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THE NATURAL HISTORY OF RENNELL ISLAND
BRITISH SOLOMON ISLANDS
VOLUME 2

27. THE LAND AND FRESHWATER MOLLUSCA
OF RENNELL ISLAND, SOLOMON ISLANDS

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a long period of time and that, if it ever was connected with other islands in the Solomon group, it must have been in the remote past.

The second problem is far more difficult to understand. Choiseul Strait is not particularly wide (25 miles) and is studded with islands. Two genera, *Placostylus* and *Crystalloopsis*, common on all of the islands to the south, have failed to reach Bougainville Island. On the other hand, a few genera and subgenera on Bougainville have failed to reach Choiseul and the islands to the south. *Crystalloopsis* is peculiar to the Solomon Islands but *Placostylus* (s. l.) occurs in the Fiji Islands, New Caledonia, Norfolk, Lord Howe and the north island of New Zealand. Why has it failed to cross the relatively narrow Choiseul Strait?

These problems are presented here with no idea of solution. The facts are given with the data which are at hand.

In the broader considerations of geographical distribution no single group of animals should be selected as a basic pattern of what may have been distributed by former land connections. Certainly it is fairly apparent, as indicated by the land mollusks, that no connection between Bougainville and Choiseul could have existed within recent geographical times, otherwise both *Crystalloopsis* and *Placostylus* should occur on Bougainville just as certain Bougainville genera, such as *Quirosena*, should have extended at least into Choiseul.

Why, in this particular area did mechanical transport, at least in part, fail these genera, for they were unable to cross this island studded strait? *Crystalloopsis* was able to reach Rennell Island from San Cristobal, a distance of at least 90 miles over open water, yet it has failed to island-hop a comparatively narrow strait. Future studies of other animal or plant groups may shed some light on this problem.

The land and freshwater mollusks of Rennell Island are disharmonic and show relationships with several islands in the Solomon group and in one case, *Quirosella*, with the Admiralty Islands. However, the two species noted below, *M. guppyi* and *C. rennellensis*, indicate a little stronger relationship with San Cristobal than to the remaining islands in the Solomon Archipelago.

Melanooides guppyi is known elsewhere only from Lake Waileva, Santa Ana Island, while other species in the Thiaridae indicate a relationship to several islands in the Solomon group. *Crystalloopsis* (*Cristovala*) *rennellensis* (new) is most closely allied to *C. conica* Gude from San Cristobal Island. Also *Nesopoma galathea* (new) occurs on Rennell, Malaita and San Cristobal. This, however, is a very small land snail and as such means but little in the geographic relationships of these islands at present. It is to be remembered that very few small species have been collected in these islands. Many species now limited to single or only a few islands may eventually be found on most of the larger islands. It is, however, interesting that neither *Placostylus* (s. l.) or *Papuina* (s. l.) reached Rennell, both genera being very common throughout most of the Solomon Islands.

STATION DATA

of the Danish Rennell Island Expedition October-November 1951 (WOLFF 1955b).

Station	Locality	Date	Substratum and Biotope
GUADALCANAL, SOLOMON ISLANDS			
L 340	Honiara	9.10.	Under leaves and stones close to vertical wall of coral rock
L 342	-	9.10.	In mud and on plant débris in a freshwater pond near the shore
L 343	-	9.10.	Under stones at above named pond
L 345	-	9.10.	Under stones at the sea shore
L 346	5 km W of Honiara	10.10.	In and under dry-rotten wood and under stones
RENNELL ISLAND, SOLOMON ISLANDS			
L 351	Lavanggu	13.10.	In coarse grass in coconut grove near the shore
L 352	-	13.10.-14.10.	Under stones and plant débris in coconut grove near slope of coral rock
L 353	-	13.10.-13.11.	Rain forest above the slope
L 357	-	15.10.-12.11.	On decaying wood and on the ground in cultivated area with <i>Papaya</i>
L 362	Te-Maingga	16.10.	In grass in cultivated area with open coconut grove
L 363	Lavanggu- Te-Avamanggu	16.10.	Rain forest
L 364	Te-Avamanggu	16.10.-18.10.	In open area around village
L 365	-	17.10.	On mould and scattered coral blocks in rain forest
L 366	-	17.10.	On leaves in rain forest
L 367	-	17.10.	Rain forest and cultivated area
L 370	-	18.10.	On leaves of young coconut palm
L 372	Lavanggu	20.10.	On coral rock and blocks, dry leaves and dry-rotten wood in rain forest
L 374	-	21.10.-12.11.	In young forest, about 3 m high, on previously cultivated area
L 375	-	21.10.	In dry-rotten wood in above named young forest
L 377	Niupani at Lake Te-Nggano	22.10.-23.10.	In shallow water (5-25 cm) near the shore; bottom: mud and green algae
L 382	-	22.10.-23.10.	On leaves in coconut grove
L 385	-	23.10.	On low vegetation and on the ground near the lake
L 387	-	23.10.	In shallow water (30-40 cm) near the shore; bottom: coral, very little mud and algae
L 389	Lavanggu	27.10.	<i>Pandanus</i> grove on bare coral rock
L 390	-	29.10.	Young forest (like L 374); after continuous rain
L 399	Lugugi	14.11.	

Systematic part

NERITIDAE

Neripteron auriculata Lamarck

Neritina auriculata Lamarck 1822, Animaux sans Vertèbres, 6: pt. 2, p. 186 (New Holland [Australia] and neighboring islands).

Specimens examined. Guadalcanal: L 342, Honiara.

Theodoxus corona Linné

Nerita corona Linné 1758, Syst. Nat. ed. 10, p. 777 (in Asiae fluvii).

Neritina brevispina Lamarck 1822, Animaux sans Vertèbres, 6, pt. 2, p. 185 (Timor).

Specimens examined. Guadalcanal: L 342, Honiara.

Neritina (Vittina) variegata Lesson

Neritina variegata Lesson 1831, Voy. Coquille, Zoology, 2: 378, (Nouvelle Irlande).

Specimens examined. Guadalcanal: L 343, Honiara.

HELICINIDAE

These are rhipidoglossate land operculates of wide distribution in the tropics, a few species extending well into the temperate regions. The entire family, however, is absent from Africa. The few Solomon Island species are not well differentiated and it is rather difficult to assign limits to certain border-line specimens.

Sturanyella Pilsbry and Cooke

Sturanyella Pilsbry and Cooke 1934, Nautilus, 48: 54.

Type species, *Helicina plicatilis* Mousson, original designation.

Sturanyella modesta Pfeiffer

Helicina modesta Pfeiffer 1853, Proc. Zool. Soc. London, p. 52 (Tanna, New Hebrides); PFEIFFER 1854, Malak. Blatt. 1: 102; PFEIFFER 1858, Mono. Pneumonopomorum Viven, 2: 186; ibid. 1865, 3: 218; ibid. 1875, 4: 246; SOWERBY 1866, Thesaurus Conchy, 3: 287, pl. 6, fig. 221-222; SOWERBY 1873, Conch. Icon., 19: *Helicina*, pl. 29, fig. 259; SMITH 1885, Proc. Zool. Soc. London, p. 599; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 345.

Helicina solomonensis Smith 1885, Proc. Zool. Soc. London p. 599, pl. 36, fig. 11-11 b (Faro, Shortland and Treasury Islands); GUPPY 1887, The Solomon Islands and Their Natives. London, 1: 345.

Helicina virido-colare Hartman 1890, Proc. Acad. Nat. Sci. Phila., p. 285, pl. 3, fig. 7 (Solomon Islands).

Sturanya modesta, Wagner 1905, Denks. Akad. der Wissen., 77: 386, pl. 3, fig. 15a-c, 22a-b; WAGNER 1907, Conchy.-Cab., (2) 1: pt. 18, sec. 1, p. 43, pl. 6, fig. 25-29.

Remarks. Widely distributed in the Solomons, and probably occurring on all of the Islands. The locality, Tanna, New Hebrides, is based upon material supplied to PFEIFFER by CUMING and, according to SMITH, is open to question.

I am unable to separate *S. solomonensis* from *modesta*. The species is variable in size, height of spire and in its sculpture. Most of the specimens examined are smooth, a very few possess the spiral striae mentioned by SMITH for *solomonensis*. WAGNER (1907, pl. 6) has probably overdrawn this character.

Specimens examined. Choiseul: Bambatana; Luti. Malaita: Auki; Su'u. New Georgia: Labete; Rubiana Lagoon. Rendova. Rennell: L 374; L 390, Lavanggu. San Cristobal: Kira Kira. Santa Ana. Three Sisters. Ysabel: Fulakora.

***Sturanyella julii* Baird**

Helicina julii Baird 1873, [in] The Cruise of H.M.S. Curacoa Among the South Sea Islands by J.L. Brenchley, London, p. 449, pl. 41, fig. 7-8 (Cockatoo Island, Solomon Group); SOWERBY 1873, Conch. Icon., 19, *Helicina*, pl. 30, fig. 272.

Remarks. This species has not been reported since its original discovery. It does not appear to be closely related to *modesta* because of its very peculiar type of axial color streaks. Cockatoo island is off the south end of Ysabel.

***Pleuropoma* Moellendorff**

Pleuropoma Mlldff 1893, Bericht. Senckenb. Nat. Ges., p. 140.

Type species, *Helicina dichroa* Mlldff.

***Pleuropoma sophiae* Brazier**

Helicina (Trochatella) sophiae Brazier 1875 [1876], Proc. Linn. Soc. New South Wales, 1: 4 (Treasury Island).

Helicina sophiae Brazier, PFEIFFER 1877, Malak. Blätt., 24: 155.

Aphanoconia sophiae Brazier, WAGNER 1909, Conchy.-Cab. (2), 1, pt. 18, sec. 2, p. 183, pl. 36, fig. 16-20.

Remarks. I have not seen this species, but judging by the figures of WAGNER (1909, pl. 36) it appears to be a very distinctive form. It has not been collected in recent years, and the single specific record suggests an unusual case of isolation as the genus is widely distributed among the islands of the Pacific and Indian Oceans, as far west as the Seychelles.

Palaeohelicina Wagner 1905¹

Palaeohelicina Wagner 1905, Denks. Akad. der Wissen., 77: 435.

Type species, *Helicina fischeriana* (here designated).

Palaeohelicina s.s. is limited in its distribution to New Guinea, the Louisiades, Bismarks and Solomon Islands, and is probably a derivative of the more widespread *Ceratopoma* which extends to New Caledonia and the Philippines. However, the limits assigned to these two groups are not definite as the characters more or less overlap.

Palaeohelicina probably originated in the New Guinean center and subsequently spread to the Philippines by way of Halmahara and south over the Bismark-Solomon chain to New Caledonia. The genus has also penetrated Australia into Queensland.

Palaeohelicina (*Palaeohelicina*) *moquiniana* Récluz

Helicina moquiniana Récluz 1851, Jour. de Conch., 2: 212, pl. 5, fig. 8, (L'île Salomon); PFEIFFER 1852, Mono. Pneumonopomorum Viven., 1: 393; *ibid.* 1858, 2: 213; GRAY 1852, Catalogue of Pulmonata in the Collection of the British Museum, 1: 286; PFEIFFER 1854, Malak. Blätt. 1: 108; SOWERBY 1873, Conch. Icon., 19, *Helicina*, pl. 26, fig. 231; SMITH 1885, Proc. Zool. Soc. London, p. 598; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 345.

Trochatella moquiniana, H. and A. ADAMS 1856, The Genera of Recent Mollusca, 2: 305; SOWERBY 1866, Thesaurus Conch., 3: 294, pl. 277, fig. 419-420.

Palaeohelicina moquiniana, WAGNER 1905, Denks. Akad. der Wissen., 78: 204, pl. 10, fig. 1a-d; WAGNER 1910, Conchy-Cab. (2), 1, pt. 18, sec. 2, p. 238, fig. 6-10.

Palaeohelicina moquiniana christovalensis WAGNER 1905, Denks. Akad. der Wissen., 78: 205, pl. 10, fig. 2, (San Christoval, Solomon Islands); WAGNER 1910, Conchy-Cab. (2), 1, pt. 18, sec. 2, p. 239, pl. 47, fig. 11.

Remarks. WAGNER has unduly increased the varieties in this and other species of the Helicinidae in the Solomon Islands. The differences mentioned for most of his new forms seem to be slight, and these differences are not even consistent in specimens from a single colony. His illustrations in the Conchylien Cabinet appear to be overdrawn, and many of the characters are accentuated. However, I may be unfair to judge him without seeing the material from which he made his figures, but my comparisons have been based upon a very large series of specimens collected on all of the islands from which WAGNER derived his material for his new forms.

Specimens examined. Malaita: Atta; Auki. New Georgia: Morovo Lagoon. San Cristobal: Wainoni Bay; Pamua; Rava River; Kira. Santa Ana. Three Sisters Ids. Ugi Id.

1. WAGNER (1905, p. 207) and THIELE (1929, p. 87) include *Ceratopoma* Moellendorff 1893, as a subgenus of *Palaeohelicina*. If *Ceratopoma* is found to be as closely related to *Palaeohelicina* as this classification would admit, *Ceratopoma* would have to become the genus and *Palaeohelicina* the subgenus. MOELLENDORFF'S name has priority of twelve years.

Palaeohelicina moquiniana livida Rousseau

Helicina livida 'Hombron and Jacquinot' PFEIFFER 1852, Mono. Pneumonopomorum Viven, 1: 414 [nomen nudum]; ROUSSEAU 1854, Voy. au Pole Sud, 5: 47, p. 11, fig. 40-44 (Iles Salomon); PFEIFFER 1858, Mono. Pneumonopomorum Viven., 2: 219; *ibid.* 1865, 3: 245; *ibid.* 1876, 4: 286.

Remarks. This form seems to be only a uniformly colored race of *moquiniana*. Other than its dark reddish coloration, its size, outline and strongly developed keel are exactly similar to the typical form.

The type locality is the southeastern part of Ysabel Island, the only locality in the Solomon Islands where this French expedition landed.

Palaeohelicina moquiniana spinifera Pfeiffer

Helicina spinifera PFEIFFER 1855, Proc. Zool. Soc. London, p. 118, (Wanderer Bay, Guadalcanal); PFEIFFER 1858, Mono. Pneumonopomorum Viven., 2: 218; *ibid.* 1865, 3: 244; *ibid.* 1876, 4: 286; SOWERBY 1873, Conch. Icon., 19, *Helicina*, pl. 7, fig. 55 a-b.

Trochatella spinifera, SOWERBY 1866, Thesaurus Conch., 3: 294, pl. 277, fig. 416-417.

Palaeohelicina spinifera, WAGNER 1905, Denks. Akad. der Wissen., 78: 205, pl. 10, fig. 3 a-c; WAGNER 1910, Conchy.-Cab. (2), 1, pt. 18, sec. 2, p. 240, pl. 47, fig. 13-16.

Remarks. This is a local race or subspecies that is apparently confined to Guadalcanal and the associated island of Florida. It is much smaller than the typical form, though agreeing in all other essential characters.

P. spinifera inflata WAGNER 1905, has been described from New Ireland [New Mecklenburg] in the Bismarks. Though no records are available for Bougainville, either *moquiniana* or certain of its varieties will probably be found to occur there upon later investigation. This appears to be the only record for this species outside of the Solomon group. It is, however, to be regarded as a subspecies of *moquiniana* and not *spinifera*.

Specimens examined. Florida: Tulagi. Guadalcanal: L 340, Honiara.

Palaeohelicina moquiniana ecarinata Wagner

Palaeohelicina moquiniana ecarinata WAGNER 1910, Conchy.-Cab. (2), 1, pt. 18, sec. 2, p. 240, pl. 47, fig. 12 (Solomons).

Remarks. This subspecies differs from the typical form in possessing a rounded rather than a keeled periphery.

Specimens examined. Choiseul. Malaita: Kivarambara; Su'u.

Palaeohelicina (Palaeohelicina) mayri, sp. nov.

Plate 1, fig. 7

Description. Shell depressed, imperforate and rather thin. Color brownish yellow throughout with no secondary coloration. Whorls 5, flattened, the last clearly though not abruptly angled. Spire depressed and forming a broad flattened cone, produced at an angle of 115° . Lip reflected. Parietal wall thinly glazed. Aperture subquadrate, the palatal margin somewhat convex as seen in profile. Columella short, forming a definite angle at its base with the lip. Umbilical area not noticeably depressed. Sculpture of numerous and very fine growth lines crossed with less numerous but fine grooves, the grooves supporting periostracal folds in areas not worn smooth. These folds are finely serrated and near the aperture are somewhat recumbent. Superficially these grooves appear to be very finely hirsute. At the peripheral angle and a little below are two narrow bands produced by a series of short periostracal folds *axially* arranged. This periostracal character is very fine and can only be clearly seen with at least a 12 powered lens. Operculum thin, with a subcentral nucleus. Opercular growth lines very indistinct.

