

Differs from *dupetithouarsi* and *sequoicola* in much darker color, more inflated aperture, depressed form, greater breadth, and enclosed band of the same color as the body of the shell.

Habitat, Santa Cruz mountains midway between Soquel creek and Skyland.

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REMARKS ON SOME LAND AND FRESH-WATER SHELLS FROM THE  
NEW HEBRIDES, WITH DESCRIPTION OF NEW SPECIES.

BY C. F. ANCEY.

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The following species represented in my collection were obtained from various sources, principally from my regretted friend E. L. Layard, the well-known student, and from Dr. Ph. François, who collected somewhat extensively in the Archipelago several years ago, and has explored chiefly the northern group. To the latter I am particularly obliged for useful data on several of the localities he visited, and for the liberal gift of specimens, most of these, however, having been examined by the late Mr. Mabille and forming part of the collection of the Paris Museum.

1. *Lamprocystis Layardi* (Thomson).

Hab. Vate island (Glisson, fide Layard). This form is united to *L. guttula* Pfr., by Mr. E. R. Sykes (Proc. Malac. Soc., London, 1902, p. 196), but having specimens of both I do not share this opinion, the general aspect being the same, but the columellar insertion being different. It was well described and figured by Mr. J. H. Thomson (Proc. Zöol. Soc., 1885, p. 25, with fig.).

2. *Macrochlamys* (?) *Annatonensis* (Pfr.).

Hab. Vate island (Glisson).

This form is closely allied to "Zonites" *Vitiensis* Mousson, of the Viti group. The generic reference is doubtful, but I consider they are more nearly related to *Macrochlamys* than to the European genera *Vitrea* or *Polita*.

3. *Endodonta tenuiscripta* Anc.

Hab. Mallicollo island.

The original description states that the shell is "widely umbilicated." One must read "not widely umbilicated" (see NAUTILUS, 1896, p. 90).

4. *Draparnaudia singularis* Pfr., var. *diminuta* Anc.

Hab. Aneitum (= Annaton) island (fide E. L. Layard).

I venture to give this varietal name to the shell I have mistaken for the true *H. singularis* Pfr. (see NAUTILUS, 1897, p. 27), which is described from Aneitum. According to Mr. Sykes (loc. supra cit., p. 197), specimens of the latter, so named by Dr. Pfeiffer, are in the British Museum, and are the ordinary, large, strongly-keeled form usually met with in collection. The present one is also strongly but obtusely angled, has 6 whorls only and the last whorl is not deflected at all in front. It is  $6\frac{1}{2}$  mm. high and 6 mm. wide. In size it is quite like *D. Walkeri* Sykes (loc. supra cit., p. 197, fig. II), but the latter appears to have a higher body-whorl and more rounded periphery. It was collected on Espiritu Santo island, very distant from that of Aneitum.

5. *Dendrotrochus Eva* (Pfr.).

Hab. Vate island.

It is peculiar, I think, to the above island. The specimens are more commonly white, sharply keeled, with or without a brown lip. In others the keel is more obtuse, while in some cases there is a brown zone between the keel and the suture.

6. *Dendrotrochus Layardi* (Hartm.).

Hab. Aura (= Aurora island), fide Layard; also Espiritu Santo island (J. J. Walker, Dr. Ph. François).

I have seen an extensive series of this fine shell, originally described as "*Oxychona*." It is now well established that *Oxychona* is a genus of *Bulimulidæ* allied to *Zaplageus* and *Drymazus*, restricted in its distribution to Brazil. The present species is related to *D. Eva*, which it appears to replace in the northern group. The following variations occurred to my notice:

a. Plain ashy-white.

b. Ornamented with a narrow brown line on the keel and the suture.

c. With a wide dark-brown band between the keel and the sutures, sometimes extending, sometimes fading on the upper whorls.

The lip is either brown or whitish and the base, around the axis, is frequently tinged with brown. There are always some minute spots and black, oblique lines on the pale ground.

7. *Diplomorpha Brazieri* Hartm.

Hab. Espiritu Santo island. A scarce species, never found, I suppose, in fresh condition.

8. *Diplomorpha Delantouri* Hartm.

Hab. Aura (= Aurora island), Delantour, fide Hartman.

The numerous specimens from Espiritu Santo island (Ph. François), belong to a variety *major* (long. 21–25, diam. 15–16 mm.), but otherwise are quite like the type.

9. *Diplomorpha ruga* Hartm.

Hab. Espiritu Santo island.

10. *Diplomorpha Bernieri* Hart.

Hab. Espiritu Santo island. I am informed that "Segon island," quoted by Dr. Hartman, does not exist in the New Hebrides. The locality is to be corrected to "Canal du Second," Espiritu Santo island.

11. *Placostylus (Pæcilocharis) Françoisi* Mab.

The types which I have had the opportunity of examining through the kindness of Prof. Joubin, in the Paris Museum, appear to be conspecific with *P. hebridarum* of the same author.

12. *Partula Aurumiana* Hartm.

Hab. Buka-buka, Torres group (Dr. P. François).

13. *Opeas oparicum* Pfr.

Hab. Espiritu Santo island (Dr. P. François).

14. *Auriculus elongatus* Pfr.

Hab. Espiritu Santo island (Dr. P. François).

15. *Physa Layardi* Anc., n. sp.

