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THE LAND MOLLUSCA OF THE SOLOMON ISLANDS (SUCCINEIDAE, BULIMULIDAE AND PARTULIDAE)

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INTRODUCTION

This report is based in greater part upon the land mollusks collected by the members of the Whitney South Sea Expedition during their stay in the Solomon Islands. Most of the material obtained was collected by W. J. Coultas, W. J. Eyerdam and Dr. E. Mayr.

It has been considered best to make this paper more inclusive than a mere list of the species obtained, as most of the papers so far published for this island group have dealt only with the descriptions of the new species rather than a complete summary of the molluscan fauna of the individual islands and the problem of their geographical distribution.

In addition to the Whitney collections the mollusks collected by W. M. Mann[2] have been restudied and the results incorporated in this report.

This portion of the report deals with the Succineidae, Bulimulidae and the Partulidae inhabiting these islands.

ACKNOWLEDGMENTS

I am under deep obligation to Dr. R. W. Miner of The American Museum of Natural History, for the privilege and pleasure of working up this collection, and to W. J. Eyerdam and E. Mayr of the Whitney Expedition for much additional information about the islands and the localities where the material was obtained.

To Dr. E. Paravicini of Basel, Switzerland, I am grateful for a large series of land and freshwater mollusks recently collected by him in the Solomon Islands.

To Dr. C. M. Cooke of the Bernice P. Bishop Museum for a loan of the Solomon Island land mollusks obtained mainly by the Crocker Expedition.

To Dr. W. M. Mann I am indebted for a map explaining his route and collecting places in the Solomons as well as much additional information relative to the shells he collected.

To Mr. F. P. Orchard my thanks are due for his careful and painstaking work upon the photographs.

HISTORY

The first scientific expedition to investigate the Solomon Islands was that of Dumont D'Urville which was made in the western Pacific during the years 1837 to 1840. The "Astrolabe" and "Zelee" were the two ships that figured in this voyage; the former earlier became famous through the pioneer work of Quoy and Gaimard while in Australasian waters. Though D'Urville sailed the entire length of the Solomon archipelago, collections were made only at the southeastern extremity of the island of Ysabel. The mollusks collected were named and figured by the naturalists, Hombron and Jacquinot, who accompanied the expedition; the formal

[1] Museum of Comparative Zoölogy, Cambridge, Massachusetts.

[2] W. F. Clapp (1923) published upon the shells obtained by W. M. Mann. He did not include, however, the land operculates.

descriptions were written by L. Rousseau, assistant at that time in the Jardin des Plants. The original locality, "Isles de Salomon," which is given for all of their new species described from these islands refers actually to the single island named above. According to Sherborn both text and atlas of plates were published in 1854.

During 1865, J. L. Brenchley, accompanied by John Brazier, paid a short visit to the Solomons. This expedition was that of the "Curaçoa," made by the British to establish new and reëstablish old claims of possession in the Solomons and other island groups in the Pacific. Only a few days were spent in the Islands from August 27 to September 10 of that year. Several marine and a single land species (*Helicina julii*) were described as new by W. Baird from the material obtained on this trip. Brazier later made a second trip to the Solomons and, in addition to the material of his own collecting, received much material from traders and missionaries. His new species were described mainly in the Proceedings of the Zoological Society of London, both by him and several associates who had access to his large collection. The "Curaçoa" visited Ulakua [Ulawa]; Uji [Ugi]; San Christoval; Guadalcanar; Florida and Ysabel.

We owe to Dr. H. B. Guppy the most comprehensive account of the Solomon Islands that has thus far appeared. During the years from 1881 to 1884, he was surgeon on H.M.S. "Lark," at that time engaged in hydrographic work in the Islands. Besides his many duties as ship's doctor, he acted as naturalist of the voyage and his time away from the ship was devoted to the exploration and study of the geology, flora and fauna of the Islands. Land and freshwater shells formed an important part of his studies, and the large collection he made was studied and published upon by E. A. Smith in 1885. His own publication which appeared two years later in a two-volume report contains a complete list of the many species he obtained with their localities and notes.

In 1916, Dr. W. M. Mann, now Director of the Zoological Park, Washington, D. C., made a stay of several months in the Solomon Islands. Though mainly interested in insects, he collected a superb series of mollusks, now in the Museum of Comparative Zoölogy, and this material formed a basis for the paper by W. F. Clapp on the land pulmonates of the archipelago. The new species collected by Dr. Mann were described and a list of most of the known land pulmonates recorded for this region was included.

The Whitney South Sea Expedition was in the Solomons during the latter half of 1929 and the early part of 1930. Though mainly engaged in collecting birds, Mr. W. J. Eyerdam and Dr. E. Mayr collected a very large series of shells. This collection is very carefully localized and includes material from new regions on the large islands and from many of the smaller islands not previously explored.

A small series of land mollusks was collected by the Crocker Expedition in the Solomons during 1934. The island of Gizo, off the north coast of New Georgia was explored and a few shells obtained. This is the first time that any specific records are available for this small island. The few other localities from which shells were obtained were not new, however, the records are included in this report.

The Whitney and Mann collections have formed the basis for the present study. A large number of shells from the Solomon Islands, in the collection of the Museum of Comparative Zoölogy, received many years ago from Brazier, Cox, Pease and others, have made possible a much better understanding of the land mollusks of this group. There is still, however, much more to be accomplished in this area. All of the above named expeditions were made for purposes other than the collecting of mollusks, and such that were obtained were only incidental to other interests. Many of the early collections were poorly localized, and certain of the old records are based on material now known to occur outside of the Solomons. Many of the Cumingian species described by Pfeiffer are in this category.

In addition to the material derived from the above sources, many other lots have been studied that do not figure in the pres-

ent distributional records. Their history is unknown, and the locality unknown or simply labeled, "Solomon Islands." Many lots of this sort are in the Pease collection (now in the M.C.Z.) and were probably originally received from Cox, Coxen and Beddome, Australian collectors who supplied a host of shells from the Australasian region to museums and private collectors two generations ago.

As stated above, there is yet a vast field remaining for the collector in this group of islands. All of the larger and most of the smaller islands are still very imperfectly known. This is especially true for the many small islands associated with the island of New Georgia. Bougainville, the northernmost island of the group, has received but little attention and mollusks from this region are much to be desired. Only a few are known and several of these appear to be quite sharply differentiated from those of the other islands to the south.

The interior mountainous regions of all the islands are practically unstudied. Dr. Mann crossed northern Malaita and eastern San Christoval; Eyerdam, with his associates, penetrated the islands of Malaita and San Christoval in a few places to the highland areas within. So far as I have been able to ascertain, no mullusks have ever been obtained from the interior of the remaining larger islands. Highland species are of the greatest importance in distributional studies, as those peculiar to the higher altitudes are less likely to be distributed mechanically between different islands than those occupying the coastal areas, and consequently lend greater strength to arguments favoring former land connections.

However, it is fully appreciated that there are many difficulties to overcome in the exploration of these islands. Hostility of the natives, lack of trails and much inaccessible coastline make collecting hazardous and in many places quite impossible.

COLLECTING STATIONS OF W. M. MANN

FLORIDA ISLAND:
- Tulagi (S. Lat. 9° 5′ 30″; E. Long. 160° 10′).

GUADALCANAR ISLAND:
- Rere (S. Lat. 9° 25′; E. Long. 160° 12′; position approximate).

MALAITA ISLAND:
- Auki (S. Lat. 8° 52′; E. Long. 160° 48′ 30″).
- Fourati (S. Lat. 8° 35′; E. Long. 160° 50′; position approximate).
- Atta [Ata] (S. Lat. 8° 31′; E. Long. 160° 55′).

NEW GEORGIA ISLAND:
- Rubiana (S. Lat. 8° 20′; E. Long 157° 17′).
- Labeti, Rubiana Lagoon (S. Lat. 8° 16′; 157° 25′; position approximate).
- Kepi, Rubiana Lagoon (S. Lat. 8° 16′; 157° 25′; position approximate).
- Rendova (Isl.) (S. Lat. 8° 25′; E. Long. 157° 21′).
- Marovo Lagoon [Maravo] (S. Lat. 8° 30′; E. Long. 158°).

RUSSELL ISLAND:
- (S. Lat. 9° 3′; E. Long. 159° 5′).

SAN CRISTOVAL ISLAND:
- Bio Isl. (S. Lat. 10° 10′; E. Long. 161° 41′).
- Pamua (S. Lat. 9° 24′; E. Long. 161° 44′; position approximate).
- Santa Anna Isl. (S. Lat. 10° 50′; E. Long. 162° 28′).
- Star Harbor [Bulimatarivo] (S. Lat. 10° 49′; E. Long. 162° 16′).
- Three Sister Isls. (S. Lat. 10° 11′; E. Long. 161° 56′; center island).
- Ugi Isl. (S. Lat. 10° 15′; E. Long. 161° 44′).
- Waiai [Wai-ai] (S. Lat. 10° 22′; E. Long. 161° 39′ 30″).
- Wainoni Bay (S. Lat. 10° 30′; E. Long. 162° 2′).

YSABEL ISLAND:
- Fulakora (S. Lat. 8° 21′; E. Long. 159° 51′).

COLLECTING STATIONS OF THE WHITNEY SOUTH SEA EXPEDITION

(Solomon Islands only)

BOUGAINVILLE ISLAND:
- Buin (S. Lat. 6° 49′ 30″; E. Long. 155° 45′).
- Kieta (S. Lat. 6° 13′; E. Long. 155° 40′).

BELLONA ISLAND:
- (S. Lat. 11° 25′; E. Long. 159° 45′).

CHOISEUL ISLAND:
- Bambatini [Sasamanga] (S. Lat. 7° 4′ 30″; E. Long. 156° 46′).
- Choiseul Bay (S. Lat. 6° 41′; E. Long. 156° 26′).
- Luti (S. Lat. 7° 15′; E. Long. 157°; position approximate).
- Papera [? Poro-poro] (S. Lat. 6° 41′; E. Long. 156° 26′; position approximate).
- Sumbi (S. Lat. 7° 15′; E. Long. 157°; position approximate).

Taoro (S. Lat. 7° 24′; E. Long. 157° 35′; position approximate).
Wurulata River (S. Lat. 7° 15′; E. Long. 157°; position approximate).
FLORIDA ISLAND:
Tulagi (S. Lat. 9° 5′ 30″; E. Long. 160° 10′).
Olevuga Isl. (S. Lat. 9°; E. Long. 160° 5′ 30″).
GOWER ISLAND:
(S. Lat. 7° 54′; E. Long. 160° 37′.)
GUADALCANAR ISLAND:
Berendi (S. Lat. 9° 24′ 30″; E. Long. 160° 17′).
MALAITA ISLAND:
Auki (S. Lat. 8° 52′; E. Long. 160° 48′ 30″).
Aurola [Arorla] (S. Lat. 8° 58′; E. Long. 161° 5′; position approximate).
Kwarambara (S. Lat. 8° 57′; E. Long. 161° 6′; position approximate).
Maramasiki (S. Lat. 8° 30′; E. Long. 161° 30′; position approximate).
Su'u (S. Lat. 9° 13′; E. Long. 161° 2′; position approximate).
Ulimburi (S. Lat. 8° 57′; E. Long. 161° 6′).
RENNEL ISLAND:
(S. Lat. 11° 35′; E. Long. 160° 20′.)
SAN CRISTOVAL:
Kira Kira
SHORTLAND ISLAND:
Faisi (S. Lat. 7° 4′; E. Long. 155° 53′).
ULAWA ISLAND:
(S. Lat. 9° 46′; E. Long. 161° 58′.)