Length	Width	Height	Aperture	
11.2	9	7	5 × 4.5 mm	Holotype
10.5	8.5	7	5 × 4.5	Paratype, Auki
10.8	8.5	7.5	5.5 × 4.8	– Oolamboori
10. (young)	8.5	7	5 × 4.7	– –

Holotype. Museum of Comparative Zoology, no. 32610, Auki, Malaita. W. M. MANN collector, 1916. Paratypes Museum of Comparative Zoology and American Museum of Natural History from Auki and Oolamboori, Malaita Island.

Remarks. This species is a member of the *P. moquiniana* complex but quite sharply differentiated from that species. It is much more depressed, possesses flatter whorls and is without any trace of color bands. The sculptural characteristics of this form may not be peculiar. No specimens of *moquiniana* or any of its varieties examined possess any trace of periostracum though most of the shells had been collected alive.

P. mayri is much larger than *P. egregia*, and this latter species differs by being globose to conic rather than depressed, is smooth and is usually banded with color.

Palaeohelicina (Palaeohelicina) egregia (Pfeiffer)

Helicina egregia PFEIFFER 1855, Proc. Zool. Soc. London, p. 118 (Wanderer Bay, Guadalcanar); PFEIFFER 1858, Mono. Pneumonoporum Viven., 2, 195; *ibid.* 1865, 3: 228; *ibid.* 1875, 4: 267; SOWERBY 1873, Conch. Icon., 19, *Helicina*, pl. 18, fig. 159; SMITH 1885, Proc. Zool. Soc. London, p. 598, pl. 36, fig. 10-10a; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 345.

- Trochatella egregia* SOWERBY 1866, Thesaurus Conch., 3: 228, pl. 273, fig. 272.
Palaeohelicina spinifera egregia, WAGNER 1905, Denks. Akad. der Wissen., 78: 206, pl. 10, fig. 4.
Palaeohelicina spinifera isabelensis WAGNER 1905, Denks. Akad. der Wissen., 78: 207, pl. 10, fig. 5 (Isabel Island, Solomons).
Palaeohelicina egregia WAGNER 1910, Conchy.-Cab. (2), 1, pt. 18, sec. 2, p. 241, pl. 47, fig. 19-22.
Palaeohelicina egregia isabelensis WAGNER 1910, Conchy.-Cab. (2), 1, pt. 18, sec. 2, p. 242, pl. 48, fig. 1-2.
Palaeohelicina egregia incerta WAGNER 1910, Conchy.-Cab. (2), 1, pt. 18, sec. 2, p. 243, pl. 47, fig. 23-24 (Isabel Island, Solomons).

Remarks. A very well marked species, generally distributed throughout the Solomon group. The lack of records from Choiseul and Bougainville may indicate that this species does not occur in the northern part of the islands, but it is more likely that it has been overlooked.

It differs in general from *P. moquiniana* and its varieties by being smooth, non keeled and possessing a ground color of white or pale ivory. The bands of color are usually stronger than in the former species and stand out in greater contrast.

Specimens examined. Bio. Florida. New Georgia: Morovo Lagoon. Rennell. San Cristobal: Pamua; Wai-ai. Ugi. Ulawa. Ysabel: Fulakora.

CYCLOPHORIDAE

Leptopoma Pfeiffer

Leptopoma PFEIFFER 1847, Zeitschrift für Malakozoologie 4: 47.

Type species, *Cyclostoma vitrea* Lesson (= *L. nitidum* SOWERBY), subsequent designation, KOBELT 1898, Illus. Conchylienbuch, p. 184.

Leptopoma (Leptopoma) nitidum Sowerby

Cyclostoma vitrea LESSON 1830, [in] Voyage de la Coquille 2: 346, pl. 13, fig. 6-6'-6'' (New Guinea), non *Cyclostoma vitreum* Draparnaud 1801; DESHAYES 1838 [in] Lamarck, Hist. Anim. s. Vert. ed. 2, 8: 367.

Leptoma vitreum LESSON, PFEIFFER 1852, Mono. Pneumonopomorum Viven., 1: 101; SMITH 1885, Proc. Zool. Soc. London, p. 596; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 345; KOBELT 1902, Das Tierreich, Mollusca (Cyclophoridae), 16: 15.

Dermatocera vitrea LESSON, H. and A. ADAMS 1858, The Genera of Recent Mollusca, 2: 282, pl. 85, fig. 7; PFEIFFER 1858, Mono. Pneumonopomorum Viven., 2: 78.

Cyclostoma nitidum SOWERBY 1843, Thesaurus Conchyliorum, 1: 133 (Guiamaras [Philippines]).

Remarks. This protean species has a very wide range, extending from the Solomons on the southeast to Formosa on the northwest, with many records from islands in between these extreme points. Specimens from the Philippines are on the

average a little larger than material obtained from the Solomons and the Bismarks. It is quite possible that there are several racial elements concerned.

Many closely related species are exceedingly difficult to separate from this form. There appears to be but few modifications of shell characters which are of sufficient diagnostic value to delimit clearly the several species.

I have not attempted to give a complete synonymy for this species but only those references which pertain to the Solomon Islands. A complete synonymy is given in KOBELT 1902, p. 9.

Specimens examined. Bio. Choiseul: Bambatana; Choiseul Bay. Florida: Tulagi. Santa Isabel: Fulakora. Malaita: Auki; Kivarambara; Su'u. New Georgia: Rubiana Lagoon. Rendova. Rennell: L 380, Niupani, Lake Tenggano. San Cristobal: Kira-Kira. Santa Ana.

Leptopoma (Leptopoma) pellucidum Rousseau

Cyclostoma pellucida 'Humbroon and Jacquinet' ROUSSEAU 1854, Voy. au Pole Sud, 5: 51, pl. 12, fig. 29-33 (Solomon Islands).

Leptopoma jacquinoti PFEIFFER 1858, Mono. Pneumonopomorum Viven., 2: 74. [Proposed as a new name for *pellucida* ROUSSEAU, non *perlucida* Grat.]; SMITH 1885, Proc. Zool. Soc. London, p. 596; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 345; KOBELT and MÖLLENDORFF 1897, Nach. Deut. Malak. Ges., 29: 79; KOBELT 1902, Das Tierreich, Mollusca (Cyclophoridae), 16: 10.

Remarks. The name *jacquinoti* was substituted by PFEIFFER for *pellucida* on the supposition that *pellucida* ROUSSEAU 1859 was a homonym of *perlucida* Grateloupe 1840. This, of course, not being the case under our present rules, the name of ROUSSEAU must stand.

This species is differentiated from *nitidum* by possessing reddish brown, nuclear whorls; in all other characters, however, the two species appear to be the same. It is quite possible that it is only a local differentiation of the more widespread *nitidum* and as such it is only of subspecific value.

Leptopoma (Leptopoma) woodfordi Sowerby

Leptopoma woodfordi SOWERBY 1889, Proc. Zool. Soc. London, p. 581, pl. 56, fig. 13 (Guadalcanal).

Leptopoma (Leptopoma) woodfordi SOWERBY; KOBELT and MÖLLENDORFF 1897, Nach. Deut. Malak. Ges., 29: 80; KOBELT 1902, Das Tierreich, Mollusca (Cyclophoridae), 16: 16.

Remarks. This species seems to be quite distinct from the remaining Solomon Island species. The spiral ribs are much stronger and there is developed a strong peripheral keel. In color it is pale straw-yellow to dull white. Its relationships appear to be nearest to *L. dohrni* Ad. and Ang.

Specimens examined. Guadalcanal: Aola.

Leptopoma (Leptopoma) dohrni Adams and Angas

Leptopoma dohrni ADAMS and ANGAS 1864, Proc. Zool. Soc. London, p. 38 (New Ireland); PFEIFFER 1875, Mono. Pneumonopomorum Viven., 3: 132; KOBELT and MÖLLENDORFF 1897, Nach. Deut. Malak. Ges., 29: 79; KOBELT 1902, Das Tierreich, Mollusca, (Cyclophoridae), 16: 8.

Leptopoma hargreavesi COX 1893, Proc. Zool. Soc. London, p. 151 (Solomon Islands); KOBELT 1902, Das Tierreich, Mollusca (Cyclophoridae), 16: 9.

Remarks. Four specimens, Museum of Comparative Zoology no. 94850, from New Georgia are referable to this species, originally described from New Ireland in the Bismarcks. They are light olivaceous to yellowish brown in color, strongly keeled and somewhat malleated. In addition, there are several fairly well developed spiral riblets which are interspaced with fine microscopic, wavy, spiral threads.

L. hargreavesi appears to be a synonym of this species. Both are described as brownish and as having a keel on the body whorl. They agree as well in practically all other descriptive points.

Specimens examined. New Georgia.

PUPINIDAE

Pupina (Pupina) huntingtoni Clench

Pupina (Pupina) huntingtoni CLENCH 1949, Bull. B.P. Bishop Mus., 196: 33, fig. 19 (North coast of Guadalcanal Island, Solomon Islands).

Specimens examined. Guadalcanal: L 340, Honiara; L 346, 5 km W of Honiara.

Pupina (Pupina) keradreni Vignard

Pupina keradreni VIGNARD 1829, Ann. Sci. Nat., 18: 440, pl. 11c (New Guinea).

Specimens examined. Rennell: L 351; L 352; L 362; L 389, Lavanggu; L 380, Niupani, Lake Te-Nggano. Also many records from other stations in the Solomon Islands. (c.f. CLENCH 1949).

TRUNCATELLIDAE

Truncatella guerinii Villa

Truncatella guerinii VILLA 1841, Conchyliarum Terrestrium et Fluviatilium, Mediolani [Milan, Italy] p. 49 (Bourbon [Réunion Island]).

Specimens examined. Rennell: L 352; L 362, Lavanggu. Shortland: Harapa.

Taheitia whitneyi, new species

(Plate 16, fig. 1)

Description. Shell small, reaching 9.8 mm in length, slender, shining, imperforate and sculptured. Color a light straw-yellow. Whorls 7 (truncated holotype),

probably 12-14 whorls in complete specimens. Spire greatly extended and beginning with a small flattened nuclear whorl. Aperture subcircular and having the outer lip slightly flaring. Parietal lip somewhat thickened. Columella short and slightly arched. Suture deeply indented. Sculpture consisting of numerous, axial riblets, about 50 on the the last whorl. Nuclear whorls 2 and smooth.

Length	Width	
9.8 mm	2.4 mm	Holotype
9.2 -	2 -	Paratype

Types. The holotype is in the American Museum of Natural History no. 73883, from Bambatana, Choiseul Island, Solomon Islands. A single paratype from the same locality is in the Museum of Comparative Zoology no. 188089.

Remarks. *Taheitia clathrata* Adams and Angus is the only other known species of *Taheitia* occurring in the Solomon Islands. *T. whitneyi* differs from *T. clathrata* by being proportionately thinner and in having a smaller and less flaring aperture and in having more numerous and very much finer axial riblets. In its general structure, *T. whitneyi* most nearly approaches *T. tongana* Clench and Turner from Eua Island, Tonga Islands. *T. whitneyi* is larger, has more whorls remaining after truncation and has a less flaring aperture. The sculpture of both is very similar.

Taheitia, similar to most other truncatellids, decollate their early whorls.

ASSIMINEIDAE

Setaepoma Clench

Setaepoma CLENCH 1955, Nautilus, 68: 134.

Shells flattened to slightly elevated and possessing numerous spiral threads which are slightly raised above the shell surface. Periostracum producing long bristle-like processes which are in spiral arrangement and grouped into three bands, one above and one below the periphery, and the third near the base of the shell. Operculum calcareous, moderately dished, multispiral and deeply grooved. Inner surface covered with periostracum, smooth and having a central papilliform nucleus.

Type species, *Japonia* (?) *hedigeri* I. and B. Rensch.

Setaepoma does not appear to be closely related to any other known genus in the Assimineidae, at least on the basis of opercular characters. The cyclophorid type of shell is also quite different from most other assimineids, being somewhat heavy and with a depressed spire.

This genus is placed in the subfamily *Thaanumellinae* because of its thickened and multispiral operculum. The radula is quite similar to *Thaanumella angulosa* Ancy from the Caroline Islands.

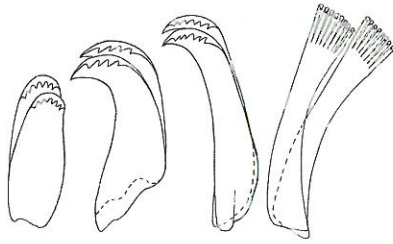


Fig. 1. Radula of *Setaepoma mayri* Clench.

Setaepoma mayri, new species

(Plate 17, fig. 5; text fig. 1)

Description. Shell depressed turbinate, thin and having three spiral rows of bristle-like processes of periostracum on the outer whorl. Color a dark straw-yellow. Whorls 4 to $4\frac{1}{2}$, strongly convex and tubular but only narrowly attached to the whorl above. Spire depressed, the early whorls just appearing above the body whorl. Aperture nearly circular, holostomatous and exceedingly thin. No columella. Umbilicus wide and funnel-shaped, the early whorls to the nuclear whorls being visible. Suture very deep. Periostracum rather thick and forming rather long, thin, bristle-like processes which are grouped to form three spiral crests. Fine thread-like and spiral ridges exist which are without the bristle-like processes. Nuclear whorls $1\frac{1}{2}$, smooth and pinkish in color. Operculum calcareous with a periostracal base, depressed above and with a papilliform nucleus on the lower inner surface. Outer surface deeply grooved with a spiral channel, the ridge between being flat and crossed by fine thread-like costae.

Height	Greater	Diameter	Lesser Diameter
5.5 mm	8.2 mm	7.5 mm	Paratype
5.5 -	10.5 -	8.5 -	-
7.5 -	11 -	9 -	-
5.5 -	6.5 -	5.8 -	Holotype

Types. Holotype, Museum of Comparative Zoology, no. 36840, from Fulakora, Ysabel Island, Solomon Islands. W. M. MANN collector, 1918. Paratypes in the Museum of Comparative Zoology and the American Museum of Natural History from along the Wurulata River, Choiseul Island at 2500 feet elevation. ERNST MAYR collector, Sept. 1929.

Remarks. *Setaepoma mayri* is close in its relationships to *S. hedigeri* I. and B. Rensch from the Island of Bougainville. *S. mayri* is, however, more depressed, the spire hardly elevated above the body whorl and it has as well a much wider, funnel-shaped umbilicus.

Nesopoma, new genus

Shell extended, rather thin, having a heavy periostracum which may have bristlelike processes. Operculum multispiral, thickened, composed of calcium and with a thin layer of periostracum on its inner surface. The outer surface nearly smooth, rather deeply dished toward the center.

Type species, *Nesopoma eyerdami* Clench.

Nesopoma eyerdami, new species

(Plate 17, fig. 4)

Description. Shell small, not exceeding 6 mm in height, extended, rather thin, perforate and sculptured. Color straw-yellow. Whorls 6 and strongly convex. Spire somewhat extended, forming an angle of 60°. Aperture subcircular, holastomatous, and attached only near the anal canal. No columella. Umbilicus open and deep. Suture deeply indented. Sculpture consisting of numerous spiral threads upon which there are a series of very short periostracal "hairs." Nuclear whorls 2½ and smooth. Operculum multispiral, somewhat thickened with calcium and with a thin layer of periostracum on its inner surface. Outer surface with diagonal growth lines between the sutures and being somewhat dished toward the center.

Height	Width	Whorls	
5.5 mm	4 mm	6	Paratype
5 -	3.6 -	6	Holotype
5 -	3.5 -	5.75	Paratype

Types. Holotype, American Museum of Natural History, no. 73885 from Su'u, Malaita Island, Solomon Islands. W.J.EYERDAM collector, March 1930, Whitney Expedition. Two paratypes from the same locality in the Museum of Comparative Zoology no. 188086.

Remarks. See under *N. galathea* Clench.

Nesopoma galathea, new species

(Plate 17, fig. 2)

Description. Shell small, not exceeding 4 mm in height, somewhat extended, perforate and sculptured. Color a dark straw-yellow. Whorls 5½ and strongly convex. Spire somewhat extended and forming an angle of 70°. Aperture subcircular and nearly holastomatous, the palatal area very thin where appressed to the whorl above. No columella. Umbilicus small and deep, partially covered by the palatal wall. Suture deeply indented. Sculpture consisting of numerous, spiral threads which do not possess any outgrowths of periostracal "hairs". Nuclear whorls 2 and smooth. Oper-

culum multispiral, thickened with calcium and with a thin layer of periostracum on its inner surface. Outer surface nearly smooth and with faint diagonal growth lines between the sutures and being dished toward the center.

Height	Width	Whorls	
4 mm	3.4 mm	5	Holotype
4.2 -	3.5 -	5	Paratype
4.3 -	3.5 -	5	-

Types. Holotype, American Museum of Natural History no. 73884, from Su'u, Malaita Island, Solomon Islands. W.J.EYERDAM collector, March 1930, Whitney Expedition. Paratypes in the Museum of Comparative Zoology and the University Zoological Museum, Copenhagen, Denmark, from the same locality.

