

- Fig. 7. *Octonaria octoformis*, var. *persona*, nov. *a*, right valve; *b*, edge view of carapace.  
 Fig. 8. *Octonaria octoformis*, var. *monticulata*, nov. *a*, left valve; *b*, edge view of carapace.  
 Fig. 9. *Thlipsura angulata*, sp. nov. *a*, right valve shown; *b*, edge view of carapace.  
 Fig. 10. *Thlipsura plicata*, sp. nov. Carapace, right valve shown.  
 Figs. 11, 12. *Thlipsura plicata*, var. *unipunctata*, nov. Left valve.  
 Fig. 13. *Thlipsura plicata*, var. *bipunctata*, nov. Carapace, right valve seen.  
 Fig. 14. *Bollia interrupta*, sp. nov. Right valve.

## PLATE XIII.

[All the figures are magnified 20 diameters except figs. 1 *c* and 5 *c*, which are magnified 70 diameters.]

- Fig. 1. *Primitia obliquipunctata*, sp. nov. *a*, carapace, right valve seen; *b*, dorsal view; *c*, portion of surface enlarged ( $\times 70$ ).  
 Fig. 2. *Æchmina cuspidata*, J. & H. Inside of right valve.  
 Fig. 3. The same. *a*, right valve; *b*, end view.  
 Fig. 4. The same. *a*, left valve; *b*, end view; *c*, seen from above.  
 Fig. 5. *Æchmina bovina*, sp. nov. *a*, right valve; *b*, end view; *c*, portion of the edge enlarged ( $\times 70$ ).  
 Fig. 6. The same. *a*, left valve; *b*, end view; *c*, seen from above.  
 Fig. 7. *Æchmina depressicornis*, sp. nov. *a*, carapace, right valve seen; *b*, end view; *c*, seen from above.  
 Fig. 8. *Æchmina brevicornis*, sp. nov. *a*, right valve; *b*, end view.  
 Fig. 9. *Æchmina cuspidata*, J. & H. Fragment of a large right valve.  
 Fig. 10. *Bollia auricularis*, sp. nov. *a*, carapace, right valve upwards; *b*, ventral aspect; *c*, end view.  
 Fig. 11. *Moorea Smithii*, sp. nov. *a*, carapace, showing left valve; *b*, ventral aspect.  
 Fig. 12. *Octonaria? paradoxa*, sp. nov. Left valve.

LIII.—*Notes on some Land-Shell from New Guinea and the Solomon Islands, with Descriptions of new Species.* By EDGAR A. SMITH.

[Plate XV.]

THE specimens here described form part of very valuable collections of shells which, from time to time, have been liberally presented to the British Museum by Mr. John Brazier of Sydney, to whom special thanks are due, as in several instances the specimens are unique and unrepresented in his own collection.

*Nanina Hunsteini.* (Pl. XV. fig. 6.)

Testa anguste perforata, tenuis, globoso-depressa, pallide luteo-



fuscescens vel purpureo-fuscescens, zona lata saturate fusca paulo supra peripheriam cincta, regulariter et confertim spiraliter striata, lineisque incrementi prope suturam subplicosis sculpta; anfractus 5, celeriter accrescentes, convexiusculi, suturam infra impresse submarginati et nigrescentes; ultimus magnus, paulo inflatus; apertura parum obliqua; peristoma tenue, margine columellari superne breviter expanso, umbilicum angustum partim obtegente.

Diam. max. 40 millim., min. 33, alt. 25.

*Hab.* Foot of the Astrolabe and Owen Stanley Ranges.

This species is peculiar on account of the regularity of the close spiral striation which covers the entire surface both below and above, with the exception of the few topmost whorls. The brown band which encircles the body-whorl falls a little above the middle, and, passing spirally upward, produces a dark margination to the whorls.

*Nanina fraudulenta.*

Testa globoso-depressa, anguste perforata, purpureo-fusca, epidermide tenui flavo-olivacea induta, nitida, lineis incrementi striata; anfractus 6, convexiusculi, ad suturam anguste marginati, ultimus rotundatus; apertura parum obliqua; peristoma tenue, prope umbilicum paulo incrassatum, album et reflexum.

