

REVISION OF THE NEW ZEALAND PATELLIDÆ,
WITH DESCRIPTIONS OF A NEW SPECIES AND SUBSPECIES.

By HENRY SUTER.

Read 16th June, 1905.

Genus HELCIONISCUS, Dall, 1871.

Helcioniscus, Dall: Amer. Journ. Conch., vol. vi, p. 227 (type, *Patella variegata*, Reeve).

Helcioniscus, Pilsbry: Man. Conch. (1), vol. xiii, pp. 80, 123.

1. HELCIONISCUS DENTICULATUS (Martyn).

Patella denticulata, Martyn: Univ. Conch., vol. i, t. lxxv (1784).

„ *imbricata*, Reeve: Conch. Icon., vol. viii, fig. 93 (1855), not of Linné.

„ *Reevei*, Hutton: Man. N. Zeal. Moll., p. 108 (1880).

„ *margaritaria*, Martens: Crit. List. N. Zeal. Moll., p. 36 (1873), not of Chemnitz.

Helcioniscus denticulatus, Pilsbry: Man. Conch. (1), vol. xiii, p. 138, pl. lxxviii, figs. 23, 24; pl. xxi, figs. 49, 50 (1891).

The shell is mostly, but not always, elevated; one of my specimens has an altitude of 9 mm. only, with a length of 38 mm. The number of principal costæ varies from 22 to about 30, and they are imbricated or nodulous, but this character is very often lost in adult shells through the dissolving action of the water. The colour varies from light grey with brownish ribs to dark brown. Interior: The central area is always orange brown, the muscular scars in adult specimens bluish white and slightly raised. The yellowish spots on a chestnut-brown ground are marginal or extending up to the muscle-scar.

Dentition. The inner lateral tooth has a simple long cusp, and the outer lateral has one denticle on the outer edge. The dentition of *P. denticulata* published by Hutton (Trans. N. Zeal. Inst., vol. xv, p. 128, pl. xvi, fig. B) is that of *P. ornata*, Dillw.

Hab.—This species is very local in its distribution, but plentiful where it occurs. In Cook Strait it is common near Lyall Bay. Dunedin and Chatham Islands are mentioned by Capt. Hutton.

2. HELCIONISCUS TRAMOSERICUS (Martyn).

Patella tramoserica, Martyn: Univ. Conch., vol. i, pl. xvi (1784).

„ *Diemenensis*, Philippi: Zeitschr. f. Malak. (1848), p. 162.

„ *variegata*, Reeve: Conch. Icon., vol. viii, pl. xvi, figs. 36a-c.

„ *antipodum*, E. A. Smith: Voy. Erebus & Terror, Moll., p. 4, pl. i, fig. 25 (1874).

Helcioniscus melanostomus, Pilsbry: Man. Conch. (1), vol. xiii, p. 151, pl. xxxii, figs. 67-69 (1891).

Helcioniscus tramosericus, Pilsbry: l.c., p. 142, pl. lxx, figs. 49-52.

Tate & May made *P. limbata*, Phil., a synonym, but I prefer to follow Pritchard & Gatliff, who consider it a distinct species, and I have never yet seen New Zealand specimens. Most of the synonyms here given are reproduced on the authority of the latter authors. Our specimens agree very well with those I have seen from Australia and Tasmania, and show also a great variability. The interior of the shell has narrow to broad dark rays, and the colour of the central area varies from greyish olive to chestnut brown. I have New Zealand specimens in my collection showing almost exactly the same dimensions as those quoted by Pilsbry.

The dentition is, as far as I am aware, unknown.

Hab.—Common in Australia and Tasmania. It is very local and rare in New Zealand. I have specimens from near Hokianga and the Hauraki Gulf, Wellington, and the Chatham Islands are mentioned by Hutton.

3. *HELCIONISCUS RADIANUS* (Gmelin).