This species was also obtained by the Whitney Expedition at Kira Kira, San Cristobal and by the "Galathea" Expedition at station L 340, Honiara, Guadalcanal and at station L 374, Lavangu and L 364, Te-Avamangu, both Rennell Island, Solomon Islands.

Remarks. This species is close to *N. eyerdami* but differs in several of its characters. There appears to be no trace of periostracal "hairs." In addition, the spiral threads are more numerous. The angle of the spire is greater which gives the shell a more depressed appearance. The umbilicus is much smaller and the outer surface of the operculum is smoother.

Omphalotropis nebulosa Pease

Omphalotropis nebulosa PEASE 1872, Am. Jour. Conch., 7: 197, (Solomon Islands); SMITH 1885, Proc. Zool. Soc. London, p. 597; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 345.

Realia (Omphalotropis) nebulosa Pease, PFEIFFER 1875, Mono. Pneumonoporum Viven., 4: 219.

Remarks. This and the following subspecies are the only known forms in this genus occurring in the Solomons. *O. nebulosa* appears to be distributed throughout the archipelago, though not as yet recorded from any other region. The original label in the PEASE collection (M. C. Z. no. 72347) cites "Makela" as the locality. This may possibly be an error in transcription for Makira, another name for San Cristobal Island.

O. nebulosa differs from *O. ducalis* 'Bttg.' Mölldf., a species occurring in the Bismarks, by possessing a smoothly rounded and convex body whorl (not carinate, as in *ducalis*) and having spiral bands of a rather deep reddish brown coloration. It approaches in its method of coloration that of *O. bulimoides* 'H. & J.' Rouss. from the Carolines.

Specimens examined. Bio. Bougainville: Kieta. Choiseul: Choiseul Bay; near Bambatana at 1000 feet; Poro Poro. Guadalcanal: Aola; L 340, Honiara.

Malaita: Auki; Su'u. New Georgia: Kepi, Rubiana; Labete. Rendova Id. San Cristobal: Wai-ai; Kira Kira. Santa Ana. Shortland: Harapa; Faisi. Three Sisters. Also Santa Cruz Id., Santa Cruz Islands.

***Omphalotropis nebulosa guppyi*, new subspecies**

(Plate 17, fig. 1)

Description. Shell larger and proportionately wider with the umbilical area wider and somewhat deeper than in *O. nebulosa*. The color is dull brown throughout and not banded.

Height	Width	Aperture	
11.5 mm	7.5 mm	5.5 × 4 mm	Holotype
12.5 -	8.8 -	4.8 × 4.5 -	Paratype
11.5 -	7.9 -	5 × 4.2 -	-
12.1 -	8 -	4.5 × 4.1 -	-
10.8 -	8 -	5.1 × 4.6 -	-

Holotype. American Museum of Natural History no. 59010, Olimburi, 2000 feet, Malaita Island, Solomon Islands. W.J. EYERDAM collector, April 1930, Whitney Expedition. Paratypes from Wahle's village, west central Malaita (1300 feet) and a single specimen from Kivarambara, Malaita Island.

Remarks. Only 5 specimens from these several localities were obtained and only the holotype was collected alive.

***Omphalotropis quirosi*, new species**

(Plate 17, fig. 3)

Description. Shell small, reaching 4 mm in length, light in structure, umbilicate and smooth. Color a brick-red and overlaid with a light yellowish-brown and smooth periostracum. Whorls 6 and slightly convex and with a fine thread-like carina. Spire short and flat sided. Aperture subquadrate. Outer lip simple, parietal lip consisting of a thin glaze. Columella short and arched. Umbilicus small but deep and margined with an umbilical ridge. Suture indented. Sculpture consisting of exceedingly fine diagonal growth lines. Nuclear whorls 2, a brickred in color and smooth.

Height	Width	
4 mm	2.5 mm	Holotype
3.7 -	2.3 -	Paratype

Types. Holotype in the University Zoological Museum, Copenhagen, Denmark, from L 390, Lavanggu, Rennell Island, Solomon Islands. Collected by the Danish

Rennell Expedition, October 1951. Paratypes in the Museum of Comparative Zoology no. 191443, from the same locality. A single specimen was obtained at L 365, Te-Avamanggu, Rennell Island.

Remarks. *Omphalotropis quirosi* differs from *O. nebulosa* Pease by being very much smaller, having a solid coloration and in having the base of the shell less extended. In addition, there is a thread-like carina at the peripheral area in *quirosi* while there is none in *nebulosa*.

THIARIDAE

Melanoides guppyi Smith

Melania guppyi SMITH 1885, Proc. Zool. Soc. London, p. 603, pl. 37, fig. 6-6a (Lake Wailava, Santa Ana Island, Solomons).

Specimens examined. Rennell: L 387, Niupani Lake, Te-Nggano.

Remarks. So far as can be determined, this is the second known record for this species, the other being the type locality, the small island of Santa Ana.

Tarebia granifera Lamarck

Melania granifera LAMARCK 1822, Anim. San Vert., 6, pt. 2, p. 167 (Timor).

Specimens examined. Rennell: L 377, Niupani, Lake Te-Nggano.

Stenomelania fuscata undulata Gmelin

Helix undulata GMELIN 1790 [in] LINNÉ, Syst. Nat. ed. 13, 1, pt. 6, p. 3654 (locality unknown); based upon *Helix maculata* BORN 1778, non MÜLLER 1774.

Specimens examined. Guadalcanal: L 345, Honiara. Rennell: L 377, Niupani, Lake Te-Nggano.

ELLOBIIDAE

Pythia scarabaeus Linné

Helix scarabaeus LINNÉ 1758, Syst. Nat. ed. 10, p. 768 (Asiae montibus).

Remarks. This is a species of wide distribution in the Solomon Islands and probably throughout most of Melanesia.

Specimens examined. Guadalcanal: L 346, W of Honiara. Rennell: L 351; L 352; L 357; L 362; L 374, all Lavanggu; L 385, Niupani, Lake Te-Nggano.

Melampus luteus Quoy and Gaimard

Auricula lutea QUOY and GAIMARD 1832, Voyage de L'Astrolabe, Zoology, 2: 163, pl. 13, fig. 25-27 (Nanoun-ha Islet [Naun-ha] Vanikora [Santa Cruz Islands]).

Specimens examined. Guadalcanal: L 345, Honiara.

SUCCINEIDAE

Succinea simplex Pfeiffer

Succinea simplex PFEIFFER 1854 [1855], Proc. Zool. Soc. London, p. 123 (Solomon Islands).

Specimens examined. Rennell: L 357; L 389, both Lavanggu and L 380, Niupani, Lake Te-Nggano. Also many additional records from other localities in the Solomon Islands (c.f. CLENCH 1941).

TORNATELLINIDAE

Tornatellina microstoma Quadras and Moellendorff

Tornatellina microstoma QUADRAS and MOELLENDORFF 1894, Deutschen Malak. Gesell. 26: 16 (Guam).

Remarks. Similar to the Pupillidae, members of this family have heretofore escaped notice by collectors. This species has been recorded by RENSCH (1937, p. 584) from Karlei, New Britain Island, Bismark archipelago.

Specimens examined. Santa Ana. (Whitney Expedition).

PUPILLIDAE

Gastrocopta pediculus Shuttleworth

Pupa pediculus SHUTTLEWORTH 1852, Mittheilungen der naturforschenden Gesellschaft in Bern, p. 296 (Marquesas and Tahiti).

Notes. I believe that heretofore no records were known of any pupillid in the Solomons. Their small size makes them difficult to find.

Specimens examined. Bellona. Rennell: L 357, Lavanggu. Santa Ana.

SUBULINIDAE

Lamellaxis gracilis Hutton

Bulimus gracilis HUTTON 1834, Jour. Asiatic Soc. Bengal, 3: 93 (Mirzapur, India).

Remarks. An introduced species now widely distributed through most of the tropical world.

Specimens examined. Bellona. Guadalcanal: L 340, Honiara. Rennell: L 351, L 352, L 357, L 374, L 390, Lavanggu; L 367, Te-Avamanggu; L 385, Niupani.

ENDODONTIDAE

Charopa hoeyeri, new species

(Plate 16, fig. 6)

Description. Shell small, not exceeding 5 mm in greater diameter, depressed and strongly sculptured with axial costae. Color probably light brown when alive. Whorls

$3\frac{3}{4}$, rounded but slightly flattened above the periphery. Spire depressed, earlier whorls but slightly above the last. Aperture subcircular. Lip simple. Umbilicus wide and deep, being about $1\frac{1}{2}$ mm in width. Sculpture consisting of numerous, axial and moderately sinuous riblets which number about 10 to the millimeter. Nuclear whorl smooth, there being no trace of spiral sculpture when seen under high magnification.

Greater diameter	Lesser diameter	Height	
5 mm	4 mm	2.3 mm	Holotype

Types. Holotype in the University Zoological Museum, Copenhagen, Denmark, from station L 374, Lavanggu, Rennell Island, Solomon Islands, collected by the Danish Rennell Expedition. Paratype from the same locality in the Museum of Comparative Zoology no. 191461. The species is named for Mr. MOGENS HOEYER, the photographer of the Danish expedition.

Remarks. This new species is based upon two specimens, both dead but in a good state of preservation. The holotype is mature, the paratype a younger shell. It differs from *Charopa solomonensis* Clapp by being much larger, having a much larger funnel-shaped umbilicus and much heavier riblets. In *solomonensis*, the first nuclear whorl exhibits very fine spiral threads, while in the present new form the nuclear whorl is smooth.¹

Charopa insularis, new species

(Plate 18, fig. 5)

Description. Shell small, not exceeding 4 mm in greater diameter, depressed and nearly smooth. Color probably brownish in live material. Whorls 4, rounded and not flattened above the periphery. Spire greatly depressed, hardly appearing above the last whorl. Aperture subcircular. Lip simple. Umbilicus wide and deep, being .8 mm in width. Sculpture consisting of a few, somewhat coarse growth lines. Nuclear whorls smooth.

Greater diameter	Lesser diameter	Height	
3.8 mm	3.5 mm	2 mm	Holotype

Types. Holotype in the University Zoological Museum, Copenhagen, Denmark, from station L 365, Te-Avamanggu, Rennell Island, Solomon Islands, collected by the Danish Rennell Expedition.

Remarks. This species differs from *C. hoeyeri* by being entirely smooth as well as being a little smaller. Only a single specimen was obtained.

1. *Endodonta (Charopa) solomonensis* Clapp is now placed in the genus *Mocella* Iredale according to ALAN SOLEM in a recent letter.

ARIOPHANTIDAE

Quirosella, new genus

Shell depressed to globose, imperforate or with an imperfectly closed umbilicus. Sculpture consisting of fine growth lines and exceedingly fine spiral threads; nuclear whorls entirely smooth.

This new genus appears to be close in its relationships to *Nesonanina* Bgt. of the Admiralty Islands. It differs in not having the dome shaped spire of *Nesonanina* and in having rather deeply incised sutures. The general shape of the two are quite different yet difficult to describe. *Quirosella* appears to be more remotely related to *Hemiplecta* Albers, a genus of wide distribution in the western Pacific islands. From this genus, *Quirosella* differs in being imperforate or nearly so, in lacking all sculpture other than occasional specimens with very fine spiral threads and in not having the peculiar color pattern which occurs in *Hemiplecta*. In this latter genus both sculpture and color may differ quite remarkably on the whorls above and below the periphery.

Type species, *Quirosella coultasi* Clench.

Quirosella coultasi, new species

(Plate 18, fig. 1-2; text fig. 2, p. 191)

Description. Shell globose, relatively solid, imperforate or with a minute umbilical opening. Color a uniform dark yellowish brown or with two bands of a much darker brown, one above and one below the periphery. Whorls 5 and strongly convex. A small rounded lip margins the aperture which is colored a very pale pink in fresh specimens. Fully matured specimens have a small tooth-like thickening on the columellar margin of the lip with a second thickening on the basal margin of the lip. Sculpture of fine and somewhat irregular growth lines. On a few of the paratypes there are very faint and very fine hair-like spiral threads. Columella oblique and thickened below with the tooth-like process. Outer lip in profile produced in a narrow sigmoid curve. Aperture cast at an angle of 40° from the axis (50° from the base line).

Height	Width	Aperture Width	
13.2 mm	14.4 × 17 mm	8 mm	Holotype
13.8 -	15 × 17.4 -	7.6 -	Paratype
12 -	15.3 × 17.5 -	8.1 -	-
13.5 -	14.5 × 17 -	8 -	-
11.8 -	14.5 × 16.5 -	6.5 -	-

Types. Holotype, American Museum of Natural History no. 59011, from Rennell Island, Solomon Islands, W. J. EYERDAM collector, May 25, 1930. Paratypes from the same locality in the American Museum Natural History no. 59012, the Museum of Comparative Zoology no. 93017, the Dominion Museum, Wellington, New Zealand,

and the Zoological Museum, Copenhagen. The specimens collected by the Danish Rennell Expedition are from the following stations: L 357; L 362; L 363; L 372; L 374; L 375; L 389, all Lavanggu; L 365 and L 367 from Te-Avamanggu; L 380, Niupani and L 399, Lugugi, all Rennell Island. In addition, there are two lots of paratypes from Bellona Island collected by W. J. EYERDAM during the Whitney Expedition and by members of the Crocker Expedition for the B. P. Bishop Museum. The specimens in the Wellington Museum came from the cliffs above Te-Uhungango anchorage on Rennell Island, collected by M. LAIRD, August 1953.

Remarks. It is quite astonishing that three species of an apparently new genus of ariophantids should occur on this relatively small and low island. Though quite obviously related to one another, the three species are very distinct with no indication at all of intergrading examples among any of the several specimens collected. All three species occurred in the same immediate locality such as station L 365 at Te-Avamanggu where they lived in rain forest in leaf mold among the scattered coral blocks.

Named for W. F. COULTAS, a member of the Whitney Expedition party.

Quirosella wolffi, new species

(Plate 18, fig. 3)

Description. Shell subglobose, relatively solid and with a minute perforation. Color a dark yellowish brown with a single specimen showing a light band at the periphery. Whorls $5\frac{3}{4}$ and strongly convex. Aperture subcircular. Lip slightly thickened and pale pink in color. Old individuals show a very slight thickening on the columellar margin of the lip. Sculpture consisting only of very fine growth lines.

Height	Width	Aperture Width	
16 mm	24 × 19.5 mm	13 mm	Holotype
16.5 -	23 × 19.5 -	12 -	Paratype
16.5 -	24.5 × 21.5 -	13 -	-
16 -	22.5 × 18 -	12 -	-

Types. The holotype is in the University Zoological Museum, Copenhagen, from station L 367, Te-Avamanggu, Rennell Island, Danish Rennell Expedition. Paratypes in the Zoological Museum and the Museum of Comparative Zoology no. 191447 and 191448 from the same station and from stations L 365 and L 364, both Te-Avamanggu and station L 372 at Lavanggu, Rennell Island.

Remarks. See under *Q. coultasi*. Named for Dr. TORBEN WOLFF, leader of the Danish Rennell Expedition.

Quirosella knudseni, new species
(Plate 3, fig. 4; text fig. 2, 3, p. 191)

Description. Shell depressed, relatively solid, imperforate and acutely keeled. Color a yellowish brown. Whorls 5 and acutely keeled. Aperture subquadrate and having a slightly thickened pinkish lip. No indication of a columellar tooth or thickening. Sculpture consisting of very fine growth lines. Nuclear whorls smooth. Periostracum thin, and yellowish.

Height	Width	Aperture Width	
11 mm	20 × 17.5 mm	9.5 mm	Holotype
10.5 -	20.5 × 17 -	11 -	Paratype
10 -	20 × 17.5 -	9.8 -	-

Types. The holotype is in the University Zoological Museum, Copenhagen, from station L 364, Te-Avamanggu, Rennell Island, Danish Rennell Expedition. Paratypes from station L 365, Te-Avamanggu and station L 372, Lavanggu, Rennell Island, in the Zoological Museum and the Museum of Comparative Zoology no. 191452 and 191453.

Remarks. See under *Q. coultasi*. Named for Mr. HARRY KNUDSEN who collected mollusks of the Danish Rennell Expedition.

Dendrotrochus cineraceus Humbron and Jacquinot

Helix cineracea HUMB. and JACQ. 1841, Annales Sciences Naturelles (2), 16: 64 (New Guinea).

Helix helicinoidea JACQUINOT (Nov.) 1849, Zeitschrift für Malakozoologie 6: 77 (Insulis Salomonis); ROSSEAU 1854, Voyage au Pole Sud, 5: 28, pl. 7, fig. 34-37 (Iles Salomon); non *Helix helicinoidea* MOUSSON (Dec.) 1848.

Helix (Carocolla) cleryi RECLUZ 1851, Jour. de Conchy., 2: 211, pl. 5, fig. 10 (Les Iles Salomon).