Diam. max. 42 milim., min. 35, alt. 24.

*Hab.* Foot of Astrolabe Mountains, New Guinea.

This species, unless closely examined, might easily be confounded with *N. Hunsteini*. The form and size are almost similar, but the sculpture is different. This species has no trace of the regular fine spiral striæ which cover the entire surface of *N. Hunsteini*. It also differs from that species in having the spire a trifle more depressed, the body-whorl less inflated, and in not having the distinct brown band above the middle.

*Nanina Cairni.* (Pl. XV. fig. 5.)

Testa perforata, supra pallide fuscescens, infra albida, nitida, lineis incrementi minutis striata; anfractus 5, paulo convexiusculi, regulariter accrescentes, supra suturam leviter submarginati vel depressi, ultimus ad peripheriam subacute angulatus, infra angulum fuscescens, convexus, in medio albidus, minute concentricè undulatim striatus; apertura obliqua; peristoma tenue, margine columellari vix incrassato, superne supra umbilicum breviter reflexo.

Diam. max. 36 millim., min. 31, alt. 20.

*Hab.* Foot of the Astrolabe and Owen Stanley Mountains, British New Guinea.



The brown colour beneath the central angulation is a trifle darker than the tint of the upper surface. This has the appearance of being marked with obliquely-curved lines of growth, but under the lens it is seen to be sculptured with very minute wrinkly striæ in the same direction. The lower surface, which is more glossy, is destitute of this wrinkly sculpture, and has instead very fine close-set hair-like concentric undulating striæ which are invisible to the naked eye.

*Nanina exilis*, juv. (Pl. XV. fig. 13.)

Testa depressa, acute carinata, perforata, superne griseo-cornea, inferne pallidior; anfractus 6, convexiusculi, supra suturam depresso marginati, striis incrementi sculpti; ultimus compressus et acute carinatus, inferne nitidus; apertura obliqua, subsecuriformis; peristoma tenue, margine columellari superne leviter reflexo.

Diam. max. 27 millim., min. 24, alt.  $13\frac{1}{2}$ .

*Hab.* British New Guinea.

The sculpture of the upper surface of this species is almost precisely the same as that of *N. Cairni*. It is, however, a more sharply carinate shell, and has more numerous and narrower whorls. It is more acutely carinate than the type of *N. exilis*, Müller, lacks the brown band below the keel, and is a trifle more finely striated.

*Helix (Sphærospira) Rehsei*, Martens. (Pl. XV. fig. 14.)

*Hab.* Dinner Island, New Guinea (*Brazier*).

This species I described as *H. Gerrardi*\* a month or two after the publication of Martens' diagnosis†. I then had only a single specimen under examination. Three additional examples, two of which were sent by Mr. Brazier, have since been added to the Museum collection. These show that the species varies considerably with regard to the umbilicus, which, as in the type, may be rather broad, or it may be gradually closed up by the overspreading reflexed columellar margin of the peristome, leaving only a small perforation. The indications on the body-whorl of a few shallow transverse indistinct sulci observable in the shell I originally described are less apparent (but still traceable) in the other specimens now at hand. The spire varies in height, and seems to be usually rather less elevated than in the specimen described in the 'Annals.' The granulation of the spire is also variable, being more strongly developed and extending much further down in some specimens than in others.

\* Ann. & Mag. Nat. Hist. 1883, vol. xi. p. 192.

† Jahrb. deutsch. malak. Gesellsch. 1883, p. 83.



*Helix (Acavus) coraliolabris.* (Pl. XV. fig. 4.)

Testa elevate conica, imperforata, alba, labris intus purpureo-fuscis ad marginem saturate rufis instructa; anfractus  $5\frac{1}{2}$ , convexiusculi, oblique rugose et confertim striati, incrementique lineis flexuosis sculpti, ultimus in medio obtuse angulatus, inferne vix convexus, antice breviter descendens, pone medium labri leviter complanatus; apertura oblique irregulariter subquadrangularis, intus alba; peristoma paulo incrassatum et expansum, breviter reflexum, margine exteriori paulo supra medium obtuse angulato; columella late dilatata appressa, complanata, margine aperturam versus lilacea, superne callo nigro-fusco labro juncta.

