

THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY.

[SIXTH SERIES.]

No. 81. SEPTEMBER 1894.

XXIV.—*Natural History Notes from H.M. Indian Marine Survey Steamer 'Investigator,' Commander C. F. Oldham, R.N.—Series II., No. 10. Report upon some Mollusca dredged in the Bay of Bengal and the Arabian Sea.* By EDGAR A. SMITH.

[Plates III.-V.]

SEVERAL reports by Dr. A. Alcock and the late Professor J. Wood-Mason upon the Fishes, Crustacea, and other marine Invertebrates obtained during the surveys of the 'Investigator' have already appeared in the 'Annals' during the last five years; but only some brief observations have been made upon the Mollusca. These were published in 1891 in vol. vii. pp. 15-19, and vol. viii. pp. 443-448.

Previously to these surveys there does not appear to have been any dredging carried on in this part of the Indian Ocean at any great depths, and therefore it is not surprising that most of the species obtained at over a hundred fathoms are new to science. Up to the present nothing generically new has been discovered; but of the species some are especially interesting as bearing a close resemblance to others which occur in remote parts of the world. For instance, the *Lucina bengalensis*, dredged off the delta of the Godaveri in 410 fathoms, with the exception of a slight difference in form, is very like *L. lamellata* from 245 fathoms in the Straits of Magellan. *Turbo (Cantrainea) indicus* is possibly only a variety of *T. peloritanius*, a deep-water form occurring in the Mediterranean and Atlantic. The species of *Amussium* have

close West-Indian and Atlantic representatives in *A. Dalli* and *A. lucidum*; and *Dentalium profundorum*, from 675 fathoms, and *Limopsis indica*, from 142-400 fathoms, are respectively only slight modifications of *D. capillosum* and *L. pelagica*, from the depths of the Atlantic.

A few forms of *Dentalium* are known, the shells of which are not regularly tubular. In *D. ensiculus*, Jeffreys, the shell is much compressed, and in *D. compressum*, Sowerby, a handsome Japanese species, in section it is oval. *D. insolitum* of the present collection is also remarkable on account of its irregularity in this respect; the two sides are a little flattened and slope or converge somewhat towards the excurved side, which is more convex than the opposite side. The two Pleurotomids, from 675 and 1043 fathoms, are also worthy of special attention, as they have quite the appearance of northern form or inhabitants of cold regions, having the whitish chalky surface of some of the boreal Buccinids and *Chrysodomi*.

In addition to the species now enumerated and described, the following, also from dredgings of the 'Investigator,' have already been characterized as new:—

1. *Rostellaria delicatula*, Nevill, 1881.
2. *Solariella metalica*, Wood-Mason and Alcock, 1891.
3. *Pleurotoma symbiotes*, iid.
4. *Verticordia (Euciroa) eburnea*, iid. (= *V. optima*, Sowerby, 1894).
5. *Nucula (Acila) Fultoni*, Smith, 1892.
6. *Syndesmya maxima*, Sowerby, 1894.
7. *Glaucanome sculpta*, Sowerby, 1894.

The types of the species, hereafter described, will be deposited in the Indian Museum at Calcutta; but one or more representatives of each have been retained, by permission, for the National Collection in the Natural History Museum at South Kensington.

1. *Conus australis*, Chemnitz. (Pl. III. fig. 1.)

Conus australis, Chemn., Reeve, Conch. Icon. vol. i. pl. iv. fig. 49; Sowerby, Thes. Conch. vol. iii. pl. ccvi. fig. 486; Kiener, Coq. Viv. pl. xli. fig. 2.

Hab. Swan River (Reeve); Australia, Moluccas (*Tryon*); China (*coll. Cuming*, and Sowerby for *C. laterculatus*); off Malabar coast, lat. 11° 05' 45" N., long. 75° 04' 08" E., in 36 fathoms ('*Investigator*').

C. gracilis, *C. duplicatus*, and *C. laterculatus*, all of Sowerby, are synonyms of this species. The Malabar

specimens, although they appear to be adult, are very small, measuring only about 43 millim. in length. Two out of the three examples in the present collection exhibit a considerable amount of nodulation upon the transverse ridges of the body-whorl, a feature commonly seen in larger forms of the species. With the exception of the considerable difference in size these specimens are fairly typical, the general form, the spire, the colour and disposition of it, and the sculpture being precisely the same as in normal specimens. Sowerby's figure in the 'Thesaurus,' although a trifle slender, gives a very good idea of the general appearance of the present examples.

2. *Conus planiliratus*, Sowerby. (Pl. III. fig. 2.)