Helix cinerarea "Homb. and Jacq." ROUSSEAU 1854, Voyage au Pole Sud, 5: 28, pl. 7, fig. 30-33 (Nouvelle-Guinée).

Helix cyrene CROSSE 1870, Jour. de Conchy., 17: 183; *ibid.* 18: 102, pl. 2, fig. 2 (Oceania).

Helix (Geotrochus) quirosi COX 1873, Proc. Zool. Soc. London, p. 147 (Solomon Islands).

Helix (Geotrochus) cleryi septentrionalis SMITH 1885, Proc. Zool. Soc. London, p. 593, pl. 36, fig. 6 (Choiseul Bay [Choiseul Island], Shortland and Treasury Islands).

Helix (Geotrochus) cleryi simboana SMITH 1885, Proc. Zool. Soc. London, p. 593, pl. 36, fig. 6a (Simbo [= Eddystone] Island).

Helix (Geotrochus) cleryi meridionalis SMITH 1885, Proc. Zool. Soc. London, p. 593, pl. 36, fig. 6b (Santa Anna Island).

Trochonanina helicinoides tenera I. and B. RENSCH 1935, Sitzungsberichte d. Gesell. Naturfreunde, p. 249 (Aola; Domma; Dalomay and Wanderer Bay, Guadalcanal, Solomon Islands).

This is a polytypic species of wide distribution in the Solomon and Bismark archipelagoes. Many of the forms have been named, but they appear to me to have but little taxonomic value. They vary exceedingly in size, shape and in coloration and certain of these different forms may occur at one station. In other places they are remarkably uniform.

The original locality of New Guinea given by HUMBRON and JACQUINOT for *D. cineraceus* may well be in error. So far as I can trace this species has not been reported beyond the Bismarks by any recent authors. The "Astrolabe" and "Zelee" made only one station in the Solomon Islands and that station was at the southeastern extremity of Ysabel Island. The figures of *cineraceus* and *helicinoides* in the Voyage au Pole Sud are exceedingly close and could have been examples of this species from one locality.

Specimens examined. Bellona. Rennell: L 351, L 357, L 372, L 374, L 389. Lavanggu; L 365, Te-Avamanggu; L 386, Niupani. Also many additional localities in the Solomon Islands.

Trochomorpha Albers

Trochomorpha ALBERS 1850, Die Helicien, Berlin, p. 116; VON MARTENS 1860, [in Albers] Die Helicien, Leipsig, 2nd. ed., p. 60.

Type species, *Nanina trochiformis* Férussac, subsequent designation, VON MARTENS 1860.

A "genus" of wide distribution, extending from southeastern Asia through the East Indies to Melanesia and Polynesia.

Subgenus Lentitrochus H. B. Baker

Lentitrochus H. B. BAKER 1941, Bull. B. P. Bishop Mus. no. 166, p. 286.

Type species, *Trochomorpha sanctaeannae* SMITH, original designation.

It is possible that all species of *Trochomorpha* from the Solomon Islands belong in this subgenus. BAKER gave no shell characters with which this subgenus could be separated from the others.

Trochomorpha zenobia Pfeiffer

Helix zenobia PFEIFFER 1863, Proc. Zool. Soc. London, p. 527 (New Georgia).

Helix hidalgoiana CROSSE 1864, Jour. de Conch., 12: 283 (Oceania); *ibid.* 1864, 14: 56, pl. 1, fig. 2.

Helix (Trochomorpha) eudora ANGAS 1869, Proc. Zool. Soc. London, p. 47, pl. 2, fig. 8 (New Georgia).

Trochomorpha zenobia PFEIFFER, PILSBRY 1892, Man. of Conch. (2), 8: 131, pl. 42, fig. 14-16; CLAPP 1923, Bull. Mus. Comp. Zool., 65: 374.

Trochomorpha eudora Angas, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 365.

Trochomorpha hidalgoiana Crosse, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 368.

Remarks. A species of wide distribution in the Solomon Group. I cannot differentiate *hidalgoiana* Crosse and *eudora* Angas from *zenobia* Pfeiffer. All were derived originally from the Island of New Georgia.

This is the most coarsely sculptured species of *Trochomorpha* occurring in the Solomon Islands. The whorls are generally well rounded both above and below the sharply keeled periphery. So far as known, this species is the only one in the Solomons to extend over several of the larger islands. Most of the species are localized on single islands.

Specimens examined. San Cristobal: Kira-Kira; Kavo River; Wainoni Bay. Choiseul: Choiseul Bay. Guadalcanal: L 346, west of Honiara. This species has been reported from New Georgia by PFEIFFER, ANGAS, CROSSE and PILSBRY.

***Trochomorpha floridensis* Clapp**

Trochomorpha floridensis CLAPP 1923, Bull. Mus. Comp. Zool., 65: 367 (Florida Island, Solomon Islands).

Specimens examined. Rennell: L 364; L 385, L 357, Lavanggu.

***Trochomorpha mcleani*, new species**

(Plate 17, fig. 6)

Description. Shell reaching 30 mm in width, subdepressed, carinated and umbilicated. Color a straw-yellow with a subperipheral band of dark brown. Whorls $5\frac{1}{2}$ to 6, convex, the last whorl moderately carinated. Spire depressed, dome-shaped and forming an angle of about 110° . Aperture subquadrate with the lip simple and not noticeably thickened. No columella. Umbilicus wide and deep, being $\frac{1}{6}$ the greater diameter of the shell. Suture moderately indented. Sculpture consisting of numerous, oblique growth lines. Nuclear whorls $1\frac{1}{2}$ and smooth.

Height	Greater diameter	Lesser diameter	
15 mm	30 mm	25.5 mm	Holotype
14.5 -	30.4 -	25.5 -	Paratype
15.5 -	30 -	25 -	-

Types. The holotype is in the American Museum of Natural History no. 79016 from 10 miles inland from Su'u, Malaita Island, Solomon Islands, collected by the Whitney Expedition. Paratypes from the same locality in the American Museum and the Museum of Comparative Zoology, no. 93070, and from 20 miles inland from Su'u' Malaita Island.

Remarks. This species is, perhaps, nearest in relationship to *T. concava* Clapp.

differing by having a dome-shaped spire and not concave as in the latter form. *T. concava* is very sharply carinated, in fact the entire whorl is sharply angled.

This species is named for Mr. R. A. McLEAN, a former student of mine.

Specimens examined. Malaita: Aurola; Kivarambara: Fiu; 10 and 20 miles inland from Su'u.

Orpiella treasuryensis Tryon

Helix (Nanina) nitidissima SMITH 1885, Proc. Zool. Soc. London, p. 589, pl. 36, fig. 1-1 b (Treasury Id., Solomon Islands).

Nanina treasuryensis TRYON 1886, Man. of Conch. (2), 2: 111, pl. 37, fig. 100-2 (Treasury Id., Solomon Islands); new name for *H. nitidissima* SMITH, non MOEL-LENDORFF.

Specimens examined. Guadalcanal: L 346, Honiara.

Orpiella pamuaensis Clapp

Fretum pamuaensis CLAPP 1923, Bull. Mus. Comp. Zool., 65: 359, pl. 2, fig. 1-3 (Pamua, San Cristobal).

Specimens examined. Guadalcanal: L 340; L 346, Honiara. Malaita: Su'u. Rennell: L 365, Te-Avamanggu; L 372, Lavanggu.

BULIMULIDAE

Placostylus macgillivrayi Pfeiffer

Bulimus macgillivrayi PFEIFFER 1855, Proc. Zool. Soc. London, p. 108, pl. 32, fig. 2 (Wanderer Bay, Guadalcanal).

Specimens examined. Guadalcanal: L 346, 5 km west of Honiara.

PARTULIDAE

Partula (Rennellia) cramptoni Clench

Partula (Rennellia) cramptoni CLENCH 1941, American Museum Novitates 1129, p. 20, fig. 13 (Rennell Island).

Specimens examined. Rennell: L 357, L 372, L 374, Lavanggu; L 364, L 365, L 367, Te-Avamanggu.

CAMAENIDAE

Crystallopsis Ancey

Crystallopsis ANCEY 1887, Conchologists Exchange, 2: 22, types, *H. hunteri* Cox and *H. allasteri* Cox; PILSBRY 1892, Man. of Conch. (2), 8: 243; PILSBRY 1894, Man. of Conch., (2), 9: 220, type, *H. hunteri*.

Type species, *Helix hunteri* Cox, subsequent designation, Pilsbry 1894.

The genus *Crystallopsis* has been, until a rather recent date, considered a sectional

element in the genus *Helicostyla*. ANCEY (1887, p. 22) erected the genus, placed it after *Papuina*, and named two species, *hunteri* and *allasteri*, as types. Subsequently PILSBRY (1891, p. 105) included the species of this genus in *Corasia*, a section of *Helicostyla*, and later (1894, p. 220) considered it as an independent section in *Helicostyla*. GUDE (1907, p. 235), describing a new species in *Crystalloopsis*, used it in a generic sense and was later followed by CLAPP (1923, p. 396) in his list of the land shells of the Solomons. CLAPP listed *Crystalloopsis* after *Papuina*. In a publication by THIELE (1931, p. 685) the genus was reduced to sectional value, included, however, in *Papuina*. RENSCH (1933, p. 317) has followed THIELE.

Its association with the section *Corasia* in *Helicostyla* was due to the remarkable parallelism in the shell characters, namely their depressed form, the glass-like texture and the thin structure, and the fact that anatomical comparisons were not made with any true *Crystalloopsis*. This group should, however, be accorded full generic rank and not be reduced to sectional value under *Papuina*.

The radula and reproductive system of the Solomon Island species (CLAPP, 1923, p. 398) are similar to *Papuina* and not to *Helicostyla*. The statement by PILSBRY (1894, p. 220) that the radula and reproductive organs were similar to *Helicostyla* was based upon the anatomy of *H. coniformis* (not in the genus *Crystalloopsis*), a species from New Guinea, and not any Solomon Island species, the anatomy of which was unknown to PILSBRY at the time he made his studies. Species accredited to this genus from localities in New Guinea and the islands to the west are probably not related to *Crystalloopsis* at all but either to *Corasia* or other purely East Indian genera.

No species of *Crystalloopsis* are known to occur on the two large and most northerly islands of the Solomon group, namely, Choiseul and Bougainville, but are confined entirely to the remaining large islands of the southeast and a few of the smaller associated islands. The subgenus *Cristovala* occurs only on San Cristobal, the small islands near by and on Rennell. *Cristovala* parallels the conditions of *Aspastus*, a subgenus in *Placostylus*, which is as well confined to San Cristobal but not on Rennell.

From evidence based upon its anatomy and distribution, *Crystalloopsis* has very probably been derived from *Papuina* at a comparatively recent period. Its non-occurrence on Choiseul and Bougainville would indicate that these islands were separated from those of the southeast before the advent of this group, and the occurrence of only a single species of *Placostylus* (*P. founaki* Rousseau) on these two islands further bears out the point.

Crystalloopsis differs from *Papuina* of the Solomons by possessing fewer whorls, and usually being much more depressed. The shells are usually glossy in texture, generally translucent and, with very few exceptions, not colored, and then only brown or red-brown.

Crystalloopsis (Crystalloopsis) hunteri (Cox)

(Plate 16, fig. 3)

Helix hunteri COX 1871, Proc. Zool. Soc. London, p. 646, pl. 52, fig. 11, (Guadalcanal); DOHRN, 1880, in Conchy. Cabinet, (2), 1, pt. 12, sec. 4, p. 583, pl. 172, fig. 5-6.

Helix allasteri COX 1873, Proc. Zool. Soc. London, p. 564 (Solomon Islands).

Helix aggiei v. HEIMBURG 1890, Nach. der Deut. Malak. Gesell., 22: 191 (Solomon Islands).

Cochlostyla (Corasia) hunteri COX, PILSBRY 1891, Man. of Conch. (2), 7: 105, pl. 13, fig. 41, 44, 45.

Cochlostyla (Corasia) allisteri [err. typ.] COX, PILSBRY 1891, Man. of Conch. (2), 7: 106.

Cochlostyla (Crystalloopsis) aggiei v. Heimburg, PILSBRY 1892, Man. of Conch. (2), 8: 244, pl. 57, fig. 7-9.

Helicostyla (Crystalloopsis) hunteri COX, PILSBRY, 1894, Man. of Conch. (2), 9: 220.

Crystalloopsis hunteri COX, CLAPP, 1923, Bull. Mus. Comp. Zool., 65: 396.

Remarks. The only widely umbilicated species in the genus. The transition of this character between species is exhibited by a partially closed rimately shaped orifice in *C. crystallina* and nearly obsolete in *C. fictilia* Clapp. Angle of spire 118° . Aperture forming an angle of 55° with the horizontal base line. Paratypes of this species are in the Museum of Comparative Zoology, no. 47826.

Crystalloopsis allasteri Cox is only *C. hunteri* Cox with a few, narrow, spiral bands of opaque white. This same character is also found in other species and it appears to be relatively rare and of a sporadic occurrence.

Specimens examined. Guadalcanal.

Crystalloopsis (Crystalloopsis) crystallina, new species

(Plate 16, fig. 5)

Description. Shell semi-globose to subquadrate, thin, shining, translucent, rimately umbilicate, carinate. Color pale horn, crystalline. A narrow milk-white band superimposed over the carina. A second narrow milkwhite band is developed subsuturally in nearly all of the adult shells. Whorls slightly convex, $3\frac{1}{2}$ to $3\frac{3}{4}$, definitely though not abruptly carinate. Nuclear whorl not indicated by any character. Spire obtuse and produced at about 110° , depressed. Aperture subquadrate, large, cast at an angle of 40° from the horizontal. Lip well reflected, milk white. A very thin callus is developed on the parietal wall. Columella rather short, slightly outwardly arched and more or less abruptly angled with the parietal area. Columellar fold free at the basal edge, producing the narrow umbilical rimation. Suture slightly impressed, sharply defined by the subsutural white band. Sculpture of fine, irregularly spaced growth lines. *Very fine* spiral lines indicated on all but the last half of the body whorl.

Measurements:

Length	Gt. diam.	Less. diam.	Ap. length	Ap. width
18 mm	26.5 mm	21.5 mm	12 mm	12.5 mm
16 -	28 -	23 -	12.5 -	13.5 -
17 -	26 -	22 -	12 -	12 -
18 -	27.5 -	22 -	13 -	13 -
17.5 -	26.5 -	22 -	11.5 -	12 -
16 -	25 -	21.5 -	12.5 -	12.5 -
18 -	25.5 -	21 -	12 -	12 -
16.5 ¹ -	25 -	21.5 -	12.5 -	12 -
16.5 -	25.5 -	20 -	11 -	11.5 -
16.5 -	24 -	19.5 -	10.5 -	10.5 -

Types. The holotype is in the American Museum of Natural History, no. 66484, from Ulawa Island, Solomon Islands, W. J. EYERDAM collector, April 1930. Paratypes in the American Museum of Natural History no. 66441 and the Museum of Comparative Zoology no. 92945 from the same locality.

Remarks. Apparently closely related to *C. hunteri* from Guadalcanal. It differs from that species in being very much broader, having a flatter spire, and not being openly umbilicate. It differs from *C. fictilia* of Malaita in being strongly carinate, thinner and glass-like rather than chinalike in its texture. It is intermediate between *C. hunteri* and *C. fictilia* in the development of the umbilicate orifice. The latter species has only an occasional specimen that possesses a minute rimation. This is the first reported *Crystalloopsis* from Ulawa Island.

***Crystalloopsis gowerensis* Boettger**

Papuina gowerensis BOETTGER 1918, Abhandlungen d. Senckenberg Naturforschenden Gesellschaft, 36: 294, pl. 23, fig. 19a-c (Gower Island, Solomon Islands).

Types. The holotype of this species is in the Senckenberg Museum.

Remarks. This is a small, compact and nearly opaque species. It is most closely allied to *C. fictilia* Clapp from Malaita Island. It is smaller and has more convex whorls than *fictilia*, all other characters appearing about the same.

A large series of this species was obtained by the Whitney Expedition.

1. Injured specimen, loss of 1 mm on this measurement.

Crystallopsis (Crystallopsis) fictilia Clapp

Crystallopsis fictilia CLAPP, 1923, Bull. Mus. Comp. Zool., 65: 397, pl. 4, fig. 1-3.
(Auki, Malaita).

Length	Gt. diam.	Less. diam.	Ap. length	Ap. width
21.5 mm	26 mm	21 mm	14 mm	13 mm
20 -	25 -	20 -	13 -	12.5 -
19.5 -	25 -	20.5 -	12 -	11.5 -
19 -	26 -	20 -	13 -	13 -
18 -	24.5 -	19 -	12.5 -	12 -

Types. The holotype is in the Museum of Comparative Zoology no. 32455, and paratype no. 47830 from Auki, Malaita.

