

VIII REPORT ON A SMALL COLLECTION
OF MARINE MOLLUSCA DREDGED IN
SHALLOW WATER IN THE
ANDAMAN ISLANDS

By H. B. PRESTON, F.Z.S.

In dealing with the present small collection the exceedingly rich nature of the Andaman Islands Molluscan fauna is once more emphasized, several large collections, notably those of Nevill, Bouley, Wilmer and Warneford, made during more or less recent years having seemingly failed to exhaust it and there is little doubt that were systematic dredging, especially in from two to twenty fathoms, carried on at every available point round the islands large numbers of forms hitherto unknown to science would be revealed.

In the present paper the author is able to diagnose and figure seventeen species which appear to have up to now escaped notice, and also to place on record the occurrence of several quite unlooked for forms, thus very considerably extending their known range, while the material collected has, in addition, enabled him to provide drawings of two species (*Ethalia capillata*, Gould and *Eulima oxytata*, Watson) which, though duly described, have not before been figured.

Class GASTROPODA.

Order PROSOBRANCHIA.

Family PLEUROTOMIDAE.

Pleurotoma fusca, Hombron and Jacquinot.

Voy. Sud. Pole, Zool., Vol. V, p. 111, pl. xxv, figs. 19-20.

Brigade Creek, in 2-5 fathoms, on a bottom composed of decaying vegetation; Port Blair.

Mangilia gracilentia, Reeve.

Proc. Zool. Soc., 1843, p. 184; Tryon, *Man. Conch.*, Vol. VI, p. 251, pl. xxiii, figs. 98, 88; pl. xvii, fig. 11.

Port Blair.

Family NASSIDAE.

Nassa kempí, sp. n.

(Figs. 1, 1a.)

Shell small, ovately fusiform, whitish, shading on the last whorl to pale yellowish-brown, painted with two spiral bands of pale reddish-chestnut which increase to three on the last whorl; whorls 5, the first two smooth, polished, the last three sculptured with rather closely-set, transverse costulae; base of shell finely spirally sulcate; suture impressed, crenellated by the terminations of the

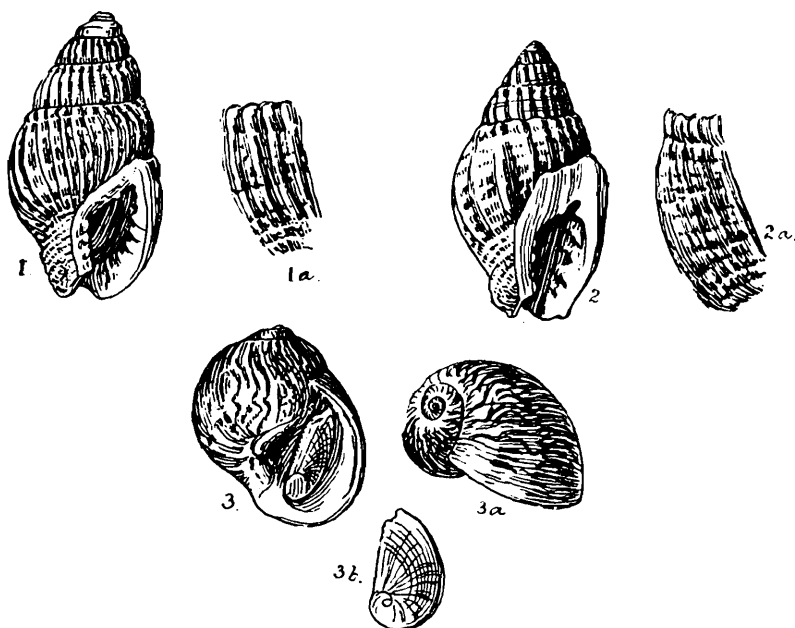


FIG. 1.—*Nassa kempí*, sp. n. $\times 6$. FIG. 2.—*Nassa phoenicensis*, sp. n. $\times 4$.
 „ 1a.— do., sculpture, $\times 8$. „ 2a.— do., sculpture, $\times 4$.
 FIG. 3, 3a.—*Natica kempí*, sp. n. $\times 3$.
 „ 3b.— do., operculum $\times 3$.

transverse costulae; columella obliquely descending, narrowly and restrictedly outwardly calloused, the callus extending upward across the parietal region to meet the upper margin of the labrum and bearing eight denticle-like plaits of which the uppermost and the three basal ones are the coarsest; labrum white, acute, varicosely thickened behind, slightly projecting in front and somewhat sharply contracted near the base, bearing seven small, regular denticles just within the aperture; aperture ovate; canal short, rather broad.