Conus planiliratus, Sow. Proc. Zool. Soc. 1870, p. 255, pl. xxi. fig. 1; Thes. Conch. vol. v. p. 265, pl. dxii. fig. 723; Weinkauff, Conch.-Cab. ed. 2, p. 352, pl. lxx. fig. 6; Tryon, Man. Conch. vol. vi. p. 73, pl. xxiii. fig. 76.

Hab. Off Calicut, west coast of South India, in 45 fathoms ('Investigator'); China Sea (Sowerby).

The original specimen described by Sowerby, now in the British Museum, is not quite adult. The largest example from Calicut, which appears to be full-grown, is 58 millim. in length and 27 in diameter at the shoulder.

3. *Conus coromandelicus*. (Pl. IV. figs. 1, 2.)

Testa breviter fusiformis, albida vel pallide carnea, epidermide dilute olivacea induta, spiraliter subnodose costulata et sulcata; spira conica, acuta; anfractus 10, sutura canaliculata sejuncti, superiores quinque in medio angulati, cæteri fere plani, costulis 3-4 spiralibus, subnodulosis cincti, ultimus paulo infra suturam ad costam sublævem subangulatus, inter costas lineis incrementi conspicuis striatus; apertura angusta, intus pallide fuscescens; labrum tenuissimum, intus sulcatum, ad marginem crenulatum, superne profunde sinuatum.

Longit. 37 millim., diam. 14; apertura 25 longa, 3½ lata.

Var. Testa lævior, costis transversis haud nodosis.

Hab. Off Coromandel coast, lat. 14° 18' 15" N., long. 80° 18' 30" E., in 80-110 fathoms; and lat. 15° 4' 7" N., long. 80° 25' 7" E., in 128 fathoms.

The epidermis of this species is darker upon the spiral ridges than in the interstices or grooves between them, and is particularly dark between the faint nodules, so that the ridges have a somewhat spotted appearance. They are about twenty-six in number upon the body-whorl, of which two or three are above the slight angle or shoulder, which is marked by a peculiar, somewhat flattened, broad and smooth or

scarcely nodulous costa. This winds up the spire a little above the suture, which consequently has a channelled appearance. The lip is very thin, finely undulated at the edge, and grooved within, the grooves corresponding to the external ridges.

It belongs to that section of the genus which includes *C. Orbignyi*, *C. cancellatus*, &c., which have the surface ornamented with transverse grooves and ridges. It is not sufficiently similar to any known species to suggest a comparison.

The variety differs only in having the ridges plain instead of nodulous. Some of the upper whorls, however, are noduled at the angle, as in the type.

4. *Conus turriculatus*, Sowerby.

Conus turriculatus, Sow. Thes. Conch. vol. iii. p. 328, pl. cclxxxviii. figs. 643, 644; Weinkauff, Conch.-Cab. ed. 2, p. 377, pl. lxi. figs. 10, 11; Tryon, Man. Conch. vol. vi. p. 75, pl. xxiii. fig. 89; Smith, Report 'Alert' Coll. p. 487.

Hab. Cheduba Island, Bay of Bengal, 20–30 fathoms ('Investigator').

I have already shown, in the 'Alert' Report, that *C. acutangulus*, Kiener (non Chemnitz), and *C. gemmulatus*, Sowerby, are synonymous with this species. It occurs in the Mascarene Islands, the China Sea, and the Philippines.

Tryon places this species among the synonyms of *C. cancellatus*, from which, however, it is perfectly distinct.

5. *Pleurotoma congener*. (Pl. III. figs. 4, 5.)

Testa fusiformis, robusta, alba, infra suturam pallide rufo-cingulata, inter tuberculos circa medium anfractuum rufo-punctulata; anfractus 10–12, convexi, infra suturam cingulo duplicato et circa medium altero planato tuberculato cincti, liris spiralibus paucis tenuibus incrementique lineis conspicuis ornati, ultimus infra cingulum liris 5–6 striisque intercalentibus cinctus, inferne angustatus, in rostrum productus; columella leviter obliqua, rectiuscula; labrum tenue, ad cingulum tuberculatum incisum; apertura intus lirata.

Longit. 52 millim., diam. 17; apertura cum canali 22 longa, in medio 7 lata.

Hab. Bay of Bengal, 128 fathoms; west of Colombo, Ceylon, 142–400 fathoms.

