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# MARINE MOLLUSCS IN THE CUMING COLLECTION, BRITISH MUSEUM (NATURAL HISTORY) DESCRIBED BY WILLIAM HARPER PEASE

E. ALISON KAY

BULLETIN OF
THE BRITISH MUSEUM (NATURAL HISTORY)
ZOOLOGY SUPPLEMENT 1

LONDON: 1965



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### E. ALISON KAY

University of Hawaii, Honolulu, Hawaii, U.S.A.

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In 1965 a separate supplementary series of longer papers was instituted, numbered serially for each Department.

This paper is Supplement No. 1, of the Zoology series. The abbreviated titles of periodicals cited follow those of the World List of Scientific Periodicals.

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### SYNOPSIS

Holotypes and lectotypes of 130 species of molluscs from the Pacific Ocean described by W. H. Pease and now in the British Museum (Natural History) are re-described and figured. Pease's descriptions, published in the *Proceedings of the Zoological Society of London* between 1860 and 1865, lacked illustrations, and, in many instances, dimensions. Termed by Pilsbry (1917) "Linnaean in brevity", these species have long been a stumbling block in the identification of the marine molluscs of the tropical Pacific. The present work is intended to clarify this situation.

### INTRODUCTION

In the Cuming Collection in the British Museum (Natural History) are more than 300 specimens sent to Hugh Cuming (1791–1865) the famous London shell collector by William Harper Pease (1824–1872), an American resident in the Hawaiian Islands. Correspondence between Cuming and Pease is not extant, but there are references to communication between them in the Pease letters to Andrew Garrett<sup>1</sup> (B. P. Bishop Museum Mss. Coll.). In 1858, Pease wrote Garrett, "I received one [letter] at last from Cumming [sic]. He sends me names of over 100 of our shells ...', and in 1860 he wrote, "... I rec'd. the box from Cummings [sic]." From a published note it seems that Pease customarily sent not only specimens but also descriptions of species "where they apparently were new" to his correspondents (Pease, 1868b). The descriptions accompanying the new species sent to London were published between 1860 and 1865 by the Zoological Society of London, of which Pease was a corresponding member. The types were incorporated into the Cuming Collection, as Pease pointed out in 1868 to J. E. Gray, then Keeper of Zoology in the British Museum (Natural History): "... [the types] are in the Cumingian Collection, . . . which I furnished Mr. Cuming myself." (Mss. letter, Foreign Letters, Vol. II, B.M.(N.H.).)

<sup>1</sup>Andrew Garrett (1823–1887) was an American naturalist who travelled extensively in the Pacific. His travels were largely financed by the House of Godeffroy for which he made extensive collections.

The species described by Pease and the specimens which he sent to Cuming came from several island groups in the Pacific including the Hawaiian Islands. The majority of these were collected by Pease himself on several of the islands in the Hawaiian chain, primarily the islands of Oahu and Kauai. Pease was a resident of Kauai from 1850 until 1856 or 1857, and then moved to Oahu. The molluscs from other Pacific Islands (Tahiti, Jarvis Island, the Gilbert Islands, etc.) were collected by Andrew Garrett on his travels in the Pacific and sent to Pease for description (Pease letters to Garrett, B. P. Bishop Museum Mss. Coll.). Pease did not leave the Hawaiian Islands between his arrival in Honolulu in 1850 and his death there in 1872.

This study is concerned with the marine molluscs described by Pease in seven papers published between 1860 and 1865. The only marine species described in these papers which were not apparently included in the Cuming Collection were the majority of the opisthobranchs described in 1860 and 1861. Examples of these, accompanied by coloured illustrations by Garrett were deposited in the Museum de Godeffroy in 1874 (Bergh, 1889). Bergh (loc. cit.) published illustrations of some of the species, and indicated that he had made anatomical studies of several. The specimens were destroyed during the bombing of Hamburg in the 1939–45 War. Of the species described by Pease from the Cuming Collection the types of 30 prosobranchs, one pulmonate, and two lamellibranchs have not been found.

As a part of the Cuming Collection the Pease types have been variously treated in the century since their original description. Twenty-six of the type specimens were illustrated in the works of the English iconographers Lovell Reeve (1814–1865) and G. B. Sowerby (1812–1884). One of Sowerby's illustrations actually antedates the publication of Pease's descriptions, and the authorship of this species, *Erato sandwicensis*, is properly ascribed to Sowerby (1859). A number of the types were compared with specimens collected from other regions of the Indo-Pacific by J. C. Melvill and R. Standen, E. A. Smith, A. H. Cooke, J. R. le B. Tomlin, T. Iredale, and others.

Methods. Since the purpose of this work is merely to figure and re-describe the marine molluscan species described by Pease, neither a systematic arrangement of species nor a taxonomic treatment is attempted here. The sequence of species is that of Pease who followed no particular style in presenting his descriptions. Although synonymies have not been included, an annotated list of references is appended for each species. While these lists are inevitably incomplete, the range in geographical area and in time that they present should make them adequately representative for many purposes. Synonymies indicated by the various authors have been included in the list of references.

The specimens are listed under their British Museum (Natural History) [abbreviated as B.M.(N.H.)] registration numbers. The term *holotype* is applied only to the types of those species represented by a single specimen in the Collection. Lectotypes have been selected from the cotype series, and where it seemed appropriate, the specimens selected were those previously illustrated by Reeve or Sowerby. Dimensions are given in millimeters. The original description is quoted for each species and comments have been added to clarify some of the rather broad descriptions given

by Pease. Descriptive terminology is that found in Moore (1960). Notes on the present knowledge of the occurrence of the species have also been included. All recent collection data are referable to the islands of Kauai and Oahu in the Hawaiian Islands. The abbreviation H.I. indicates Hawaiian Islands. When types have not been found the species concerned are listed at the end of the paper.

The photographs of the types were made by the staff photographers of the B.M. (N.H.) and by the author, with the exception of the photographs of Alcyna rubra and Collonia variabilis which were taken by Robert Robertson of the Academy of Natural Sciences of Philadelphia. The drawings were made by the author with the aid of a camera lucida.

Acknowledgments. I am indebted to the Trustees of the British Museum (Natural History) for their kind permission to examine this collection and for providing facilities for study in the Mollusca section of the Zoology Department.

This project has been supported by National Science Foundation Grant GB1346 since July 1, 1963.

### REDESCRIPTIONS OF PEASE'S SPECIES

### Bullina vitrea Pease, 1860

Pl. 1, Figs. 1, 2

Pease, 1860a: 19. Sandwich Islands [H.I.].

Deshayes, 1863: 56; Pl. 8, Figs. 2, 3. As Bulla vitrea. Réunion. [Specimens compared with Pease material by Cuming.]

Sowerby, 1873, Conch. Icon., 18, Bullina: Pl. I, Fig. 4. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Martens, 1880: 304. Réunion.
Paetel, 1887, 1: 621. Sandwich Islands [H.I.].

Pilsbry, 1893, in Tryon, 15: 177; Pl. 45, Figs. 25, 26. Sandwich Islands [H.I.].

Pilsbry, 1917: 214.

Pilsbry, 1921: 363. H.I. "Not yet found by modern collectors."

Edmondson, 1933: 148. H.I. "... not been seen by recent collectors."

Viader, 1937: 4. Mauritius.

Edmondson, 1946: 170. H.I. "... not been seen by recent collectors."

Pruvot-Fol, 1947: 107.

PEASE'S DESCRIPTION: "Shell ovate, thin, fragile, white, with or without one or two sets of two or three fine transverse black lines on body whorl, transversely finely grooved; interstices punctured; spire obtuse; apex acute; whorls four; aperture oval, dilated at the base; slight fold at the base of the columella (not imperforate, umbilicated)."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961456. Length, 11 mm.; diameter, 7 mm. Paralectotype (1961457): length, 11 mm.; diameter, 7 mm.

REMARKS: The entire shell is marked by regularly spaced spiral grooves which are closely punctate, the punctations showing through the transparent shell in the aperture like links of a chain. The columella is straight and vertical, lacking folds and plaits, and ending abruptly on the outer lip. The protoconch is small, convex, and smooth.

Beachworn specimens of this species although resembling *Bullina lauta* Pease below are distinguished by their thin, almost transparent shells, distinctly punctate grooves, and their straight columella.

Both living and beached specimens are rare in the Hawaiian Islands. A single living animal was recently collected at Ala Moana Beach Park, Oahu [H.I.], where it was found partially buried in a shallow, sandy depression at the low tide level.

### Bullina lauta Pease, 1860

Pl. 1, Figs. 3, 4

Pease, 1860a: 19. Sandwich Islands [H.I.].

Angas, 1867: 225. As Bullina lineata Wood. New South Wales.

Martens and Langkavel, 1871: 51; Pl. 2, Fig. 20a, b. As Tornatella ziczac Muhlfeld. Sandwich Islands [H.I.].

Sowerby, 1873, Conch. Icon., 18, Bullina: Pl. I, Fig. 5. Sandwich Islands [H.I.]. [Illustration of Pease's specimen.]

Watson, 1886: 633. As Aplustrum scabrum (Chemnitz). Java, Sandwich Islands [H.I.], Japan, Port Jackson, Mauritius, and Polynesia.

Paetel, 1887, 1: 621. Sandwich Islands [H.I.].

Pilsbry, 1893, in Tryon, 15: 177. As Bullina scabra Gmelin.

Viader, 1937: 4. As B. scabra Gmelin. Mauritius.

Pruvot-Fol, 1947: 107.

Pease's Description: "Shell oval, umbilicate, white, with two transverse red lines on body whorl, crossed by irregular longitudinal pink undulating lines, transversely ribbed, crossed by fine longitudinal raised lines; whorls four; spire a little elevated, *nucleus persistent*; aperture elongately oval; columella obliquely truncated."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961201. Length, 15 mm.; diameter, 10 mm.

Remarks: The shell is solid, the interior of the aperture glazed, and the outer lip slightly thickened. The columella is curved, the curves emphasized by a fold extending along the apertural edge.

In the Hawaiian Islands the species is not infrequently collected on sand flats and in tidepools where it apparently lives in gravel or coarse sand.

## Tornatina sandwicensis Pease, 1860

Pl. 9, Fig. 4

Pease, 1860a: 19. Sandwich Islands [H.I.].
Paetel, 1887, 1: 625. Sandwich Islands [H.I.].

Pilsbry, 1893, in Tryon, 15: 190. Description quoted from Pease. Sandwich Islands [H.I.].

Couturier, 1907: 173. Lagon de Temoe [Tuamotus].

Pilsbry, 1917: 215; Fig. 2. As Acteocina sandwicensis. H.I.: off Honolulu, 6-8 fathoms.

Pilsbry, 1921: 363. As Acteocina sandwicensis. H.I.: Oahu; Haena, Kauai.

Dautzenberg and Bouge, 1933: 50. Lagon de Temoe [Tuamotus].

Edmondson, 1933: 148. As Acteocina sandwicensis. H.I. Edmondson, 1946: 170. As Acteocina sandwicensis. H.I.

Pruvot-Fol, 1947: 107.

PEASE'S DESCRIPTION: "Shell small, cylindrical, shining, white, finely striated transversely; spire elevated; whorls four; aperture contracted posteriorly, dilated anteriorly; slight fold on columella."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962751. Length, 5 mm.; diameter, 2 mm. Paralectotype (1962752): length, 5 mm.; diameter, 2 mm.

REMARKS: The type set consists of five somewhat beachworn specimens, two of which lack protoconchs, a third with an elevated, convexly conic spire, and two specimens with distinctly projecting protoconchs. The specimen with the elevated, convexly conic protoconch has been selected as the lectotype on the basis of Pease's description of "... spire elevated; whorls four ...", and the lack of mention of a projecting protoconch. Pilsbry (1917) pointed out there were two similar but distinct species occurring in the Hawaiian Islands and suggested that the typical T. sandwicensis was the form with the low spire, naming the form with the projecting spire T. honoluluensis. The two specimens in the set with the projecting protoconch have, therefore, been segregated as T. honoluluensis.

Although there are no recent records of live collections of T. sandwicensis from the Hawaiian Islands, specimens have occasionally been recorded from beach drift.

### Haminea crocata Pease, 1860

Pl. 1, Figs. 9, 10

Pease, 1860a: 19-20; 1861b: 432. Sandwich Islands [H.I.].

Sowerby, 1868, Conch. Icon., 16, Haminea: Pl. V, Figs. 29a, b. [Illustration of one of Pease's specimens.]

Martens and Langkavel, 1871: 52. Sandwich Islands [H.I.].

Smith, 1872b: 349.

Paetel, 1873: 81. Sandwich Islands [H.I.].

Angas, 1877: 189.

Paetel, 1887, 1: 628. Sandwich Islands [H.I.].

Pilsbry, 1893, in Tryon, 15: 363; Pl. 40, Fig. 3. Sandwich Islands [H.I.].

Kobelt, 1896: 109; Pl. 16, Fig. 1. New South Wales.

Melvill and Standen, 1899: 155. Torres Straits. [Had access to Pease's specimens.]

Melvill and Standen, 1901: 456. Karachi. Habitat. [Had access to Pease's specimens.]

Pilsbry, 1917: 214. H.I. Pilsbry, 1921: 368; Fig. 6. H.I.: Oahu; Kauai.

Edmondson, 1933: 151. H.I. Distinguishes between Haminea crocata and Haminea galba. Edmondson, 1946: 172-173. H.I. Distinguishes between Haminea crocata and Haminea

galba.

Pruvot-Fol, 1947: 107.

Ostergaard, 1950: 104; Fig. 30. H.I. Spawning and development.

Solem, 1953: 217. Solomon Islands.

Ostergaard, 1955: 112-113; Fig. 2. H.I. Description of shell and animal.

Solem, 1959: 256. New Hebrides.

Pease's Description: "Shell suboval, thin, fragile, slightly narrowed posteriorly, smooth, with the exception of the longitudinal lines of growth; outer lip slightly produced posteriorly, and rounded; aperture narrowed posteriorly, and slightly dilated at the base; columella with a light fold, white and shining."

The description of the animal which follows the description of the shell was subsequently noted by Pease (1861b: 432) to be that of  $H.\ galba$ , and the description of the animal of  $H.\ crocata$  was inserted following the shell description of  $H.\ galba$  (Pease

loc. cit.).

"Animal. Cephalic disk square, oblong, in advance of the shell, slightly notched at the centre of the front side, at the posterior side provided with a pair of flat, rather broad, recumbent lobes, which are rounded at their extremities; lateral lobes reflected on the sides of the shell two-thirds of its length; foot extending beyond the shell posteriorly, and rounded at its termination. Colour cinerous; pellucid."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961199. Length, 12 mm.; diameter, 7.5 mm. Two paralectotypes (1961200): length, 13 mm.; diameter, 7 mm.; length, 12 mm.; diameter, 8 mm.

REMARKS: The shell is involute with the protoconch concealed and the apex rounded. The columella curves, protruding beyond the base. The columellar

callus is smooth, ending on the lower portion of the outer lip.

The types of *H. crocata* are chalky white, a condition frequently encountered in tectibranch shells collected from beach drift. A discussion of characters distinguishing this species from the following species, *H. galba*, appears in the "Remarks" under *H. galba*.

### Haminea galba Pease, 1861

Pl. 1, Figs. 11, 12

Pease, 1861b: 432. Sandwich Islands [H.I.].

Sowerby, 1868, Conch. Icon., 16, Haminea: Pl. IV, Fig. 23a, b. [Illustration of one of Pease's specimens.]

Smith, 1872b: 349.

Pilsbry, 1893, in Tryon, 15: 364; Pl. 40, Figs. 1, 2. Sandwich Islands [H.I.].

Kobelt, 1896: 108; Pl. 15, Figs. 19, 20. Sandwich Islands [H.I.].

Melvill and Standen, 1901: 456. Bombay. [Had access to Pease's specimens.]

Pilsbry, 1917: 214. "Described from the Hawaiian Islands."

Pilsbry, 1921: 368; Fig. 7. H.I.

Edmondson, 1933: 151. H.I. Description of shell. Edmondson, 1946: 173. H.I. Description of shell.

Pease's Description: "Shell oval, light, shining, yellowish; marked with longitudinal lines of growth, and finely microscopically spirally striated; outer lip nearly straight, and very slightly produced posteriorly; inner lip thickened somewhat at the base, and slightly reflected; columella strongly arched at lower part."

"Animal (Pease, 1860a: 20, following shell description of  $H.\ crocata$ ). Cephalic disk large, oblong triangular, entire in front and truncated, bilobed posteriorly and lobes overlapping; lateral lobes reflected on the sides of the shell during locomotion;

covering about one-half of its length, and nearly meeting at the back; posterior lobe covering the spire; foot subquadrate, extending a short distance beyond the shell posteriorly; eyes central, immersed, black, surrounded by white areolae; colour of the animal varying from grey to greyish-yellow, and in some nearly to black, being closely mottled and freckled with olive or dusky."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961194. Length, 17 mm.; diameter, 10 mm. Two paralectotypes (1961195): length, 17 mm.; diameter, 11 mm.; length, 17 mm.; diameter, 10 mm.

REMARKS: To Pease's description should be added the following: shell involute, protoconch largely concealed, apex shouldered, columella curving but not protruding beyond the base of the shell, callus thick, and the shell covered with fine dark brown spiral striations on a yellow ground. Pease did not mention these striations which immediately distinguish the shells of this species in the type lot from those of *H. crocata*.

In addition to the brown striations, the shells of H. galba differ from those of H. crocata in that they are larger (17 mm. in length) compared to the 7–13 mm. length of the types of H. crocata; the apex is shouldered rather than rounded as in H. crocata; and the columella ends on the posterior extremity.

Although beached shells comparable with the types of H. crocata are of common occurrence in drift from the shores of both the islands of Oahu and Kauai [H.I.], none corresponding with the types of H. galba have recently been identified. The positive identification of living specimens of H. galba must await further study of the various species of Haminea which occur in Hawaiian waters.

# Haminea pusilla Pease, 1860

Pl. 9, Fig. 1

Pease, 1860a: 20. Sandwich Islands [H.I.]. Paetel, 1887, 1: 629. Sandwich Islands [H.I.].

Pilsbry, 1893, in Tryon, 15: 364. Description quoted from Pease. Sandwich Islands [H.I.].

Kobelt, 1896: 165. Sandwich Islands [H.I.].

Pilsbry, 1917: 214. "Described from the Hawaiian Islands."

Pilsbry, 1921: 366; Fig. 5. As Mnestia pusilla (Pease). H.I.: Oahu; Maui.

Edmondson, 1933: 150. As Mnestia pusilla (Pease). H.I. Collected from shores and from depths of 10 fathoms.

Edmondson, 1946: 172. As Mnestia pusilla (Pease). H.I. Collected from shores and from depths of 10 fathoms.

Pruvot-Fol, 1947: 107.

PEASE'S DESCRIPTION: "Shell small, cylindrically ovate, rather solid, white, surface finely cancellated; apex slightly umbilicated or perforated; aperture narrow, contracted posteriorly; slight fold at base of columella."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962754. Length, 3.5 mm.; diameter, 2 mm. Paralectotype (1962755): length, 3.5 mm.; diameter, 1.5 mm.

Remarks: The finely cancellated surface described by Pease is produced on the entire surface of the shell by fine spiral grooves which are crossed by equally fine longitudinal grooves. The aperture is long, narrowed in the middle where the outer lip is reflected inward, and flaring at the base; the outer lip parallels the parietal wall except at the expanded basal third of the shell. The columella is straight. reflected briefly, and joins the outer lip in an even curve.

Specimens are commonly collected in beach drift in the Hawaiian Islands.

### Atys semistriata Pease, 1860

Pl. 1, Figs. 7, 8

Pease, 1860a: 20. Sandwich Islands [H.I.].

Sowerby, 1869, Conch. Icon., 17, Atys.: Pl. 5, Fig. 27. As A. semistriata Gould. N. Am. [Illustration presumably of the holotype.]

Martens and Langkavel, 1871: 53; Pl. 3, Fig. 2. Sandwich Islands [H.I.].

Paetel, 1887, 1: 631. Sandwich Islands [H.I.].

Smith, 1872b: 345.

Cooke, 1886: 129. Suez.

Pilsbry, 1893, in Tryon, 15: 267; Pl. 28, Fig. 30. Sandwich Islands [H.I.].

Kobelt, 1896: 20; Pl. 6, Fig. 11. As Atys (Alicula) semistriata. Sandwich Islands [H.I.].

Pilsbry, 1917: 217; Fig. 5. H.I.: Kahoolawe. Pilsbry, 1921: 365. H.I.: Kauai; Oahu; Maui. Two sub-species described.

Edmondson, 1933: 149; Fig. 74. H.I. "... occasionally found in shallow water."

Ingram, 1939: 117–120. H.I.: Kaneohe Bay, Oahu.

Edmondson and Ingram, 1939: 257. H.I.

Edmondson, 1946: 171; Fig. 86. H.I. "... occasionally found in shallow water."

Pruvot-Fol, 1947: 107.

Habe, 1952b: 139. Limulatys ooformis nov. sp. from Wakayama [Japan] previously erroneously identified as Atys semistriata.

Kuroda and Habe, 1952: 40. Pacific coast area of Japan. Ostergaard, 1955: 112; Fig. 1. H.I. Shell and animal description.

Pease's Description: "Shell oval, contracted posteriorly, thin, fragile, pellucid, white, transverse raised lines at both ends; aperture slightly dilated at the base; apex perforate."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961459. Length, 9 mm.; diameter, 5.5 mm.

Remarks: The shell is involute; the adapical umbilicus is narrow but not perforate as described by Pease. The body whorl is evenly rounded anteriorly and posteriorly. Expanding anteriorly and posteriorly, the aperture is narrow and semilunar. The outer lip ascends above the apex and then sweeps in a smooth curve to the anterior extremity. The columella curves forward forming a narrow

Living specimens are occasionally collected on the sandy substrate beneath rubble in the shallow waters of sheltered bays in the Hawaiian Islands. The animal is white, with three bands of red spots across the mid-dorsal region. Specimens are frequent in beach drift.

### Atys debilis Pease, 1860

Pl. 1, Figs. 5, 6

Pease, 1860a: 20. Sandwich Islands [H.I.].

Carpenter, 1865: 516. "... appears to be identical with A. succisa Ehr. and simply a slender variety of A. alicula A. Ad."

Pease, 1868b: 231. "... not synonymous with A. succisa Ehr."

Sowerby, 1870, Conch. Icon., 17, Atys.: Pl. I, Fig. 28a, b. Pacific Ocean. [Illustration of one of Pease's specimens.]

Martens and Langkavel, 1871: 53; Pl. 3, Fig. 3a, b. Tahiti.

Smith, 1872b: 345. Cooke, 1886: 131.

Watson, 1886: 640. Levuku, Fiji. [Had access to Pease's specimens.]

Paetel, 1887, 1: 631. Sandwich Islands [H.I.].

Pilsbry, 1893, in Tryon, 15: 266; Pl. 33, Figs. 69, 70. Sandwich Islands [H.I.]; Levuku, Fiji.

Kobelt, 1896: 22; Pl. 6, Fig. 15. Sandwich Islands [H.I.]; Viti Islands.

Melvill and Standen, 1899: 155. Torres Straits. [Had access to Pease's specimens.]

Hedley, 1910: 370. Queensland.

Pilsbry, 1917: 217; Fig. 7. [Figure a copy of Sowerby, 1870.] H.I.

Pilsbry, 1921: 365. H.I.

Dautzenberg and Bouge, 1933: 52. Tahiti (Martens and Langkavel). Edmondson, 1933: 150. H.I. "...has not been seen recently."

Ingram, 1939: 120. In list of Hawaiian tectibranchs.

Edmondson, 1946: 171. H.I. "... has not been seen recently."

Pruvot-Fol, 1947: 107.

Pease's Description: "Shell cylindrically ovate, elongate, narrowed posteriorly, pellucid, fragile, white; outer lip produced and twisted posteriorly; apex umbilicated, and umbilicus striated or grooved, finely striated transversely, transverse raised lines at both ends; columella with a fold at the base."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961197. Length, 13 mm.; diameter, 5·5 mm. Two paralectotypes (1961199): length, 13 mm.; diameter, 6 mm.; length, 12·5 mm.; diameter, 5 mm.

Remarks: The apex is narrow and deeply impressed around the axis, about the base of which there is a shallow concavity. The ascending axis is broad, terminating in a posteriorly projecting point. The sculpture consists of approximately 14 spiral grooves which are irregularly spaced anteriorly, and 10 posteriorly.

Although the Sowerby (1870) figures, which were of the types, suggest the posteriorly projecting point, neither the Martens and Langkavel (1871) nor the Kobelt (1896) illustrations of the species show the point. Pilsbry (1917) remarked that

Pease did not note the projection in the original description.

The Sowerby (1870) figures exaggerate the narrowness of the posterior whorl. Comparison of the types with the illustrations suggests that the artist included a portion of the whorl in the shadow of the lip, thus emphasizing the narrow posterior whorl. Pilsbry (1917) described a new species, *A. cornuta*, from the Hawaiian Islands, solely on the basis of a wider posterior whorl; this species should be compared with Pease's *A. debilis*.

### Volvatella fragilis Pease, 1860

### Not figured

Pease, 1860a: 20-21. Sandwich Islands [H.I.].

Pease, 1868d: 73; Pl. 7, Fig. 4. Nevill and Nevill, 1869: 67.

Paetel, 1887, 1: 634. Sandwich Islands [H.I.].

Pilsbry, 1895–96, in Tryon, 16: 384; Pl. 42, Figs. 27, 28. Sandwich Islands [H.I.]. Description from Pease.

Pilsbry, 1921: 368. Not found since time of Pease. Thiele, 1931: 388. As Volvatella fragilis Pease.

Edmondson, 1933: 151. As Valvatella [sic] fragilis Pease. H.I. "... has not been observed since [Pease]."

Edmondson, 1946: 173. As Valvatella [sic] fragilis Pease. H.I. "...has not been observed since [Pease]."

Pruvot-Fol, 1947: 107. Evans, 1950: 102–106. Kay, 1961: 112–113.

Pease's Description: "Shell thin, horny, subpyriform, convolute (finely striated longitudinally), covered with a membranaceous epidermis; spire none; aperture wide, dilated at the base and contracted posteriorly; the lips thin and entire, meeting at about one-half the length of the shell and folding closely one over the other, posteriorly produced in the form of a tube, leaving a circular aperture; colour yellowish."

"Animal. Mantle not exposed; cephalic disk quadrate, slightly in advance of the shell; tentacular lobes four, produced from the corners of cephalic disk, round, short and bluntly rounded at their extremities, anterior pair slightly longer; foot small, not extending posteriorly beyond the aperture, and not reaching in front the anterior side of the cephalic disc, of an oblong triangular shape, widest in front; eyes minute at inner base of posterior tentacles; anal opening at posterior aperture; colour white.

Mus. Cuming.

This anomalous animal was found on sea-weed dredged from a salt-water pond. It remained alive several days in a glass jar; it was very timid and slow in its movements. The animal would occasionally protrude slightly from the posterior aperture."

Holotype: Shell fragments only. B.M.(N.H.) Reg. No. 1962753.

Remarks: Pease erected a new genus, Volvatella (Pease, 1860a: 20), to include the species he was describing. Three additional species were later described, two by Pease in 1868d, and one by G. and H. Nevill from Ceylon in 1869. Evans (1950) proposed a revision of the genus because of several discrepancies in Pease's species descriptions. While retaining V. fragilis as the type species of Volvatella, Evans proposed the genus Arthessa to include the Nevill species and a newly described species from Zanzibar (Evans, 1950). No collections of specimens which can be identified as V. fragilis have been recorded in the Hawaiian Islands since Pease's original description (Edmondson, 1933; 1946). A species, A. evansi, recently described as congeneric with the two species in the genus Arthessa has recently been

described by Kay (1961); although the shell of this species is similar to that described by Pease (1860a), the animal is orange-yellow and following Evans' distinction between *Arthessa* and *Volvatella*, the species was included in the genus *Arthessa*.

### Dolabrifera olivacea Pease, 1860

### Not Figured

Pease, 1860a: 22. Sandwich Islands [H.I.].

Sowerby, 1868, Conc. Icon., 16, Dolabrifera: Pl. 1, Fig. 7. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 54. As Aplysia (Dolabrifera) olivacea (Pease). Sandwich Islands [H.I.].

Pilsbry, 1895–1896, in Tryon, 16: 123, Pl. 34, Fig. 25. Sandwich Islands [H.I.].

Edmondson, 1933: 154 1; Fig. 77e H.I.

Engel, 1936: 30, 40-41, 43. As Dolabrifera dolabrifera Rang.

Edmondson, 1946: 176 1; Fig. 89e H.I.

Pruvot-Fol, 1947: 107. As Dolabella olivacea (Pease). Ostergaard, 1950: 100, Fig. 24. Spawning habits.

Pease's Description: "Elongate pyriform shape, rounded posteriorly, rugose, and ornamented with small filaments. Back convexly rounded. Mantle lobes small, rounded and closely enveloping the body, the right overlapping the left, leaving two small orifices; a groove extends from the mantle lobes along the back and right side of head to the mouth. Dorsal tentacles grooved laterally and slightly dilating outwards. Oral tentacles longer than the dorsal, and curved forwards, grooved and much dilated. Eyes small, black, distinct, sessile in front laterally to dorsal tentacles. Mouth with a bilobed veil. Foot smooth; shape same as body. Colour varies; usually of a dark olive-green with sap-green margins, and varied with whitish and dusky. Filaments pale. Foot pale greenish-slate, dotted with dusky brown and white.

The eggs are deposited under stones, coiled from right to left.

HOLOTYPE: B.M.(N.H.) Reg. No. 1964376. Length, 8 mm.; diameter, 3 mm.

REMARKS: The shell of this species has not been figured because it is of little use in the identification of species of *Dolabrifera*. The shell is, however, that of *Dolabrifera*, and undoubtedly that of the circumtropical species *D. dolabrifera*. The species is common under rocks near the shoreline in the Hawaiian Islands.

### Vexilla fusconigra Pease, 1860

Pl. 4, Figs. 3, 4

Pease, 1860a: 141. Sandwich Islands [H.I.].

Adams, 1861: 369. As Vexilla nigro-fusca [sic]. Type of subgenus Usilla.

Pease, 1868e: 115.

Martens and Langkavel, 1871: 9; Pl. 1, Fig. 8. Sandwich Islands [H.I.].; Rarotonga [Cook Is.].

Paetel, 1873: 34. As Purpura fusconigra Pease. Sandwich Islands [H.I.]. Smith, 1876: 547. Solomon Islands. [Had access to Pease's specimens.]

Tryon, 1880, 5: 121; Pl. 55, Fig. 87. Sandwich Islands [H.I.]; Solomon Islands.

Paetel, 1887, 1: 137. As Purpura fusconigra. Sandwich Islands [H.I.].

Edmondson, 1933: 115. As *Usilla fusconigra* Pease. H.I. Edmondson, 1946: 135. As *Usilla fusconigra* Pease. H.I.

Solem, 1953: 223. As Cronia (Usilla) fusconigra. Solomon Islands.

Pease's Description: "Shell abbreviately fusiform, ventricose, solid; spire moderately produced, acute, and less than half the length of the shell; whorls six, convex, furnished with close transverse granular ribs; suture impressed; bodywhorl large, ventricose, and marked with coarse, remote, revolving impressed lines, and fine longitudinal striae and wrinkles; canal short, slightly recurved; aperture oblong-ovate; outer lip thick, somewhat dilated, and furnished with six or seven intramarginal tubercular teeth, sinuated at its junction with body-whorl; columellalip smooth, flattened, slightly callous above. Colour black or brownish-black, impressed lines on body-whorl light chocolate-colour; lips purplish-brown; teeth white or bluish. *Animal*. — Foot oblong, truncated in front, rounded behind. Tentacles cylindrically tapering. Eyes lateral and sessile, at about two-thirds the length of the tentacles. Siphon long. Colour dark greenish-slate, and closely punctured with black and white. Tentacles zoned with brown, tips white."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961164. Length, 13 mm.; diameter, 7 mm. Two paralectotypes (1961165): length, 15 mm.; diameter, 8 mm.; length, 12 mm.; diameter, 7 mm.