Patella radians, Gmelin: Syst. Nat., vol. xiii, p. 3720 (1879).

„ *argyropsis*, Lesson: Voy. Coquille, p. 419 (1830).

„ *pholidota*, Lesson: l.c., p. 420.

„ *radiatilis*, Hombr. & Jacq.: Ann. Sci. Nat. (2), vol. xvi, p. 191 (1841).

„ *sturnus*, Hombr. & Jacq.: l.c., p. 191.

„ *fusca*, L.: Syst. Nat., vol. x, p. 784.

„ *sagittata*, Donovan: Rees' Encyclop., t. xvi (*vide* Pilsbry).

Helcioniscus radians, Pilsbry: Man. Conch. (1), vol. xiii, p. 139, pl. lxix, figs. 25–28.

This is a very variable shell, and with regard to synonyms there has been a great confusion. However, by collecting specimens from many localities and comparing them critically, I have been able to greatly reduce the number of synonyms, and to establish six distinct subspecies.

Pilsbry has given a capital diagnosis of the species. *P. pholidota*, distinguished only by the divaricating pattern extending over the posterior part of the shell down to the margin, cannot be separated for this reason alone from *P. radians*. As Hanley and Pilsbry pointed out, Linné's name *fusca* cannot be used, being “defined in an absurdly inadequate manner.”

The dentition was described and figured by Capt. Hutton in Trans. N. Zeal. Inst., vol. xv, p. 129, pl. xvi, fig. E (*argyropsis*). The anatomy was described by J. A. Newell in tom. cit., vol. xix, p. 157, pl. xi (1887).

Hab.—Throughout New Zealand, but more common on the east coast of the North Island. The Australian habitat, mentioned by Pilsbry, is no doubt a mistake.

Subsp. *argentea*, Quoy & Gaimard.

Patella argentea, Quoy & Gaimard: Voy. Astrolabe, Zool., vol. iii, p. 345, pl. lxx, figs. 16, 17 (1834).

The specimens obtained by the French naturalists were rather small, but much larger examples occur in many localities, especially in the

vicinity of Lyttelton, South Island. The shell has most of the characters of the species, but the interior has no radiate brownish bands. The surface is sculptured by about 20 more or less elevated ribs, and in each interval are several riblets. The main ribs are light brown, sometimes punctured with white. The ground colour is greenish or grey, often blotched with white. The nacre is silvery white, often with a yellowish tint. Central area mostly greyish white, sometimes, in old shells, rusty. Adult shells are much higher than *radians*.

	Length.	Breadth.	Height.
Specimen from Sumner ...	50	41	21 mm.
„ „ Napier ...	42	34	15 „
„ „ Timaru ...	53	44	17 „
Type-specimen of Q. & G.	24	22.5	6.8 „

I examined the dentition, and found it to be the same as in *H. radians*.

Hab.—Throughout New Zealand, most common on the east coast of the South Island.

Subsp. *decora*, Philippi.

Patella decora, Philippi: Zeitschr. f. Malak. (1848), p. 162; Abbild., pl. iii, fig. 3.

„ *decora*, Reeve: Conch. Icon., vol. viii, figs. 33a-c.

Helcioniscus decorus, Pilsbry: Man. Conch. (1), vol. xiii, p. 140, pl. lxix, figs. 29-31.

Shell mostly large, semiglobose, apex much inclined to the anterior, more rounded than in the typical species, with 20-24 distant reddish-brown ribs on a yellowish or greenish olive ground. Interior iridescent, with the brown radiating ribs shining through the pearly layer; central area milk white to greyish olive. My largest specimen, from Tauranga, has the following dimensions:—Length 60, breadth 50, height 18 mm.

The dentition is unknown.

Hab.—East coast of both islands, rare.

Subsp. *Earlîi*, Reeve.

Patella Earlîi, Reeve: Conch. Icon., vol. viii, fig. 71 (1855).