All members of the scientific staff of the Whitney Expedition aided in collecting the mollusks in the Solomons.

The latitude and longitude of the localities for both the Mann and Whitney collections were obtained from U. S. Hydrographic charts: 2896; 2902; 2907; 2911; 2912; 2916; 2920.

SUCCINEIDAE

SUCCINEA DRAPARNAUD, 1801

Tableau des Mollusques de la France, p. 55. Paris.

GENOTYPE.—*Helix putris* Linné.

This genus is practically world wide in distribution, not exceeded by any other genus of land shells in its extensive range. There are but few differential characters to distinguish the many species, and a vast amount of material will be necessary for study before we are at all certain that many of the names now in use are really valid. They are easily transported by birds, as specifically noted by Ramsden (1913, p. 71) for *Succinea riisi* (Cuba), and very probably other species have been similarly distributed in this manner.

Succinea simplex Pfeiffer

Figure 12

Succinea simplex PFEIFFER, 1854 [1855], Proc. Zool. Soc. London, p. 123 (Solomon Islands).—E. A. SMITH, 1885, Proc. Zool. Soc. London, p. 595.—H. B. GUPPY, 1887, The Solomon Islands and Their Natives, London, I, p. 345.—W. F. CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 418.

REMARKS.—A small, light amber-colored species which probably occurs throughout the entire archipelago. It seems to be closely related to *S. montrouzieri* Crosse, from New Caledonia, and it is quite possible that the two are the same species. I have no material of the latter to make comparisons.

RECORDS.—Bio: (Clapp). Bellona: (Whitney). New Georgia: Labeti, Rubiana Lagoon (Clapp). Rennell: (Whitney). Santa Anna: (Eyerdam). Shortland: (Smith); Faisi (Whitney). Treasury: (Smith). Ugi: (Clapp).

BULIMULIDAE

PLACOSTYLUS BECK

1837, Index Molluscorum, p. 57.[1]

GENOTYPE.—*Bulimus fibratus* Martyn.

A genus of mainly large land snails of the southwestern Pacific islands. Its range extends from the northern portion of North Island, New Zealand, to the island of Bougainville in the Solomons and includes Lord Howe Island, New Caledonia, New Hebrides, the Loyalty and the Fiji islands.

They are found on the ground as well as on bushes and trees, especially in cleared areas about villages. Certain subgenera such as *Aspastus* appear to be entirely arboreal. Several of the New Caledonian species are very large and are exceeded in size only, among the land snails, by members of the genera *Achatina* (African) and *Strophocheilus* (South American). In New Caledonia they form an important item of food (Cockerell, 1929, p. 73). Though apparently not eaten by the natives in the Solomons, they are used to some extent for decorative purposes (Brenchly, 1873, p. 251).

Eyerdam reports in his field notes that dogs feed upon them to a considerable extent. Very probably the ground species

[1] See Filsbry, 1900, p. 19.

are eaten, as well, by pigs. No other enemies have been recorded as far as I am aware, although, as stated above, they are occasionally used by the natives for decorative purposes. Guppy (1887, p. 338) noted that the natives gathered (*P. cleryi*) [dead shells?] and dropped them into piles along the forest path, though he was never able to learn the reason for this peculiar practice.

SUBGENUS **PLACOSTYLUS**

A single species, *P. gizoensis*, of this subgenus occurs in the Solomons and it is the only member known to occur north of New Caledonia. All other Solomon Island subgenera are peculiar to the archipelago, though *Proaspastus* and *Eumecostylus* show a strong relationship to *Callistocharis* and *Euplacostylus*, of the Fiji Islands.

Placostylus (Placostylus) gizoensis, new species

Figure 10

DESCRIPTION.—Shell medium in size, solid, somewhat attenuated and imperforate. Color: earlier whorls pale straw or very light yellowish brown, later whorls covered by a deep brown periostracum which shows some spiral bars of deeper color in transmitted light. Lip materially thickened, white along the outer edge, red within. The entire inner portion of the aperture is deep red, both outer and inner sides. Whorls 6, slightly convex. Aperture subovate. Parietal wall calloused heavily. No parietal tooth. Columella thick, slightly oblique and ridged on its inner face. Columellar callous extending over the umbilical area leaving only a minute chink. Sculpture: first 2 1/2 (embryonic) whorls pitted, following whorls irregularly ridged with growth lines. Spire produced at 40°. Aperture cast at an angle of 16° from the vertical.

LENGTH	WIDTH	APERTURE	
54.5	25.0	23.0 × 9.5 mm.	Holotype
56.5	25.5	24.5 × 11.5	Paratype

HOLOTYPE.—B. P. Bishop Museum, No. 106216, Gizo Island [New Georgia Group], Solomon Islands, A. Seale, collector. Paratype, M.C.Z. 106357, with the same date.

REMARKS.—The species shows a very striking resemblance to *P. bivaricosus* of Lord Howe Island. Differences between the two forms are trivial and it is with some hesitation that this form is presented here as a new species. As A. Seale also collected *P. strangei* Pfeiffer on Gizo, a species of the New Georgia group of islands, the question of an error in the assignment of locality is materially reduced.

The two specimens of this new species do differ in being heavier, and more solid, the periostracum a deeper brown rather than a reddish brown as is to be found in *P. bivaricosus*, and the earlier whorls are a pale straw-brown rather than reddish brown as in this latter species.

It would appear that *P. gizoensis* is a remnant of *Placostylus*, *s.s.*, in the Solomon Islands, as all other species belong to other and probably later evolved subgenera. Further exploration may bring to light other members in this subgenus.

Its relationships with the Lord Howe Island species may be purely a case of parallelism, or a persistence of form without change from the early stock.

SUBGENUS **PLACOCHARIS** PILSBRY

1900, Man. of Conch., (2) XIII, p. 79.

SUBGENOTYPE.—*Bulimus macgillivrayi* PFEIFFER.

Shells smooth or spirally malleated, usually uniformly dark colored, sometimes with axial bars of a darker color superimposed over the ground pigmentation. Lip generally white, occasionally red or tinged with brown. Axis not generally widely spiral.

Species of this subgenus are usually terrestrial, occasionally found climbing on bushes.

Placostylus (Placocharis) founaki ("Hombron and Jacquinot" Rousseau)

Bulimus founaki "Hombron and Jacquinot" ROUSSEAU, 1854, Voy. au Pole Sud, V, p. 32, Pl. VIII, figs. 13–15 (Iles Solomon [south end of Ysabel]).

Bulimus stutchburyi var. *B.* CROSSE, 1864, Jour. de Conch., XII, p. 142 [based on all figures of *B. founaki*].

Bulimus hombroni CROSSE, 1871, Jour. de Conch., XIX, p. 178 (Ile Isabelle [Ysabel]).—BRAZIER, 1889, Jour. of Conch., VI, p. 80.

Bulimus (*Placostylus*) *founaki*, SMITH, 1885, Proc. Zool. Soc. London, p. 595.—GUPPY, 1887, The Solomon Islands and Their Natives, London, I, p. 345.

Placostylus founaki, KOBELT, 1901, Conchy.-Cab., I, pt. 13A, pp. 33 and 76, Pl. VIII, figs. 2–3, Pl. XVIII, figs. 2–6 [Kobelt first considered this species under *P. macfarlandi*, p. 33, Pl. VIII,

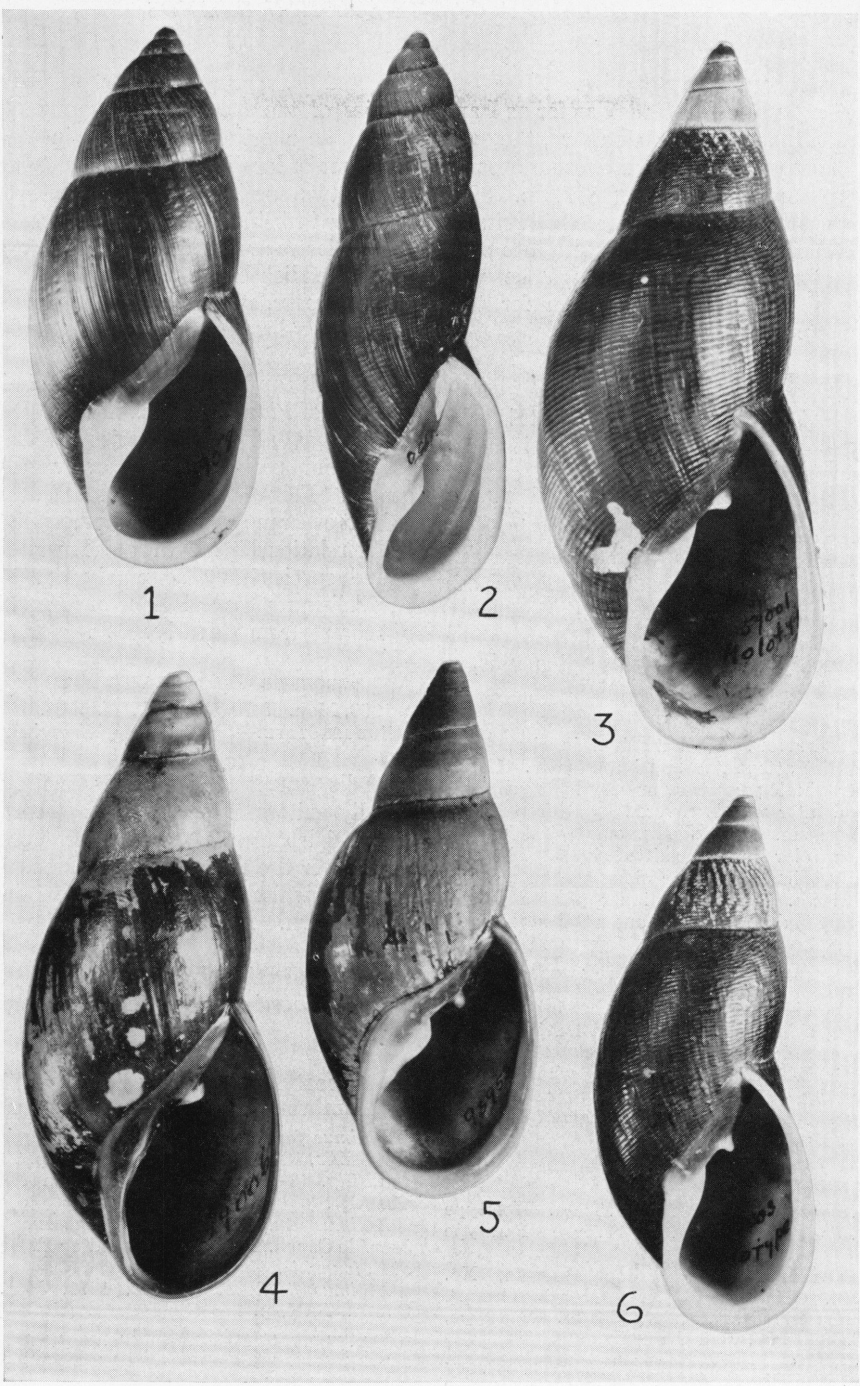

Fig. 1. *Placostylus paravicinianus* Rensch.
Fig. 2. *Placostylus fraterculus* Rensch.
Fig. 3. *Placostylus kirakiraensis* Rensch.
Fig. 4. *Placostylus malaitensis* Clench. Holotype.
Fig. 5. *Placostylus acutus* Clench. Holotype.
Fig. 6. *Placostylus galleogoi* Clench. Holotype.
All figures natural size.

