

3+1+3, median cusp elongate, sharp (somewhat worn in figured radula, typically more than 2× length of adjacent cusps). Lateral teeth with cusp formula 2-3+1+2-3, primary cusp elongate, sharp. Inner marginal teeth with cusp formula 3-4+1+? cusps, outermost obscured in mounts. Outer marginal teeth with about 6 small, sharp cusps, outermost largest (based on 2 radulae).

Animal. Unknown.

REMARKS. Comparison of paratypes of *Eatoniella latina* with the types of *Paludestrina nigra* show them to have identical shells and we regard them as conspecific. *Eatoniella nigra* is shorter and more ovoid in shape than other dark-colored South American species and has a thicker shell. The shell of the most similar South American species, *E. picea*, is contrasted above. *Eatoniella nigra* has an operculum with similar coloration to that of *E. picea*, but in the latter species the opercular peg is much narrower.

A somewhat similar species from New Zealand, *E. olivacea*, has a more elongate, larger shell. The southern Australian *E. melanochroma* (Tate, 1899) has a very similar shell to that of *E. nigra*, although it is slightly thinner, with more convex whorls, and the radula and operculum in the two species are also similar.

Da Silva and Davis (1983) did not include this species in their review of Orbigny's species of *Paludestrina*.

The South African *Rissoa* (= *Eatoniella*) *nigra* Krauss (1848) is a secondary homonym of this species. A replacement name, *Eatoniella afronigra* n. sp. is provided, as none of the other South African taxa appear to be synonymous. This species also has a shell very similar to that of *E. nigra* but is slightly broader and usually has more convex whorls.

DISTRIBUTION. Northern Chile to Tierra del Fuego in algae and among rocks. Mainly intertidal; some specimens to 15 m. Empty shells to 50 m. Common.

Eatoniella (Eatoniella) castanea n. sp.

Figures 9D, 11F, H, 12A

ETYMOLOGY. Castanea—Latin. Chestnut color (brown). Refers to the shell color.

MATERIAL EXAMINED. Types. Holotype, LACM 2664, 34 paratypes, LACM 2665; 5 paratypes, AMS C.167418. 31B 71-277. NW arm Bahía York, Isla de los Estados, Tierra del Fuego, Argentina. 54°47.15'S, 64°17.9'W, intertidal rocks, Sta. 71-2-22, USARP-SOSCR/V *Hero* Cr.712, 5 May 1971.

DIAGNOSIS. Shell (Fig. 11F, H). Minute (maximum length 1.7 mm), ovoid, moderately thin, with 2.2-3.0 teleoconch whorls. Spire with lightly convex outlines, whorls lightly convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch smooth, with faint axial growth lines and faint spirals. Protoconch smooth, of about 1.2-1.5

whorls. Aperture oval, with sharp peristome, lacking external varix. Inner lip narrow, outer lip moderately prosocline. Umbilical chink minute. Periostracum very thin, transparent. Color reddish-brown, whitish near growing edge.

Dimensions.

	SL	SW	SL/ SW	AL	SL/ AL	TW	PW	PD
Holotype	1.31	0.85	1.53	0.54	2.44	3.0	1.2	0.27
Paratypes								
Fig. 11F	1.66	1.00	1.65	0.63	2.63	2.5	1.4	0.37
	1.42	0.93	1.53	0.60	2.37	2.4	1.2	0.35
	1.37	0.91	1.51	0.60	2.33	2.4	1.3	0.35
	1.44	0.92	1.57	0.62	2.33	2.4	1.4	0.35
	1.50	0.96	1.55	0.60	2.55	2.4	1.5	0.41
	1.36	0.91	1.49	0.57	2.40	2.2	1.5	0.39
	1.18	0.96	1.43	0.56	2.12	2.2	1.3	0.33
	1.36	0.92	1.48	0.56	2.44	2.3	1.4	0.35
	1.36	0.90	1.51	0.55	2.49	2.3	1.5	0.35
	1.25	0.86	1.46	0.55	2.29	2.3	1.5	0.38

Operculum (Fig. 12A). Yellow, oval, slightly more strongly angled anteriorly than posteriorly. Peg moderately stout, curved.

Radula (Fig. 9D). Central teeth with cusp formula 2+1+2, median cusp moderately large, trowel-shaped. Lateral teeth with cusp formula 2+1+3, primary cusp rather narrow, sharply pointed. Inner marginal teeth with cusp formula 2(?) + 1+1, primary cusp sharp, triangular. Outer marginal teeth with at least 5 small cusps, outermost largest (based on 2 radulae).

Animal. Unknown.

REMARKS. *Eatoniella castanea* is distinguished from other South American species by its small, oval, red-brown shell. Faded shells of *E. nigra* are sometimes reddish in color but are larger and broader and have more flattened whorls. *Eatoniella nigra* also differ in having a broader opercular peg and a brown operculum and in radular details. *Eatoniella subrufescens* (E.A. Smith, 1875) from Kerguelen Island is similar to *E. castanea* but has a smaller, narrower shell. *Eatoniella argentinense* Castellanos and Fernandez, 1972, from Punta Loma, Argentina, is somewhat similar as far as can be determined from the description and figures (Castellanos and Fernandez, 1972a) but is white in color.

DISTRIBUTION. Tierra del Fuego on intertidal algae. Uncommon.

Eatoniella (Eatoniella) glomerosa n. sp.

Figures 6E, 7F, H, I, 11A-E, 13A-D

ETYMOLOGY. Glomerosa—Latin. Like a ball, round. Refers to the shell shape.

MATERIAL EXAMINED. Types. Holotype, LACM 2666, 230 paratypes, LACM 2667; 8 paratypes, AMS C.167419. 32H 71-287. Puerto Cook, Isla de los Estados, Tierra del Fuego, Argentina. 54°45.25'S, 64°02.3'W, intertidal rocks, Sta. 71-2-37, USARP-SOSCR/V *Hero* Cr.712, 17 May 1971.

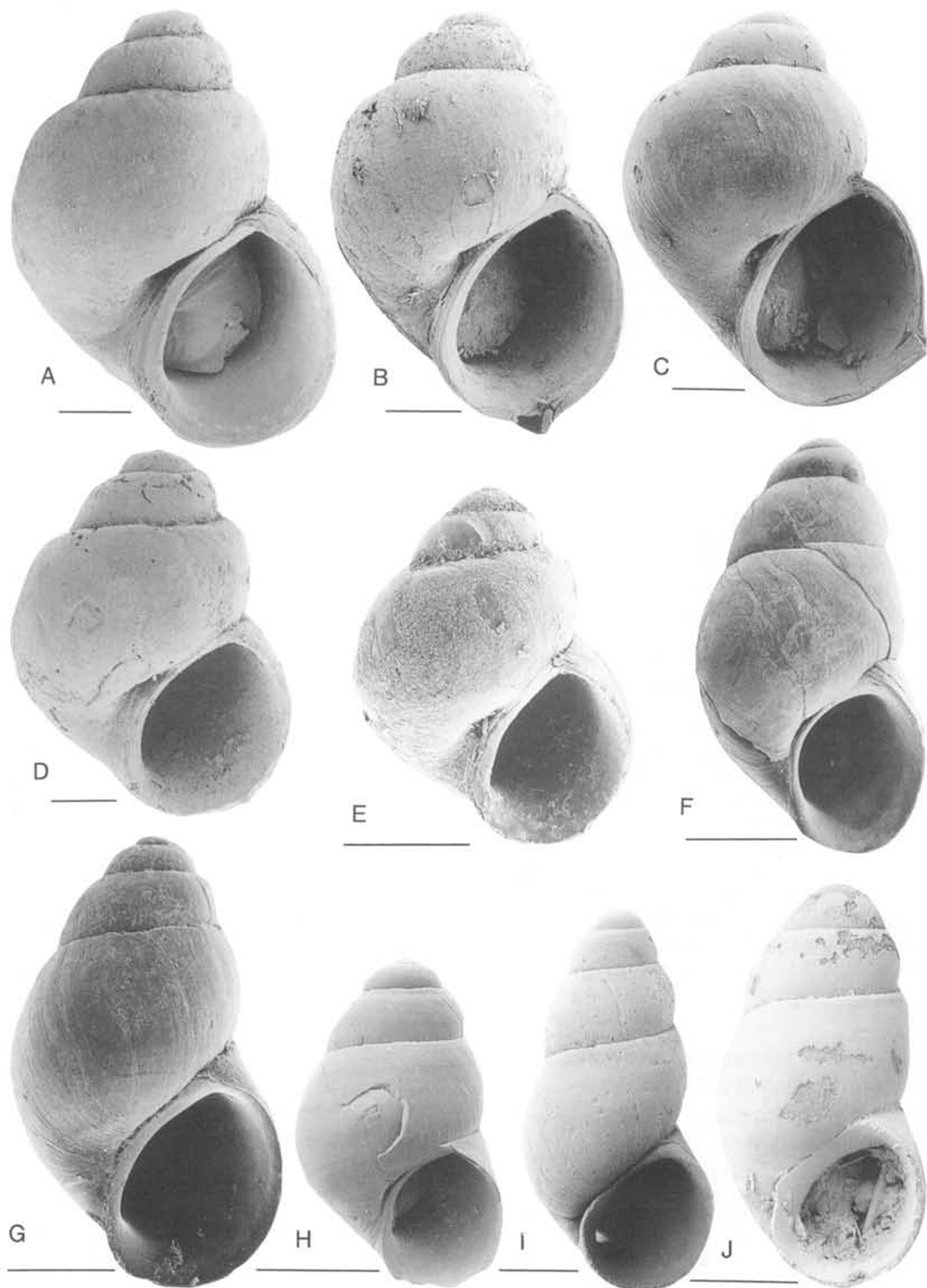


Figure 11. Shells of species of *Eatoniella*. A–E, *Eatoniella glomerosa* n. sp.; A, holotype, length 1.26 mm; B, C, E, Sta. 71–283, showing variation; B, length 1.04 mm; C, length 1.03 mm; E, length 1.48 mm; D, Sta. 73–73, length 1.16 mm. F, H, *Eatoniella castanea* n. sp.; F, paratype, length 1.66 mm; H, holotype, length 1.31 mm. G, *Eatoniella (Albosabula) mcleani* n. sp., holotype, length 0.96 mm. I, *Pupatonia magellanica* n. sp., holotype, length 1.01 mm. J, *Pupatonia* cf. *atoma* Ponder, NMNZ, 67004, 60 m, off Taieere, Dunedin, New Zealand, length 0.76 mm. Scale bars: A–D, G, I, J, 200 µm; E, H, 500 µm; F, H, 500 µm.