Alt. 4.5, diam. maj. 2.5, diam. min. 2.25 mm.

Aperture: alt. 1.5, diam. .5 mm.

Hab.—Semiramis Bay, Andaman Islands, in 2-6 fathoms, on a bottom of fine mud (*S. Kemp*).

***Nassa phoenicensis*, sp. n.**

(Figs. 2, 2a, p. 88.)

Shell rather small, shortly fusiform, reddish-brown, painted with spiral bands of dark chocolate; whorls 6, flattish, regularly increasing, the last long, sculptured with slightly oblique, transverse costulae, crossed by fine, spiral lirae and a single groove a little below the sutural region, which transforms the terminations of the transverse costulae into a row of nodules; suture impressed; columella margin obliquely descending, bearing four plait-like denticles, livid whitish in colour, restricted and rather erectly calloused and extending above into a well defined, parietal callus which reaches to the upper margin of the labrum; labrum varicosely thickened with narrowly reflexed margin, obliquely backwardly sloping and sharply contracted to form a notch near its base, bearing seven denticles just within; aperture irregularly ovate, canal short.

Alt. 7, diam. maj. 3.75, diam. min. 3.25 mm.

Aperture: alt. 2.25, diam. 1 mm.

Hab.—Phoenix Bay, Andaman Islands, in 1-3 fathoms, on a bottom of muddy sand (*S. Kemp*).

***Nassa (Hima) tindalli*, Melvill.**

Proc. Malac. Soc. London, Vol. VII, 1907, p. 29 (fig. in text).

Port Blair.

A single small and damaged specimen which the author refers with some hesitation to the above quoted species originally described from Baticaloa, Ceylon.

***Nassa (Niotha) livescens*, Phil.**

Zeitschr. für Malak., 1848, p. 135 (as *Nassa*); Tryon, *Man. Conch.*, Ser. I, Vol. IV, p. 54, pl. xvi, fig. 304.

Semiramis Bay, 2-6 fathoms, in fine mud.

A single dead and immature specimen.

***Nassa (Arcularia) globosa* (Quoy).**

Quoy and Gaimard, *Zool. Voy. Astrolabe*, II, p. 448, pl. xxxii, figs. 25-27 (as *Buccinum*).

Phoenix Bay, in 1-3 fathoms, in muddy sand.

***Nassa (Arcularia) cancellata*, Adams.**

Proc. Zool. Soc., 1851, p. 99; Tryon, *Man. Conch.*, Ser. I, Vol. IV, p. 26, pl. viii, fig. 35.

Bamboo Flat Bay, 1-4 fathoms, in muddy sand.

Nassa (Alectrion) unicolor, Hombron and Jacquinot.

Voy. Astrol. et Zel., 1853, V, p. 76, pl. xxi, figs. 13-15.

Semiramis Bay, 2-6 fathoms, in fine mud; Port Blair.

A single juvenile example from each locality.

Family CAPULIDAE.

Calyptraea pellucida, Reeve.

Conch. Icon. (Trochita), sp. 2, pl. i, figs. 2a-b.

A single specimen on the inner side of a valve of *Tellina viator*, Preston, from Port Blair.

Family NATICIDAE.

Natica kempi, sp. n.

(Figs. 3, 3a, 3b, p. 88.)

Shell small, solid, ovate. of a yellowish ground colour, painted with rather fine, closely-set, transverse, zig-zag, chestnut markings and irregularly, broadly, spirally banded with pale reddish-chestnut; whorls 4, the first three small, the last large, convex, finely, transversely striate; sutures so lightly impressed as to be almost linear; umbilicus deep, sealed, but for a comparatively narrow opening, by a heavy convex callus which is stained with dark livid purple; columella margin obliquely descending, spreading above into a well defined, parietal callus which is so thickened as to take on almost the appearance of a nodule near its junction with the upper margin of the labrum; labrum sub-acute above and in front where it is stained with a livid tinge, slightly dilated below and considerably thickened where it merges into the base of the columella margin; aperture ovate; operculum thick, shelly, polished shining, semi-transparent, but marked with opaque, radiating bands of milk white, two-whorled, with eccentric nucleus and strongly spirally striate.