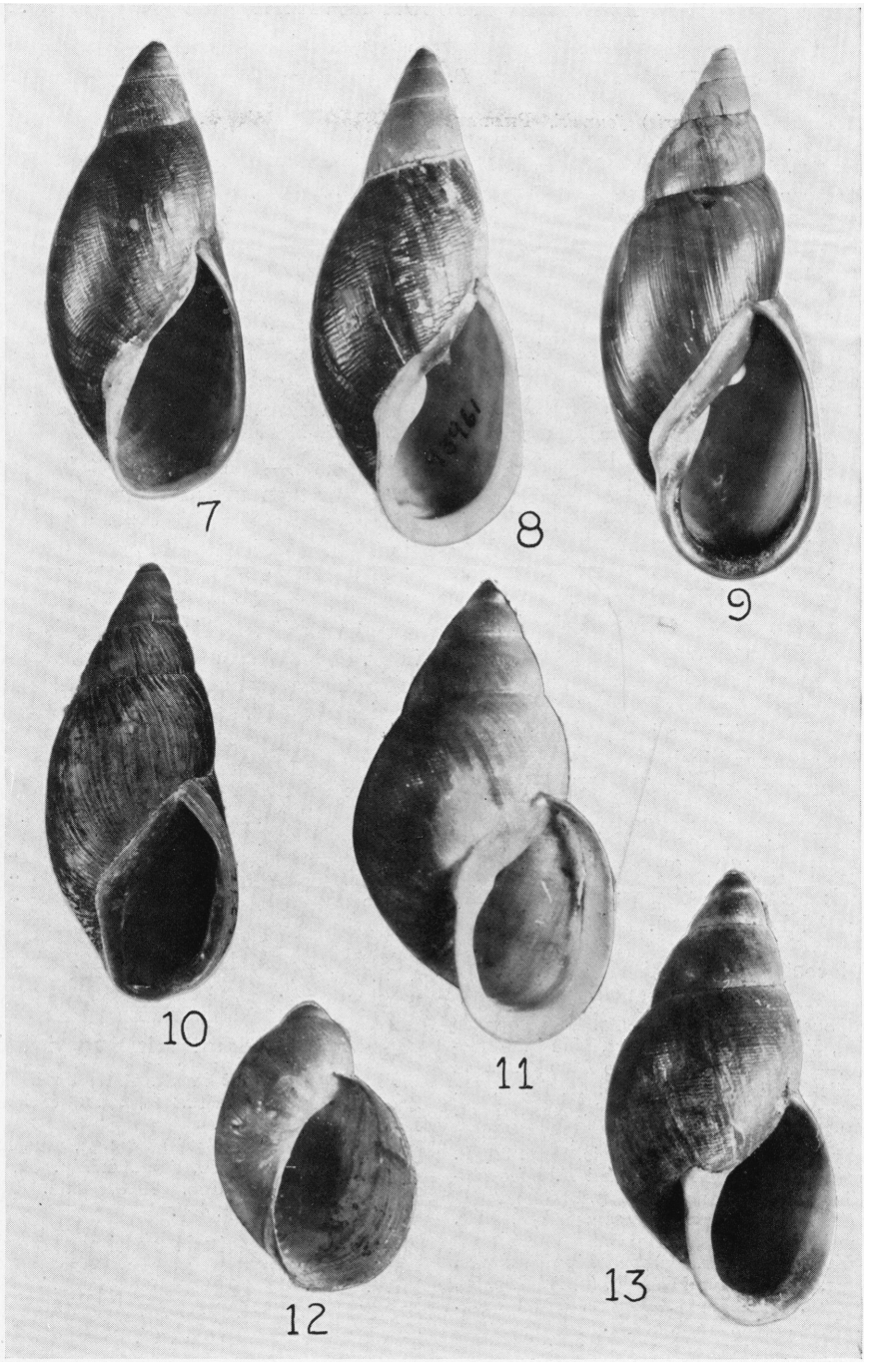

Fig. 7. *Placostylus almiranta* Clench. Holotype.
Fig. 8. *Placostylus vicinus* B. Rensch. Paratype.
Fig. 9. *Placostylus ophir* Clench. Holotype.
Fig. 10. *Placostylus gizoensis* Clench. Holotype.
Figures 7 to 10 natural size.
Fig. 11. *Partula incurva* Hartman. Topotype. × 4
Fig. 12. *Succinea simplex* Pfeiffer. Rennell Id. × 4
Fig. 13. *Partula cramptoni* Clench. Paratype. × 2

figs. 2–3, and on p. 76 refers the figures to *P. founaki*].

Placostylus (Placocharis) founaki, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 79, Pl. XXXIV, figs. 10–14.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 407.

REMARKS.—This species is quite variable both in color and in size and, according to Eyerdam, it is to be found both on the ground and on bushes.

A single specimen found by Eyerdam on Bougainville deserves a special note. Although it is a dead shell, it has the shape and appearance of this species and agrees both in shape and in size with specimens from Choiseul. In his field notes, Eyerdam mentioned that this specimen was the only *Placostylus* found on Bougainville at the several localities at which he made collections. This record marks the most northwestern limit of this genus.

There are as yet a few species in this genus that have not been definitely assigned to any specific locality, but their general characters would place them with species on the islands in the southeastern portion of the archipelago.

RECORDS.—Bougainville: Kieta (Whitney). Choiseul: Bambatani; Choiseul Bay; Luti; Taoro (Whitney). Faro: (Pilsbry; Smith). Treasury: (Brazier). Ysabel: (Brazier; Crosse; Guppy; Pilsbry); Fulakora (Clapp).

Placostylus founaki paletuvianus (Gassies)

Bulimus paletuvianus GASSIES, 1859, Jour. de Conch., VII, p. 370 (L'ile Art, Nouvelle-Caledonie).—GASSIES, 1863, Faune Conchy. de la Nouvelle-Caledonie, Paris, I, p. 48, Pl. II, fig. 2.—CROSSE, 1871, Jour. de Conch., XIX, p. 177.

Bulimus rhizophorarus GASSIES, 1871, Faune Conchy. de la Nouvelle-Caledonie, II, p. 91 [*B. rhizophoraraeus* in the index and *B. rhizophorareus* in his Faune Conchy., III, p. 100].

Bulimus rhizophorarum GASSIES, 1878, Jour. de Conch., XXVI, p. 337.

Placostylus (Placocharis) founaki paletuvianus, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 80, Pl. XXXIV, figs. 18–19.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 407.

REMARKS.—I have not seen this variety which differs only in the lack of strong color blotches. It may, however, form a local race, and is probably localized on some specific island in the Solomon group. Gassies was in error in citing this form as coming from New Caledonia as was first noted by Crosse.

There are probably other races of subspecific value in this species that can be segregated eventually from the typical form. At present, however, the lack of a large series obtained from different localities makes it inadvisable to add any more names.

Placostylus (Placocharis) manni Clapp

Placostylus (Placocharis) manni CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 411, Pl. V, figs. 1–2 (Auki, Malaita).

REMARKS.—The shells of this species are larger than any other in the subgenus *Placocharis*, and much darker in coloration. In addition to the characters mentioned by Clapp in the original description, the shells are materially depressed dorso-ventrally. This character is found in *P. founaki* to a limited extent. The following measurements are based on a portion of the type series:

LENGTH	LESSER WIDTH	GREATER WIDTH	
85.0	30.5	41.0 mm.	Holotype
83.5	30.5	39.0	Paratype
84.0	29.0	39.0	"
83.5	29.0	37.0	"
80.0	29.0	37.5	"

RECORDS.—Malaita: (C. M. Cooke); Auki (Clapp).

Placostylus (Placocharis) guppyi Smith

Placostylus guppyi SMITH, 1891, Proc. Zool. Soc. London, p. 489, Pl. XL, fig. 6 (Solomon Islands).

Placostylus (Placocharis) guppyi, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 82, Pl. XXXV, fig. 26.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 407.

REMARKS.—A single specimen of this species has been received from Dr. Paravicini. It appears to be related to *P. macfarlandi* Brazier, differing, however, in being darker in coloration, possessing a more acute spire, having the inner area of the aperture and lip pigmented a pale brown and having the columellar fold greatly developed.

RECORDS.—Guadalcanar: (Paravicini).

Placostylus (Placocharis) paravicinianus B. Rensch

Figure 1

Placostylus paravicinianus B. RENSCH, 1934, Sitz. Gessell. Natur. Freunde, p. 451 (Aola, Guadalcanar).—I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 79, Pl. I, fig. 7.

DESCRIPTION. — Shell elongate - ovate, rather solid, rimately perforate. Color of first 4 1/2 whorls a brick-red, shading into a brownish red on the fifth whorl. Whorls 6, decidedly convex. Spire with the tip (2 whorls) pitted. Aperture ovate. Parietal wall thinly glazed with white. Columellar fold strong but not excessively developed. No parietal tooth. Outer lip reflexed. Sutures slightly indented. Sculpture, other than the pitting on the early whorls, consisting of fine growth lines on the body whorl which are somewhat coarser just below the suture and in addition are slightly recurved at this point. Mid-whorls showing faint malleations. Aperture cast at an angle of 15° from the vertical, spire forming an angle of 45°.

LENGTH	WIDTH	APERTURE	
68	31.5	30.5 × 15 mm.	Paratype

PARATYPE.—Mus. Comp. Zoöl. No. 93958, Island of Guadalcanar, Solomon Islands. Dr. E. Paravicini, collector.

REMARKS.—*P. paravicinianus* does not appear to be closely related to any other species. It is sharply differentiated by the strong convexity of the early whorls and its rather deep red and brownish-red coloration. The lack of a parietal tooth is quite different from all other large forms in the subgenus *Placocharis*. A second paratype sent by Dr. Paravicini is deformed and as a consequence not measured.

RECORDS.—Guadalcanar: Aola (Rensch).