Remarks. This species has nearly lost the carina and it is only slightly indicated on a few specimens in the type series. There is as well a thin lamina produced along the columella which parallels the face of the aperture. This ends smoothly on the basal area of the lip. Spire forms an angle of 112° . Aperture cast at an angle of 39° with a horizontal base line.

Notes: Animal white, found on bushes in forest (EYERDAM).

Crystallopsis (Crystallopsis) lactiflua (Pfr.)

Helix lactiflua PFEIFFER 1861, Proc. Zool. Soc. London, p. 190 (New Georgia).

Helix isabellensis SOUVERBIE 1863, Jour. de Conch., 11: 74 and 173, pl. 5, fig. 1 (Isabella, [Ysabel]).

Helix (Geotrochus) isabellensis Souverbie, KOBELT 1894, Conch.-Cab. (2), 1, pt. 12, sec. 4, p. 711, pl. 202, fig. 9-10.

Cochlostyla (Corasia) lactiflua Pfeiffer, PILSBRY 1891, Man. of Conch. (2), 7: 108, pl. 13, fig. 36.

Helicostyla (Crystallopsis) lactiflua Pfeiffer, PILSBRY 1894, Man. of Conch. (2), 9: 220.

Crystallopsis lactiflua Pfeiffer, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 397.

Length	Gt. diam.	Less. diam.	Ap. length	Ap. width
19 mm	23.5 mm	19.5 mm	12 mm	10 mm
18.5 -	24 -	19.5 -	11 -	11.5 -

Remarks. SOUVERBIE's species, *isabellensis*, seems to be *C. lactiflua* Pfr. without question. It is possible that either of the above localities may be wrong; more probably that of PFEIFFER's as his species was based on Cumingian material, long noted for errors in assignment of proper locality.

Angle of spire 99° . Aperture cast at 44° with a horizontal base line. Museum of Comparative Zoology, no. 47829, Solomon Islands, Ex. Beddome.

Specimens examined. New Georgia. Russell: Pavuvu.

Crystalloopsis (Crystalloopsis) purchasi (Pfr.)

Helix purchasi PFEIFFER 1858, Proc. Zool. Soc. London, p. 21, pl. 40, fig. 4 (Admiralty Islands); DOHRN 1880, Conch.-Cab., 1, pt. 12, sec. 4, p. 590, pl. 173, fig. 7-8. *Cochlostyla (Corasia) purchasi* Pfeiffer, PILSBRY 1891, Man. of Conch. (2), 7: 108, pl. 13, fig. 46-47.

Helicostyla (Crystalloopsis) purchasi Pfeiffer, PILSBRY 1894, Man. of Conch., (2), 9: 220. *Crystalloopsis purchasi* Pfeiffer, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 397.

Papuina (Cristalloopsis) [err. typ.] paravicinii RENSCH 1933, Zoologischer Anzeiger, 102: 317, text fig. 5 (Auki; Buma; Maka; Malaita).

Remarks. There is probably no question but that the type locality given by PFEIFFER as "Admiralty Islands" is in error. Specimens collected by EYERDAM agree both in the description and figure of this species as given by PFEIFFER and DOHRN.

The recently described form, *C. paravicinii* Rensch, appears to be an absolute synonym of *C. purchasi* Pfr. The slightly differential characters mentioned by RENSCH are to be found in any sizable series of *purchasi* as a minor factor of variation.

Angle of spire 119° . Aperture cast at an angle of 58° with a horizontal base line.

Notes. Arboreal, found in gardens of the natives. March and April 1930 (EYERDAM).

Specimens examined. Malaita: Auki; Olimburi; Su'u; Kivarambara.

Crystalloopsis (Crystalloopsis) wisemanni (Brazier)

Helix (Corasia) wisemanni BRAZIER 1875 [1876], Proc. Linn. Soc. New South Wales, 1: 3 (Solomon Islands).

Cochlostyla (Corasia) wisemanni Brazier, PILSBRY 1891, Man. of Conch., (2), 7: 109.

Helicostyla (Crystalloopsis) wisemanni Brazier, PILSBRY 1894, Man. of Conch. (2) 9: 220.

Crystalloopsis wisemanni Brazier, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 399.

Remarks. This species is unknown to us and has not been reported since the original description. The two outstanding characters, "rounded at the periphery" and "peristome . . . whitish brown", occurring together, differentiate this form from all described.

Crystalloopsis (Crystalloopsis) rossiteri (Angas)

Helix (Corasia) rossiteri ANGAS 1869, Proc. Zool. Soc. London, p. 46, pl. 2, fig. 5 (Ysabel).

Cochlostyla (Corasia) rossiteri Angas, PILSBRY 1891, Man. of Conch., (2), 7: 109, pl. 21, fig. 26.

Helicostyla (Crystalloopsis) rossiteri Angas, PILSBRY 1894, Man. of Conch. (2), 9: 220.

Crystalloopsis rossiteri Angas, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 399.

Remarks. Differs from the other members of this group by having a proportionately higher spire.

Specimens examined. Ysabel.

Crystalloopsis (Crystalloopsis) fulakorensis Clapp

Crystalloopsis fulakorensis CLAPP 1923, Bull. Mus. Comp. Zool., 65: 398, pl. 4, fig. 4-6, text fig. 38 (Fulakora, Ysabel).

Remarks. This species is nearest in relationship to *C. rossiteri* (Angas), but differs from that species by being broader and having a much coarser sculpture. Angle of spire 126° , aperture cast at an angle of 55° with a horizontal base line.

Specimens examined. Ysabel: Fulakora.

Crystalloopsis (Crystalloopsis) woodfordi (Sowerby)

Helix (Corasia) woodfordi SOWERBY 1889, Proc. Zool. Soc. London, p. 578, pl. 56, fig. 6 (Guadalcanal).

Cochlostyla (Crystalloopsis) woodfordi SOWERBY, PILSBRY 1892, Man. of Conch., (2), 8: 243, pl. 57, fig. 14.

Helicostyla (Crystalloopsis) woodfordi SOWERBY, PILSBRY 1894, Man. of Conch., (2), 9: 220.

Crystalloopsis woodfordi SOWERBY, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 403.

A small species with a very thin shell. It differs from all other *Crystalloopsis* s.s. by having a thin pinkish peristome. Angle of spire 98° , aperture cast at an angle of 45° from a horizontal base line.

Length	Width	Ap. length	Ap. width
15.5 mm	19.2 mm	11 mm	9.5 mm
14.5 -	18.3 -	11.2 -	10 -

Measured specimens from Doma, Guadalcanal, collected by E. PARAVICINI.

Specimens examined. Guadalcanal: Doma.

Crystalloopsis (Crystalloopsis) anadyomene (Adams & Angas)

Helix (Corasia) anadyomene ADAMS & ANGAS 1864, Proc. Zool. Soc. London, p. 38 (Guadalcanal, Solomon Islands); SMITH 1885, *ibid.*, p. 590; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 344.

Cochlostyla (Corasia) anadyomene ADAMS & ANGAS, PILSBRY 1891, Man. of Conch. (2), 7: 110.

Helicostyla (Crystalloopsis) anadyomene ADAMS & ANGAS, PILSBRY 1894, Man. of Conch. (2), 9: 220.

Crystalloopsis anadyomene Adams & Angas, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 400.

Remarks. This species has never been figured, and all references are based upon the original description. It is apparently a well marked species and is a differentiation of the *C. aphrodite* and *C. balcombei* series. SMITH (loc. cit. p. 590) and GUPPY (loc. cit. p. 344) listed this form from Ugi. Without question they were dealing with a variant of *C. aphrodite*. A large series of this latter species from Ugi collected by W.M. MANN exhibits a wide range of variation and several approach somewhat the shape that is described for *C. anadyomene*.

References. Guadalcanal: (ADAMS & ANGAS; PILSBRY). Ugi: (SMITH; GUPPY; PILSBRY), questioned.

Crystalloopsis (Crystalloopsis) aphrodite (Pfeiffer)

Helix aphrodite PFEIFFER 1859, Proc. Zool. Soc. London, p. 26, pl. 44, fig. 2 (New Caledonia); CROSSE 1871, Jour. de Conchy., 19: 173.

Cochlostyla (Corasia) aphrodite Pfeiffer, PILSBRY 1891, Man. of Conch. (2), 7: 109, pl. 23, fig. 8-12.

Helicostyla (Crystalloopsis) aphrodite Pfeiffer, PILSBRY 1894, Man. of Conch. (2), 9: 220.

Crystalloopsis aphrodite Pfeiffer, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 400.

Remarks. The specimens described by PFEIFFER were obtained from H. CUMING and were wrongly labelled as to type locality. The genus *Crystalloopsis* does not occur outside of the Solomon Islands.

The island of San Cristobal was unquestionably the original locality, as the figure of PFEIFFER compares exactly with material from that island in the Museum of Comparative Zoology collection. This is also stated by CROSSE (loc. cit.).

Specimens from Ugi Island are on the average a little smaller and a little higher in proportion than those from San Cristobal.

Angle of spire 140°, aperture cast at an angle of 43° with a horizontal base line. Specimens examined. San Cristobal: Kira Kira. Ugi.

Crystalloopsis (Crystalloopsis) debilis Clapp

Crystalloopsis debilis CLAPP, 1923, Bull. Mus. Comp. Zool., 65: 400, text fig. 40-41 (Waiai, San Cristobal).

Remarks. This species is exceedingly close to *C. aphrodite*. The holotype and single paratype are both badly broken. It is, however, far more fragile than *C. aphrodite*. In a limited series, it is impossible to determine whether or not thinness of the shell constitutes a genetic character or whether it is only a factor contributed by the environment. There is no question but that both exist in certain groups. *Polymita picta* from nonlimestone regions of Cuba are very thin and fragile but agree in all other characters with the typical form occurring in limestone areas. On the other hand, certain races of *Liguus* from specific areas are very thin while others have a much

thickened shell. Both occur in exactly the same type of habitat, have the same food plants and exist in a limestone region.

The spire of this species forms an angle of 134° . Aperture cast at an angle of 50° with a horizontal base line (M. C. Z. 32459). These angles are slightly different from those of *C. aphrodite*.

Specimens examined. San Cristobal: Waiai.

Crystalloopsis (Crystalloopsis) psyche (Angas)

Helix (Corasia) psyche ANGAS 1869, Proc. Zool. Soc. London, p. 624, pl. 48, fig. 1 (New Georgia).

Cochlostyla (Corasia) psyche Angas, PILSBRY 1891, Man. of Conch. (2), 7: 110, pl. 23, fig. 13-14.

Helicostyla (Crystalloopsis) psyche Angas, PILSBRY 1894, Man. of Conch. (2), 9: 220.

Crystalloopsis psyche Angas, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 400.

Remarks. I have not seen this species. Judging by both description and figure, it appears to be quite distinct.

References. New Georgia (ANGAS; PILSBRY).

Crystalloopsis (Crystalloopsis) balcombei (Cox)

Helix (Corasia) balcombei COX 1873, Proc. Zool. Soc. London, p. 565, pl. 48, fig. 4 (Solomon Islands).

Cochlostyla (Corasia) balcombei COX, PILSBRY 1891, Man. of Conch. (2), 7: 111, pl. 23, fig. 15.

Helicostyla (Crystalloopsis) balcombei COX, PILSBRY 1894, Man. of Conch. (2), 9: 220.

Crystalloopsis balcombei COX, CLAPP 1923, Bull. Mus. Comp. Zool., 65: 403.

Remarks. A very distinctive species and materially different from all others in the group. It is flat with a very sharp keel. The spire forms an angle of 144° . Aperture cast at an angle of 48° with a horizontal base line (M. C. Z. 32458).

Specimens examined: Malaita: Auki; Buma.

Cristovala, new subgenus

Shell depressed-turbinata, imperforate and carinate. Columella brownish, peristome usually brownish, carina with or without brownish coloring but when colored, it is usually as an interrupted and more or less mottled band. The remaining portions of the shell white, sometimes having two shades of whitish spiral bands. A single form, *C. tricolor picta*, is ornamented with reticulated spiral bands of brown.

This subgenus differs from typical *Crystalloopsis* by having the brownish coloration and a somewhat heavier and more porcelaineous rather than glasslike structure to the shell.

The name is derived from San Cristobal.

Type species, *Crystalloopsis tricolor* Pfeiffer.

Crystallopsis (Cristovala) tricolor (Pfeiffer)

Helix tricolor PFEIFFER 1849, Proc. Zool. Soc. London, p. 129 (San Christoval); REEVE 1852, Conch. Icon., 7, pl. 81, fig. 431; PFEIFFER 1853, Mono. Heliceorum Viven., 3: 168; PFEIFFER 1853, Conchy.-Cab., 1, pt. 12, sec. 2-3, p.281, pl. 124, fig. 22-24.

Helix (Corasia) tricolor Pfeiffer, SMITH 1885, Proc. Zool. Soc. London, p. 589; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 344.

Cochlostyla (Corasia) tricolor Pfeiffer, PILSBRY 1891, Man. of Conch. (2), 7: 111, pl. 23, fig. 1-6.

Helicostyla (Crystallopsis) tricolor Pfeiffer, PILSBRY 1894, Man. of Conch. (2), 9: 220.

Crystallopsis tricolor Pfeiffer, GUDE 1907, Proc. Mala. Soc. London, 7: 234; CLAPP 1923, Bull. Mus. Comp. Zool., 65: 401, text fig. 42-44.

Remarks. A variable species, both in its shape and extent of coloring. Certain forms are devoid of brown pigmentation, having only spiral bands of two shades of white, crystalline and opaque. Others have the lip and columellar area tinged with brown. Forms from the north coast of San Cristobal have the keel area and above covered with brown flecks in addition. This is the varietal form named *picta* by SMITH.

PFEIFFER's figures of this species in the Conchy.-Cab. are slightly over-drawn and not properly colored and they indicate a depression that is much greater than actually exists.

Specimens examined. San Cristobal: Waiiai; Kira Kira; along the Koro River. Santa Ana. Ugi.

Crystallopsis tricolor santa-annae I. Rensch

(Plate 16, fig. 4)

Papuina (Crystallopsis) tricolor santa-annae I. RENSCH 1934, Sitz. Gesell. Natur. Freunde, p. 453 (Santa Ana, Solomon Islands); I. & B. Rensch 1935, Revue Suisse de Zoologie, 42: 66.

Remarks. This is a well marked subspecies, differing mainly by being a little smaller and proportionately higher. In addition, it lacks the peripheral band of color which is found in the subspecies *picta* Smith.

We include a figure of a paratype kindly sent to us by B. RENSCH, Museum of Comparative Zoology, no. 156953.

Crystallopsis tricolor picta (Smith)

Helix (Corasia) tricolor picta E.A. SMITH 1885, Proc. Zool. Soc. London, p. 590, pl. 36, fig. 3-3 a-b (north coast of San Cristobal); GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 344.

Cochlostyla (Corasia) tricolor picta Smith, PILSBRY 1891, Man. of Conch. (2), 7: 112, pl. 18, fig. 69-71.

Cochlostyla (Corasia) tricolor transenna PILSBRY 1891, Man. of Conch. (2), 7: 112, pl. 23, fig. 7, 16-18 (Solomon Islands).

Helicostyla (Crystallopsis) tricolor picta Smith, PILSBRY 1894, Man. of Conch. (2), 9: 220.

Crystallopsis tricolor picta Smith, CLAPP 1923, Bull. Mus. Compl. Zool., 65: 403.

Remarks. A color form of *C. tricolor* that possesses a reticulated color pattern of brownish markings in a spiral arrangement.

Specimens examined. San Cristobal: north coast. Bio.

***Crystallopsis (Cristovala) conica* Gude**

Crystallopsis tricolor var. *conica* GUDE 1907, Proc. Mala. Soc. London, 7: 235, pl. 21, fig. 13; CLAPP 1923, Bull. Mus. Comp. Zool., 65: 403.

Remarks. This species was considered as a variety of *C. tricolor* by GUDE, but from an abundance of material at hand there seems to be no question as to its specific rank. It is shaped differently, is far thicker and heavier and differs as well in its type of coloring. GUDE cited no locality for this species but it probably came from San Cristobal. This island can be considered the type locality.

Spire produced at an angle of 101° , aperture cast at an angle of 40° from the horizontal.

Specimens examined. San Cristobal: Mountains at 1000-2000 feet.

***Crystallopsis (Cristovala) rennellensis*, new species**

(Plate 16, fig. 2; text fig. 2, 1, text fig. 3)

Description. Shell depressed turbinata, reaching 32 mm in greater diameter, imperforate, shining and fairly solid. Color a porcelain-white and with the outer lip a dark chocolate brown. Whorls 4 to $4\frac{1}{2}$ and rather acutely carinated. Spire moderately depressed and formed at an angle of 100° . Aperture subovate and slightly constricted behind at the periphery. Palatal lip thin and reflected on its lower margin, and from the columella to near the mid base it is exceedingly broad. Parietal wall very thinly glazed. Columella short and merging into the broadened basal portion of the lip. Suture slightly indented. Sculpture consisting of very fine growth lines. Spiral sculpture of faint and exceedingly fine incised lines. Nuclear whorls entirely smooth.