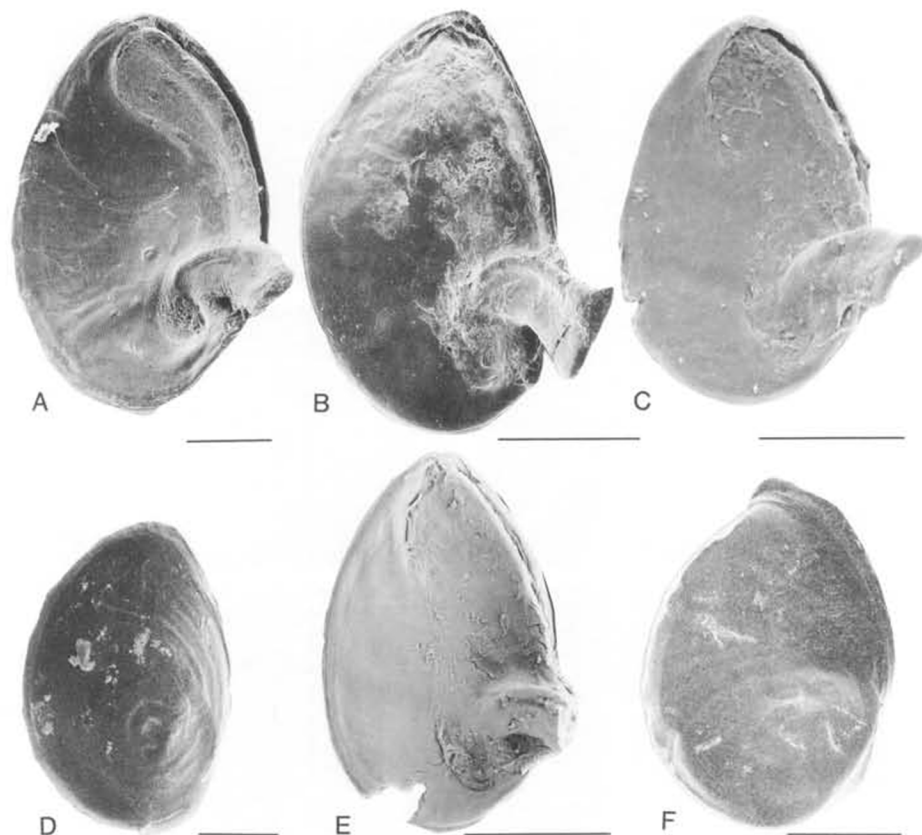


Figure 12. Opercula of Eatoniellidae and Rissoidae. All views inner side. **A**, *Eatoniella castanea* n. sp., paratype. **B**, *Eatoniella (Albosabula) mcleani* n. sp., paratype. **C**, *Pupatonia magellanica* n. sp., paratype. **D**, *Powellisetia microlirata* n. sp., paratype. **E**, *Pupatonia* cf. *atoma* Ponder, 60 m, off Taiere, Dunedin, New Zealand. **F**, "*Onoba*" *lacuniformis* n. sp., paratype. Scale bars: A-C, E, 100 μ m; D, F, 200 μ m.

Additional Material Examined. *Northern Chile*: 9 75-25 [3(d)]. 10 75-28 [11(d)]; AMS C.167459 [1(d)]. 11 75-30 [1(d)]. 13 75-37 [4(d)]. *Southern Chile*: 15 75-41 [8(d)]. 16 75-46 [1(d)]. 17 73-75 [5(d)]. 19 73-73 [many(d)]. 24 75-49 [1]. *Tierra del Fuego*: 28 71-270 [5(+2d)]; 71-271 [7]. 31A 71-345 [1(d)]. 31B 71-276 [6]; 71-277 [30]. 31C 71-281 [28]. 31D 71-283 [many]. 32A 71-273 [many]. 32B 71-295 [3(d)]. 32D 71-293 [7]. 32E 71-289 [many]; 71-290 [4(d)]. 32F 71-326 [1(d)]. 32G 71-311 [3]. 32H 71-286 [1]; 71-323 [1]. 33G 73-66 [13]. 39 71-268 [19]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. Shell (Figs. 6E, 11A-E). Minute (maximum length 1.5 mm), globular, thin, translucent, with about 1.3-3.0 teleoconch whorls. Spire with convex outlines, whorls strongly convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch smooth and rather glossy, with faint prosocline growth lines. Protoconch (Fig. 6E) smooth, of 1.2-1.7 whorls. Aperture ovoid, angled posteriorly, with sharp peristome, lacking external varix. Inner lip moderately broad, upper part detached from last whorl; outer lip strongly prosocline, more strongly convex than inner lip. Umbil-

icus moderate to distinct. Periostracum very thin, transparent. Color white.

Dimensions.

	SL	SW	SL/ SW	AL	SL/ AL	TW	PW	PD
Holotype	1.26	0.98	1.29	0.65	1.96	2.3	1.5	0.35
Paratypes	1.16	0.87	1.33	0.61	1.90	3.0	1.5	0.23
	1.13	0.77	1.47	0.50	2.26	2.9	1.4	0.23
	1.10	0.81	1.36	0.58	1.90	2.5	1.4	0.27
	1.10	0.80	1.38	0.52	2.12	2.5	1.4	0.26
	1.19	0.87	1.37	0.62	1.92	2.5	1.3	0.27
	1.23	0.99	1.24	0.62	1.98	2.5	—	—
Sta. 71-283								
Fig. 11B	1.04	0.83	1.24	0.56	1.87	1.3	1.6	0.44
Fig. 11C	1.03	0.82	1.25	0.58	1.78	1.3	1.6	0.41
Fig. 11E	1.48	1.18	1.25	0.74	2.00	—	—	—
	1.02	0.92	1.10	0.58	1.76	1.7	1.3	0.37
	1.03	0.80	1.28	0.57	1.81	1.4	1.6	0.41
	1.16	0.93	1.24	0.57	2.04	1.6	1.6	0.42
	1.03	0.84	1.21	0.57	1.81	1.4	1.4	0.38
	1.11	0.87	1.28	0.55	2.03	1.4	1.7	0.41
	1.17	0.95	1.22	0.55	2.14	1.5	1.6	0.41
	1.16	0.82	1.40	0.53	2.16	1.6	1.5	0.43

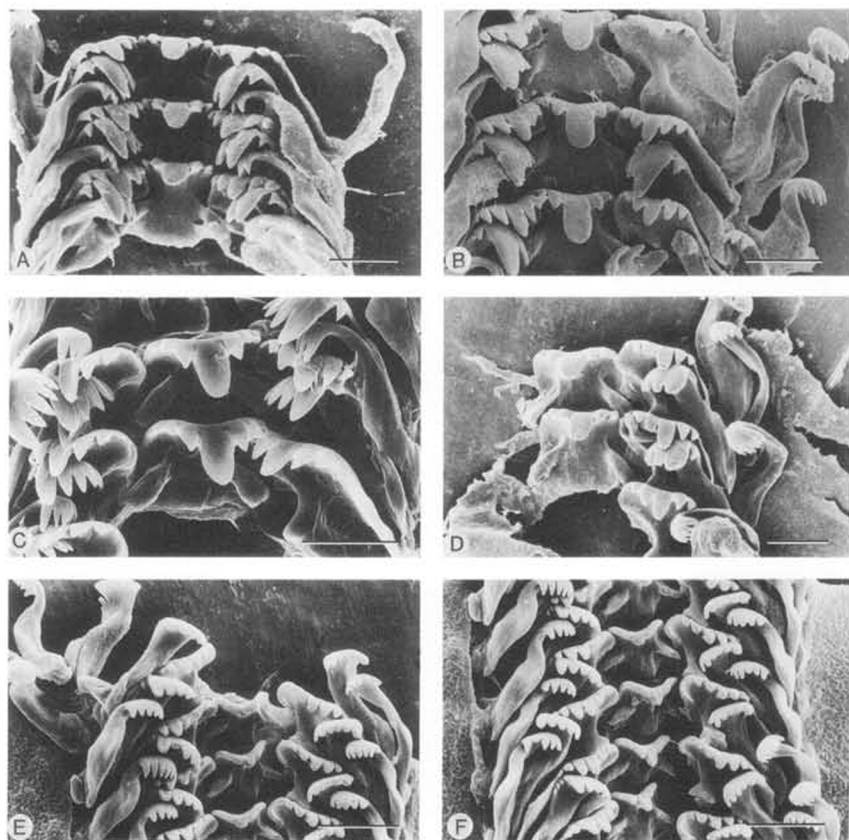


Figure 13. Radulae of *Eatoniella* species. A-D, *Eatoniella glomerosa* n. sp.; A, Sta. 71-283; B, paratype; C, Sta. 71-270; D, Sta. 71-283. E, F, *Eatoniella (Albosabula) mcleani* n. sp., paratypes. Scale bars: A-D, 10 μ m; E, F, 5 μ m.