Testa oblongo-attenuata, tenuis, nitida, pallide corneo-virens, indumento ferrugines plerumque coöperta. Spira conoidea, satis producta, regularis, acuta. Anfractus 5 convexi, sutura subappressa, obliqua divisi, lineis incrementi vix conspicuis, in ultimo antice curvatis; ultimus ovalis, basi attenuatus. Apertura subobliqua, superne angustata, irregulariter ovalis, intus nitida, basi interdum lacteo-subincrassata, margine sinistro antrorsim flexuoso. Columella crassa, lactea, intus late pliciformis, plica parum prominente. Peristoma simplex, acutum, ad columellam anguste reflexum, marginibus callo tenui junctis.

Long.  $9\frac{1}{4}$ , diam.  $5\frac{1}{4}$ , alt. apert.  $5\frac{3}{4}$  mill.

Hab. Vate island (Glisson, fide E. L. Layard).

An inconspicuous little form, like many of those described from Australia and New Caledonia, but sufficiently distinct. No species of this genus has hitherto been recorded from the New Hebrides.

16. *Palaina Françoisi* Anc.

Testa sinistrorsa, oblique et compresse rimata, subcylindraco-

oblonga, tenuis, pallide cinereo-fulvescens, acute costulata, costulis filiformibus, parum nitens. Spira oblongo-attenuata, apice minuto. Anfractus  $6\frac{1}{2}$  convexi, sutura impressa discreti, embryonales læves, sequentes remote et argute chordato-costulati, penultimus multo densius costulatus, dorso subgibbosus, ultimus antice distincte planulatus, infra attenuatus, ad aperturam valde ascendens, dorso laxius liratus. Apertura fere recta, circularis, columella intus obscure subinflata. Peristoma continuum, undique modice expansum.

Long.  $2\frac{3}{4}$ , diam. vix  $1\frac{1}{2}$ , alt. apert. 1 mill.

Hab. Espiritu Santo island. A single specimen found in the aperture of *Helicina Layardi*, Hartm.

The genus has not yet been recorded from the New Hebrides. Some have been ascribed to "Lord Howe's island, New Hebrides," but this particular island is the one lying between the coast of New South Wales and Norfolk island, although another islet in the New Hebrides bears the name of "Lord Howe." The present species is allied to *Palaina Montrouzieri*, of New Caledonia, but of different sculpture.

17. *Omphalotropis conella* Sykes (??) var.

Testa minute umbilicata, conico-turbinata, solidula, castanea, haud nitens, costulis cuticularibus verticalibus remotis, subobliquis, atque lineis elevatis spiralibus parum conspicuis, infra peripheriam distantibus et validiusculis sculpta, carina peripherica et lira circa umbilicum distinctis. Spira conoidea, obtusiuscula. Anfractus 6 convexiusculi, sutura impressa, ultimus medio angulatus, infra 5 liris spiralibus munitus. Apertura leviter obliqua, supra angulata. Peristoma simplex, acutum, ad columellam subsinuatum vix expansiusculum.

Long.  $4\frac{1}{2}$ , diam. vix  $3\frac{1}{2}$ , alt. apert. 2 mm.

Hab. Espiritu Santo island.

Only one specimen was obtained. This little shell is shaped like Sykes' *O. conella*, of which it may perhaps be considered a variety or a fresh example; however it comes from a very distinct locality and it may prove to be specifically distinct.

18. *Helicina Layardi* Hartm.

Hab. Espiritu Santo. All the specimens have a reddish band. It is the form recorded by Mr. Mabilie as *H. Bairdi*, and I am disposed to share Mr. Sykes' opinion that it is simply a form of *H. sublavigata* Pfr. The sculpture is precisely the same, as described by

Mr. E. A. Smith in his report on the Land and Freshwater Shells of the Challenger Expedition.

19. *Potamopyrgus brevior* Anc.

Testa parva, oblongo-attenuata, nitidula, pallide cornea, fere imperforata, lineis incrementi indistinctis, indumento ferrugineo tecta. Spira sat producta, conoideo-attenuata, obtusula. Anfractus 5 convexiusculi, sutura impressa, ultimus oblongus, infra attenuatus. Apertura recta, imo basi antice leviter protracta, oblique oblongo-ovata, basi ad sinistram distincte prodiens, supra attenuata, marginibus continuis, externo subobtusato.

Long.  $2\frac{1}{2}$ , diam.  $1\frac{1}{4}$ , alt. apert. 1 mm.

Hab. Vate Island (fide Layard).

Very near to *P. whiteleggei* Braz., from Lord Howe's Island, but with shorter spire. This is the first record of the genus in the New Hebrides. Only one specimen was seen. The genus is also found in the Viti group, and I have from them a very closely allied species.

20. *Melania setosa* Swains.

Hab. Aurora Island (Layard).

21. *Melania mauiensis* Lea.

Hab. same island (Layard).

22. *Septaria suborbicularis* Sowerby.

Mr. Layard wrote me he procured one specimen nearly 2 inches long.

Hab. Aurora Island.

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A FOSSIL FORM OF *OREOHELIX YAVAPAI*, PILSBRY.

BY T. D. A. COCKERELL.

*Oreohelix yavapai compactula*, n. subsp.

Shell compact; spire elevated, pyramidal; last whorl somewhat gibbous above, with a strong cord-like keel extending to the aperture; shell with coarse, oblique striæ, especially prominent on the last two whorls above, and also with fine spiral lines, most prominent on the last whorl, where they are more or less beaded; sometimes the spiral lines are scarcely apparent, but this is probably the result of weathering. Five specimens, two with the spire broken; the dimensions are:

Max. diam. 13,  $12\frac{1}{2}$ , 11, 13, 12 mm.