Greater width	Lesser width	Height	Whorls	
32 mm	25.5 mm	23 mm	4 mm	Holotype
32 -	26 -	22.5 -	4.5 -	Paratype

Types. The holotype is in the University Zoological Museum, Copenhagen, Denmark, from station L 382, Niupani, Lake Te-Nggano, Rennell Island, Solomon Islands. Collected by the Danish Rennell Expedition, October 1951. Paratypes in the Zoological Museum are from the same locality and from station L 364, L 370,

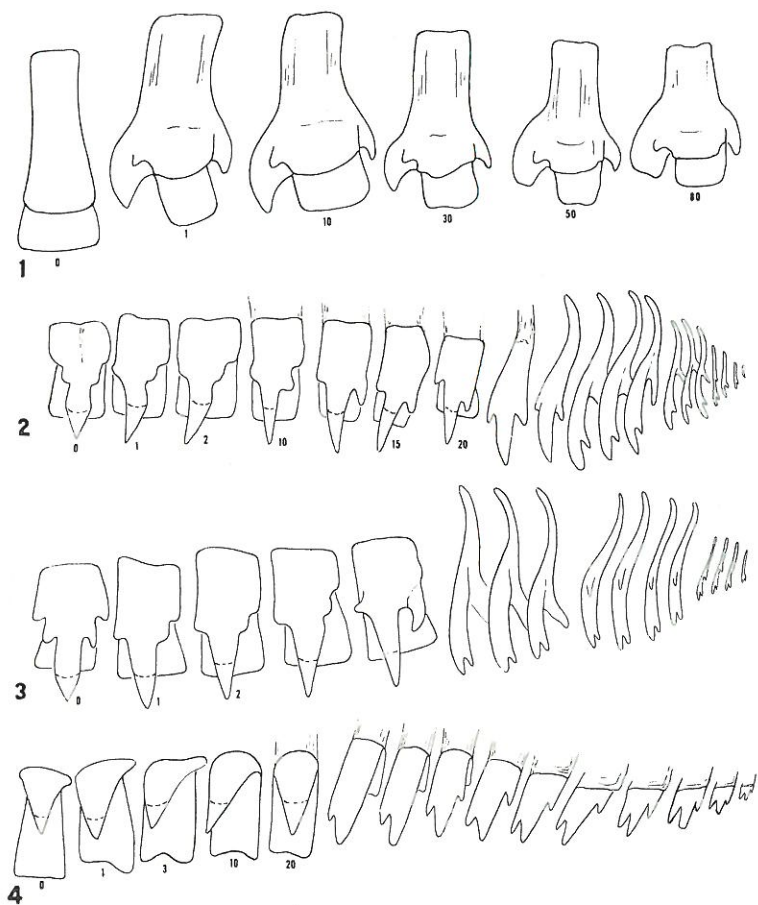


Fig. 2. Radulae.

1. *Crystallopsis rennellensis* Clench.
2. *Quirosella coultasi* Clench.
3. *Quirosella knudseni* Clench.
4. *Eustomopsis bellonensis* Clench.

Te-Avamanggu and from station L 372, Lavanggu, Rennell Island. Additional paratypes from Te-Avamanggu (no. 191379), Lavanggu (no. 191433) and from Te-Nggano (no. 191434) are in the Museum of Comparative Zoology.

Remarks. This species is exceedingly close to *Crystallopsis conica* Gude from San Cristobal. It differs from *C. conica* by having the brown coloration limited to the lip and not extending along the carina as it does in this latter species. In addition, the spiral incised lines are exceedingly fine on *rennellensis* while on *C. conica*, they are visible to the unaided eye.

Notes. The brilliant green colour of the live animal was visible through the transparent shell. The species was found exclusively on leaves of coconut palms (WOLFF).

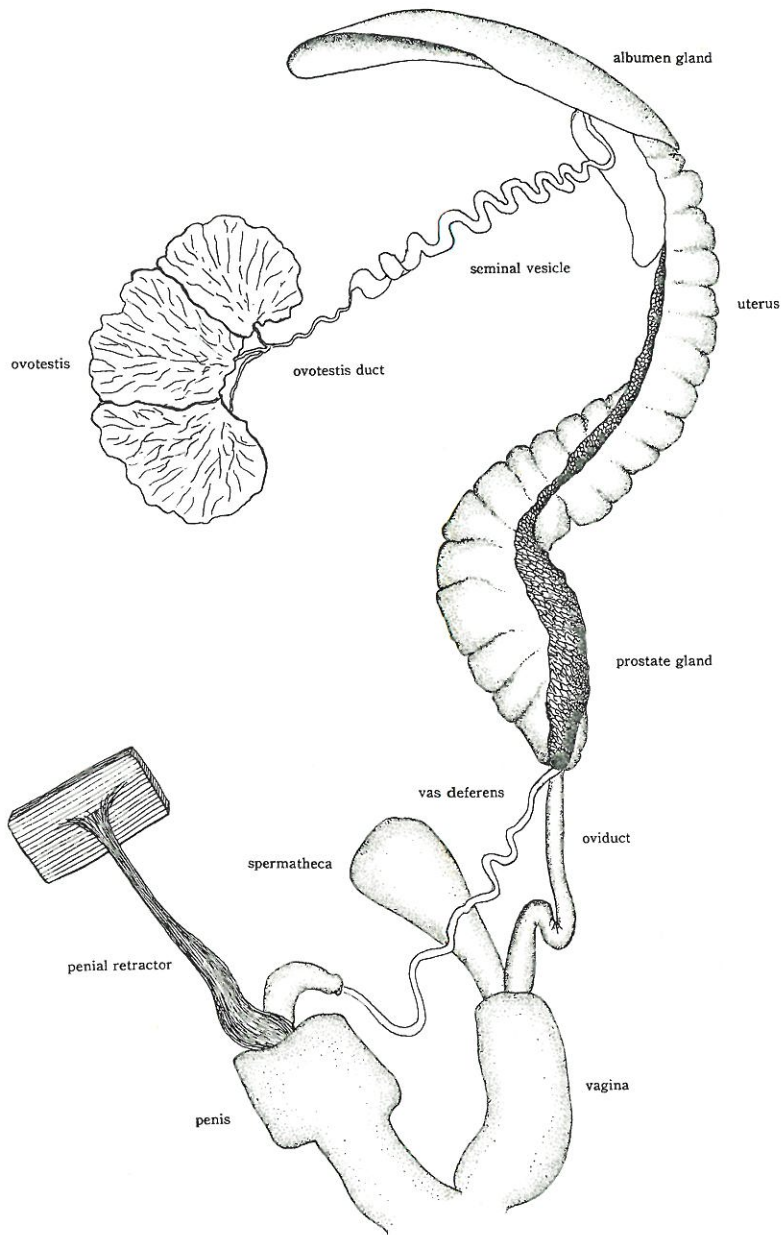


Fig. 3. Anatomy of *Crystallopsis rennellensis* Clench.

Cryptaegis Clapp

Cryptaegis CLAPP 1923, Bull. Mus. Comp. Zool., 65: 403.

Type species. *C. pilsbryi* Clapp.

Cryptaegis pilsbryi Clapp

Cryptaegis pilsbryi CLAPP 1923, Bull. Mus. Zool., 65: 403, text fig. 45-48 [soft parts only], (Wainoni Bay, San Cristobal); THIELE 1931, Handbuch der Syst. Weichtierkunde, Jena, 2: 685, fig. 738 [reproductive organs]; HOFFMANN 1931, Zeit. Wissen. Zool., 138: 122, fig. 18-30.

Remarks. This genus is considered by CLAPP as an offshoot of *Papuina* or *Papuina*-like stock, though he definitely states that the "systematic position of this genus is very uncertain". The shell, though materially different from *Papuina*, is not unlike certain species of *Crystallopsis* and in this case may mark another line of evolution from similar stock.

HOFFMANN, in a very able paper (loc. cit.), shows definitely the relationship of this genus with that of *Papuina* and considers it a rather late offshoot from that genus. HOFFMANN's material was obtained from Dr. PARAVACINI, but unfortunately no locality was assigned to the material he examined. As far as known it is limited to San Cristobal.

Specimens examined. San Cristobal: Wainoni.

Chloritis Beck

Chloritis BECK 1837, Index Molluscorum, p. 29.

Type species, *Helix unguлина* Linné, subsequent designation, von Martens 1860.

Only three of the several genera in the Chloritinae are to be found in the Solomon Islands. Various species occupy apparently all of the islands, even those of coral formation such as Bellona, Rennell, Santa Ana, Ugi and Ulawa. They are purely terrestrial forms and have apparently reached the smaller non-volcanic islands by mechanical means.

The group as a whole is probably Asian in origin and has migrated into the Solomons from Papua by way of the Bismarks. *Eustomopsis* is probably much the oldest of the three genera as it is far more widespread and retains the more characteristic depressed coil of the type genus. The genus *Sulcobasis* is more variable in sculpture and has given rise to several rather distinct types.

There is a certain amount of flexibility in all of these species as regards their size and shape. This is best exhibited by *quercina* and a form of it which has been called *hombroni*. Both may occur in the same colony, and both may show a considerable range in size. The extremes would normally be considered valid species without the intermediate forms.

The surface of the shells, in certain species with the periostracum worn away, is covered with small knobs which are the points of origin for the periostracal hairs. These knobs are analogous to the ball in a ball and socket joint. In fresh specimens the "hairs" are arranged in oblique axial rows, "staggered" or offset alternately. This feature gives rise to the so-called quincuncial pattern.

Key to the species of the Chloritinae occurring in the Solomon Islands.

1. Shell openly umbilicated, less than 50 mm in greater diameter 2
Shell narrowly umbilicated to imperforate, 50 mm or larger in greater diameter 7
2. Spire very much depressed or entirely flattened 3
Spire elevated and pointed 5
3. Shell exceeding 25 mm in diameter *S. isis*
Shell less than 25 mm in diameter 4
4. Spire slightly produced above body whorl, lip thickened, aperture nearly circular *E. bellonensis*
Spire usually never produced above body whorl, lip thin, aperture somewhat oval *E. eustoma*
5. Aperture auricular, shell about twice as wide as high *E. renschi*
Aperture reniform to ovate, nearly as wide as high 6
6. Aperture reniform, spire somewhat concave *E. hombroni*
Aperture ovate, spire not concave *E. quercina*
7. Shell rather depressed, slightly carinate, almost imperforate *Q. scorteeus*
Shell rather globose, not carinate, usually completely imperforate *Q. bougainvillei*

Eustomopsis Gude

Eustomopsis GUDE 1906, Proc. Mala. Soc. London, 7: 112.

Type species, *Helix eustoma* Pfr.

Sheba IREDALE 1941, Australian Zoologist, 10: 89.

With one or two exceptions, this genus is limited to New Guinea, the Bismarks, Louisiades, Admiralty and Solomon Islands. The shells are generally discoidal, thin, dark reddish brown in color and covered with a thin persistent periostracum with numerous fine hairs.

Eustomopsis eustoma (Pfeiffer)

(Plate 19, fig. 6-7)

Helix eustoma PFEIFFER 1856 [1857], Proc. Zool. Soc. London, p. 283, (Admiralty Islands); PFEIFFER 1856 [1857], Mala. Blätt., 3: 243; PFEIFFER 1860, Novit. Conch., 2: 148, fig. 3-5; PFEIFFER 1859, Mono Heliceorum Viven., 4: 293; *ibid.* 5: 391; DOHRN 1880, Conchy.-Cab., 1, pt. 12, sec. 4, p. 572, pl. 169, fig. 1-3; BRAZIER 1889, Jour. of Conch., 6: 76.

Helix erinaceus PFEIFFER 1861, Proc. Zool. Soc. London, p. 192, (New Georgia); PFEIFFER 1861, Novit. Conch., 2: 174, pl. 47, fig. 3-4; PFEIFFER 1868, Mono. Heliceorum Viven., 5: 387; DOHRN 1881, Conchy.-Cab., 1, pt. 12, sec. 4, p. 602, pl. 175, fig. 15-16.

Helix (Chloritis) eustoma PFEIFFER, SMITH 1885, Proc. Zool. Soc. London, p. 594; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 345; PILSBRY 1890, Man. of Conch., (2), 6: 252, pl. 50, fig. 44-46 and pl. 52, fig. 86-87.

Helix (Chloritis) erinaceus Pfeiffer, PILSBRY 1890, Man. of Conch., (2), 6: 251, pl. 52, fig. 88-89.

Chloritis (Chloritis) eustoma Pfeiffer, PILSBRY 1894, Man. of Conch., (2), 9: 120.

Chloritis (Chloritis) erinaceus Pfeiffer, PILSBRY 1894, Man. of Conch., (2), 9: 120.

Chloritis eustoma Pfeiffer, GUDE 1906, Proc. Mala. Soc. London, 7: 43; I. and B. RENSCH 1935, Revue Suisse de Zoologie 42: 71.

Chloritis (Eustomopsis) eustoma Pfeiffer, GUDE 1906, Proc. Mala. Soc. London, 7: 112; CLAPP 1923, Bull. Mus. Comp. Zool., 65: 61, text fig. 25-27, (radula and reproductive organs).

Chloritis eustoma var. *erinaceus* Pfeiffer, GUDE 1906, Proc. Mala. Soc. London, 7: 44.

Chloritis (Eustomopsis) eustoma erinaceus Pfeiffer, GUDE 1906, Proc. Mala. Soc. London, 7: 112.

Chloritis conomphala GUDE 1907, Proc. Mala. Soc. London, 7: 229, pl. 21, fig. 1a-d; CLAPP 1923, Bull. Mus. Comp. Zool., 65: 381.

Remarks. This species is well distributed throughout the Solomon Islands and possibly the Bismark Archipelago. The two names *eustoma* and *erinaceus* unquestionably refer to the same species. A large amount of material was obtained by EYERDAM from most of the localities visited by the Whitney Expedition while in the Islands. There is a fairly wide range in size and shape in each colony and different colonies vary slightly in general shell outline. SMITH (1885, p. 594) believed them to be the same, though DOHRN (1881, p. 602) and PILSBRY (1890, p. 251) held them distinct. GUDE, however, took a middle course and considered *erinaceus* to be a variety of *eustoma*. The availability of a very large series of this species for study would indicate the correctness of SMITH's opinion.

Chloritis moellendorffi (Ancey) is listed by GUDE (1906, p. 44) from Rubiana, New Georgia. This identification was probably based upon a specimen of *C. eustoma* possessing a slightly raised spire. ANCEY's species was described from Tuom Island in the Siassi Islands off northern New Guinea.

I fail to see where *C. conomphala* Gude differs from this species. The figures by GUDE and specimens in the Museum of Comparative Zoology supplied by Cox, from whom GUDE received his material, agree in all details with any usual series of this form. The collection of this group made by EYERDAM shows that there is a certain flexibility in general shape in each colony and that these varieties do not possess specific or even subspecific value.

A sinistral specimen is recorded by GUDE (1907, p. 228).

Specimens examined. Bougainville: Kieta. Choiseul: Bambatana; Choiseul Bay; Wunulata River. Florida: Tulagi. Gizo Island. Guadalcanal: Aola; Domma; Marassa; Nalimbu. Malaita: Auki; Aurola; Kirarambara; Su'u. New Georgia: Marovo Lagoon; Rubiana. Rendova Island. San Cristobal: Wai-ai; Kira Kira. Santa Ana. Shortland Island. Ugi Island. Ulawa Island. Ysabel: Fulakora.

Eustomopsis bellonensis, new species
(Plate 19, fig. 1-3; text fig. 2, 4, p. 191)

Description. Shell small, rather solid, umbilicated, depressed to subglobose. Color dark red-brown, shining and of a lighter red-brown on areas denuded of the hairy periostracum. Whorls $4\frac{1}{4}$ to $4\frac{3}{4}$, well rounded. Spire flattened. Aperture subcircular. Outer lip broad, reflected and lightly colored red to purplish brown, whitish on the columellar area. Parietal lip consisting only of a thin callus on the body whorl. Columella short, widest at its point of attachment, and partially reflected over the umbilicus. Suture sharply defined and well indented. Sculpture of very short and numerous periostracal hairs, arranged in oblique staggered rows which gives rise to the quincuncial pattern.

Bellona Island.

Length	Width	Aperture	
15 mm	19.8 mm	7 × 5 mm	Holotype
14.5 -	20.5 -	7.5 × 5.5 -	Paratype
14.9 -	19.5 -	7.2 × 5.5 -	-
14.8 -	19 -	7 × 5 -	-
13 -	18 -	7 × 5 -	-

Rennell Island

Length	Width	Aperture	
14.5 mm	20.5 mm	8.5 × 5.5 mm	Paratype
15 -	20.5 -	8 × 5.5 -	-
14.5 -	20.6 -	7.5 × 5.4 -	-

Types. The holotype is in the American Museum of Natural History, no. 66430, from Bellona Island, Solomon Islands, collected by W.J.EYERDAM in May 1930. Paratypes in the American Museum of Natural History, the Museum of Comparative Zoology from Bellona (no. 92958) and Rennell Islands, the B.P. Bishop Museum and University Zoological Museum, Copenhagen.

