subprofunde sinuatum, in medio arcuatim prominens; columella leviter arcuata, callosa. Longit. 40 mm., diam. 16. Apertura 16 longa, 6 lata.

Hab., from the stomach of a fish caught in forty fathoms ten miles from Durban (Quekett).

A smooth white shell, varied with a few pale reddish undulating irregular lines, and some blotches of the same colour upon the rounded thickening or girdle at the upper part of the whorls. It is smaller than *C. taxus* (Chemnitz), and without any tubercular costæ on the upper whorls and differently coloured.

28. *Terebra textilis* Hinds, var.

Terebra textilis Hinds; Sowerby, Thesaurus, vol. i., pl. xlv., fig. 73; Reeve, Conch. Icon., vol. xii., fig. 13a.

Hab., Manila Bay, Philippines, 6 fathoms; Natal (H. Burnup).

The specimen from Natal is a trifle stouter than the type, and the row of deep punctures which marks off the infrasutural zone is less pronounced, and the costæ at this point are less (if at all) constricted, and about one less in number upon a whorl. More specimens are required to see whether these differences are more or less constant. The transverse sulcations between the costæ are similar in both forms.

29. *Terebra (Abretia) diversa*. (Pl. I., fig. 6).

T. rufopunctata Sowerby (nec Smith), Mar. Shells South Africa, p. 12, 1892.

Testa subulata, polita, purpureo-fuscescens, infra suturam zona alba rufo-nigro vel rufo punctata, et zona altera alba circa medium anfractus ultimi ornata; anfractus 12, fere plani, supra ad suturam

¹ *Archives Zool. Expér.*, 1877, vol. vi., p. 108, pl. iii., fig. 1, 2.

tenuiter plicati, plicis infra evanidis, spiraliter haud striati, lente accrescentes; apex magnus, obtusus, laevis, rufo tinctus; anfr. ultimus convexiusculus, antice albus; apertura intus fuscescens, zona alba mediana et altera basali picta, longit. totius $\frac{1}{2}$ aequans. Longit. 2.7 mm. diam. 5. Apertura 5 longa, $2\frac{1}{2}$ lata.

Hab., Umzinto, Natal (H. Burnup).

Somewhat resembling *T. rufopunctata*, but longer and more slender, with a larger and blunter apex. The white bands at the suture and around the middle of the body-whorl are more defined, and the reddish or purple-brownish ground colour is different. Spiral striation, which is quite evident in *T. rufopunctata*, is entirely absent in this species.

31. *Venus declivis* Sowerby.

Venus declivis Sowerby, Thes. Conch., vol. ii., p. 730, pl. 157, figs.

123, 124, 1853; Reeve, Conch. Icon., vol. xiv., pl. 23, fig. 1111, 1863.

Hab., —? (Sowerby and Reeve); Gulf of Guinea (Brit. Mus.); Durban Bay, Natal (Quekett).

I have seen only a single specimen from the South African locality. It is not absolutely identical with the type, being larger and with a rather more broadly curved ventral margin to the valves. It has the same style of colouration and concentric delicate lamellæ.

32. *Macoma retrorsa* Sowerby.

Tellina retrorsa Sowerby, Conch. Icon., vol. xvii., fig. 234, 1867.

Tellina (Macoma) candidata Sowerby, Journ. of Conch., vol. vii., p. 375, 1894; Marine Shells South Africa, Appendix, p. 23, pl. vi., fig. 25, 1897.

Hab., Durban (H. Burnup).

The type of *T. retrorsa* quoted as in Mus. Sowerby, was subsequently acquired by Mr. Lombe Taylor, after whose death it was purchased by the British Museum. Having also, for comparison, the types of *T. candidata*, presented by Mr. J. H. Ponsonby, I am able to pronounce with some degree of certainty the identity of the above-named species.

BRACHIOPODA.

33. *Kraussina atkinsoni* (T. Woods).

Kraussia atkinsoni Tenison Woods, Proc. Roy. Soc., Tasmania, 1878, p. 57.

Kraussina atkinsoni Davidson, Trans. Linn. Soc., 1887, vol. iv., p. 127, pl. xxi., figs. 5, 6.

Hab., Algoa Bay, Cape Colony (Brit. Mus. presented by J. H. Ponsonby).

Previously known only from South Tasmania.

CYPRÆA CHRYSALIS Kien. AND C. MICRODON Gray.

By JAMES COSMO MELVILL.

(Read before the Society, April 10, 1901.)

IN November, 1892, I read before the Conchological Society¹ a resumé of the history of *Cypræa chrysalis* Kien., a species long overlooked, misunderstood, or confused with *C. fimbriata* Gmel., drawing attention to the fact that it was in all probability—nay, almost certainly—a good species, and basing this decided opinion on the acquisition of a specimen in fine condition, formerly in the collection of Mr. C. W. Viner, of Bath, and with a ticket attached in the hand-writing of L. C. Kiener, as "*C. chrysalis*, mihi." It is necessary to re-open the question now, as, during the past few months a considerable flood of new light has been thrown on it, and these fresh developments I will at once proceed with seriatim.

M. Vayssière, professor of biology in the University of Marseilles, last autumn forwarded me several doubtful species and varieties of *Cypræa*, mostly, if not entirely, belonging to the Museum attached to the University, to diagnose and name for him. Amongst these were three specimens of *C. chrysalis* Kien., one, in fine condition, being the original Kienerian type figured in "Iconographie Coq. Viv.," pl. 54, f. 4, 4a, and from that source copied by all subsequent monographers of the genus. This specimen, which I had imagined existed in the Paris Museum, was certified as the type in the hand-writing of the author, and it exactly agrees in every particular with my own, which may be called the second type, or co-type, as having also passed through the hands of, and been critically differentiated by its original discoverer. Mr. R. Standen has a fine series of this species, all similar, from Borneo; Mr. J. R. Hardy two from the collection of the late Mr. Arthur Adams. It is to be seen, but not in fine condition in the Manchester Museum, from Lifu (Hadfield Collection) in which locality it was rare; good examples likewise exist in the collections of Messrs. Thomas Rogers, J. W. Edwards, and J. M. Williams; Mr. R. Cairns also has it fine from Mauritius and other localities.

In our National Collection at South Kensington it has not been fully understood as a species, and I detected a specimen or two mixed up with *C. fimbriata* Gmel. in the table cases.

Mr. Raymond Roberts² and Sowerby³ consider both *C. microdon* and *C. macula* good species, and this dictum has been generally followed. In the "Survey of Cypræa," 1888, however, I esteemed both these varieties merely of *C. fimbriata*.

¹ *J. of Conch.*, vol. 7, pp. 120-122, 1893.

² Tryon, "Man. Conch.," vol. 7, p. 169.

³ "Thes. Conch. Cypræa," p. 50, figs. 385, 386.

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