Placostylus (Placocharis) macfarlandi (Brazier)

Bulimus (Eumecostylus) macfarlandi BRAZIER, 1875 [1876], Proc. Linn. Soc. New South Wales, I, p. 4 (Solomon Archipelago).—PFEIFFER, 1877, Mono. Heliceorum Viven., VIII, p. 604.—COX, 1888, Proc. Linn. Soc. New South Wales, (2) II, pt. 4, p. 1063, Pl. XXI, fig. 7.

Bulimus macFarlanei (*sic*) "Cox" PAETEL, 1873, Catalog der Conchy.-Samml., p. 98.

Placostylus macfarlandi, KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 67, Pl. XVI, figs. 3–4; not *P. macfarlandi*, Kobelt, idem, p. 33, Pl. VIII, figs. 2–3 [= *P. founaki*].

Placostylus (Placocharis) macfarlandi, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 83, Pl. XXXV, fig. 20.—CLAPP, 1923, Bull. Mus. Comp. Zool., LXV, p. 407.

Bulimus brodiei "Brazier" PILSBRY, 1900, Man. of Conch., (2) XIII, p. 83 [*nomen nudum*].

REMARKS.—A single specimen was obtained by Eyerdam that seems referable to this species. It is a dead shell but possesses sufficient coloration to characterize it as this form.

RECORDS.—Malaita: Aurola at 3000 feet (Whitney).

NOTES.—Found in a native's garden: terrestrial (Eyerdam).

Placostylus (Placocharis) macgillivrayi (Pfeiffer)

Bulimus macgillivrayi PFEIFFER, 1855, Proc. Zool. Soc. London, p. 108, Pl. XXXII, fig. 2 (Wanderer Bay, Guadalcanar); 1859, Mono. Heliceorum Viven., IV, p. 379.—CROSSE, 1864, Jour. de Conch., XII, p. 134.

Bulimus (Placostylus) macgillivrayi, PFEIFFER, 1855 [1856], Malak. Blätt., II, p. 148.

Eumecostylus macgillivrayi, ALBERS, 1860, Die Heliceen, p. 186.

Placostulus macgillivrayi, KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 72, Pl. XVII, figs. 4–5.

Placostylus (Placocharis) macgillivrayi, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 84, Pl. XXXVI, figs. 27–30.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 408.

REMARKS.—A small species differing quite sharply from all other species in this subgenus. It has not been obtained by recent collectors.

RECORDS.—Guadalcanar: Wanderer Bay (Pfeiffer).

Placostylus (Placocharis) stutchburyi (Pfeiffer)

Bulimus stutchburyi PFEIFFER, 1860, Proc. Zool. Soc., London, p. 137, Pl. LI, fig. 9 (Erumanga, New Hebrides); 1861, Malak. Blätt., VIII, p. 12; 1868, Mono. Heliceorum Viven., VI, p. 23.—CROSSE, 1864, Jour. de Conch., XII, p. 142 [reference only].

Placostylus stutchburyi, KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 135, Pl. XXXII, fig. 8.

Placostylus scottii var. *mendanae* KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 133, Pl. XXXII, figs. 6–7 (Solomon Islands).

Placostylus (Placocharis) stutchburyi, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 88, Pl. XXXVI, figs. 35–37.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 408.

REMARKS.—Very close in general appearance to *P. palmarum* (Mousson), differing slightly in the more elongated aperture and the more brilliant periostracum.

The type locality given by Pfeiffer is unquestionably wrong. Pilsbry (*op. cit.*, p. 88), quotes Brazier as giving New Georgia as the locality. A single lot, M.C.Z. No. 62042, is from Russell Island.

RECORDS.—New Georgia: (Pilsbry, Kobelt). Russell Isl.: (M.C.Z.).

Placostylus (Placocharis) palmarum (Mousson)

Bulimus palmarum MOUSSON, 1869, Jour. de Conch., XVII, p. 62, Pl. IV, fig. 5 (Makite, San Christoval).—PFEIFFER, 1877, Mono. Heliceorum Viven., VIII, p. 28.—KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 41 [description only; not the figures, which are *P. minor* Kobelt].

Placostylus palmarum minor KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 42, Pl. IX, figs 6–9 [description refers to *P. palmarum* (Mousson), the remarks and figures to *P. minor* Kob.], *non minor* Kobelt, 1891, p. 21, nor Brazier, 1895.

Placostylus (Placocharis) palmarum, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 85, Pl. XXXVI, figs. 31–32.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 408.

Placostylus (Placocharis) palmarum minor, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 86, Pl. XXXVI, figs. 33–34.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 408.

Placostylus palmarum, DAUTZENBERG, 1910, Jour. de Conch., LVIII, p. 25.—I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 78.

REMARKS.—There is considerable uncertainity relative to the species. The variety *minor* Kobelt differs but slightly from the form described by Mousson. Additional material is needed for a better understanding of this as well as other closely related forms. The localities listed below are not consistent with the distribution of other members of this genus and would indicate an error in the original assignment of localities. Neither Mann nor Eyerdam obtained *P. palmarum* on the island of San Christoval. Paravicini collected specimens at Domma, Guadalcanar, and it may occur on Savo which is close to this latter island. If the variety *minor* Kobelt is found to be valid, the name will have to be changed, as Kobelt used the name on a previous page (21) for a variety of *P. sinilis* from New Caledonia.

RECORDS.—Guadalcanar: Domma (Paravicini). San Christoval: Makite (Mousson) [questioned]. Savu [= Savo]: (Rensch; Pilsbry, as *minor*).

Placostylus (Placocharis) strangei (Pfeiffer)

Bulimus strangei PFEIFFER, 1855, Proc. Zool. Soc. London, p. 8 (Eddystone Island).—PFEIFFER, 1856, Novit. Conch., I, p. 54, Pl. XVI, figs. 11–12; 1859, Mono. Heliceorum Viven., IV, p. 378.

Bulimus (Placostylus) strangei PFEIFFER, 1855 [1856], Malak. Blätt., II, p. 148.

Placostylus strangei, FRAUNFELD, 1869, Verh. Zool. Botan. Gesell., XIX, p. 874.—KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 23, Pl. V, figs. 4–6.

Placostylus (Placocharis) strangei, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 87, Pl. XXXIV, figs. 15–17.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 408.

REMARKS.—Materially different from *P. palmarum* in possessing a more attenuated spire and in having a lighter though redder periostracum.

RECORDS.—Eddystone [Narovo]: (Pfeiffer; Pilsbry). Gizo: (C. M. Cooke); New Georgia: (C. M. Cooke); Rubiana (J. H. Waterhouse, M.C.Z. No. 79248).

Placostylus (Placocharis) sellersi (Cox)

Bulimus sellersi COX, 1871, Proc. Zool. Soc. London, p. 644, Pl. LII, fig. 3 (Guadalcanar).—PFEIFFER, 1877, Mono. Heliceorum Viven., VIII, p. 31.—BRAZIER, 1889, Jour. of Conch., VI, p. 79.

Bulimus (Eumecostylus) sellersii, PAETAL, 1873, Catalog der Conchy.-Samml., p. 98.

Placostylus sellersi, KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 55, Pl. XIII, figs. 6–7.—I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 74.

Placostylus (Aspastus) sellersi, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 95, Pl. XXXVIII, figs. 56–57.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 416.

REMARKS.—This species is entirely white and a little smaller than *P. strangei*. Pilsbry (*loc. cit.*) placed this species in the subgenus *Aspastus*, but a critical examination, based in particular on the parietal area, indicates it to be an extreme in the subgenus *Placocharis*. It approaches quite closely the general outline of *P. strangei*, differing in being proportionately narrower, being white and not pale brown

as in the latter species, and not possessing a parietal tooth of any size. Only two out of the eighteen specimens possess a tooth. In *P. strangei*, the parietal tooth is very well developed. The following measurements are from a series of four cotypes from Cox (M.C.Z. No. 26051):

Length	Width	Aperture
47.5	18.0	21.0 × 9.5 mm.
49.0	19.5	21.5 × 9.5
45.0	18.0	20.0 × 8.0
43.0	17.5	19.0 × 7.0

Records.—Guadalcanar: (Brazier; Cox); Domma (Paravicini); Rotalu; Gamba; Domma; Aola (Rensch).

Subgenus **Malaitella**, new name

Acrostylus Clench, 1935, Nautilus, XLVIII, p. 129, *non* Cossmann, 1896.

Subgenotype.—*Placostylus acutus* Clench.

The subgenus is characterized by shells possessing a single color (red, reddish brown or greenish), acute spires with flat to slightly convex whorls and the lip of the aperture colored white or red. No secondary coloration, such as stripes or blotches occur in the species so far described.

Placostylus (Acrostylus) ophir, new species

Figure 9

Description.—Shell medium in size, depressed dorso-ventrally, umbilicate, the umbilicus in part covered by the columellar fold. Color a light olivaceous green, darkest on the body whorl. A slight diffusion of red occurs just below the lip. Peristome red, the color extending slightly into the basal area of the columella. Early whorls whitish. Whorls 5, strongly convex, first 2 1/2 pitted. Spire produced. Aperture ovate. Parietal wall calloused and possessing a single rounded tooth. Outer lip reflected. Columella slightly spiral, ridged, and producing, as in *Proaspastus*, a small false umbilicus (this is in addition to the usual umbilical orifice). Sculpture, besides the pitting on the first 2 1/2 whorls, consisting of fine irregular growth lines. Very faint traces of spiral sculpture consisting of fine incised lines on the mid-whorls. Sutures well indented. Spire produced at 43°. Aperture cast at an angle of 18° from the vertical.

Length	Width	Aperture	
68	29.0	31.5 × 16.5 mm.	Holotype
67	30.0	32.0 × 15.0	Paratype
62	27.5	29.5 × 14.5	"
64	28.0	31.0 × 15.5	"
60	27.5	29.0 × 15.0	"

Holotype.—A.M.N.H. No. 79005, 20 miles inland from Su'u, Malaita Island, Solomon Islands. W. J. Eyerdam collector, March, 1930. Paratypes in the A.M.N.H. and the M.C.Z. from Su'u and Aurola, Malaita.

Remarks.—The olivaceous periostracum of this species is very thin and scales off readily on dead shells. There is little or no trace of spiral sculpture.

Records.—Malaita: Su'u; 20 miles from Su'u; Aurola at 2500–3000 feet (Whitney).

Placostylus (Acrostylus) malaitensis, new species

Figure 4

Description.—Shell medium in size, depressed dorso-ventrally, imperforate to minutely perforate, smooth. Color olivaceous brown, reddish just below the aperture margin. Early whorls brownish to dull reddish, the color being invested in the lime of the shell. The periostracum on the early whorls worn off. Spire produced, the sides more or less flattened. Whorls 5 1/2 to 5 3/4, flattened, first 2 1/2 pitted. Aperture ovate. Peristome simple, thickened within but not noticeably expanded, colored a deep red to a brick-red. Parietal wall caloused and supporting a large rounded tooth in the mid-area. Columella with a slight basal ridge and only very slightly inclined toward spiral development and, as a consequence, no false umbilicus is indicated. Sutures not indented to any extent though they are sharply defined. Sculpture of very fine growth lines and pitted early whorls. Spiral sculpture not in evidence on the adult shells in the type series though faintly traceable on a single immature specimen. Spire produced at 32° to 40°. Aperture cast at 90° from the horizontal.

