

MOLLUSCA OF H.M.S. 'CHALLENGER' EXPEDITION.—Part XVII.
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[Read March 1, 1883.]

Fam. PYRAMIDELLIDÆ, Gray.

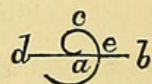
EULIMA, Risso.

STYLIFER, Broderip.

EULIMA.

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| 1. <i>E. psila</i> , n. sp. | 13. <i>E. chyta</i> , n. sp. |
| 2. <i>E. fasciata</i> , n. sp. | 14. <i>E. campyla</i> , n. sp. |
| 3. <i>E. chaunax</i> , n. sp. | 15. <i>E. fallax</i> , n. sp. |
| 4. <i>E. chascanon</i> , n. sp. | 16. <i>E. chydæa</i> , n. sp. |
| 5. <i>E. hians</i> , n. sp. | 17. <i>E. cylindrata</i> , n. sp. |
| 6. <i>E. ephamilla</i> , n. sp. | 18. <i>E. gomphus</i> , n. sp. |
| 7. <i>E. oxytata</i> , n. sp. | 19. <i>E. hyalina</i> , n. sp. |
| 8. <i>E. acanthyllis</i> , n. sp. | 20. <i>E. ambliæ</i> , n. sp. |
| 9. <i>E. acerrima</i> , n. sp. | 21. <i>E. hebes</i> , n. sp. |
| 10. <i>E. sarissa</i> , n. sp. | 22. <i>E. dissimilis</i> , n. sp. |
| 11. <i>E. latipes</i> , n. sp. | 23. <i>E. eurychada</i> , n. sp. |
| 12. <i>E. famelica</i> , n. sp. | |

The tip of the apex in *Eulima* is so characteristic, that I felt it was desirable to supply the measurement of this part in each case; but it is obvious such a measurement, when taken in profile, cannot be satisfactory because of the uncertainty as to the aspect under which the observer has viewed it. I have therefore given the breadth of the first whorl as seen from a point in the line of the axis, reckoning for the first whorl here, as in all other cases, the part cut off by the line db , in which case the breadth of course the distance from a to c .



Eulima, tip of the shell, ace ; the first whorl cut off by a straight line, db . Breadth at the first whorl, ac .

1. EULIMA PSILA, n. sp. ($\psi\iota\lambda\acute{o}s$, bare.)

St. 24. March 25, 1873. Lat. $18^{\circ} 38' 30''$ N., long. $65^{\circ} 5' 30''$ W. Off St. Thomas, N. of Culebra Island, Danish W. Indies. 390 fms. Coral-mud.

Shell.—Small, thin, hyaline, straight, very smooth, narrow and sharp, with longish base and mouth and small rounded tip. *Sculpture*. None whatever, the surface being perfectly smooth and glossy. *Colour* transparent glassy white. *Spire* high, narrow, and quite straight. *Apex* small, but not really sharp,

being perfectly rounded and slightly set to one side. *Whorls* 10, of very regular and slow increase; quite flat. *Suture* oblique, not in the least impressed, so that the division of the whorls is only traceable from the division-walls shining through the shell. *Mouth* long, narrow, and pointedly oval. *Outer lip* rises a very little on the body-whorl, and here at the upper corner of the mouth it is slightly hollowed backward on the edge, while it advances in front to the periphery: its direction is very straight in the line of the spire's slope; on the base, which is narrow, it is extremely patulous. *Inner lip*: a very thin and undefined glaze expands on the body, which is very faintly convex, and melts without a break into the pillar, which is very slightly thickened, rounded, and twisted, and behind which lies the slightest possible furrow. H. 0.17. B. 0.04. Penultimate whorl, height 0.027. Tip of apex, breadth 0.005. Mouth, height 0.058, breadth 0.024.

This species, in the perfect flatness of its whorls, the absence of any impression of the suture, and form of the apex, greatly resembles *E. subulata*, Don.; but it is much more attenuated, the body-whorl in particular is more contracted at the periphery, and the apex is smaller and more perfectly rounded and very slightly bent to one side. In *E. bilineata*, Alder, the base of which is liker the 'Challenger' species, the whorls are slightly rounded. In *E. distorta*, Desh., var. *gracilis*, there is always some slight irregularity in the spire, and the apex is very much more minute.

2. *EULIMA FASCIATA*, n. sp.

St. 24. (As above.)

Shell.—Very small, slightly bent, short; the suture is discernible on the surface and faintly banded above with white, the base is rounded, the mouth pointedly oval, the tip small and rounded. *Sculpture* none. *Colour* translucent, with an ivory band encircling the body-whorl at the periphery, and lying above the suture on the spire. *Apex* small, perfectly rounded. *Spire* rather attenuated and bent. *Whorls* 9, flat, the last rather long with a produced rounded base. *Suture* oblique, slightly impressed, especially near the apex. *Mouth* rather large, oval, pointed above. *Outer lip* a little prominently arched; on its front edge it is rather deeply sinuated above, prominent in the middle, and retreating at the base so as to form a broad, shallow, little canal in front. *Inner lip*: a very narrow rather thin glaze with a defined edge

crosses the body, and runs straight down the pillar, which is very narrow and patulous, with a sharp prominent edge and a very minute furrow behind it. H. 0.096. B. 0.034. Penultimate whorl, height 0.017. Tip of apex 0.004. Mouth, height 0.03, breadth 0.017.

Than *E. Jeffreysiana*, Brus., this is a slightly stumpier form; the whorls are not in the least convex, the apex is blunter and more truncated, the outer lip is much more laterally expanded, and the basal line much more oblique. The form of the mouth and the slightly larger tip distinguish it from the young of *E. intermedia*, Cantr.