„ *flexuosa*, Hutton: Cat. Mar. Moll. N. Zeal., p. 45 (1873), not of Quoy & Gaimard.

Helcioniscus Earlîi, Pilsbry: Man. Conch. (1), vol. xiii, p. 140, pl. xxi, figs. 51, 52.

Distinguished from the species by the rotundately ovate form, the convexly raised front, the broad blood-red blotches, and the milk-white central area. This is a very distinct and easily recognized subspecies. The altitude is generally not greater than in *radians*, but the breadth is much greater in proportion to the length.

I examined the dentition, and found it to be exactly the same as in the species.

Hab.—I have specimens from Tauranga, Te Onepoto and Sumner near Lyttelton, Akaroa, Timaru, and Preservation Inlet. In the first two localities perfectly typical specimens occur.

Subsp. *affinis*, Reeve.

Patella affinis, Reeve: Conch. Icon., vol. viii, fig. 108 (1855).

Nacella Earli, Hutton: Cat. Mar. Moll. N. Zeal., p. 45 (1873), not of Reeve.

Helcioniscus affinis, Pilsbry: Man. Conch. (1), vol. xiii, p. 140, pl. lxix, figs. 32, 33.

Distinguished from the species by its smaller size, the elongated oval form, the numerous simple, smooth, slightly waved radiate ridges and striæ. The typical, close, divaricating colour-pattern is not always present, sometimes there are only brown radiate bands visible, which, especially in Chatham Island examples, coalesce, forming broad dark-brown or black patches. The concentric striation is mostly very distinct. A large specimen has the following dimensions:—Length 33, breadth 33, height 7 mm.

Hab.—I have specimens from Stonyhurst, Te Onepoto, Preservation Inlet, and from the Chatham Islands. It seems to be very local in its distribution.

Subsp. *flava*, Hutton.

Patella flava, Hutton: Cat. Mar. Moll. N. Zeal., p. 44 (1873).

Helcioniscus flavus, Pilsbry: Man. Conch. (1), vol. xiii, p. 142.

This subspecies is best described as a conical, pale yellow form of *decora*, Phil. The apex is subcentral, sometimes nearly reaching the anterior third of the length. Small shells are, as a rule, depressed, but adult individuals have mostly a high conical form. The distant broadly-rounded ribs number 20 to 22, and are almost always of the same colour as the shell; specimens from Stonyhurst have, now and again, one or several ribs dark brown. Interior light to orange yellow, iridescent, central area cream to light orange colour. To show the variability in form I give here the dimensions of specimens from three different localities:—

		Length.		Breadth.		Height.
Kaikoura, South Island	...	55	...	46	...	26 mm.
"	"	...	46	...	39	...
Stonyhurst,	"	...	50	...	42	...
"	"	...	42	...	33	...
Napier, North Island	...	50	...	43	...	25 "
"	"	...	45	...	37	...
						18 "

I examined the radula of several specimens, and found the dentition the same as in the species. The gill cordon is interrupted in front.

Hab.—My collection contains specimens from Kaikoura, Stonyhurst, Motanau Island, South Island; Napier and Gisborne, North Island; Chatham Islands.

Subsp. *olivacea*, Hutton.

Patella olivacea, Hutton: New Zeal. Journ. Sci., vol. i (1882), p. 69.

Helcioniscus olivaceus, Pilsbry: Man. Conch. (1), vol. xiii, p. 141, pl. lxx, figs. 46–48.

This subspecies is very much like the large conical form of *argentea*, Q. & G., but distinguished from it chiefly by the very numerous (about 70) fine and uniform radiate riblets, the olive colour of the shell, and the black margin on the inner edge, which, however, is not a constant character.

The dentition was described and figured by Hutton in Trans. New Zeal. Inst., vol. xv, pl. xvi, fig. D.

Hab.—From Sumner, near Lyttelton, along the east coast to Preservation Inlet, South Island. Rather rare, but always together with *argentea*, Q. & G.