Alt. 7.5, diam. maj. 5.75, diam. min. 4.75 mm.

Aperture: alt. 4, diam. 2.25 mm.

Hab.—Port Blair, Andaman Islands (*S. Kemp*).

Sigaretus (Eunaticina) calaraphe, sp. n.

(Figs. 4, 4a.)

Shell small, moderately solid, yellowish-white; whorls 4, the first two small, the last two rapidly increasing, the last large, long, sculptured with fine, but rather irregular, slightly wavy, incised spiral striae; suture canaliculate; umbilicus moderately narrow, deep, partly concealed by the outward expansion of the calloused columella margin; columella margin obliquely descending, curved below, outwardly expanded, the expansion appearing as a wing-

like projection above and much contracted in the median part; labrum continuous with the columella callus, acute, somewhat projecting in front; aperture pyriform; interior of shell white, porcellaneous.

Alt. 8.5, diam. maj. 5.5, diam. min. 4.25 mm.

Aperture: alt. 6, diam. 3 mm.

Hab.—Semiramis Bay, Andaman Is., in 2-6 fathoms, on a bottom of fine sand (*S. Kemp*).

Family SCALIDAE.

Epitonium robillardi (Sowerby).

Proc. Malac. Soc., London, I, p. 42, pl. iv, fig. 5 (as *Scalaria*).

Bamboo Flat Bay, 1-4 fathoms, in muddy sand.

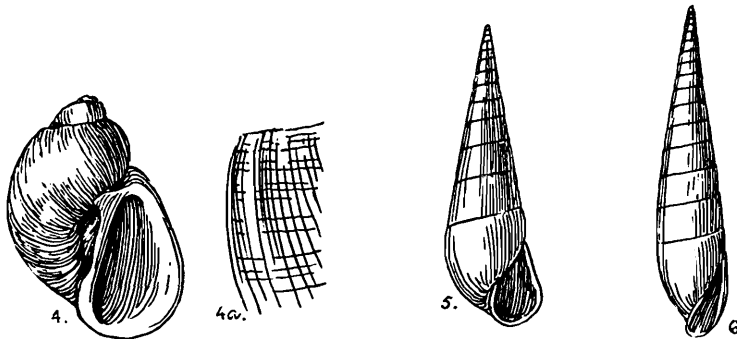


FIG. 4.—*Sigaretus (Eunaticina) calaraphe*, sp. n. $\times 4$.
 „ 4a.—*do.* sculpture, $\times 4$.
 „ 5.—*Eulima oxytata*, Watson $\times 6$.
 „ 6.—*Eulima rossinsulae*, sp. n. $\times 3$.

Family EULIMIDAE.

Eulima oxytata, Watson.

(Fig. 5.)

J. Linn. Soc., 1883, Vol. XVII, p. 117 (unfigured).

Bamboo Flat Bay, 1-4 fathoms, in muddy sand.

The author has been unable to trace the existence of any figure of this pretty little species, hence the figure now given.

Eulima rossinsulae, sp. n.

(Fig. 6.)

Shell elongately subulate, semi-opaque, white; whorls 17, flattened, not convex, smooth, polished, shining; suture linear; columella margin oblique; labrum acute, slightly bent inwards over the aperture; aperture slightly oblique, narrowly and somewhat elongately triangular.

Alt. 11, diam. maj. 2.25 mm.

Aperture: alt. 1.5, diam. .75 mm.

Hab.—Off Ross Island, Andaman Is., 2-10 fathoms, on a bottom of sand, stones and coral (*S. Kemp*).

Family NERITIDÆ.

Theodoxus oualanensis, Lesson.

Lesson in Duperey, *Voy. Coquille, Zool.*, Vol. II, 1830, p. 379.
Reeve, *Conch. Icon.*, sp. 168, pl. xxxvi, fig. 168 (as *Neritina*).