3. *EULIMA CHAUNAX*, n. sp. (χαύραξ, a gaper, so called from the openness of the mouth.)

St. 24. (As above.)

Shell.—Small, straight, rather broad, with suture slightly impressed; whorls a very little rounded below, the last rather large and somewhat suddenly contracted; with a short flattish base, a large very open mouth, and a small rounded tip. *Sculpture* none. *Colour* translucent ivory-white. *Apex* small, rounded; but the two slopes do not perfectly agree. *Spire* shortish, perfectly straight, and with entirely similar profile-lines. *Whorls* 9, flattened above, but just perceptibly swollen below, and faintly contracting to the inferior suture; the last is a little large and contracts rather suddenly (yet not so as to form an angulation) to the constricted and flattish base. *Suture* very slightly impressed. *Mouth* large, pointedly ovate. *Outer lip* well arched and patulous; on the edge it is deeply sinuated above, prominent in the middle, and retreating in front to the point of the shell, where it forms a broad gutter with a slight projecting lip. *Inner lip*: a thin, narrow, margined glaze spreads across the body; the pillar-edge is sharp, narrow, not patulous, very slightly oblique to the left, and is truncated in front. H. 0.15. B. 0.06. Penultimate whorl, height 0.028. Tip of apex 0.007. Mouth, height 0.05, breadth 0.036.

The proportions of the shell, its size, and the form of the mouth markedly distinguish this species from *E. fasciata*, which it slightly resembles.

4. *EULIMA CHASCANON*, n. sp. (χάσκαρον, a mask with a gaping mouth.)

St. 24. (As above.)

Shell.—High, narrow, and pliant in its lines, with a scarce visible oblique suture, short flat-sided whorls, a rounded constricted base, a very large and most patulous mouth, and a small rounded but slightly flattened and unequally sided tip. *Sculpture*. There are some microscopic soft lines of growth, which are only visible in exceptionally good light. *Colour* translucent white. *Apex* small, slightly compressed laterally, a little unequally sided, and rounded yet faintly flattened down on the tip. *Spire* high, narrow, and slightly flexuous. *Whorls* 13, not quite flat on the side; they are short and narrow, and of very slow increase; the base is a little elongated and very slightly rounded. *Suture* linear, but just perceptibly impressed; it is very distinct near the top of the spire. *Mouth* large and very open, pointedly ovate. *Outer lip* very slightly arched and patulous; on the edge it is deeply sinuated above, prominent in the middle, and retreating very little to the base, where it is extraordinarily expanded into a spoon-edged shallow canal. *Inner lip*: a very thin glaze with a most faintly defined edge extends across the body; the pillar-edge is narrow, rounded, expanded, with a very minute furrow behind it. H. 0.32. B. 0.08. Penultimate whorl, height 0.04. Tip of apex 0.004. Mouth, height 0.1, breadth 0.05.

This species in many respects resembles in form *E. gracilis*, Forb., the large variety of *E. distorta*, Desh.; but has a larger apex, a coarser suture, a more contracted, less tumid, and much more one-sided base, and a totally different mouth. Than *E. intermedia*, Cantr., it is much more attenuated.

5. *EULIMA HIAN*S, n. sp.

St. 24. (As above.)

Shell.—Largish, somewhat broad, with a coarsish linear suture, short flat-sided whorls, a rounded somewhat constricted base, a large patulous mouth, and a small apex. *Sculpture*. There are feeble microscopic lines of growth; along either side, not quite regularly, nor correspondingly nor uninterruptedly, are scores which mark an old mouth-edge on the succeeding whorls. *Colour* dirty white (but the specimen is a dead shell). *Apex* small, contracting rather suddenly, and in the middle the extreme tip rises into view. *Spire* high, slightly flexuous, and with not quite similar profile-lines. *Whorls* 11, just appreciably convex; the earlier ones are rounded; the last is largish, a little tumid, very faintly angulated at the periphery, with a rounded base, at the

point of which the spoon-shaped mouth-front projects. *Suture* linear, slightly impressed, and for the genus a little coarse. *Mouth* large and very open, pointedly oval. *Outer lip* well arched and patulous; the edge is deeply sinuated above, slightly prominent in the middle, and retreating a little to the base, where it is expanded into a very shallow, wide, spoon-edged canal. *Inner lip*: a thinnish narrow glaze with a defined edge crosses the body, and runs out on the straight broad pillar, behind the reverted edge of which lies a strongly marked furrow. H. 0.41. B. 0.12. Penultimate whorl, height 0.06. Mouth, height 0.14, breadth 0.06.

In general form this is somewhat intermediate between *E. polita*, Linn., and *E. intermedia*, Cantr.; but the apex is much coarser, and the mouth both larger and diverse in shape. No measurement of the apical whorl is given above, in consequence of a minute crush which befell the extreme tip in the very act of taking the measurement.

6. EULIMA EPHAMILLA. (ἐφάμιλλος, like *E. subulata*.)

St. 122. Sept. 10, 1873. Lat. 9° 5' S., long. 34° 50' W. Off Pernambuco. 350 fms. Mud.