Remarks. This species is very probably related to *C. eustoma* (Pfr.) and evolved from that species by isolation. The two islands, Bellona and Rennell, are approximately 90 miles south of the nearest land mass of the Solomon group and are the most widely separated in the Solomon archipelago.

Specimens examined. Bellona. Rennell: L 353; L 357; L 372; L 374, Lavanggu; L 364; L 365; L 367, Te-Avamanggu. Additional specimens from two miles inland from Kanggava, Rennell Island, collected by the Crocker Expedition (B.P. Bishop Museum).

Eustomopsis quercina (Pfeiffer)

(Plate 19, fig. 8)

Helix quercina PFEIFFER 1856 [1857], Proc. Zool. Soc. London, p. 382, (Admiralty Island); PFEIFFER 1859, Novit. Conch., 1: 108, pl. 31, fig. 1-2; PFEIFFER 1859, Mono. Heliceorum Viven., 4: 247.

Hadra quercina Pfeiffer, ALBERS 1860, Die Heliceen, 2: 165.

Helix (Chloritis) quercina Pfeiffer, PILSBRY 1890, Man. of Conch. (2), 6: 257, pl. 37, fig. 48-49.

Chloritis quercina Pfeiffer, PILSBRY 1894, Man. of Conch., (2), 9: 121.

Chloritis (Sulcobasis) quercina Pfeiffer, GUDE 1906, Proc. Mala. Soc. London, 7: 114; CLAPP 1923, Bull. Mus. Comp. Zool., 65: 382.

Chloritis (Sulcobasis) camaratus DALL 1910, Field Mus. Nat. Hist. Zool., Ser. 7, p. 220, pl. 4, fig. 2-4 (Bougainville Island, Solomon Islands).

Remarks. This species is well distributed throughout the islands. It completely intergrades with the subspecies *hombroni* which is the more common of the two forms. There is a wide variation in size, not only in specimens from different localities but in material obtained in a single region.

C. camaratus Dall appears to be an absolute synonym of *C. quercina*. Comparison was made with a paratype in the United States National Museum.

Specimens examined. Bougainville: Kieta at 3000 feet. Choiseul: Bambatana; Choiseul Bay; Luti; headland of the Wurulata River. San Cristobal: mountains at 1000-2000 feet.

Eustomopsis quercina form **hombroni** (Pfeiffer)

(Plate 19, fig. 4)

Helix janellii 'Homb. & Jacq.' ROUSSEAU 1854, Voy. au Pole Sud., 5: 8, atlas, pl. 4, fig. 15-18, (Solomon Islands); non *H. janellei* LE GUILLOU 1842, Rev. Zool., p. 137¹.

Helix hombroni PFEIFFER 1856 [1857], Proc. Zool. Soc. London, p. 382, new name for *H. janellii* 'H. & J.' ROUSSEAU 1854, non *H. jannellei* LE GUILLOU 1842; PFEIFFER 1859, Novit. Conch., 1: 111, pl. 31, fig. 9-11; PFEIFFER 1859, Mono. Heliceorum Viven., 4: 262; PFEIFFER 1868, ibid. 5: 340; DOHRN 1880, Conchy.-Cab., 1, pt. 12, sec. 4, p. 583, pl. 172, fig. 1-4.

Helix fanellei, PFEIFFER 1856 [1857], [err. typ. = *janellii*], Proc. Zool. Soc. London, p. 382.

Hadra hombroni Pfeiffer, ALBERS 1860, Die Heliceen, 2: 165.

Helix (Camaena) hombroni Pfeiffer, SMITH 1885, Proc. Zool. Soc. London, p. 594; GUPPY 1887, The Solomon Islands and Their Natives, London, 1: 345.

Helix (Chloritis) quercina var. *hombroni* Pfeiffer, PILSBRY 1890, Man. of Conch., (2), 6: 258, pl. 37, fig. 45-47.

1. *Helix janellii* and *H. jannellei* are homonyms according to Article 36 in the International Rules. This justifies the use of *hombroni* for this subspecies.

Chloritis (Sulcobasis) quercina hombroni Pfeiffer, PILSBRY 1894, Man. of Conch., (2), 9: 121; GUDE 1906, Proc. Mala. Soc. London, 7: 114; CLAPP 1923, Bull. Mus. Comp. Zool., 65: 382.

Remarks. Judging from the material obtained by EYERDAM, this form is a little more abundant than *E. quercina* and is associated with it at nearly every locality. As stated by PILSBRY (1890, p. 257), it completely intergrades with the typical form.

We have retained the name *hombroni* as a form only under *quercina* because extreme specimens of both *quercina* and *hombroni* are so different as to size and to a less degree in shape.

Specimens examined. Bougainville: Kieta. Choiseul: Choiseul Bay; Luti; Bambatana. Florida. Ysabel: Fulakora.

***Eustomopsis renschi*, new species**

(Plate 19, fig. 9-10)

Description. Shell medium in size, depressed, umbilicated, rather heavy. Color in live material probably a deep red brown. Whorls 5, bluntly keeled, the keel high on each whorl producing a shoulder. Spire very depressed and slightly concave. Aperture oblique and somewhat auricular in shape. Lip strong and well reflected with a slight though very definite indentation on the outer side. Parietal wall very thinly calloused. Columella very short and curved outwardly. Sutures fine and indented. Sculpture of rather short periostracal hairs arranged in oblique rows producing the quincuncial pattern. On shell areas denuded of the periostracum, the little knobs are well pronounced. These are the insertion areas for the hairs. The remaining sculpture is of fine, somewhat oblique, growth lines. Angle of spire 144° , aperture cast at an angle of about 18° from the axis.

Length	Width	Aperture	
16.5 mm	37.4 mm	17.5 × 5.5 mm	Holotype
20.5 -	40.5 -	19 × 6.5 -	Paratype

Types. Holotype. American Museum of Natural History no. 66463, Tulagi, Florida group, Solomon Islands, W. J. EYERDAM collector, April 20, 1930. Paratype, Museum of Comparative Zoology no. 92957, same data as holotype.

Remarks. This species is very probably an extreme development of the *E. quercina hombroni* stock and has evolved its distinctive form through isolation on Florida. A parallelism of this sort is as well expressed by *C. isis* which represents the extreme flattened form of the *Sulcobasis* series.

The open umbilicus of *E. renschi* is somewhat funnel shaped and in part covered by the reflected lip at the columellar area.

Sulcobasis Tapparone Canefri

Sulcobasis TAPPARONE CANEFRI 1883, Ann. Mus. Storia Genoa, 19: 161.

Opterigone IREDALE 1941, Australian Zoologist, 10: 89.

Type species. *Helix sulcosa* PFEIFFER, subsequent designation, PILSBRY 1894.

Description. Shell generally large, rather heavy, globose to depressed and colored a dark reddish or mahogany brown. Periostracum thin and in certain forms covered with short oblique rows of hairs. Denuded areas usually showing hair scars as minute flat knobs.

This group occurs in New Guinea, the Bismark and Solomon Islands.

GUDE (1906, p. 114) placed *E. quercina* in the section (subgenus) *Sulcobasis*, but its relationships are without question with those of *Eustomopsis*. It possesses well developed and abundant periostracal hairs which are poorly developed or entirely lacking in *Sulcobasis*, and has a general structural outline far more closely allied to the latter genus.

Sulcobasis isis (Pfeiffer)

Helix isis PFEIFFER 1860, Proc. Zool. Soc. London, p. 133, pl. 50, fig. 8 (Admiralty Islands); PFEIFFER 1861, Malak. Blätt., 7: 237; PFEIFFER 1868, Mono. Heliceorum Viven., 5: 375; PFEIFFER 1885, Novit. Conch., 4: 113, pl. 126, fig. 1-5; DOHRN 1880, Conchy.-Cab., 1, pt. 12, sec. 4, p. 591, pl. 173, fig. 11-13.

Helix (Chloritis) isis Pfeiffer, PILSBRY 1890, Man. of Conch., (2), 6: 256, pl. 32, fig. 46-48 and pl. 49, fig. 16-17.

Chloritis isis Pfeiffer, PILSBRY 1894, Man. of Conch. (2), 9: 121.

Chloritis (Sulcobasis) isis Pfeiffer, GUDE 1906, Proc. Mala. Soc. London, 7: 114; OBERWIMMER 1909, Denks. K. Akad. d. wissen., 84: 516, pl. 1, fig. 2a-c; CLAPP 1923, Bull. Mus. Comp. Zool., 65: 382.

Remarks. This species is very closely related to *Sulcobasis majuscula* Pfr. from the Bismarks. The umbilical opening is about one-half closed in *isis* by the reflexed lip of the columellar area and possesses a smaller umbilicus. *S. isis* may well extend throughout the Bismark Archipelago but it does not occur in either the Solomon or the Admiralty Islands.

Quirosena Iredale

Quirosena IREDALE 1941, Australian Zoologist, 10: 89.

Type species. *Helix bougainvillei* PFEIFFER, original designation.

This genus has but two species. The shell is rather large, dark brown in color and has smooth or faintly malleated surface. It is known only from Bougainville Island.

Quirosena bougainvillei (Pfeiffer)

(Plate 19, fig. 11)

Helix bougainvillei PFEIFFER 1860, Proc. Zool. Soc. London, p. 133, pl. 50, fig. 7, (Bougainville); PFEIFFER 1861, Malak. Blätt., 7: 235; PFEIFFER 1868, Mono.

Heliceorum Viven., 5: 275; PFEIFFER 1877, *Conchy.-Cab.*, 1, pt. 12, sec. 4, p. 557, pl. 167, fig. 1-2.

Helix angasiana NEWCOMB 1860 [1862], *Ann. Lyc. Nat. Hist.*, New York, 7: 283, (non *H. angasiana* PFEIFFER 1862).

Helix (Hadra) bougainvillei Pfeiffer, PILSBRY 1890, *Man. of Conch.*, (2), 6: 128, pl. 22, fig. 55-56.

Chloritis (Sulcobasis) bougainvillei Pfeiffer, PILSBRY 1894, *Man. of Conch.*, (2), 9: 121; GUDE 1906, *Proc. Mala. Soc. London*, 7: 114; CLAPP 1923, *Bull. Mus. Comp. Zool.*, 65: 381.

Remarks. *Helix angasiana* Newc. is an absolute synonym of *Chloritis bougainvillei* (Pfr.).

Specimens examined. Bougainville: Buen; Kieta.

Quirosena scorteus Vanatta

(Plate 19, fig. 5)

Chloritis scorteus VANATTA 1930, *Proc. Acad. Nat. Sci. Philadelphia*, 82: 263, pl. 20, fig. 2-3a (Bougainville Island, Solomon Islands).

Remarks. This species differs from *Q. bougainvillei* Pfr. by being far more depressed, by being smooth and by having a wider umbilicus.

Specimens examined. Bougainville (holotype specimen Academy of Natural Sciences, Philadelphia, no. 151678).

RHYTIDIDAE

Ouagapia Crosse

Ouagapia CROSSE 1894, *Jour. de Conchy.*, 42: 203.

Type species, *Ouagapia raynali* Gassies, monotypic.

Ouagapia villandrei Gassies

Helix villandrei GASSIES 1865, *Jour. de Conch.*, 13: 210 (New Caledonia); CROSSE 1871, *Jour. de Conchy.*, 19: 174.

Helix (Rhytida) boydi ANGAS 1869, *Proc. Zool. Soc. London*, p. 626, pl. 48, fig. 8.

Helix (Rhytida) villandrei Gassies, J. BRAZIER 1872, *Proc. Zool. Soc. London*, p. 805; E.A. SMITH 1885, *ibid.* p. 594; GUPPY 1887, *The Solomon Islands and Their Natives*, London, 1: 345.

Rhytida villandrei Gassies, TRYON 1885, *Man. of Conch.* (2), 1: 119, pl. 23, fig. 43-46; (as *boydii* Angas), pl. 23, fig. 47-48; CLAPP 1923, *Bull. Mus. Comp. Zool.* 65: 354.

Helix eustrophes A.D. BROWN 1870, *Jour. de Conchy.*, 18: 391; TRYON 1887, *Man. of Conch.*, (2) 3: 49.

Rhytida (Ougapia) [err. typ.] *oldroydae* VANATTA 1930, *Proc. Acad. Nat. Sci.*, Philadelphia, p. 263, pl. 20, fig. 4-4b.

Remarks. A slightly variable species, showing a little range in color pattern, though quite consistent as to general outline and other shell characters. Fig. 23 in the Man. of Conch. exhibits a wider umbilical region than exists in any material examined by me.

In this species the upper half of each whorl is strongly striated, the striations terminating abruptly at the peripheral region. The lower half of the body whorl is shining and nearly smooth, roughened only by very fine irregular growth lines. At the peripheral area and a little above, there are many fine incised oblique lines that cross the axial striations.

I fail to see differences enough to warrant the retention of *O. oldroydae* Vanatta as a valid species. It falls well within the normal range of variation as exhibited by any large series of this species. BRAZIER (1872, p. 805) placed *R. boydi* Angas in the synonymy of *O. villandrei*, as *boydi* was described prior to the knowledge that *villandrei* was a Solomon Island form. CROSSE (1871, p. 174) also placed *R. boydi* in the synonymy of *O. villandrei*. A sinistral specimen is mentioned by GUDE (1907, p. 235).

Greater diameter	Lesser diameter	Height
27 mm	24 mm	12 mm
25.5 -	22.5 -	11 -
26.5 -	23 -	12 -
25.5 -	23 -	11.5 -
24.5 -	22 -	11 -
24 -	21.5 -	11 -

Series from mountains of San Cristobal.

This species is distributed apparently throughout the Solomon group. However, the records known are still only for the extreme islands in this archipelago, Bougainville and Choiseul on the northwest and San Cristobal on the southeast. It is quite possible that this form is highly localized as to its ecological station and it has not been found on the intervening islands because of lack of collecting in suitable areas. BRAZIER (1872, p. 805) states that missionaries obtained this species in the Solomons but specimens were sent to GASSIES by these missionaries after they had reached New Caledonia, causing the error in the assignment of the type locality.

Specimens examined. Bougainville. Kieta. Choiseul: Fahro; Luti. San Cristobal: Kiva Kiva; along Kavo River; Wainoni Bay. Santa Ana.

Notes. On the ground in forests and plantations at 1800 feet in the mountains of San Cristobal (EYERDAM).

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EXPLANATION OF PLATES

Abbreviations

- AMNH – American Museum of Natural History, New York.
ANSP – Academy of Natural Sciences, Philadelphia.
MCZ – Museum of Comparative Zoology, Harvard University, Cambridge, Mass.
UZM – University Zoological Museum, Copenhagen, Denmark.