Bamboo Flat Bay, 1-4 fathoms, in muddy sand.

A single small specimen; the species though originally described from the Pacific appears to have a very wide range, the author having taken quite typical specimens some years ago at Baticaloa on the east coast of Ceylon.

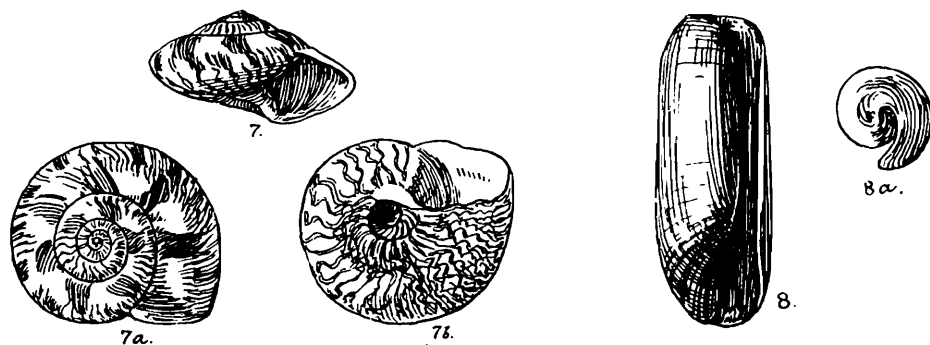


FIG. 7, 7a, 7b.—*Ethalia capillata*, Gould, $\times 4$.
,, 8, 8a.—*Cylichnella syngenes*, sp. n. $\times 8$.

Family TROCHIDÆ.

Ethalia capillata, Gould.

(Figs. 7, 7a, 7b.)

Proc. Bost. Soc. Nat. Hist., 1861, Vol. VIII, p. 17.

Off Ross I., in 2-10 fathoms, on a bottom of sand, stones and coral.

A very beautiful species which appears hitherto to have escaped being figured.

Order OPISTHOBRANCHIA.

Family SCAPHANDRIDÆ.

Cylichnella syngenes, sp. n.

(Figs. 8, 8a.)

Shell allied to *Cylichna cylindracea*,¹ Pennant, a common European form, but differing from that species in the wider apical

¹ *Brit. Zool.*, Ed. 4, Vol. IV p. 117, pl. lxx, fig. 35 (as *Bulla*).

umbilicus, in its coarser revolving striae and more cylindrical and truncate form.

Alt. 5·25, diam. 2 mm.

Aperture: alt. 5·25, diam. 25 mm.

Hab.—Port Blair, Andaman Is. (*S. Kemp*).

Family APLUSTRIDAE.

Micromelo undatum (Bruguière).

Brug., *Encycl. Méth.*, I, p. 380 (as *Bulla*); Tryon, *Man. Conch.*, Vol. XV, p. 392, pl. lix, figs. 20-24.

Off Ross I., in 2-10 fathoms, on a bottom of sand, stones and coral.

A single very brightly coloured example which is inseparable from the West Indian shells in the British Museum.

Class PELECYPODA.

Order TETRABRANCHIA.

Sub-order MYTILACEA.

Family MYTILIDAE.

Mytilus curvatus, Dunker.

Proc. Zool. Soc., 1856, p. 361; Reeve, *Conch. Icon.*, sp. 53, pl. xi, fig. 53.

Brigade Creek, in 2-5 fathoms, on a bottom composed of decaying vegetation.

Sub-order ARCACEA.

Family ARCIDAE.

Arca (Anadena) holoserica, Reeve.

Proc. Zool. Soc., 1844, p. 39 (as *Arca*); Reeve, *Conch. Icon.*, sp. 11, pl. ii.

A young specimen from Semiramis Bay, in 2-6 fathoms, in fine mud.

Family NUCULIDAE.

Nucula semiramisensis, sp. n.

(Figs. 9, 9a, 9b.)