Shell.—High and narrow, very symmetrical, with a very fine linear suture, flat-sided and very little oblique whorls, a tapering scarcely convex base, and a small pear-shaped mouth. *Sculpture* none. *Colour*: the specimen is dead and discoloured. *Apex* slightly broken, but seemingly small. *Spire* high, quite straight, and with both profile-lines most symmetrical. *Whorls* 12 or 13, quite flat on the sides; the last whorl is a little long but narrow, tapering very gradually, scarcely convex, and very regularly rounded in front, where the lip hardly projects. *Suture* linear, fine and hardly impressed, and very little oblique. *Mouth* not oval, but regularly pear-shaped and slightly oblique. *Outer lip* quite straight in its direction; its edge is deeply sinuated above, a little prominent in the middle, and then it retreats very slightly to the shallow open gutter in front. *Inner lip*: a thin glaze with defined edge crosses the body and runs out on the short, narrow, slightly twisted pillar, with a very minute furrow behind it. H. 0.33. B. 0.06. Penultimate whorl, height 0.046. Mouth, height 0.07, breadth 0.05.

This species very much resembles *E. subulata*, Don., but is slightly slimmer in form, and the base in particular is more sym-

metrical; the sculpture is less oblique; the mouth is unmistakably different, being smaller, more drawn in towards the axis of the shell, and the inner lip has no curve on the body and no angulation at the junction of body and pillar, but runs quite straight from the angle of the mouth to the point of the pillar. Than either *E. bilineata*, Alder, or *E. gracilis*, Forb., the mouth is much smaller, the shell is much more attenuated and drawn out on the base.

7. *EULIMA OXYTATA*, n. sp. (*οξύτατος*, excessively sharp.)

St. 212. Jan. 30, 1875. Lat. 6° 55' N., long. 122° 15' E. Off Malanipa, Basilan Strait, Philippines. 10–20 fms. Sand.

Shell.—High and narrow, slightly bent, very thin and transparent, with a very fine linear suture fallaciously margined and little oblique, flat-sided whorls, a very round base, a short round mouth, and an excessively sharp point. *Sculpture* none but occasional microscopic lines of growth. *Colour* horny translucent to transparent white. *Apex* excessively small, attenuated and sharp, acuminate rounded and almost symmetrical. *Spire* very high and narrow, not quite straight, there being more or less of a bend near the tip. *Whorls* 17, very short, perfectly flat-sided; the last is short, very slightly tumid, with a very gently and regularly curving base. *Suture* very little oblique, linear, scarcely visible on the surface, and having the appearance of being remotely margined in consequence of the septum of the whorls shining through the thin shell. *Mouth* pear-shaped in the young shell; it is somewhat irregularly semicircular in the adult form. *Outer lip* very regularly arched except toward the lower outer corner, where there is a blunt angulation; the edge is shallowly and broadly sinuated above, prominent in the middle, and then it retreats to the shallow, open, unequal-sided gutter in front. *Inner lip* very flat on the body; there is a very slight angulation at the junction of body and pillar, which last is oblique, very short and very narrow, with a patulous but not reverted edge. H. 0.3. B. 0.07. Penultimate whorl, height 0.04. Tip of apex 0.001 to 0.002. Mouth, height 0.05, breadth 0.04.

This very beautiful form is especially remarkable for the extreme sharpness of its apex, which is not so much as half the breadth of *E. distorta*, Phil. It is slightly like *E. attenuata*, Sow., but is much slimmer, thinner in texture, more brilliant, and has a shorter and rounder mouth. Than *E. acicula*, Gd., it is very much

smaller and slimmer. Than *E. rutila*, Carp., it is much slimmer, and the apex in particular is very much sharper.

8. *EULIMA ACANTHYLLIS*, n. sp. (*ἀκανθυλλίς*, a small prickle.)

July 1875. Reef off Honolulu, Sandwich Islands. 40 fms.

Shell.—Very small, very slightly bent, transparent, with a very fine somewhat oblique suture, flat-sided whorls, a straight oblique shortish base, a pear-shaped flat-ended mouth, and an excessively sharp tip. *Sculpture* none. *Colour* pure very glossy transparent white. *Apex* quite extraordinarily small, not perfectly regular, being slightly pinched-in at the very tip, which is rounded but slightly acuminate, and not perfectly symmetrical. *Spire* very high and narrow, nearly but not quite straight, one side being slightly more oblique than the other. *Whorls* 8, almost perfectly flat-sided except towards the tip, where they are slightly rounded. *Suture* rather oblique, scarcely impressed except towards the tip, where it is a little distinct; the septum between the whorls shines through the shell, and of course makes the suture easily recognizable. *Mouth* pear-shaped, but a little truncated in front. *Outer lip* almost straight, arched at the outer basal corner, and a little straight in front; its edge is deeply sinuated above, prominent in the middle, and very retreating in front, where it forms a broad deep gutter. *Inner lip*: a thin narrow glaze with a defined edge crosses the body and extends down the pillar, on which it is expanded and slightly twisted; from the upper corner of the mouth to the point of the pillar the line is nearly straight or very slightly concave. H. 0·1. B. 0·02. Penultimate whorl, height 0·01. Tip of apex 0·002. Mouth, height 0·024, breadth 0·01.

This species, which is much smaller than *E. oxytata*, is very like a young form of that species, but it increases more rapidly, so that it has a whorl more than a specimen of *E. oxytata* of the same size; the apex is as small, but is the last thing more abruptly contracted. The *E. Manzoniana*, Issel, from the Red Sea, is larger for the number of whorls, somewhat broader in proportion to the length, the suture is less oblique, and the base is longer and more rounded.

9. *EULIMA ACERRIMA*, n. sp.

St. 185 b. August 31, 1874. Lat. 11° 38' 15" S., long. 143° 59' 38" E. Rain Island, Cape York, N. Australia. 155 fms. Sand, shells.