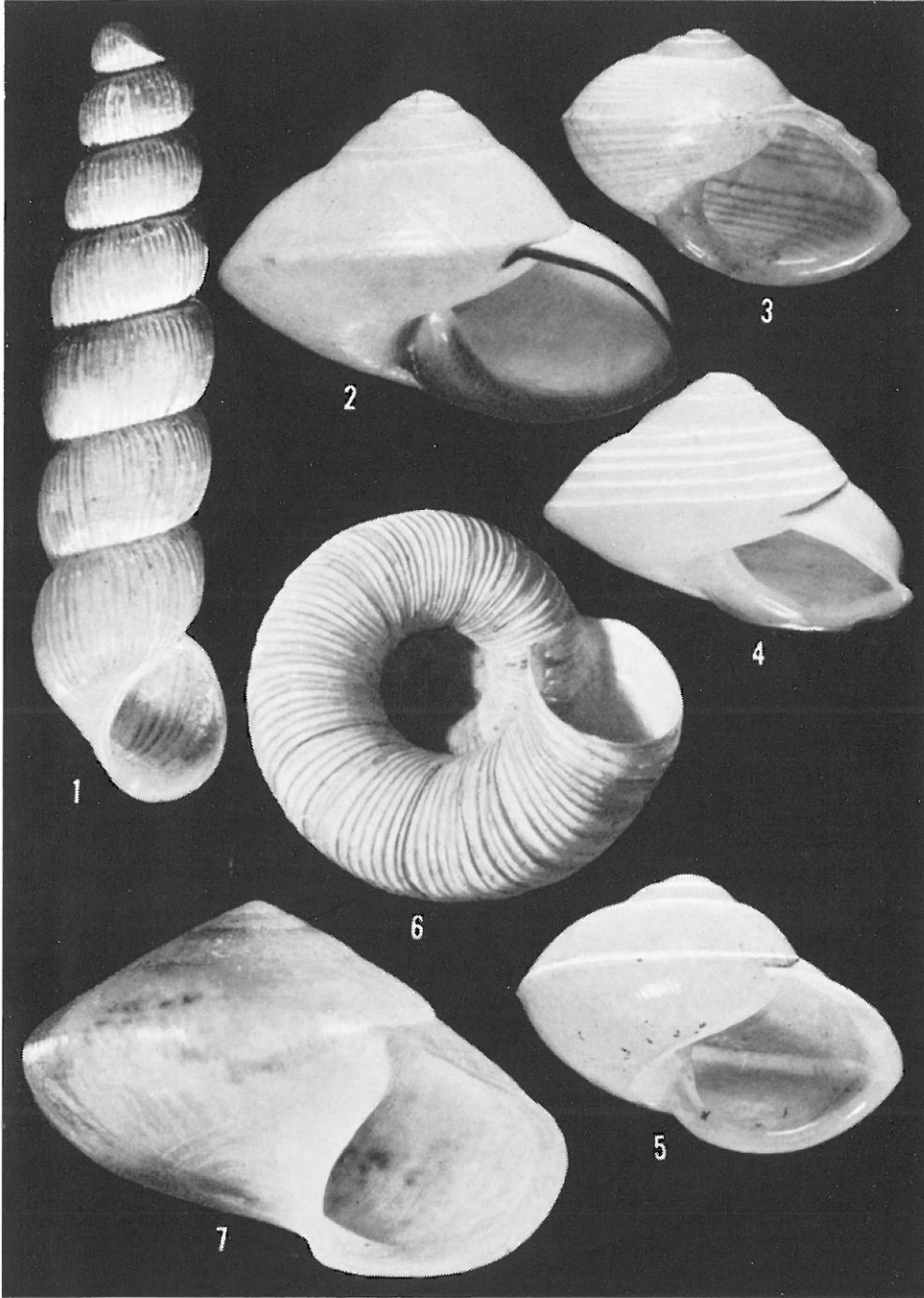


Fig. 1. *Taheittia whitneyi* Clench, Bambatana, Choiseul Id., Solomon Islands. Holotype AMNH no. 73883 (10X).

Fig. 2. *Crystalloopsis rennellensis* Clench, Rennell id., Solomon Islands. Holotype UZM (2X).

Fig. 3. *Crystalloopsis hunteri* (Cox), Solomon Islands. Cotype ANSP no. 63653 (about 2X).

Fig. 4. *Crystalloopsis tricolor santa-annae* Rensch, Santa Ana Id., Solomon Islands. Paratype MCZ no. 156953 (about 2X).

Fig. 5. *Crystalloopsis crystallina* Clench, Ulava Id., Solomon Islands. Holotype AMNH no. 66484 (2X).

Fig. 6. *Charopa hoeyeri* Clench, Lavanggu, Rennell Id., Solomon Islands. Holotype UZM (6X).

Fig. 7. *Paleohelicina mayri* Clench, Auki, Malaita Id. Solomon Islands. Holotype MCZ no. 32610 (6.3X).

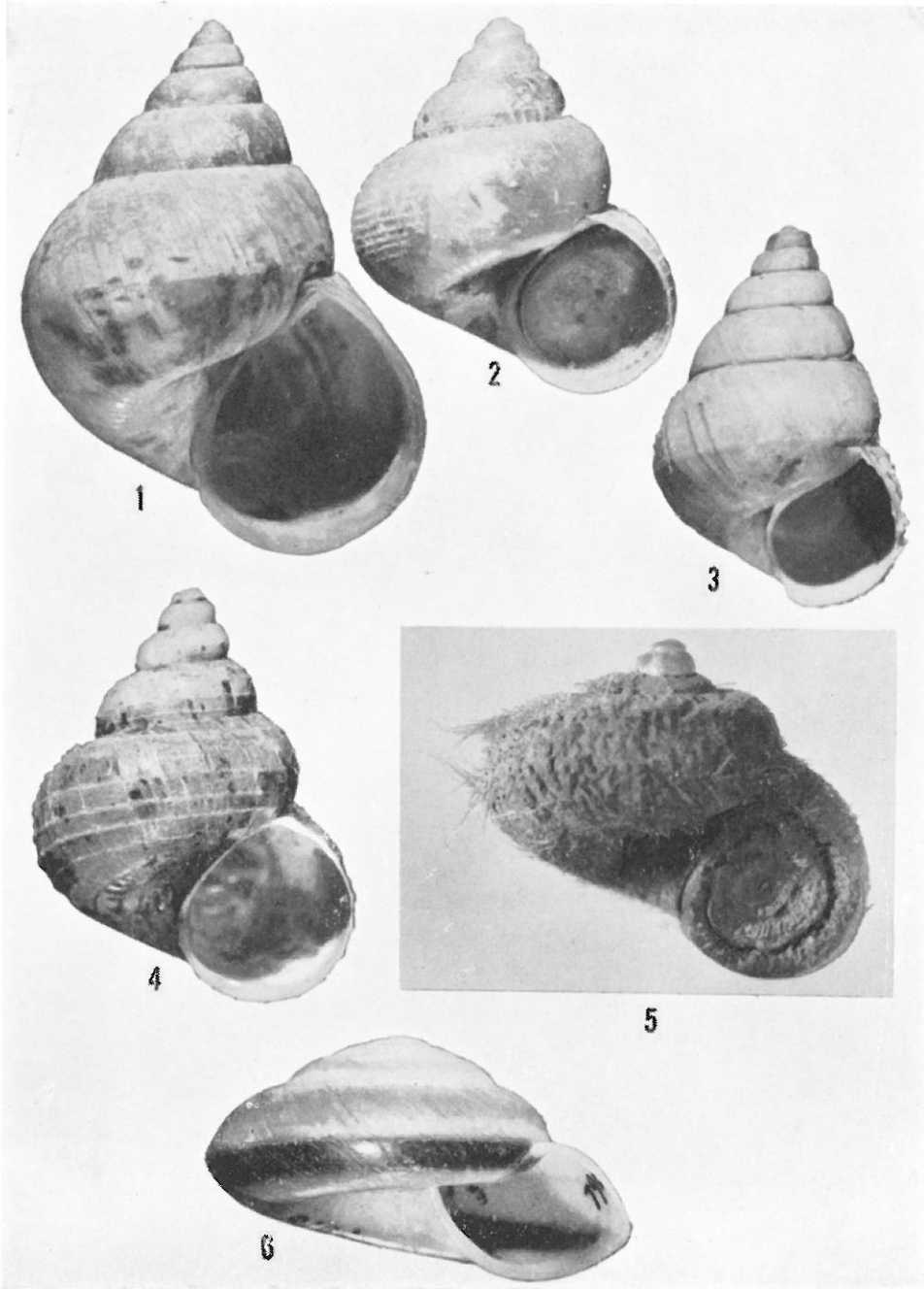


Fig. 1. *Omphalotropis nebuosal guppyi* Clench, Olimburi, Malaita Id., Solomon Islands. Holotype, AMNH no. 70794 (5.4X).

Fig. 2. *Nesopoma galathea* Clench, Su'u, Malaita Id., Solomon Islands. Holotype, AMNH no. 73884 (13X).

Fig. 3. *Omphalotropis quirosi* Clench, Lavanggu, Rennell Id., Solomon Islands. Holotype, UZM (13X)

Fig. 4. *Nesopoma eyerdami* Clench, Su'u, Malaita Id., Solomon Islands. Holotype, AMNH no. 73885 (about 11X).

Fig. 5. *Setaepoma mayri* Clench, Fulakora, Ysabel Id., Solomon Islands. Holotype, MCZ no. 36840 (9X).

Fig. 6. *Trochomorpha mcleani* Clench, Su'u, Malaita Id., Solomon Islands. Holotype, AMNH no. 79016 (2X).

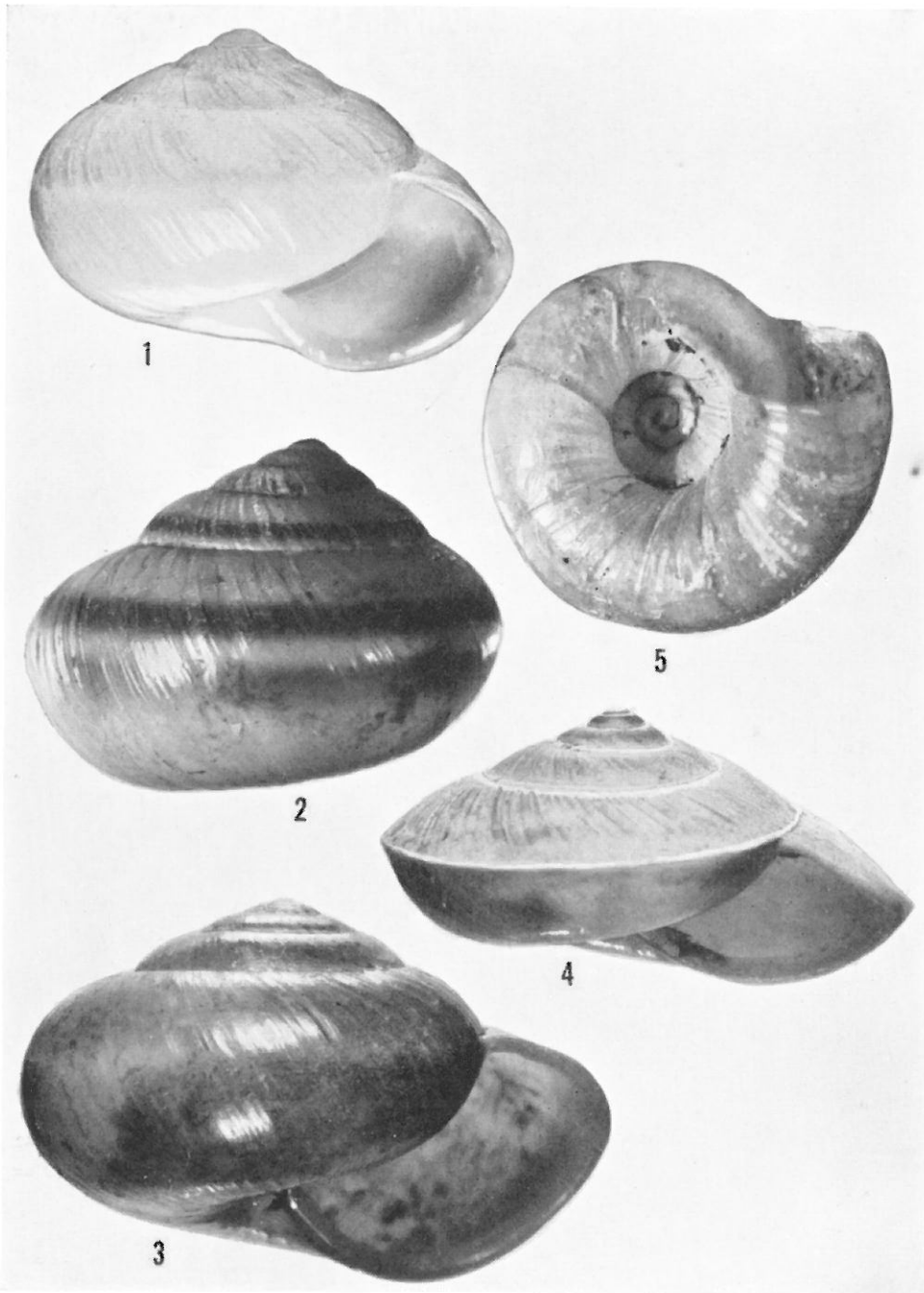


Fig. 1-2. *Quirosella coultasi* Clench, Lavanggu, Rennell Id., Solomon Islands. Paratype, MCZ no. 191450 (4.2X).

Fig. 3. *Quirosella wolffi* Clench, Te-Avamanggu, Rennell Id., Solomon Islands. Holotype, UZM (3.4X).

Fig. 4. *Quirosella knudseni* Clench, Te-Avamanggu, Rennell Id., Solomon Islands. Holotype UZM (3.6X).

Fig. 5. *Charopa insularis* Clench, Te-Avamanggu, Rennell Id., Solomon Islands. Holotype, UZM (11X).

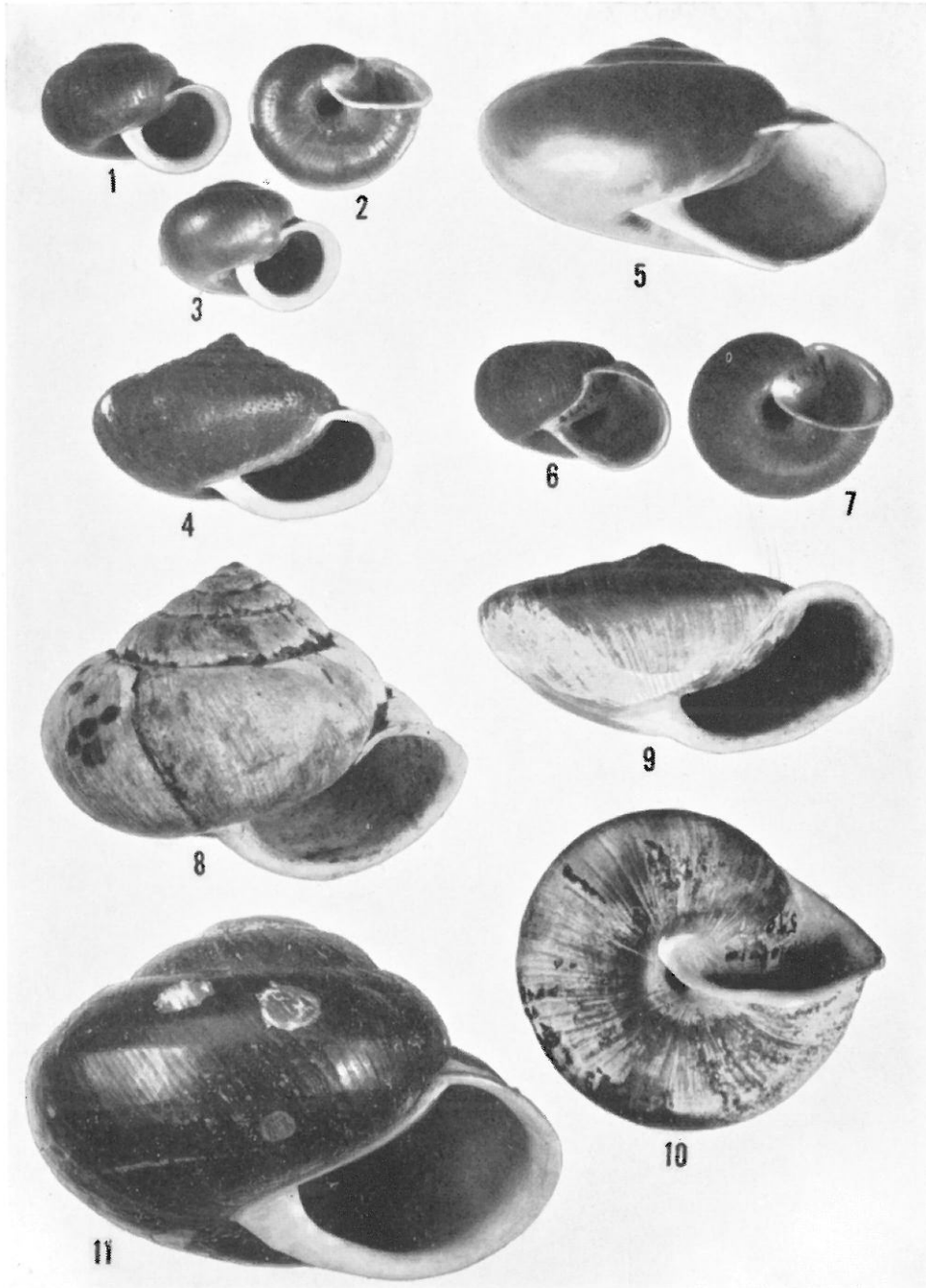


Fig. 1-3. *Eustomopsis bellonensis* Clench, Bellona Id., Solomon Islands. Holotype, (fig. 1) AMNH no. 66430 (1.2X).

Fig. 4. *Eustomopsis quercina* form *hombroni* (Pfeiffer), Fulakora, Ysabel Id., Solomon Islands. (1.5X).

Fig. 5. *Quirosena scorteus* Vanatta, Bougainville Id., Solomon Islands. Holotype, ANSP no. 151678 (nat. size).

Fig. 6-7. *Eustomopsis eustoma* (Pfeiffer), Ugi Id., Solomon Islands. (1.4X).

Fig. 8. *Eustomopsis quercina* (Pfeiffer), Bambatani, Choiseul Id., Solomon Islands. (1.3X).

Fig. 9-10. *Eustomopsis renschi* Clench, Tulagi, Florida Id., Solomon Islands. Paratype, MCZ no. 92957 (1.4X).

Fig. 11. *Quirosena bougainvillei* (Pfeiffer), Bougainville Id., Solomon Islands (1.3X).