Shell tumid, ovately rhomboidal, covered with a thin, pale reddish-brown periostracum, polished, shining, minutely, obsolete-ly, transversely striate, and marked with concentric growth lines; umbones pearly, not prominent; dorsal margin arched in the median part, anteriorly sinuous, posteriorly bulging; ventral margin rounded; anterior side sharply angled above, obliquely sloping below; posterior side rather slightly produced, sharply rounded; hinge plate bearing on right valve five erect, sharp-pointed,

anterior and sixteen posterior lateral teeth, and on the left valve six anterior and seventeen posterior lateral teeth. Interior of shell pale bluish, nacreous.

Long. 7.75, lat. 11.75 mm.

Hab.—Semiramis Bay, Andaman Is., in 2-6 fathoms, in fine mud (*S. Kemp*).

Allied to *N. bengalensis*, Smith¹, from deep water in the Bay of Bengal. The present species

is however of smaller dimensions and greater convexity for its size, the anterior side is also much more angular than is the case in that species.

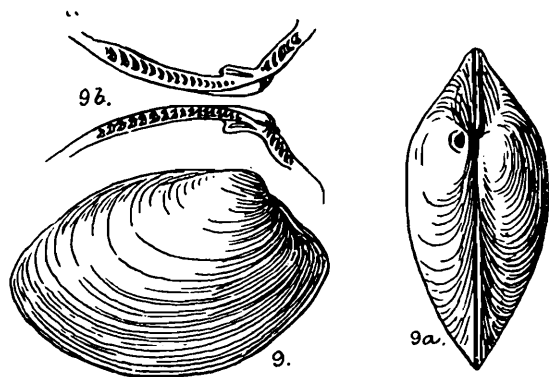


FIG. 9, 9a.—*Nucula semiramisensis*, sp. n. $\times 3$.
,, 9b.— do., hinge, $\times 3$.

Yoldia tenella, Hinds.

Proc. Zool. Soc., 1843, p. 99; Reeve, *Conch. Icon.*, sp. 2, pl. ii.

Semiramis Bay, in 2-6 fathoms, in fine mud; Port Blair.

Sub-order CARDIACEA.

Family CARDIDAE.

Fulvia papyracea, Chem.

Conch., Cab., Vol. VI, p. 190, pl. xviii, fig. 184; Sowerby, *Conch. Illust.*, fig. 56 (non fig. 55); Reeve, *Conch. Icon.*, sp. 9, pl. ii (as *Cardium*).

Bamboo Flat Bay, in 1-4 fathoms, on a bottom of muddy sand (young specimens only).

Sub-order CONCHACEA.

Family VENERIDAE.

Dosinia laminata, Reeve.

Venus, No. 34 Schröter, *Einleit.*, iii, p. 167, pl. x, fig. 3?; *V. excavata*, Gmel. *Syst.*, p. 3269, No. 83?; cf. Römer, *Krit. Unters.*, p. 26; Reeve, *Conch. Icon.*, sp. 41, pl. vii.

Port Blair.

A number of small specimens measuring about 13 millimetres in height and breadth.

Pitaria sp.? Juv.

Phoenix Bay, in 1-3 fathoms, on a bottom of muddy sand; Port Blair.

¹ *Ann. Mag. Nat. Hist.*, Ser. 6, Vol. XVI, 1895, p. 257, pl. ii, fig. 9.

Anaitis calophylla, Hanley.

Cat. Rec. Biv. Shells, Appendix, p. 361, pl. xvi, fig. 26 (as *Venus*).

Port Blair.

Anaitis sp. ? Juv.

Semiramis Bay, 2-6 fathoms, in fine mud.

A single very beautiful specimen, which the author has been unable to satisfactorily determine, it is obviously in a very youthful state.

Tapes tatrix, Chem.

Conch. Cab., VII, p. 48, pl. xlii, fig. 442 (as *Venus*).

Port Blair. Two young examples.

Family SOLENIDAE.

Solen sp. ? Juv.

Bamboo Flat Bay, 1-4 fathoms, in muddy sand; only extremely juvenile specimens obtained.

Order DIBRANCHIA

Sub-order LUCINACEA.

Family LUCINIDAE.

Lucina semperiana, Issel.

Savigny, *Descript. de l'Egypte Coq.*, pl. viii, fig. 12 Issel, *Mal. del Mar. Rosso*, 1869, p. 82.