	0.98	0.81	1.21	0.53	1.84	1.4	1.5	0.39
	1.48	1.08	1.37	0.65	2.26	—	—	—
	1.41	1.04	1.36	0.67	2.09	1.5	1.6	0.44
Sta. 73-73								
Fig. 11D	1.16	0.90	1.29	0.56	2.08	2.2	1.2	0.31
	1.07	0.86	1.23	0.53	2.00	2.2	1.2	0.27
	1.14	0.87	1.32	0.54	2.10	2.2	1.2	0.31
	1.19	0.89	1.34	0.54	2.18	2.3	1.2	0.31
	1.21	0.88	1.38	0.44	2.22	2.3	1.2	0.27
	1.20	0.93	1.29	0.56	2.15	2.3	1.3	0.30
	1.32	0.96	1.37	0.58	2.28	—	—	—
	1.23	0.92	1.37	0.59	2.09	2.3	1.3	0.31
	1.26	0.96	1.31	0.57	2.23	2.3	1.2	0.28
	1.36	1.02	1.34	0.60	2.27	2.3	1.2	0.28

Operculum (Fig. 7F, H, I). Pale yellow, oval, weakly angled posteriorly, outer edge much more convex than inner. Peg moderately narrow, curved.

Radula (Fig. 13A-D). Central teeth with cusp formula 3+1+3, median cusp large, spatulate. Lateral teeth with cusp formula 3+1+3, primary cusp small, narrow, sharp. Inner marginal teeth with cusp formula 3+1+1(-2), primary cusp large, sharp. Outer marginal teeth with about 6 small cusps, outermost largest (based on 6 radulae).

Animal. Usually unpigmented, sometimes with darker visceral coil.

REMARKS. The shell of this species is variable (see measurements) in size, shape, number of whorls, and umbilical size and may possibly represent a species complex. Specimens from the north of its range generally have a larger umbilicus. There are no other globular species of *Eatoniella* known from South America, although several species from other southern areas have similar shells. The New Zealand *E. pullmitra* Ponder, 1965, has a larger shell aperture, and the Australian *E. shepherdii* Ponder and Yoo, 1977, has a more elongate shell. The Kerguelen Island *E. hyalina* Thiele, 1912, is similar, but smaller.

A few specimens, including some in the paratype series, have narrower shells somewhat similar in shape to the New Zealand *E. aterviseralis* Ponder, 1965. This shell form, however, intergrades with the broader, typical form and agrees with it in all other respects.

DISTRIBUTION. Central Chile to Tierra del Fuego among rocks and algae. Mainly intertidal; some specimens and dead shells to 15 m. Common.

Subgenus *Albosabula* Ponder, 1965

Species in this subgenus were previously known only from New Zealand (Ponder, 1965a) and Tasmania (Ponder and Yoo, 1977a). They are distinguished by their small, conical shells that are never colored and in having the midbasal margin of the central teeth of the radula markedly produced ventrally. Ponder and Yoo (1977a) suggested that *Rissoa georgiana* Martens and Pfeffer, 1886, was possibly a member of this group, but subsequent examination of that species showed that it is a member of the rissoid genus *Onoba* (Ponder, 1983a).

Eatoniella (Albosabula) mcleani n. sp.

Figures 11G, 12B, 13E, F

ETYMOLOGY. Named for Dr. James McLean of the Natural History Museum of Los Angeles County as a small recognition of his efforts in collecting the material on which this report is largely based.

MATERIAL EXAMINED. Types. Holotype, LACM 2668, 295 paratypes, LACM 2669; 11 paratypes, AMS C.167420. 10 75-28. Los Molles, Aconcagua Prov., Chile. 32°14'S, 71°32'W, intertidal, Sta. 19, J.H. McLean, 16-18 Oct. 1975.

Additional Material Examined. *Northern Chile:* 9 75-25 [23(d)]; AMS C.167474 [3]. 11 75-30 [3(d)]; AMS C.167473 [1]. *Southern Chile:* 15 75-41 [19]. 16 75-46 [3(d)]. 19 73-73 [17(d)]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. Shell (Fig. 11G). Minute (maximum length 1.0 mm), ovate, thin, translucent, with 2.5-2.9 teleoconch whorls. Spire with lightly convex outlines, whorls lightly convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch smooth and glossy with moderately prominent prosocline growth lines. Protoconch smooth of 1.1-1.3 whorls. Aperture oval, angled posteriorly, with sharp peristome, lacking external varix. Inner lip moderately broad, outer lip slightly prosocline, slightly more convex than inner. Umbilical chink minute. Periostracum very thin, transparent. Color pale brown when fresh, empty shells often white.

Dimensions.

	SL	SW	SL/ SW	AL	SL/ AL	TW	PW	PD
Holotype	0.96	0.60	1.61	0.42	2.31	2.5	1.3	0.20
Paratypes	0.93	0.56	1.67	0.39	2.35	2.8	1.2	0.16
	0.95	0.56	1.71	0.39	2.40	2.8	1.2	0.17
	0.91	0.55	1.67	0.41	2.24	2.9	1.2	0.19
	0.99	0.61	1.63	0.41	2.45	2.9	1.2	0.18
	0.95	0.57	1.70	0.39	2.41	2.9	1.1	0.17
	0.86	0.57	1.60	0.35	2.42	2.7	1.3	0.19
	0.96	0.59	1.64	0.41	2.37	2.5	1.3	0.21
	0.99	0.62	1.60	0.43	2.33	2.5	1.3	0.21
	0.97	0.59	1.65	0.42	2.33	2.5	1.2	0.19

Operculum (Fig. 12B). Pale yellow, oval, more strongly angled posteriorly than anteriorly, and more

strongly convex on outer edge. Peg stout, slightly curved, and flared at extremity.

Radula (Fig. 13E, F). Central teeth with cusp formula 2+1+2, median cusp long, narrow, pointed; with midbasal tongue. Lateral teeth with cusp formula 2+1+2-3, all cusps pointed. Inner marginal teeth with cusp formula 4+1+2, all cusps pointed, primary cusp slightly larger than adjacent inner cusp, outer adjacent cusps much smaller. Outer marginal teeth with 5-6 small cusps. (Note: Cusps somewhat worn in illustrated specimen; the second specimen examined has sharper cusps but is a very poor mount.)

Animal. Unpigmented.

REMARKS. This is the only known species referable to the subgenus *Albosabula* outside Australasia. It can be distinguished from other South American species of *Eatoniella* by its small, oval, translucent shell.

There are three species assigned to *Albosabula* in New Zealand (Ponder, 1965a). *Eatoniella* (*A.*) *lampra* (Suter, 1908) and *E. (A.) poutama* (E. Smith, 1962) both have larger shells, whereas the shell of *E. (A.) rakiura* Ponder, 1965, is broader. The only Australian species, *E. (A.) pellucida* (Tate and May, 1900), has a slightly larger, broader shell.

DISTRIBUTION. Central and southern Chile from intertidal to 17 m. Moderately common.

Genus *Pupatonina* Ponder, 1965

This genus has previously only been recorded from southern New Zealand and the New Zealand sub-Antarctic islands (Ponder, 1965a; Powell, 1979). It was distinguished from other genera in the family by the pupiform shell. The familial position of this genus has never previously been confirmed by the examination of the radula and operculum because all known specimens were empty shells. However, recently, a single dried animal of a New Zealand species, *P. cf. atoma* Ponder, 1965, was found in the NMNZ collections. The radula and operculum were extracted from this specimen and are figured here for comparison with the South American species (Figs. 11J, 12E, 14D, F). The operculum (Fig. 12C, E) in both taxa is very similar to that of species of *Eatoniella*. The radula, for which only poor mounts were available for both species, is also generally similar to that of species of *Eatoniella* but differs in having markedly less prominent basal pegs on the central teeth as well as having smaller, more equal-sized cusps on the inner marginal teeth than seen in most species of *Eatoniella*.

Pupatonina magellanica n. sp.

Figures 11I, 12C, 14A-C

ETYMOLOGY. Named after the Magellanic Province of Chile.