Remarks: The type lot consists of specimens which are beachworn and blotched with white water marks. The protoconchs are worn.

The sutures are not constricted. The columellar lip is vertical, and the columella is straight, flat, and glazed. The outer lip is thickened, with six-seven internal teeth. There is a shallow, almost vertical sinus at the junction of the body whorl and the outer lip.

Beachworn specimens are occasionally found in drift in the Hawaiian Islands. Living specimens appear to be associated with certain species of sea urchins, where they occur attached to the oral surface of the urchins.

### Engina costata Pease, 1860

Pl. 1, Figs. 17, 18

Pease, 1860a: 142. Sandwich Islands [H.I.]. Tryon, 1883, 5: 196. Sandwich Islands [H.I.]. Kobelt, 1897: 294. As Columbella (Engina) costata.

Pace, 1902a: 71. Non Columbellidae.

PEASE'S DESCRIPTION: "Shell solid, fusiformly ovate, attenuated at both ends; spire acute, half the length of the shell; whorls seven or eight, convex, longitudinally ribbed; ribs coarse, rounded, and crossed with numerous transverse spiral ridges, which become somewhat nodulous on the ribs; interstices between the transverse ridges cancellated with raised striae; sutural lines undulated; canal produced and slightly recurved; aperture narrow, widest above; outer lip much thickened

externally; edge sharp, furnished with five or six intramarginal tubercular teeth; columella-lip with a thin callosity, and transversely ribbed on the middle. Colour yellowish-brown; aperture white."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961163. Length, 16 mm.; diameter, 10 mm.; aperture, 8 mm.

REMARKS: The protoconch is worn in the holotype. There are eight strong, almost vertical axial ribs on the last whorl, fewer on the succeeding whorls. The sutures are somewhat constricted. The columella is straight, covered by a thin callus which projects outward; there are three or four somewhat obsolete folds midway down the columella.

Beachworn specimens are fairly common in drift from the shores of Kauai, H.I.

### Engina monilifera Pease, 1860

Pl. 2, Figs. 13, 14

Pease, 1860a: 142. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 22; Pl. 1, Fig. 15. Sandwich Islands [H.I.].

Schmeltz, 1874, 5: 128. Sandwich Islands [H.I.].

Smith, 1876: 542. Solomon Islands. [Had access to Pease's specimens.]

Martens, 1880: 235. As Enzina [sic] monilifera. Mauritius.

Tryon, 1883, 5: 190; Pl. 61, Fig. 26. Sandwich Islands. [H.I.]; Solomon Islands. "... probably E. iodosia Duclos . . ."

Kobelt, 1896: 245; Pl. 33, Fig. 4. As Columbella (Engina) monilifera. Sandwich Islands [H.I.]; Solomons; Mauritius.

Pace, 1902a: 169. Non Columbellidae.
Dautzenberg, 1910: 31. Solomon Islands.
Viader, 1937: 25. As E. iodosia Duclos.
Solem, 1953: 223. Solomon Islands.

PEASE'S DESCRIPTION: "Shell solid, ovate, slightly attenuated at both ends; spire acute, half the length of the shell; whorls six or seven, convexly angulated, ribbed longitudinally; ribs coarse, rounded, crossed with spiral transverse granular ridges, two on each whorl of the spire; suture faintly defined, bordered by a single row of golden-coloured granules; body-whorl sculptured same as the spire; canal short, slightly recurved; aperture narrow, oblong; outer lip nearly straight, thickened externally, and provided with four internal teeth, and three small tubercular teeth on the lower half of columella-lip. Colour white, with a broad, broken, purplish transverse band on the body-whorl, and a narrow one at the margin of the sutures."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961460. Length, 7 mm.; diameter, 4 mm. Paralectotype (1961461): length, 8 mm.; diameter, 5 mm.

Remarks: The type lot consists of two specimens, both of which have four somewhat indistinct whorls. The aperture is irregularly ovate. The columella is straight, with two small folds mid-way.

The illustrations in Martens and Langkavel (1871), Tryon (1883), and Kobelt (1896) are misleading in that the sculpture is indicated as being evenly spaced and the granules the same size. The Martens and Langkavel (1871) illustration does not

show the yellow granules, and the Kobelt (1896) illustration indicates golden bands rather than knobs.

In the Hawaiian Islands, living specimens are occasionally collected under loose rocks in tidepools and along the shoreline. Beachworn specimens, usually very faded, are frequent in drift.

### Engina albocincta Pease, 1860

Pl. 2, Figs. 9, 10

Pease, 1860a: 142. Sandwich Islands [H.I.]. Tryon, 1883, 5: 200. As Engina fusiformis Pease.

Kobelt, 1897: 294. As Columbella (Engina) albocincta. Sandwich Islands [H.I.].

Pace, 1902a: 51. Non Columbellidae.

PEASE'S DESCRIPTION: "Shell ovate, brownish red, with a white transverse band on body-whorl; apex acute, longitudinally ribbed, transversely nodosely ridged, finely striated between the ridges; aperture narrow; outer lip denticulated within; canal slightly produced and recurved."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961454. Length, 7 mm.; diameter, 4 mm.; aperture, 3·5 mm. Paralectotype (1961455): length, 6·5 mm.; diameter, 4 mm.; aperture, 3·5 mm.

Remarks: The whorls are indistinctly sutured, the last shouldered, and sculptured with fine spiral striae. The aperture is oval, the outer lip thickened and bearing five internal teeth and a shallow sinus posteriorly. The columella is sinuous, with a thin callus.

Beachworn specimens are frequent in drift in the Hawaiian Islands.

### Hindsia angicostata Pease, 1860

Pl. 1, Figs. 15, 16

Pease, 1860a: 142. Sandwich Islands [H.I.].

Jeffreys, 1867: 305.

Martens and Langkavel, 1871: 5. As Nassarius farinosa Gould.

Paetel, 1873: 28. As Fusus angicostatus Pease. Sandwich Islands [H.I.].

Tryon, 1883, 5: 192. As Engina farinosa Gould.

Pease's Description: "Shell ovate; spire blunt; whorls rounded, longitudinally ribbed, and transversely nodosely ridged; interstices finely striated; aperture oval; outer lip thickened externally; edge of lip sharp, ridged internally; columella-lip arched, slightly callous, wrinkled striae on upper part; canal slightly produced and recurved. Colour light brown, longitudinal ribs darker, white band on body-whorl."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961159. Length, 15.5 mm.; diameter, 7 mm.; aperture plus canal, 7.5 mm. Paralectotype (1961160): length, 13 mm.; diameter, 6.5 mm.; aperture plus canal, 7.5 mm.

REMARKS: The two specimens in the type lot are beachworn, mottled white and brown and clouded with water marks. The shell is fusiform with seven distinct whorls. The sculpture consists of axial ribs crossed by sharp spiral striae between which are finer interstitital striae; the primary striae form nodulous edges on the ribs. The thin outer lip bears four or five ridges internally. The columella is arched and covered by a wrinkled callus which is widely reflected over the body whorl.

Beachworn specimens are occasionally found in drift in the Hawaiian Islands.

### Borsonia lutea Pease, 1860

Pl. 2, Figs. 15, 16

Pease, 1860a: 143. Sandwich Islands [H.I.].

Garrett, 1873: 221. As Clathurella lutea.

Tryon, 1884, 6: 227. Sandwich Islands [H.I.].

Paetel, 1887, 1: 66. As Pleurotoma lutea. Sandwich Islands [H.I.]. Hervier, 1896: 81. As Glyphostoma lutea. Lifou [New Caledonia].

Melvill and Standen, 1897: 398. Lifu [New Caledonia]. [Had access to Pease's specimens.]

Bouge and Dautzenberg, 1914: 181. As Glyphostoma luteum.

Hedley, 1922: 288. As *Lienardia lutea*. Queensland. *Mangelia tereganum* Melvill and Standen, 1896, a synonym.

Edmondson, 1933: 106. As Philbertia lutea. H.I.

Tomlin, 1935: 81. As *Pseudoraphitoma lutea*. Christmas Island, Indian Ocean. [Had access to Pease's specimens.]

Edmondson, 1946: 126. As Philbertia lutea. H.I.

Kuroda and Habe, 1952: 76. As Philbertia lutea. Pacific coast area of Japan.

Pease's Description: "Shell fusiform, solid, shining; whorls convex, angulated at the sutures, longitudinally regularly and closely ribbed, crossed by regular transverse ridges; aperture narrow; outer lip thick, denticulated within; canal produced and recurved. Colour light yellowish-brown."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962756. Length, 9 mm.; diameter, 3·5 mm. Two paralectotypes (1962757): length, 8·5 mm.; diameter, 3·5 mm.; length, 7·5 mm.; diameter, 3 mm.

Remarks: The spire is the same height as the aperture plus the canal. There are five whorls, plus the protoconch. The body whorl rapidly contracts forming a narrow base; the sinus at the shoulder is wide and deep. The sculpture consists of strong, close, smooth, spiral cords which cross the axials and render the carina spinose; there are five spirals on the spire whorl, 10 on body whorl and base, and approximately 18 axials per whorl. The protoconch is damaged in the lectotype but consists of at least one obliquely tipped whorl.

### Borsonia crassicostata Pease, 1860

Pl. 2, Figs. 5, 6

Pease, 1860a: 143. Sandwich Islands [H.I.].

Tryon, 1884, 6: 227; Pl. 34, Fig. 94. Sandwich Islands [H.I.]; Tuamotus. Paetel, 1887, 1: 61. As Pleurotoma crassicostata. Sandwich Islands [H.I.].

Hervier, 1896: 67. As Glyphostoma crassicostatum.

Dautzenberg and Bouge, 1933: 93. Tuamotus.

Edmondson, 1933: 106; Fig. 46a. As Philbertia crassicostata. H.I.

Tomlin, 1936: 149.

Edmondson, 1946: 126; Fig. 58a. As Philbertia crassicostata. H.I.

PEASE'S DESCRIPTION: "Shell fusiform, shining, longitudinally coarsely ribbed, crossed by transverse raised striae; whorls rounded; sutures well impressed; aperture narrow; outer lip denticulated within; canal short, slightly recurved. Colour light yellow."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962847. Length, 7.5 mm.; diameter, 3.5 mm. Two paralectotypes (1962848): length, 7 mm.; diameter, 3 mm.; length, 6.5 mm.; diameter, 2.5 mm.

Remarks: The spire is slightly taller than the aperture plus the canal. There are four whorls plus the protoconch. The whorls are slightly angular, the base gradually contracted, the aperture narrow and oblique and the sinus occupying the shoulder is deep and rounded. The axials are broadly rounded, slightly oblique and extend from the upper suture to the neck; there are IO-I2 on the body whorl. The spiral sculpture consists of evenly spaced cords overriding the axial ribs; I3 on the body whorl, 4 on earlier whorls, becoming weak at the shoulder. The protoconch consists of at least one inflated, smooth whorl.

### Borsonia bifasciata Pease, 1860

Pl. 8, Figs. 4, 5

Pease, 1860a: 143. Sandwich Islands [H.I.].

Tryon, 1884, 6: 227. Sandwich Islands [H.I.]. Compare with B. nigrocincta Montr.

Paetel, 1887, 1: 59. As Pleurotoma bifasciata. Sandwich Islands [H.I.]. Hervier, 1896: 81. As Glyphostoma bifasciatum. Lifu [New Caledonia].

Melvill and Standen, 1897: 398. "... surely a *Clathurella*." Lifu [New Caledonia]. [Had access to Pease's holotype.]

Pease's Description: "Shell fusiform, shining, longitudinally coarsely ribbed, crossed by coarse raised striae; whorls rounded at the sutures; outer lip thick, incurved, serrated on the edges at the termination of the transverse striae; canal short and slightly recurved. Colour white; two light brown bands on each whorl."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962758. Length, 5.5 mm.; diameter, 2 mm.

Remarks: The shell is white. There are four whorls plus the protoconch. The spire is twice the length of the aperture plus the canal. The base very gradually contracts, and the canal is moderately long and broadly open. The sculpture is strong, the axials more prominent than the spirals. There are 14 axials and 6–7 spirals per whorl. The fasciole has four granular threads. The protoconch consists of three whorls; the posterior whorl has slight cancellations; the others are glossy yellow.

B. bifasciata may be distinguished from B. lutea by its smaller size (5 mm. compared to 9 mm. in length), rounded whorls, and prominent axials.

### Clathurella balteata Pease, 1860

Pl. 9, Fig. 12

Pease, 1860a: 143. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 78. As Defrancia balteata. Sandwich Islands [H.I.].

Pease's Description: "Shell fusiformly ovate, longitudinally coarsely ribbed; ribs disposed alternately on the whorls, crossed by transverse raised striae; whorls roundly angulated at the sutures; outer lip incurved, serrated on its edge by the termination of the transverse striae. Colour light brown, ornamented by one white band on centre of each whorl.'

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962759. Length, 4.5 mm.; diameter, 2.5 mm. Paralectotype (1962760): length, 4.5 mm.; diameter, 2.5 mm.

REMARKS: The spire is the same height as the aperture plus the canal. There are four whorls plus the protoconch. The axial sculpture consists of eight ribs on the body whorl, fewer on other whorls; the spiral sculpture forms faint knobs on the axials. The carina is granular.

### Clathurella producta Pease, 1860

Pl. 2, Figs. 3, 4

Pease, 1860a: 143. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 2; Pl. 1, Fig. 3. Sandwich Islands [H.I.].

Tryon, 1884, 6: 298; Pl. 19, Fig. 63. Sandwich Islands [H.I.]. "The figure appears to represent an immature individual."

Pease's Description: "Shell fusiformly elongate, longitudinally ribbed, finely striated transversely; whorls convex; suture impressed; aperture oval; outer lip denticulated; canal short. Colour yellowish-brown; a darker band of same colour on each whorl."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962761. Length, 7 mm.; diameter, 2 mm. Two paralectotypes (1962762): length, 7 mm.; diameter, 2 mm.; length, 6.5 mm.; diameter, 2 mm.

REMARKS: The spire is two-thirds the length of the aperture plus the canal. There are five and one-half whorls plus the protoconch. The whorls are shouldered, and the base gradually contracted. The sculpture consists of longitudinal ribs with the spirals forming weak, flat knobs. The denticulations on the outer lip noted by Pease are due to the sculpture, the bands of which terminate on the lip. The columellar fasciole is faintly striated. The protoconch consists of one whorl which is flat, shining, and horn-coloured.

### Clathurella brunnea Pease, 1860

Pl. 8, Figs. 1, 2, 3

Pease, 1860a: 143. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 79. As Defrancia brunnea. Sandwich Islands [H.I.].

Pease's Description: "Shell fusiformly elongate, ornamented with transverse granular ribs, and fine longitudinal raised striae; whorls slightly convex; aperture elongate-oval; canal short. Colour dark brown."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962763. Length, 7 mm.; diameter, 2·5 mm.; aperture plus canal, 2·5 mm. Three paralectotypes (1962764): length, 6 mm.; diameter, 2 mm.; aperture plus canal, 3·5 mm.; length, 6·5 mm.; diameter, 2·5 mm.; aperture plus canal, 2·5 mm.; length, 6 mm.; diameter, 2 mm.; aperture plus canal, 2·5 mm.

REMARKS: The lectotype which was selected from the type lot of four specimens was chosen on the basis of Pease's description of the shell as "dark brown". That the species varies in colour is indicated by the variation shown in the other three specimens which are variously mottled brown and white. The sculpture is also variable, worn specimens, such as the lectotype, having weak axials and spiral granules, whereas live-collected specimens have distinctly bead-like axials and spirals.

The shell is fusiformly elongate, solid, brown, becoming cream at the base. The post-nuclear whorls are convex, sculptured by spiral cords of granules: three, four, and ten on the body whorls. The whorls are gently shouldered, with the posterior row of granules at the suture more prominent than the others, and usually of a lighter shade. The sinus is of the daphnellid type. The base is straight, as is the columella. The outer lip has a deep sinus; the inner teeth are only slightly developed. A portion of the protoconch only remains on the lectotype; in the paralectotypes the protoconch consists of two convex whorls cancellated with brown.

Living specimens are occasionally collected under loose rocks in tide-pools and from shallow bays in the Hawaiian Islands. Beachworn specimens are frequent in drift.

# Clathurella cylindrica Pease, 1860

Pl. 8, Fig. 8

Pease, 1860a: 143. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 80. As Defrancia cylindrica. Sandwich Islands [H.I.].

Pease's Description: "Shell cylindrically fusiform, shining; apex blunt, longitudinally strongly ribbed, transversely ornamented with raised striae, forming deep cancellations; whorls slightly convex, angulated at sutures; aperture oval. Colour white."

Holotype : B.M.(N.H.) Reg. No. 1962765. Length, 5 mm. ; diameter, 2 mm. ; aperture, 2 mm.

Remarks: The shell is small, shining, white. The post-nuclear whorls are elongate, slightly convex, gently shouldered, and marked by strong axial ribs tuberculated with spiral cords. The intersection of the spiral cords and the axial ribs forms very strong tubercles, while the spaces enclosed between them appear as well impressed, rectangular pits. There are nine axial ribs on the last whorl, eight on the three preceding. The spiral cords number seven on the last whorl, five on the penul-

timate, four, and finally three. The fasciole has two spiral threads. The sutures are gently sloping and the whorls are consequently shouldered. The outer lip is thin, banded by the external sculpture, and flaring. The columella is straight; the sinus is shallow. The protoconch is eroded on the holotype.

### Clathurella exilis Pease, 1860

Pl. 2, Figs. 17, 18

Pease, 1860a: 144. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 80. As Defrancia exilis. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell elongately fusiform, ornamented with transverse ribs and longitudinal striae; whorls slightly convex; aperture oblong-oval; canal short, slightly recurved. Colour white, with irregular yellowish-brown longitudinal spots on upper whorls, and two bands of same colour on body-whorl."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962766. Length, 6 mm.; diameter, 2·5 mm. Two paralectotypes (1962767): length, 5 mm.; diameter, 2 mm.; length, 5 mm.; diameter, 2 mm.

REMARKS: The shell is fusiformly elongate, shining white, with five whorls plus the protoconch. The post-nuclear whorls are slightly convex, rounded at the sutures but not shouldered, sculptured with small, evenly spaced spirals which are slightly tuberculated, the elongate tubercles forming small axial ribs. The aperture is oval, regular, the outer lip indented posteriorly by a shallow sinus and sculptured by bands of the spirals. The columella is straight, the fasciole threaded. The protoconch consists of one and one-half bulbous, oblique, white and shining whorls.

### Clathurella elegans Pease, 1860

Pl. 2, Figs. 21, 22; Pl. 8, Fig. 6

Pease, 1860a: 144. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 80. As Defrancia elegans. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell elongate-pyramidal, yellowish, with chestnut-brown spots on the centre of varices of each whorl; remote varices extending whole length of the shell, transversely granosely ribbed, interstices finely granulated; whorls convex, rounded; suture well impressed; aperture wide, ovate; outer lip acute; canal produced and recurved."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961166. Length, 15 mm.; diameter, 6 mm.; aperture plus canal, 6·5 mm. Two paralectotypes (1961167): length, 16·5 mm.; diameter, 6 mm.; aperture plus canal, 6·5 mm.; length, 15 mm.; diameter, 6 mm.; aperture plus canal, 5 mm.

REMARKS: The type lot consists of specimens which are white, with no indication of the brown spotting mentioned by Pease.

The protoconch consists of one and one-half whorls which are bulbous, crossed by faint striae, and is white.

### Clathurella harpa Pease, 1860

Pl. 2, Figs. 23, 24

Pease, 1860a: 144. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 81. As Defrancia harpa. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell pyramidally ovate; body-whorl ventricose, longitudinally strongly ribbed; ribs rather distant; interstices finely striated longitudinally; whorls roundly angulated at the sutures; outer lip acute, somewhat dilated; aperture large, oval; columella-lip striated obliquely on lower part; canal short, slightly recurved. Colour white."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961206. Length, 22 mm.; diameter, 8 mm.; aperture plus canal, 10 mm. Two paralectotypes (1961207): length, 23 mm.; diameter, 8 mm.; aperture plus canal, 10 mm.; length, 19 mm.; diameter, 7 mm.; aperture plus canal, 9.5 mm.

Remarks: The shell is light and thin, with six whorls plus the protoconch. The spire has a pink tint; the remainder of the shell is white. The axial ribs are somewhat obsolete on the first whorl; there are ten on the second whorl, and they decrease in number on the succeeding whorls. The striations between the ribs noted by Pease are noticeable only in the smallest specimen in the type lot and are obsolete on the others. The protoconch consists of one and one-half whorls and is smooth.

### Clathurella pulchella Pease, 1860

Pl. 2, Figs. 19, 20

Pease, 1860a: 144. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 83. As Defrancia pulchella. Sandwich Islands [H.I.].

Pease's Description: "Shell fusiform, acuminated, shining, longitudinally ribbed, crossed by transverse raised striae; whorls rounded; suture impressed; aperture oval; canal slightly produced and recurved; pinkish-white, irregular pink spots over the surface; apex red."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962768. Length, 10 mm.; diameter, 4 mm. Two paralectotypes (1962769): length, 10 mm.; diameter, 4 mm.; length, 9 mm.; diameter, 3 mm.

Remarks: There are four whorls plus the protoconch. The sculpture consists of strong axial ribs with weak spirals between ribs. The protoconch is eroded; it is red as noted above by Pease.

### Clathurella paucicostata Pease, 1860

Pl. 2, Figs. 11, 12

Pease, 1860a: 144. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 83. As Defrancia paucicostata. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell elongately fusiform, thin, shining; whorls ornamented with varices, remote and fine transverse raised striae; outer lip thin; aperture elongate-oval; canal long and slightly recurved. Colour white, with irregular orange-brown spots or blotches; varices white."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961158. Length, 11 mm.; diameter, 3.5

mm.; aperture plus canal, 6 mm.

REMARKS: The spire is longer than the aperture plus the canal. There are eight whorls including the protoconch. The sculpture consists of prominent axial varices, one varix extending from the body-whorl, three on the second whorl, four on third whorl, the others regularly spaced. The spiral sculpture consists of weak striae. There is a moderate sinus at the shoulder of the outer lip. The protoconch consists of three flat whorls which are slightly oblique and smooth.

### Clathurella fuscomaculata Pease, 1860

Pl. 2, Figs. 7, 8

Pease, 1860a: 144. Sandwich Islands [H.I.]. Tryon, 1884, 6: 299. Sandwich Islands [H.I.].

Paetel, 1887, 1: 81. As Defrancia fuscomaculata. Sandwich Islands [H.I.].

Pease's Description: "Shell acuminately turreted, ornamented with transverse raised striae, slightly granulose; outer lip thin; aperture oval; canal straight and slightly produced. Colour white, with irregular longitudinal bands of reddishbrown."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961153. Length, 9 mm.; diameter, 3 mm. Two paralectotypes (1961154): length, 11.5 mm.; diameter, 4 mm.; length, 8 mm.; diameter, 2.5 mm.

Remarks: The shell is turreted and light, white with flashes of red-brown. The four post-nuclear whorls are ornamented with spirals of bead-like granules, two rows on the first three whorls with a third weaker row at the suture, the next two whorls with a thread-like spiral between the granules; and the fourth with three rows of granules followed by increasingly obsolete spirals of granules. The columella is sinuous. The fasciole has granular threads. There are three nuclear whorls on the protoconch which are white, shining, and bulbous; the apical whorl is flattened; all are slightly oblique, with a row of granules at the suture.

### Clathurella buccinoides Pease, 1860

Pl. 2, Figs. 1, 2

Pease, 1860a: 144. Sandwich Islands [H.I.].

Tryon, 1884, 6: 299. Sandwich Islands [H.I.].
Paetel, 1887, 1: 79. As Defrancia buccinoides. Sandwich Islands [H.I.].

Pease's Description: "Shell pyramidally ovate, shining; whorls rounded, longitudinally ribbed, crossed by transverse striae; aperture ovate; outer lip serrated at edge; canal short, slightly recurved. Colour vellowish white."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961156. Length, 9.5 mm.; diameter, 4.5 mm.; aperture plus canal, 4 mm.

Remarks: The spire is twice the length of the aperture. There are five whorls plus the protoconch. The sculpture consists of prominent axials, the spirals forming nodes on the ribs and becoming weak in the interstices between the ribs. There is a shallow sinus at the shoulder of the lip. The protoconch consists of three whorls, the apical whorl bulbous and slightly oblique, the middle whorl concave, and the final whorl forming a narrow band.

### Nassa microstoma Pease, 1860

Pl. 3, Figs. 5, 6

Pease, 1860a: 145. Sandwich Islands [H.I.].

Carpenter, 1865: 516. "... a white variety of N. dermestina Gould."

Pease, 1868b: 232. Distinct from Nassa dermestina.

Tryon, 1882, 4: 226; Pl. 15, Fig. 247. As Nassa paupera Gould. Japan, Australia, Central Polynesia.

PEASE'S DESCRIPTION: "Shell oblong-ovate, rather solid, white, sparingly stained with ferruginous brown; spire rather long, acute; whorls six or seven, strongly convex, ribbed longitudinally, ribs stout, close set, rounded and crossed with numerous close spiral ridges; aperture small, rounded, lyrated within; outer lip thick; columella arched, transversely wrinkled above, one or two faint spiral plicae near the base."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961458. Length, 9 mm.; diameter, 4 mm.; aperture, 3 mm.

Remarks: There are five whorls plus the protoconch, each whorl ribbed with spiral striae. The shell is white with a brown band across the body whorl and narrow brown bands on the posterior portion of the suture, the latter fading into the suture. The lyrations within the aperture noted by Pease are absent in the holotype, but the columellar plications are present. The protoconch consists of one and one-quarter whorls which are white, shining, and bulbous.

Beachworn specimens are frequent in drift from the islands of Oahu and Kauai [H.I.].

### Drillia nodifera Pease, 1860

Pl. 5, Figs. 1, 2

Pease, 1860a: 145. Sandwich Islands [H.I.]. Tryon, 1884, 6: 212. Sandwich Islands [H.I.].

Paetel, 1887, 1: 67. As Pleurotoma nodifera. H.I.: Oahu.

Melvill and Standen, 1898: 37. As Pleurotoma (Drillia) nodifera. Madras. [Had access to Pease's specimens.]

Pease's Description: "Shell elongate-ovate, smooth, plicately noduled longitudinally; outer lip thin, acute; canal short; nodules white, interstices reddish brown, base white."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961210. Length, 11·5 mm.; diameter, 5 mm.; aperture, 4 mm. Two paralectotypes (1961211): length, 11 mm.; diameter, 4·5 mm.; aperture, 3 mm.; length, 9·5 mm.; diameter, 4 mm.; aperture, 2 mm.

REMARKS: There are six whorls plus the protoconch. The sutures are not impressed. The sculpture consists of short prominent axial keels rising on the periphery into prominent tubercles, about 10 to the whorl; there are also faint axial threads on the base and above the periphery. There is no spiral sculpture. The aperture is pyriform and narrow, the outer margin slightly inflected. The sinus on the shoulder is deep and rounded, arched posteriorly above the suture, its inner margin raised. The columella is straight, with a narrow callus.

Beachworn specimens are frequent in drift from the islands of Oahu and Kauai [H.I.].

### Oliva sandwicensis Pease, 1860

Pl. 3, Figs. 9, 10

Pease, 1860a: 145. Sandwich Islands [H.I.].

Sowerby, 1870, Thes. Conch., 4, Oliva: Pl. 6, Fig. 82. [Illustration of one of Pease's specimens.]

Weinkauff, 1878: 128; Pl. 34, Fig. 3. Sandwich Islands [H.I.].

Tryon, 1883, 5: 238. As Oliva duclosi Reeve. Sandwich Islands [H.I.].

Paetel, 1887, 1: 157. Sandwich Islands [H.I.].

Mant, 1923: 122. Kewalo Harbor dredgings, Oahu [H.I.].

Edmondson, 1933: 107; Fig. 47a. H.I. Edmondson, 1946: 128; Fig. 59a. H.I.

Pease's Description: "Shell oblong-ovate, spire somewhat acuminated; columella-plaits few in number, extending two-thirds of the length of the aperture; outer lip slightly thickened internally. Colour minutely freckled and blotched with white, reddish brown and cinereous, the lower half of the body-whorl being much the darkest; apex white, encircled beneath the suture with a light fawn-coloured or whitish band, blotched with dark reddish brown or cinereous; aperture white, two broad, equidistant dark brown bands on the interior, reaching to the thickened portion of the outer lip."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961188. Length, 25 mm.; diameter, 13 mm.; aperture, 19 mm. Paralectotype (1961189): length, 22 mm.; diameter, 9 mm.; aperture, 15 mm.

Remarks: The lectotype conforms well to Pease's description, to which little can be added. In the Hawaiian Islands the species lives in sand below the high tide mark, and can be located by following the tracks the animals leave by burrowing just below the surface.

### Blauneria gracilis Pease, 1860

Pl. 9, Fig. 3

Pease, 1860a: 145. Sandwich Islands [H.I.].

Pease, 1869c: 60. Description of animal and habitat.

Martens and Langkavel, 1871: 57; Pl. 3, Fig. 14. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell elongate fusiform, thin, corneous, fragile, semi-pellucid. Whorls seven or eight, flatly convex, finely longitudinally obliquely striated; suture faintly impressed, outer lip thin; columella-lip flexuous; one oblique plait near the centre, truncated; aperture oblong-ovate, contracted posteriorly.

Animal. Small, subpellucid, uncoloured, excepting a yellow tinge around the mouth. Tentacles short, stout, approximating at their bases. Eyes conspicuous, black, immersed at the posterior bases of the tentacles. Head deep, narrow above, and much dilated below. Mouth a simple longitudinal slit. Foot small, short, bluntly rounded behind, truncated in front, divided by a transverse groove; posterior portion slightly the longest."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962770. Length, 5·5 mm.; diameter, 1·5 mm. Two paralectotypes (1962771): length, 6 mm.; diameter, 1·5 mm.; length, 5 mm.; diameter, 1·5 mm.

Remarks: The shell is small, thin, white and shining. There are six whorls. The sutures are faintly impressed with fine crenulations. The columella has a thick callus reflected over the parietal wall.

The Pease specimens differ from the Martens and Langkavel (1871) illustration in that they lack the two columellar plaits which appear in the figure.

### Turricula bella Pease, 1860

Pl. 3, Figs. 13, 14

Pease, 1860a: 145. Sandwich Islands [H.I.].

Pease, 1868e: 120. Mitra wisemani Dohrn 1860 a synonym.

Martens and Langkavel, 1871: 17; Pl. 1, Fig. 10. As Mitra bella. Sandwich Islands [H.I.].

Paetel, 1873: 39. As Mitra bella. Sandwich Islands [H.I.].

Sowerby, 1874, Thes. Conch., 4, Mitra: Pl. 19, Fig. 377. As Mitra bella A. Adams. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Garrett, 1880: 5, 38. "... peculiar to the Sandwich Islands [H.I.] where they live on sandy bottoms in the upper laminarian zone."

Tryon, 1882, **4**: 205. As *Turricula militaris* Reeve, var. cophina. Paetel, 1887, **1**: 174. As *Mitra bella*. Sandwich Islands [H.I.].

Shopland, 1902: 173. As Mitra bella. Aden. [Had access to Pease's specimens.]

Pilsbry, 1921: 312. As Vexillum bella (Pease). H.I.