Length	Width	Aperture	
77.5	32.5	34.0 × 18.5 mm.	Holotype
66.5	33.0	33.0 × 17.5	Paratype
67±	33.0	32.5 × 20.0	"
64.0	31.0	29.0 × 15.0	"

Holotype.—A.M.N.H. No. 79006, near Su'u, Malaita Island, Solomon Islands, at 400 feet. W. J. Eyerdam, collector, March, 1930. Paratypes, A.M.N.H. and the M.C.Z. from Aurola, Malaita, at 3000 feet.

Remarks.—Related to *P. ophir* but differing from that species in several of its characters. Specimens of this species are a little larger, have different proportions in the measurements of aperture to length of shell, a smaller true umbilicus (or even being imperforate) and have a simple lip. The flat-sided whorls in this species differ from the more convex whorls

of *P. ophir*. Other than the holotype, the spire of this species is much more obtuse.

In general, there seems to be considerable variation in the Solomon Island *Placostylus* regarding their length. In the measurements given above for this species, it is to be noted that though the holotype is a little over 10 mm. longer than any of the paratypes, the remaining measurements are approximately the same. Other species seem to vary the same way, having disproportionate lengths in relationship to their other measurable characters.

RECORDS.—Malaita: near Su'u; Aurola at 3000 feet (Whitney).

Placostylus (Acrostylus) acutus Clench

Figure 5

Placostylus (*Acrostylus*) *acutus* CLENCH, 1935, Nautilus, XLVIII, p. 126, Pl. VII, fig. 6 (Wanderer Bay, Guadalcanar, Solomon Islands).

DESCRIPTION.—Shell rather thick, rimately umbilicate, elongate and depressed dorso-ventrally. Color of shell pale reddish brown, periostracum a deep reddish brown. Whorls 5 3/4, rather convex. Spire produced and sharply tapering. Aperture ovate. Peristome grayish in color and very sharply reflexed, with a definite thickening within the aperture. Parietal wall calloused and supporting a very strong tooth. Columella spirally developed, its basal portion thickened and forming a false lamella. Sutures indented. Sculpture of fine irregular growth lines with faint malleations on the body whorl. Spire forms an angle of 42°, aperture cast at an angle of 14° from the axis.

LENGTH	WIDTH	APERTURE	
67.5	31	30 × 13 mm.	Holotype

HOLOTYPE.—M.C.Z. No. 93953, Wanderer Bay, Guadalcanar, Solomon Islands. E. Paravicini collector.

REMARKS.—In relationship, this form appears to resemble most closely *P. calus* Smith from Malaita. It differs from that species in being smaller, having more convex whorls and a more rounded aperture. From *P. ophir*, Clench, the only other species it at all approximates, it differs by being reddish in color and not green and the spire is more attenuated and the shell more solid in structure.

Placostylus (Acrostylus) calus Smith

Placostylus calus SMITH, 1891, Proc. Zool. Soc. London, p. 489, Pl. XL, fig. 7 (Solomon Islands).

Placostylus (*Placocharis*) *calus*, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 83, Pl. XXXV, fig. 20.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 407.

REMARKS.—The series of this species from several localities indicate that there is a fair amount of size variation. There is a strong peristome notch developed on the upper inner edge of the lip. This character is not exhibited by Smith in his figure. This feature is very well developed in the typical *Placostylus* from New Caledonia.

RECORDS.—Malaita: Kivarambara; Su'u; Aurola; Ulimburi (Whitney).

NOTES.—In gardens and on forest floor from the coast to elevations of 2500 feet (Eyerdam).

Placostylus (Acrostylus) unicus B. Rensch

Placostylus unicus B. RENSCH, 1934, Sitz. Gesell. Natur. Freunde, p. 452 (Moravo Lagoon, New Georgia). I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 80, Pl. I, fig. 8.

REMARKS.—I have not seen this species. It appears to be a member of *Acrostylus*, and the only species in this subgenus occurring outside of Malaita.

PROASPASTUS, NEW SUBGENUS

Characterized by a wavy-malleated spiral sculpture, a spiral columellar axis, usually a light primary color with greenish to greenish bronze, tent-shaped blotches which are arranged generally in an axial pattern.

SUBGENOTYPE.—*Bulimus sanchristovalensis*, Cox.

This group seems to be connected with *Aspastus* by a somewhat similar shape, to *Eumecostylus* by its spiral axis (though this character is developed to a limited extent in *Placocharis*) and to *Placocharis* by its sculpture. Its type of coloring is more or less peculiar though not entirely so. There are no complete intergrades between *Proaspastus* and the other subgenera of *Placostylus* from the Solomon Islands. Other than in shape it appears to bear a strong relationship to *Callistocharis* from

the Fiji Islands, both in its type of coloring and in its sculpture. Species in this group are arboreal as far as known.

Placostylus (Proaspastus) hargravesi (Cox)

Bulimus hargravesi Cox, 1871, Proc. Zool. Soc. London, p. 323, Pl. xxxiv, fig. 3 (Treasury Island).—Brazier, 1889, Jour. of Conch., VI, p. 78 (Ulawa or Contrariete Island, Solomon Islands).

Placostylus (Charis) hargravesi, Kobelt, 1891, Conchy.-Cab., I, pt. 13A, p. 38, Pl. ix, figs. 2–3.

Placostylus (Placocharis) hargravesi, Pilsbry, 1900, Man. of Conch., (2) XIII, p. 93, Pl. xxxviii, figs. 49–51.—Clapp, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 409.

Placostylus hargravesi, I. and B. Rensch, 1935, Revue Suisse de Zoologie, XLII, p. 75.

Remarks.—It is questionable whether Treasury Island is the type locality for this species. The subgenus *Proaspastus*, as far as all present data indicate, is limited in its distribution to the lower chain of islands, namely, Malaita, San Christoval, Guadalcanar and the few small associated islands. Additional collecting may extend the present range of the subgenus, but probably not to the islands north of those named above. Treasury Island is approximately 350 miles distant from the nearest definitely known locality for the subgenus.

Brazier (1889, p. 78) gives Ulawa Island for this species. In this he is entirely wrong, as his remarks deal with *P. scottii* and not *P. hargravesi* with which he was confused. The species is entirely confined to Malaita Island.

Records.—Malaita: Su'u; 6 miles, at 400 feet, and 10 miles, 1500 feet, from Su'u; Ulimburi; Auki; (Whitney): Malamaniki; Buma (Parevincini; Rensch); Tai Lagoon (C. M. Cooke). Treasury: (Cox) questioned.

Placostylus (Proaspastus) hargravesi heimburgi Kobelt

Placostylus hargravesi var. *heimburgi* Kobelt, 1891, Conchy.-Cab., I, pt. 13A, p. 38, Pl. viii, figs. 6–7.

Placostylus (Placocharis) hargravesi heimburgi, Pilsbry, 1900, Man. of Conch., (2) XIII, p. 93, frontispiece, Fig. 5.—Clapp, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 410.

Placostylus (Placocharis) harvravesi aukiensis Clapp, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 409, Fig. 49 (radula), (Auki, Malaita).

Remarks.—The variety *aukiensis* described by Clapp seems to be an absolute synonym of this subspecies. The form *heimburgi* itself is questionable as it intergrades completely with the typical form. Clapp (p. 409) intimated that *aukiensis* was more or less an ecological form.

Records.—Malaita: Kivarambara (Whitney); Auki (Clapp, as *aukiensis*).

Placostylus (Proaspastus) sanchristovalensis (Cox)

Bulimus san-christovalensis Cox, 1870, Proc. Zool. Soc. London, p. 172, Pl. xvi, fig. 7 (San Christoval Island).—Pfeiffer, 1877, Mono. Heliceorum Viven., VIII, p. 27.

Bulimus christovalensis, Brazier, 1889, Jour. of Conch., VI, p. 77 (Recherch Bay, San Christoval Isl., Solomon Islands), *nomen nudam*, suggested by Brazier to replace *sanchristovalensis* Cox.

Placostylus sanchristovalensis, Kobelt, 1891, Conchy.-Cab., I, pt. 13A, p. 34, Pl. viii, figs. 4–5.

Placostylus (Eumecostylus) sanchristovalensis, Pilsbry, 1900, Man. of Conch., (2) XIII, p. 97, Pl. xxxvii, fig. 48.—Clapp, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 413.

Placostylus sanchristovalensis, I. and B. Rensch, 1935, Revue Suisse de Zoologie, XLII, p. 76.

Remarks.—A species closely related to *P. hargravesi*. Pilsbry placed this species in *Eumecostylus* because of the spiral development of the columella which has produced a false umbilicus. This character is not, however, peculiar to any subgenus. All other characters place it in this subgenus.

Records.—San Christoval: (Cox); Wai-Beroni (Paravicini; Rensch).

Placostylus (Proaspastus) vicinus B. Rensch

Figure 8

Placostylus sanchristovalensis vicinus B. Rensch, 1934, Sitz. Gesell. Natur. Fruende, p. 452 (Aola, Guadalcanar).—I. and B. Rensch, 1935, Revue Suisse de Zoologie, XLII, p. 76. Pl. i, fig. 5.

Description.—Shell elongate, fairly solid, subperforate. Color of the early four whorls a deep pink, the color impregnated in the body of the lime. From the fifth whorl onward, the basic color in the shell proper shades into white. This white coloration is entirly concealed by

the periostracum which covers the later whorls. The periostracum is colored a yellowish brown with zigzag, axial streaks of a much deeper brown. Whorls 5 1/2–6, and somewhat convex. Spire attenuated and rather acute, tip punctate. Aperture ovate with a strongly reflexed lip. Columellar fold strong, the columella spirally developed. Parietal wall thinly glazed and supporting a well-developed tooth which is set at right angles to the face of the aperture. Sutures only slightly impressed. Sculpture of irregular, spirally arranged and somewhat lengthened malleations, the ridges between these malleations incised by fine axial growth lines. Aperture cast at an angle of 15° from the vertical, spire forming an angle of 36°.

Length	Width	Aperture	
62.5	27.5	28.5 × 13.5 mm.	Paratype
65.0	28.5	30.0 × 13.5	"

Remarks.—In general appearance this species is closely related to *P. sanchristovalensis* Cox from the island of San Christoval. It differs from that species in being smaller, having a slightly darker coloration, possessing a parietal tooth and having a much stronger columellar fold. It differs from *P. hargravesi* Cox (Malaita) in being a little larger, having less convexity to its whorls and possessing the parietal tooth, which is lacking entirely in the latter species.

Records.—Guadalcanar: Aola (Paravicini); Aola; Rotalu (Rensch).