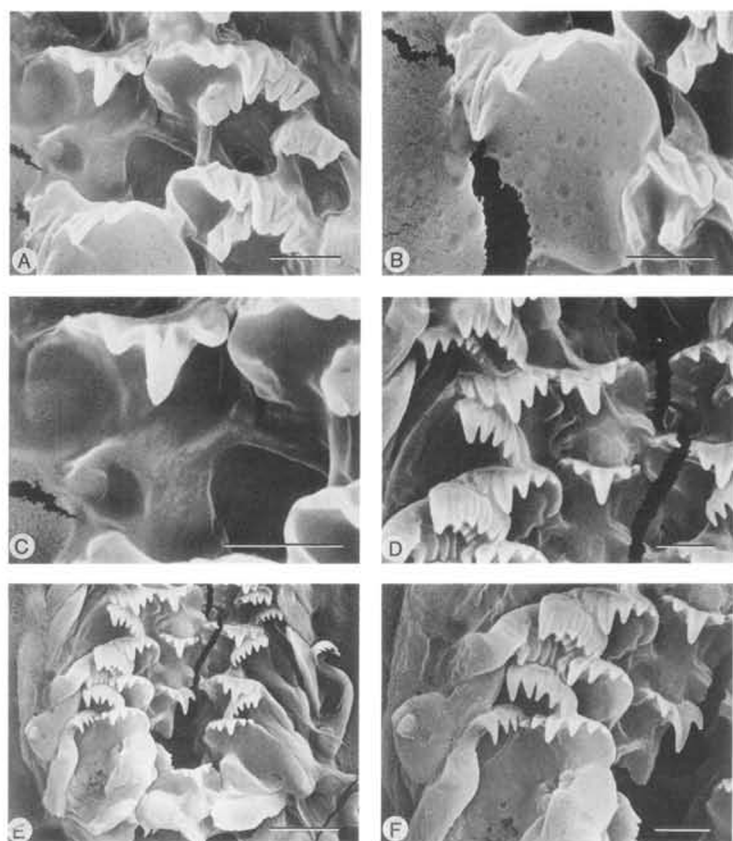


Figure 14. Radulae of *Pupatonia* species. A–C, *Pupatonia magellanica* n. sp., paratype, detail of central teeth. D–F, *Pupatonia* cf. *atoma* Ponder, 60 m, off Taiere, Dunedin, New Zealand. Scale bars: A–D, F, 2 μ m; E, 5 μ m.

MATERIAL EXAMINED. Types. Holotype, LACM 2670, 3 paratypes, LACM 2671. 32 71-273. Bahía Crossley, Isla de los Estados, Tierra del Fuego, Argentina. 54°46.2'S, 64°42.7'W, intertidal, rocks and mussel beds, Sta. 71-2-16, USARP-SOSC-R/V *Hero* Cr.712, 27 Apr. 1971. 5 paratypes, LACM, 2, AMS C.167421. 17 73-75. Isla Westhoff, Chiloé Prov., Chile. 43°54'S, 73°43.5'W, 23 m, P. Dayton (R/V *Hero*), 25 May 1973.

Additional Material Examined. *Northern Chile:* 9 75-25 [1(d)]. *Southern Chile:* 14 75-43 [6(d)]. 19 73-73 [2(d)]. 22B USNM E 958 [5(d)]. *Tierra del Fuego:* 28 71-270 [1(d)]. 33D 71-352 [3(d)]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. Shell (Fig. 111). Minute (maximum length 1.1 mm), cylindrical-pupoid, thin, translucent, with 2.6–3.1 teleoconch whorls. Whorls strongly convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch smooth and glossy with faint growth lines. Protoconch of 1.3–1.5 whorls, apparently smooth (eroded in available material). Aperture oval, protruding, with sharp peristome, lacking external varix. Inner lip moderately broad and separated from last whorl, outer lip orthocline. Umbilical chink absent. Periostracum very thin, transparent. Color white.

Dimensions.

	SL	SW	SL/ SW	AL	SL/ AL	TW	PW	PD
Holotype	1.01	0.53	1.91	0.36	2.84	2.8	1.5	0.17
Paratypes	0.99	0.51	1.94	0.35	2.84	2.7	1.3	0.17
	0.91	0.49	1.86	0.33	2.76	2.8	1.4	0.18
Sta. 75-43	0.98	0.51	1.92	0.36	2.69	3.0	1.4	0.16
	0.91	0.48	1.88	0.33	2.77	3.1	1.5	0.17
	1.05	0.57	1.85	0.37	2.83	3.0	1.4	0.17
	0.91	0.50	1.83	0.32	2.83	2.6	1.4	0.17

Operculum (Fig. 12C). Oval, angled posteriorly, and rounded anteriorly. Inner and outer edges equally convex. Peg stout, curved.

Radula (Fig. 14A–C). Central teeth with cusp formula 2+1+2, median cusp pointed. Lateral teeth with cusp formula 2+1+3, primary cusp pointed. Inner marginal teeth with 5–6 cusps about equal in size. Outer marginal teeth with about 4 cusps. Teeth apparently rather soft, causing cusps to fold (based on 1 specimen).

Animal. Unpigmented.

REMARKS. The shape of the shell of species of *Pupatonia* is distinctive. Only four species have been assigned to this genus, all from New Zealand. Of these, *P. magellanica* is most similar in shape

to *P. minutula* (Powell, 1933), which differs in its slightly larger shell and in having weak spiral sculpture. *Pupatonia gracilispira* (Powell, 1933) is about the same size as the new species but is smooth and has a narrower spire.

DISTRIBUTION. Central Chile to Tierra del Fuego; live-collected specimens all intertidal. Shells found to 100 m. Uncommon.

Family CINGULOPSIDAE

Members of this family have trochiform to elongate-conic shells that, like the other members of the superfamily, have an inner "chitinous" layer (Ponder, 1988). Like eatoniellids, they have a pegged operculum and males are aphyllate but differ in radular characters and, markedly, in anatomical details. Notable differences include the lack of a style sac in the stomach and closed pallial genital ducts. The operculum of cingulopsids never has an opaque muscle insertion area. The cingulopsid genera have been reviewed by Ponder and Yoo (1980), with some modifications by Ponder (1983a).

Genus *Skenella* Pfeffer, 1886

This genus was included in the Eatoniellidae by Ponder (1965a) and Ponder and Yoo (1977a) but was transferred to the Cingulopsidae by Ponder (1983a) following examination of topotype material of the type species. It is distinguished from the other genera included in the family by the radula having simple central teeth, the operculum having a small peg and lacking a ridge on the inner surface, and the columella of the shell having a weak bulge.

Skenella hallae n. sp.

Figure 15A, F

ETYMOLOGY. Named for Jane Hall, who was initially involved with this project, taking many of the SEM photographs and measuring many of the specimens.

MATERIAL EXAMINED. Types. Holotype, LACM 2672, 8 paratypes, LACM 2673, 1 paratype, AMS C.167422. 25 73-69. Punta Valparaíso, Canal Cockburn, Magallanes Prov., Chile. 54°22.2'S, 71°21.7'W, 17 m, P. Dayton (R/V *Hero*), 17 May 1973.

Additional Material Examined. *Tierra del Fuego*: LACM 33M 71-263 [16(d)].

DIAGNOSIS. Shell (Fig. 15A). Minute (maximum length 1.2 mm), ovate, moderately thick, with 2.3-3.0 teleoconch whorls. Spire with convex outlines, whorls moderately convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch smooth except for faint growth lines. Protoconch apparently smooth, of 1.0-1.2 whorls. Aperture oval, weakly angled posteriorly, with sharp peristome. Inner lip moderately broad with an indistinct swelling on columella, outer lip moderately to strongly prosocline. Umbilical chink minute. Color reddish-brown.

Dimensions.

	SL	SW	SL/ SW	AL	SL/ AL	TW	PW	PD
Holotype	0.88	0.64	1.37	0.39	3.28	2.3	1.2	0.15
Paratypes	0.96	0.73	1.31	0.43	2.22	2.5	1.0	0.14
	0.98	0.71	1.38	0.43	2.27	2.5	1.0	0.14
	0.97	0.71	1.36	0.44	2.19	2.8	1.1	0.13
	0.96	0.72	1.33	0.43	2.22	2.5	1.1	0.13
	1.24	0.81	1.53	0.49	2.50	3.0	1.0	0.17
	0.97	0.73	1.32	0.43	2.25	2.7	1.2	0.14
	0.97	0.73	1.32	0.43	2.25	2.8	1.2	0.14
	1.01	0.74	1.36	0.45	2.24	2.3	1.2	0.15
	1.02	0.73	1.40	0.43	2.37	2.8	1.2	0.15

Operculum (Fig. 15F). Pale yellow, oval, anterior and posterior ends moderately angled, inner edge weakly angled. Peg short, narrow, almost straight.

Radula. Present but too poorly prepared to describe from available material.

Animal. Unknown.

REMARKS. This is the only known South American *Skenella* and can be distinguished from other rissoiform taxa with similar shells by the small swelling on the columella. The shell is most similar to *Eatoniella castanea* but is smaller and narrower.

DISTRIBUTION. Southern Chile and Tierra del Fuego; living specimens collected from 17 m; empty shells from 30 m. Uncommon.

Genus *Eatonina* Thiele, 1912

In this genus the columella of the shell is simple, the operculum has a large peg and a heavy ridge on its inner surface, and the central radular teeth usually have cusps.

Subgenus *Mistostigma* Berry, 1947

Only two species are known from this subgenus, the type species from California (*E. (M.) albida* Carpenter, 1864) and the one described below. Ponder and Yoo (1980) described the radula and operculum of the type species. The subgenus is distinguished by members of the typical subgenus on radular details (Ponder and Yoo, 1980).

Eatonina (Mistostigma) fusca (Orbigny, 1840)

Figures 10C, 15B, E

Paludestrina fusca Orbigny, 1840: 387, pl. 75, figs. 13-15 (2 syntypes, BMNH 1854.12.4.348; Arica, Tarapacá Prov., Chile). Orbigny, 1854: 31.

Eatonina (Saginus) atacamae Marinicovich, 1973: 27, figs. 52, 59, 60 (Holotype, LACM 1589, many paratypes, LACM 1590; 20 paratypes, AMS C.162624).

Eatonina (Mistostigma) atacamae: Ponder and Yoo, 1980: 32, fig. 14h, i.

MATERIAL EXAMINED. Types. Syntypes of *P. fusca*; paratypes of *E. atacamae* [20].

Additional Material Examined. *Northern Chile*: 6A 64-16 [many SEM]; 75-12 [4(d)]; AMS C.167472 [1(d)].