Shell.—Small, straight, high and narrow, translucent, with slightly impressed suture, flat-sided whorls, a long slowly attenuated and scarcely rounded base, a very long pear-shaped flat-ended mouth, and an excessively sharp tip. *Sculpture* none. *Colour* glossy, translucent white with a tinge of yellow in the middle of the whorls. *Apex* excessively minute, not quite symmetrical as the tip rises on one side. *Spire* high and narrow, almost but not quite symmetrical in its profile-lines. *Whorls* 12, very nearly quite flat-sided, but towards the tip a little convex. *Suture* rather oblique, scarcely impressed but defined by the septum, which shines through the shell. *Mouth* long, pear-shaped, but a little truncated in front. *Outer lip* scarcely in the slightest degree convex, not patulous except in front, where it forms a shallow gutter; its edge is deeply sinuated above, very prominently rounded in the middle, and slightly retreating in front. *Inner lip* almost quite straight to the point of the pillar, where the meeting with the gutter-edge is very abrupt and almost angulated; the defined-edged glaze spreads a little on the body and runs out straight on the flat and narrowly expanded pillar. H. 0.16. B. 0.04. Penultimate whorl, height 0.02. Tip of apex 0.003. Mouth, height 0.05, breadth 0.025.

Compared to *E. intermedia*, Cantr., this is a much slimmer form, with a longer more attenuated base, more curved profiles, and a much sharper apex. Than *E. oxytata* it is slimmer, the profile-lines are not quite so straight nor the individual whorls so flat, the suture is more oblique, the mouth does not project laterally, the base is smaller and longer, and the apex is not so minute nor so symmetrical.

10. *EULIMA SARISSA*, n. sp.

St. 122. Sept. 10, 1873. Lat. 9° 5' S., long. 34° 50' W. Off Pernambuco. 350 fms. Mud.

Shell.—Straight, high and narrow, rather dull, with a scarcely perceptible suture, very slightly rounded whorls, a short stumpy base, roundish mouth lying very much in the line of the axis, and with a very small symmetrical tip. *Sculpture*. There are coarsish microscopic lines of growth. *Colour* dullish white, but the shell is dead. *Apex* very small and symmetrically rounded. *Spire* narrow, straight, nearly symmetrical, but with slightly undulating profile-lines; most marked as usual near the apex, the last two whorls of which have a slight but marked con-

traction. *Whorls* 11, scarce perceptibly rounded. *Suture* extremely slight, and only a little oblique. *Mouth* short, broad, and rounded, pointed above, and with a broad shallow patulous gutter in front. *Outer lip* well and regularly arched; it is patulous in front, but direct above; there its edge retreats very much; it advances in the middle, and retires again toward the base. *Inner lip*: across the scarcely convex body there is a glaze with a well-defined edge; the junction of body and pillar is obtuse-angled; the pillar is short, with a rounded patulous edge. H. 0.16. B. 0.05. Penultimate whorl, height 0.02. Tip of apex 0.03. Mouth, height 0.04, breadth 0.03.

This species has not the sharp impressed suture, perfectly flat-sided whorls, and high polish of *E. intermedia*, Cantr.; is straighter and more symmetrical, the shell is thinner, the base is narrower and longer, the mouth is larger, the suture is more oblique, the apex is small but more equally rounded, not rising on one side as in that other. It is a good deal like a large form of *E. Jeffreysiana*, Brusina, but is slimmer, the whorls are not so rounded, the mouth is very much shorter and rounder, and though the apex is about the same size and form, yet the whole spire is markedly more attenuated. *E. acerrima* is slimmer, longer in the base, narrower in the mouth, and smaller in the tip. *E. oxytata*, besides other differences, has a far more attenuated spire and minute tip. *E. ephamilla* is a species with larger whorls and an impressed suture; but its greater size, the absence of young specimens, and its somewhat damaged tip make minute comparison difficult.

11. EULIMA LATIPES, n. sp.

Sept. 8, 1874. Flinder's Passage, Torres Straits. 7 fms.

Shell.—Squat, with a broad flat base, a rapidly contracting bent spire, a small tip, convex whorls, an impressed suture, and a small pear-shaped mouth. *Sculpture* none. *Colour* glassy white. *Apex* very small, acuminate symmetrically rounded. *Spire* small and bent above, enlarging very rapidly in breadth, with concave profile-lines. *Whorls* 9, short, broad, of slow increase, slightly convex. *Suture* slight, a little impressed, scarcely oblique. *Mouth* small, pear-shaped. *Outer lip* arched, its edge retreats above, is rounded in the middle, and is patulous throughout. *Inner lip* is continuously arched across the body and down the short broad pillar. H. 0.093. B. 0.045. Penultimate whorl, height 0.015. Mouth, height 0.029, breadth 0.019.

This species is remarkable for the breadth of its base and the smallness of its tip. Unfortunately it is not very well represented, the specimen which I regard as full-grown being rubbed and chipped, and the two which are perfect being young and imperfectly developed, especially about the mouth.

12. *EULIMA FAMELICA*, n. sp.

St. 75. July 2, 1873. Lat. $38^{\circ} 38' N.$, long. $28^{\circ} 28' 30'' W.$ Fayal, Azores. 450 fms. Sand.