4. HELCIONISCUS STELLIFERUS (Gmelin).

Patella stellifera, Gmelin: Syst. Nat., vol. xiii (1789), p. 3719.

„ *stellularia*, Quoy & Gaimard: Voy. Astrolabe, Zool., vol. iii (1834), p. 347, pl. lxx, figs. 18–20.

Helcioniscus stelliferus, Pilsbry: Man. Conch. (1), vol. xiii, p. 141, pl. lxx, figs. 43–45.

Usually the shell is reddish, but cream-white, cinereous, and purplish-black specimens occur occasionally. The white rays at the apex, forming the typical star, very often extend to the margin, and their number is very variable.

This species no doubt lives in deeper water, as only empty shells washed up on the beach are obtained. I know only of one specimen having been found alive at Island Bay, near Wellington. The animal and dentition are unknown.

Hab.—From Cape Maria van Diemen to Banks' Peninsula, but nowhere common.

N. subsp. *phymatia*.

Distinguished from the species by the high conical form and the strongly nodulous ribs. The shell is solid, oval or oblong, high conical, the height somewhat less than half the length of the shell;



apex at about the front third, more or less denuded. There are about 24 strongly nodulous radiate ribs, crossed by strong concentric lines of growth. As in the species, a white star or white bands extending to the margin are present, and the colour is yellowish red. The anterior slope is straight or slightly convex. Interior silvery white, central area white, sometimes tinged with light brown. Length 27, breadth 21, height 12 mm.

The animal and dentition are unknown.

Hab.—Together with the species.

Type in my collection.

5. *HELCIONISCUS ORNATUS* (Dillwyn).

Patella ornata, Dillwyn: Descript. Cat. Recent Shells, vol. ii, p. 1029 (1817).

„ *nodosa*, Hombr. & Jacq.: Ann. Sci. Nat. (2), vol. xvi, p. 191 (1841).

„ *denticulata*, E. A. Smith: Voy. Erebus & Terror, Zool., vol. ii, Moll., p. 4, pl. i, fig. 26, not of Martyn

„ *denticulata*, Hutton: Man. N. Zeal. Moll., p. 109 (1880), not of Martyn.

„ *margaritaria*, Reeve: Conch. Icon., fig. 74.

Helcioniscus ornatus, Pilsbry: Man. Conch. (1), vol. xiii, p. 137, pl. lxviii, figs. 14-19; pl. xix, figs. 39, 40.

Specimens from Stonyhurst, South Island, have the apex quite anterior.

Dentition described and figured by Hutton in Trans. N. Zeal. Inst., vol. xv, p. 128, pl. xvi, fig. B (*P. denticulata*).

Hab.—Throughout New Zealand, but more common in the south.

Subsp. *inconspicua* (Gray), Hutton.

Patella inconspicua, Gray: in Dieffenbach's N. Zeal., vol. ii, p. 244 (1843).

„ *luctuosa*, Gould: Proc. Bost. Soc. Nat. Hist., vol. ii, p. 150 (1846), not of Hombr. & Jacq.

„ *inconspicua*, Hutton: Man. N. Zeal. Moll., p. 107; P.L.S. N.S. Wales, vol. ix, p. 375.

„ *inconspicua*, Hutton: Trans. N. Zeal. Inst., vol. xiii, p. 203 (1881); animal descr.

Helcioniscus ornatus, var. *inconspicua*, Pilsbry: Man. Conch. (1), vol. xiii, p. 138, pl. lxviii, figs. 20-22.

Hab.—Throughout New Zealand, one of our most common limpets.

6. *HELCIONISCUS STRIGILIS* (Hombron & Jacquinot).

Patella strigilis, Hombr. & Jacq.: Ann. Sci. Nat. (2), vol. xvi, p. 190 (1841).