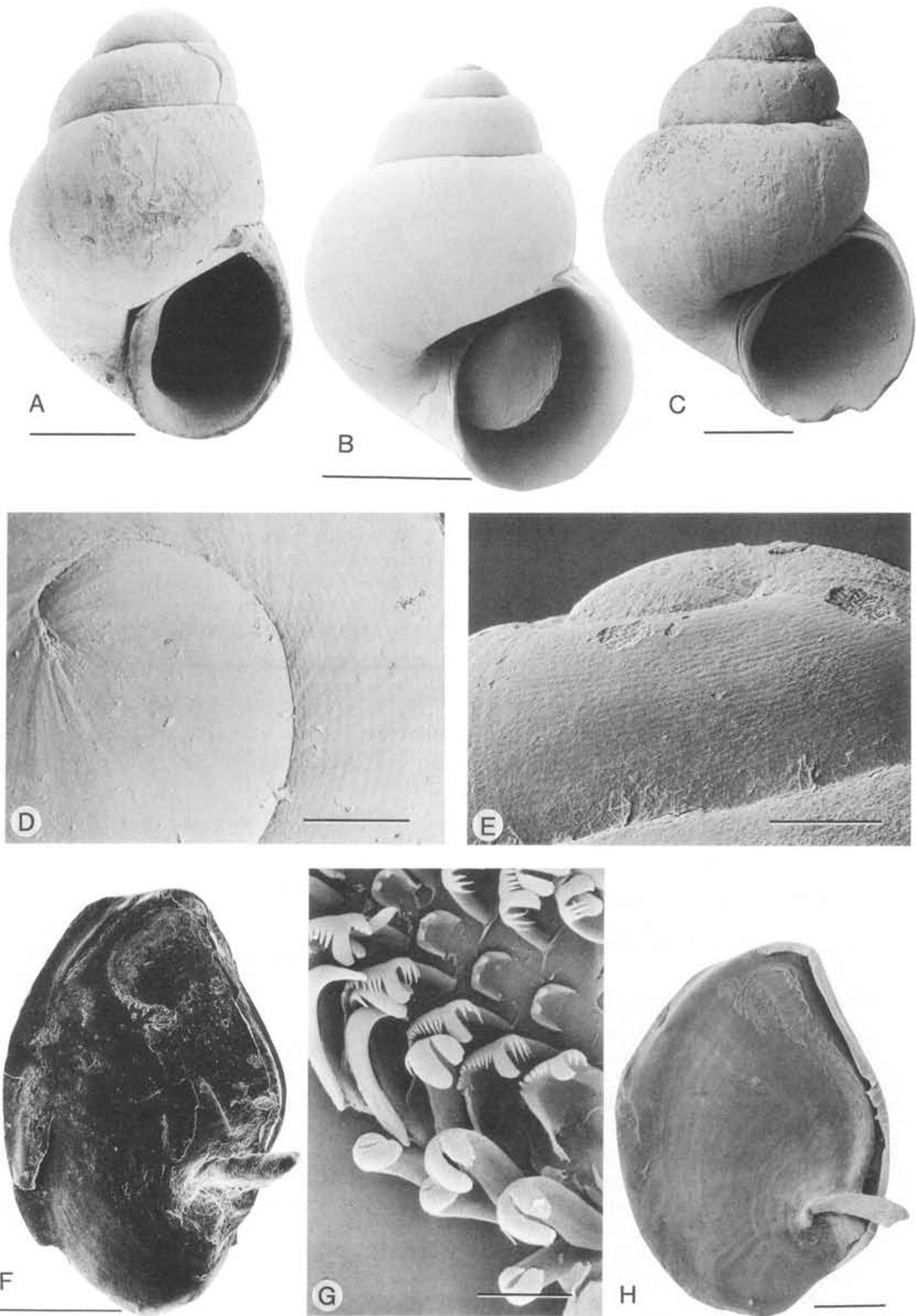


Figure 15. Shells, radulae, and opercula of Cingulopsidae. **A, F**, *Skenella hallae* n. sp.; **A**, holotype, shell, length, 0.88 mm; **F**, paratype, operculum, inner side. **B, E**, *Eatonina fusca* (Orbigny) Sta. 64-16; **B**, shell, length, 1.45 mm; **E**, paratype, Iquique, Chile, lateral view of protoconch. **C, D, G, H**, *Skenella wareni* n. sp.; **C**, holotype, shell, length 1.64 mm; **D, G, H**, paratypes; **D**, protoconch microsculpture; **G**, radula; **H**, operculum, inner side. Scale bars: **A**, 200 μm ; **B, C**, 500 μm ; **D, E**, 50 μm ; **F, H**, 100 μm .

6B 75-10 [many]; AMS C.167469 [3(+11d)]. **7** 75-21 [9]. **8A** 75-17 [many]; AMS C.167468 [3(+13d)]. **8B** 75-19 [3(d)]; AMS C.167471 [1]. **8C** 75-15 [3(d)]; 75-20 [8]; AMS C.167470 [1]. **9** 75-25 [1(d)]. **10** 75-28 [2]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. Shell (Figs. 10C, 15B, E). Minute (maximum length 1.8 mm), ovate-conic, moderately thin, opaque, with 2.8–3.3 teleoconch whorls. Spire with lightly convex outlines, whorls moderately to strongly convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch smooth with faint prosocline growth lines and extremely fine spiral striae. Protoconch (Fig. 15E) with close, fine spiral grooves, of about 1.3–1.4 whorls. Periostracum thin, transparent. Aperture oval to almost round, very weakly angled posteriorly, with sharp peristome. Inner lip narrow, detached from parietal wall; outer lip strongly prosocline. Umbilicus distinct. Color typically reddish-brown, occasionally pale or white.

Dimensions.

	SL	SW	SL/ SW	AL	SL/ AL	TW	PW	PD
Figured syntype (Fig. 10C)	1.25	1.10	1.14	—	—	—	—	—
Paratypes of	1.52	1.21	1.25	0.73	2.07	3.3	1.4	0.24
<i>E. atacamae</i>	1.38	1.07	1.28	0.68	2.04	3.1	1.4	0.22
	1.17	1.02	1.15	0.66	1.77	2.8	1.3	0.25
Sta. 64-16								
Fig. 15B	1.45	1.13	1.29	0.73	1.98	3.0	1.3	0.21
Sta. 75-10*	1.57	1.20	1.30	0.72	2.18	—	—	—
	1.61	1.24	1.30	0.76	2.11	—	—	—
	1.48	1.26	1.18	0.70	2.12	—	—	—
	1.54	1.13	1.36	0.70	2.20	—	—	—
	1.75	1.21	1.44	0.74	2.36	—	—	—
	1.52	1.19	1.27	0.69	2.20	—	—	—
	1.56	1.23	1.27	0.74	2.10	—	—	—
	1.54	1.16	1.32	0.77	1.99	—	—	—
	1.48	1.11	1.34	0.71	2.09	—	—	—
	1.62	1.19	1.36	0.75	2.16	—	—	—

* Protoconch and upper whorls of shells from this station badly eroded.

Operculum. Yellow, oval to rectangular. Peg broad and short with thickened ridge running from it to opposite end of operculum (figured by Marinovich, 1973: fig. 60).

Radula. Central teeth with dorsal edge with 3 rudimentary cusps; face of teeth with 4 prominent cusps. Lateral teeth with 4 large, triangular cusps, outermost smallest. Inner marginal teeth with 4 cusps, third largest, forth (outermost) smallest. Outer marginal teeth very short, with 3 cusps (figured by Marinovich, 1973: fig. 59, and Ponder and Yoo, 1980: fig. 14h, i).

Animal. Unknown.

REMARKS. This species is much larger and more globular than *Skenella hallae* and lacks the bulge on the columella. Shell shape is somewhat similar to that of *Eatoniella glomerosa* but is immediately distinguished by its red-brown color.

DISTRIBUTION. Northern and central Chile;

mainly intertidal, occasional animals and empty shells to 30 m. Common.

Superfamily RISSOIDEA

(=Truncatelloidea,
ICZN Opin. 1664)

Family RISSOIDAE

This family is distinguished from the foregoing by the shell lacking an inner “chitinous” layer, the males are phallate, and there are also many other anatomical differences (see Ponder, 1985a, 1988). Some rissoid genera have a peg on the inner side of the operculum, but this is not the case in any of the genera covered below. The generic classification adopted here follows Ponder (1985a).

Genus *Pusillina*
Monterosato, 1884

This genus is similar to *Rissoa* in anatomy and shell morphology, differing mainly in details of anatomy, notably the possession of a pallial prostate gland.

Subgenus *Haurakia* Iredale, 1915

Members of this subgenus usually have an anterior excavation of the anterior part of the aperture and the radula has a tongue-like midventral edge on the central teeth. Species of *Pusillina* (*Haurakia*) were known from all of the southern continents and New Zealand except South America (Ponder, 1985a). The species described below is tentatively assigned to *Pusillina* (*Haurakia*) pending examination of the animal. No species in this group were recorded from the Antarctic-sub-Antarctic by Ponder (1983a), although some are known from the New Zealand sub-Antarctic islands (Powell, 1979).

Pusillina (*Haurakia*) *averni* n. sp.

Figure 16A, B

ETYMOLOGY. Named for Geoff Avern, who prepared, mounted, and photographed with the SEM some of the material used in this paper.

MATERIAL EXAMINED. Types. Holotype, LACM 2674, 5 paratypes, LACM 2675; 1 paratype, AMS C.167455. **30E** 71-339. NW arm Bahía York, Isla de los Estados, Tierra del Fuego, Argentina. 54°47.2'S, 64°18.4'W, 38 m, Sta. 891, USARP-SOSC-R/V *Hero* Cr.715, 1 Nov. 1971.