Shell.—Slightly more cylindrical than is usual in the genus, thin, with a small direct oval mouth, a truncated rounded base, unsymmetrical profiles, whorls neither convex nor concave, yet not flat, suddenly constricted near the tip, which is small, but not fine, and is bluntly rounded. *Sculpture* none. *Colour* white, but with a horny translucency. *Apex* small, but blunt and rounded. *Spire* small, slightly bent, enlarging slowly and regularly; its profile-lines are slightly convex, but are not symmetrical. *Whorls* 11, those toward the apex are slightly convex, after the second is a rather sudden slight enlargement. *Suture* slightly impressed and rather distinct, not much oblique. *Mouth* oval, pointed above, rather small. *Outer lip* arched, slightly patulous; its edge retreats above, advances very much below, retreating again in front, where it forms a slight patulous gutter. *Inner lip* has a thickened glaze with defined edge, and is very regularly arched from the upper corner to the point of the shortish, narrow-edged pillar. H. 0.14. B. 0.04. Penultimate whorl, height 0.029. Tip of apex 0.003. Mouth, height 0.04, breadth 0.029.

The name of this species was suggested by the hungered look of the shell. It has a larger tip with a less contracted spire, a more truncated base, and a smaller broader mouth than *E. gracilis*, Forb. & Han. It most resembles *E. sarissa*; but it is, as compared to that species, slimmer, the base is much shorter, the mouth more regularly oval, the apex blunter, the spire more flexuous.

13. *EULIMA CHYTA*, n. sp. ($\chiυτρός$, cast.)

St. 344. April 3, 1876. Lat. $7^{\circ} 24' 20'' S.$, long. $14^{\circ} 28' 20'' W.$ Ascension Island. 420 fms. Hard ground.

Shell.—Very small, with compressed rounded outlines, glossy, with a slightly impressed suture, flat whorls, a short rounded base, oblique pear-shaped mouth, and a small blunt rounded

tip. *Sculpture* none. *Colour* glossy porcellaneous white. *Apex* small, but very blunt and round. *Spire* conical, unsymmetrical. *Whorls* 9, short, broad, flat; the last, which is small, is bluntly angulated at the periphery, and has a blunt rounded base. *Suture* minutely but sharply impressed. *Mouth* small, oblique, pear-shaped with a gutter in front, and altogether very like the mouth of a *Rissoina*. *Outer lip* thick and strong, but with a sharp edge; it is well arched; the edge retreats above, is very prominently rounded in the middle, and retires in front, where it is patulous. *Inner lip*: a narrow defined glaze crosses the body, which is barely convex; this glaze spreads a little at the concave base of the pillar, which is extremely short and narrow, and has a sharpish edge. H. 0.085. B. 0.03. Penultimate whorl, height 0.014. Tip of apex 0.004. Mouth, height 0.024, breadth 0.017.

This small species is like some of the small *Eulimellas*, but is a true *Eulima*.

14. *EULIMA CAMPYLA*, n. sp. (καμπύλος, curved.)

St. 185 b. August 31, 1874. Lat. $11^{\circ} 38' 15''$ S., long. $143^{\circ} 59' 38''$ E. Rain Island, Cape York, N. Australia. 155 fms. Sand, shells.

Shell.—Subfusiform, thin, with a narrow direct semioval mouth, a long subconcave base, flat whorls, an impressed suture, slightly convex profiles, and a small blunt tip. *Sculpture*. There are a few very slight lines of growth. *Colour* hyaline to porcellaneous. *Apex* small, but very bluntly rounded, a little tumid; the extreme tip rises a little on one side. *Spire*: laterally it is straight; but the whole shell bends forward in the plane of the mouth*, and the apex has a bend over of its own. *Whorls* 9, those toward the apex are slightly convex, those lower down are less so; the earlier ones are of slow and regular increase, but the penultimate is rather long, and the last one is elongated and attenuated. *Suture* fine, slightly impressed, very little oblique; towards the lip it rises a little, a peculiarity connected with the bend of the shell toward the mouth. *Mouth* semioval, very long and narrow. *Outer lip* straight, converging toward the pillar, sweeping across the base with a very regular and even curve; the edge retreats above, but from the middle onwards is perfectly flat; in front it is very patulous and spoon-

* It is from this curved form that the name of the species is derived.

shaped, but not hollowed. *Inner lip* is a little thickened; from the upper corner of the mouth it runs straight to the point of the pillar, on which it is broadly and flatly reflected; it is abruptly angulated where it joins the basal lip. H. 0.15. B. 0.04. Penultimate whorl, height 0.03. Tip 0.004. Mouth, height 0.06, breadth 0.03.

The length of the base, the peculiar bend of the spire, and the narrow mouth cut off on the left by the straight line of the inner lip and narrower than the measurement seems to indicate, give a peculiar aspect to this shell. I know of none other which it re-embles.

15. *EULIMA FALLAX*, n. sp.

July 29, 1874. Levuka, Fiji. 12 fms.

Shell.—Small, translucent, strong, rather broad, subangulated at the periphery, with a short broad flattish base, a nearly symmetrical spire, a small subtruncated rounded one-sided apex, flat whorls, a nearly invisible suture, an oblique pear-shaped mouth, and a thickened lip. *Sculpture*. There are faint microscopic lines of growth. *Colour* alabaster-white, glossy. *Apex*: the first two whorls are a little tumid and cylindrical, and the top is somewhat abrupt, being slightly tabulated with the small extreme tip but slightly projecting. *Spire* straight, with conical and nearly symmetrical profiles. *Whorls* 9, flatly conical, small, and of slow increase; the last, which is also small, is slightly oblique, and begins to contract almost from the suture; the base is broad and flattish to flatly rounded. *Suture* linear and hardly visible, but toward the apex impressed; it is scarcely at all oblique. *Mouth* pear-shaped and oblique, extremely straight on the inner lip. *Outer lip* patulous, especially in front, thickened externally, but bevelled off from the outside to a fine edge, which retreats very much above, but is roundly prominent at the periphery, below which it does not retreat, or only very slightly so toward the front of the pillar, which is crossed obliquely by a *Rissoina*-like trough. *Inner lip*: there is a narrow, patulous, thickish glaze with a defined edge which runs in a very straight line from the upper corner of the mouth to the point of the very short pillar, where it joins the outer lip at a right angle. H. 0.13. B. 0.05. Penultimate whorl, height 0.02. Tip of apex 0.004. Mouth, height 0.049, breadth 0.04.