Diam. max. 32 millim., min. 25, alt. 34.

*Hab.* Russell Island, New Guinea.

This species is so well defined by the remarkable contrast of the colour of the peristome with the white tint of the rest of the shell that it will readily be recognized. The edge of the aperture is thickened and bright coral-red, and this, both within and without, is rather deeply bordered, especially within, with purple-brown.

*Helix (Acavus) brumeriensis*, Forbes.

This species was originally described from a unique specimen (now in the British Museum) collected by Macgillivray at Brumer Island. The figures both in the 'Voyage of the Rattlesnake' and in Reeve's 'Conchologia Iconica' show it to be a small specimen in comparison with others now received from Mr. Brazier, which were collected on trees and bushes at Millport Harbour, near Amazon Bay, British New Guinea. The largest of these has a greatest diameter of 38 millim., and is 33 in height, whilst the type is only 28 in width and 24 high.

All of Mr. Brazier's specimens are also more conically elevated, have a more broadly dilated black columellar margin to the peristome, and the callus connecting the extremities is also more developed and jet-black. Several of them show indications over the entire surface of a peculiar cross-hatching of short lines of a pale dirty yellowish tint. The aperture in some specimens is tinted with very pale rose, in others it is white.

Another series of three specimens from "an island east of New Guinea" illustrates three different stages of growth. The youngest example, consisting of four whorls, is almost entirely of a light corneous tint, except towards the lip, where it becomes more opake white; it is also very thin and narrowly umbilicated. The oldest and mature specimen is



peculiar in having no black callus connecting the columella and extremity of the outer lip.

*Helix (Acavus) latiaxis*, Smith. (Pl. XV. fig. 7.)

A single specimen from the foot of the Owen Stanley Mountains, British New Guinea, differs from the type\* in having the last whorl very much more sharply keeled at the periphery, the aperture consequently also being more pointed in front. The epidermis upon the body-whorl is disposed in ten spiral zones instead of six, five above and five below the carina. Being a younger shell, the interior has not been coated over with the bluish-white callus as in the adult type, and the external banding is, on account of the comparative thinness of the shell, obscurely visible.

Messrs. Brazier† and Tapparone Canefri‡ consider this species the same as *H. zeno* of Brazier, described in the year 1876. This can scarcely be correct, as certain terms of the description are not applicable to *H. latiaxis*, which cannot be described as "*globosely turbinated*," nor "*thin*," nor "*flesh-colour*;" and the spiral bands do not "*in front all run into one*." The omission of any mention of the acute angulation of the body-whorl also induces me to consider this species distinct; and, finally, Mr. Brazier having now sent me a specimen of this species marked "*Helix*, sp. nov. (only specimen): foot of Mount Owen Stanley Range, British New Guinea," strongly indicates that the two forms are specifically different, for it is very unlikely that he would have sent a specimen of his own species thus labelled.

*Helix (Geotrochus) lacteolota*. (Pl. XV. fig. 9.)

Testa conica, perforata, zonis pluribus lacteis et nigro-fuscis lacteo illitis cincta; anfractus 5, lineis incrementi obliquis striati, ultimus ad peripheriam rotundatus, infra convexiusculus, antice paulo descendens; apertura perobliqua, perist. versus purpureo-nigrescens, longe intus cærulea; peristoma album, undique expansum et paulo reflexum, margine columellari superne livido-fusco, late dilatato umbilicum partim obtegente.

Diam. max. 36 millim., min. 28, alt. 34.

*Hab.* Foot of Owen Stanley Mountains, British New Guinea.

This handsome species, in some respects, bears a considerable resemblance to *H. plurizonata*, Adams and Reeve, from

\* *Vide* Ann. & Mag. Nat. Hist. 1883, vol. xi. p. 191.

