XIII.—*Further Additions to the known Marine Molluscan Fauna of St. Helena.* By Edgar A. Smith.

[Plate XII. figs. 1, 2, & 7.]

Since publishing my report upon the marine shells of St. Helena* a few more species, also obtained by Capt. W. H. Turton, R.E., have been identified; some of these may be regarded as indigenous and others as importations, having been obtained on floating seaweed ("sea-horn") which undoubtedly drifts northward from the Cape †. In addition to these, a number of marine species were also discovered by Captain Turton inland at a considerable elevation. Some observations on this interesting discovery will form the concluding portion of this paper.

I. Additional Indigenous Species.

Lamellaria perspicua (Linn.).

Hab. North Sea, Atlantic, at Madeira, the Azores, Mediterranean, Adriatic, Ægean; also Atlantic coast of United States, Port Elizabeth, South Africa, and Japan.

Three small specimens from St. Helena appear to belong to this well-known and widely distributed species.

Trivia candidula, Gaskoin.

Hab. Mexico (*Gaskoin*); coast of Spain, Algeria, Canary Isles, Azores, Madeira, Goree.

I have omitted in the above distribution the locality "Sandwich Islands" quoted by Sowerby in his monograph of the genus *Cypræa* in the 'Thesaurus,' also that of Port Jackson mentioned by Angas in the P. Z. S. 1871, p. 94. In the latter case, at all events, I think there is little doubt of a misidentification of the Port Jackson shells, for a specimen in the British Museum from that locality presented by Mr. Angas and named by him "*T. candidula*, Gaskoin," in my opinion is merely a small example of *T. scabriuscula*, Gray. It has quite the form of that species, has the sculpture between the ribs and the dorsal median impression.

The single specimen from St. Helena is small, only 5 millim. in length, whereas three examples presented to the

* Proc. Zool. Soc. 1890, pp. 247–317.

† *L. c.* p. 247.

Museum by Mr. Gaskoin are almost 8. This, however, is of little importance, as many of the *Triviæ* exhibit great variation in the size of the specimens. It has been doubted whether the species described originally from Mexico is really the same as that found in the North Atlantic and which is usually considered to be so. Of the identity of the latter with this species there need be no further doubt, for the shells received from Gaskoin, already referred to, are identical with others in the Museum collected by Mr. MacAndrew at Corunna.

I may add that, although Gaskoin quoted "Mexico" as the locality of his species, the specimens received from him were marked "S. America?"

Jeffreysia atlantica. (Pl. XII. fig. 7.)

Testa minuta, ovato-pyramidalis, anguste perforata, albida, tenuis, diaphana, nitida; anfractus $4\frac{1}{2}$, perconvexi, sutura profunda, leviter obliqua sejuncti; apertura ovato-circularis; peristoma tenue, continuum, margine columellari vix reflexo.
Longit. $1\frac{1}{4}$ millim., diam. $\frac{3}{4}$; apertura $\frac{1}{2}$ longa.

This species is less elongate than *J. diaphana* of Alder, has a more conical spire, and a shorter and more globose body-whorl; the aperture also is more circular.

Tellimya producta. (Pl. XII. fig. 2.)

Testa transversa, inæquilateralis, convexa, irregulariter ovato-triangularis, postice producta, tenuis, diaphana, nitida, lineis incrementi tenuissimis, striisque obsoletis radiantibus sculpta; margo dorsi utrinque declivis, ventralis rectus; latus anticum mediocriter latum, rotundatum, posticum paulo acuminatum; umbones antemediani, prominentes; dentes duo valvæ sinistræ divergentes, subvalidi, v. dextræ inconspicui, marginales.
Longit. $6\frac{1}{2}$ millim., alt. 5, diam. 4.

This species is peculiar on account of its form, the posterior end being produced or subrostrate and the ventral margin straight or even faintly incurved. The hinge-teeth in the left valve are rather distinctly developed and divergent, one on each side beneath the umbo; the right valve is practically edentulous. Below the apex the hinge-line is interrupted by a triangular space, the anterior border of which is somewhat thickened, and the dorsal line behind it is narrowly reflexed upward. The pallial line and the adductor scar are very indistinct.