Semiramis Bay, 2-6 fathoms, in fine mud.

Sub-order TELLINACEA.

Family TELLINIDAE.

Tellina bertiniana, sp. n.

(Figs. 10, 10a, p. 96.)

Shell trigonally ovate, somewhat convex, white, opaque, slightly polished, smooth but for concentric growth lines which are more closely-set and more apparent near the margins; umbones moderately small and inwardly curved, marked with rather distant growth ridges; dorsal margin arched; ventral margin gently rounded, very slightly contracted posteriorly; anterior side rounded; posterior side angularly rounded.

Long. 7.5, lat. 9.25 mm.

Hab.—Bamboo Flat Bay, Andaman Islands, in 1-4 fathoms, on a bottom of muddy sand (*S. Kemp*).

Dedicated to M. Victor Bertin in recognition of assistance received from his valuable work on the Tellinidae.¹

¹ *Nouv. Arch. Mus. Paris*, 2nd Ser., I, pp 202-361, pls. viii, ix.

Tellina innocens, sp. n.

(Fig. 11.)

Shell small, ovately and broadly auriform, thin, semi-transparent, white, both valves finely concentrically striate; umbones small, a little prominent; dorsal margin anteriorly sloping, posteriorly sharply sloping and a little excavated; ventral margin rounded; anterior side also rounded; posterior side shortly and obtusely rostrate, abruptly rounded at its extremity.

Long. 4, lat. 5 mm.

Hab.—Phoenix Bay, Andaman Is., in 1-3 fathoms, on a bottom of muddy sand (*S. Kemp*).

Tellina micans, Hanley.

Proc. Zool. Soc., 1844, p. 72; *Sowerby, Thes. Conch.*, fig. 106.

Port Blair (several specimens).

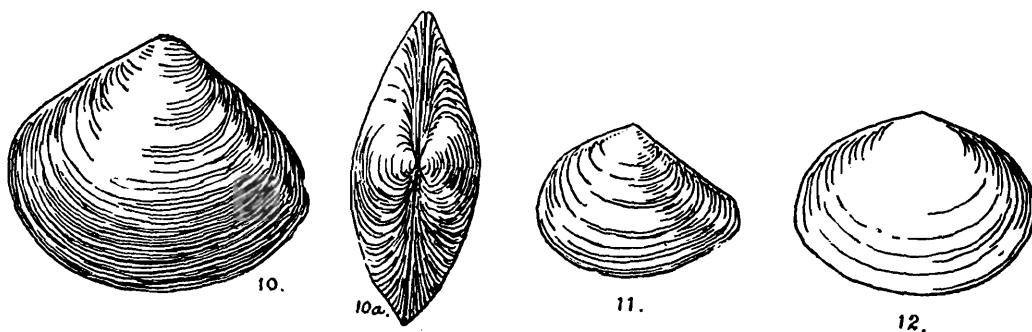


FIG. 10, 10a.—*Tellina bertiniana*, sp. n. $\times 3$.
 ,, 11.—*Tellina innocens*, sp. n. $\times 4$.
 ,, 12.—*Tellina persimplex*, sp. n. $\times 3$.

Tellina persimplex, sp. n.

(Fig. 12.)

Shell oval, thin, semi-transparent, whitish, both valves having the upper portion smooth, while the lower portions are marked with fine, concentric ridges which become coarser on the posterior side; umbones small, not prominent; dorsal margin gently sloping both anteriorly and posteriorly; ventral margin rounded; anterior and posterior sides bluntly rounded.

Long. 6, lat. 8 mm.

Hab.—Port Blair, Andaman Is. (*S. Kemp*).

Tellina pervitrea, sp. n.

(Fig. 13.)

Shell small, ovately cuneiform, exceedingly thin and almost transparent, smooth, polished, shining, marked only with fine, concentric growth lines; umbones small, not prominent; dorsal

margin anteriorly gently arched, markedly excavated in the ligamental region and sloping posteriorly; ventral margin scarcely rounded; anterior side rounded; posterior side comparatively short, abruptly descending, rounded below.

Long. 4.75, lat. 8.25 mm.

Hab.—Semiramis Bay, Andaman Is., in 2-6 fathoms, on a bottom of fine mud (*S. Kemp*).