Pease's Description: "Shell fusiform; spire acuminated; whorls convexly angulated; sutures rather deep, longitudinally ribbed, ribs somewhat angular,

irregular in size and finely striated longitudinally, also the interstices, and crossed by numerous transverse striae; base slightly recurved; columella four-plaited, a callosity posteriorly; aperture lyrated within. Colour light chestnut brown, with broad lighter or whitish bands, and spotted remotely and irregularly with reddish brown; base white."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961204. Length, 32 mm.; diameter, 10 mm.; aperture plus canal, 15 mm. Two paralectotypes (1961205): length, 20 mm.; diameter, 14 mm.; aperture plus canal, 14 mm.; length, 24 mm.; diameter, 7 mm.; aperture plus canal, 12 mm.

Remarks: The aperture is subequal to the spire. There are eight whorls.

### Turricula approximata Pease, 1860

Pl. 3, Figs. I, 2

Pease, 1860a: 146. Sandwich Islands [H.I.].

Pease, 1868e: 119; Pl. 23, Fig. 3. As Mitra approximata.
Sowerby, 1874, Thes. Conch., 4, Mitra: Pl. 21, Fig. 453. Sandwich Islands [H.I.]. Illustration of one of Pease's specimens.

Garrett, 1880: 71. As Mitra approximata. Not found.

Tryon, 1882, 4: 186. "Not figured. Not seen by either Mr. Garrett or myself."

Paetel, 1887, 1: 173. Sandwich Islands [H.I.].

Pilsbry, 1921: 317. As Turricula approximata. Description from Pease.

Pease's Description: "Shell ovate, turreted; whorls convexly angulated at the sutures, longitudinally ribbed, crossed by impressed striae; interstices punctured; aperture striated within; columella four-plaited. Colour white, banded and blotched irregularly with chestnut brown."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961192. Length, 19 mm.: diameter, 8 mm.; aperture, 8 mm. long, 2 mm. wide. Paralectotype (1961193); length, 19.5 mm.; diameter, 8.5 mm.; aperture 9 mm. long, 2 mm. wide.

REMARKS: The aperture is subequal to the spire. There are eight whorls. The impressed striae become somewhat obsolete toward the base although the ribs remain distinctive.

The two specimens conform to Pease's description except that both shells are white.

### Mitra pudica Pease, 1860

Pl. 3, Figs. 11, 12

Pease, 1860a: 146. Sandwich Islands [H.I.].

Dohrn, 1862: 137. Mitra nux-avellana Dohrn a synonym. Pease, 1868e: 120. Mitra nux-avellana Dohrn a synonym.

Sowerby, 1874, Thes. Conch., 4, Mitra: 13: Pl. 16, Fig. 296. Sandwich Islands. [H.I.]. [Illustration of one of Pease's specimens.]

Garrett, 1880: 71. Not found.

Tryon, 1882, 4: 150; Pl. 44, Figs. 291, 292. Sandwich Islands [H.I.]. Mitra nux-avellana and Mitra subrostrata Sowb. are synonyms.

Paetel, 1887, 1: 185. Sandwich Islands [H.I.]. Pilsbry, 1921: 311. H.I. In key to Mitra.

PEASE'S DESCRIPTION: "Shell ovate; spire short, transversely ribbed; interstices finely cancellated, longitudinally remotely ribbed, white, variegated with smoky brown; columella four-plaited."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961190. Length, 16 mm.; diameter, 8 mm.; aperture length, 8 mm. Two paralectotypes (1961191): length, 21 mm.; diameter, 9 mm.; length, 21 mm.; diameter, 9 mm.

Remarks: The protoconch consists of one whorl which has fine cancellations. Sowerby's (1874) illustration, presumably of one of the type lot, indicates crenulations on the outer lip; the lip is smooth in the types.

### Mitra ericea Pease, 1860

Pl. 3, Figs. 3, 4

Pease, 1860a: 146. Sandwich Islands [H.I.]. Dohrn, 1862: 137. As Mitra turgida Reeve.

Pease, 1869b: 85. As M. turgida Rve.

Sowerby, 1874, Thes. Conch., 4, Mitra: Pl. 22, Fig. 487. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Garrett, 1880 : 30. As Mitra turgida Reeve. Tryon, 1882, 4 : 214. As Mitra turgida Reeve.

Melvill and Standen, 1895: 100. Lifu [New Caledonia] and Loyalty Islands. [Had access to Pease's specimens.]

Shopland, 1902: 173. Aden. [Had access to Pease's specimens.]

Viader, 1937: 19, 23. As Mitra turgida Reeve. Mauritius.

Pease's Description: "Shell fusiformly ovate, attenuated at both ends, transversely ribbed; body whorl crossed by longitudinal striae, rather remote. Colour light brown; apex white; columella three-plaited."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961161. Length, 15 mm.; diameter, 7 mm.; aperture length, 8 mm. Paralectotype (1961162): length, 13 mm.; diameter, 6.5 mm.; aperture length, 7 mm.

Remarks: There are six post-nuclear whorls, the latter five with three smooth ribs, the body whorl with additional longitudinal ribs producing a rough appearance. The protoconch consists of at least three and one-half whorls.

The types are white. The Sowerby (1874) illustration, which is apparently of one of the Pease specimens, indicates a shell 21 mm. in length, somewhat larger than either of the specimens in the type lot.

# Strigatella picea Pease, 1860

Pl. 9, Fig. 9

Pease, 1860a: 146. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 17; Pl. 1, Fig. 11. As Mitra picea. Sandwich Islands [H.I.] Sowerby, 1874, Thes. Conch., 4, Mitra: Pl. 28, Fig. 658. [Illustration of the holotype.] Tryon, 1882, 4: 150; Pl. 58, Fig. 685; Pl. 44, Fig. 288. Paumotu [Tuamotu] and Sandwich Islands [H.I.].

Paetel, 1887, 1: 184. As Mitra picea. Sandwich Islands [H.I.].

Pilsbry, 1921: 312. As Vexillum picea. H.I. In key.

Dautzenberg and Bouge, 1933: 184. Tuamotus: Anaa; Fakahina.

Pease's Description: "Shell small, ovate, longitudinally ribbed, row of granules bordering suture, transversely finely striated. Colour dark brown; whorls encircled by a single narrow light-brown belt; columella five-plaited; aperture purplish white."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962772. Length, 7 mm.; diameter, 3.5 mm.

REMARKS: The shell is yellow-brown, with three post-nuclear whorls plus an eroded protoconch. The granules bordering the suture form a narrow, light-brown belt. There are four columellar plaits, rather than five.

Both the Martens and Langkavel (1871) and Sowerby (1874) illustrations are misleading, in that the former indicates a darker colour, blunt posterior, and does not show the columellar rugosity; the latter indicates no sculptural detail and a purple-brown colour.

In the Hawaiian Islands beached specimens are of frequent occurrence in drift on the islands of Oahu and Kauai.

### Strigatella fuscescens Pease, 1860

Pl. 3, Figs. 7, 8

Pease, 1860a: 146. Sandwich Islands [H.I.].

Pease, 1868b: 233.

Paetel, 1873: 40. As Mitra fuscescens. Sandwich Islands [H.I.].

Sowerby, 1874, Thes. Conch., 4, Mitra: Pl. 16, Fig. 303. Pacific; Mauritius. [Illustration presumably of one of Pease's specimens.]

Garrett, 1880: 3, 16. Sandwich Islands [H.I.]. Habitat.

Tryon, 1882, 4: 157. Sandwich Islands [H.I.].

Paetel, 1887, 1: 179. As Mitra fuscescens. Sandwich Islands [H.I.].

Couturier, 1907: 133. Marutea [Tuamotus].

Pilsbry, 1921: 315. H.I.

Dautzenberg and Bouge, 1933: 170. As Mitra (Strigatella) fuscescens. Marutea [Tuamotus].

Edmondson, 1933: 110. H.I.

Edmondson, 1946: 129. H.I.

PEASE'S DESCRIPTION: "Shell ovate, thick, finely crenulated at borders of suture, transversely faintly grooved, the grooves becoming more distinct towards the base; columella five-plaited. Colour brown; aperture white."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961184. Length, 27 mm.; diameter, 13 mm.; aperture length, 15 mm. Two paralectotypes (1961185): length, 26 mm.; diameter, 11 mm.; aperture length, 15 mm.; length, 25 mm.; diameter, 12 mm.; aperture length, 14 mm.

Remarks: The outer lip is swollen posteriorly and the entire lip is thickened. The columella is four-plaited.

The Sowerby (1874) figure, which is presumably of one of the type specimens, does not show the crenulations at the border of the suture.

# Melampus (Tralia) semiplicata Pease, 1860

Pl. 4, Fig. 7

Pease, 1860a: 146. Sandwich Islands [H.I.]. Pease, 1869c: 60-61. Description of animal.

Schmeltz, 1874, 5: 88.

PEASE'S DESCRIPTION: "Shell elongate-ovate, dark reddish brown, with an olive shade; apex acute; whorls eight or nine; spire and upper part of body-whorl plicate; rough striae of growth on body-whorl; aperture narrow, acute above; two transverse folds on base of columella; one plait on the inner lip below the centre, and three on outer lip."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962773. Length, II mm.; diameter, 6 mm.; aperture length, 6 mm. Seven paralectotypes; length, II mm.; diameter, 5·5 mm.; aperture length, 6 mm.; length, II mm.; diameter, 6 mm.; aperture length, 7 mm.; length, 9·5 mm.; diameter, 5 mm.; aperture length, 6 mm.; length, 9 mm.; diameter, 5 mm.; length, 6 mm.; length, 8 mm; diameter, 4·5 mm.; aperture length, 5 mm.; length, 9 mm.; diameter, 5 mm.; aperture length, 6 mm.; aperture length, 6 mm.; aperture length, 6 mm.

Remarks: Although there is little which can be added to Pease's description, there are no recent collections of this species from the Hawaiian Islands.

## Pedipes sandwicensis Pease, 1860

Pl. 9, Fig. 7

Pease, 1860a: 146. Sandwich Islands [H.I.]. Edmondson, 1933: 165; Fig. 88b. H.I. Edmondson, 1946: 187; Fig. 100b. H.I.

Pease's Description: "Shell ovate globose, brownish yellow; aperture white, solid, ribbed transversely, ribs rather remote and irregular; whorls four, convexly angulated at the sutures, the last whorl ventricose; outer lip flexuous, thickened in the middle; aperture subquadrate; columella-lip flat, furnished with three plaits, of which the upper is the largest, and slightly oblique; remaining two transverse, lower one the smaller."

Holotype: B.M.(N.H.) Reg. No. 1962775. Length, 2 mm.; diameter, 2 mm.

Remarks: There are four whorls, the spire barely extending above the last whorl. The spire whorls are rounded, angled at the distinct sutures, and marked by spiral threads with narrower, interstitial threads between. The protoconch is eroded. The outer lip is irregular, thickened in the middle. The aperture is ovate. There are three plicae on the parietal wall which are flat, thin plaits, the upper the largest and oblique, the two small plaits transverse.

In the Hawaiian Islands beachworn specimens are occasionally collected in drift along the shores of the islands of Oahu and Kauai.

#### Erato sandwicensis Pease, 1860

Pl. 9, Fig. 10

Pease, 1860a: 146. Sandwich Islands [H.I.].

Reeve, 1865, Conch. Icon., 15, Erato: Pl. 3, Figs. 17a, b. Sandwich Islands [H.I.]. [Illustrations of one of Pease's specimens.]

Redfield, 1870: 218. Sandwich Islands [H.I.]. Garrett, 1879: 105. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 20; Pl. 1, Fig. 13. Sandwich Islands [H.I.].

Weinkauff, 1879: 154; Pl. 26, Figs. 14, 15. Description and illustration after Reeve.

Tryon, 1883, 5: 9; Pl. 4, Fig. 35. Sandwich Islands [H.I.].

Smith, 1910: 18–19. Shell description.

Dautzenberg and Bouge, 1933: 293. Tuamotus.

Edmondson, 1933: 128; Fig. 54b. H.I. Edmondson, 1946: 149; Fig. 66b. H.I.

PEASE'S DESCRIPTION: "Shell pyriform, smooth, shining, white, with a broad band of yellowish brown on lower part of the body-whorl, and a narrower one of same colour bordering the sutures beneath; columella and outer lip white; apex and base tinged with pink; aperture narrow, contracted; outer lip denticulated its whole length; inner lip about one-half its length."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962776. Length, 5·5 mm.; diameter, 3·5 mm. Three paralectotypes (1962777): length, 5 mm.; diameter, 3 mm.; length, 5 mm.; diameter, 2·5 mm.; length, 4·5 mm.; diameter, 3 mm.

REMARKS: Little can be added to Pease's description of this species. The specimens in the type lot are beachworn and faded. Live-collected specimens have a bluewhite cast. In the Hawaiian Islands the species is frequently collected on the undersurfaces of small rocks and in the interstices of dead coral in shallow bays.

## Marginella sandwicensis Pease, 1860

Pl. 9, Fig. 11

Pease, 1860a: 147. Sandwich Islands [H.I.].

Reeve, 1865, Conch. Icon., 15, Marginella: Pl. 27, Fig. 157. Sandwich Islands [H.I.].

Redfield, 1870: 255. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 20.

Weinkauff, 1879: 133; Pl. 21, Fig. 9. As Marginella sandwichensis.

Tryon, 1883, 5: 45; Pl. 12, Fig. 69. Sandwich Islands [H.I.]; Viti Islands [Fiji]. Marginella pygmaea Garrett a synonym.

Paetel, 1887, 1: 196. Sandwich Islands [H.I.].

Tomlin, 1917: 296.

Edmondson, 1933: 107; Fig. 47b. H.I. Edmondson, 1946: 128; Fig. 59b. H.I.

Habe, 1951: 105. Kogomea japonica (Nomura and Hatai) formerly recorded as Marginella sandwicensis.

Kuroda and Habe, 1952: 60. As Hyalina sandwicensis (Pease). Pacific coast of Japan.

Pease's Description: "Shell minute, subconoidal, thin, transparent white; aperture narrow, contracted; apex obtuse; inner lip three-plaited."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962778. Length, 2.5 mm.; diameter, 1.5 mm. Paralectotype (1962779): length, 2 mm.; diameter, 1.5 mm.

Remarks: The shell is convolute and semitranslucent. The spire is short and broadly conic. The whorls are not separated by distinct sutures. The left margin of the shell is gently rounded, the aperture is narrow, and the outer lip, which has minute teeth on the inner edge, is bent inwards in the middle. The parietal region is covered by a thin callus; the columella has two oblique folds of equal size.

In the Hawaiian Islands the species is very common in the shallow waters of sheltered bays where it lives on algal-encrusted rocks and pieces of dead coral. It is also commonly found in beach drift.

### Cythara garrettii Pease, 1860

Pl. 10, Fig. 11

Pease, 1860a: 147. Sandwich Islands [H.I.].

Carpenter, 1865: 516. A Mitrella.

Pease, 1868e: 105. As Columbella lachryma Gaskoin.

Martens and Langkavel, 1871: 23; Pl. 1, Fig. 18. As Columbella (Seminella) lacrima

Schmeltz, 1874, 5: 127. As Columbella lacryma Gaskoin. Tryon, 1884, 6: 345. As Columbella lachryma Gask. Iredale, 1916: 28. As Anarithma metula (Hinds).

PEASE'S DESCRIPTION: "Shell fusiform, attenuated at both ends, longitudinally ribbed, ribs becoming nearly obsolete on body-whorl, transversely finely and closely striated, a deeply impressed line encircling the whorls just beneath the sutures. Colour white, variegated with reddish brown, which colour extends over the greater part of the body-whorl."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962780. Length, 8 mm.; diameter, 3 mm. Three paralectotypes (1962781): length, 7 mm.; diameter, 3 mm.; length, 6·5 mm.; diameter, 2 mm.; length, 6 mm.; diameter, 2 mm.

Remarks: The shell is fusiform, solid, with indistinct sutures. On the last whorl the sculpture consists of axial ribs which are interlaced with spiral bands, the ribs and bands producing a ladder-like effect. The adapical whorls are similarly sculptured but have in addition a row of obsolete granules bordering each suture. The neck is sculptured with approximately eight spiral bands separated by longitudinally striated depressions. The columella is straight, with a thin callus. The abapical portion of the outer lip curves inward, and there are obsolete lirations internally. The lectotype is white with yellow splashes on the last whorl, but the species varies in colour as is indicated by the other three specimens in the type lot in which the last whorl ranges from white to dark brown.

In the Hawaiian Islands the species is occasionally collected on the under-surfaces of small rocks in tidepools and shallow bays. It is commonly found in beach drift.

## Cythara varia Pease, 1860

Pl. 10, Fig. 13

Pease, 1860a: 147. Sandwich Islands [H.I.].

Carpenter, 1865: 516. Probably Columbella virginea Gould.

Pease, 1868b: 233.

Martens and Langkavel, 1871: 23; Pl. 1, Fig. 17. As Columbella (Seminella) peasei Langkavel.

Tryon, 1884, 6: 381. As Columbella peasei Martens.

Iredale, 1916: 30-31. Type of Seminella.

Viader, 1937: 29. As Pyrene peasei Martens and Langkavel.

PEASE'S DESCRIPTION: "Shell fusiform, minute, attenuated at both ends, longitudinally ribbed. Colour variable, light brown with transverse lines of a darker colour encircling the whorls, or with longitudinal undulating lines, or ornamented with oblong square brown spots, or light brown dotted with white."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962782. Length, 3 mm.; diameter, 1·5 mm. Five paralectotypes (1962783): all of approximate length of 3 mm. and diameter of 1·5 mm.

Remarks: The aperture is approximately one-third the length of spire. There are three whorls plus the protoconch. The protoconch consists of one whorl which is white, smooth, and with longitudinal ribs forming approximately eight facets. The sculpture of the spire consists of smooth longitudinal ribs with smooth interstices. The outer lip is thick.

In the Hawaiian Islands the species is commonly collected in the algal mat of small rocks in tidepools and shallow bays. It is also commonly found in drift.

## Cythara pusilla Pease, 1860

Pl. 10, Fig. 14

Pease, 1860a: 147. Sandwich Islands [H.I.]. Tryon, 1884, 6: 271. Sandwich Islands [H.I.].

Paetel, 1887, 1: 94. As Daphnella pusilla. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell oval, white, stained with purplish brown; whorls longitudinally ribbed, ribs somewhat oblique, striated transversely, whorls angulated at the sutures; outer and inner lip denticulated; spire short, outer lip thickened."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962784. Length, 4.5 mm.; diameter, 2.5 mm. Two paralectotypes (1962785): length, 5 mm.; diameter, 2.5 mm.; length, 4 mm.; diameter, 2 mm.

REMARKS: The shell is oval, solid, consisting of three whorls plus the protoconch. The protoconch is eroded in all specimens of the type lot, but consists of at least one flat bun-shaped whorl. The two succeeding spire whorls are strongly ribbed by smooth, angular axials, eight on the posterior whorl and ten on the last whorl. The suture is impressed and sharply demarcated, the ribs descending gently over it as

shallow shoulders, then becoming angular. The aperture is wide, the outer lip with a shallow sinus and toothed internally. The columella is straight, with several plaits. The shells are white, stained with brown near the columella and at the sutures.

In the Hawaiian Islands beachworn specimens are occasionally found in drift.

## Daphnella bella Pease, 1860

Pl. 5, Figs. 3, 4

Pease, 1860a: 147. Sandwich Islands [H.I.].

Carpenter, 1865: 516. Belongs to one of the Columbelloid genera, probably Anachis.

Pease, 1871b: 25. Pleurotoma gemmulata Deshayes from Bourbon a synonym.

Martens and Langkavel, 1871: 2-3; Pl. 1, Figs. 4a, b. Sandwich Islands [H.I.].

Tryon, 1884, 6: 266. As Mangilia interrupta Reeve.

Melvill and Standen, 1897: 98. As Mangilia (Cythara) bella. Lifu [New Caledonia]. [Had access to Pease's specimens.]

Bouge and Dautzenberg, 1914: 146. As Mangilia bella. Lifou [New Caledonia].

Oliver, 1915: 537. As Mangilia bella. Sunday Island [Kermadec Islands]. Hedley, 1922: 299. As Macteola segesta Chenu, 1850. Queensland.

Dautzenberg and Bouge, 1933: 96. As Mangilia bella. Tahiti; Tuamotus.

Viader, 1937: 11. As Mangilia bella (Pease). Mauritius.

PEASE'S DESCRIPTION: "Shell fusiform; whorls angulated at the sutures, nodosely ribbed; body-whorl ribbed longitudinally somewhat obliquely, transversely striated. Colour yellowish brown, nodules white, ornamented with a row of dark spots between the interstices, encircling the whorls, and one following the sutures."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962786. Length, 6 mm.; diameter, 3 mm. Three paralectotypes (1962787): length, 5·5 mm.; diameter, 3 mm.; length, 6 mm.; diameter, 3 mm.; length, 6 mm.; diameter, 2·5 mm.

Remarks: There are four whorls plus the protoconch. The protoconch is small, with a depressed nucleus followed by a flattened whorl with a convex spiral keel. The aperture is approximately one-third the length of the spire. The sculpture consists of regularly spaced axial ribs, 10–12 on the earlier whorls, and about 15 on the last whorl which are obsolete or lacking at the sutures but which form nodules below the sutures. The spiral sculpture consists of evenly spaced threads overriding the axial ribs, forming the only sculpture in the angled sutures and on the base. There is a narrow band of callus on the columella. The outer lip is heavy.

The Martens and Langkavel (1871) figure does not indicate the spiral sculpture on the shell.

Specimens are frequent in drift in the Hawaiian Islands.

## Daphnella interrupta Pease, 1860

Pl. 5, Fig. 13; Pl. 8, Figs. 9, 10

Pease, 1860a: 147. Sandwich Islands [H.I.]. Tryon, 1884, 6: 307. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell elongate fusiform, thin, yellowish white, ornamented with transverse, interrupted, chestnut-brown lines transversely marked with interrupted granulose raised lines, finely striated longitudinally; aperture rather long; sinus deep."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962849. Length, 7.5 mm.; diameter, 3 mm. Two paralectotypes (1962850): length, 6 mm.; diameter, 3 mm.; length, 6 mm.; diameter, 2.5 mm.

Remarks: The shell is subulate, white with a few faint light brown splashes. The protoconch consists of one and one-half whorls which are white, bulbous, and slightly oblique. The four spire whorls are convex, bulging to the right more than to the left. The sculpture consists of spiral rows of small bead-like granules with faint axial striae between. The spirals are not of equal strength, but a weaker or smaller row may lie between two stronger rows. In the adapical whorls the beads are worn, producing a cancellate effect. The outer lip is thin. The columella is sinuous with a thin callus. The neck is striated with granules similar to those on the last whorl.

In the Hawaiian Islands specimens are occasionally found in tidepools, where empty shells are frequently inhabited by hermit crabs.

#### Neptunea fuscolineata Pease, 1860

Pl. 12, Figs. 14, 15

Pease, 1860b: 189, Pl. 51, Fig. 3. Corea Sea.

Tryon, 1880, 2: 136, Pl. 57, Fig. 618. As Siphonalia fuscolineata.

PEASE'S DESCRIPTION: "Shell fusiformly turreted, rather thin, shortly twisted at the base; epidermis thin, light, corneous; spire rather slender. Whorls nine, convexly angulated, ribbed longitudinally, and crossed by numerous transverse raised lines; ribs close, swollen, and becoming gradually obsolete on the back of the body-whorl; sutures well impressed; body-whorl convexly depressed above; canal short, slightly twisted to the left, and furnished with a slight umbilical fissure; labrum thin, simple; aperture oblong-oval, half the length of the shell; columella arched, smooth, glossy, slightly callous above. Colour whitish fawn, sparingly streaked longitudinally with brown, and ornamented with subequidistant revolving dark-brown lines.

Hab. Corea Sea. Dredged from sandy bottom, in 70 fathoms water."

HOLOTYPE: B.M.(N.H.) Reg. No. 1964277. Length, 39 mm.; diameter, 15 mm.; length of aperture, 21 mm.

Remarks: Pease's description is adequate for identification of the species. There are no available records as to how Pease obtained the holotype for there is no evidence that either he or Garrett were ever in the area of the Korea Sea.

## Cypraea compta Pease, 1860

Pl. 12, Figs. 1, 2

Pease, 1860b: 189-190, Pl. 51, Fig. 1. Jarvis Island.

Garrett, 1879: 106. Kingsmill Islands.

Roberts, 1885, in Tryon, 7: 212. As Cypraea cumingi Gray.

Melvill, 1888: 230. As a variety of Cypraea cumingi; Kingsmill and Phoenix Islands.

Schilder and Schilder, 1938: 173. As Cypraea cumingi cumingi Sowerby, 1832.

PEASE'S DESCRIPTION: "Shell oblongo-ovate, rather solid; colour pale fawn-yellow, ornamented with somewhat remote, round, white spots of irregular size, and a flexuous dorsal line of same colour; sides and base white, the former conspicuously dotted with dark brown; extremities produced, the posterior curving to the left; umbilical region concave; right side margined; aperture narrow, flexuose; teeth small, even, twenty-eight on the outer lip, not extending over the middle; columella teeth twenty-three, not so stout as those on the outer lip, forming an even line on the inner edge of the aperture; columella smooth, sulcated longitudinally, gibbous above and dentated on the extreme inner edge."

Hab. Jarvis Island."

HOLOTYPE: B.M.(N.H.) Reg. No. 1964276. Length, II·5 mm.; diameter, 6 mm.; height, 5·5 mm.

Remarks: Pease's description is sufficient to identify this species which has been placed in the synonymy of a more widespread Pacific species. The holotype was collected by Garrett.

### Vitularia sandwicensis Pease, 1861

Pl. 4, Figs. 1, 2

Pease, 1861a: 397. Sandwich Islands [H.I.].

Tryon, 1880, 2: 133; Pl. 35, Fig. 399. Sandwich Islands [H.I.].

Edmondson, 1933: 115. H.I. Edmondson, 1946: 135. H.I.

Pease's Description: "Shell fusiformly ovate, rather thin, white, with about three transverse rows of brown spots on varices; whorls five, sharply angulated, body-whorl angulated just below the suture; varices six, slightly oblique, wrinkled; aperture white, oblong-ovate, outer lip denticulated within; columella slightly arched; canal short."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961182. Length, 20 mm.; diameter, 11 mm.; aperture length, 8 mm. Two paralectotypes (1961183): length, 19 mm.; diameter, 9 mm.; aperture length, 8 mm.; length, 23 mm.; diameter, 12 mm.; aperture length, 12 mm.

Remarks: There are three whorls plus the protoconch. The protoconch consists of one whorl which is white, smooth, and shiny; the lower portion is faintly sculptured by longitudinal ribs and faint spiral striations. It is 1 mm. in length; 0.5 mm. in diameter.

In the Hawaiian Islands empty shells are occasionally inhabited by hermit crabs on sand and mud flats near coral reefs.

## Ranella producta Pease, 1861

Pl. 6, Figs. 17, 18

Pease, 1861a: 397. Sandwich Islands [H.I.].

Tryon, 1881, 3: 45. "Undetermined Ranellae." Sandwich Islands [H.I.].

Pease's Description: "Shell solid, small, depressly pyramidal, sublanceolate, ribbed longitudinally, ribs overlapping at the sutures, and cancellated by transverse granulose ridges, lateral varices compressed, arranged like the ribs by overlapping; aperture small, oval, coarsely lyrate within; canal short, recurved; colour chalky-white."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961157. Length, 19 mm.; diameter, 9 mm.; aperture, 4 mm.

REMARKS: The shell is elevated, with prominent sculpture, cream-white. The protoconch is eroded. There are four spire whorls plus the last whorl. The whorls are edged on each side by a prominent varix. The holotype is a beachworn specimen.

Beachworn specimens are occasionally found in drift in the Hawaiian Islands.

## Distorsio pusilla Pease, 1861

Pl. 3, Figs. 15, 16

Pease, 1861a: 397.

Kuster and Kobelt, 1878: 273. As Persona pusilla. Sandwich Islands [H.I.].

Tryon, 1881, 3: 35. Sandwich Islands [H.I.].

Edmondson, 1933: 123. H.I. Edmondson, 1946: 143. H.I.

Kuroda and Habe, 1952: 53. Pacific coast area of Japan.

PEASE'S DESCRIPTION: "Shell solid, oblong ovate, gibbous, somewhat distorted, four or five varices; whorls beautifully latticed, with rather coarse granular raised ridges and fine microscopic spiral striae; aperture small, narrow; outer lip thick, strongly dentated on inner edge and sinuated above; columella deeply excavated and plicately toothed; canal short.

Only a single specimen has been found, too much faded to determine its colour. It is pale yellow, with faint traces of brown."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961155. Length, 10 mm.; diameter, 5 mm.

REMARKS: The holotype, as Pease remarks, is beachworn, and no colour determination has been possible. In the Hawaiian Islands beachworn specimens are occasionally collected in drift.

### Conus fusiformis Pease, 1861

Pl. 10, Fig. 12

Pease, 1861a: 398. Sandwich Islands [H.I.]. Carpenter, 1865: 516. As Conella fusiformis.

Pease, 1868b: 232.

Pease, 1868e: 126. As Conus parvus. Pease, 1871c: 99. As Conus parvus.

Martens and Langkavel, 1871: 32; Pl. 2, Figs. 1a, b. As Conus parvus. Sandwich Islands [H.I.].

Tryon, 1884, 6: 107. As Conus parvus.

Paetel, 1887, 1: 303. As Conus var. fusiformis. Sandwich Islands [H.I.].

Kohn, 1959: 379. As Mitromorpha.

Pease's Description: "Shell small, fusiform, attenuated at both ends, closely and regularly grooved spirally, and reticulated by fine irregular longitudinal striae; spire acuminate, sharp; whorls encircled by two granulose ridges, sutures marginated; aperture narrow, rather more than half the length of the shell; colour dark chocolate-brown, with a row of irregular white spots on upper edge, margin of the sutures light yellowish brown."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962788. Length, 6.5 mm.; diameter, 3 mm. Paralectotype (1962789): length, 6 mm.; diameter, 3 mm.

Remarks: The shell is fusiform, solid, brown with a cream-yellow band at the body whorl. The protoconch is eroded in the type specimens. The sculpture consists of spiral grooves on the body whorl, a raised cord (cream-yellow) at the suture, and two spiral obsoletely granular whorls separated at the suture by a yellow cord on the adapical whorls. There are about eight smooth threads on the neck. The aperture is elongate, the outer lip thin. The columella is straight and lacks a callus.

In the Hawaiian Islands specimens are occasionally collected in tidepools and from the under surfaces of small rocks in shallow bays; beachworn specimens are frequent in drift.

### Fossar multicostatus Pease, 1861

Pl. 6, Figs. 1, 2

Pease, 1861a: 398. Sandwich Islands [H.I.]. Fischer, 1864: 257. As Fossarus (Fossar) multicostatus Pease.

Paetel, 1887, 1: 415. Sandwich Islands [H.I.]. Tryon, 1887, 9: 274. Sandwich Islands [H.I.].

Pilsbry, 1921: 375. H.I.: Waikiki and Kaneohe Bay, Oahu.

Edmondson, 1933: 134–135; Fig. 59a. As Fossarus multicostata. H.I. Edmondson, 1946: 155-156; Fig. 171a. As Fossarus multicostata. H.I.

Pease's Description: "Shell small, thin, globose, of a chalky-white colour, spire small, acute, consisting of three or four moderately convex whorls separated by a linear impressed suture; surface ornamented with a nearly uniform series of small, rather sharp spiral ridges, and the interstices decussately striated with fine raised lines, of which the spiral are most developed, periphery of the last whorl rounded and narrowly umbilicated; columella slightly oblique, scarcely arched,

covered with a thin callous deposit and a slightly sinuous at the base; aperture large, subcircular, lip thin, crenulated by the external spiral ridges."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962790. Length, 6 mm.; diameter, 4.5 mm.; aperture, 4 mm. Two paralectotypes (1962791): length, 6.5 mm.; diameter, 6 mm.; aperture, 5 mm.; length, 5 mm.; diameter, 4.5 mm.; aperture, 3.5 mm.