„ *Magellanica*, Hutton: Trans. N. Zeal. Inst., vol. xv, p. 128, pl. xvi, fig. A, dentition, not of Gmelin.

Helcioniscus strigilis, Pilsbry: Man. Conch. (1), vol. xiii, p. 137.

The situation of the apex is very variable. The type usually has the apex at about the anterior third of the length, but my collection contains specimens which have the apex at the anterior eighth of the length. This species attains sometimes a rather large size; a specimen from Campbell Island has the following dimensions: length 80, breadth 68, height 39 mm. The muscle-scar is occasionally much elevated, catenate.

Hab.—From Tauranga to the Bluff; Chatham, Auckland, Antipodes, and Campbell Islands. The type is from the Auckland Islands.

7. *HELCIONISCUS REDIMICULUM* (Reeve).

Patella redimiculum, Reeve: Conch. Icon., vol. viii, fig. 50 (1854).

„ *radians*, Reeve: l.c., fig. 25, not of Gmelin.

Patella Pottsi, Hutton: Cat. Mar. Moll. N. Zeal., p. 44 (1873).

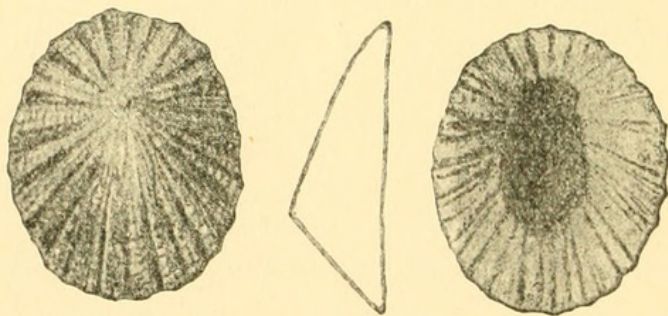
Helcioniscus redimiculum, Pilsbry: Man. Conch. (1), vol. xiii, p. 136.

This species, nearly allied to *H. denticulatus* and *H. strigilis*, is very variable; the dentition is very much like that of the first species, but the shell characters are more in accordance with the latter. The form varies from round-oval to elongate-oval, depressed to conical, and the apex is to be found situated from the front fourth to quite close to the anterior margin. Sometimes the shells are beautifully coloured, the ribs brown and the intervals bluish white, whilst other specimens have the surface very much worn and eroded. Interior: The central area is normally cream white to light brown, but at the Chatham and Auckland Islands shells occur with the central area light blue to bluish grey and brown, like *H. limbatus*, Phil., from Tasmania.

Hab.—It is found on the eastern shores of the South Island from Stonyhurst to Preservation Inlet, and at the Chatham, Bounty, and Auckland Islands.

8. *HELClONISCUS CRATICULATUS*, n.sp.

Shell small, thin, ovate, depressed conical, the apex at the anterior third of length, anterior slope straight, posterior very slightly convex. Surface black, brown, or yellowish grey; black shells sometimes



with concentric patches of grey; sculptured by 24 to 30 principal radiate ribs, the interstices having 1 to 3 smaller riblets, and they are crossed by very distinct, close-set concentric striae, producing a finely granulated surface. The radiate ribs are alternately black and olive or black and reddish white, sometimes the black rays are quite absent, and the shell is uniformly flesh-coloured. Margin slightly crenulated. The interior is olive or white, tinged with orange outside the muscular scar, iridescent, and the black rays are distinctly visible through the pearly layer. The central area is chestnut brown.

The dimensions of a few specimens are:—

Length 25, breadth 20, height 7 mm. (Type-specimen.)

„ 20, „ 17, „ 5 mm.

„ 19, „ 15, „ 4.5 mm.

The animal and dentition are unknown.

Hab.—Kermadec Islands. Specimens were collected by Captain Bollons, of the Government steamer “Hinemoa,” and kindly presented to me. Type in my collection.