† Proc. Linn. Soc. N. S. Wales, 1884, vol. ix. p. 805.

‡ Ann. Mus. Civico Stor. Nat. Genova, 1886, vol. iv. p. 21.



the island of Mindanao, Philippines. The basal aspect of that species (*vide* 'Voy. Samarang,' Mollusca, pl. xvi. fig. 9, or Reeve, 'Conch. Icon.' fig. 528), both as regards size and banding, is very similar to that of *H. lacteolata*. The latter, however, has a very much more elevated spire, a more raised body-whorl, and the volutions increase less rapidly. The coloured bands are eight in number on the last whorl; most of them are almost black and generally margined with brown and more or less blotched and smeared with an opaque cream-colour.

*Helix (Papuina) roseolabiata.* (Pl. XV. fig. 2.)

Testa imperforata, conica, trochiformis, alba, ad apicem nigrescens, ad peripheriam et circa suturam zona nigro-fusca cincta; anfractus 5, primi duo convexi, cæteri convexiusculi, oblique rugose striati, ultimus acutissime carinatus, supra carinam paulo concavus, inferne planiusculus, similiter sculptus, antice prope labrum breviter descendens, ad aperturam contractus, intus lilaceus; apertura oblique producta, rostrata, irregulariter triangularis, intus alba, infra suturam quoque ad carinam nigro-fusco zonata; peristoma rosaceum, margine dextro in medio procurvo, breviter expanso, inferiore latius dilatato, columellari reflexo, appresso.

Diam. max.  $30\frac{1}{2}$  millim., min. 24, alt. 19.

*Hab.* Ferguson Island, D'Entrecasteaux group.

This species has even a more rostrate aperture than *H. Tayloriana*, and is well characterized by its rosy lip, the acute keel around the periphery, and the marked contrast of the brown band upon the white ground.

*Helix (Papuina) Tayloriana*, Adams and Reeve.  
(Pl. XV. figs. 1, 1 a.)

This I believe to be a species which varies considerably both in form and colour, but not much in sculpture. The type, which is in the British Museum, is well figured (as regards shape) by Reeve\*. The keel is, however, in some specimens even more acute, and the spire is concave instead of slightly convex. On the other hand, other examples are less acutely keeled, and the aperture is not so much produced or beaked. These constitute the *H. yulensis* of Brazier†, which in other respects, excepting small differences in the colour-markings, agrees with the typical form. A third variety (Pl. XV. fig. 1 a) has just been sent to the Museum

\* Conch. Icon. fig. 524, a-b.

† Proc. Linn. Soc. N. S. Wales, 1876, vol. i. pp. 106 and 126.



by Mr. Brazier which seems quite distinct when placed side by side with the original *H. Tayloriana*, but which appears to be linked with it through *H. yulensis*.

It has a more convex body-whorl, especially above the periphery, which is also less sharply keeled.

The points in which all specimens agree are :—(1) the same kind of sculpture ; (2) the black, *more or less* rostrate peristome ; (3) the *more or less* acute cream-coloured keel at the periphery ; (4) the pinkish-lilac tint upon the base of the last whorl towards the centre and upon that portion of it which lies between the terminations of the peristome.

Of ten specimens before me, two have black, two pinkish, and the rest pale apices. Some examples, like the type, have scarcely any colour-markings, some have interrupted spiral bands both above and below, others show interrupted oblique stripes, or both bands and stripes are intermingled confusedly in the same individual. With one exception all have two or more (more or less well defined) concentric zones on the lower surface.

The distribution of this species appears to be rather extended.

The locality of the typical form was unknown to Adams and Reeve ; but in the British Museum there is a specimen (Pl. XV. fig. 1) said to be from the D'Entrecasteaux group of islands, off the eastern extremity of New Guinea. The variety (*H. yulensis*) is met with at Yule Island, and the more convex form above described is, according to the specimens presented to the Museum by Mr. Brazier, from South Cape, British New Guinea. A single specimen of this form in the Museum is said to have been obtained at Ferguson Island, one of the D'Entrecasteaux group.