This species might almost be regarded as a short robust form of *P. Kieneri*, Doumet*, which it resembles in many

* Mag. de Zool. 1840, pl. x., = *Pl. carinata*, Reeve (non Gray), Con. Icon. fig. 56. *Pl. speciosa*, Reeve, l. c. fig. 9, = *P. carinata*, Gray, Griffith's Anim. Kingdom, vol. xii. p. 599, pl. xxiii. fig. 2.

respects. It differs in having a thicker stouter spire, a shorter canal, a thicker girdle at the top of the whorls, and a broader tuberculated zone around the middle.

The specimens obtained off the west of Ceylon are peculiar for a kind of nodule or swelling on the upper part of the columella. They are rather smaller, although full-grown, than the examples from the Bay of Bengal.

Of the two specimens examined one is 4.5 millim. in length, the other only 4.0.

6. *Pleurotoma (Surcula) symbiotes*, W.-M. & A.
(Pl. III. figs. 7, 8.)

Pleurotoma symbiotes, Wood-Mason and Alcock, Ann. & Mag. Nat. Hist. 1891, vol. viii. p. 444, figs. 13 a, b.

Testa fusiformis, sordide albida, epidermide tenuissima pallide olivacea hic illic induta; anfractus 10, superne concavi, in medio nodosi, striis spiralibus lineisque incrementi tenuibus flexuosis sculpti, sutura leviter undulata sejuncti, ultimus antice angustatus; apertura intus fuscescens, lævis, longit. totius $\frac{1}{2}$ paulo brevior; labrum in medio prominens, valde arcuatum, superne late sinuatum; columella lævis, callo tenui pallide fuscescente induta, in medio parum arcuata, inferne obliqua; canalis anterior latus, paulo recurvus.

Longit. 57 millim., diam. 19; apertura cum canali 27 longa, 9 lata.

Hab. Off southern extremity of India, lat. 7° 04' N., long. 76° 34' 15" E., in 1043 fathoms.

The nodules upon the central portion of the whorls (about twelve in number on the penultimate) become gradually more and more acute towards the top of the spire, where the suture also is more wavy than lower down the shell, becoming quite even in the last volution. The sinus in the outer lip, although wide, is not deep, and is situated in the depression or concavity below the suture. Neither the spiral lines nor the acuteness of the nodules upon the upper whorls are well shown in the figures referred to.

7. *Pleurotoma (Surcula) subcorpulenta*.
(Pl. III. fig. 6.)

Testa *S. symbioti* similis, sed major, anfractibus supra minus excavatis, striisque spiralibus paulo prominentioribus, columella in medio plica obliqua plus minus prominente instructa.

Longit. 80 millim., diam. 29; apertura 42 longa, 16 lata.

Hab. Off Colombo, Ceylon, lat. 6° 32' N., long. 79° 37' E., in 675 fathoms.

line is higher in proportion to the length. The interior towards the outer margin is beautifully pearly.

30. *Amussium Jeffreysii*, Smith.

Amussium Jeffreysii, Smith, Lamellibr. 'Challenger' Exped. p. 310, pl. xxiii. figs. 2-2.c.

Hab. Off Koukan coast, lat. 15° 29' N., long. 72° 41' E., in 559 fathoms.

These specimens agree precisely with those obtained by the 'Challenger' off the Philippine Islands in 375 fathoms.

31. *Amussium caducum*, Smith.

Amussium caducum, Smith, Lamellibr. 'Challenger' Exped. p. 309, pl. xxiii. figs. 1-1 c.

Hab. Off delta of the Godaveri River, lat. 16° 01' 00" N., long. 81° 25' 00" E., in 410 fathoms.

The specimens from this locality correspond in every particular with the types from the China Sea obtained by the 'Challenger' in 700 fathoms.

32. *Amussium solitarium*. (Pl. V. figs. 11, 12.)

Testa subcircularis, pellucido-alba, subnitida; valva dextra leviter convexa, concentrice regulariter striata, sinistra æque convexa, liris tenuibus radiantibus paulo arcuatis instructa, lineisque incrementi substriata; auriculæ parvæ, haud radiatim sculptæ; umbones mediocriter acuti, ad angulum circa 130° convergentes; pagina interna nitida, liris undecim in utraque valva instructa. Longit. 16 millim., alt. 16, diam. 4.

Hab. Bay of Bengal, lat. 12° 20' N., long. 85° 8' E., in 1803 fathoms.

Allied to *A. Watsoni*, but with the radiating liræ of the left valve more remote and without distinct cancellation. The internal liræ are curved, those of *A. Watsoni* being nearly straight.

EXPLANATION OF THE PLATES.

PLATE III.