This small limpet shows, like most of our species, a very great variability with regard to the colour pattern, and in this respect it stands nearest to *H. tramosericus*. The variety without black rays, of flesh colour, occurs on Raoul and Curtis Islands. The principal ribs are very often formed by two or three smaller riblets grouping together.

Genus *NACELLA*, Schumacher, 1817.

Nacella, Schumacher : Essai d'un nouv. Syst. (1817), p. 179 (type, *P. mytilina*, Helb.).

„ Pilsbry : Man. Conch. (1), vol. xiii, pp. 79, 114.

Sect. *Patinella*, Dall, 1871.

Patinella, Dall : Amer. Journ. Conch., vol. vi (1871), p. 272 (type, *P. Magellanica*, Gm.).

„ Pilsbry : Man. Conch. (1), vol. xiii, pp. 80, 116.

9. *NACELLA* (*PATINELLA*) *ILLUMINATA* (Gould).

Patella illuminata, Gould : Proc. Bost. Soc. Nat. Hist., vol. ii (1846), p. 149.

„ *Terroris*, Filhol : Compt. Rend., vol. xci (1880); Mission de l'île Campbell, p. 529 (1885).

Helcioniscus illuminatus, Pilsbry : Man. Conch. (1), vol. xiii, p. 142, pl. lxx, figs. 40-42.

The dentition was described and figured by Hutton in Trans. New Zeal. Inst., vol. xv, p. 128, pl. xvi, fig. C. I examined the radula of a specimen from Macquarie Island and found it exactly as figured by Captain Hutton. The foot of the animal has on its sides a scalloped frill, interrupted in front; the branchial cordon is complete, not interrupted in front, and the branchial papillæ are elongated conical, transversely foliated; larger black lamellæ are placed at regular intervals, leaving two to three white papillæ between them, and have their base of insertion higher up on the inner side of the mantle.

Hab.—Auckland, Campbell, and Macquarie Islands.

10. *NACELLA* (*PATINELLA*) *FUEGIENSIS* (Reeve).

Patella Fuegiensis, Reeve : Conch. Icon., vol. viii (1855), fig. 73.

„ *Fuegiensis*, Filhol : Mission de l'île Campbell, p. 529.

„ *Fuegiensis*, Pilsbry : Man. Conch. (1), vol. xiii, p. , pl. , figs. .

Shell oval, rather thin, semitransparent, rather compressly raised, apex rounded, inclined anteriorly, radiately ridged, ridges thin, numerous, densely crossed with concentric striæ; greenish, more or less stained and blotched with chestnut brown, apex bronze, interior iridescent bronze, radiately grooved, grooves sometimes partially obsolete (Reeve).

Hab.—Campbell and Macquarie Islands; Tierra del Fuego, Falkland Is.; Kerguelen Island (Smith).

A delicate subpellucid bronzed species, elegantly many-ridged, of a pale greenish texture, partially, and sometimes almost entirely, stained and blotched with reddish chestnut (Reeve).

A specimen collected by Mr. A. Hamilton, now Director of the Colonial Museum, Wellington, and very kindly presented to me, perfectly agrees with Reeve's description and figure, with the exception of the situation of the apex, which is at the anterior fourth of the length, but this is subject to great variability with most of our limpets. My specimen is subpellucid, the radiate close ribs number about 40, and are crossed by close distinct concentric striæ. It is a little smaller than the type; the dimensions are: length 33, breadth 24, height 9 mm.

It is quite distinct from *N. illuminata*, and forms a very interesting addition to the fauna of the Southern Islands of New Zealand.

Genus PATELLA, Linné, 1758 (s. str.).

Type: *Patella vulgata*, Linn.

Sect. *Ancistromesus*, Dall, 1871.

Ancistromesus, Dall: Amer. Journ. Conch., vol. vi (1871), p. 276 (type, *P. Mexicana*, B. & S.).