*Helix (Papuina) albocarinata.*

(Pl. XV. fig. 12.)

Testa breviter conica, imperforata, tenuis, semipellucida, pallide cornea, carina alba opaca cincta ; anfractus 5, mediocriter convexi, oblique rugose striati, ultimus ad peripheriam acute carinatus, inferne striis rugosis concentricis sculptus, lineis paucis interruptis albis opacis ornatus, antice breviter descendens, pone labrum luteo vel lacteo marginatus ; apertura obliqua ; peristoma album, anguste expansum et reflexum, margine exteriori sinuato, columellari incrassato, appresso, superne callo tenui labro juncto.

Diam. max. 24 millim., min. 20, alt. 17.

*Hab.* South Cape, British New Guinea.

This species comes from the same locality as the convex



form of *H. Tayloriana*, and resembles it considerably in form and sculpture, and, indeed, it may eventually have to be regarded as an albino variety of that form. The central keel is rather sharper and the texture more transparent than in *H. Tayloriana*.

*Helix (Papua) Rollisiana.* (Pl. XV. fig. 3.)

Testa imperforata, conoideo-subglobosa, albida vel rubescens, prope suturam fusco notata, zonis fuscis diverse cincta, pone labrum aurantio strigata; anfractus 5, convexiusculi, striis obliquis confertis rugosis incrementique lineis sculpti, ultimus ad peripheriam antice subrotundatam, pone obtuse carinatam semper albo zonatus, inferne purpureo-roseo tinctus, antice breviter et subito descendens; apertura obliqua, subquadrata; peristoma album, tenue, late expansum et reflexum, margine superiore sinuato, columellari dilatato, appresso.

Diam. max.  $30\frac{1}{2}$  millim., min.  $21\frac{1}{2}$ , alt. 20.

*Hab.* South Cape, British New Guinea.

The colour of this very pretty species in some respects appears to be very constant, whilst in other points it is variable. The periphery in the four specimens at hand is encircled by a more or less broad white zone, and the body-whorl always exhibits an orange stripe just behind the broadly expanded lip, which is constantly white. Another persistent feature is the purplish rosy portion of the base between the umbilical region and the extremity of the outer lip. The ground-colour of the shell is usually whitish or of a pinkish tint, and somewhat freckled with minute oblique opaque white dots and lines, and the apex may be white or blackish. The spiral bands are rather variable, numbering from one to three above the periphery and two to four below it. The sculpture is of the same character as that of *H. Tayloriana*. I have named it, at Mr. Brazier's request, after Mr. Rolls, who, accompanied by Mr. Goldie and others, whilst exploring certain parts of New Guinea, collected these specimens.

*Helix (Trochomorpha) Belmorei*, var.  
(Pl. XV. figs. 8, 8 a.)

Testa late et perspective umbilicata, depresso conico-orbicularis, mediocriter crassa, corneo-fusca, infra peripheriam pallidiorem zona lata saturate fusca ornata; anfractus 6, planiusculi, vix convexi, oblique striati, supra suturam compressi, concavi, regulariter accrescentes; ultimus in medio acutissime carinatus et compressus, inferne paulo convexus, antice haud descendens; umbilicus latus, profundus; apertura horizontalis, intus albescens;



peristoma superne mediocriter tenue, subrectum, inferne incrassatum, recedens, marginibus callo tenui junctis.  
Diam. max. 29 millim., min. 26, alt. 12.

*Hab.* North-east end of Malayta Island, Solomon group.

The specimens from the above locality are very closely allied to the type of *Helix Belmorei*, Cox\*, from Hoki Island, also one of the Solomon group. They differ in being more depressed and consequently more sharply angled at the periphery, and they have not the "irregular longitudinal striæ" (which might be more explicitly described as irregular impressed spiral lines) upon the base. The type of *H. Belmorei* was presented to the British Museum by Dr. Cox, and from an examination of it I am inclined to think that these impressed lines are rather an individual characteristic than a specific feature. I therefore think it advisable to consider the specimen sent by Mr. Brazier as a variety of this species until we have a larger series of the typical form to prove them distinct. *H. merziana* has a more convex upper surface, is smaller, and the last whorl expands at the aperture.