- Fig. 1. *Conus australis*.
 Fig. 2. — *planiliratus*.
 Fig. 3. *Murex malabaricus*.
 Figs. 4, 5. *Pleurotoma congener*.
 Fig. 6. — (*Surcula*) *subcorpulenta*.
 Figs. 7, 8. — (—) *symbiotes*.
 Fig. 9. *Latirus andamanicus*.

PLATE IV.

- Figs.* 1, 2. *Conus coromandelicus*.
Fig. 3. *Nassaria coromandelica*.
Figs. 4, 5, 6. *Capulus lissus*.
Fig. 7. *Lacuna indica*.
Fig. 8. *Sigaretus (Eunaticina) tener*.
Figs. 9-12. *Lepidopleurus similis*.
Figs. 13-13 c. *Turbo (Cantrainea) indicus*.
Figs. 14, 14 a. *Natica rufa*, var.
Fig. 15. *Scaphander andamanicus*.
Figs. 16, 16 a. *Dentalium usitatum*.
Figs. 17, 17 a. — *insolitum*.
Fig. 18. — *profundorum*.

PLATE V.

- Figs.* 1, 2. *Lucina bengalensis*.
Figs. 3, 4. *Cytherea (Caryatis) pudicissima*.
Figs. 5, 6. *Abra maxima*.
Fig. 7. *Limopsis indica*.
Fig. 8. *Cuspidaria (Cardiomya) Alcocki*.
Figs. 9, 10. — (*Myonera*) *caduca*.
Figs. 11, 12. *Amusium solitarium*. Exterior of right and left valves.
Figs. 13, 14. — *andamanicum*. Interior and exterior of left valve.
Figs. 15, 16. — *Alcocki*. Exterior and interior of left valve.

XXV.—On new Species of Histeridæ.

By G. LEWIS, F.L.S.

THIS notice of new species of Histeridæ is supplementary to papers which from time to time have appeared in this Magazine; the last was published in June 1893 (ser. 6, vol. xi. pp. 417-430).

List of Species and new Synonymy.

Hololepta higonixæ, <i>nom. n.</i>	Pachycrærus puncticollis.
<i>parallela</i> , Lew.	Eretmotus valens.
Anaglymma afra.	Sternocœlus acutangulus, <i>Lew.</i>
Platysoma uniforme.	<i>punctulatus</i> , <i>Luc.</i>
— chinense.	— <i>politus</i> , <i>Sch.</i>
— quadricolle.	<i>cancer</i> , <i>Lew.</i>
Cypturus assamensis.	<i>Sedilloti</i> , <i>Lew.</i>
— Thugi.	Notolister Edwardsii, <i>Mars.</i>
Phelister capensis.	Carcinops Blandfordi.
Pachycrærus completus, <i>Gerst.</i>	Tryponæus singularis.
— elegans.	Byzenia formicicola, <i>King.</i>

Hololepta higonixæ, *nom. n.*

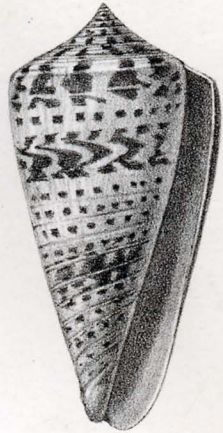
I propose this name as a substitute for *H. parallela*, *Lew.* 1884, as I find that in 1868 G. v. Koch described a species



6.



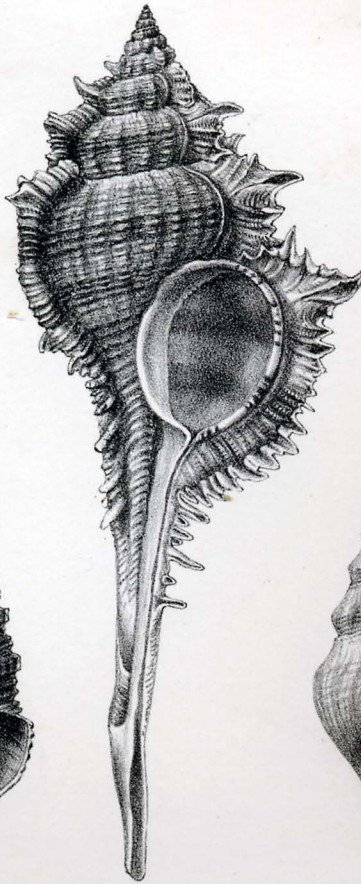
1.



2.



9.



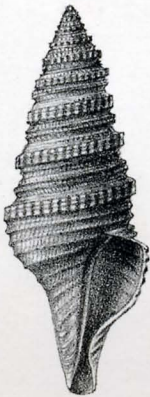
3.



8.



5.



4.



7.