This species seemed at first sight one already known; but

the impression proved deceptive, and hence the name. The form of the spire is somewhat like *Odostomia unidentata*, Mont., whilst the mouth resembles *E. paivensis*, Watson, from Madeira. The form of the earlier whorls is faintly suggestive of the peculiar columellar tip of the spire in *Spirifer*. *E. lentiginosa*, A. Ad., from Japan, is of the same size, but has the whorls rounded, the spire smaller and bent, and the apex much sharper.

16. *EULIMA CHYDÆA*, n. sp. (χυδαῖος, coarse.)

St. 24. March 25, 1873. Lat. $18^{\circ} 38' 30''$ N., long. $65^{\circ} 5' 30''$ W. St. Thomas, N. of Culebra Island, Danish W. Indies. 390 fms. Coral-mud.

Shell.—Smallish, translucent, strong, rather stumpy, with a short broadish rounded base, a symmetrical spire, a small bluntish rounded tip, subconvex whorls, an impressed suture, an oblique pear-shaped mouth, and a thickened lip. *Sculpture*. The whole surface is scored with faint regular microscopic longitudinal streaks. *Colour* translucent white, not very brilliant on the surface. *Apex*: the first two or three whorls are a little depressed, the tip is flatly rounded, and the extreme tip hardly rises into view. *Spire* conical, straight, with nearly symmetrical profiles. *Whorls* $7\frac{1}{2}$, of regular increase, the last alone is a little large; they are slightly convex; the base is contracted, tumid, and slightly concave. *Suture* distinct, being linearly impressed. *Mouth* short and pear-shaped. *Outer lip* thickened by an external varix, but with a fine, though blunt edge, which retreats above and is very patulous in front; in the middle of the solitary specimen it is broken. *Inner lip* thickened, concave, with a short narrowed pillar, crossed in front by a *Rissoina*-like furrow. H. 0.15. B. 0.06. Penultimate whorl, height 0.02. Tip of apex 0.004. Mouth, height 0.06, breadth 0.05.

This species slightly resembles *E. paivensis*, Watson, but is narrower, with a finer, more conical spire, flatter-sided whorls, smaller apex and mouth. It has a superficial likeness to *E. fallax*; but has a coarser apex without the two papillary cylindrical first whorls of that species, its spire-profiles are more convex, there is no contraction of the body-whorl, and the mouth is larger.

The following group of *Eulimas* have a coarser apex than those which have gone before.

17. *EULIMA CYLINDRATA*, n. sp.

St. 24. March 25, 1873. Lat. $18^{\circ} 38' 30''$ N., long. $65^{\circ} 5' 30''$ W. St. Thomas, N. of Culebra Island, Danish W. Indies. 390 fms. Coral-mud.

Shell.—Smallish, thin, glossy, attenuated, with a rounded longish base, a symmetrical spire, a blunt biggish tip, flat whorls, a scarcely visible suture, and an ovate mouth. *Sculpture*. There are very faint microscopic lines of growth, with a very feeble continuous indication of an old labial varix on successive whorls. *Colour* translucent white with a slight yellow tinge; the surface is brilliant. *Apex* is largish, blunt, and rounded, being somewhat spread out and flattened down. *Spire*: as the whorls in their growth increase very little in breadth, the breadth at the periphery is slight; and the apex being large, the form of the spire is somewhat cylindrical in comparison with other species of the genus*; it is also straight, with nearly symmetrical profiles. *Whorls* 9, of regular increase; they are all small, and not in the least convex; the base is slightly elongated and is rounded. *Suture* scarcely visible, but indicated by the interior septum. *Mouth* ovate, pointed above. *Outer lip* very regularly curved; its edge, which is sharp and thin, retreats above, is rounded and prominent in the middle, where it is slightly patulous; in front it is extremely so. *Inner lip* very direct in its oblique course from above to the point of the short pillar, where it turns over a little abruptly, joining the basal lip: there is a thin glaze on the body, and on the pillar the narrow edge is slightly reverted. H. 0.15. B. 0.04. Penultimate whorl, height 0.029. Tip of apex 0.008. Mouth, height 0.04, breadth 0.027.

The shape of this species is somewhat like that of an *Aclis*; but the texture of the shell and form of mouth are unmistakably those of *Eulima*. It is a little like *E. stenostoma*, Jeffr., but is more cylindrical and compressed, with shorter whorls and a much smaller and relatively broader mouth.

18. *EULIMA GOMPHUS*, n. sp. (γόμφος, a nail.)

St. 24. (As above.)

Shell.—Smallish, translucent, thin, glossy, rather attenuated, with a subconical base, a symmetrical spire, a biggish but bluntly-pointed tip, flat whorls, a distinct linearly impressed suture, and an oval mouth. *Sculpture*. There are many close-

* It is from this the name is derived.

set, fine, microscopic lines of growth. *Colour* translucent white, with a glossy surface. *Apex* is largish, but the first whorl contracts a little, and the extreme tip, which rises slightly on one side, is very bluntly pointed, or at least not perfectly rounded. *Spire* conical, symmetrical, with a slight sudden contraction toward the top. *Whorls* 9, of very regular increase; they are all small and not in the least convex, except the first three, which are slightly so. *Suture* a little oblique, linearly impressed, except in the case of the first three whorls, which slightly contract into the suture both above and below. *Mouth* a long oval, in its direction straight, with an open gutter in front. *Outer lip* a little flatly arched; its edge retreats very much above, forming a deep wide sinus: at the periphery it makes a very prominent advance; beyond this it scarcely retreats, but across the base projects with a very prominent patulous lip. *Inner lip*: there is a thin defined glaze across the flat body; the pillar is long and concave, with a rather broadly reverted lip which passes very gradually over into the patulous basal lip. H. 0.14. B. 0.04. Penultimate whorl, height 0.02. Tip of apex 0.008. Mouth, height 0.048, breadth 0.025.