*Megalomastoma Brazieræ.* (Pl. XV. fig. 15.)

*Brazieria typica*, Brazier, Proc. Linn. Soc. New South Wales, 1883, vol. viii. p. 35.

Testa pupiformis, solida, anguste umbilicata, pallide fuscescens, oblique striata; anfractus 7, convexi, penultimus inflatus, ultimo latior, ult. angustatus, valde oblique descendens, prope labrum subito ascendens, circa umbilicum subfuniculatus; apertura circularis, luteo-albida, longit. totius  $\frac{1}{3}$  paulo superans; peristoma albidum, incrassatum, reflexum, marginibus callo crassiusculo junctis.

Longit. 23 millim., diam. 11, apertura 8 lata.

Operculum corneum, multispirale.

*Hab.* Ferguson Island, D'Entrecasteaux group, south-east of British New Guinea.

The species here described was exhibited by Mr. Brazier at the Linnean Society of New South Wales as representing a new genus, and he proposed to name it *Brazieria typica*. After due consideration I have failed to find good reasons for separating it from *Megalomastoma*. In shape it is very like *M. Gundlachi*, Pfeiffer. It has, however, a more contracted umbilicus, and the peristome is differently connected with the body-whorl. The fact of this species being from New Guinea, whereas *Megalomastoma* mainly comprises West-Indian forms,

\* Proc. Zool. Soc. 1871, p. 647, pl. lii. fig. 12.



is not sufficient, I think, to warrant the erection of a new genus for its reception. The front of the body-whorl above the aperture is very slightly flattened, as in the species of *Hybocystis*, which, however, are furnished with shelly opercula.

As it was Mr. Brazier's wish that this shell should be dedicated to the memory of his late wife, I have named it *Megalomastoma Brazieræ*; however, should further investigation prove that the animal differs from that of *Megalomastoma*, I would propose that the name originally assigned to this species by Mr. Brazier (although no description of it was then published) should be retained.

*Helicina novo-guineensis.* (Pl. XV. figs. 11, 11 a.)

Testa depresso trochiformis, acute carinata, flavescens, plus minus rufo maculata et strigata vel flammulata, spiraliter lirata et sulcata, incrementique lineis sculpta; anfract. 5-5½, parum convexiusculi, ultimus supra et infra æqualiter convexiusculus, carinam infra liris tenuioribus concentricis ornatus, in medio callo albo obtectus; apertura subhorizontalis, triangularis, ad basim pone columellam lira parva ab margine divergenti instructa; peristoma album, anguste expansum. Operculum utrinque purpureo-rubidum, ad marginem columellarem pallidum.

Diam. max. 18 millim., min. 15½, alt. 12½.

*Var.* Testa maxima (fig. 11 a).

Diam. max. 25 millim., min. 21, alt. 15.

*Hab.* Foot of Owen Stanley Mountains.

This species is well characterized by the spiral liræ, which are much coarser on the upper surface than beneath. There are about twelve upon the last whorl above the rather sharp keel, and about twenty below. The ridge within the aperture, which appears to act as a rest for the operculum, is rather strongly developed. The ground-colour of this shell is generally more or less yellowish; a series of bright red spots ornament the carina and the suture, and radiating lines and undulating streaks occur both on the upper and under surfaces of most specimens. Some examples are more uniformly yellow and have only faint traces of the red markings.

*Helicina solitaria.* (Pl. XV. fig. 10.)

Testa parva, breviter conica, albida, zonis duabus (altera supra medium anfract. ultimi altera infra) rufescentibus, plusve minusve interruptis cincta; anfract. 5, vix convexiusculi, spiraliter striati, ultimus ad peripheriam filo-carinatus, infra angulum convexus, concentrice striatus, in medio callo tenui albo indutus; apertura paulo obliqua, intus rubescens, basi circa columellam flavida;



peristoma tenue, antice parum effusum, flavescens; columella inferne subdentata.