Tellina phoenicensis, sp. n.

(Figs. 14, 14a.)

Shell small, ovately cuneiform, milk white, both valves sculptured with moderately fine, concentric ridges which stand out somewhat along the upper portion of the posterior, dorsal margin, the interstices being occupied by very fine, microscopic, concentric striae; umbones small, rather prominent; dorsal margin

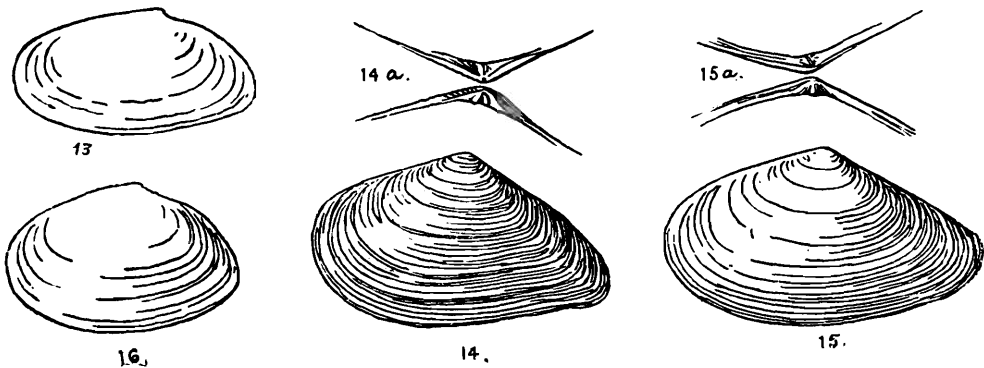


FIG. 13.—*Tellina pervitrea*, sp. n. $\times 3$. FIG. 15.—*Tellina soror*, sp. n. $\times 3$.
 ,, 14.—*Tellina phoenicensis*, sp. n. $\times 4$. ,, 15a.— *do.*, hinge, $\times 3$.
 ,, 14a.— *do.*, hinge, $\times 4$. ,, 16.—*Tellina unguis*, sp. n. $\times 4$.

anteriorly, very slightly sloping, posteriorly sloping, faintly excavated above then a little bulging; ventral margin rounded anteriorly, contracted posteriorly, anterior side bluntly rounded; posterior side produced, subrostrate, sharply rounded.

Long. 5, lat. 8.5 mm.

Hab.—Phoenix Bay, Andaman Islands, in 1-3 fathoms, on a muddy bottom (*S. Kemp*).

Tellina soror, sp. n.

(Figs. 15, 15a.)

Shell allied to *T. phoenicensis* but larger and of a thinner and semi-transparent texture, the concentric ridges are lacking and are replaced by very fine and closely-set striae only; the ventral margin is not posteriorly contracted; the anterior side is still more obtusely rounded, and the posterior side is neither unduly produced nor rostrate.

Long. 6.75, lat. 21.25 mm.

Hab.—Port Blair, Andaman Islands (*S. Kemp*).

***Tellina unguis*, sp. n.**

(Fig. 16, p. 97.)

Shell rather elongately ovate, thin, transparent, yellowish-white, shining, polished, smooth but for exceedingly fine growth lines; umbones small, scarcely prominent; dorsal margin arched, posteriorly excavated for a short distance; ventral margin very gently rounded; anterior side produced, rounded; posterior side obliquely sloping above, very obtusely rostrate below.

Long. 4.75, lat. 7.25 mm.

Hab.—Bamboo Flat Bay, Andaman Is., in 1-4 fathoms, on a bottom of muddy sand (*S. Kemp*).