Placostylus (Proaspastus) scottii (Cox)

Bulimus (*Eumecostylus*) *scottii* Cox, 1873, Proc. Zool. Soc. London, p. 152 (Solomon Islands).

Placostylus (*Placocharis*) *scottii*, Pilsbry, 1900, Man. on Conch., (2) XIII, p. 90, Pl. xxxvii, figs. 38–39.—Clapp, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 409.

Remarks.—This species is smaller and has less color than any other in the subgenus *Proaspastus*. A very large series was collected by Eyerdam on the island of Ulawa which lies about 50 miles north of the center of San Christoval. This establishes the first specific island for this species. Brazier (1889, p. 78), erroneously referred this record to *P. hargravesi* Cox.

Length	Width	Aperture
49.5	24.0	28 × 12.0 mm.
48.0	22.5	27 × 12.0
49.0	23.0	28 × 12.5
48.5	23.5	26.5 × 11.5
51.0	22.5	26.0 × 11.5

Records.—Ulawa: (Whitney, April, 1930).

Placostylus (Proaspastus) uliginosus "v. Heimburg," Kobelt

Placostylus (*Charis*) *uliginosus* "v. Heimburg," Kobelt, 1891, Conchy.-Cab., I, pt. 13A, p. 73, Pl. xvii, figs. 6–7 (Solomons).

Bulimus (*Placostylus*) *hobsoni* Cox, 1892, Proc. Linn. Soc. New South Wales, (2) VI, p. 567, Pl. xx, figs. 2–3 (Malanta [Malaita] Island, Solomon Islands).

Placostylus (*Placocharis*) *uliginosus*, Pilsbry 1900, Man. of Conch., (2) XIII, p. 91, Pl. xxxvii, figs. 46–47.—Clapp, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 409.

Placostylus founaki uliginosus, I. and B. Rensch, 1935, Revue Suisse de Zoologie, XLII, p. 77.

Remarks.—This form bears a close relationship to *P. scottii*, differing generally in possessing a red rather than a yellowish coloration.

P. hobsoni Cox was tentatively considered a synonym by Pilsbry, and it is here placed under *P. uliginosus*, though it is still questionable as to its exact status. The descriptions tally but there is a difference in the size. However, the size character does vary considerably in certain of these forms and the species described by Cox is probably only a larger form.

Records.—Malanta [Malaita]: (Cox, as *P. hobsoni*): Maka (Rensch).

Placostylus (Proaspastus) almiranta, new species

Figure 7

Description.—Shell elongate-ovate, fairly thin, subperforate. Color an olivaceous green, with faint (holotype) to strong (paratype) irregular axial bars of deep brown, discontinuous and very irregular on the early whorls. First to fourth whorls a dull reddish brown to light brown. Whorls 5, rather convex. Spire somewhat produced, acute and punctate on the first 2 1/2 whorls. Aperture ovate with a slightly reflexed lip. Parietal wall thinly glazed and supporting a small tooth. Sutures impressed. Sculpture of fine, spirally arranged and lengthened malleations crossed by fine growth lines. Aperture cast at an angle of 16° from the vertical, spire forming an angle of 38°.

Length	Width	Aperture	
58	26.0	31 × 12.0 mm.	Holotype
50	22.5	29 × 11.5	Paratype

Holotype.—A.M.N.H. No. 79009, at an elevation of 1500 feet, 10 miles from Su'u, Malaita, Solomon Islands, Whitney Exp., March, 1930. Paratype, M.C.Z. 93001, with the same date.

Remarks.—*P. almiranta* is quite different from all other members of this subgenus. It appears to be most closely allied to *P. hargravesi*, but differs from that species in being more ovate in outline, darker in coloration, possessing bars of color over the ground pigmentation (rather than the tentlike marks) and having a much less acute spire. The more rounded contour of the spire in this new species is sharply different from all other species from Malaita in this subgenus, though approximating this character in *P. gallegoi* from San Christoval.

Placostylus (Proaspastus) gallegoi, new species

Figure 6

Description.—Medium sized, rimately perforate, long-ovate, solid. Color reddish brown, marked with blotches of darker red-brown on the earlier whorls. These blotches are axial in their arrangement. First three whorls brick red and usually devoid of periostracum, not pitted, but this is probably due to the early whorls being worn. Whorls 6, slightly convex. Spire extended and pointed. Aperture ovate, only very slightly flaring at the base. Palatal lip reflected, white or slightly tinged with pale brown-yellow. Parietal wall thinly calloused. A single parietal tooth developed midway and slightly lengthened at right angles to the face of the aperture. Columella continued smoothly as a fold into the base of the reflected lip. Sutures very slightly impressed. Sculpture similar to that of *P. kirakiraensis* Rensch but finer. Spire forming an angle of 47°. Aperture cast at an angle of 14° from the vertical.

Length	Width	Aperture	
67.0	29.0	28.5 × 13.0 mm.	Holotype
66.5[1]	28.5	30.0 × 13.5	Paratype
68.5[1]	28.0	29.0 × 12.0	"
70.5[1]	27.5	30.5 × 12.0	"
66.5[1]	29.0	29.0 × 13.0	"

Holotype.—A.M.N.H. No. 79003, Mountains of San Christoval, Solomon Islands, Eyerdam and Mayr, collectors, Dec. 1929. Paratypes A.M.N.H. No. 72004 and M.C.Z. No. 92901.

[1] Spire broken, with an approximate loss of 2 mm.

Remarks.—Closely allied to *P. kirakiraensis* in shape and sculpture but differing materially in both size and color. There is no intergradation between the two species. A single specimen (M.C.Z. 32447) collected by Mann, was labeled as new by Clapp but not described.

Records.—San Christoval: mountains at 1800 feet; near Kavo River (Whitney); Pamua (Mann).

Placostylus (Proaspastus) kirakiraensis B. Rensch

Figure 3

Placostylus sanchristovalensis kirakiraensis B. Rensch, 1934, Sitz. Gesell. Natur. Freunde, p. 452.—I. and B. Rensch, 1935, Revue Suisse de Zoologie, XLII, p. 76, Pl. 1, fig. 6.

Description.—Rather large, long-ovate, minutely rimate to imperforate. Color dark yellow-brown with patches of irregular dark brown axial markings on the body whorl. Remaining whorls reddish brown. Early whorls devoid of periostracum and colored a dull red-brown. Whorls 6, slightly convex. Spire pointed and produced. Aperture ovate with the basal area somewhat flaring. Palatal lip reflected and somewhat thickened, colored with a brownish tinge. Parietal wall ridged at its lower portion by the spiral columella, thinly calloused though somewhat thickened just above the columellar fold. A small subcentral tooth is located on the parietal wall and set at right angles with the face of the aperture. Columella a thin fold and continued as a spiral fold to the apex (similar in structure to the columella in the subgenus *Eumecostylus*). Sutures somewhat indented. Sculpture of slightly developed, widely spaced axial ridges in addition to very fine microscopic hairlike axial incised lines. Spiral sculpture of coarse and rather elongated malleations. Aperture case at an angle of 13° from the vertical, spire forming an angle of 48°.

Length	Width	Aperture	
87.0	36.0	37.5 × 18.0 mm.	Paratype
86.5	36.0	36.5 × 19.0	"
92.0	38.0	41.5 × 19.0	"
88.0	36.5	37.5 × 19.0	"
89.5	35.5	36.5 × 18.5	"

REMARKS.—This species is the largest in the subgenus and also the darkest in coloration of the forms so far described. The sculpture is very strongly developed. In relationship it appears to be near to *P. gallegoi*, differing from that form in its much larger size, its darker coloration and being much thinner in structure.

RECORDS.—San Christoval: mountains at 1800 feet (Whitney); Kira Kira (Paravicini; Rensch).

NOTES.—Rare, found on the ground in forests and gardens. These snails are eaten by dogs (Eyerdam).

SUBGENUS **EUMECOSTYLUS** ALBERS

ALBERS, 1861, Die Heliceen, p. 186.

SUBGENOTYPE.—*Bulimus cleryi* Petit.

Usually rather large shells, more or less parallel sided with a dark and generally thin greenish or reddish-brown periostracum. The lime proper of the shell is impregnated with a strong reddish pigment. The columella is generally in a wide spiral which allows a view through to the apex. This structural feature produces the "false umbilicus." The pitting on the early whorls varies to some extent and does not cover three and one-half whorls in all species as usually quoted.

The subgenus *Eumecostylus* appears to be definitely related to *Euplacostylus* of the Fiji archipelago and both have probably evolved from some similar stock. A parallel condition also exists between *Proaspastus* (Solomon) and *Callistocharis* (Fiji). The lack of similar elements in the *Placostylus* fauna of New Caledonia would indicate that these four groups evolved after the land connection had been severed between New Caledonia and the islands to the north, but before the Fijian connection had separated from the Solomons.

Placostylus (Eumecostylus) cleryi Petit de la Saussaye

Bulimus cleryi PETIT, 1850, Jour. de Conch., I, p. 56, Pl. IV, fig. 1 (Solomon Islands).—PFEIFFER, 1853, Mono. Heliceorum Viven., III, p. 306; idem, 1859, IV, p. 369; idem, 1868, VI, p. 13; idem, 1877, VIII, p. 27; 1856, Conchy.-Cab., I, pt. 13A, Sec. 1, p. 243, Pl. LXV, fig. 3.—CROSSE, 1864, Jour. de Conch., XII, p. 133.—BRAZIER, 1889, Jour. of Conch., VI, p. 77.

Bulimus (Placostylus) cleryi, PFEIFFER, 1855 [1856], Malak. Blätt., II, p. 148.—SMITH, 1885, Proc. Zool. Soc. London, p. 594.—GUPPY, 1887, The Solomon Islands and Their Natives, London, I, p. 345.

Otostomus (Aspastus) cleryi, H. AND A. ADAMS, 1858, The Genera of Recent Moll., II, p. 151.

Eumecostylus cleryi, ALBERS, 1860, Die Heliceen (2nd Ed.), p. 186.

Placostylus (Eumecostylus) cleryi, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 96, Pl. XL, figs. 68–70.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 412.

Placostylus cleryi cleryi, I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 82.

REMARKS.—This is the largest of the Solomon Island species. A specimen obtained by Eyerdam measured 112 mm. in length. The olivaceous green periostracum is usually lost in adult shells leaving a dull reddish surface. Two nearly mature specimens (M.C.Z. 26057, Pease Coll.), possess a solid green coloration on later whorls.

RECORDS.—San Christoval: Wano or Wanga, NE. side of S. Christoval (Brazier); Makira Harbor (Brazier; Crosse); Koofeh district (Smith); Wainoni Bay (Clapp); Star Harbor and 20 miles south of Kira Kira (Whitney); Kira Kira (Paravicini; Rensch).

NOTES.—Dr. Mann informs me that the specimens he obtained (Wainoni) were found on palm trees, and Guppy (1887, p. 338) learned from the natives that they exist only in the foliage of the high trees. Guppy did not obtain any live material.