Diam. max. 10 millim., min.  $8\frac{1}{2}$ , alt. 8.

*Hab.* Foot of Mount Astrolabe, British New Guinea.

Only a single specimen was obtained by Mr. Goldie at the above locality. It is white, varied with a few transparent spots, and an interrupted band of a reddish tint upon the upper part of the last whorl and another on the under surface. The columella forms an angle or almost a tooth at the lower part, where it unites with the basal portion of the peristome.

#### EXPLANATION OF PLATE XV.

Figs. 1, 1 a. *Helix (Papuina) Tayloriana*, Adams and Reeve.

Fig. 2. *Helix (Papuina) roseolabiata*.

Fig. 3. *Helix (Papuina) Rollisiana*.

Fig. 4. *Helix (Acavus) coraliolabris*.

Fig. 5. *Nanina Cairni*.

Fig. 6. *Nanina Hunsteini*.

Fig. 7. *Helix (Acavus) latiaxis*, Smith.

Figs. 8, 8 a. *Helix (Trochomorpha) Belmorei*, Cox, var.

Fig. 9. *Helix (Geotrochus) lacteolata*.

Fig. 10. *Helicina solitaria*.

Figs. 11, 11 a. *Helicina novo-guineensis*.

Fig. 12. *Helix (Papuina) albocarinata*.

Fig. 13. *Nanina exilis*, Müller, jun.

Fig. 14. *Helix (Sphærospira) Rehsei*, Martens.

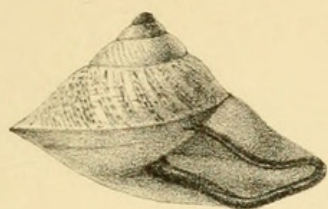
Fig. 15. *Megalomastoma Brazieræ*.

LIV.—*Sporendonema terrestre*, Oudemans, an example of *Endogenous Spore-formation among the Hyphomycetes*. By C. A. J. A. OUDEMANS\*.

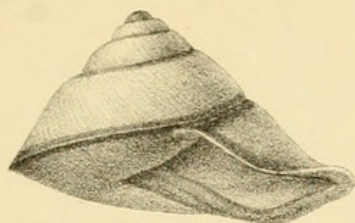
It is one of the characters of the true Moulds or Hyphomycetes that their spores or conidia are not produced *in* sporidia, but by the upper parts of erect threads, that is to say free, not enclosed, or, as has been said, *exogenously*. The conidia are composed of one, two, or more cells—sometimes singly, but sometimes also placed together in more or less considerable numbers, or again united into longer or shorter chains. In the last case, the conidia which are situated furthest from their origin are the oldest, and those nearest the origin the

\* From the 'Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen; Afd. Natuurkunde.' Derde Reeks, Deel ii. Amsterdam, 1886, pp. 115-122.

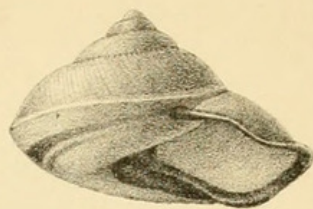




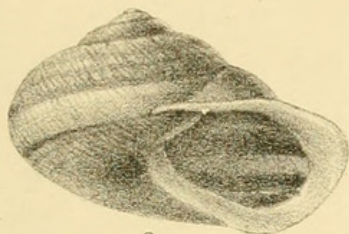
1.



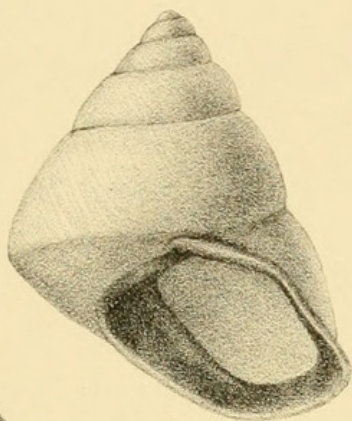
2.