„ Pilsbry: Man. Conch. (1), vol. xiii, pp. 77, 79, 107.

11. PATELLA (ANCISTROMESUS) KERMADECENSIS, Pilsbry.

Patella (*Scutellastra*) *Kermadecensis*, Pilsbry: The Nautilus, vol. vii, p. 106 (1894).

„ *Kermadecensis*, Taylor: tom. cit., p. 142.

„ *Kermadecensis*, Dall: MS., Jan., 1894.

„ *Pilsbryi*, Brazier: P.L.S. N.S. Wales, 1894 (1895).

„ *Kermadecensis*, Pilsbry: Proc. Acad. Nat. Sci. Philad. (1894), p. 208, pls. vii, viii.

„ *Kermadecensis*, Suter: Journ. Malac., vol. ix (1902), p. 111, pl. viii (animal and dentition).

Hab.—Kermadec Islands.

In Trans. N. Zeal. Inst., vol. xx (1888), p. 165, we find the following passage with regard to the mollusca of the Kermadecs:—“A large limpet, more than 5 inch. in diam., is common on the rocks.”

Doubtful New Zealand Species.

PATELLA FLOCCATA, Reeve.

Conch. Icon., vol. viii, fig. 106 (1855). Collected in New Zealand by Mr. Earl.

We first find this species mentioned again by Hutton as *Nacella floccata*, Reeve, Hutton, Cat. Mar. Moll. N. Zeal., p. 45 (1873). Martens, in his Crit. List. Moll. N. Zeal., does not mention it at all. Hutton remarks: “This appears to me to be a variety of *N. argentea*.” Again, in his Révision des Coquilles de la Nouv. Zélande (1878), Capt. Hutton enumerates *Patella floccata* with the note: “Je n’ai vu aucun spécimen de cette espèce.” Further, in Hutton’s Man. N. Zeal. Moll. (1880), we find this species as a synonym of *P. pholidota*, Lesson, and this is repeated in his revision of the Docoglossate Mollusca, P.L.S. N.S. Wales, 1884. Pilsbry accepts Hutton’s synonymy in the Man. Conch. (1), vol. viii, p. 140, and reproduces Reeve’s figures of *Patella floccata*, pl. lxix, figs. 38, 39.

I am confident that my collection now contains all the species of Patellidæ to be found in New Zealand waters, and I am unable to find anything amongst them corresponding with Reeve's species. Without seeing the type-specimen, it is not easy to locate this form, but I fully agree with Mr. E. A. Smith that it is an *Acmaea*, and there is no other New Zealand species attaining that size but *Acmaea pileopsis*, Q. & G. This also is a very variable species, but I have examples which are decidedly convexly depressed, have the apex situated as the figure of *floccata* indicates, and several specimens are profusely and radiately dashed with white flakes.

PATELLA MAGELLANICA, Gmel.

Filhol records this species in the Miss. de l'île Campbell, p. 528. I have seen specimens from South America, but never anything like it from the Southern Islands of New Zealand. It seems that Filhol was partly misled by Hutton's enumeration of *P. Magellanica* in his Man. N. Zeal. Moll., and it is most likely that he also took *H. strigilis* for *Magellanica*. Without having seen the specimens collected by the late Dr. Filhol, it is of course impossible to be quite positive on this point.

In Capt. Hutton's revision of 1884 the following species were omitted as not really inhabiting New Zealand :—*Patella granularis*, L., and *cochlear*, Born, from South Africa, and *stella*, Lesson. Habitat unknown.

The last mentioned is no doubt an *Acmaea*, and I have examples from New Zealand corresponding with Lesson's diagnosis; they are very near *A. corticata*, Hutt. I shall deal with this form in my revision of the Acmaeidæ of New Zealand, which I hope to work out some day.



1905. "Revision of the New Zealand Patellidae, with descriptions of a new species and subspecies." *Proceedings of the Malacological Society of London* 6, 346–355.

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