REMARKS: The shell is small and milk white. The protoconch consists of one and one-half well rounded, smooth whorls. The spire whorls are marked by strong spiral keels, between which are weaker keels, often with the middle intercalary keel stronger than the others. The base projects as a moderate canal, with the neck striated. There is a moderately large umbilicus. The aperture is oblique. The outer lip is fluted by the external sculpture which is also apparent through the substance of the shell.

Of the set of three beachworn specimens from which the lectotype was selected, the lectotype is in the best condition.

Beachworn specimens are common in drift in the Hawaiian Islands.

## Turris monilifera Pease, 1861

Pl. 5, Figs. 17, 18; Pl. 8, Fig. 7

Pease, 1861a: 398. Sandwich Islands [H.I.]. Pease, 1869a: 68. As Pleurotoma monilifera.

Weinkauff and Kobelt, 1876: 73; Pl. 15, Figs. 7, 9. H.I.: Oahu.

Tryon, 1884, 6: 173, 358; Pl. 4, Fig. 52. As Pleurotoma gemmata Hinds pars.

Cooke, 1885: 33. Suez. [Had access to Pease's specimens.]
Watson, 1886: 278. Levuku, Fiji. 12 fathoms. [Had access to Pease's specimens.]

Paetel, 1887, 1: 485. As Turritella monilifera. Sandwich Islands [H.I.].

Smith, 1903: 362. As Pleurotoma monilifera.

Hidalgo, 1904-5: 112. As Pleurotoma monilifera. Philippines.

Schepman, 1913: 402. Sulu Sea.

Hedley, 1922: 217-218. As Gemmula monilifera. Queensland.

Faustino, 1928: 311. Cebu; Palawan [Philippines].

Iredale, 1931: 226. As a Gemmula.

Pease's Description: "Shell fusiform, turreted, light brown; whorls numerous, encircled with a row of semitransparent slightly oblong tubercles, disposed in a somewhat imbricated manner, with a prominent keel between and a lighter one just below the rows of tubercles, interstices concave, ornamented with raised striae, and crossed by oblique lines, last whorl encircled by raised striae, which are most prominent on upper part; aperture ovate; canal rather long, slightly recurved."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961196. Length, 29:5 mm.; diameter, 9.5 mm.; aperture length (plus canal), 12 mm.

REMARKS: Little can be added to Pease's description of this species. The protoconch consists of three and one-half whorls of which the apical whorl is smooth and shining white and the second and third whorls decorated by almost vertical, narrow ribs.

Specimens are occasionally dredged from off-shore waters of the Hawaiian Islands.

### Strombus cancellatus Pease, 1861

Pl. 4, Figs. 8, 9

Pease, 1861a: 398. Sandwich Islands [H.I.].

Tryon, 1885, 7: 122. "Unidentified species of Strombus."

Paetel, 1887, 1: 310. Sandwich Islands [H.I.].

Smith, 1900: 43.

Abbott, 1960: 83. As Strombus helli Kiener. "Limited to Hawaiian Chain."

PEASE'S DESCRIPTION: "Shell solid, abbreviate, somewhat fusiformly ovate; spire short, acute; whorls seven or eight, subangulated above, latticed with longitudinal ribs (or ridges) and spiral lines, margined next the sutures, about three varices to each whorl; sutures well impressed, last whorl irregularly verrucose on the back at the upper part, and latticed like the spire; outer lip thin, slightly thickened behind; columella strongly callused and closely wrinkled throughout; aperture narrow, contracted, lyrate and granulose within."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961180. Length, 24.5 mm.; diameter, 15 mm.; aperture length, 15 mm. Two paralectotypes (1961181): length, 21 mm.; diameter, 12 mm.; aperture length, 13 mm.; length, 21 mm.; diameter, 11 mm.; aperture length, 13 mm.

Remarks: In the Hawaiian Islands specimens are occasionally collected at depths of more than 12 meters; beachworn species are frequent in drift on the northern shores of the islands of Kauai and Oahu [H.I.].

### Amathina bicarinata Pease, 1861

Pl. 6, Figs. 3, 4

Pease, 1861a: 399. Sandwich Islands [H.I.]. Tryon, 1886, 8: 133. Sandwich Islands [H.I.]. Paetel, 1887, 1: 509. Sandwich Islands [H.I.].

Couturier, 1907: 163. Taku [Tonga].

Dautzenberg and Bouge, 1933: 375. Taku: Tokaai [Tonga].

Edmondson, 1933: 138. H.I. Viader, 1937: 49. Mauritius. Edmondson, 1946: 160. H.I.

Pease's Description: "Shell thin, subpellucid, triangularly ovate, contracted posteriorly; colour vitreous-white; traversed by longitudinal, diverging, irregular-sized ribs, two of which are more prominent than the others, giving the shell a somewhat bicarinated appearance, and crossed by fine, close, concentric lines of growth; spire consisting of one evolution, recurved laterally and projecting beyond the posterior margin of the shell; aperture oval, edges smooth; epidermis thin, membranaceous, covering the entire shell."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962792. Length, 5 mm.; diameter, 4 mm. Paralectotype (1962793): length, 4 mm.; diameter, 3 mm.

Remarks: The shell is cap-shaped, small, white, almost transparent in places, and occasionally faintly marked by brown periostracum near the edge. The protoconch is coiled to the right in a single tight coil which expands into the triangular body

whorl. The body whorl is marked by two prominent cords which traverse the shell on either side of the median line, with several less prominent cords between. All the cords are crossed by somewhat obsolete transverse striations.

#### Rhizochilus exaratus Pease, 1861

Pl. 4, Figs. 10, 11

Pease, 1861a: 399. Sandwich Islands [H.I.].

Deshayes, 1863: 115. As Purpura exarata Réunion. Pease, 1868e: 115. As Coralliophila deformis Lamarck. Tryon, 1880, 2: 232. As Coralliophila galea Chemnitz.

Cooke, 1885: 332. As Coralliophila exarata. Suez. [Had access to Pease's specimens.]

Viader, 1937: 33. As Coralliophila deformis Lam. Mauritius.

Abbott, 1950: 82. As Coralliophila erosa Röding 1798. Cocos Keeling Islands.

PEASE'S DESCRIPTION: "Shell abbreviately ovate, deeply umbilicated; spire short, acute, less than one-half the length of the shell; whorls about six, convex subangulated, the last large and gibbous, encircled with small, close, irregular, minutely scaled ridges and longitudinal ribs, ribs slightly oblique and becoming obsolete or altogether wanting on body-whorl; aperture wide, semicircular, finely and closely lyrate within; outer lip thin; inner lip produced so as to form an even surface with the outer lip, smooth and slightly arched; canal very short and slightly recurved; colour dirty-white."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961177. Length, 30 mm.; diameter, 23 mm. Two paralectotypes (1961178): length, 34 mm.; diameter, 26 mm.; length, 27 mm.; diameter, 23 mm.

Remarks: In the Hawaiian Islands specimens are occasionally collected on coral reefs, and beachworn specimens are frequent in reef dredgings.

## Columbella pellucida Pease, 1861

Pl. 10, Fig. 7

Pease, 1861a: 399. Sandwich Islands [H.I.].

Carpenter, 1865: 516. "... probably a Nitidella (or Mitrella)."

Pease, 1868e: 122. As Columbella rorida Reeve.

Martens and Langkavel, 1871: 20. As Columbella rovida Reeve.

Tryon, 1883, 5: 147, 232. As Columbella rorida Reeve.

Paetel, 1887, 1: 212. As Columbella rorida Reeve.

Kobelt, 1893: 144.

Pace, 1902a: 120. Group of Columbella rorida Rve.

Dautzenberg and Bouge, 1933: 224. As Columbella (Atilia) rorida Reeve var. pellucida Pease.

Tuamotus: Fakahina.

Viader, 1937: 29. As Pyrene pellucida Pease. Mauritius.

Pease's Description: "Shell elongate-oval, turreted, thin, pellucid, smooth, shining; spire prominent, consisting of six or seven volutions; apex obtuse; whorls smooth, plano-convex, last whorl but slightly swollen, and furnished with

close obliquely transverse impressed striae on the basal half; suture impressed, and margined below with a fine spiral impressed line; aperture about one-half the length of the shell, oblong-oval, slightly effuse above; outer lip simple; columella smooth, slightly arched; whitish horn-colour; last whorl ornamented with one or two rows of oblong brown spots and an opake white spot, intermediate rows extending to and encircling the lower part of the upper whorls near the suture."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962794. Length, 6·5 mm.; diameter, 2·5 mm.; aperture length, 4 mm. Two paralectotypes (1962795): length, 7 mm.; diameter, 3 mm.; length, 7 mm.; diameter, 3 mm.

Remarks: The shell is slender, high-spired, smooth, horn-coloured but variegated with brown and white. The protoconch consists of two and one-half white, smooth, convex whorls. The spire whorls are convex, with indistinct sutures, and swollen just below the summit. The two abapical whorls are marked by an indistinct line below the summit. The base is short, marked with spiral striations. The columella is smooth with a thin callus reflected over the basal striations. The aperture is moderately large, with the adaptical angle reflected upward as a gentle channel. The outer lip is thin.

The shell is marked by two oblique bands of rectangular brown marks on the last whorl, the lower band ending below the reflexion of the outer lip, the upper above the lip. Between them is a row of white spots. There is a similar row of brown spots at the base of the two adaptical whorls and white on the base.

The set from which the lectotype was selected consists of three beachworn specimens. The specimen selected as the lectotype conforms most closely to Pease's description of the colour pattern. The other two specimens include an almost pure white specimen marked only by some milk-white dashes across the last whorl and a specimen with faint brown marks and white dashes. Although Pease (1868c) later remarked that the lip was "... finely denticulated within ...", denticulations are present only in the lectotype.

Specimens are found only rarely in drift in the Hawaiian Islands.

## Scalaria millecostata Pease, 1861

Pl. 6, Figs. 5, 6

Pease, 1861a: 400. Sandwich Islands [H.I.]. Tryon, 1887, **9**: 84. Sandwich Islands [H.I.]. Paetel, 1887, **1**: 243. Sandwich Islands [H.I.].

Smith, 1901: 109; Pl. 1, Fig. 5. As Scala millecostata. Isipingo, Natal. [Had access to the holotype.]

Pilsbry, 1921: 377. As Epitonium millecostatum. H.I.

Pease's Description: "Shell small, pyramidal, white, thin; whorls nine, contiguous, rapidly enlarging, rounded, the last one ventricose and perforated at the base; varices numerous, crowded, appearing like raised lines; sutures deeply impressed; aperture rounded."

Holotype : B.M.(N.H.) Reg. No. 1961170. Length, 6.5 mm. ; diameter, 3.5 mm. ; aperture, 2.5 mm.

REMARKS: The shell is elevated-conical, with bulbous spire whorls. The protoconch consists of one and one-half white, shining, oblique whorls. There are six spire whorls which are sculptured by narrow oblique lirae. The sutures are strongly constricted. The aperture is circular, the outer lip thin. The collumellar lip is thickened, curved, and reflected. The parietal region is covered by a moderately thick callus which is not continuous so that the peristome is not complete.

Specimens are collected only rarely on reef flats in the Hawaiian Islands.

# Scalaria fucata Pease, 1861

Pl. 6, Figs. 11, 12

Pease, 1861a: 400. Sandwich Islands [H.I.]. Tryon, 1887, **9**: 84. "Unfigured species." Paetel, 1887, **1**: 241. Sandwich Islands [H.I.].

Pilsbry, 1921: 376; Fig. 11a. As Epitonium fucatum. H.I.

Edmondson, 1933: 117. As Epitonium furcatum [sic] (Pease). H.I. Edmondson, 1946: 136. As Epitonium furcatum [sic] (Pease). H.I.

PEASE'S DESCRIPTION: "Shell elongate, imperforate, white, with a spiral brown band on the periphery of the whorls; whorls 8–9, rounded, separated and closely decussately striated with fine raised lines; varices 7–8, distant, compressed, rather large, continuous and toothed above; aperture abbreviately oval."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961168. Length, 14 mm.; diameter, 6 mm.; aperture length, 3 mm. Paralectotypes (1961169): length, 11 mm.; diameter, 4 mm.; aperture length, 2.5 mm.

REMARKS: The shell is elevated-conical. The protoconch is broken. The spire whorls are well-rounded, obliquely crossed by wide, lamellose axial ribs. There are seven or eight ribs on the adapical whorls, nine on the last whorl. The ribs form continuous lines on the spire, and are marked by conspicuous hooks near the summit of the whorls. The spaces between the ribs are marked by fine cancellations, which produce a checker-board effect. The sutures are very strongly constricted. The aperture is oval, the outer lip bordered by a rib with a hook at the juncture with the body whorl, the columellar lip thickened as the outer lip and strongly curved. The parietal region is covered by a thick callus which renders the peristome complete.

The lectotype is white with a faint brown band running across the centre of each whorl, the band almost faint enough to be a shadow. The second specimen in the type set is smaller than the lectotype and also lacks the protoconch. The brown bands are more conspicuous on this specimen than on the lectotype.

Beachworn specimens are common in drift in the Hawaiian Islands.

## Cirsotrema attenuatum Pease, 1861

Pl. 10, Figs. 9, 10

Pease, 1861a: 400. Sandwich Islands [H.I.].

Tryon, 1887, 9: 82; Pl. 17, Fig. 29.

Paetel, 1887, 1: 239. As Scalaria attenuata. Sandwich Islands [H.I.].

Clessin, 1897: 17; Pl. 4, Fig. 7. As Scalaria attenuata. Sandwich Islands [H.I.].

Sowerby, 1874, Conch. Icon., 19: Pl. 10, Fig. 71. As Scalaria attenuata. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Kuroda and Habe, 1952: 46. As Gyroscala attenuata. Pacific coast area of Japan.

Pease's Description: "Shell small, elongate, solid, imperforate, slightly distorted; spire obtuse; whorls plano-convex, nodulous at the suture, encircled with fine, close spiral lines, upper whorls longitudinally ribbed; varices few, irregular, suture faintly impressed; outer lip thickened by an external varix; aperture oval."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962796. Length, 7.5 mm.; diameter, 2 mm. Paralectotype (1962797): length, 11 mm.; diameter, 3.5 mm.

REMARKS: The shell is elevated-conical, rather thick, and white. The protoconch is worn and flat. The spire whorls are elongate, slightly rounded, and marked by irregularly spaced, somewhat obsolete, axial ribs. A single varix extends across the fifth whorl. The sculpture between the axial ribs consists of faint spiral threads which are obsoletely cancellated. The sutures are moderately constricted and crenulated where the axial ribs leave the whorl. The base is rounded, ornamented like the spire. The aperture is oval, provided with a complete peristome at the edge which is greatly thickened and slightly reflected all around.

Beachworn specimens are occasionally found in drift in the Hawaiian Islands.

#### Bulla marmorea Pease, 1861

Pl. 1, Figs. 13, 14

Pease, 1861b: 431-432. Sandwich Islands [H.I.].

Sowerby, 1868, Conch. Icon., 16, Bulla: Pl. 6, Fig. 16. Sandwich Islands [H.I.]. "...not marmorea Schroeder . . ."

Paetel, 1873: 81. Sandwich Islands [H.I.]. Paetel, 1887, 1: 627. Sandwich Islands [H.I.].

Pilsbry, 1893, in Tryon, 15: 348; Pl. 34, Fig. 8. As Bulla peasiana n. n. Kobelt, 1896: 91; Pl. 14, Fig. 17. As Bulla peaseana Pilsbry. Sandwich Islands [H.I.]. Kuroda and Habe, 1952: 42. As Bulla peasiana Pilsbry. Pacific coast area of Japan.

Pease's Description: "Shell ovately oblong, light, thin, perforate, outer lip straight; longitudinally finely striated and marked with fine microscopic spiral striae. Colour chocolate-brown, mottled with darker, and freckled and blotched with white."

Holotype: B.M.(N.H.) Reg. No. 1961209. Length, 21 mm.; diameter, 11 mm.

Remarks: The shell is deeply umbilicate, elongate, thin, and semi-transparent; brown, mottled with white. The surface is glossy, marked obscurely by longitudinal lines and fine spiral striae. The columella is straight, reinforced by a wide reflected callus which expands and spreads over the parietal wall. The outer lip barely projects above the spire and follows the parietal wall closely. The base is rounded.

The animals appear in large numbers on the dead reef-platform of Ala Moana Reef, Oahu, in the Hawaiian Islands, during the months of January and February. The animals swarm up through the porous coral and gravel during full moon at low tide, and disappear into the substrate as the tide turns. The animal coloration varies from bright orange to dull brown.

## Cerithium gracile Pease, 1861

Pl. 5, Figs. 5, 6

Pease, 1861b: 432. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Cerithium: Pl. 14, Fig. 95. As Cerithium rostratum Sowerby.

Philippines, Cuming; Sandwich Islands [H.I.]. Pease. Martens, 1880: 280. As Cerithium rostratum Sowerby.

Cooke, 1885: 42. As Cerithium rostratum Sowerby.
Tryon, 1887, 9: 130. As Cerithium rostratum Sowerby.

Melvill and Standen, 1895: 115. As Cerithium rostratum Sowerby. Lifu [New Caledonia].

[Had access to Pease's specimens.]

Kobelt, 1898: 211. As Cerithium rostratum Sowerby.

Viader, 1937: 41-42. As Cerithium rostratum Sowerby. Mauritius.

PEASE'S DESCRIPTION: "Shell light, thin, turreted, slender; whorls convexly rounded, ribbed longitudinally and varicose, ribs rounded and becoming obsolete on the last whorl, ornamented with spiral raised striae or ribs which are somewhat flexuous and alternately smaller; aperture oval; outer lip somewhat expanded; columella arcuate and callous, callosity joining the outer lip posteriorly; canal short, slightly recurved. Colour white or light-fawn, irregularly marked with brown."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961173. Length, 12 mm.; diameter, 4 mm.; aperture, 2.5 mm. Four paralectotypes (1961174): length, 16 mm.; diameter, 5 mm.; length, 13 mm.; diameter, 4.5 mm.; length, 11 mm.; diameter, 3 mm.

REMARKS: The shell is high-spired, white with some indications of brown markings near the varices. The protoconch is eroded. There are II whorls, the five abapical whorls distinctly larger than the remaining apical whorls. The sculpture consists of narrow, beaded spirals. There are prominent varices on the last two whorls. The aperture is subcircular and the outer lip is frilled.

In the Hawaiian Islands occasional beachworn specimens have been collected from drift from the islands of Molokai and Oahu.

## Cerithium unilineatum Pease, 1861

Pl. 10, Fig. 5

Pease, 1861b: 432. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Cerithium: Pl. 15, Fig. 99. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Sowerby, 1866, Thes. Conch., 3, Cerithium: Pl. 12, Fig. 311. As Cerithium unilineatum Sowerby. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Tryon, 1887, 9: 138; Pl. 26, Fig. 86. Sandwich Islands [H.I.].

Paetel, 1887, 1: 341. Sandwich Islands [H.I.].

Kobelt, 1898: 224; Pl. 29, Fig. 18. Sandwich Islands [H.I.]. Description and figure from Reeve [Sowerby].

Mant, 1923: 121. As Bittium boeticum unilineatum. H.I.: Dredged from Kewalo Harbor, Oahu.

PEASE'S DESCRIPTION: "Shell small, subulate, turreted; whorls longitudinally ribbed, varicose, spirally finely ribbed; aperture ovate. Colour white, spotted with

brown, spots arranged spirally; a band of dark purple encircling the whorls, at their upper margin."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962798. Length, 5.5 mm.; diameter, 3 mm. Two paralectotypes (1962799): length, 6 mm.; diameter, 3 mm.; length, 6 mm.; diameter, 2.5 mm.

Remarks: The shell is cyrtoconoid, white, with a thin brown line at the sutures. The protoconch is eroded. There are six spire-whorls which are moderately rounded. marked by minute spiral threads which are slightly granulated, and one or two moderate varices on each whorl. The aperture is channelled anteriorly, the outer lip thickened. The columella is stout, slightly curved, covered by a thin callus which extends over the parietal region. There are spiral threads on the base.

Both the Sowerby (1866, Conch. Icon.) and Tryon (1887) illustrations indicate wider brown lines than are present in the syntypes; the illustrations simulate C. zebrum Kiener which has also been reported from the Hawaiian Islands.

Specimens are occasionally found in drift in the Hawaiian Islands.

### Cerithium fucatum Pease, 1861

Pl. 5, Figs. 7, 8

Pease, 1861b: 432. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Cerithium: Pl. 15, Fig. 102. [Illustration is of a different species.]

Sowerby, 1866, Thes. Conch., 3, Cerithium: Pl. 12, Fig. 314. Sandwich Islands [H.I.].

Schmeltz, 1874, 5: 111. Tahiti.

Paetel, 1887, 1: 336. Tahiti.

Tryon, 1887, **9**: 138; Pl. 26, Fig. 87. Sandwich Islands [H.I.]. Kobelt, 1898: 222; Pl. 39, Fig. 14. Description and figure from Reeve [Sowerby].

Pease's Description: "Shell light, thin, vitreous, pyramidal; whorls seven or eight, slightly convex, ornamented with three equal rows of granules, and the interstices with a single ridge and fine microscopic striae, granules becoming obsolete on last whorl; last whorl ribbed and longitudinally striated, striae fine, microscopic; aperture oval; outer lip slightly expanded; canal short, nearly closed. Colour vellowish-fawn, irregularly spotted with brown."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962800. Length, 9.5 mm.; diameter, 5 mm.; aperture, 3 mm. Paralectotype (1962801): length, 10 mm.; diameter, 4 mm.; aperture, 3 mm.

REMARKS: The shell is cyrtoconoid, shining, cream-white. The protoconch is eroded. There are seven spire whorls which are sculptured by three rows of elongate granules strung closely together, the rows separated by spiral keels smaller than the granular rows. There are four granular spirals on the last whorl, the uppermost almost obsolete. The sutures are not distinct. The base is rounded, marked by spiral keels, the posterior two equal in size to the granular spirals of the whorls, the others threadlike. The aperture is oval, the outer lip thin and flaring. The columella is arched, with a relatively thick callus and two weak folds.

The illustrations of Sowerby (1866, Conch. Icon.) and Tryon (1887) approximate

neither the syntypes nor Pease's description. The Sowerby illustration is that of a less bulbous shell with a distinct varix and toothed outer lip; the Tryon figure is of a shell with distinct whorls.

## Cerithium asperum Pease, 1861

Pl. 5, Figs. 11, 12

Pease, 1861b: 433. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Cerithium: Pl. 14, Fig. 96. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Tryon, 1887, 9: 136; Pl. 25, Fig. 62. As Cerithium asperulum. Sandwich Islands [H.I.].

Paetel, 1887, 1: 335. As Cerithium asperulum Tryon. Sandwich Islands [H.I.]. Kobelt, 1895: 198; Pl. 35, Fig. 16. Sandwich Islands [H.I.]. Description and figure from Reeve [Sowerby].

Couturier, 1907: 156. Gambier.

Dautzenberg and Bouge, 1933: 304. As Cerithium asperulum Tryon. Gambier.

Pease's Description: "Shell pyramidal; whorls slightly convex, encircled in the middle with a row of nodules, and on either side a row of granules; interstices spirally striated, striae raised and unequal in size; aperture ovate; columella arcuate, a slight callosity posteriorly; canal short. Colour whitish or light-fawn; nodules and striae reddish brown."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961203. Length, 15 mm.; diameter, 7 mm.; aperture length, 7 mm.

REMARKS: The shell is cyrtoconoid, brown striped with white. The protoconch is eroded. There are six spire whorls which are marked by three beaded spirals, each granule of which is separate from the others. The spirals are separated by twothree obsolete spiral threads. There are occasional varices on the whorls. The aperture is oval, the outer lip thickened and flared outward by the external sculpture. There is a shallow sinus at the junction of the outer lip and the last whorl. The columella is curved and covered by a thin callus. The granules and threads are brown, the spaces between them white.

## Cerithium paxillum Pease, 1861

Pl. 10, Fig. 6

Pease, 1861b: 433. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Cerithium: Pl. 16, Fig. 115. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Tryon, 1887, 9: 138; Pl. 26, Fig. 88. Sandwich Islands [H.I.].

Paetel, 1887, 1: 339. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell somewhat ovate, turreted; whorls seven, slightly convex and varicose, ornamented with four rows of granules, and interstices with fine raised striae, longitudinally rudely ribbed, ribs and granules becoming obsolete at the periphery of the last whorl; columella arcuate, and callous within; aperture ovate, canal very short. Colour light brown, granules black."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962804. Length, 6 mm.; diameter, 2:5 mm. Two paralectotypes (1962805): length, 7 mm.; diameter,

3 mm.; length, 5.5 mm.; diameter, 2.5 mm.

REMARKS: The shell is cyrtoconoid, brown. The protoconch is eroded. The spire whorls are slightly rounded, marked by spiral threads of small granules. There are two spiral threads on the first two adaptical whorls, three on the middle whorl, and four on the abapical whorl and the last whorl. The granules of the spiral threads project producing an angular effect at the base of each whorl. On the last whorl the first three granular threads are separated from the fourth by a thin spiral thread. The base is rounded, with obsoletely granular spiral threads. The aperture is oval, the canal slightly recurved but short. The outer lip is thin and slightly reflected. The columella is curved, with a thick brown callus which is reflected over the base of the shell.

#### Cerithium boeticum Pease, 1861

Pl. 10, Fig. 8

Pease, 1861b: 433. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Cerithium: Pl. 16, Fig. 114. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Sowerby, 1866, Thes. Conch., 3, Cerithium: Pl. 13, Fig. 327. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Paetel, 1873: 56. As Cerithium boeticum. Sandwich Islands [H.I.]. Tryon, 1887, **9**: 143; Pl. 27, Fig. 26. Sandwich Islands [H.I.]. Paetel, 1887, **1**: 335. As *Cerithium boeticum*. Sandwich Islands [H.I.]. Kobelt, 1898: 236; Pl. 41, Fig. 14. Sandwich Islands [H.I.].

Mant, 1923: 121. As Bittium boeticum unilineatum. H.I.: Dredged from Kewalo Harbor, Oahu.

Edmondson, 1933: 130. H.I.

Ostergaard, 1939: 72, 76. H.I.: Hawaii, Maui, Molokai. Fossil.

Edmondson, 1946: 152. H.I.

Pease's Description: "Shell turreted; whorls seven or eight, slightly convex, spirally ribbed; ribs regular, depressed, alternately smaller, obsoletely varicose; aperture ovate; canal very short, abruptly truncate. Colour light-fawn, ribs black or black with a yellowish band at the margins of the whorls, or spotted and marbled with different shades of brown, fawn-colour, and white."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962802. Length, 6 mm.; diameter, 2.5 mm. Five paralectotypes (1962803): length, 6-7 mm.; diameter, 3-4 mm.

REMARKS: The shell is cyrtoconoid, striped brown and white. The protoconch is eroded. There are seven spire whorls which are moderately rounded and marked by obsoletely granular spiral striae which alternate brown and white. The sutures are moderately constricted and bounded by a brown band. The shell is without varices. The aperture is oval, the outer lip thin. The columella is curved, covered with a thick callus which is reflected around the base of the siphonal canal. The siphonal canal is short and slightly recurved. The brown and white striations of the external surface show through the aperture of the shell.

The six specimens in the type lot are beachworn, but similar in size and colour, one specimen being more faded than the others.

Beachworn specimens are common in drift in the Hawaiian Islands.

## Vertagus graniferus Pease, 1861

Pl. 5, Figs. 9, 10

Pease, 1861b: 433. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Vertagus: Pl. 2, Fig. 11 [non Fig. 6]. Sandwich Islands

[H.I.]. [Illustration is of the holotype.]

Tryon, 1887, 9: 147; Pl. 28, Fig. 51. Sandwich Islands [H.I.].

Paetel, 1887, 1: 342. Sandwich Islands [H.I.].

Viader, 1937: 41. As Cerithium graniferum Pease. Mauritius.

Pease's Description: "Shell subulate; whorls about twelve, flat, bordered by prominent and slightly elongate granules on both sides, intermediate space ornamented with two rows of granules of smaller size, interstices filled by a ridge, somewhat flexuous; aperture small, oblique, elongate-oval; columella slightly arched, callous, and furnished with a single fold. Colour white or dusky, spotted irregularly with brown, spots at margins of the whorls darker and more regular."

HOLOTYPE: B.M.(N.H.) Reg. No. 1961208. Length, 26 mm.; diameter, 8 mm.; aperture, 6 mm.

REMARKS: The shell is cyrtoconoid, white flecked with brown. The protoconch is eroded. There are ten spire whorls which are marked by three granular spirals separated by small shouldered keels. The adapical spiral is the largest, consisting of vertical, angular knobs separated by sloped depressions; the other two are unequal in size, the abapical the smallest and consisting of hemispherical, shelved bosses. The aperture is suboval, the outer lip thickened. The canal is fairly long and recurved. The columella is arched and covered by a thick callus which is reflected over the parietal region; there is a single median fold.

Living specimens are collected occasionally at depths of 12 meters in sand in the

Hawaiian Islands.

## Bittium tricarinatum Pease, 1861

Pl. 5, Fig. 14

Pease, 1861b: 433. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Cerithium: Pl. 18, Fig. 127. Sandwich Islands [H.I.]. [Illustration is of the holotype.]

Tryon, 1887, 9: 154; Pl. 30, Fig. 9. Sandwich Islands [H.I.].

Paetel, 1887, 1: 346. Sandwich Islands [H.I.].

Viader, 1937: 44. Mauritius.

Pease's Description: "Shell light, thin, shining, turreted; whorls eight, carinated by three spiral ribs, interstices finely spirally striated and ornamented by longitudinal ribs which are somewhat curved, rather distant, and become granulose at the crossing of the transverse ribs, giving the shell a clathrated appearance;

aperture oval; columella arcuate, and twisted at lower part; base subplanulate and ornamented with diverging raised striae. Colour brown."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962806. Length, 8 mm.; diameter, 2.5 mm.

Remarks: The shell is cyrtoconoid, light, thin and translucent brown. The protoconch consists of one flattened whorl with sculpture similar to that of the spire whorls. There are seven spire whorls which are prominently convex and separated by distinct sutures. The sculpture consists of three rows of spirals, each joined by axials which terminate at the sutures. The spirals consist of narrow, convex threads which are interrupted by beads at the junctions with the axials. The aperture is oval and the outer lip thin, decorated with the external sculpture only. The columella is twisted and flat. The base is rounded, with sculpture similar to that on the spire whorls.

### Triphoris triticea Pease, 1861

Pl. 10, Fig. 3

Pease, 1861b: 433. Sandwich Islands [H.I.].

Tryon, 1887, 9: 191. "Unfigured and doubtful species."

Paetel, 1887, 1: 351. Sandwich Islands [H.I.].

Smith, 1909: 371. Christmas Island, Indian Ocean. Shell description. [Had access to the holotype.]

Smith, 1911: 315.

Faustino, 1928: 194. Luzon; Tablas [Philippines].

Edmondson, 1933: 129. H.I.

Tomlin, 1935: 77. Christmas Island, Indian Ocean. [Had access to the holotype.]

Edmondson, 1946: 151. H.I.

Pease's Description: "Shell minute, fusiformly ovate, ornamented throughout by spiral rows of regular-sized granules; aperture oval and in a line with the axis of the shell, lip slightly recurved and thickened (plicate on the inner side?); canal posterior, enclosed, tubular. Colour dark purplish-red, granules dusky white."

Holotype: B.M.(N.H.) Reg. No. 1962807. Length, 3 mm.; diameter, 1 mm.

Remarks: The shell is cyrtoconoid, dark purple-brown except for the apex which is horn-coloured. The protoconch consists of one and one-half whorls which are inflated. The adapical whorl is smooth; the abapical whorl finely ribbed spirally and longitudinally and decorated with small nodules. There are five spire whorls which are bulbous. The spire whorls are sculptured with two rows of nodulose, spiral cords and the last whorl with three rows. The spirals are waxy yellow except for the abapical row on the last whorl which is darker yellow. The sutures are marked with smooth but slightly raised interspaces between the granules. The base is well rounded, and marked by two spiral cords, the adapical cord immediately below the periphery, the abapical half way between it and the columellar insertion. The aperture is moderately channelled. The outer lip is thin, with external sculpture

of three cancellated spirals; it is reflected abapically so that there is a nearly complete peristome. The columella is short and stout.