Additional Material Examined. *Southern Chile:* 25 73-69 [1(d)]. *Tierra del Fuego:* **30H** 71-332 [1(d)]. **33A** USNM H 656 [2(d)]. **33E** 71-351 [2(d)]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. Shell (Fig. 16A, B). Small (maximum length 2.3 mm), elongate-conic, thin, translucent when fresh; with 2.7–3.2 teleoconch whorls. Spire with lightly convex to straight outlines, whorls moderately convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch with about 6–20 fine, spiral striae on penultimate whorl

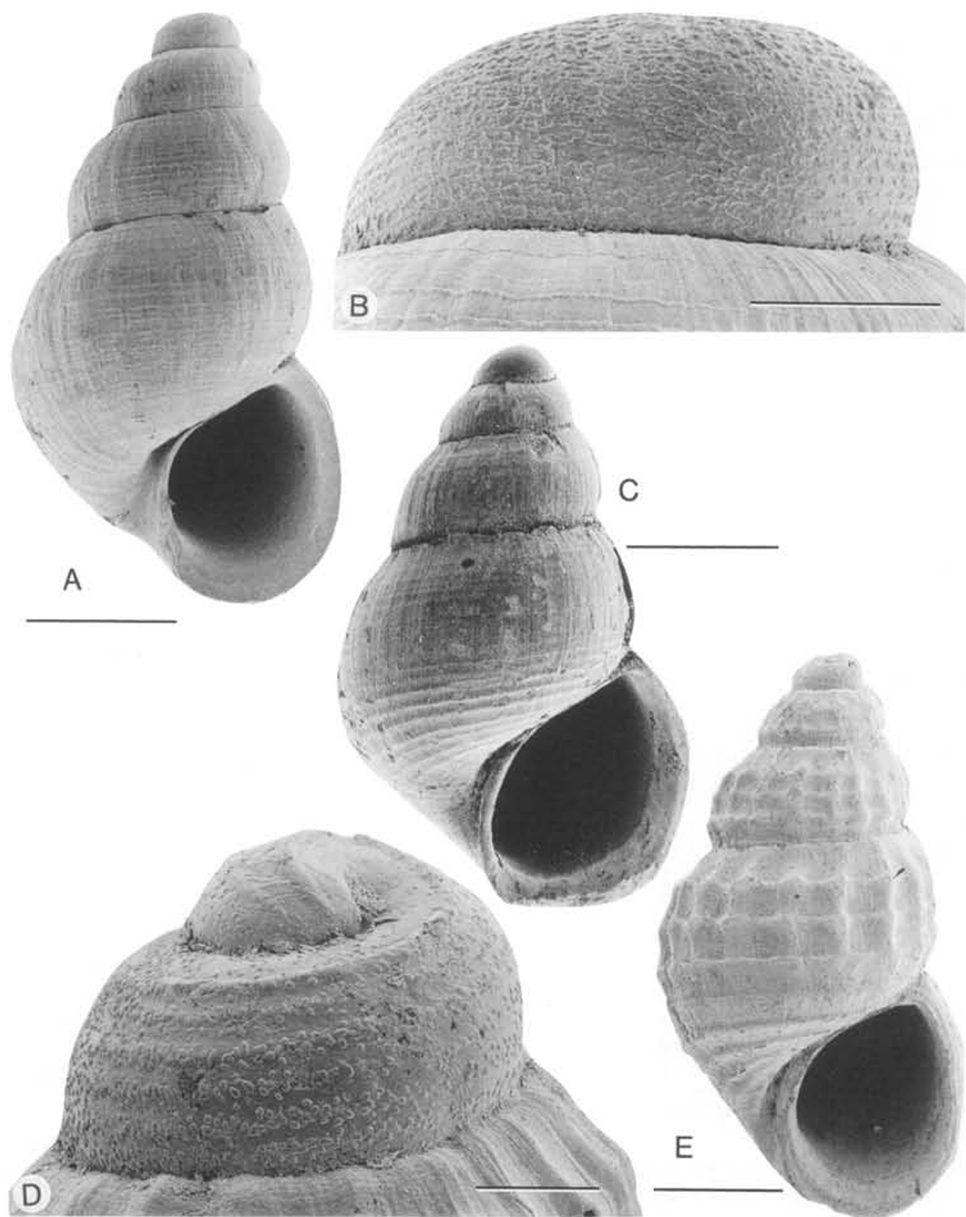


Figure 16. Shells and protoconchs of species of *Manzonina* and *Pusillina*. A, B, *Pusillina (Haurakia) averni* n. sp., holotype; A, shell, length 2.05 mm; B, lateral view of protoconch. C, *Pusillina (Haurakia)* cf. *averni*, Sta. 71-344, shell, length, 2.13 mm. D, E, *Manzonina (Alvinia) limensis* n. sp., holotype; E, shell, length, 2.03 mm; D, lateral view of protoconch. Scale bars: A–C, 250 μ m; D, E, 100 μ m; F, G, 25 μ m.

and 16–30 on last whorl and base. Protoconch (Fig. 16B) of 1.1–1.3 whorls, sculptured with irregularly shaped pits arranged more or less spirally. Aperture oval, weakly angled posteriorly. Inner lip narrow, attached to parietal wall in upper portion; outer lip orthocone with small apertural varix. Umbilical chink small to moderate. Periostracum very thin, transparent. Color white.

Dimensions.

	SL/		SL/		AL	TW	PW	PD	PS	BS
	SL	SW	SW	AL						
Holotype	2.05	1.19	1.72	0.80	2.58	3.2	1.1	0.34	20	30
Paratypes	2.29	1.41	1.63	0.80	2.88	3.2	1.2	0.35	—	—
	2.12	1.29	1.64	0.80	2.66	2.9	1.2	0.40	—	—
Sta. 71-351	1.98	1.25	1.59	0.82	2.42	2.7	1.2	0.48	—	—

2.17 1.34 1.62 0.89 2.43 2.7 1.3 0.50 — —
 Sta. 71-332 2.11 1.31 1.61 0.89 2.36 2.8 1.2 0.44 11 16

Operculum, radula, and animal unknown.

REMARKS. This species is tentatively included here, pending examination of the radula. It most closely resembles *Pusillina (Haurakia) infecta* from New Zealand but differs in having a white (not brown) protoconch, more convex teleoconch whorls, stronger axials, and stronger spirals on the base. This species resembles a few taxa included in *Onoba* but has finer sculpturing than any similarly sized South American species.

DISTRIBUTION. Tierra del Fuego. Known only from empty shells; uncommon in 40–900 m.

Pusillina (Haurakia) cf. averni

Figure 16C

MATERIAL EXAMINED. *Tierra del Fuego*: 25 73-69 [1(d)]. 27C USNM E 219 [1(d)]. 29B 71-305. 30C 71-344 [1(d)]. 30I 71-329 [5(d)]. 33D 71-352 [1(d)]. 33E 71-351 [3(d)]. 35 USNM E 1596 [1(d)]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. See Remarks.

Dimensions.

	SL/		SL/		AL	TW	PW	PD	PS	BS
	SL	SW	SW	AL						
Sta. 71-344										
Fig. 16C	2.13	1.28	1.66	0.88	2.41	2.8	1.3	0.47	8	21
Sta. 71-351	2.20	1.50	1.46	0.97	2.28	2.3	1.2	0.54	10	18
	1.94	1.35	1.44	0.92	2.10	2.0	1.2	0.46	—	—
	1.93	1.30	1.49	0.89	2.17	2.0	1.2	0.58	9	17
Sta 71-329	2.05	1.35	1.52	0.89	2.30	2.8	1.1	0.39	—	—
	2.17	1.49	1.45	0.93	2.32	2.3	1.2	0.49	—	—
Sta. 71-305	2.12	1.26	1.68	0.90	2.34	3.0	—	—	6	17

REMARKS. Specimens from the above localities differ from the types of *P. averni* in shell dimensions and/or strength of sculpturing (e.g., Fig. 16C) and may represent variations of one species or closely similar, separate species. We cannot make a decision on the available material.

Genus *Manzonina* Brusina, 1870

This genus is distinguished by its shell having a duplicated peristome and strong, smooth basal spirals as well as anatomical and other details (see Ponder, 1985a).

Subgenus *Alvinia*
 Monterosato, 1884

The species included here is related to a small group of North and Central American species that were assigned to *Manzonina (Alvinia)* by Ponder (1985a).

Manzonina (Alvinia) limensis n. sp.

Figure 16D, E

ETYMOLOGY. Named after the Province of Lima.

MATERIAL EXAMINED. **Types.** Holotype, LACM 2676, 2 paratypes, LACM 2677. 4 72-78. Isla Chinchá Norte, Ica Prov., Peru. 13°38'S, 76°25'W, 6–12 m, exposed side, J.H. McLean, V. Alamo, 1 Apr. 1972.