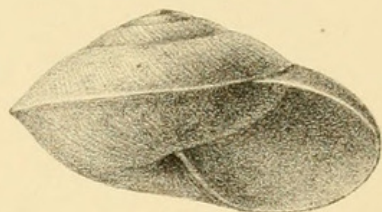
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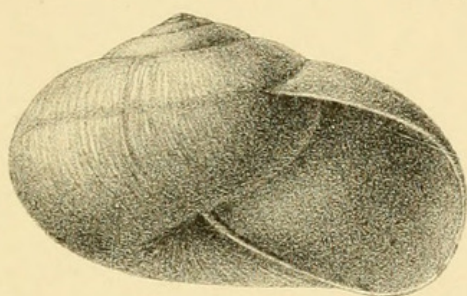
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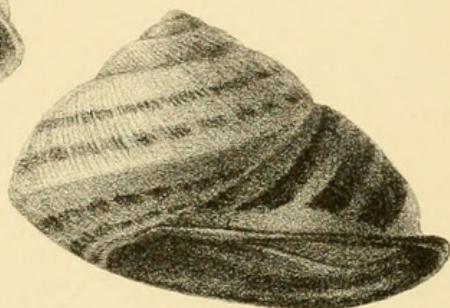
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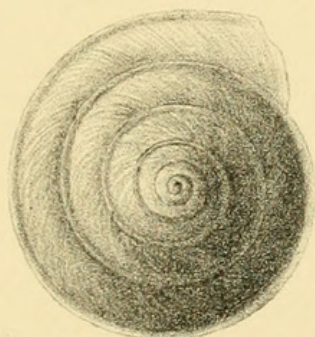
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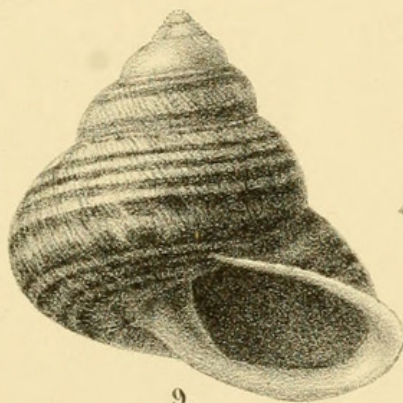
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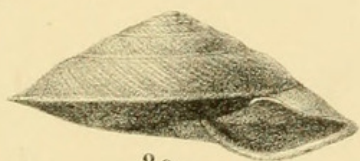
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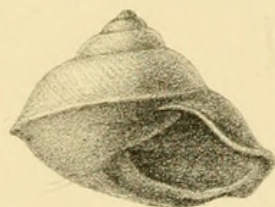
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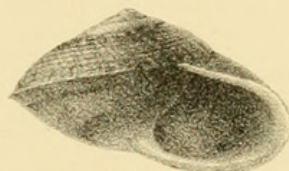
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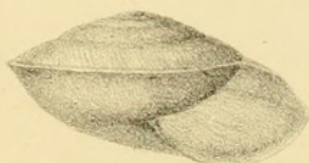
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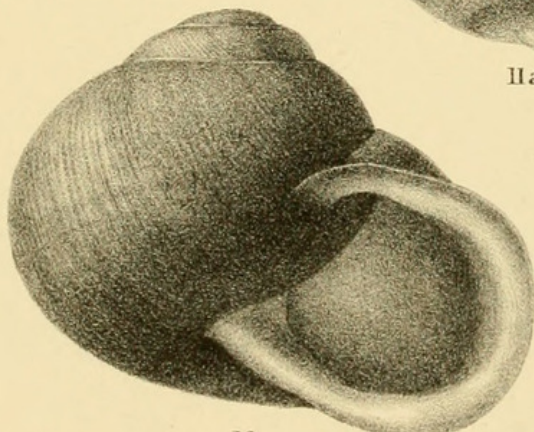
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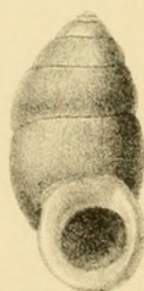
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13.



14.



15.





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