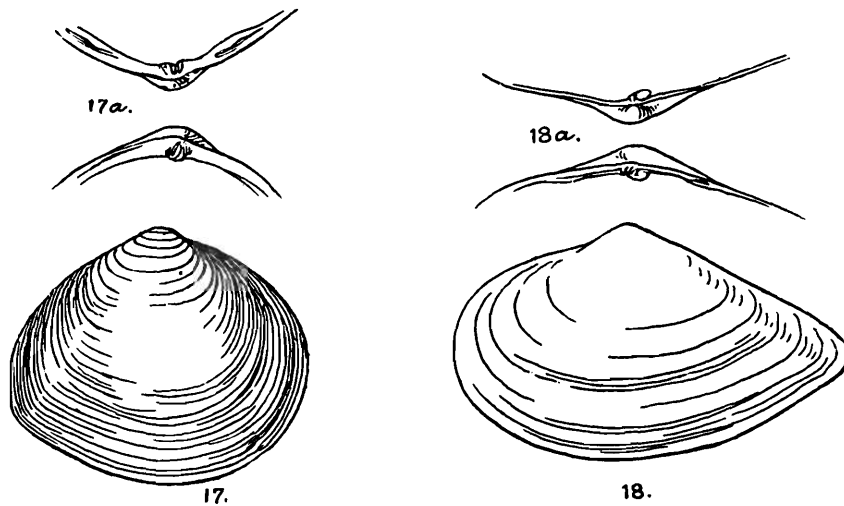


FIG. 17.—*Tellina vadorum*, sp. n. $\times 4$. FIG. 18.—*Theora hindsiana*, sp. n. $\times 3$.
 ,, 17a.— do., hinge, $\times 4$. ,, 18a.— do., hinge, $\times 3$.

***Tellina vadorum*, sp. n.**

(Figs. 17, 17a.)

Shell rather roundly ovate, thin, white, both valves sculptured with fine, regular, concentric ridges which become more closely crowded towards the ventral, anterior and posterior margins; umbones small, a little prominent; dorsal margin arched; ventral margin rounded; anterior side also rounded; posterior side very obtusely and roundedly rostrate.

Long. 6.5, lat. 8 mm.

Hab.—Bamboo Flat Bay, Andaman Islands in 1-4 fathoms, on a bottom of muddy sand (*S. Kemp*).

***Tellina vestalis*, Hanley.**

Proc. Zool. Soc., 1844, p. 141 Reeve, *Conch. Icon.*, sp. 230, pl. xl.
 Port Blair (young only).

Tellina viator, Preston.*Ann. Mag. Nat. Hist.*, Ser. 8, Vol. XVI, 1915, p. 84, fig. in text.

Port Blair.

A number of specimens of this very delicate species which are inseparable from the type which is of New Caledonian origin.

Family SCROBICULARIIDAE.

Theora hindsiana, sp. n.

(Figs. 18, 18a, p. 98.)

Shell allied to *T. opalina*, Hinds¹, but differing from that species in its more tumid form, anteriorly excavated and posteriorly sloping dorsal margin, broader and more obtusely rounded anterior side and more rostrate posterior side.

Long. 8.25, lat. 13 mm.

Hab.—Phoenix Bay, Andaman Islands, in 1.3 fathoms, on a bottom of muddy sand.

Named in honour of the late Mr. R. B. Hinds, to whose researches are due a large proportion of the known members of the group.

Sub-order ANATINACEA.

Family CUSPIDARIIDAE.

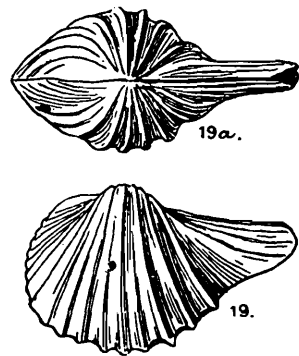
Cardiomya andamanica, sp. n.

(Figs. 19, 19a.)

Shell small, convex, pyriform, pure white, sculptured with seven minute anterior, eleven coarse median, and three fine posterior radiate riblets, a considerable smooth gap intervening between the two last; umbones small, not prominent; dorsal margin anteriorly sloping towards the umbones, posteriorly gently curving upwards towards the posterior side; ventral margin rounded, posteriorly contracted; anterior side steeply sloping above, rounded below; posterior side produced, rostrate, sharply rounded at its extremity.

Long. 3, lat. 5 (nearly) mm.

Hab.—Semiramis Bay, Andaman Is., in 2-6 fathoms, on a bottom of fine mud (S. Kemp).

FIG. 19, 19a.—*Cardiomya andamanica*, sp. n. × 6.¹ *Proc. Zool. Soc.*, 1843, p. 78.