Tellimya simillima. (Pl. XII. fig. 1.)

Testa *T. bidentatæ* similis, sed umbonibus leviter prominentioribus, magis centralibus, dentibus duobus valvæ sinistræ brevioribus et fortioribus.

Longit. $3\frac{1}{2}$ millim., alt. $2\frac{1}{2}$.

This small species is very thin and fragile, pellucid, and agrees in general aspect with *T. bidentata* of Montagu. It is not, however, quite of the same form, having the beaks a little less anterior in position and a trifle more prominent. The two teeth in the left valve are also less divergent, shorter, and stronger.

Montacuta ferruginosa (Montagu).

Hab. North Sea, Atlantic to the Mediterranean.

The two valves from St. Helena evidently belong to this species, which has not, I believe, been previously recorded from so southern a locality.

Pecten pes-felis, var.

Two small valves of this species are rather flatter than usual. They certainly belong, however, to this well-known Mediterranean species.

II. Species found on Floating Tangle and to be regarded as South African.

Rissoa fenestrata, Krauss.

Hab. Mouth of the Knysna (*Krauss*); Port Elizabeth (*Sowerby*).

Trochus (*Gibbula*) *cicer*, Menke.

Hab. Cape of Good Hope (*Philippi*); Simon's Bay (*Gould*); Table Bay (*Krauss*); Port Elizabeth (*Sowerby*).

Phasianella bicarinata, Dunker.

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

The bicarination of this pretty little species is accurately described by Dunker as obsolete. Therefore, judging from specimens in the Museum which I identify with this species, I am inclined to suppose that this angulation is exaggerated in the figure given by Pilsbry in Tryon's 'Manual of Conchology,' vol. x. pl. xxxix. *a*. fig. 10.

Kellia suborbicularis (Montagu).

Hab. North Sea, Mediterranean, Atlantic, Port Elizabeth, Kerguelen Island.

This species has been recorded from all the above localities, and it is quite probable that *K. rotunda*, Deshayes, an Australian species, is not specifically separable from it.

Thecalia concamerata (Bruguière).

Hab. South Africa and South Australia.

Only a few small valves of this species were obtained by Capt. Turton.

Crenella rhombea (Berkeley).

Hab. English coast, North Atlantic, Mediterranean.

This species having been got at St. Helena on "sea-horn," the term locally applied to this kind of floating seaweed, it doubtless also occurs at the Cape, although it has not at present been recorded from there.

III. Marine Species found Inland.

The discovery of a considerable number of marine shells at an elevation of about 700 feet is an interesting fact, as nothing of this kind had been observed previously in the island. Capt. Turton, who found them in small patches of sand which had accumulated in certain spots in the bed of a small dried-up watercourse on Sugarloaf Ridge, was at a loss to account for their occurrence in that locality. Mr. R. B. Newton, to whom I mentioned the subject, suggested that probably wind was the agency by which they had been carried up the hillside. This seems a very likely solution, for without exception all the shells are very minute and might easily be blown any distance by hurricanes or whirlwinds. Capt. Turton found these accumulations of sand at intervals, and it would appear that, when storms rushed up the slope, the sand was stopped here and there by projecting rock and accumulated accordingly. He informs me that "the largest patch of sand did not exceed a very few cubic yards, but of course the rains had washed all the rest away." Such accumulations are known to geologists as Æolian or Eluvium deposits. This is not an instance of a raised beach, as the surroundings generally testify; besides, if such were the case, we should expect to meet with larger marine objects

than the minute forms obtained by Capt. Turton. It will be noticed in the following list that in cases where the species attain in the adult state any size whatever (*e. g.* the *Natica*, the *Nassa*, the *Littorina*, the *Hipponyx*, the *Gadinia*, and the two *Arcas*) only extremely young specimens occurred. About ten or a dozen other species were obtained, but they are either too fragmentary or in too bad condition for determination. Like those which have been identified they evidently belong to the existing fauna. The descriptions or references of the thirty-three species enumerated may be found in the Proc. Zool. Soc. 1890, pp. 255–305.