This species is represented by eight specimens, all nearly of the same size, but they look hardly quite mature. It differs from *E. cylindrata* in being a little broader in form, more conical, and less cylindrical; the suture is distinct. The mouth and the apex in all their details are different.

19. *EULIMA HYALINA*, n. sp.

St. 24. March 25, 1873. Lat. $18^{\circ} 38' 30''$ N., long. $65^{\circ} 5' 30''$ W. St. Thomas, N. of Culebra Island, Danish W. Indies. 390 fms. Coral-mud.

Shell.—Thin, hyaline, glossy, rather narrow, with a bluntish rounded base, a symmetrical spire, a biggish flattened tip, slightly convex whorls, a well-marked suture, and a short oval mouth. *Sculpture*. There are microscopic hair-like but slight lines of growth, with occasional stronger mouth-edge scars at irregular intervals, but with a recurrence of one series of them on successive whorls: these scars are like cracks in the substance of the shell. *Colour* hyaline white, scarcely clouded, and with a glassy surface. *Apex* rather large and blunt, the tip being flattened down and spread out, with a very slight rise on one side of the flatly rounded summit. *Spire* straight and symmetrical. *Whorls* $8\frac{1}{2}$, of regular increase; they are a little large and slightly con-

vex. *Suture* somewhat oblique and distinct from the slight rounding of the whorls. *Mouth* a roundish oval, pointed above and guttered in front. *Outer lip* roundly arched throughout; its thin edge retreats very much above, is roundly prominent at the periphery, and retreats toward the base, where it is very patulous. *Inner lip* scarcely convex on the body; it is slightly concave on the short patulous-edged pillar. H. 0.19. B. 0.06. Penultimate whorl, height 0.03. Tip of apex 0.01. Mouth, height 0.06, breadth 0.03.

This is a stouter form than *E. gomphus*, with shorter mouth, blunter tip, and rounder whorls. Compared to the young of *E. stenostoma*, Jeffr., this is a broader form with shorter and less oblique whorls, a much shorter and broader mouth, and a blunter tip.

20. *EULIMA AMBLIA*, n. sp. (ἀμβλύς, blunt.)

St. 145. Dec. 27, 1873. Lat. 46° 43' S., long. 38° 4' 30" E. Halfway between Marion Island and Prince Edward Island. 50-150 fms. Grey sand.

Shell.—Small, thin, translucent or transparent, a little cylindrical, slightly bent, with a blunt tip, nearly flat-sided whorls, a very slight linear suture, and an oblong mouth. *Sculpture*. There are some very obscure microscopic lines of growth and spiral scratches. *Colour* glassy, weathering to translucent. *Spire* narrow, slightly unsymmetrical, being a little bent to the right. *Whorls* 6, short, flattened, and scarcely convex on the side; the last is somewhat long with a very blunt round base. *Suture* very slight indeed. *Mouth* oval, pointed above. *Outer lip* curved a little flatly above, but very roundly below; its edge retreats very much above and below, and is prominent at the periphery. *Inner lip* forms a continuous very slightly concave curve across the body and down the short pillar, at the point of which it is slightly angulated at its junction with the base. H. 0.125. B. 0.047. Penultimate whorl, height 0.02. Tip of apex 0.008. Mouth, height 0.04, breadth 0.026.

This species, which is represented by only one specimen and a fragment, is probably full grown. Compared to *E. distorta*, Desh., this is a narrower shell, with a much blunter apex, a longer base, a smaller mouth, and an outer lip less laterally prominent.

21. *EULIMA HEBES*, n. sp.

St. 122. Sept. 10, 1873. Lat. 9° 5' S., long. 34° 50' W. Off Pernambuco. 350 fms. Mud.

Shell.—Rather small, broad, blunt, slightly angulated at the periphery, straight, with conical profiles, flat-sided whorls, a slightly impressed suture, and a small angulated mouth. *Sculpture*. There are unequal, close-set, hair-like microscopic lines of growth, and faint broader spirals. *Colour* glossy ivory-white. *Apex* very blunt, rounded, with a slight projection of the extreme tip on one side. *Spire* short, conical, very slightly contracted toward the apex. *Whorls* 6, of regular increase; the last is subangulated at the periphery. *Suture* somewhat oblique, slightly impressed and distinct. *Mouth* somewhat lozenge-shaped, being pointed above and at the end of the pillar, and also at the periphery of the shell and the base of the pillar. *Outer lip* thin, angulated at its edge, retreats above and in front, and is prominent at the periphery. *Inner lip*: a thinnish defined pad stretches across the body, which is flat and expands thinly on the straight shortish pillar. H. 0.15. B. 0.07. Penultimate whorl, height 0.03. Tip of apex 0.013. Mouth, height 0.05, breadth 0.04.

This is a remarkably short and blunt form, more like an *Odosomia*, but without the characteristic apex of that genus.

22. *EULIMA DISSIMILIS**, n. sp.

April 17, 1874. Port Jackson, Australia. 2–10 fms.