Placostylus (Eumecostylus) cleryi cookei, new subspecies

DESCRIPTION.—Similar to *P. cleryi* other than in color. In this form the periostracum on the adult shells is reddish brown with irregular small dark brown blotches somewhat axially arranged. There is no green coloration at all as appears on the typical form. Sculpture of rather fine spiral malleations with the surface of shell rather shining.

LENGTH	WIDTH	APERTURE	
103	32	49 × 14 mm.	Holotype

HOLOTYPE.—M.C.Z. No. 65996, Waiai, San Christoval, Solomon Islands. W. M. Mann, collector, 1918. Paratypes, M.C.Z. No. 32443 from the same locality.

Named for C. M. Cooke.

Placostylus (Eumecostylus) phenax Clapp

Placostylus (*Eumecostylus*) *phenax* CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 412, Pl. v, figs. 3–4 (Wainoni Bay, San Christoval).

Placostylus cylindricus phenax, I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 81.

REMARKS.—As noted by Clapp, this species is much smaller than *P. cleryi*, and it possesses in addition a coarser sculpture of spiral malleations. It differs from *P. cylindricus* by being a little larger, having a coarser sculpture and having the outer edge of the aperture comparatively straight. The color of *P. cylindricus* differs in being a greenish brown and not reddish brown as in *P. phenax*.

RECORDS.—San Christoval: Wainoni Bay (Clapp; Whitney); Kira Kira (Paravicini; Rensch).

Placostylus (Eumecostylus) fraterculus B. Rensch

Figure 2

Placostylus cleryi fraterculus B. RENSCH, 1934, Sitz. Gesell. Natur. Fruende, p. 451 (Domma, Guadalcanar).—I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 83, Pl. I, fig. 9.

DESCRIPTION.—Shell narrow, elongate and imperforate. (Two specimens have the lip incompletely cemented to the body whorl, leaving a minute rimation.) Color olivaceous to reddish brown on the last two whorls, the early whorls pinkish red which, in turn, merges into the coloration of the later whorls. Spire produced, forming an angle of 54°. Whorls 6 to 6 1/8 rather convex and slightly irregular. First two whorls minutely pitted. Aperture auriculate, its face nearly parallel with the axis. Peristome slightly reflexed, white and slightly thickened about midway along the palatal side. Parietal wall thinly calloused and toothless, columella produced in a wide spiral which is plicated in the parietal area. Sculpture of fine irregular growth lines crossed by fine irregular incised spiral lines, the two early whorls possessing only the pitted surface.

LENGTH	WIDTH	APERTURE	
70.5	25.0	26.5 × 9.0 mm.	Paratype
64.0	26.0	27.5 × 10.0	"
69.5	28.5	29.5 × 11.0	"
63.5	25.0	25.0 × 10.5	"
66.5	22.5	25.5 × 8.0	"

REMARKS.—This species is closely related to *P. cylindricus* from Ysabel Island. It differs only slightly from that species in the general contour and in having more convex whorls. It is related to *P. phenax* from San Christoval as well but there are much sharper differences. *P. phenax* is much larger, possesses a parietal tooth, has a more or less distorted aperture, a differently shaped spire and it has a coarser sculpture.

RECORDS.—Guadalcanar: Damma (Paravicini).

Placostylus (Eumecostylus) cylindricus Fulton

Placostylus (*Euplacostylus*) *cylindricus* FULTON 1907, Ann. Mag. Nat. Hist., (7) XIX, p. 154, Pl. x, fig. 3 (Isabel Island, Solomons).—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 412.

Placostylus cylindricus, I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 81.

REMARKS.—This species belongs to the subgenus *Eumecostylus*. Clapp (*op. cit.*, p. 413) intimated that this was its position but did not list it as such on p. 412. Both this species and *phenax* are probably derivations of the same stock which have become differentiated through isolation.

It is to be noted that all species in the subgenus *Eumecostylus* exhibit a very wide range in aperture shape. No two specimens are exactly alike and in some the general apertural shape is materially altered from the usual.

It appears to be questionable whether or not this species occurs on both of these islands as indicated in the records below. As the records of Rensch are well localized, and the material originally described by Fulton had only an island indication, it is possible that Fulton's record was an error.

RECORDS.—Ysabel: (Fulton); Guadalcanar: Rotala and Aola (Rensch).

Placostylus (Eumecostylus) kreftii (Cox)

Bulimus (*Charis*) *krefti* Cox, 1872, Proc. Zool. Soc. London, p. 19, Pl. IV, fig. 4 (Solomon Islands).

Bulimus kreftii, PFEIFFER, 1877, Mono. Heliceorum Viven., VIII, p. 27.—BRAZIER, 1889, Jour. of Conch., VI, p. 79.

Placostylus kreftii, KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 132, Pl. XXXII, fig. 4 [?5].

Placostylus (*Placocharis*) *kreftii*, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 81, Pl. XXXV, figs. 23, 25.—CLAPP, 1923, Bull. Mus. Zoöl., LXV, p. 407.

Placostylus (*Placocharis*) *artus* CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 410, Pl. IV, figs. 7–8 (Florida Island).

REMARKS.—*P. artus* Clapp is this species, without question. The holotype (M.C.Z. 32448) is an abnormal specimen of *P. kreftii*, the two paratypes are similar in detail to the figure of *kreftii*. Specimens of this species collected by Eyerdam agree in all respects with the figure and description of Cox.

This species is placed in the subgenus *Eumecostylus* and not *Placocharis* as it has been considered. It agrees in sculpture, general outline and in the spiral twist of the columella with other members of this subgenus.

RECORDS.—Florida: (Brazier; Whitney); (Clapp, as *P. artus*).

NOTES.—Found in forest near the coast (Eyerdam).

SUBGENUS ASPASTUS ALBERS

Aspastus ALBERS, 1850, Die Heliceen, p. 149.
SUBGENOTYPE.—*Bulimus miltocheilus* Reeve.

White or yellow shells usually axially ridged and not possessing any spiral or malleated sculpture. Spire produced and whorls flat sided with the axis not noticeably spiral. There is no parietal tooth developed though the columellar plication is usually well pronounced. Arboreal. This subgenus is limited to Ulawa and San Christoval and its coastal islands.

Placostylus (Aspastus) miltocheilus (Reeve)

Bulimus miltocheilus REEVE, 1848, Conch. Icon, V, *Bulimus*, Pl. XLIX, fig. 322 (San Christoval).—PFEIFFER, 1848, Zeitsch. für Malak., V, p. 120; 1853, Mono. Heliceorum Viven., III, p. 371; idem, 1859, IV, p. 440; idem, 1868, VII, p. 77; idem, 1877, VIII, p. 108.—PHILIPPI, 1850, Abbild. Neuer Conchylien, III, p. 98, Pl. IX [38], fig. 7.—DESHAYES [in] Ferussac, 1850 (?), Hist. Nat. Des Mollusques, II, p. 105, Pl. CLIV, figs. 3–4.—PFEIFFER, 1854, Conchy.-Cab., I, pt. 13, Sec. 1, p. 147, Pl. XLV, figs. 18–19.—CROSSE, 1864, Jour. de Conch., XII, p. 148.—BRAZIER, 1889, Jour. of Conch., VI, p. 77; idem, 1889, Proc. Zool. Soc. London, p. 162.—I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 72.

Bulimus (*Aspastus*) *miltocheilus*, ALBERS, 1850, Die Heliceen, p. 149.—BRAZIER, 1895, Proc. Linn. Soc. New South Wales, (2) IX, p. 569.

Otostomus (*Aspastus*) *miltocheilus*, H. AND A. ADAMS, 1858, The Genera of Recent Moll., London, II, p. 151.—CHENU, 1859, Man. de Conch., I, p. 437, fig. 3216.

Bulimus (*Placostylus*) *miltocheilus*, SMITH, 1885, Proc. Zool. Soc. London, p. 595.—GUPPY, 1887, The Solomon Islands and Their Natives, London, I, p. 345.

Placostylus (*Aspastus*) *miltocheilus*, KOBELT, 1891, Conchy.-Cab., I, pt. 13A, p. 63, Pl. XV, figs. 2–5.—PILSBRY, 1900, Man. of Conch., (2) XIII, p. 94, Pl. XXXVIII, figs. 53–54.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 413.

Placostylus miltocheilus manugiensis B. RENSCH, 1934, Sitz. Gesell. Natur. Freunde, p. 453.

REMARKS.—This species appears to be one of the most abundant in the genus where it occurs. Both the Mann and Eyerdam collections contained a much larger proportion of this species than any other. It is apparently well distributed throughout San Christoval and its coastal islands.

RECORDS.—San Christoval: (Reeve; Pilsbry); Port Makera [Makra]; Wano or Wanga Bay; Recherche Bay (Brazier); Pamua; Wainoni Bay (Clapp); Kira Kira (Whitney; Paravicini; Rensch); Mts. of San Christoval at 1000–2000 feet (Whitney); Manugia (Paravicini; Rensch). Sesarga: [= Savo] (Brazier), questioned. Ugi: (Brazier; Mann; Smith).

NOTES.—Found on the leaves of trees (Brazier); arboreal, on palm trees (Mann); on bushes (Eyerdam).

The yellow shells from Ugi were described by Brazier as the variety *stramineus*.

The occurrence of this species or any of its varieties on the island of Sesarga [= Savo] is open to question.

Placostylus (Aspastus) miltocheilus stramineus (Brazier)

Bulimus miltocheilus var. BRAZIER, 1889, Jour. of Conch, VI, p. 77 (Uji [Ugi] or Gulf Island).

Bulimus (*Aspastus*) *miltocheilus* var. *stramineus* BRAZIER, 1894 [1895], Proc. Linn. Soc. New South Wales, (2) IX, p. 569 (Ugi Island).

Placostylus (*Aspastus*) *miltocheilus stramineus*

PILSBRY, 1900, Man. of Conch., (2) XIII, p. 95, Pl. XXXVIII, fig. 55.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 414.

Placostylus miltocheilus paravicinii B. RENSCH, 1934, Sitz. Gesell. Natur. Freunde, p. 453 (Wai Beroni, San Christoval).—I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 73, Pl. I, fig. 4.

REMARKS.—Smaller than the typical form and not possessing such strong axial ridges. It has in addition a diffusion of a yellow pigment throughout the entire shell.

It is interesting in this connection to note the development of coloration in certain of these shells. The typical form usually, though not always, develops its color late in life, that is, at the beginning of the lip structure. At the time the lip is being produced, pigmentation starts, and in this case a deep yellow color is used. It is impregnated into the body of the calcium carbonate and as its successive layers are formed, produces a deep orange lip. The varietal form, on the other hand, develops this color while still in the egg, and owing to its dilution—i.e., to new areas of shell material, results in a yellow shell. At shell maturity it continues to lay down pigment and lime forming the orange colored lip as in the typical form.

NOTES.—Found on palm tree trunks, some 6 to 20 feet from the ground (Brazier).

RECORDS.—Bio: (Clapp). San Christoval: Wai Beroni (Paravicini; Rensch). Three Sisters: (Clapp). Ugi: (Brazier; Clapp; Paravicini; Pilsbry; Rensch).