With one or two exceptions all traces of colour have left the shells, but the well-preserved condition of many of them would appear to indicate that they had not been buried or exposed to weathering for any very long period.

Besides the shells, two valves of a species of *Lepas* allied to *L. anserifera*, Linn., were found by Capt. Turton inland at another part of the island. These, being very thin and light, might also have been carried there by the wind or by birds; and it is possible that to the latter agency the presence is accountable of "what appeared to be a lava internal cast of a bivalve shell, about 6 inches in length," found by Mr. Melliss * at the summit of High Knoll at an elevation above the sea of 1900 feet.

1. *Columbella* (*Mitrella*) *sanctæ-helenæ*, Smith.

Three small specimens are probably the young of this species.

2. *Pleurotoma* (*Clavus*) *prolongata*, Smith.

A few immature specimens.

3. *Pleurotoma* (*Clathurella*?) *usta*, Smith.

The specimens which apparently belong to this species have a few denticles within the outer lip. In the type the labrum has the appearance of not being quite fully developed, which might account for the absence of the tubercles.

4. *Nassa sanctæ-helenæ*, A. Adams.

Several young specimens only.

* 'St. Helena,' by J. C. Melliss (1875), p. 61.

5. *Marginella* (*Volvaria*) *consanguinea*, Smith.

Possibly some of these specimens may be small examples of *M. cinerea*, Jousseaume.

6. *Mitra* (*Pusia*) *sanctæ-helenæ*, Smith.

A few specimens, all young and much worn.

7. *Natica Dillwynii*, Payraudeau.

Several specimens, all quite young.

8. *Eulima atlantica*, Smith?

A number of very small examples may possibly belong to this species.

9. *Scalaria sanctæ-helenæ*, Smith.

One immature specimen with the fine riblets worn away apparently belongs to this species.

10. *Turbonilla assimilans*, Smith?

None of the specimens are in sufficiently good condition for certain identification.

11. *Cingulina circinata*, A. Adams.

Two young specimens.

12. *Aclis angulata*, Smith?

Two specimens are probably worn examples of this species.

13. *Leucotina minuta*, Smith.

A single specimen only.

14. *Triforis recta*, Smith.

A few worn broken specimens having the slender form of this species.

15. *Littorina miliaris*, Quoy & Gaimard.

Very small specimens, not more than 2 millim. in length.

16. *Rissoina congenita*, Smith.

Two specimens.

17. *Rissoina Mellissi*, Smith.

A few worn examples.

18. *Rissoina Turtoni*, Smith.

Numerous specimens.

19. *Rissoa ephamilla*, Smith.

Several specimens, none with perfect outer lip.

20. *Rissoa glypta*, Smith.

21. *Rissoa eritima*, Smith.

22. *Rissoa compsa*, Smith.

Numerous specimens, having a very solid look.

23. *Rissoa Wallichi*, Smith.

24. *Rissoa perfecta*, Smith.

25. *Rissoa varicifera*, Smith.

26. *Hipponyx Grayanus*, Menke.

One small specimen, 3 millim. in length.

27. *Turbo* (*Leptothyra*) *rubricinctus*, Mighels.

Many specimens.

28. *Liotia arenula*, Smith.

29. *Gadinia costata* (Krauss) ?

One very small specimen, only 4 millim. in length.

30. *Williamia Gussoni* (Costa).

A single specimen, 3 millim. long.

31. *Ervilia subcancellata*, Smith.

32. *Arca* (*Acar*) *domingensis*, Lamarck.