## Triphoris fucata Pease, 1861

Pl. 6, Figs. 13, 14

Pease, 1861b: 433. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell elongate subulate; whorls sixteen to eighteen, with three granulose ribs and one much smaller at the suture; base subplanulate; canal short and recurved. Colour white, spotted irregularly with brown."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961171. Length, 11·5 mm.; diameter, 2 mm. Paralectotype (1961172): length, 13·5 mm.; diameter, 3 mm.

REMARKS: The shell is turriculate, white, sparsely spotted with brown. The protoconch is eroded. The whorls are sculptured with three beaded spirals, the two bordering spirals more conspicuous than the middle spiral, especially on the apical whorls. All three spirals are separated by indentations about equal in diameter to the beading. The spirals consist of beads which are shelved adapically and convex abapically. The periphery of the last whorl is marked by a granular spiral. The outer lip is reflected and slightly thickened.

Specimens are found occasionally in beach drift in the Hawaiian Islands.

#### Triphoris affinis Pease, 1861

Pl. 10, Fig. 1

Pease, 1861b: 434.

Jousseaume, 1884: 272. As Mastonia peasei.

Tryon, 1887, 9: 191. As T. peasei Jousseaume. "Unfigured and doubtful species."

Paetel, 1887, 1: 346. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell elongately turreted, shining; whorls composed of three regular-sized rows of granules; canal short, tubular. Colour reddish brown."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962808. Length, 6.5 mm.; diameter, 1.5 mm.

Remarks: The shell is cyrtoconoid, light yellow-brown. The protoconch consists of three whorls, the adapical eroded and flat, the middle oblique and gently cancellated, the abapical with indications of two rows of spiral granules. The spire whorls are marked by three rows of granular spirals consisting of hemispherical bosses. The spirals are separated by depressions in which there are slightly swollen remnants of the bosses. In the abapical whorls the lower granular row is somewhat keeled. The sutures are indistinct. The periphery of the body whorl is marked by a spiral cord a little weaker than the adapical granular spirals. It is followed by two additional weaker cords on the base. The aperture is twisted and channelled anteriorly; the outer lip is thin, showing the external sculpture within. The columella is much

twisted and curved and covered with a thick callus which also extends over the parietal region.

Beachworn specimens are found occasionally in drift in the Hawaiian Islands.

## Triphoris cingulifera Pease, 1861

Pl. 6, Figs. 9, 10

Pease, 1861b: 434. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 38; Pl. 2, Fig. 8. Sandwich Islands [H.I.].

Tryon, 1887, 9: 144, 186; Pl. 39, Fig. 43. Sandwich Islands [H.I.].

Paetel, 1887, 1: 347. Sandwich Islands [H.I.].

Melvill and Standen, 1897: 408. Lifu [New Caledonia]. [Had access to Pease's specimens.]

Mant, 1923: 123. H.I.: Dredged from Kewalo Harbor, Oahu. Edmondson, 1933: 129. As Triforis cinguilifera [sic] Pease. H.I.

Viader, 1937: 43. Mauritius.

Edmondson, 1946: 151. As Triforis cinguilifera [sic] Pease. H.I.

Kuroda and Habe, 1952: 91. Pacific coast of Japan.

PEASE'S DESCRIPTION: "Shell subulate; whorls about ten, ornamented by a row of granules at both margins, interstices concavely rounded, with a raised stria at the upper side, last whorl with three granulose ribs; canal short and tubular. Colour waxy-yellow, lower row of granules and ribs on last whorl purplish-red."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962812. Length, 6 mm.; diameter, 2.5 mm. Seven paralectotypes (1962813): Four specimens—length, 8.5 mm.; diameter, 2.5 mm.; 3 specimens—length, 5 mm.; diameter, 2 mm.

REMARKS: The shell is cyrtoconoid, red-brown with yellow stripes. The protoconch is eroded. The sculpture on each of the spire whorls consists of an adapical dark red-brown granular spiral, a small undulated yellow thread, and an abapical spiral of large yellow granules. The base is rounded with three dark spirals on a yellow ground. Between the basal spirals are three fine intercalary spirals of beaded threads. The aperture is round; the outer lip thin and expanded. The sutural sulcus is circular and nearly closed by an extension of the outer lip.

Specimens are occasionally found associated with sponges in tide pools, and beach-

worn specimens are very common in drift in the Hawaiian Islands.

T. cingulifera differs from T. alternata Pease 1861 (p. 54) in that a row of brown granules alternates with a row of yellow. In T. alternata there are two yellow rows bordering a brown row on each whorl.

### Triphoris flammulata Pease, 1861

Pl. 6, Figs. 15, 16

Pease, 1861b: 434. Sandwich Islands [H.I.]

Tryon, 1887, 9: 191. Unfigured and doubtful species.

Paetel, 1887, 1: 348. As Triforis flammulatus. Sandwich Islands [H.I.].

Mant, 1923: 121. As Biforina flammulata. H.I.: Dredged from Kewalo Harbor, Oahu.

Viader, 1937: 43. Mauritius.

Kosuge, 1961: 413; Pl. 22, Fig. 3. As Viriola (s.s.) flammulata (Pease, 1860). Amami Islands [Japan].

Pease's Description: "Shell elongately pyramidal; whorls twelve to fourteen, spirally carinately ribbed, ribs three, central one much the smallest, a rib of the same size at the sutures; canal tubular, enclosed. Colour white, marked with spots and longitudinal flammules of light vellowish-brown."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961175. Length, 14 mm.; diameter, 5 mm.; aperture, 1.5 mm. Four paralectotypes (1961176): length 16 mm.; diameter, 4 mm.; aperture, 2 mm.; length, 13 mm.; diameter, 3 mm.; aperture, broken; length, 9 mm.; diameter, 3 mm.; aperture, broken; length, 7 mm.; diameter, 2.5 mm.

REMARKS: The shell is turriculate, white with splashes of yellow-brown. The protoconch is lacking. There are 18 or 19 spire whorls which are marked by two strong cords, between which there is an intervening thread, and a similar thread in front of the suture. In the abapical whorls the adapical cord is obscurely beaded. The last whorl is marked by one abapical cord and four adaptical cords which are obsoletely nodose.

The species is occasionally collected on the undersurface of stones on reef-flats in the Hawaiian Islands. Beachworn specimens are frequent in drift.

## Triphoris clavata Pease, 1861

Pl. 10, Fig. 2

Pease, 1861b: 434. Sandwich Islands [H.I.].
Tryon, 1887, 9: 191. Unfigured and doubtful species.

Edmondson, 1933: 130. H.I. Shell description.

Edmondson, 1946: 151. H.I. Shell description.

PEASE'S DESCRIPTION: "Shell elongate subulate; whorls fifteen to eighteen, bordered on each side by a row of granules, interstices concavely rounded, finely striated spirally, and bordered against the upper row of granules by a light ridge, obsoletely granulose; canal slightly recurved. Colour white or yellowish, interstices between the granules of a purplish or reddish brown, and spotted irregularly with same."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962814. Length, 9 mm.; diameter, 3 mm.; aperture, 2 mm. Paralectotype (1962815): length, 8.5 mm.; diameter, 3 mm.; aperture, 1.5 mm.

Remarks: The shell is cyrtoconoid, orange-brown with white gemmules. The protoconch is lacking. There are approximately 18 sharply impressed spire whorls. The whorls are marked by two rows of granules, approximately 16 per row, alternating vertically. The granules are polished hemispherical bosses which are shelved above, distant about their own diameter from their neighbours, and linked by an inconspicuous ridge. The surface between the granules is spirally grooved. The last whorl is marked in addition by a peripheral row of granules and three abapical ridges, each of the latter closely beaded. The aperture is perpendicular and nearly square. The outer lip is thickened and slightly reflected, the right margin closing the canal. The anal notch is deep. The semicircular canal is short, blunt, and oblique.

Beachworn specimens are frequent in drift in the Hawaiian Islands.

## Triphoris alternata Pease, 1861

Pl. 10, Fig. 4

Pease, 1861b: 434. Sandwich Islands [H.I.]. Pease, 1868e: 127. As Triphoris bicolor Pease.

Jousseaume, 1884: 222. As Mastonia harperi Jousseaume.

Tryon, 1887, 9: 190. As T. harperi Jousseaume. Paetel, 1887, 1: 347. As T. Harperi Jousseaume.

Pease's Description: "Shell turreted; whorls composed of three regularsized rows of granules, the middle one of dark reddish brown, the remaining two of a waxy-yellow colour; base longitudinally striated; canal closed, tubular."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962816. Length, 7 mm.; diameter, 2.5 mm. Two paralectotypes (1962817): length, 6 mm.; diameter, 2 mm.; length, 5 mm.; diameter, 1.5 mm.

REMARKS: The shell is turriculate, brown with white stripes. The protoconch is eroded. The spire whorls are moderately rounded, ornamented on the first threefour adapical whorls by two rows of beaded granules. About the fifth turn the whorls become distinct, and there are three rows of granules on the following whorls. Of the three rows, the adapical is light brown and consists of oblong beads, a distinct concavity separating it from the middle row which consists of much larger white granules which touch one another. The abapical row consists of oblong horn-coloured granules which are shelved adapically. The suture is deep with obsolete granular swellings continuous in it. The base is rounded with two spiral keels, one at the periphery just below the last granular spiral which meets the outer lip, the other ending at the top of the columella. The columella is twisted, with a heavy callus in the parietal region. The outer lip is thin, the external sculpture showing through. The canal is curved posteriorly.

Features distinguishing *T. alternata* and *T. cingulifera* have been discussed under *T*. cingulifera.

Beachworn specimens are common in drift in the Hawaiian Islands.

### Triphoris incisa Pease, 1861

Pl. 6, Figs. 19, 20

Pease, 1861b: 434. Sandwich Islands [H.I.].

Pease, 1871b: 25. As Triforis incisus. T. triliratus Deshayes from Réunion a synonym.

Martens and Langkavel, 1871: 37. Sandwich Islands [H.I.].

Tryon, 1887, **9**: 190; Pl. 39, Fig. 65. Sandwich Islands [H.I.].; Isle of Bourbon. Paetel, 1887, **1**: 348. As *Triforis incisus*. Sandwich Islands [H. I.].

Hedley, 1899: 447; Fig. 33. Funafuti, Ellice Islands.

Hidalgo, 1904-05: 204. Sibuyan, Philippines.

Oliver, 1915: 523. As Sinistroseila incisus (Pease). Kermadec Islands. Dredged dead shells 10-30 inches off Sunday Island. New genus erected for the species.

Faustino, 1928: 201. Sibuyan [Philippines]. Edmondson, 1933: 129; Fig. 55c. H.I.

Ingram, 1939: 118. As Triforis incisus. H.I.: Kaneohe Bay, Oahu.

Edmondson and Ingram, 1939: 257. As Triforis incisus Pease. H.I.

Edmondson, 1946: 151; Fig. 67c. H.I.

Kuroda and Habe, 1952: 91. Pacific coast of Japan.

Kosuge, 1961: 414; Pl. 22, Fig. 9. As Viriola (s.s.) incisa (Pease, 1860). Formosa; Okinawa; Amami Islands [Japan].

Pease's Description: "Shell subulate; whorls encircled by three prominent smooth and regular ribs, interstices deep and very finely striated, longitudinally, irregularly spotted and marbled with yellowish-white, brown, and purple of various shades."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1961151. Length, 15 mm.; diameter, 3·5 mm. Five paralectotypes (1961152): length, 12·5 mm.; diameter, 3 mm.; length, 11 mm.; diameter, 2·5 mm.; length, 10·5 mm.; diameter, 3 mm.; length, 9 mm.; diameter, 1·5 mm.; length, 12 mm.; diameter, 3 mm.

Remarks: The shell is turriculate, light chestnut-brown. The protoconch is eroded. The spire whorls are convex, marked by strong keeled spiral cords, the alternate cords smaller than the two bordering cords. Of the two bordering cords, the adapical is the larger. All three cords are equally spaced, the spaces between almost smooth or marked with very faint striae. The periphery of the last whorl is marked by a prominent cord, and the base by a single cord which terminates above the columella. The columella is twisted, with a callus covering the apertural surface. The outer lip is thin, with the external sculpture visible through it. It is notched at the junction with the last whorl.

In the Hawaiian Islands specimens are frequently collected clinging to the undersurface of loose rocks on reef flats and in shallow bays. Live-collected specimens are darker brown than the beachworn types, and are frequently encrusted with calcareous algae and serpulids.

## Triton pusilla Pease, 1861

Pl. 5, Figs. 19, 20

Pease, 1861b: 434. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 4. As Tritonium pusillum. Sandwich Islands [H.I.].

Kuster and Kobelt, 1878: 273. Sandwich Islands [H.I.].

Tryon, 1881, 3: 31; Pl. 16, Fig. 156. Sandwich Islands [H.I.].

Iredale, 1916: 32. As Zafrona isomella (Duclos).

PEASE'S DESCRIPTION: "Shell small, fusiform; whorls six, non-varicose, plicately ribbed longitudinally and spirally striated; aperture oblong oval, less than one-half the length of the shell; columella arcuate posteriorly, callous, smooth; outer lip denticulate; canal short, slightly recurved. Colour white, with irregular brown spots or flammules longitudinally disposed, interrupted in the centre of each whorl by a narrow transverse white line."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962818. Length, 9 mm.; diameter, 3 mm.; aperture, 3 mm.

Remarks: The shell is subulate, white variegated with brown on the last whorl. The protoconch consists of one and one-half whorls which are smooth, bulbous, and

white; the adapical whorl is broken. There are five spire whorls which are well-rounded, slightly shouldered, and marked by regular narrow axial ribs which are crossed by equally narrow, smooth spiral cords. The rectangular areas between the cords are sculptured with fine striations. There are approximately 15 ribs on the body whorl, 21 on the penultimate, and fewer on the adapical whorls. The aperture is elongate, the outer lip thickened and with six teeth on the inner surface. The columella is straight, a conspicuous callus covering it and reflected onto the parietal region and forming a ridge on the base. There are spiral striations on the base. The lip is slightly notched below the suture.

# Neritina neglecta Pease, 1861

Pl. 4, Figs. 5, 6

Pease, 1861b: 435. Sandwich Islands [H.I.].

Pease, 1868e: 129. Habitat. [Distinguished from N. nuttalli Reeve.]

Martens, 1879: 274. Sandwich Islands [H.I.]. Paetel, 1887, 1: 524. Sandwich Islands [H.I.].

Pilsbry, 1888, in Tryon, 10: 77. Unassigned species.

Sykes, 1900: 399. H.I.

Baker, 1923: 159; Pl. 13, Fig. 25. As Theodoxus neglectus. Shell and radular characters.

Ostergaard, 1928: 6, 29. As Nerita neglecta. H.I.: Oahu. Fossil.

Edmondson, 1933: 145; Fig. 7od. As Nerita neglecta. H.I.

Ostergaard, 1939: 70, 77. As Nerita neglecta. H.I.: Hawaii; Maui; Molokai. Fossil.

MacKay, 1945: 122. H.I. Shells inhabited by hermit crabs. Edmondson, 1946: 166; Fig. 82d. As Nerita neglecta. H.I.

McLean and Hebert, 1946: 55. As Theodoxus neglecta. Ponam Island, Admiralty Islands.

Pease's Description: "Shell obliquely ovate; spire very small, consisting of one whorl, depressed; finely striated spirally, and longitudinally engraved with irregular striae; columellar-area smooth, slightly curved, toothed in the centre; teeth seven or eight, covering rather more than half of the area; aperture expanded. Colour black, spotted irregularly with white."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1961186. Length, 16 mm.; diameter, 13 mm. Two paralectotypes (1961187): length, 16·5 mm.; diameter, 12 mm.; length, 15 mm.; diameter, 11 mm.

Remarks: The shell is globose and solid. The ground colour is deep black, peppered with irregular white spots. The sculpture consists of obsoletely engraved fine axial threads. There are two and one-half whorls. The spire is very low and the apex eroded. The aperture is lunate. The palatal lip is thin, sharp, and bears no teeth; it is white; the palatal hinge tooth is strong. The parietal area is smooth, plane, white, and bears a number of fine, irregular teeeth on the columellar edge. The sutures are but faintly impressed.

The species live below the low tide level in the Hawaiian Islands, usually in bays at the mouths of freshwater streams such as occur at Ala Moana and Kaimalino, Oahu.

## Vanikoro semiplicata Pease, 1861

Pl. 6, Figs. 7, 8

Pease, 1861b: 435. Sandwich Islands [H.I.].

Sowerby, 1878, Conch. Icon., 20, Vanikoro: Pl. 3, Fig. 22. South Seas. [Illustration of the holotype.]

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Tryon, 1886, 8: 95. As V. clathrata Recluz.

Paetel, 1887, 1: 512. As Naricia semiplicata. Sandwich Islands [H.I.]. Couturier, 1907: 164. Marutea: Aukena: Aratika [Tuamotus].

Smith, 1908: 112.

Pilsbry, 1921: 373. H.I.: Hilo [Hawaii]; Oahu; Kauai.

Dautzenberg and Bouge, 1933: 374. V. clathrata Tryon (pars, non Récluz) 1868 a synonym.

Marutea; Aukena; Aratika [Tuamotus].

Edmondson, 1933: 140. H.I.

Edmondson, 1946: 161-162. H.I.

PEASE'S DESCRIPTION: "Shell ovately globose, white, ornamented with spiral raised striae, interstices very finely striated; spire longitudinally ribbed, ribs becoming obsolete on the last whorl; umbilical aperture finely grooved, edges rounded."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962819. Length, 8 mm.; diameter, 8 mm.; aperture length, 6 mm.; aperture width, 4 mm.

REMARKS: The shell is small and white. The protoconch is eroded. There are two well-rounded whorls ornamented with spiral threads between which are finer interstitial threads. There are somewhat obsolete longitudinal ribs on the spire which are also apparent on the outer lip. The umbilicus is moderately large and grooved with conspicuous ridges. The columella is straight.

## Vanikoro imbricata Pease, 1861

Pl. 8, Fig. 11

Pease, 1861b: 435. Sandwich Islands [H.I.].

Sowerby, 1878, Conch. Icon., 20, Vanikoro: Pl. 3, Fig. 17. Islands in the Pacific. [Illustration of the holotype.]

Sowerby, 1884, Thes. Conch., 5, Vanikoro: 170; Pl. 482, Fig. 11. Islands in the Pacific.

[Illustration of the holotype.]

Tryon, 1886, 8: 70, 83; Pl. 29, Fig. 86. As ? V. acuta Récluz.

Paetel, 1887, 1: 511. As Naricia imbricata. Sandwich Islands [H.I.]. Smith, 1908. 113. Description of shell.

Pilsbry, 1921: 373. H.I.: Hilo; Kaneohe Bay.

Edmondson, 1933: 140. H.I. Edmondson, 1946: 161. H.I.

Pease's Description: "Shell obliquely ovately globose, light, thin, fragile, white, obliquely and longitudinally finely ribbed, crossed by spiral raised striae; umbilical aperture coarsely ribbed."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962820. Length, 6 mm.; diameter, 7 mm.; aperture, 6 mm.

REMARKS: The shell is small, globose, and white. The protoconch consists of one and one-half white, somewhat worn whorls. The sculpture of the other two whorls consists of oblique lirae cancellated with spiral striations. The whorls are distinct, slightly shouldered at the sutures. The umbilicus is moderately deep, with ridges and grooves, the latter marked by faint cross lirae.

Smith (1908) noted that the species differs from V. acuta Récluz by the presence

of the oblique lirae and generally oblique form.

Living specimens are occasionally found on the undersurfaces of small rocks in tidepools in the Hawaiian Islands.

# Euchelus corrugatus Pease, 1861

Pl. 8, Figs. 12, 13

Pease, 1861b: 435. Sandwich Islands [H.I.]. Paetel, 1887, 1: 555. Sandwich Islands [H.I.].

PEASE'S DESCRIPTION: "Shell globosely conic, turbinate, spirally ribbed and obliquely longitudinally striated; aperture nearly circular, umbilicated; outer lip thickened internally and ribbed. Colour light green, spotted with darker, spots arranged longitudinally and obliquely."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962821. Length, 3·5 mm.; diameter, 4 mm. Two paralectotypes (1962822): length, 3 mm.; diameter, 4 mm.; length, 3·5 mm.; diameter, 3·5 mm.

Remarks: Shell small, sturdy, white with transverse rose-pink splashes on the spire. The protoconch consists of one and one-half smooth, white whorls. The other whorls are convex, and marked by granular spiral cords. There are three worn cords on the adapical whorl, four on the next, and five on the last whorl. Faint axial riblets run between the spiral cords which are well separated from one another on all the whorls. The periphery of the last whorl is somewhat angular and marked by a spiral granular cord. The base is flattened, with three-four obsoletely granular cords between the periphery and the smooth umbilical region. The aperture is subcircular, the outer lip thickened, and there are three or four teeth internally, a wide groove, and a tooth at the termination of the columella. The columella is straight, white, and shining. The umbilicus is narrow and very deep.

In the Hawaiian Islands specimens are frequently collected on the undersides of rocks in shallow bays and in tidepools. Beachworn specimens are frequent in drift.

## Euchelus fimbriatus Pease, 1861

Pl. 8, Figs. 14, 15

Pease, 1861b: 435. Sandwich Islands [H.I.].

Paetel, 1887, 1: 555.

Pease's Description: "Shell globose conic, white, carinately ribbed; ribs spiral, prominent and fimbriated at their edges; interstices ribbed longitudinally and obliquely and deeply punctured; aperture oval, brilliantly iridescent within; outer lip ridged internally, indented at the umbilical region."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962823. Length, 3.5 mm.; diameter, 4 mm.

Remarks: The shell is small, sturdy, pearly white with an iridescent aperture. The protoconch consists of one and one-half white, smooth, whorls which are somewhat elevated above the next whorl. The whorls are marked by spiral cords and axial riblets forming tubercles at their junctions with the spiral cords. The spiral cords project outward, giving the whorls a sharp, angular appearance. Of these cords, there are two, three, and four on the succeeding whorls from the apex. The spiral cords are separated on all the whorls by shallow spaces about equal to the cords in width. The sutures are slightly constricted. The periphery of the last whorl is marked by the usual spiral cord but it is smaller than the preceding cord. The base is short, rounded, marked by four obsoletely granular cords. The umbilical area is smooth and there is no umbilicus. The aperture is subcircular, with the posterior angle obtuse and the outer lip very slightly thickened and flaring outward; the lip is faintly denticulated. The columella is straight and terminates in a projecting tooth.

## Margarita marmorea Pease, 1861

Pl. 9, Fig. 5

Pease, 1861b: 435. Sandwich Islands [H.I.].

Sowerby, 1886, Thes. Conch., 5, Turbo.: Pl 13, Fig. 171. Sandwich Islands [H.I.]. [Illustration presumably of one of Pease's specimens.]

Paetel, 1887, 1: 575. Sandwich Islands [H.I.].

Pilsbry, 1888, in Tryon, 10: 263; Pl. 69, Fig. 29. Sandwich Islands [H.I.].

Pilsbry, 1889, in Tryon, 11: 472. Sandwich Islands [H.I.]. Description from Pease.

Pilsbry, 1921: 378. ? As Leptothyra. Recorded from H.I.

Pease's Description: "Shell somewhat depressly turbinate; spire short, spirally striated; aperture circular, umbilicate; inner lip reflected over the umbilical region. Colour light green, clouded with white and green of different shades, and marked with occasional longitudinal and oblique zigzag lines of dark green."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962824. Length, 4 mm.; diameter, 4·5 mm.; aperture diameter, 2·5 mm. Two paralectotypes (1962825): length, 4 mm.; diameter, 3·5 mm.; length, 4 mm.; diameter, 4 mm.

Remarks: The shell is small, thin, and turbiniform. Both the protoconch and spire whorls are white in the type series; in specimens which have been collected alive the protoconch and the first whorl of the teleoconch are white, and the last whorl is marked by flammules of green splashed with brown. The protoconch consists of two whorls. The other whorls are convex, and marked by fine, narrow, spiral threads which are most obvious on the adapical whorls and which become obsolete on the abapical whorl; the last whorl is smooth. The sutures are but feebly constricted. The base is short, well-rounded, narrowly umbilicated, and marked by faint threads. The aperture is obliquely oval. The outer and basal lips are thin; the parietal region is glazed.

In the Hawaiian Islands the species is gregarious and can be collected in fairly large numbers from the undersurfaces of rocks and amongst algae in intertidal areas.

#### Turbo semicostatus Pease, 1861

Pl. 7, Figs. 3, 4

Pease, 1861b: 435. Sandwich Islands [H.I.].

Sowerby, 1886, Thes. Conch., 5, Turbo: 228; Pl. 14, Fig. 179. Isle of Capul [Philippines].

[Illustration presumably of the holotype.]

Paetel, 1887, 1: 539. As Collonia semicostata. Sandwich Islands. [H.I.].

Tryon, 1888, 10: 206; Pl. 63, Fig. 19. Description from Pease and illustration from Sowerby. Ins. Capul [Philippines]. (Cuming).

Hidalgo, 1904–05: 242. Isla de Cebu [Philippines].

Faustino, 1928: 137. Capul, Cebu [Philippines].

Pease's Description: "Shell depressly ovate, finely striated obliquely and longitudinally; spire and upper part of last whorl ridged, lower half smooth, ridges irregular in size, somewhat angulated at the centre; aperture circular, lip slightly effuse at base, imperforate. Colour light brownish red, marbled and variegated with darker, and ornamented with a broad yellowish spiral band below the periphery of the last whorl."

Holotype : B.M.(N.H.) Reg. No. 1961202. Length, 11 mm. ; diameter, 9 mm. ; aperture diameter, 5 mm.

Remarks: The shell is small and relatively smooth except for granular spirals at the adaptical portion of the whorls. The holotype appears to be a juvenile specimen resembling juveniles of what is locally known in the Hawaiian Islands as *Turbo intercostalis* Menke.

## Turbo sandwicensis Pease, 1861

Pl. 7, Figs. 7, 8

Pease, 1861b: 436. Sandwich Islands [H.I.].

Paetel, 1887, 1: 539. As Collonia sandwichensis Pse. Sandwich Islands [H.I.].

Tryon, 1888, 10: 207. Sandwich Islands [H.I.].

Pease's Description: "Shell ovately turbinated, slightly perforated, somewhat tubulous, spirally ridged; ridges smooth, alternately rather smaller, squamose; scales most prominent on the last whorl, becoming obsolete near the base and on the upper whorls, interstices between the ridges finely imbricately laminated; last whorl somwhat angulated at the upper part. Colour green, marbled and variegated with dark brownish red."

Ноготуре: В.М.(N.H.) Reg. No. 1961179. Length, 42 mm.; diameter, 40 mm.

Remarks: This species is now referred to as *Turbo intercostalis* Menke in the Hawaiian Islands. It is a commonly occurring species in shallow bays where there is an abundant growth of algae and numerous small rocks.

#### Collonia candida Pease, 1861

Pl. 9, Fig. 8

Pease, 1861b: 436. Sandwich Islands [H.I.].

Paetel, 1887, 1: 538. Sandwich Islands [H.I.].

Tryon, 1888, 10: 256; Pl. 63, Fig. 40. As Leptothyra candida. Sandwich Islands [H.I.]. Sowerby, 1886, Thes. Conch., 5, Turbo: 213; Pl. 13, Fig. 162. As Collonia candidus. Polynesia. [Illustration presumably of one of Pease's specimens.]

Pilsbry, 1921: 378. Recorded from H.I.

Edmondson, 1933: 143. As Leptothyra candida. H.I. Edmondson, 1946: 165. As Leptothyra candida. H.I.

PEASE'S DESCRIPTION: "Shell minute, thin, perforate, orbicular, ornamented with raised spiral striae (margins of upper whorls granulose at the sutures?); inner lip callous; aperture circular."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962826. Diameter, 2 mm.; altitude, 2 mm. Paralectotypes (1962827): two specimens with similar dimensions.

REMARKS: The shell is small, turbiniform, white. The protoconch is well rounded. The spire whorls are marked by strong spiral keels with smaller, finer threads between them. Of the keels, there are two on the adapical whorl, three on the next, and four on the last whorl. Axial sculpture on the two adaptical whorls consists of beaded granulations which become obsolete at the summit of the last whorl. The sutures are channelled. The periphery of the last whorl is well-rounded. The base is short and narrowly but openly umbilicate, and the umbilical area is bordered posteriorly by a granular cord which continues to the bottom of the lip. The aperture is subcircular, oblique; the outer lip is thin at the edge but much thickened internally. The columella is thick and strongly curved; the parietal region is covered by a thick callus.

Specimens are frequent in beach drift in the Hawaiian Islands.

## Collonia variabilis Pease, 1861

Pl. 7, Figs. 1, 2

Pease, 1861b: 436. Sandwich Islands [H.I.].

Pease, 1868b: 234.

Paetel, 1887, 1: 539. Sandwich Islands [H.I.].

Pilsbry, 1888, in Tryon, 10: 176. As Phasianella variabilis. Sandwich Islands [H.I.]. Pease's description quoted.

Pilsbry, 1917: 207-208. As Phasianella variabilis. H.I.: Oahu; Kahoolawe; Hawaii.

Edmondson, 1933: 141; Fig. 65b. As Phasianella variabilis. H.I. Viader, 1937: 54. As Phasianella variabilis Pease. Mauritius.

Edmondson, 1946: 163; Fig. 77b. As Phasianella variabilis. H.I.

Pease's Description: "Shell small, thin, ovate, shining; whorls three or four, convexly rounded, marked with very fine obliquely longitudinal striae; inner lip callous, slightly expanded at the base; indented at the umbilical region, and with a groove behind the inner lip; aperture ovate. Colour white, variously painted with pink lines and blotches; the lines fine, oblique, extending over a portion of the whorls, sometimes flexuous and covering the whole surface; blotches of a longitudinal shape; the periphery of the last whorl usually ornamented with a row of pink spots."

Lectotype (selected by R. Robertson (in press)): B.M.(N.H.) Reg. No. 1963331. Length, 3·7 mm.; diameter, 2·9 mm. Two paralectotypes (1963332): length, 3·5 mm.; diameter, 2·8 mm.; length, 3·2 mm.; diameter, 2·6 mm.

REMARKS: The type lot, consisting of three specimens, was located by R. Robertson in September 1963 (Robertson's personal communication), and the species will be dealt with by him in a forthcoming publication.

## Alcyna rubra Pease, 1861

Pl. 7, Figs. 5, 6

Pease, 1861b: 436. Sandwich Islands [H.I.].

Reeve, 1862, Conch. Icon., 13, Phasianella: Pl. 6, Figs. 18a, b. As Phasianella rubra. Sandwich Islands [H.I.]. "Great doubt about it being a Phasianella." [Illustrations of one of Pease's specimens.]

Pease, 1868b: 234.

Schmeltz, 1869, 4: 100. Sandwich Islands [H.I.].

Martens and Langkavel, 1871: 47; Pl. 2, Fig. 14. Sandwich Islands [H.I.].

Paetel, 1873: 74. Sandwich Islands [H.I.].

Sowerby, 1884, Thes. Conch., 5, Phasianella: Pl. 21, Figs. 19, 20. As Phasianella rubra.

Paetel, 1887, 1: 563. Sandwich Islands [H.I.].

Pilsbry, 1888, in Tryon, 10: 182; Pl. 40, Figs. 6, 7. H.I.

Pilsbry, 1917: 210; Pl. 15, Figs. 1, 2. H.I.: Oahu; Kahoolawe.

Mant, 1923: 121. H.I.: Dredged from Kewalo Harbor, Oahu.