Additional Material Examined. *Peru*: 1 74-6 [many(d)]; AMS C.167456 [10(d)]. 2A 38-208 [1(d)]. 4 35-159 [1(d)]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. **Shell** (Fig. 16D, E). Small (maximum length 2 mm), ovate-conic, solid, opaque, with about 3 teleoconch whorls. Spire with lightly convex outlines, whorls moderately convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch with strong, sharp spiral ridges with wider interspaces and equally prominent axial ribs; 3 spiral ridges on penultimate and last whorl and an additional 3–5 on base; interspaces almost smooth with only very indistinct growth lines. Axial ribs reach suture, but do not extend onto base, and form low, peaked nodules at intersections with spiral ridges. Protoconch (Fig. 16D) of about 1.2 whorls, with 5–6 low spiral ridges bearing scattered granules, interspaces between spiral ridges smooth. Aperture oval, angled posteriorly. Inner lip moderately broad, attached to parietal wall in upper portion; outer lip orthocone with prominent apertural varix immediately behind lip; peristome weakly duplicated. Umbilical chink represented by narrow groove. Periostracum not observed. Color white.

Dimensions.

	SL/		SL/		AL	TW	PW	PD	PS	BS	PA	BA
	SL	SW	SW	AL								
Holotype	2.03	1.20	1.69	0.77	2.62	2.9	1.2	0.41	3	8	7	8
Paratype	1.99	1.18	1.68	0.77	2.57	2.9	1.2	0.40	3	7	7	8
Sta. AHF 534	1.97	1.16	1.69	0.74	2.66	3.0	1.2	0.38	3	6	7	8

Operculum, radula, and animal unknown.

REMARKS. This is the only known species of *Rissoinae* in Peru with coarse axial sculpture. It resembles some of the other eastern Pacific species assigned to *Manzonina (Alvinia)* by Ponder (1985a) but differs in having a broader shell than any of the known species except *M. (A.) almo* (Bartsch, 1911), which is much smaller.

DISTRIBUTION. Peru (Ica and Lima Provs.); known only from empty shells from 7 to 100 m. Uncommon.

Genus *Powellisetia* Ponder, 1965

This genus was introduced for a group of New Zealand species with diverse shell morphology by Ponder (1965b) and has subsequently been rediagnosed (Ponder, 1985a). The majority of species assigned to this genus are found in New Zealand, one from southern Australia (Ponder, 1985a), a few from the sub-Antarctic islands, and one from Antarctica (Ponder, 1983a). Members of the genus are

similar to some species included in *Onoba* but differ in usually having a more ovate shell, which is either smooth or finely spirally striate. The radula also differs in having more numerous (>10) cusps on the outer side of the lateral teeth.

***Powellisetia microlirata* n. sp.**

Figures 12D, 17A–G, 18A

ETYMOLOGY. Micro—Greek. Minute. Lirata—Latin. Ridge. Refers to the teleoconch sculpture.

MATERIAL EXAMINED. *Types.* Holotype, LACM 2678, 175 paratypes, LACM 2679; 8 paratypes, AMS C.167454. 20 73-72. Bahía Tom, Magallanes Prov., Chile. 50°11.3'S, 74°47.9'W, 14 m, P. Dayton (R/V *Hero*), 21 May 1973.

Additional Material Examined. *Southern Chile:* 16 75-46 [1(d)]. 17 73-75 [13]. 21 73-71 [2(d)]. 23 73-70 [3]. *Tierra del Fuego:* 25 73-69 [many(d)]. 30A 71-342 [1(d)]. 30F 71-334 [4(d)]. 30I 71-329 [1(d)]. 30J 71-260 [9(d)]. 33A USNM H 656 [1(d)]. 33B 71-347 [10(d)]. 33D 71-352 [20(d)]. 33F 71-357 [5(d)]. 33M 71-263 [1(d)]. 33R 71-328 [2]. 36 USNM E 974 [1(d)]. 39 71-268 [2]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. *Shell* (Fig. 17). Minute (maximum length 1.6 mm, often smaller), conical to elongate-conic, thin, translucent when fresh, with 2.4–2.9 teleoconch whorls. Spire with lightly convex to straight outlines, whorls moderately convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch with about 20–25 fine, rounded spiral cords on penultimate whorl and 30–40 on last whorl and base but cords too indistinct to be counted precisely in available material. Protoconch (Fig. 17D–F) of 1.0–1.3 whorls, sculptured with rather scattered, spirally aligned, elongate granules and irregular low wrinkles. Aperture oval to almost round, weakly angled posteriorly. Inner lip narrow, attached to parietal wall in upper portion only; outer lip orthocone. Umbilical chink moderate. Periostracum very thin, transparent. Color white.

Dimensions.

	SL		SL/ SW	AL	SL/ AL	TW	PW	PD
	SL	SW	SW	AL	AL	TW	PW	PD
Holotype	1.00	0.67	1.49	0.43	2.32	2.6	1.3	0.25
Paratypes								
Fig. 17A	1.23	0.88	1.40	0.44	2.45	2.6	1.3	0.25
	1.47	0.99	1.49	0.62	2.36	2.8	1.1	0.32
	1.50	1.04	1.44	0.61	2.46	2.7	1.2	0.32
	1.48	0.96	1.55	0.61	2.42	2.5	1.1	0.34
	1.52	0.97	1.57	0.60	2.52	2.6	1.1	0.35
	1.49	0.98	1.53	0.58	2.57	2.5	1.2	0.34
	1.48	0.98	1.52	0.60	2.46	2.8	1.2	0.33
	1.64	1.01	1.63	0.61	2.68	2.9	1.1	0.35
	1.53	1.00	1.53	0.63	2.41	2.8	1.1	0.34
	1.52	1.00	1.52	0.62	2.43	2.8	1.0	0.33
	1.49	0.92	1.62	0.58	2.57	2.7	1.2	0.36
Sta. 71-328								
Fig. 17C	1.30	0.80	1.64	0.51	2.57	2.5	1.2	0.35
Sta. 73-71	1.36	0.92	1.48	0.56	2.44	2.5	1.2	0.35
	1.30	0.86	1.51	0.52	2.52	2.4	1.2	0.34

Operculum (Fig. 12D). Thin, horny, paucispical. Oval but with strongly convex outer edge and weakly convex inner edge. Weakly angled posteriorly, rounded anteriorly.

Radula (Fig. 18A). Central teeth with cusp formula 7-8+1+7-8, median cusp narrowly triangular; cutting edge triangular; single pair of well-developed basal denticles. Lateral teeth with cusp formula 7-8+1+c.15-19, primary cusp long, triangular. Inner marginal teeth with about 15 cusps on outer edge, inner edge not visible in mounts. Cusps on inner side of outer marginal obscured in mounts, outer side simple (3 radulae from 3 localities examined).

Animal. Visceral coil darkly colored; head, foot, and mantle apparently unpigmented.

REMARKS. This species has a shell similar to the New Zealand *P. subtenuis* (Powell, 1937) but differs in having a slightly different shell outline due to looser coiling and a less inflated last whorl (also resulting in a smaller aperture). It also lacks a varix on the outer lip.

Powellisetia microlirata is smaller than most of the South American species of *Onoba* and has much finer teleoconch sculpture. Specimens from deeper water have more elongate shells with more convex whorls than the type, but specimens of intermediate shape have been observed.

DISTRIBUTION. Valparaíso, Chile, to Tierra del Fuego; mainly intertidal. Empty shells from 30 to 900 m. Common.

Genus *Onoba* H. and A. Adams, 1852

This genus, as recognized and diagnosed by Ponder (1985a), has a worldwide distribution, with major radiations in the northeastern Pacific and the southern oceans, including the Antarctic-sub-Antarctic. The genus is distinguished from other rissoids found in South America by the elongate-conic shell, which is smooth or has predominantly spiral sculpture. The radula has fewer than 10 cusps on the outer part of the lateral teeth.

***Onoba profimbriata* n. sp.**

Figures 19F, 20B, D

ETYMOLOGY. Protos—Greek. First. Fimbriata—Latin. Fringed. Refers to the fimbriate protoconch microsculpture.

MATERIAL EXAMINED. *Types.* Holotype, LACM 2680, 11 paratypes, LACM 2681; 1 paratype, AMS C.167423. 19 73-73. Bahía San Andrés, N of Golfo de Penas, Aisén Prov., Chile. 46°35.3'S, 75°30.6'W, subtidal, P. Dayton (R/V *Hero*), 23 May 1973.

Additional Material Examined. *Southern Chile:* 17 73-75 [2(d)]. *Tierra del Fuego:* 27D USNM E 740 [1(d)]. 30G 71-259 [1(d)]. 32D 71-293 [1]. 33O 71-310 [2(d)]. *Falkland Islands:* AMS C.167498, TW4 [1(d)]; AMS C.167497, TW5 [1(d)]. (All material LACM unless otherwise indicated.)