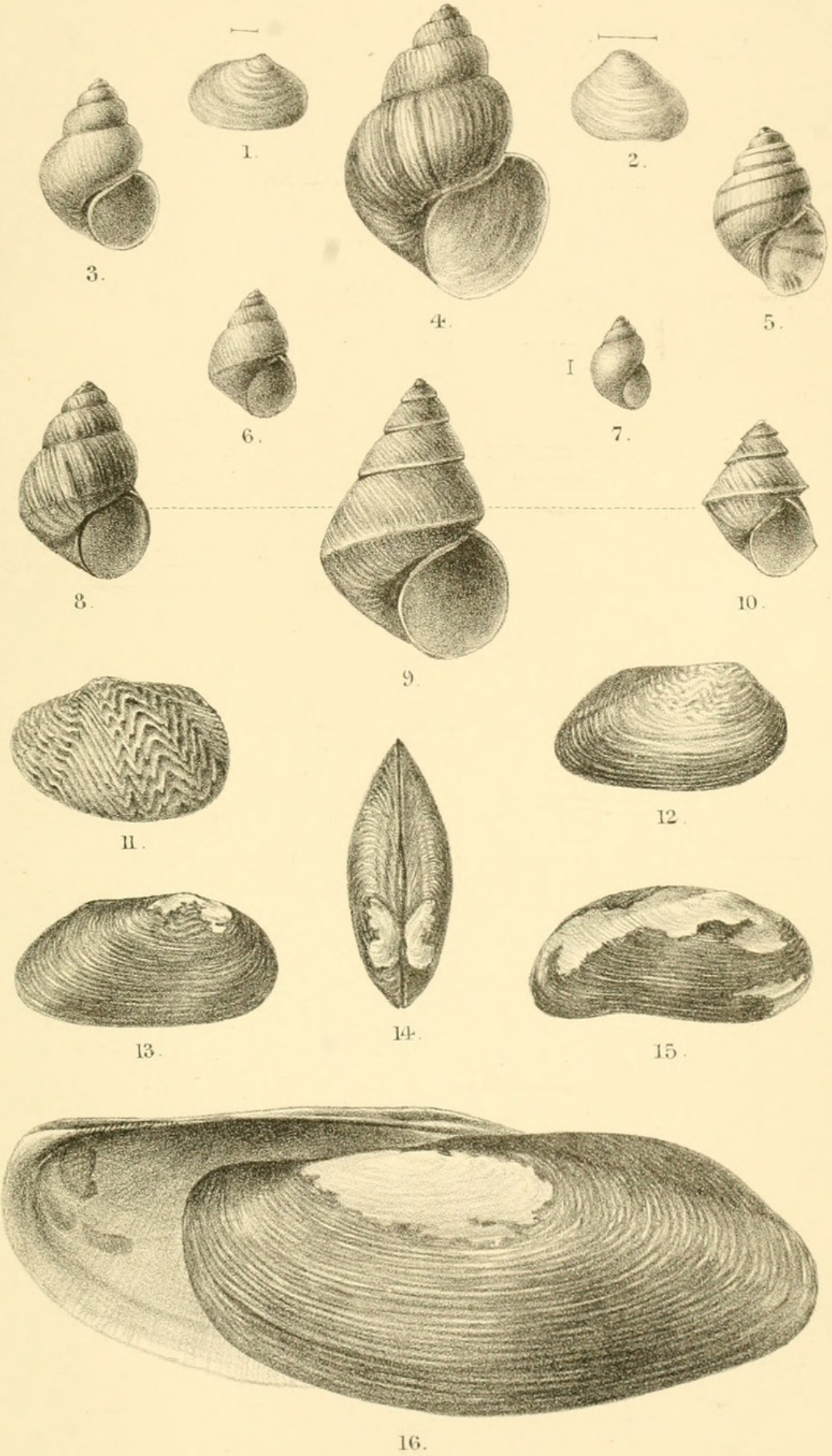
Minute specimens only.

33. *Arca sanctæ-helenæ*, Smith.

Only very small examples, not more than 3 millim. long.

EXPLANATION OF PLATE XII. (part).

Fig. 1. *Tellimya simillima.*
Fig. 2. *Tellimya producta.*
Fig. 7. *Jeffreysia atlantica.*



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