Edmondson, 1933: 141; Fig. 65a. H.I. Edmondson, 1946: 163; Fig. 77a. H.I.

Pease's Description: "Shell small, ovate, smooth, polished; whorls four, convexly rounded; aperture ovate; indented at the umbilical region, and grooved; columella with a prominent tooth near the base. Colour red, of different shades, or painted in a variety of patterns with blotches and spots of white and red, or marked with oblique longitudinal red lines."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962828. Length, 3 mm.; diameter, 1.5 mm. Eleven paralectotypes (1962829): dimensions similar.

Remarks: The shell is ovate-conical, of four convex post-nuclear whorls separated by constricted sutures; the protoconch is eroded. The outer lip is smooth, slightly thickened internally, and the columellar tooth projects into the aperture. There is a shallow, elongate pseudumbilicus, which is striated by three to five fine grooves. The shell is pink, ocellated with small white spots; the second and last whorls are banded by a white ribbon with flammules of light brown; the apex is white.

The type lot originally consisted of fifteen specimens, three of which were pointed out by Robertson (personal communication) to be examples of *Collonia variabilis* Pease. The eleven paralectotypes show considerable variation in colour, varying

from solid pink to white encircled by narrow bands of dark red. The umbilical area is variously developed, ranging from a shallow trough to a solid base; the base is smooth in some specimens but engraved with fine spirals in others.

The same variability has been noted within live-collected colonies of this species in the Hawaiian Islands.

The specific epithet *rubra* is a misnomer; while beachworn specimens are red or deep pink, specimens collected alive are olivaceous, assuming a red colour only after they have been out of water for some time. The species is common in beach drift from the shores of Oahu and Kauai [H.I.], and living animals occur in an encrusting red alga on small rocks in tidepools and shallow bays.

## Alcyna subangulata Pease, 1861

Pl. 9, Fig. 6

Pease, 1861b: 436. Sandwich Islands [H.I.]. Paetel, 1887, 1: 563. Sandwich Islands [H.I.].

Pilsbry, 1888, in Tryon, 10: 182. Sandwich Islands [H.I.]. Description quoted from Pease.

Pilsbry, 1917: 213; Pl. 15, Figs. 5, 7. H.I.: Oahu.

Edmondson, 1933: 142. H.I. Edmondson, 1946: 163. H.I.

PEASE'S DESCRIPTION: "Shell minute, rather solid, turbinate, ovate, ornamented with raised spiral striae; whorls four, depressed somewhat in the centre; outer lip thickened externally; aperture circular; columella ending in a prominent tooth. Colour deep red, with oblique light-red lines."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962830. Length, 2.5 mm.; diameter, 1.5 mm.

REMARKS: The holotype conforms to Pease's description except in colour; it is white. Pilsbry (1917) has remarked on various colour differences among specimens of *A. subangulata* from the Pease collection at the Museum of Comparative Zoology, Harvard University.

The shell is small, conoidal, and with angular whorls; the post-nuclear whorls are marked by fine spiral threads; the sutures are only faintly constricted. The aperture is subcircular, the outer lip thickened with a swelling externally below the suture. The pseudumbilicus is triangular, with ridges and grooves leading from it. The columellar tooth projects posteriorly into the aperture. The protoconch is smooth, white, and flattened apically.

In the Hawaiian Islands beachworn specimens are occasionally collected in drift from the shores of Oahu and Kauai; they range in colour from deep rose striated with red to pale pink.

Tugalia oblonga Pease, 1861

Pl. 11, Figs. 4, 5

Pease, 1861b: 437. Sandwich Islands [H.I.].

Paetel, 1887, 1: 591. As Parmophorus oblonga. Sandwich Islands [H.I.].

Pilsbry in Tryon, 1890, 12: 287. Sandwich Islands [H.I.]. Edmondson, 1933: 147. As Hemitoma oblonga. H.I. Edmondson, 1946: 169. As Hemitoma oblonga. H.I.

PEASE'S DESCRIPTION: "Shell oblong oval, depressly conical, radiately ribbed; ribs granulose, interstices decussated by concentric raised striae; apex near posterior margin white."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962831. Length, 10 mm.; diameter, 5 mm. Paralectotype (1962832): length, 9 mm.; diameter, 5.5 mm.

Remarks: The shell is oblong, white. The outer surface is marked by fine radiating ribs and spiral axial ribs, with small tubercles formed at the junction between the two. The spire is set well back.

#### Scutellina cancellata Pease, 1861

Pl. 11, Figs. 8, 9

Pease, 1861b: 437. Sandwich Islands [H.I.].

Cooke, 1885: 273. Wrongly identified from Suez by MacAndrew.

Paetel, 1887, 1: 599. Sandwich Islands [H.I.].

Pilsbry, 1890, in Tryon, 12: 129. As? Phenacolepas. Sandwich Islands [H.I.].

Dautzenberg and Bouge, 1933: 415. Papeete [Tahiti].

Edmondson, 1933: 146; Fig. 71a. As Phenacolepas cancellatus (Pease). H.I. Edmondson, 1946: 168; Fig. 83a. As Phenacolepas cancellatus (Pease). H.I.

Pease's Description: "Shell oval, somewhat conical; surface cancellated by fine radiating ribs and concentric raised striae; apex extending to the posterior margin. Colour white."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962833. Length, 7 mm.; diameter, 5 mm. Paralectotype (1962834): length, 9.5 mm.; diameter, 7 mm.

Remarks: The specimens are beachworn and the sculpture is very faint, consisting of fine radiating ribs crossed by sharper spirals.

## Mucronalia rosea Pease, 1861

Pl. 11, Fig. 1

Pease, 1861b: 437. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Eulima: Pl. 5, Fig. 39. As Eulima rosea Pease. [Illustration presumably of holotype.]

Tryon, 1886, 8: 284; Pl. 70, Fig. 7. As Eulima (Mucronalia) rosea. Sandwich Islands [H.I.].

Paetel, 1887, 1: 276, 281. As Eulima rosea. Sandwich Islands [H.I.].

Clessin, 1899: 18; Pl. 4, Fig. 9. Sandwich Islands [H.I.].

Pilsbry, 1917: 226. H.I.

Pease's Description: "Shell elongate ovate, smooth, polished; whorls six, convexly rounded; aperture oval. Colour rose pink. Found on *Echini*."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962809. Length, 4.5 mm.; diameter, 2.5 mm.

Remarks: The shell is small, ovate, pink-brown, and highly polished. The protoconch is broken. There are six spire whorls which are moderately rounded, and separated by moderately impressed sutures. The base is fairly long and well-

rounded. The aperture is ovate, the posterior angle acute. The outer lip is broken in the holotype but was apparently thin. The inner lip is curved and partly reflected over the umbilical area. There is a thin callus over the parietal region.

The illustration in Sowerby (1866), presumably of the holotype, shows the proto-

conch.

#### Mucronalia nitidula Pease, 1861

Pl. 11, Fig. 3

Pease, 1861b: 437. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Eulima: Pl. 5, Figs. 35a, b. As Eulima nitidula. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Islands [H.I.]. [Illustration of one of Pease's specimens.]

Tryon, 1886, 8: 284; Pl. 70, Fig. 2. As Eulima (Mucronalia) nitidula. Sandwich Islands [H.I.].

Paetel, 1887, 1: 276. As Eulima nitidula. Sandwich Islands [H.I.].

Clessin, 1899: 22; Pl. 5, Fig. 6. Sandwich Islands [H.I.].

Pilsbry, 1917: 226; Fig. 12c. H.I.

Edmondson, 1933: 120; Fig. 5od. H.I. Common form on *Holothuria atra*. Edmondson, 1946: 140; Fig. 62d. H.I. Common form on *Holothuria atra*.

PEASE'S DESCRIPTION: "Shell small, subulate, thin, polished, vitreous; whorls convexly rounded, five in number, nucleus of three whorls slightly distorted; aperture small, ovate; inner lip slightly thickened and reflected at its junction with the columella. Colour white or light fawn-colour. Lives on *Holothuriae*."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962835. Length, 4.5 mm.; diameter, 2 mm. Three paralectotypes (1962836): length, 3.5 mm.; diameter, 2 mm.; length, 3.5 mm.; diameter, 1 mm.

Remarks: The shell is small, ovate, polished, white with a light brown band on the apical third of the penultimate whorl. The protoconch consists of three white, polished whorls which are considerably more slender than the spire whorls and tilted to one side. There are five spire whorls which are convex and separated by constricted sutures. The base is relatively long and rounded. The aperture is oval, and the posterior angle is acute but wide. The outer lip is thin and sinuous; the inner lip is reflected over the base of the shell. There is a thin callus over the parietal region.

Of the four specimens comprising the set, the specimen selected as the lectotype was the only one showing the brown coloration and the only one in perfect condition;

the others lack the protoconch or have broken lips.

In the Hawaiian Islands living animals are not infrequently collected on *Holothuria* atra on the islands of Kauai and Oahu.

## Mucronalia ovata Pease, 1861

Pl. 11, Fig. 2

Pease, 1861b: 437. Sandwich Islands [H.I.].

Pilsbry, 1917: 226. Description quoted from Pease. "A lost species . . ."

PEASE'S DESCRIPTION: "Shell elongately ovate, light, dull shining; whorls fine, slightly convex; inner lip thickened at the base and extending by a callosity over the columella to the junction of the outer lip. Colour dull white. Lives on *Echini*."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962810. Length, 7 mm.; diameter, 4·5 mm. Paralectotype (1962811): length, 7 mm.; diameter, 4·5 mm.

Remarks: The shell is cyrtoconoid, large, and white. The protoconch consists of a single obliquely angled whorl which is very small in proportion to the spire whorls. There are six spire whorls which are convex; the last whorl is especially well-rounded and prominent. The sutures are moderately constricted. The aperture is oval, and the posterior angle acute. The outer lip is thin and the inner lip is reflected over the base.

#### Tectura radiata Pease, 1861

Pl. 11, Figs. 6, 7

Pease, 1861b: 437-438. Sandwich Islands [H.I.].

Paetel, 1887, 1: 598. As Patelloidea radiata. Sandwich Islands [H.I.].

Pilsbry, 1891, in Tryon, 13: 154. As Williamia gussoni Costa.

Melvill and Standen, 1897: 414-415. As Williamia radiata. Cape Verde, St. Helena; Loyalty Islands. [Had access to Pease's specimens.]

PEASE'S DESCRIPTION: "Shell conical, oval, smooth, radiately ribbed; ribs few in number, wide, and becoming obsolete on the upper half of the shell; apex in a line with the posterior margin of the shell. Colour brownish red, ornamented with white or reddish-white diverging lines."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962837. Length, 5.5 mm.; diameter, 5 mm. Paralectotype (1962838): length, 5 mm.; diameter, 4.5 mm.

Remarks: The shell is small, thin, shining, and transparent. The apex is situated near the posterior margin, but is on the median line; it is recurved. The margins of the shell are almost vertical. The exterior is provided with a fine microsculpture.

In the Hawaiian Islands living specimens have been found in association with a crustose red alga in the shallow waters of sheltered bays.

## Eulima aciculata Pease, 1861

Pl. 9, Fig. 2

Pease, 1861b: 438. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Eulima: Pl. 5, Figs. 36a, b. [Illustration of one of Pease's specimens.]

Martens and Langkavel, 1871: 29; Pl. 1, Fig. 22. Sandwich Islands [H.I.].

Tryon, 1886, 8: 278. Sandwich Islands [H.I.].

Melvill and Standen, 1897: 412. As *Eulima (Subularia) aciculata*. Lifu [New Caledonia]. From stomachs of Holothurians. [Had access to Pease's specimens.]

Clessin, 1902: 19; Pl. 4, Fig. 11. Sandwich Islands [H.I.].

Couturier, 1907: 167. Marutea Lagoon; Vahitaki; Tearia [Tuamotus.]

Schepman, 1909: 235. Pulu Sarassa, Postillon Islands.

Pilsbry, 1917: 214; Pl. 14, Fig. 17. As Melanella aciculata. H.I.

Mant, 1923: 122. As Melanella aciculata. H.I.: Kewalo Harbor dredgings [Oahu].

Dautzenberg and Bouge, 1933: 386. Raiatea; Tahiti; Marutea; Vahitaki; Tearia [Tuamotus].

Edmondson, 1933: 120; Fig. 50b. As Melanella aciculata. H.I.

Ingram, 1939: 118. As Melanella aciculata. Associated with Atys semistriata. H.I.:

Kaneohe Bay, Oahu.

Edmondson and Ingram, 1939: 257. As Melanella aciculata. H.I. Edmondson, 1946: 140; Fig. 62b. As Melanella aciculata. H.I.

Habe, 1952a: 74. As Balcis aciculatus Pease.

PEASE'S DESCRIPTION: "Shell slender, acicular, smooth, shining, polished; whorls about twelve, flattened; sutures faintly defined; apex slightly distorted; aperture small, oval; lip plain, simple. Colour white."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1962839. Length, 8 mm.; diameter, 2 mm. Four paralectotypes (1962840): length, 9 mm.; diameter, 3 mm.; length, 9 mm.; diameter, 2·5 mm.; length, 9 mm.; diameter, 2·5 mm.; length, 7·5 mm.; diameter, 2 mm.

Remarks: The shell is subulate, solid, and milky white. The apical whorls curve abaperturally and laterally. The apex is small and blunt. There are eleven convex spire whorls, the last whorl equal to less than one-half of the shell length. The aperture is ovate, with the outer margin projecting forward. The columellar margin is thickened.

In the Hawaiian Islands this species is frequently collected on various species of *Holothuria* on the islands of Kauai and Oahu.

## Leiostraca distorta Pease, 1861

Pl. 11, Figs. 12, 13

Pease, 1861b: 438. Sandwich Islands [H.I.].

Sowerby, 1866, Conch. Icon., 15, Eulima: Pl. 3, Fig. 15. [Illustration of the holotype.]

Tryon, 1886, 8: 281-282; Pl. 70, Fig. 91. As Eulima peasei Tryon.

Paetel, 1887, 1: 278. Sandwich Islands [H.I.].

Clessin, 1902: 37; Pl. 9, Fig. 2. Sandwich Islands [H.I.].

Pilsbry, 1917: 229; Figs. 13c, d. As Subularia distorta. H.I.

PEASE'S DESCRIPTION: "Shell small, subulate, light, thin, smooth, transparent, curved and distorted; whorls about eight, flattened, the last about half the length of the shell; aperture oblong oval, rather more than half the length of the last whorl; inner lip continued by a callosity over the columella to its junction with the outer lip. Colour white."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962841. Length, 5 mm.; diameter, 1.5 mm.; aperture length, 2 mm.

Remarks: The spire curves both abaperturally and laterally. The sutures are shallow, demarcated by a wide abapical border. The aperture is long and narrow; the inner lip is nearly straight and callous.

Beachworn specimens are collected infrequently in drift in the Hawaiian Islands.

#### Turbonilla decussata Pease, 1861

Pl. 5, Figs. 15, 16

Pease, 1861b: 438. Sandwich Islands [H.I.].

Tryon, 1886, 8: 335.

Paetel, 1887, 1: 259. As Chemnitzia decussata. Sandwich Islands [H.I.].

Hidalgo, 1904-05: 186. Sandwich Islands [H.I.].

Pilsbry and Vanatta, 1908: 58.

Pilsbry, 1918: 316. As? Turbonilla (Lancella) varicosa A. Ad. H.I.

PEASE'S DESCRIPTION: "Shell subulate, light, thin, white, longitudinally ribbed and decussately spirally striated; ribs about twenty in number, becoming obsolete at the periphery of the last whorl, spiral striae continuing to the base; whorls ten, convexly rounded, the first few shouldered posteriorly, irregularly varicose; varices four or five in number, about twice the width of the ribs and with their surface transversely striated; outline of the spire slightly curved; sutures well-impressed; aperture oval; columella indentedly curved; inner lip straight, very slightly recurved at base."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962842. Length, 12·5 mm.; diameter, 3 mm.; aperture, 2 mm. Five paralectotypes (1962843) (all broken): length, 11–14 mm.; diameter, 3–4 mm.

Remarks: The shell is slender, turriculate, and translucent white. The protoconch consists of one and one-half inflated, white whorls which are slightly crenulated abapically. There are nine spire whorls which are distinctly convex and separated by constricted sutures. The spire whorls are marked by well-developed, almost vertical, axial ribs of which fourteen occur on the first spire whorl and increasing numbers on the succeeding whorls, with twenty-two on the last whorl. The ribs are crossed by smooth, low spiral cords of which there are approximately ten on the last whorl; the cords are separated by smooth spaces almost the same width as the cords themselves. In addition to the sculpture, the whorls are also marked by two to three small varices which may be continuous from one whorl to the next. The base is rounded and marked only by spiral cords, the axial ribs having become obsolete. The aperture is oval and the adapical angle is obtuse. The outer lip is thin; the inner lip is sinuous.

Of the six specimens comprising the set, only one still possessed the protoconch, and it was selected as the lectotype.

#### Rissoina triticea Pease, 1861

Pl. 11, Fig. 11

Pease, 1861b: 438. Sandwich Islands [H.I.].

Pease, 1862: 382.

Weinkauff, 1881: 72; Pl. 15b, Fig. 3.

Sowerby, 1878, Conch. Icon., 20, Rissoina: Pl. 11, Fig. 102. Pacific Ocean. [Illustration of holotype.]

Nevill, 1885: 82. Mauritius, Bourbon, Ceylon, Andamans, Aden.

Watson, 1886: 617. Levuku, Fiji; Andamans; Ceylon; Aden; Mauritius; Red Sea. [Had access to holotype.]

Paetel, 1887, 1: 454. Sandwich Islands [H.I.].

Tryon, 1887, 9: 380; Pl. 56, Fig. 76; Pl. 57, Fig. 77. Red Sea; Indian Ocean; Mauritius; Polynesia.

Melvill and Standen, 1901: 369. As Rissoina (Schwartziella) triticea var. microstoma Nevill. Persian Gulf. [Had access to holotype.]

Hidalgo, 1904-05: 217. Luzon; Tablas, Philippine Islands.

Thiele, 1930: 572. Sharks Bay, South Australia.

Edmondson, 1933: 136. H.I.

Tomlin, 1935: 76. Christmas Island, Indian Ocean. [Had access to holotype.]

Viader, 1937: 47. As Rissoina rissoi Audouin. Mauritius.

Edmondson, 1946: 158. H.I.

Laseron, 1956: 450.

PEASE'S DESCRIPTION: "Shell somewhat fusiformly ovate; whorls five, convexly rounded, the last more than half the length of the shell, longitudinally ribbed; ribs nine, prominent, smooth, continuous over the sutures; aperture ovate; outer lip thickened externally; suture at base slight. Colour white."

HOLOTYPE: B.M.(N.H.) Reg. No. 1962844. Length, 3 mm.; diameter, 1.5 mm.

Remarks: The holotype is much eroded and discolored. The shell is small, broad, and white. The spire whorls are barely convex; the sutures are only faintly impressed. The spire whorls are marked by smooth axial ribs, of which eight occur on the apical whorls and eleven on the last whorl. The interspaces between the ribs are gently channelled. The aperture is oval, with a sinus at the adapical angle. The outer lip is thickened by a ridged rim the basal margin of which is reflected outward. A thin callus covers the parietal region.

This is a very common species, dead in beach drift and living in large numbers under stones in tidepools and in shallow bays in the Hawaiian Islands.

## Rissoina turricula Pease, 1861

Pl. 11, Fig. 10

Pease, 1861b: 438. Sandwich Islands [H.I.].

Pease, 1862: 382.

Weinkauff, 1881: 80; Pl. 15c, Fig. 6. Sandwich Islands [H.I.]; Ceylon; Mauritius. Paetel, 1887, 1: 451. Sandwich Islands [H.I]. Rissoina cernica Nevill and R. ceylonica Nevill are synonyms.

Tryon, 1887, 9: 377; Pl. 56, Fig. 63. Sandwich Islands [H.I.]; Viti Islands; Ceylon; Mauritius.

Melvill and Standen, 1897: 410. Lifu [New Caledonia]. [Had access to Pease's specimens.] Hedley, 1899: 421. As Rissoina plicata Adams.

Edmondson, 1933: 136. H.I.

Tomlin, 1935: 76. Christmas Island, Indian Ocean. [Had access to Pease's specimens.]

Viader, 1937: 48. Mauritius. Edmondson, 1946: 158. H.I.

PEASE'S DESCRIPTION: "Shell turreted; whorls six, slightly angulated at the upper part, finely striated tranversely, ribbed longitudinally; ribs ten, prominent; the last whorl encircled by a groove near its base; aperture ovate; suture at the base broad. Colour white."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1962845. Length, 4 mm.; diameter, 2 mm. Three paralectotypes (1962846): dimensions similar.

Remarks: The lectotype conforms to Pease's description, to which little can be added. The species is easily distinguished from the preceding species by its turreted shape and more convex whorls. Although not so common either in drift or in the living state as *R. triticea* in the Hawaiian Islands, it is frequently collected. *R. turricula* occurs, as does *R. triticea*, under rocks in tide-pools and in shallow bays.

## Fissurella granifera Pease, 1861

Pl. 12, Figs. 3, 4

Pease, 1861c: 244. Sandwich Islands [H.I.].

Sowerby, 1862, Thes. Conch., 3, Fissurella: 199, Pl. 7, Fig. 165. Sandwich Islands [H.I.]. [Illustration of one of Pease's specimens.]

Carpenter, 1865 : 518. Pease, 1868b : 232.

Martens and Langkavel, 1871: 50, Pl. 2, Fig. 19. Sandwich Islands [H.I.].

Pilsbry, 1890, in Tryon, 12: 207, Pl. 63, Fig. 13. As Glyphis granifera Pease. Sandwich Islands [H.I.].

Edmondson, 1933: 147, Figs. 71a, b. As Diadora [sic] granifera. H.I. Edmondson, 1946: 168, Fig. 83, b and d. As Diadora [sic] granifera. H.I.

Pease's Description: "Shell conical, slightly ovate, inclined anteriorly, radiately granosely ribbed; interstices cancellated; orifice oblong, slightly excavated in the middle. Colour white, rayed with light green.

Hab. Sandwich Islands."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1964278. Length, 5 mm.; diameter, 3.5 mm.; height, 2 mm. Four paralectotypes (1964279): length, 5 mm.; diameter, 4 mm.; height, 2.5 mm.; length, 5 mm.; diameter, 3.5 mm.; height, 2 mm.; length, 5 mm.; length, 5 mm.; diameter, 3.5 mm.; height, 2 mm.; diameter, 3.5 mm.; height, 2 mm.

Remarks: The shell is small, thin, conical, elevated and narrowed anteriorly with the apex anterior to the middle. The anterior slope is short, straight or convex; the posterior slope is long and may also be convex. The orifice is long, narrow and trilobate. The surface is dull and the sculpture of narrow, close-set, nearly equal radiating ribs which are crossed by concentric, raised threads forming small nodules where they intercept the ribs. The margin is finely denticulated. The interior colour is like that on the outer surface, with the green rays mentioned by Pease showing through.

There are two lots in the Cuming collection, one of four specimens and the other of five, but there is no indication as to which might have served as the type series. The lectotype was chosen to best represent Pease's description of "colour white, rayed with light green". The species is variable in colour, however, the type lot ranging from pure white to mottled grey, as do specimens collected alive.

This species is common under rocks in the inshore waters of the Hawaiian Islands.

## Planaxis plumbea Pease, 1861

Pl. 13, Figs. 11, 12

Pease, 1861c: 244. Sandwich Islands [H.I.].

Smith, 1872a: 42. As Planaxis labiosus A. Ad. [Had access to Pease's specimens.]

Sowerby, 1878, Conch. Icon., 20, Planaxis: Pl. 2, Fig. 14. As Planaxis labiosus A. Ad. [Had access to Pease's specimens.]

Sowerby, 1884, Thes. Conch., 5, Planaxis: 177. As Planaxis labiosus A. Ad. Sandwich Islands [H.I.]. [Had Access to Pease's specimens.]

Nevill, 1885: 189. As *Planaxis labiosus* var. *plumbea* Pease, 1861. Sandwich Islands [H.I.]. Tryon, 1887, 9: 305. As *Plabiosus* A. Ad. [sic.].

PEASE'S DESCRIPTION: "Shell solid, oblong-ovate, minutely striated transversely; bluish lead-colour, surrounded with black and whitish bands, usually on the lower half of the whorls, upper part with one or two obscure black bands, the margins of the whorls tinged with reddish brown; whorls six, convex, the last more than two-thirds the length of the shell; aperture ovate, expanded; columella curved, epidermis brown, velvety.

Hab. Sandwich Islands."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964280. Length, 11.5 mm.; diameter, 6 mm. Thirteen paralectotypes (1964281):

| No. | Length | Diameter | No.  | Length | Diameter |
|-----|--------|----------|------|--------|----------|
| (1) | 12.9   | 6.7      | (7)  | 12.9   | 7.2      |
| (2) | 12.7   | 8.5      | (8)  | 12.6   | 7.4      |
| (3) | 12.0   | 7.2      | (9)  | 13.0   | 7.2      |
| (4) | 12.8   | 7.5      | (10) | 12.9   | 7.3      |
| (5) | 13.2   | 7.6      | (11) | 12.3   | 7.0      |
| (6) | 12.9   | 7.1      | (12) | 12.3   | 7.4      |
|     |        |          | (13) | 12.5   | 6.9      |

REMARKS: To Pease's description can only be added that the apical channel is expanded and curves upward.

The specimen selected as the lectotype is that which was figured by Sowerby (1878) and was in the Hanley Collection, received from Pease.

This species is common in the waters of shallow bays in the Hawaiian Islands.

## Melampus (Tralia) striatus Pease, 1861

Pl. 12, Figs. 9, 10

Pease, 1861c: 244. Tahiti.

Pease, 1868d: 100, Pl. 12, Fig. 14. Tahiti. Martens and Langkavel, 1871: 56. Tahiti.

Sowerby, 1878, Conch. Icon., 20, Auricula: Pl. 6, Fig. 44. As Auricula striata.

Dautzenberg and Bouge, 1933: 49. Huahine, Tahiti. Melampus montrouzieri Gassies a synonym.

Pease's Description: "Shell elongately ovate, dark brown; spire short; apex granulose; last whorl ornamented with revolving striae, which, on mature

specimens, are distant or disappear altogether on the middle portion of the whorl; columella furnished with three plaits and one at the base; outer lip with one or two lamellae.

Hab. Tahiti."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1964282. Length, 10 mm; diameter, 6 mm.; aperture length, 8 mm. Three paralectotypes (1964283): length, 8 mm.; diameter, 5 mm.; aperture length, 6·5 mm.; length, 8 mm.; diameter,  $4\cdot5$  mm.; aperture length, 6 mm.; length,  $7\cdot5$  mm.; diameter, 4 mm.; aperture length, 6 mm.

Remarks: There are four whorls plus the protoconch. The last whorl is subcylindrical, smooth, obsoletely sculptured by fine spiral striae. The aperture is sublinear, with four widely spaced axial lamellae, the two on the columella being most prominent. There is a single lamella on the outer lip of the specimen selected as lectotype.

## Lophocercus viridis Pease, 1861

Pl. 12, Figs. 7, 8

Pease, 1861c: 246. Pacific Islands.

Pease, 1868d: 74, Pl. 8, Figs. 1, 2. Huaheine [Society Is.].

Nevill and Nevill, 1869: 66.

Pease's Description: "Body oval or ovate; dorsal region elevated; tentacles well developed, grooved and truncated; eyes immersed immediately behind the tentacles; lateral lobes regular in shape, outline of the edges convex, not meeting; foot linear, adapted for clasping sea-weed; the whole upper surface garnished with more or less numerous, cirrigerous appendages. Colour grass-green, mottled with darker; some are minutely dotted with brown, others with a few blue dots, margined with black rings along the edge of the lateral lobes and on the neck.

Shell thin, fragile, white, ovate, striated obliquely, convolute; outer lip separate from the apex, overlaps the inner posteriorly, and produced in a tubular form.

Station, on sandy bottom, among seaweed, in shallow water. When handled, it discharges a white viscid fluid."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964324. Length, 11 mm.; diameter, 7 mm. Two paralectotypes (1964325): length, 10 mm.; diameter, 9 mm.; length, 9 mm.; diameter, 7 mm.

Remarks: The specimens conform well to Pease's description of the shell, to which little can be added.

# Latirus squamosus Pease, 1863

Pl. 12, Figs. 12, 13

Pease, 1863b: 240-241.

Pease, 1868c: 278, Pl. 23, Fig. 16. Baker Id.

Tryon, 1880, 2: 255. Sistrum squamosum Pease a synonym of Ricinula marginata Bl.

Melvill, 1891: 402. Baker's Id., Polynesia.

Smith, 1901: 113. Sistrum squamosum Pease var. Umkomas, Natal; Kingsmill Is. [Gilbert Is.], Philippines, Sarawak.

PEASE'S DESCRIPTION: "Shell fusiform, turreted; body-whorl somewhat ventricose, longitudinally ribbed; ribs seven or eight, transversely ridged; ridges somewhat distant, becoming nodulous on the longitudinal ribs; interstices finely ribbed, transversely and very finely striated longitudinally, squamate, more particularly at the base of the body-whorl. Whorls ornamented at the sutures with a row of prominent, erect, squamate scales or spines; lower part of last whorl contracted towards the base. Colour reddish brown; nodulous portion of the transverse ridges yellowish white; scales and spines white; aperture white.

Length 45, breadth 20 mill."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1964284. Length, 37 mm.; diameter, 20 mm.; length of aperture, 19 mm. Two paralectotypes (1964285): length, 35 mm.; diameter, 19 mm.; aperture length, 16·5 mm.; length, 34 mm.; diameter, 17·5 mm.; aperture length, 19 mm.

REMARKS: Pease's diagnosis of the species is adequate. None of the three specimens in what is apparently the type lot has the dimensions noted by Pease, and the largest specimen in the lot has been selected as the lectotype. The locality given on the tablet to which the specimens were attached is merely "Polynesia"; Pease subsequently noted "Baker Island" as the type locality.

## Pisania strigata Pease, 1863

Pl. 12, Figs. 16, 17

Pease, 1863b: 241. Pacific Islands.

Pease, 1868d: 93, Pl. 11, Fig. 6. Ponape [Caroline Islands].

Tryon, 1881, 3: 146, Pl. 71, Fig. 198. Ponape [Caroline Islands].

PEASE'S DESCRIPTION: "Shell elongate, transversely ribbed; ribs depressed, regular, plane and somewhat angulated at their upper edge, and sometimes marked transversely with a few elevated striae or fine ribs. Whorls seven or eight, convex; the last with a prominent varix near the edge of the outer lip; edge of lip crenate; canal short, slightly twisted; aperture less than one-half the length of the shell. Mottled and banded with dark chestnut-brown and white; grooves between the ribs dark brown; aperture white.

Length 37, breadth 15 mill."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964288. Length, 33·5 mm.; diameter, 12·5 mm. Two paralectotypes (1964289): length, 30 mm.; diameter, 13 mm.; length, 31·5 mm.; diameter, 15 mm.

REMARKS: Little can be added to Pease's description except that the columella is covered by a thin glaze which projects over the fasciole as a fine-edged shield. The three specimens in the type lot are beachworn and the apices either broken or obscure.

A notation on the board to which the specimens were attached cites the locality as "Sandwich Islands" [H.I.], but the species is not known there.

## Amphiperas semistriata Pease, 1863

Pl. 12, Figs. 5, 6

Pease, 1863b: 241. Pacific Islands.

Reeve, 1866, Conch. Icon., 15, Ovulum: Pl. 3, Fig. 13. Sandwich Islands [H.I.].

Weinkauff 1881: 176-177, Pl. 46, Figs. 5, 8. As Ovula semistriata Pease. Sandwich Islands [H.I.].; Fiji; Boston Id.; Ceylon.

Pease's Description: "Shell ovate, somewhat gibbous, white, shining, transversely striated; striae undulated and obsolete on the back, somewhat roughened longitudinally by fine irregular striae; ridges on outer lip small; inner lip roundly convex on base; right margin slightly thickened; aperture flexuous, canal very short.