Shell.—Small, translucent, thin, narrow, straight, cylindrical, with a short spire, a blunt rounded tip, whorls of which the earlier are short and rounded while the last two are high and flattened, an impressed suture, and a round mouth. *Sculpture*. There are faint unequal microscopic lines of growth. *Colour* translucent, glossy white. *Apex* blunt, roundly and evenly pointed. *Spire* short, cylindrical below, roundedly conical above. *Whorls* $5\frac{1}{2}$; above they are short, rounded, and of slow increase, but the last two are somewhat long, cylindrical, and of rapid enlargement; the base is long, slowly contracted, but at last rapidly rounded. *Suture* distinct, and constricted above; below it is less so. *Mouth* short and round, pointed above, patulous but not guttered in front. *Outer lip* circularly curved; its thin edge is quite level. *Inner lip* is very straight, with a thin definite-edged pad on the body and pillar, the latter of which is short. H. 0.11. B. 0.03. Penultimate whorl, height 0.026. Tip of apex 0.009. Mouth, height 0.03, breadth 0.027.

* As not like a *Eulima* at all.

This is a very aberrant form, with curious resemblances to *Rissoa epidaurica*, Brusina*, and *R. striata*, Adams, but is, I think, a true *Eulima*, and is also probably mature. It is slightly like *E. kampyla*; but is smaller and straighter, with a larger blunter apex and small round mouth.

23. *EULIMA EURYCHADA*, n. sp.

St. 185 b. August 31, 1874. Lat. $11^{\circ} 38' 15''$ S., long. $143^{\circ} 59' 38''$ E. Rain Island, Cape York, North Australia. 155 fms. Sand, shells.

Shell.—Small, strongish, porcellaneous, glossy white with a smoky band, somewhat like a *Pupa*-shell but more conical, straight, with a blunt tip, flat-sided whorls, a strongly impressed suture, and a small round mouth. *Sculpture*. There are obscure microscopic crowded hair-like lines of growth and finer spiral lines. *Colour* glossy porcellaneous white, banded in the middle with smoky brown which deepens to the apex. *Apex* blunt and rounded. *Spire* narrow and symmetrical, with conical profiles. *Whorls* $5\frac{1}{2}$, short, of slow increase, flat-sided; but the last is slightly rounded, contracting toward the base, its whole round also diminishes in size toward the mouth. *Suture* linearly impressed; but toward the mouth the superior whorl slightly projects over it in consequence of the contraction of the shell. *Mouth* small, contracted, almost tubular, and perfectly round. *Outer lip* is very thin, and exceedingly patulous and prominent; its edge is very sinuous, retreating above and below, and advancing in the middle. *Inner lip* thick on the body, where it is very patulous, and has an advancing or slightly projecting edge, which is continuous with that of the outer lip: a shallow but well-marked furrow lies behind it, separating it from the body. H. 0.119. B. 0.05. Penultimate whorl, height 0.03. Tip of apex 0.009. Mouth, height 0.03, breadth 0.029.

This is certainly a very aberrant species of *Eulima*, and, but for the foolishness of such subdivisions, might form the basis of a new genus. The mouth is very unlike that of *Eulima*, not being at all pointed behind, and being quite round, contracted, and subtubular; but I think the species may find refuge in this genus. There are some forty or fifty specimens, which indicates that the species is abundant in the locality where it was found.

* The identification of this species with *R. glabrata*, Mühl., seems to me very doubtful.

Genus STYLIFER.

STYLIFER BRYCHIUS, n. sp. (*βρύχιος*, from the depths.)

St. 325. March 2, 1876. Lat. 36° 44' S., long. 46° 16' W. South Atlantic. 2650 fms. Grey ooze. Bottom temperature 32°·7 F.

Shell.—In form somewhat like *Littorina rudis*, Maton, of the var. *tenebrosa*; but shorter in base, with a tumid and larger penultimate whorl, very thin, hyaline and glossy, with faint spirals and lines of growth: the generic pillared tip is small. *Sculpture*. Longitudinals—the whole surface is closely scored with slight obsolete and very fine threadlets, which are the lines of growth. Spirals—of these there are many, somewhat broadish but very obsolete; they are unequal, and one forms a feeble angulation considerably above the middle of the whorl. *Colour* pure glassy white, thin, and perfectly transparent. *Apex*: the style is quite straight, well defined, short and small, and consists of two whorls. *Spire* conical and rather high. *Whorls* 6, of rapid but regular increase, obliquely shouldered above from the suture to the very slight angulation, rounded below. *Suture* strong, linearly impressed, submarginated below. *Mouth* roundly pear-shaped, being shortly pointed above, large. *Outer lip* leaves the body-whorl at a right angle; it is slightly patulous, and is well arched throughout. *Inner lip* very oblique, scarcely convex above; it is very concave at the junction of the body and the pillar, which last is flattened and very slightly twisted and runs out to a very sharp edge. H. 0·5. B. 0·39. Penultimate whorl, height 0·14. Mouth, height 0·33, breadth 0·3.

The solitary specimen got of this species is preserved in spirit; but I failed to extract the animal. The shell is so delicate that no force can be used. The colour is that pale uniform buff which is so common to deep-sea Mollusca. The mantle lines the shell all round. From the middle of this projects a thickish stalked mushroom-like foot, out of the centre of which extends a long thin tongue-like process, somewhat like that figured by Gould in the 'U. S. Exploring Expedition,' pl. xiv. fig. 247, but shorter and not subulate.

In regard to the shell, it is of course hardly necessary to say that the apical "nucleus" is not "sinistral" (Ad. Gen. I. 239).



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