Placostylus (Aspastus) miltocheilus mayri, new name

Bulimus (Aspastus) miltocheilus minor BRAZIER, 1894 [1895], Proc. Linn. Soc. New South Wales, (2) IX, p. 570 (Ulaua or Ulawa Island), *non P. minor* Kobelt, 1891, p. 21, *non P. minor* Kobelt, 1891, p. 42.

Placostylus (Aspastus) miltocheilus minor, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 95.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 416.

Placostylus miltocheilus minor, I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 74.

REMARKS.—This is a race much smaller than the typical form. In the original description given by Brazier (*loc. cit.*), he limits the color to white on the shell proper. A fairly large series obtained by Mr. Eyerdam indicates a color range from pure white to canary yellow, similar in all respects to the typical form other than in size.

RECORDS.—Ulaua [=Ulawa]: (Brazier; Whitney; Pilsbry; Rensch).

Placostylus (Aspastus) miltocheilus albolabris (Brazier)

Bulimus (Aspastus) miltocheilus var. *albolabris* BRAZIER, 1894 [1895], Proc. Linn. Soc. New South Wales, (2) IX, p. 570 (San Christoval and Santa Anna islands).

Placostylus (Aspastus) miltocheilus albolabris, PILSBRY, 1900, Man. of Conch., (2) XIII, p. 95, Pl. XXXVIII, fig. 32.—CLAPP, 1923, Bull. Mus. Comp. Zoöl., LXV, p. 415.

Placostylus miltocheilus albolabris, I. AND B. RENSCH, 1935, Revue Suisse de Zoologie, XLII, p. 74.

REMARKS.—Quite similar to the typical form but having a white instead of an orange lip. Certain shells, however, have a yellowish cast.

RECORDS.—San Christoval: (Brazier; Rensch); Bulimatarivo or Star Harbor (Clapp). Santa Anna: (Brazier; Clapp; C. M. Cooke; Eyerdam; Paravicini; Pilsbry; Rensch; F. S. Webber).

PARTULIDAE

PARTULA FÉRUSSAC

A genus of wide distribution in the southern and western Pacific.

SUBGENUS MELANESICA PILSBRY

SUBGENOTYPE.—*Partula turneri* Pfeiffer.

All the known species but one of *Partula* occurring in the Solomons are members of this subgenus.

Very little new material from the Solomons has come to hand since the review of this family by H. A. Pilsbry (Man. of Conch., 1909, (2) XX, pp. 280–298). A single new species is added to the list, obtained on Rennell and Bellona islands, by the Whitney Expedition in 1930 and later by the Crocker Expedition. The description and a few synonymic notes follow.

Partula micans Pfeiffer

Partula micans PFEIFFER, 1854, Proc. Zool. Soc. London, 1852 [1854], p. 138 (Solomon Islands).

Partula cinerea ALBERS, 1857, Malak. Blätter, IV, p. 98.

Partula perlucens HARTMAN, 1886, Proc. Acad. Nat. Sci. Phila., p. 31, Pl. II, fig. 2 (Ugi or Golfe Island).

I am unable to separate *cinerea* and *perlucens* from Pfeiffer's species. A fair-sized series obtained by Mann from Ugi and other small islands nearby will fit any of the descriptions equally well. The Shortland Island record of Sowerby and Fulton may be based on another species (in Pilsbry, 1909, Man. of Conch., (2) XX, p. 295).

RECORDS.—Bio: (Mann). Three Sisters: (Mann). Ugi: (Mann).

Partula incurva Hartman

Figure 11

Partula incurvum HARTMAN, 1886, Proc. Acad. Nat. Sci. Phila., p. 31, Pl. II, fig. 3 (Rubiana, Solomon Islands).

This species occurs on Rubiana as well as the main island of New Georgia. It appears to be close to *micans*, differing slightly from that species mainly in being less wide in proportion to its length.

RECORDS.—Rubiana: (Hartman; Mann; J. H. Waterhouse). New Georgia: Labete (Mann).

RENNELLIA, NEW SECTION

SECTION TYPE.—*Partula cramptoni* Clench.

Partula cramptoni, new species

Figure 13

DESCRIPTION.—Shell large, produced, rimately umbilicated and rather solid. Color, medium brown-green, the early two whorls being a dark brownish black and the body whorl deep brown just behind the lip. Whorls 5, only slightly convex. Spire extended and smoothly tapering, produced at an angle of 46°. Aperture subovate, and in profile, cast at an angle of 71° from the base line. Lip expanded, especially so at its base. Colored a deep brown on the expanded area and a short distance within. Columella thickened with the lip area expanded over the umbilical rimation. Suture well impressed but not indented. Sculpture of numerous, fine, spiral incised lines. Growth lines very fine and somewhat irregular. Early two whorls very finely rugose, the spiral lines present on all but the first whorl.

LENGTH	WIDTH	APERTURE	
26.5	14.8	11.5 × 6.5 mm.	Holotype
28.1	14.0	11.5 × 6.0	Paratype
27.3	14.5	11.0 × 6.0	"
27.5	14.5	10.0 × 5.5	"

HOLOTYPE.—A.M.N.H. No. 79014, Rennel Island, Solomon Islands, Whitney Expedition, June 1930. Paratypes in the Amer. Mus. Nat. Hist. (Whitney), the Mus. of Comp. Zoöl. (Whitney and Crocker Exp.), and the Bernice P. Bishop Museum (Crocker Exp.) from Rennell and Bellona islands.

REMARKS.—P. cramptoni is one of the most distinctive species recorded from the Solomons. It is much larger and heavier than the other species and has a very dark brown coloration which differs materially from the light yellowish of the smaller forms. We propose the name *Rennellia* as a section for this single species.

All of the specimens of this new species were collected dead, though in fair to good condition. It is quite probable that the shells are somewhat shining in live material.

As stated before, nothing can be added to the Solomon Island Partulae other than the few notes above. The following list of Partulae completes the list of known forms from these islands.

Partula alabastrina PFEIFFER, 1857, Proc. Zool. Soc. London, 1856 [1857], p. 39 (Solomon's Islands).

This species was cited in error as coming from the Solomons. It is now known to occur on Moala, Fiji Islands (Pilsbry and Cooke, 1934, Occ. Pap. B. P. Bishop Mus., X, No. 4, p. 17).

Partula coxi "Angas" HARTMAN, 1886, Proc. Acad. Nat. Sci. Phila., p. 32, Pl. II, fig. 7 (Ysabel Island, Solomon Islands).

Partula flexuosa HARTMAN, 1885, Proc. Acad. Nat. Sci. Phila., p. 204, text figure (St. Georges and Eddystone islands, Solomon Islands).

Partula hastula HARTMAN, 1886, Proc. Acad. Nat. Sci. Phila., p. 33, Pl. II, fig. 9 (Erromango Isl., Solomon Islands) [Eromanga]. Erromango is in the New Hebrides and not the Solomon Islands. See Pilsbry, 1909, Man. of Conch., (2) XX, p. 291.

Partula hollandiana PILSBRY, 1909, Man. of Conch., (2) XX, p. 293, Pl. XXXVII, figs. 8–10 (locality unknown).

Partula pellucida PEASE, 1871, Proc. Zool. Soc. London, p. 457 (Guadalcanar, Solomon Islands).

Partula regularis HARTMAN, 1886, Proc. Acad. Nat. Sci. Phila., p. 31, Pl. II, fig. 4 (Savu, [Savo] Galeria Island, Solomon Islands). [I am not able to determine just what Capt. Brazier (through Hartman) meant by the above locality. Savu is Savo Island, a small volcanic island a little north of the western end of Guadalcanar. Galeria probably is Galera Island, a small island

in the Buena Vista group in the Florida archipelago several miles NE. of Savo Island. Probably two localities were meant to be indicated.]

I. and B. Rensch 1935 (Revue Suisse de Zoology, XLII, p. 84) add Aola and Domma, Guadalcanar, as additional localities.

SPURIUS AND EXTRA LIMITAL PARTULAE

The following species, originally assigned to the Solomon Islands, are now known to occur elsewhere.

Partula peasei Cox, 1871, Proc. Zool. Soc. London, p. 644, Pl. LII, fig. 2 (Solomon Islands).

This is *Diplomorpha peasei* (Cox) which probably occurs only in the New Hebrides (cf. Pilsbry, 1900, Man. of Conch., (2) XIII, p. 117, Pl. LXXII, figs. 7–9).

Partula reeveana PFEIFFER, 1854, Proc. Zool. Soc. London [1852], p. 138 (Solomon Islands).

This is *Partula otaheitana* (Brug.) from Tahiti, Society Islands (Pilsbry, 1909, Man. of Conch., (2) XX, p. 184).

Partula salomonis PFEIFFER, 1854, Proc. Zool. Soc. London [1852], p. 137 (Solomon Islands).—BRAZIER, 1889, Jour. of Conch., VI, p. 79.

This species is a *Placostylus* from the New Hebrides group. (Crosse 1864, Jour. de Conch., XIV, p. 131, as *Bulimus*) and (Pilsbry, 1900, Man. of Conch., (2) XIII, p. 70; idem, 1909, XX, p. 320). Brazier (*loc. cit.*) points out that Pfeiffer redescribed this species as *Bulimus pyrostomus*, both names based upon the same material originally collected by him on the island of Aneiteum, New Hebrides.

Partula tryoni HARTMAN, 1885, Proc. Acad. Nat. Sci. Phila., p. 204, text figure (Solomon Islands).

This is *Partula zebrina* Gould from Samoa (Pilsbry, 1909, Man. of Conch., (2) XX, p. 269).

Placostylus (*Leucocharis*) *dorseyi* DALL, 1910, Field Mus. Nat. Hist. Zool., Ser. 7, No. 8, p. 219, Pl. IV, fig. 1 (Anair Island, Solomon Islands).

This species is unquestionably a *Partula* and not a *Placostylus* as recently pointed out by Haas (1939, Field Mus. Nat. Hist., XXIV, No. 8, p. 102). However, both authors are wrong in assigning Anair Island to the Solomons. It is in the Bismarck archipelago near New Ireland.

REFERENCES

BAIRD, W.
1873. [In] Cruise of H.M.S. "Curaçoa" Among the South Sea Islands, by J. L. Brenchley, London, pp. 432–454, Pls. XXXVI–XLII.

COCKERELL, T. D. A.
1929. The Genus *Placostylus* in New Caledonia. Nautilus, XLII, pp. 73–78, Pl. II.

COLLIER, EDWARD
1902. The Section *Placostylus* of the Genus *Bulimus*. Jour. of Conch., X, pp. 208–214.

GUPPY, H. B.
1887. The Solomon Islands and Their Natives. London, I, pp. 384 + 16, 8 pls., map; II, pp. 152 + 8, maps (Mollusks, I, pp. 336–351).

RAMSDEN, C. T.
1913. Land Shells Carried by Birds. Nautilus, XXXVII, pp. 71–72.