Length  $12\frac{1}{2}$ , breadth  $7\frac{1}{2}$  mill."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964286. Length, 12·5 mm.; diameter, 7·5 mm.; height, 6 mm. Paralectotype (1964287): length, 13 mm.; diameter, 8 mm; height, 7 mm.

Remarks: Pease's diagnosis is sufficient to identify this species. A note on the board to which the specimens were attached in the British Museum (N.H.) cites the Sandwich Islands [H.I.] as the locality for the species and Weinkauff (1881) also notes that he received specimens from Pease labelled "Sandwich Islands"; A. semistriata is not known to occur in the Hawaiian Islands, although it does occur in the Indo-West Pacific.

### Emarginula clathrata Pease, 1863

Pl. 12, Fig. 11

Pease, 1863b: 241-242. "Pacific Islands."

Pease, 1868d: 99, Pl. 11, Fig. 24. Howland Id.

Sowerby, 1866, Thes. Conch., 3, Emarginula: 212, Pl. 11, Fig. 54. Sandwich Is [H.I.]. [Figure of specimen from type series.]

Sowerby, 1873, Conch. Icon., 19. Emarginula, Pl. 5, Fig. 35. Sandwich Islands [H.I.]. [Figure of specimen from type series.]

Pilsbry, 1890, in Tryon, 12: 266, Fig. 27. As Emarginula subclathrata.

Hedley, 1899: 402. Funafuti [Ellice Islands].

Thiele, 1915: 87–88, Pl. 10, Figs. 17, 18. As Emarginula peasei. Sandwich Islands [H.I.], Indian Ocean (Ceylon, S. India).

Pease's Description: "Shell ovate, white, depressedly convex, clathrated by concentric and radiating ribs; interstices deeply pitted; apex anterior, lip crenated and lirate within on its edge.

Length  $8\frac{1}{2}$ , breadth 6 mill."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964290. Length, 9 mm.; diameter, 6 mm.; height, 2 mm.; length of slit, 2·5 mm.; Paralectotype (1964291): length, 8 mm.; diameter, 8 mm.; height, 3·5 mm.; length of slit, 3 mm.

Remarks: The shell is arcuate, the fasciole consists of a furrow, and the slit is less than one-quarter the length of the shell. The sculpture consists of coarse radiat-

ing ribs intersected by smaller spiral ribs. The type lot consists of two specimens, one of which matches the dimensions noted by Pease almost exactly; it has been selected as the lectotype. The locale cited on the board to which the specimens are attached is "Sandwich Islands" [H.I.]; the species is not known to occur in the Hawaiian Islands.

Pilsbry (1890), noting that Sowerby (1866) illustrated as "Emarginula clathrata Pease, Sandwich Islands" a shell which was "...much shorter... than any in the two suites before me, received from Pease" gave the Sowerby figure the name of E. subclathrata. Comparison of the specimen illustrated by Sowerby which is in the collection of the British Museum (N.H.) with the Pease types, and with other specimens of this species, indicate that the Sowerby specimen falls well within the range of variability of the species, and the Pilsbry name is not necessary. The Sowerby specimen is also recorded as from the Hawaiian Islands and probably arrived with Pease's type lot.

#### Laimodonta conica Pease, 1863

Pl. 13, Figs. 7, 8

Pease, 1863b: 242. Pacific Islands.

Pease, 1868d: 101, Pl. 12, Fig. 15. Paumotus [Tuamotus].

Kobelt, 1901: 224, Pl. 26, Fig. 14.

Couturier, 1907: 176.

Dautzenberg and Bouge, 1933: 44. Tuamotus.

Kuroda and Habe, 1952: 61. As? Allochroa pfeifferi Dunker.

PEASE'S DESCRIPTION: "Shell ovato-conical, spire acute, striated transversely, obsoletely granulose by irregular longitudinal lines; plaits on inner lip and columellafold at base prominent; whorls five, plano-convex. Colour dark chestnut-brown, encircled with one or two bands of a lighter colour.

Length 4½, breadth 2½ mill."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964292. Length, 4·5 mm.; diameter, 2·5 mm. Five paralectotypes (1964293): length, 4 mm.; diameter, 2·5 mm.; 4 specimens, length, 4 mm.; diameter, 2 mm.

Remarks: The shell is ovate, not umbilicate, sculptured, and thin in texture. There are six convex whorls plus the protoconch of one and one-half whorls. The colour is dark brown, a subsutural band of yellow on the last whorl imparting a somewhat striped effect. The sutures are indistinct. The aperture is auriculate, the outer lip thin with a single, thin tooth; there are two plate-like teeth on the parietal wall, and a third somewhat coarser tooth at the end of the columella. The sculpture consists of fine spiral striae on the last two whorls; the four apical whorls are granular.

The paralectotypes show various colour patterns: the apex is generally light and the spire dark brown, while the last whorl may have one or more bands of dark brown and yellow.

### Rissoina semiplicata Pease, 1863

Pl. 13, Figs. 3, 4

Pease, 1863b: 242. Pacific Islands.

Pease, 1868c: 295, Pl. 24, Fig. 29. Howland Id.

Sowerby, 1878, Conch. Icon., 20, Rissoa: Pl. 11, Fig. 100. Pacific. [Illustration of one of

Pease's specimens.]

Martens and Langkavel, 1871: 42. Paumotus [Tuamotus]; Howland Id.

Nevill, 1885: 94. Upolu [Samoa]; Paumotus [Tuamotus].

Weinkauff, 1881: 66, Pl. 157, Fig. 2. Howland Id.

Tryon, 1887, 9: 389, 430, Pl. 59, Fig. 54. As Rissoina tridentata Mich., not adult. Couturier, 1902: 162. Aukena, Marutea, Vahitaki [Tuamotus].

Dautzenberg and Bouge, 1933: 368. Tuamotus.

Pease's Description: "Shell subulate, white, shining, subpellucid, polished; whorls six, plano-convex; spire longitudinally and somewhat obsoletely plicated; aperture ovate, basal canal very slight.

Length 3½, breadth 1½ mill."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964294. Length, 3.5 mm.; diameter, 1.5 mm. Two paralectotypes (1964295): length, 3 mm.; diameter, 1.5 mm.; length, 2.5 mm.; diameter, 1.5 mm.

REMARKS: Pease's description is sufficient for diagnosis of the species, and the specimens in the type lot agree with the description in all respects. A pencilled note in the container states "Sandwich Islands" [H.I.] as the locality from which the specimens were collected. The species is common in beach drift in the Hawaijan Islands.

#### Engina tuberculosa Pease, 1863

Pl. 14, Figs. 5, 6

Pease, 1863b: 243. Pacific Islands. Pease, 1868c: 274. Baker Island.

Tryon, 1883, 5: 195, Pl. 63, Fig. 60. Baker Id. Kobelt, 1897: 285, Pl. 37, Fig. 10. Baker Id.

Pease's Description: "Shell fusiform, attenuated at both ends, spire somewhat acuminate, acute; longitudinally tuberculately ribbed, transversely ridged, ridges forming tubercles or nodules on the longitudinal ribs. Interstices very finely striated; aperture less than one-half the length of the shell; columella-lip corrugate or plicate posteriorly; teeth small. Colour black, last whorl encircled with a white band; aperture and apex white.

Length 9, width 4 mill.

The smallest species of the genus with which we are acquainted. We give the size of a large specimen. We have received it from several localities, and find it constant in shape and sculpture. The painting varies, the lower part of the last whorl and the spire being more or less spotted with white in some specimens."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1964296. Length, 7.75 mm.; diameter, 4 mm. Three paralectotypes (1964297): length, 7.50 mm.; diameter, 3.75 mm.; length 5.5 mm.; diameter, 3.5 mm.; length, 6.5 mm.; diameter, 4 mm.

Remarks: This is a distinctive species which has not been widely reported in the literature. The specimens in the type lot conform well to Pease's description, to which little can be added. The Baker Island locale is the only habitat datum available.

#### Euchelus maculosus Pease, 1863

Pl. 13, Figs. 1, 2

Pease, 1863b: 243. Pacific Islands.

Pease, 1868d: 91, Pl. 11, Fig. 1. As Collonia maculosa. Paumotus [Tuamotus].

Sowerby, 1886, Thes. Conch., 4, Turbo: 189, Pl. 13, Fig. 154. As Turbo maculosus. [Illustration of one of Pease's specimens.]

Pilsbry, 1889, in Tryon, 11: 449. Pacific Islands. "Unidentifiable." Couturier, 1907: 170. Turbo (Leptothyra) maculosus. Tuamotus.

Pease's Description: "Shell small, umbilicate, somewhat conically globose, rather thin, shining, concentrically irregularly ribbed, longitudinally very finely striated. Colour white; transverse ribs spotted somewhat remotely with red.

Breadth 2, height 1½ mill."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1964298. Length, 1.75 mm.; diameter, 2 mm. Paralectotype (1964299): length, 2 mm.; diameter, 2 mm.

REMARKS: The shell is depressed, white, spotted transversely with red, the spots at the periphery of the last whorl the largest. The sculpture consists of spiral keels, two on the apical whorl, three on the next whorl, and eight on the last whorl; a larger keel alternates with a smaller. The base is umbilicate, the umbilicus apically bordered by a granular ridge. The columella is broad and spatulate, continuous with the outer lip. The outer lip is thin, the red spots on the outer surface showing through. The operculum is thick, calcareous, and multispiral.

This species apparently has an extensive distribution in the Pacific: there are three specimens labelled "Sandwich Islands" in Pease's hand in the U.S. National Museum in Washington, D.C., while other specimens from Pease in the collection of the Academy of Natural Sciences, Philadelphia, Pennsylvania are from Howland Island and the Tuamotus. I have also seen specimens from the Cook Islands (Academy of Natural Sciences, Philadelphia, Pennsylvania) and from the Marshall Islands (U.S. National Museum, Washington, D.C.).

## Marginella cylindrica Pease, 1863

Pl. 13, Figs. 5, 6

Pease, 1863c: 244. Kingsmill Is. [Gilbert Islands].

Pease, 1868c: 280, Pl. 23, Fig. 19. As Marginella polita to replace M. cylindracea [sic], preoccupied. Tarawa Id.

Reeve, 1865, Conch. Icon., 15, Marginella: Pl. 21, Fig. 108. As Marginella peasei. [Illustration of one of Pease's specimens.]

Redfield, 1870: 248, 230. As Marginella peasei.

Marters and Langkavel, 1871: 20. As Marginella peasei Reeve. Kingsmill Is.; Tarawa.

Tryon, 1883, 5: 210, Pl. 13, Fig. 27. As Marginella peasei.

Tomlin, 1917: 261. As Marginella peasei.

PEASE'S DESCRIPTION: "Shell cylindrical, smooth, polished, white; last whorl ornamented on the back with broad yellowish bands, a spot of darker colour at the base. Aperture linear; outer lip simple, slightly expanded at the base, and spreading a short distance over the spire, at its junction posteriorly, by a callosity; inner lip four-plaited at the base.

Hab. Kingsmill Islands."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964300. Length, II mm.; diameter, 5 mm. Six paralectotypes (1964301): length, II mm.; diameter, 5 mm.; length, II 5 mm.; diameter, 4.5 mm.; length, II mm.; diameter, 4.5 mm.; length, II mm.; diameter, 4.5 mm.; length, IO mm.; diameter, 5 mm.

Remarks: Pease's diagnosis is adequate to identify the species. The specimens in the type lot are all creamy white, with only faint shadows of the banding described by Pease remaining. The specimen figured by Reeve (1865) is the one selected as the lectotype.

#### Columbella pusilla Pease, 1863

Pl. 13, Figs. 9, 10

Pease, 1863c: 244. Kingsmill Islands [Gilbert Is.].

Pease, 1868e: 122. As Columbella fusiformis.

Martens and Langkavel, 1871: 22, Pl. 1, Fig. 14. As Columbella fusiformis Pease. Sandwich Islands [H.I.].

Tryon, 1883, **5**: 235. As Columbella fusiformis Pease, a synonym of C. sagitta Gaskoin. Kobelt, 1897: 342.

Pease's Description: "Shell small, fusiform, smooth, transversely striated at the base. Whorls seven, slightly convex; aperture oblong; canal rather wide, and slightly recurved; outer lip thin, thickened externally, denticulate within, and sinuated near its junction posteriorly; inner lip plicately thickened. Colour light fulvous or white, with irregular longitudinal, somewhat reticulated, chestnut-brown lines. At the upper part of the whorls, lines much less distinct and smaller; last whorl encircled by a narrow white band.

Hab. Kingsmill Islands."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964302. Length, 7 mm.; diameter, 3 mm. Paralectotype (1964303): length, 6 mm.; diameter, 2.5 mm.

Remarks: Pease's description is sufficient to establish the identity of the species. The two specimens in the type lot are apparently all that remain of what was apparently a type lot of four specimens; the specimens were glued to a board which has glue spots indicating there were two additional specimens at one time. The

specimen selected as the lectotype is apparently adult in that the outer lip is thickened, while the specimen named as the paralectotype is probably a juvenile specimen

with the outer lip not developed.

The "Sandwich Islands" [H.I.], are cited as the locale for the specimens in the B.M.(N.H.) although Pease named the Kingsmill Islands [Gilbert Is.] as the type locality in his original description and subsequent discussion of the species (Pease, 1868e). The species is common on small, algal-covered rocks in the inshore waters of the Hawaiian Islands.

## Sistrum affine Pease, 1863

Pl. 13, Figs. 13, 14

Pease, 1863c: 244. Kingsmill Islands [Gilbert Islands].

Pease, 1868c: 277, Pl. 23, Fig. 13. Kingsmill Islands [Gilbert Is.].

Martens and Langkavel, 1871: 10. As Purpura (Sistrum) atromarginatum Blainv. Kingsmill; New Hebrides.

Tryon, 1880, 2: 186, Pl. 57, Fig. 228. As Ricinula marginata Bl.

Baker, 1897: 389.

Cooke, 1919: 100. Radula description. Funafuti [Ellice Islands]. [Had access to Pease's specimens.]

PEASE'S DESCRIPTION: "Shell ovate, thick, stout, longitudinally and transversely ribbed, interstices deeply excavated; longitudinal ribs rather broad, obtusely noduled, nodules oblong; transverse ribs smaller, and striated transversely, interstices filled by two or three irregular-sized ribs or ridges. Aperture oblongo-ovate; folds on the inner lip faint. Colour black; transverse ribs white between the nodules; edge of lip and base black, columella purplish brown.

Hab. Kingsmill Islands.

The above species belongs to a group of which the *S. tuberculatum*, Blainv., may be considered the type. Our species, however, differs from that in being much more deeply engraved throughout, in the longitudinal ribs being more distinct, and the transverse striae forming ribs or ridges."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964304. Length, 17.5 mm.; diameter, 11 mm. Three paralectotypes (1964305): length, 17 mm.; diameter, 11 mm.; length, 16 mm.; diameter, 10 mm.; length, 14 mm.; diameter, 9.5 mm.

REMARKS: The species is readily identifiable by Pease's description. The lectotype was selected as best representing the sculpture and colour pattern described by Pease. The specimens were apparently collected alive, all containing an operculum and with the protoconchs intact.

## Cypraea granulata Pease, 1863

Pl. 14, Figs. 17, 18

Pease, 1863d: 278. Pacific Islands.

Garrett, 1879: 128. Central Pacific. Not found.

Roberts, 1885, in Tryon, 7: 216, Pl. 19, Fig. 38. As Cypraea madagascariensis Gmel.

Melvill, 1888: 245. As Cypraea madagascariensis.

Schilder and Schilder, 1938: 131. N. Pacific: Hawaii to Midway.

Pease's Description: "Shell rather light, ovate, or obesely ovate, somewhat gibbous; extremities slightly produced; back granulose or nodulous; nodules irregular in size, those near the margins connected by ridges; the ridges terminating at the margins, and seldom reaching the dorsal region, impressed by a slight dorsal groove, which is sometimes obsolete; sides slightly margined; base convex, ridged; ridges remote, especially those on the columella not extending to the margin, and those on the columella not reaching the inner edge, with the exception of a few of the anterior ones; occasionally a few short intermediate ridges; aperture narrow, slightly the wider anteriorly; cream-colour or light reddish-brown; nodules whitish, sometimes encircled by reddish-brown rings; ridges of the same colour; base white; basal ridges edged with reddish-brown, and extremities stained with same colour.

Length 32, breadth 20 mill."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964306. Length, 39 mm.; diameter, 23 mm.; height, 17 mm. Three paralectotypes (1964307): length, 26·5 mm.; diameter, 16 mm.; height, 13 mm.; length, 24 mm.; width, 15 mm.; height, 11 mm.; length, 19·5 mm.; diameter, 13 mm.; height 9·5 mm.

Remarks: The lectotype was selected since it best represents the details of the description given by Pease. The three paralectotypes are juvenile specimens with neither the margins nor the basal teeth developed.

C. granulata appears to be endemic to the Hawaiian Islands where it is collected at depths of 10–20 fathoms.

#### Drillia nodulosa Pease, 1863

Pl. 14, Figs. 9, 10

Pease, 1863d: 279. Pacific Islands. Tryon, 1884, 6: 212. Unfigured species.

Pease's Description: "Shell pyramidally oblong; whorls eight, concavely depressed above, longitudinally nodosely ribbed, ribs about ten; body-whorl encircled by a row of tuberculous nodules, in continuation of the longitudinal ribs; aperture open, sinus round and deep; canal short, wide. Colour reddish brown; ribs and base of columella whitish.

Length II, breadth  $4\frac{1}{2}$  mill."

HOLOTYPE: B.M.(N.H.) Reg. No. 1964308. Length, 10 mm.; diameter, 4 mm.

Remarks: There are six whorls plus a protoconch of two whorls. The sutures are not impressed. The sculpture consists of prominent axial keels rising on the periphery of each whorl into prominent, elongate tubercles, fourteen on the last whorl. Except for the tubercles, the shell is smooth. The aperture is pyriform and narrow, the sinus on the shoulder deep and rounded and arched apically. The columella is straight with a narrow callous.

This species is common in the Hawaiian Islands, and the holotype is accompanied by a citation "Sandwich Islands" [H.I.].

## Engina fusiformis Pease, 1865

Pl. 13, Figs. 15, 16

Pease, 1865b: 513. Islands of the Central Pacific. Pease, 1868c: 273, Pl. 23, Fig. 5. Howland I.

Martens, 1871: 23. Central Pacific.

Tryon, 1883, 5: 193, Pl. 62, Fig. 44. Howland Id.; Viti (Fiji).

Kobelt, 1897: 251, Pl. 33, Figs. 17, 18. As Columbella (Engina) fusiformis. Howland Id.,

Viti [Fiji]. Pace, 1902a: 86.

Viader, 1937: 25. Mauritius.

Pease's Description: "E. t. fusiformi, utrinque attenuata, medio angulata, basi contracta, canali recurvata, spira acuminata, longitudinaliter nodoso-costata, transversim sulcata et striata; anfractibus superne parum concavis; columella superne subexcavata et plicata; nigra, luteo irregulariter maculata et fasciata; apertura dimidium longitudinis testae aequante, purpureo-refescente.

Long. ·6, lat. ·34 poll."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1964309. Length, 15 mm.; diameter, 8.5 mm. Two paralectotypes (1964310): dimensions the same as the lectotype.

REMARKS: The shell is fusiform and attenuated at both ends, somewhat angulated at the periphery, and consists of 7 whorls. The sculpture consists of nodose axial ribs, becoming most prominent in the centre of the last whorl, and obsolete apically. The shells are black, spotted and banded with fawn; the black pigment is principally confined to the axial ribs.

Locale data accompanying the type lot cite the "Sandwich Islands" [H.I.] but I am not familiar with the species in the Hawaiian Islands. The species has, how-

ever, been recorded from a number of localities in the Pacific.

## Turricula putillus Pease, 1865

Pl. 14, Figs. 7, 8

Pease, 1865b: 514. Central Pacific.

Pease, 1868a: 214, Pl. 15, Fig. 24. Central Pacific.

Sowerby, 1874, Thes. Conch., 4, Mitra: 22, Pl. 22, Fig. 482. [Illustration of the holotype.]

Tryon, 1882, 4: 190, Pl. 56, Fig. 617. Paumotus [Tuamotus] and Society Islands.

Dautzenberg and Bouge, 1933: 186. Society Islands; Tuamotus.

Pease's Description: "T. t. abbreviato-fusiformi, subventricosa, sulcis angustis decussata, sulcis longitudinalibus tenuiter striatis; spira breviuscula, acuta, suturis valde impressis; apertura intus valde lirata, labro denticulato; columella quadriplicata; nigra spira et anfractu ultimo superne albo maculatis, interdum fascia interrupta alba cingulatis, sulcis transversis rufo-fuscis.

Long. 10, diam 5 mill."

HOLOTYPE: B.M.(N.H.) Reg. No. 1964311. Length, 9 mm.; diameter, 5 mm.; length of aperture, 6 mm.

REMARKS: The shell is subovate, of five turreted whorls plus the protoconch. The sutures are impressed. The sculpture consists of close-set axial ribs crossed by fine spiral threads. The columella has four plaits, the abapical two smaller than the others. The outer lip is thickened and the aperture faintly lirate within.

## Mitra nigricans Pease, 1865

Pl. 14, Figs. 11, 12

Pease, 1865b: 514. Central Pacific.

Pease, 1868a: 215. As Strigatella nigricans.

Garrett, 1880: 71. Not found.

Tryon, 1882, 4: 153. Unfigured species.

Pease's Description: M. t. fusiformi, elongata, laevigata, transversim tenuiter striata, striis subdistantibus punctatis; epidermide tenui induta; spira gracili, elongata, acuta; labro simplici; columella quadriplicata; nigrescente, fascia angusta castanea cincta; apertura plumbea.

Long. 20, diam. 7 mill."

HOLOTYPE: B.M.(N.H.) Reg. No. 1964312. Length, 14 mm.; diameter, 5.5 mm.

REMARKS: Pease's description is adequate to identify the species. The holotype is faded, dark brown. The sutures are not impressed. Of the four columellar plaits, two are conspicuously large while the remaining two are almost obsolete.

The single specimen in the Cuming collection agrees in all details with Pease's description except in size; the specimen has been designated the holotype for reasons discussed previously. No locality data accompany the specimen.

## Neritina rubida Pease, 1865

Pl. 14, Figs. 15, 16

Pease, 1865b: 514. Central Pacific.

Pease, 1868c: 285, Pl. 24, Fig. 5. Tahiti.

Martens and Langkavel, 1871: 46, Pl. 2, Fig. 13. Tahiti; Upolu [Samoa]. Pilsbry, 1888, in Tryon, 10: 54, Pl. 17, Fig. 84, Pl. 18, Fig. 85. Central Polynesia.

Baker, 1923: 169, Pl. 16, Fig. 42. (radula). As Neritilia rubida (Pease). Tahiti (also Melanesia). Description of radula.

Pease's Description: "N. t. oblongo-ovata, tenui, striis incrementi rugulosa, spira parva; area columellari laevi, cinerea; fuscescenti-rubida.

Long. 5, diam. 3 mill.

This species may be compared with N. succinea, inhabiting the West Indies."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1964313. Length, 5 mm.; diameter, 3 mm. Two paralectotypes (1964314): length, 4·5 mm.; diameter, 3·5 mm.; length, 4 mm.; diameter, 3 mm.

Remarks: The shell is thin and globose, translucent, yellow-brown. There are two-plus whorls. The spire is very low; the aperture is lunate. The palatal lip is

long, thin, sharp, bears no teeth, and is yellow-brown. The parietal area is concave, and both the parietal area and the columella are smooth. The suture is not impressed. The sculpture consists of faint striations only. The operculum is corneous, transparent, and orange-brown, the exterior bearing faint lines of growth which radiate from the nucleus.

#### Cypraea fuscomaculata Pease, 1865

Pl. 14, Figs. 1, 2

Pease, 1865b: 515. Central Pacific.

Pease, 1868d: 95, Pl. 11, Figs. 10, 11. Apaian I. [Gilbert Is.].

Garrett, 1879: 106, 113. Kingsmill Is.; Viti [Fiji]; Tonga; Samoa.

Roberts, 1885, in Tryon, 7: 168, Pl. 20, Fig. 47. Island of Apaian.

Melvill, 1888: 244. As Cypraea goodalli Gray.

Schilder and Schilder, 1938: 168. As Cypraea goodalli fuscomaculata Pease.

Pease's Description: "C. t. oblongo-ovata, vix umbilicata, latere dextro subangulato, marginato, extremitatibus productis; apertura subflexuosa, angusta, dentibus parvis; albicante, ad dorsum irregulariter castaneo-fusco picta, lateribus fusco punctatis, extremitatibus maculis castaneo-fuscis conspicue ornatis.

Long. 13, diam. 7 mill."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964316. Length, 13 mm.; diameter, 7 mm.; height, 6 mm. Paralectotype (1964317): length, 12.5 mm.; diameter, 7 mm.; height, 5 mm.

REMARKS: The two specimens in the type lot show good colour pattern and appear to be live-collected. Garrett (1879) states that he collected the types from the outer reefs of the Kingsmill Islands.

## Cypraea candida Pease, 1865

Pl. 14, Figs. 3, 4

Please, 1865b: 515. Central Pacific.

Pease, 1868d: 95, Pl. 11, Figs. 12, 13. Apaian I. [Gilbert Is.]. Garrett, 1879: 106, 110. Apiang, Kingsmill Islands [Gilbert Is.].

Roberts, 1885, in Tryon, 7: 210, 187, Pl. 16, Figs. 39, 40. As Cypraea clandestina var.

Melvill, 1888: 220. A pure white, unmarked variety of C. clandestina.

Schilder and Schilder, 1938: 157. As C. clandestina candida.

Pease's Description: "C. t. oblongo-ovata, omnino alba, lateribus subincrassatis rotundatis, basi rotundata; extremitatibus vix productis, subreflexis; longitudinaliter tenuissime striata; apertura subflexuosa, dentibus fortibus subdistantibus instructa, interstiis profunde incisus.

Long. 15, diam. 8 mill."

Lectotype (here selected): B.M.(N.H.) Reg. No. 1964318. Length, 15.5 mm.; diameter, 9 mm.; height, 7 mm. Two paralectotypes (1964319): length, 17 mm.; diameter, 10 mm.; height, 8 mm.; length, 17 mm.; diameter, 10 mm.; height, 9 mm.

REMARKS: The three specimens in the type lot agree well with Pease's description; the specimen most nearly matching the dimensions given by Pease was selected as the lectotype. All three specimens are beachworn, two of them containing sand grains in the aperture.

Although the type locality is merely indicated as "Islands of the Central Pacific", a note on the board to which the specimens were glued gives the locality as "Kings-

mill Islands."

## Pedicularia pacifica Pease, 1865

Pl. 14, Figs. 13, 14

Pease, 1865b: 516. Central Pacific.

Pease, 1868d: 96, Pl. 11, Figs. 17, 18. Apaian Id. [Gilbert Is.].

Thiele, 1925: 88. Thiele, 1929: 270.

Schilder, 1931: 167, Pl. 6, Fig. 1. Savage Is., N. Caldeonia, Marshall Is., Sandwich Is. [H.I.].

Dautzenberg and Bouge, 1933: 265. Tuafutu [Tuamotus].

Viader, 1937: 36. Mauritius.

Pease's Description: "P. t. tenuiuscula, oblonga, irregulari, in medio contracta, radiatim striis elevatis ornata, striis concentricis decussata, apice conspicuo involuto; rubida, interdum omnino violacea vel cornea.

Long. 7 mill."

LECTOTYPE (here selected): B.M.(N.H.) Reg. No. 1964321. Length, 6 mm.; diameter, 3 mm. Two paralectotypes (1964322): length, 5 mm.; diameter, 3.5 mm.; length, 6 mm.; diameter, 3 mm.

Remarks: Pease's description is sufficient to identify the species. Of the three specimens in the type lot, that agreeing most closely with Pease's diagnosis has been selected as the lectotype. The locale accompanying the specimens is "Sandwich Islands" [H.I.] which is almost certainly an error since the gorgonid on which this species is known to occur elsewhere does not occur in the Hawaiian Islands.

#### C. UNFIGURED SPECIES

The following is a list of those species for which the types were not found.

Philinopsis speciosa Pease, 1860a: 21-22. Sandwich Islands [H.I.].

Philinopsis nigra Pease, 1860a: 22. Sandwich Islands [H.I.].

Dolabella variegata Pease, 1860a: 22. Sandwich Islands [H.I.].

Syphonota bipes Pease, 1860a: 23. Sandwich Islands [H.I.].

Syphonota grandis Pease, 1860a: 23. Sandwich Islands [H.I.].

Syphonota elongata Pease, 1860a: 24. Sandwich Islands [H.I.].

Aclesia areola Pease, 1860a: 24. Sandwich Islands [H.I.].

Pleurobranchus pellucidus Pease, 1860a: 24-25. Sandwich Islands [H.I.].

Pleurobranchus marginatus Pease, 1860a: 25. Sandwich Islands [H.I.].

Pleurobranchus rufus Pease, 1860a: 25. Sandwich Islands [H.I.].

Pleurobranchus varians Pease, 1860a: 25. Sandwich Islands [H.I.].

Pleurobranchus reticulatus Pease, 1860a: 25. Sandwich Islands [H.I.]. Doris setosa Pease, 1860a: 26. Sandwich Islands [H.I.]. Doris excavata Pease, 1860a: 26. Sandwich Islands [H.I.]. Doris reticulata Pease, 1860a: 26-27. Sandwich Islands [H.I.]. Doris echinata Pease, 1860a: 27. Sandwich Islands [H.I.]. Doris scabriuscula Pease, 1860a: 27. Sandwich Islands [H.I.]. Doris pilosa Pease, 1860a: 27–28. Sandwich Islands [H.I.]. Doris vibrata Pease, 1860a: 28. Sandwich Islands [H.I.]. Doris propinguata Pease. 1860a; 28. Sandwich Islands [H.I.]. Doris picta Pease, 1860a: 29. Sandwich Islands [H.I.]. Doris nucleola Pease, 1860a: 29. Sandwich Islands [H.I.]. Doris decora Pease, 1860a: 29. Sandwich Islands [H.I.]. Doris marginata Pease, 1860a: 30. Sandwich Islands [H.I.]. Doris papillosa Pease, 1860a: 30. Sandwich Islands [H.I.]. Doris albopustulosa Pease, 1860a: 30. Sandwich Islands [H.I.]. Doris grandiflora Pease, 1860a: 30–31. Sandwich Islands [H.I.]. Doris rugosa Pease, 1860a: 31. Sandwich Islands [H.I.]. Doris foetida Pease, 1860a: 31. Sandwich Islands [H.I.]. Doris prismatica var. imperialis Pease, 1860a: 32. Sandwich Islands [H.I.]. Doris prismatica var. lineata Pease, 1860a: 32. Sandwich Islands [H.I.]. Doriobsis granulosa Pease, 1860a: 32-33. Sandwich Islands [H.I.]. Hexabranchus pulchellus Pease, 1860a: 33. Sandwich Islands [H.I.]. Hexabranchus nebulosus Pease, 1860a: 33. Sandwich Islands [H.I.]. Tritonia hawaiiensis Pease, 1860a: 33. Sandwich Islands [H.I.]. Melibe pilosa Pease, 1860a: 34. Sandwich Islands [H.I.]. Aeolis semidecora Pease, 1860a: 34-35. Sandwich Islands [H.I.]. Aeolis parvula Pease 1860a: 35. Sandwich Islands [H.I.]. Elysia ocellata Pease, 1860a: 35. Sandwich Islands [H.I.]. Pterogasteron ornatum Pease, 1860a: 36. Sandwich Islands [H.I.]. Pterogasteron bellum Pease, 1860a: 36. Sandwich Islands [H.I.]. Histiophorous maculatus Pease, 1860a: 36. Sandwich Islands [H.I.]. Polybranchia pellucida Pease. 1860a: 141. Sandwich Islands [H.I.]. Borsonia nebulosa Pease, 1860a: 143. Sandwich Islands [H.I.]. Mitra pallida Pease, 1860a: 146. Sandwich Islands [H.I.]. Marginella oryza Pease, 1860a: 147. Sandwich Islands [H.I.]. Daphnella sandwicensis Pease, 1860a: 148. Sandwich Islands [H.I.]. Daphnella maculosa Pease, 1860a: 148. Sandwich Islands [H.I.]. Turcica coreensis Pease, 1860b: 180. Pl. 51, Fig. 2. Corea Sea. Ranella luteostoma Pease, 1861a: 307. Sandwich Islands [H.I.]. Conus neglectus Pease, 1861a: 398. Sandwich Islands [H.I.]. Coralliobia cancellata Pease, 1861a: 399. Sandwich Islands [H.I.]. Columbella lineata Pease, 1861a: 309. Sandwich Islands [H.I.]. Cassis umbilicata Pease, 1861b: 436-437. Sandwich Islands [H.I.]. Stylifer robustus Pease, 1861b: 437. Sandwich Islands [H.I.]. Patella sandwicensis Pease, 1861b: 437. Sandwich Islands [H.I.].