DIAGNOSIS. *Shell* (Figs. 19F, 20A, B). Small (maximum length 2.2 mm), elongate-conic, mod-

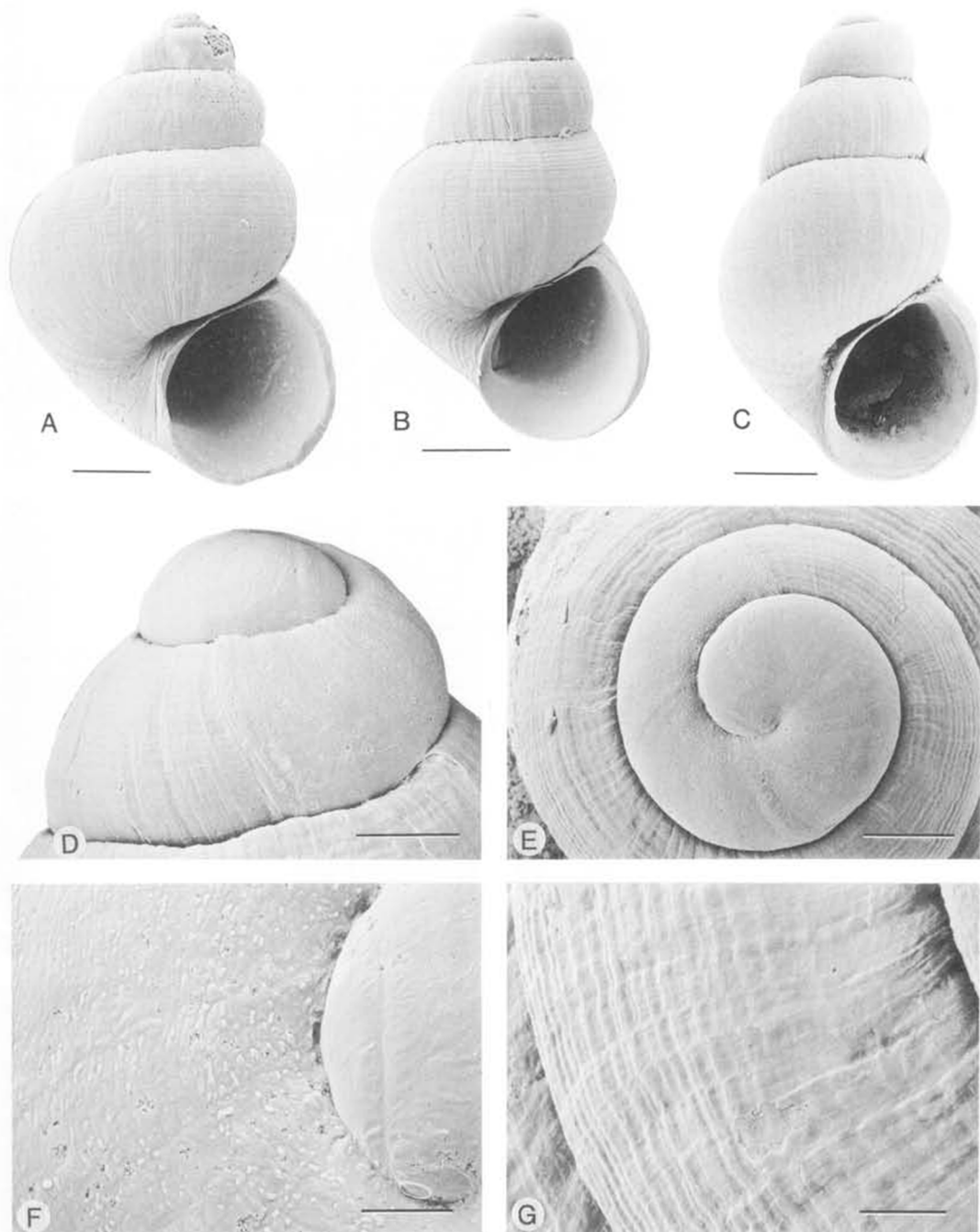


Figure 17. Details of shells of *Powellisetia microlirata* n. sp. **A**, Paratype, shell, length 1.23 mm. **B**, Holotype, shell, length 1.00 mm. **C**, Sta. 71-328, shell (deep water form), length 1.3 mm. **D–G**, Paratypes; **D**, lateral view of protoconch; **E**, apical view of protoconch; **F**, protoconch microsculpture; **G**, teleoconch microsculpture. Scale bars: **A–C**, 250 μ m; **D, E**, 100 μ m; **F, G**, 25 μ m.

erately solid, possibly translucent when fresh, with 2.7–3.1 teleoconch whorls. Spire with lightly convex outlines, whorls moderately convex; periphery of last whorl rounded. Sutures impressed, simple. Teleoconch with moderately flat spiral cords, in-

terspaces of approximately equal width; 8–9 (usually 8) on penultimate whorl, 13–14 (usually 13) on last whorl and base. Microsculpture in interspaces of fine but distinct axial growth lamellae and fine spiral striae. Protoconch (Fig. 20A, B) of about 1.1–

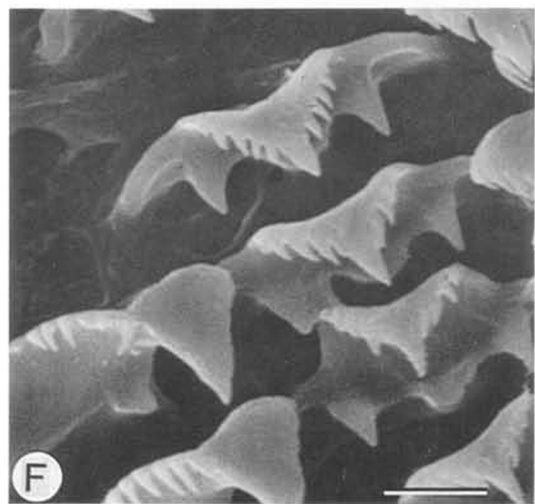
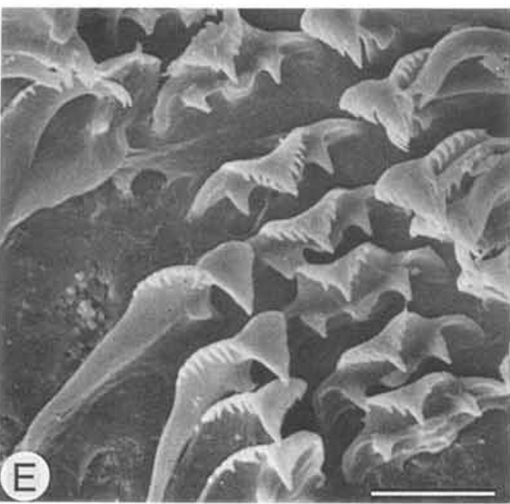
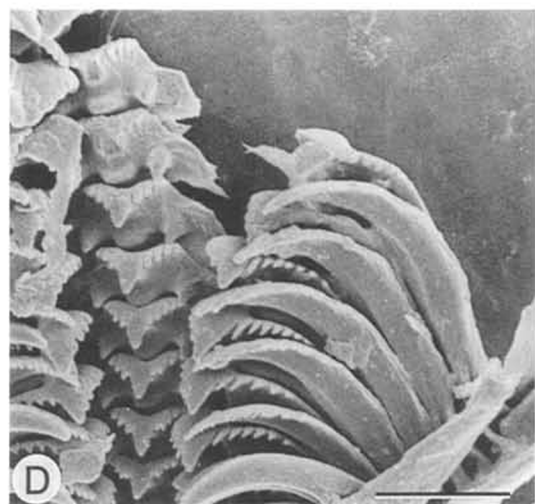
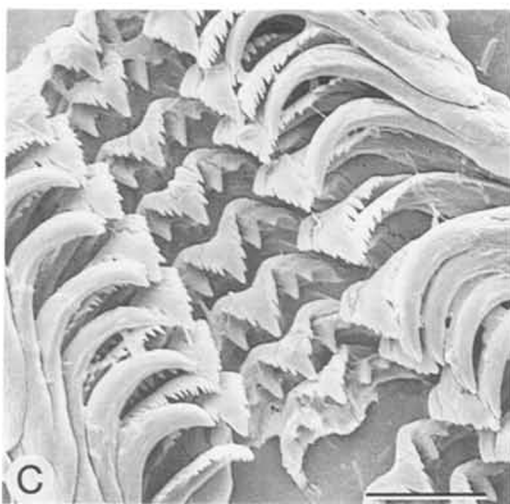
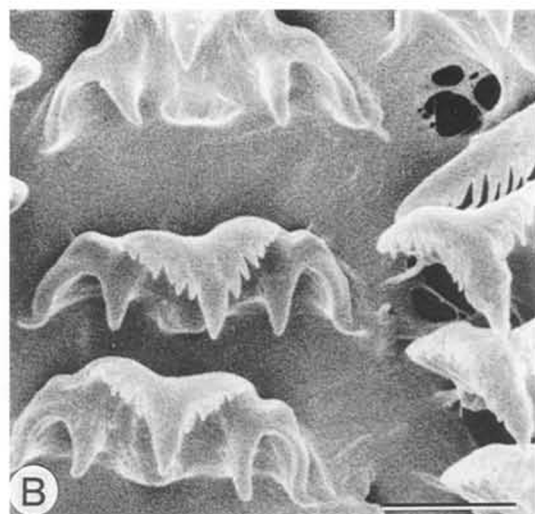
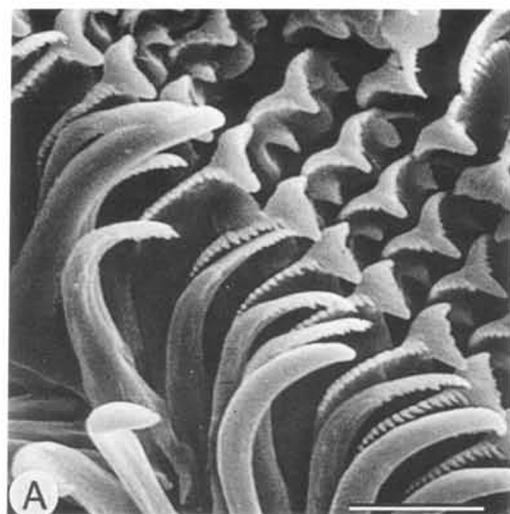


Figure 18. Radulae of species of Rissoidae. **A**, *Powellisetia microlirata* n. sp., paratype. **B**, Detail of central teeth. **C**, *Onoba striola* n. sp., paratype. **D**, *Onoba georgiana* (Pfeffer), Sta. 75-49. **E**, *Onoba erugata* n. sp., paratype. **F**, Detail of central teeth. Scale bars: **A**, **C**-**E**, 10 μ m; **B**, **F**, 5 μ m.