Rissoa gracilis Pease, 1861b: 438. Sandwich Islands [H.I.].

Pinna trigonalis Pease, 1861c: 242. Kingsmill Is. [Gilbert Is.].

Columbella sandwichensis Pease, 1861c: 244. Sandwich Islands [H.I.].

Doriopsis viridis Pease, 1861c: 244. Tahiti.

Pleurobranchus delicatus Pease, 1861c: 245. Pacific Islands.

Cryptophthalmus cylindricus Pease, 1861c: 245. Tahiti.

Dolabrifera tahitensis Pease, 1861c: 245. Tahiti. Doris pulchra Pease, 1861c: 247. Pacific Islands.

Dentiora rubida Pease, 1863a: 240. Sandwich Islands [H.I.].

Cythara strigata Pease, 1863b: 242. Pacific Islands.

Clathurella maculosa Pease, 1863b: 242. Pacific Islands.

Eulima exilis Pease, 1863b: 242–243. Pacific Islands.

Clathurella bicarinata Pease, 1863c: 243. Kingsmill Is. [Gilbert Is.].

Avicula radiata Pease, 1863c: 244. Kingsmill Is. [Gilbert Is.]. Avicula brunnea Pease, 1863c: 244. Sandwich Islands. [H.I.].

Conus purus Pease, 1863d: 279. Pacific Islands.

Anachis costellifera Pease, 1863d: 279. Pacific Islands. Siphonaria depressa Pease, 1863d: 279. Pacific Islands.

Latirus gibbus Pease, 1865a: 54. Pacific Islands.

Mitra saltata Pease, 1865b: 512. Central Pacific. Engina ovata Pease, 1865b: 513. Central Pacific.

Nassa obliqua Pease, 1865b: 513. Central Pacific.

Coralliobia sculptilis Pease, 1865b: 513. Central Pacific.

Torinia conica Pease, 1865b: 514. Central Pacific.

Mitroidea multiplicata Pease, 1865b : 514. Central Pacific. Eulima subpellucida Pease, 1865b : 515. Central Pacific.

Purpura marmorata Pease, 1865b: 515. Central Pacific.

Planaxis abbreviata Pease, 1865b: 515. Central Pacific.

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Figs. 1–2. Bullina vitrea Pease, Lectoptye, 11 imes 7 mm.

Figs. 3–4. Bullina lauta Pease, Holotype,  $15 \times 10$  mm.

Figs. 5-6. Atys debilis Pease, Lectotype, 13 × 5.5 mm.

Figs. 7-8. Atys semistriata Pease, Holotype, 9 × 5.5 mm.

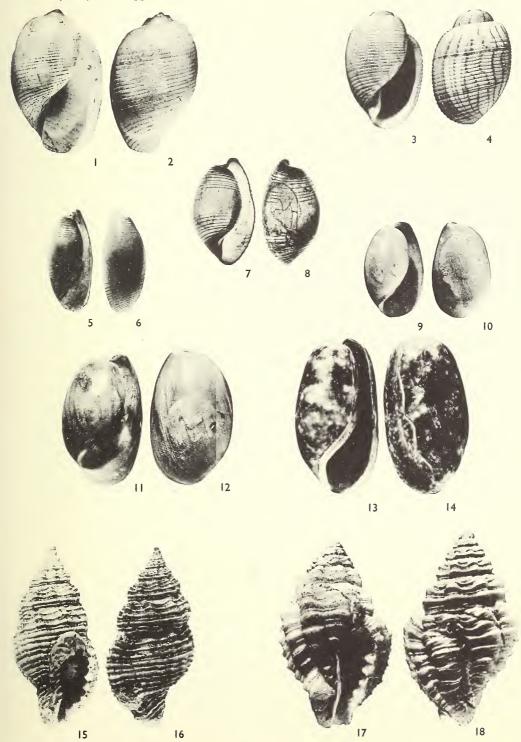
Figs. 9-10. Haminea crocata Pease, Lectotype, 12 × 7.5 mm.

Figs. 11–12.  $Haminea\ galba\ Pease$ , Lectotype, 17 imes 10 mm.

Figs. 13–14. Bulla marmorea Pease, Holotype, 21 × 11 mm.

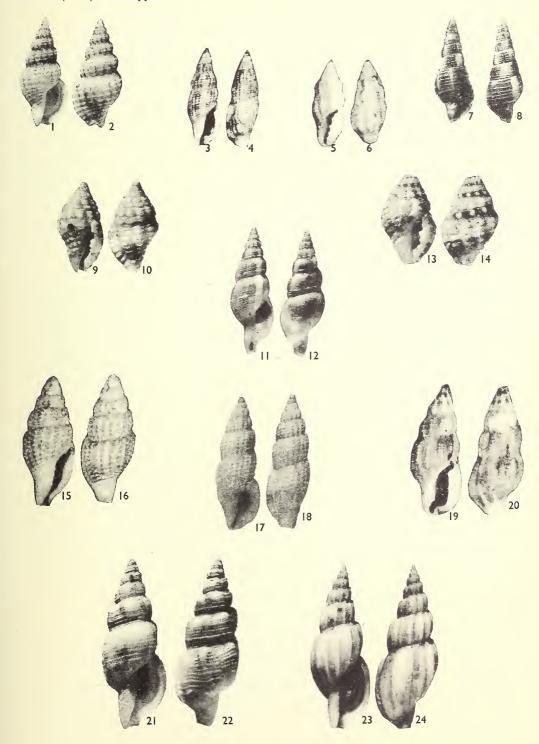
Figs. 15–16. *Hindsia angicostata* Pease, Lectotype,  $15.5 \times 7$  mm.

Figs. 17–18. Engina costata Pease, Holotype, 16  $\times$  10 mm.

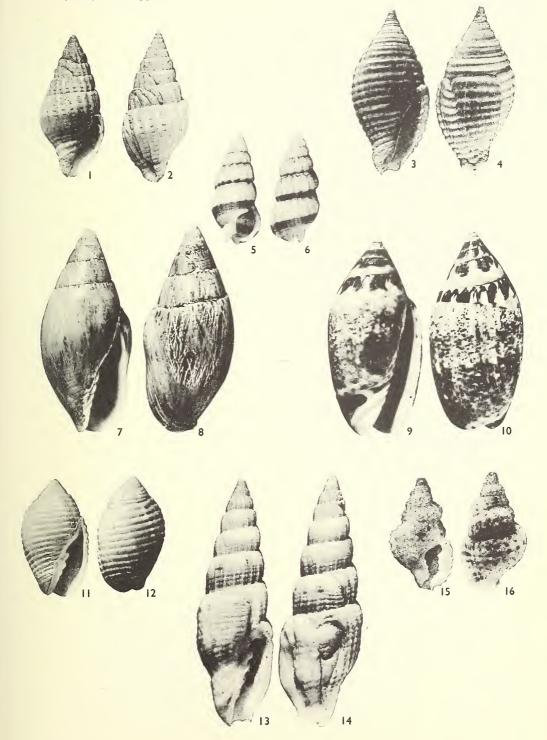


#### PLATE 2

- Figs. 1–2. Clathurella buccinoides Pease, Holotype,  $9.5 \times 4.5$  mm.
- Figs. 3-4. Clathurella producta Pease, Lectotype, 7 × 2 mm.
- Figs. 5-6. Borsonia crassicostata Pease, Lectotype, 7.5 × 3.5 mm.
- Figs. 7–8. Clathurella fuscomaculata Pease, Lectotype,  $9 \times 3$  mm.
- Figs. 9-10. Engina albocincta Pease, Lectotype, 7 × 4 mm.
- Figs. 11–12. Clathurella paucicostata Pease, Holotype, 11  $\times$  3·5 mm.
- Figs. 13–14. Engina monilifera Pease, Lectotype,  $7 \times 4$  mm.
- Figs. 15–16. Borsonia lutea Pease, Lectotype, 9 × 3·5 mm.
- Figs. 17–18. Clathurella exilis Pease, Lectotype, 6 × 2·5 mm.
- Figs. 19-20. Clathurella pulchella Pease, Lectotype, 10 × 4 mm.
- Figs. 21–22. Clathurella elegans Pease, Lectotype, 15 × 6 mm.
- Figs. 23-24. Clathurella harpa Pease, Lectotype, 22 × 8 mm.



- Figs. 1-2. Turricula approximata Pease, Lectotype, 19 × 8 mm.
- Figs. 3-4. Mitra ericea Pease, Lectotype, 15 × 7 mm.
- Figs. 5-6. Nassa microstoma Pease, Holotype, 9 × 4 mm.
- Figs. 7-8. Strigatella fuscescens Pease, Lectotype, 27 × 13 mm.
- Figs. 9-10. Oliva sandwicensis Pease, Lectotype, 25 × 13 mm.
- Figs. 11–12. Mitra pudica Pease, Lectotype,  $16 \times 8$  mm.
- Figs. 13-14. Turricula bella Pease, Lectotype, 32 × 10 mm.
- Figs. 15-16. Distorsio pusilla Pease, Holotype, 10 × 5 mm.



Figs. 1-2. Vitularia sandwicensis Pease, Lectotype, 20 × 11 mm.

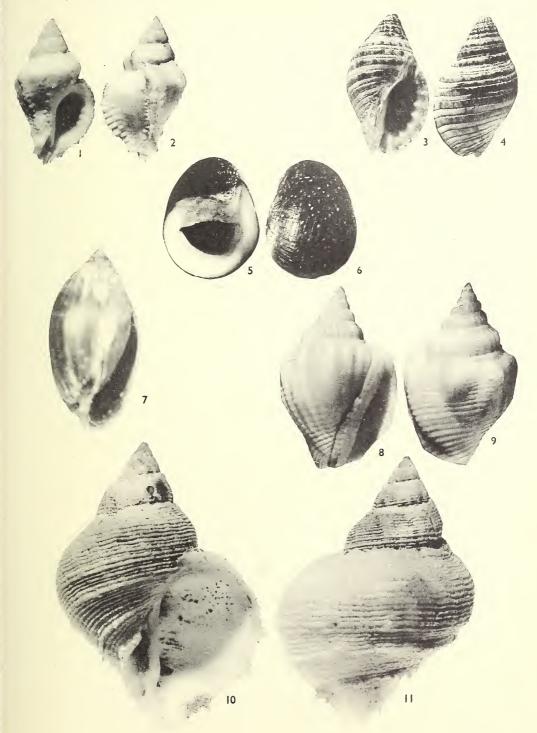
Figs. 3-4. Vexilla fusconigra Pease, Lectotype, 13 × 7 mm.

Figs. 5-6. Neritina neglecta Pease, Lectotype, 16 × 13 mm.

Fig. 7. Melampus (Tralia) semiplicata Pease, Lectotype, 11 × 6 mm.

Figs. 8–9. Strombus cancellatus Pease, Lectotype, 24.5 × 15 mm.

Figs. 10-11. Rhizochilus exaratus Pease, Lectotype, 30 × 23 mm.



Figs. 1-2. Drillia nodifera Pease, Lectotype, 11·5 × 5 mm.
Figs. 3-4. Daphnella bella Pease, Lectotype, 6 × 3 mm.
Figs. 5-6. Cerithium gracile Pease, Lectotype, 12 × 4 mm.

Figs. 5-6. Cerithium gracile Pease, Lectotype, 12 × 4 mm.

Figs. 7-8. Cerithium fucatum Pease, Lectotype,  $9.5 \times 5$  mm. Figs. 9-10. Vertagus graniferus Pease, Holotype,  $26 \times 8$  mm.

Figs. 11–12. Cerithium asperum Pease, Holotype, 15 × 7 mm.

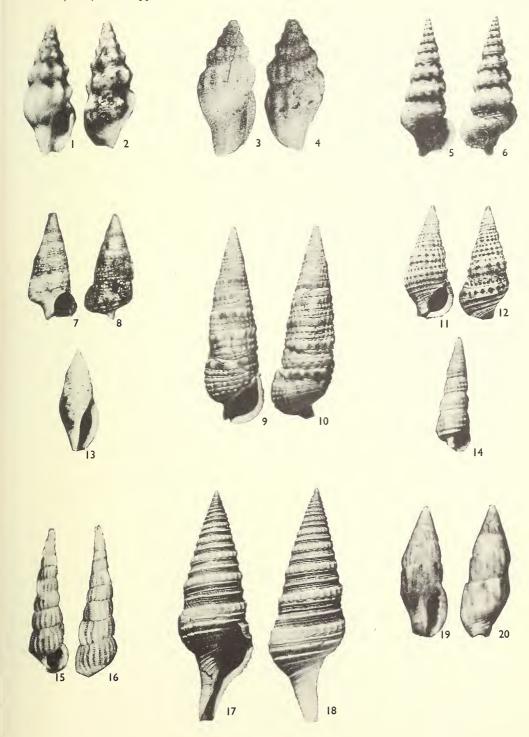
Fig. 13. Daphnella interrupta Pease, Lectotype,  $7.5 \times 3$  mm.

Fig. 14. Bittium tricarinatum Pease, Holotype, 8 × 2·5 mm.

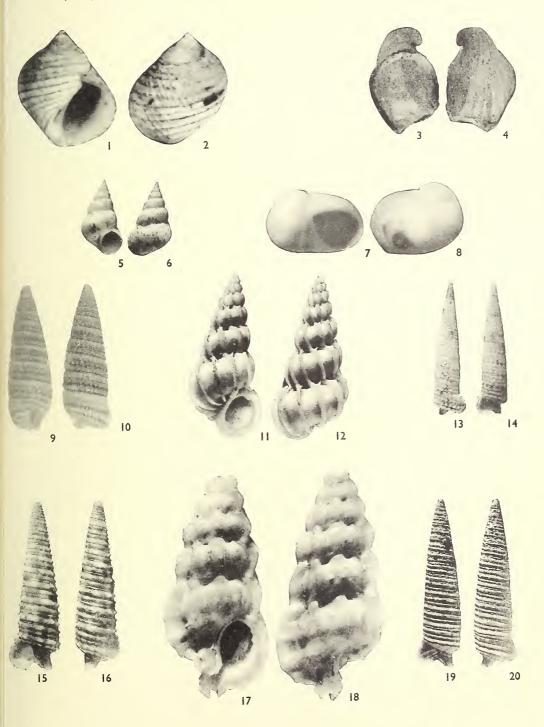
Figs. 15–16. Turbonilla decussata Pease, Lectotype, 12·5 × 3 mm.

Figs. 17–18. Turris monilifera Pease, Holotype,  $29.5 \times 9.5$  mm.

Figs. 19-20. Triton pusilla Pease, Holotype, 9 × 3 mm.



- Figs. 1–2. Fossar multicostatus Pease, Lectotype, 6 × 4.5 mm.
- Figs. 3-4. Amathina bicarinata Pease, Lectotype,  $5 \times 4$  mm.
- Figs. 5–6. Scalaria millecostata Pease, Holotype,  $6.5 \times 3.5$  mm.
- Figs. 7-8. Vanikoro semiplicata Pease, Holotype, 8 × 8 mm.
- Figs. 9-10. Triphoris cingulifera Pease, Lectotype, 6 × 2.5 mm.
- Figs. 11–12. Scalaria fucata Pease, Lectotype, 14 × 6 mm.
- Figs. 13-14. Triphoris fucata Pease, Lectotype, 11.5 × 2 mm.
- Figs. 15–16. Triphoris flammulata Pease, Lectotype, 15 × 3.5 mm.
- Figs. 17–18. Ranella producta Pease, Holotype, 19  $\times$  9 mm.
- Figs. 19-20. Triphoris incisa Pease, Lectotype, 15 × 3.5 mm.



Figs. 1–2. Collonia variabilis Pease, Lectotype,  $3\cdot 2\times 2\cdot 6$  mm.

FIGS. 3-4. Turbo semicostatus Pease, Holotype, 11 × 9 mm. FIGS. 5-6. Alcyna rubra Pease, Lectotype, 3 × 1·5 mm. FIGS. 7-8. Turbo sandwicensis Pease, Holotype, 42 × 40 mm.



Figs. 1–3. Clathurella brunnea Pease, Lectotype, 7  $\times$  2·5 mm.

Figs. 4–5. Borsonia bifasciata Pease, Holotype,  $5.5 \times 2$  mm.

Fig. 6. Clathurella elegans Pease, protoconch of paralectotype.

Fig. 7. Turris monilifera Pease, protoconch.

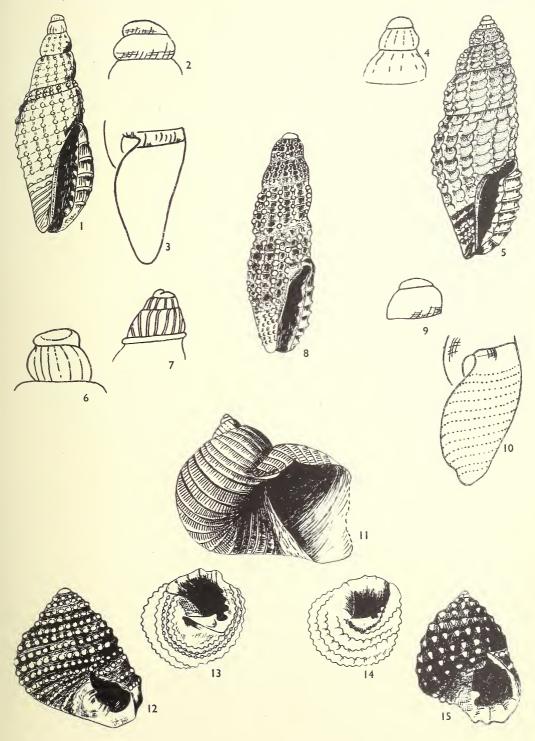
Fig. 8. Clathurella cylindrica Pease, Holotype, 5 × 2 mm.

Figs. 9-10. Daphnella interrupta Pease, protoconch and lateral view.

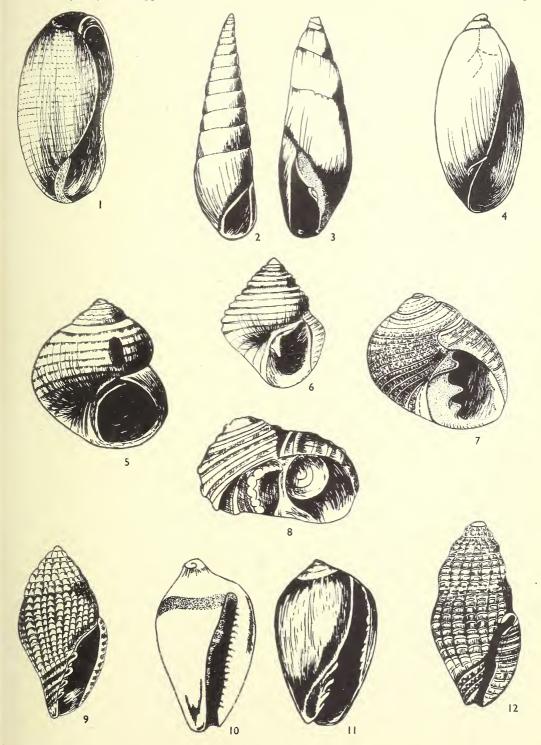
Fig. 11. Vanikoro imbricata Pease, Holotype, 6 × 7 mm.

Figs. 12–13. Euchelus corrugatus Pease, Lectotype,  $3.5 \times 4$  mm.

Figs. 14-15. Euchelus fimbriatus Pease, Holotype, 3.5 × 4 mm.



- Fig. 1. Haminea pusilla Pease, Lectotype, 3.5 × 2 mm.
- Fig. 2. Eulima aciculata Pease, Lectotype, 8 × 2 mm.
- Fig. 3. Blauneria gracilis Pease, Lectotype, 5.5 × 1.5 mm.
- Fig. 4. Tornatina sandwicensis Pease, Lectotype, 5  $\times$  2 mm.
- Fig. 5. Margarita marmorea Pease, Lectotype,  $4 \times 4.5$  mm.
- Fig. 6. Alcyna subangulata Pease, Holotype, 2·5 × 1·5 mm.
- Fig. 7. Pedipes sandwicensis Pease, Holotype, 2  $\times$  2 mm.
- Fig. 8. Cóllonia candida Pease, Lectotype, 2 × 2 mm.
- Fig. 9. Strigatella picea Pease, Holotype, 7 × 3.5 mm.
- Fig. 10. Erato sandwicensis Pease, Lectotype, 5.5 × 3.5 mm.
- Fig. 11. Marginella sandwicensis Pease, Lectotype, 2.5 × 1.5 mm.
- Fig. 12. Clathurella balteata Pease, Lectotype, 4.5 × 2.5 mm.



- Fig. 1. Triphoris affinis Pease, Holotype, 6.5 × 1.5 mm.
- Fig. 2. Triphoris clavata Pease, Lectotype, 9 × 3 mm.
- Fig. 3. Triphoris triticea Pease, Holotype, 3 × 1 mm.
- Fig. 4. Triphoris alternata Pease, Lectotype, 7 × 2.5 mm.
- Fig. 5. Cerithium unilineatum Pease, Lectotype,  $5.5 \times 3$  mm.
- Fig. 6. Cerithium paxillum Pease, Lectotype, 6 × 2.5 mm.
- Fig. 7. Columbella pellucida Pease, Lectotype,  $6.5 \times 2.5$  mm.
- Fig. 8. Cerithium boeticum Pease, Lectotype, 6 × 2·5 mm.
- Figs. 9-10. Cirsotrema attenuatum Pease, Lectotype, 7.5 × 2 mm.
- Fig. 11. Cythara garrettii Pease, Lectotype, 8 × 3 mm.
- Fig. 12. Conus fusiformis Pease, Lectotype,  $6.5 \times 3$  mm.
- Fig. 13. Cythara varia Pease, Lectotype,  $3 \times 1.5$  mm.
- Fig. 14. Cythara pusilla Pease, Lectotype, 4.5 × 2.5 mm.

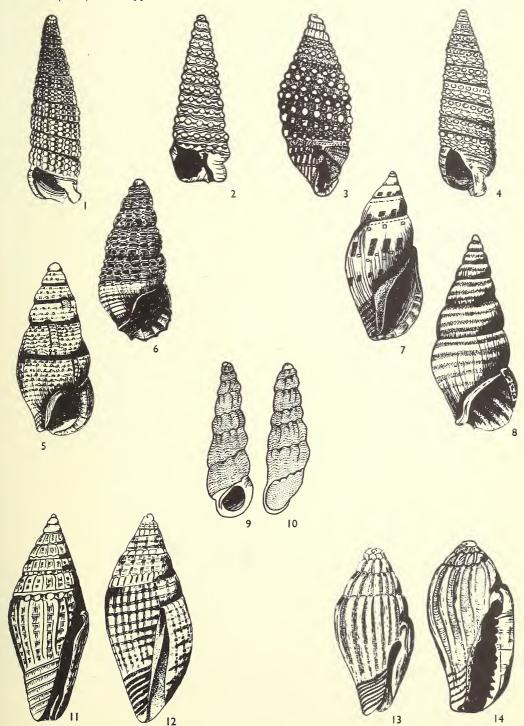


Fig. 1. Mucronalia rosea Pease, Holotype,  $4.5 \times 2.5$  mm. Fig. 2. Mucronalia ovata Pease, Lectotype,  $7 \times 4.5$  mm.

Fig. 2. Mucronalia ovata Pease, Lectotype, 7 × 4·5 mm. Fig. 3. Mucronalia nitidula Pease, Lectotype, 4·5 × 2 mm.

Figs. 4-5. Tugalia oblonga Pease, Lectotype, 10 × 5 mm.

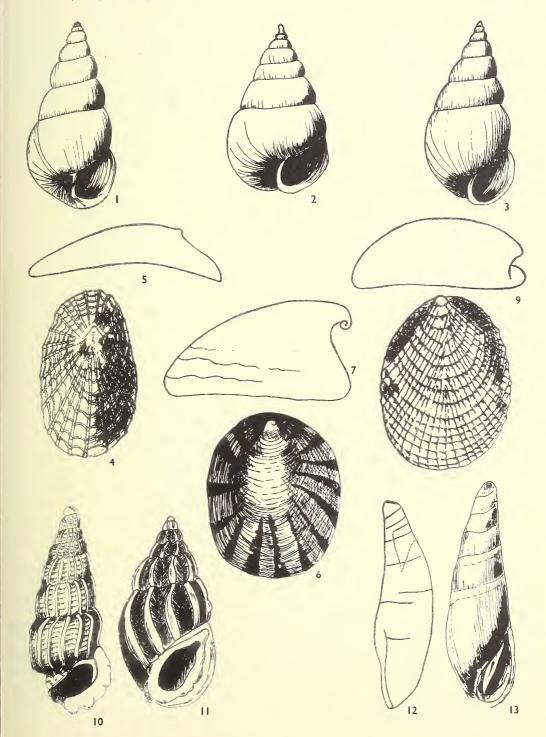
Figs. 6–7. Tectura radiata Pease, Lectotype, 5·5 × 5 mm.

Figs. 8–9. Scutellina cancellata Pease, Lectotype, 7 × 5 mm.

Fig. 10. Rissoina turricula Pease, Lectotype, 4 × 2 mm.

Fig. 11. Rissoina triticea Pease, Holotype, 3 × 1·5 mm.

Figs. 12–13. Leiostraca distorta Pease, Holotype,  $5 \times 1.5$  mm.



Figs. 1–2. Cypraea compta Pease, Holotype, 11.5 × 6 mm.

Figs. 3-4. Fissurella granifera Pease, Lectotype, 5 × 3·5 mm.

Figs. 5-6. Amphiperas semistriata Pease, Lectotype, 12.5 × 7.5 mm.

Figs. 7-8. Lophocercus viridis Pease, Lectotype, 11 × 7 mm.

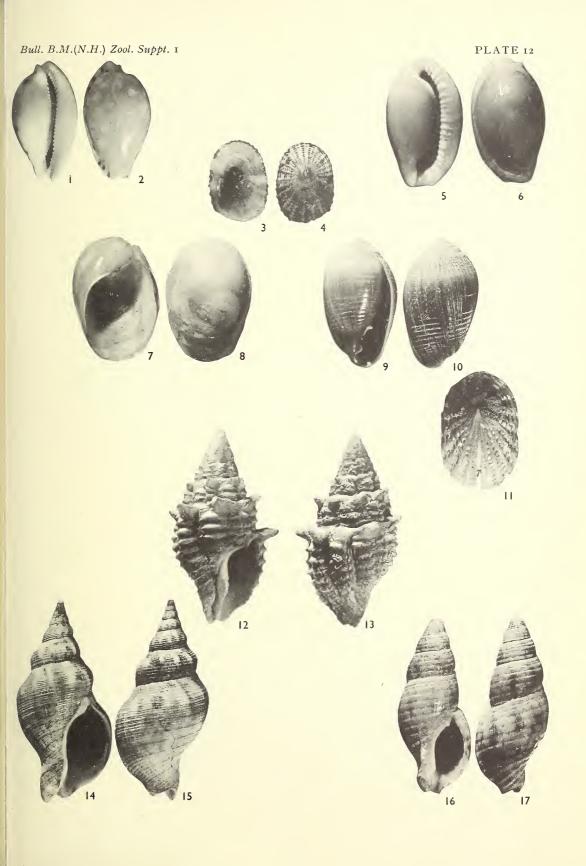
Figs. 9-10. Melampus (Tralia) striatus Pease, Lectotype, 10 × 6 mm.

Fig. 11. Emarginula clathrata Pease, Lectotype, 9 × 6 mm.

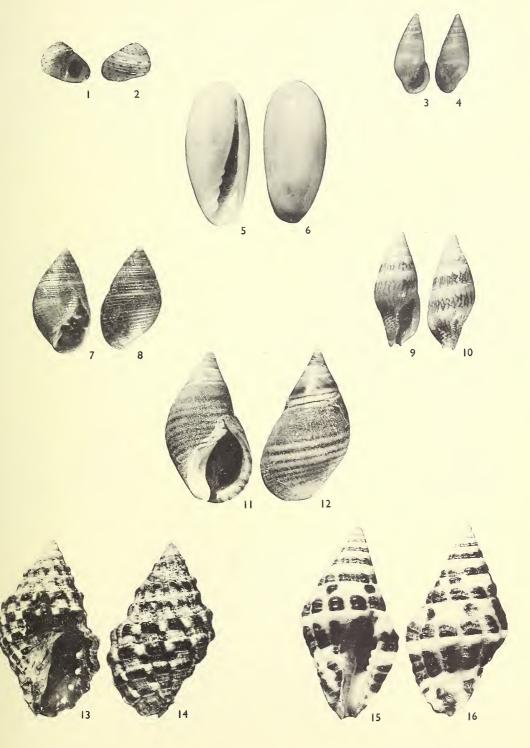
Figs. 12–13. Latirus squamosus Pease, Lectotype,  $37 \times 20$  mm.

Figs. 14–15. Neptunea fuscolineata Pease, Holotype,  $39 \times 15$  mm.

Figs. 16-17. Pisania strigata Pease, Lectotype, 33.5 × 12.5 mm.



- Figs. 1–2. Euchelus maculosus Pease, Lectotype,  $1.75 \times 2$  mm.
- Figs. 3-4. Rissoina semiplicata Pease, Lectotype,  $3.5 \times 1.5$  mm.
- Figs. 5–6. Marginella cylindrica Pease, Lectotype, 11  $\times$  5 mm.
- Figs. 7–8. Laimodonta conica Pease, Lectotype,  $4.5 \times 2.5$  mm.
- Figs. 9–10. Columbella pusilla Pease, Lectotype, 7 × 3 mm.
- Figs. 11–12. Planaxis plumbea Pease, Lectotype, 11·5 × 6 mm.
- Figs. 13–14. Sistrum affine Pease, Lectotype, 17·5 × 11 mm.
- Figs. 15–16. Engina fusiformis Pease, Lectotype,  $15 \times 8.5$  mm.



- Figs. 1–2. Cypraea fuscomaculata Pease, Lectotype, 13  $\times$  7 mm.
- Figs. 3-4. Cypraea candida Pease, Lectotype,  $15.5 \times 9$  mm.
- Figs. 5–6. Engina tuberculosa Pease, Lectotype,  $7.75 \times 4$  mm.
- Figs. 7–8. Turricula putillus Pease, Holotype,  $9 \times 5$  mm.
- Figs. 9-10. Drillia nodulosa Pease, Holotype, 10 × 4 mm.
- Figs. 11–12. Mitra nigricans Pease, Holotype,  $14 \times 5.5$  mm.
- Figs. 13–14. Pedicularia pacifica Pease, Lectotype,  $6 \times 3$  mm.
- Figs. 15–16. Neritina rubida Pease, Lectotype, 5  $\times$  3 mm.
- Figs. 17-18. Cypraea granulata Pease, Lectotype, 39 × 23 mm.

