

MARINE MOLLUSCS OF TAROONA SPIRAL UPWARDS

Simon Grove

*25 Taroona Crescent, Taroona, Tasmania 7053; email:
groverherd@bigpond.com*

Three years ago I published an article in *The Tasmanian Naturalist* (Grove, 2005) on the marine molluscs that I had encountered during my first year of shelling at Taroona. At the time, I was in awe at the diversity of beached shells that I had managed to identify along this short stretch of coastline on the western shore of the Derwent estuary – a respectable 215 species. But that was then and this is now.

Since 2005 I have continued to collect regularly along the same stretch of foreshore. My efforts bring the total number of species to a remarkable 335 species (Figure 1). Since this represents about a quarter of all the Tasmanian marine mollusc species that I am currently aware of (1381 species – a figure that includes many offshore and shell-less species), I felt that the updated Taroona list was worth publishing as it may now serve as a benchmark and guide for other naturalists as to what species to expect in this part of Tasmania – although I recognise that every beach is different.

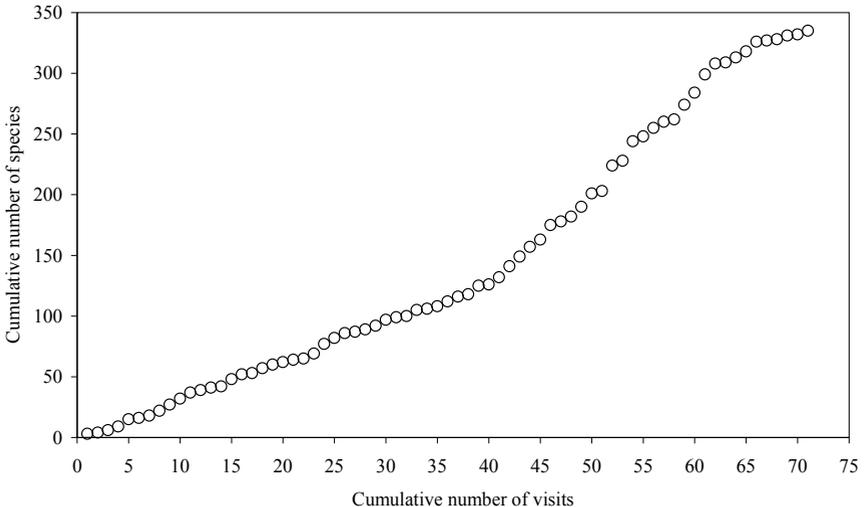


Figure 1. The species accumulation curve to mid-2008, showing how successive visits continue to contribute to the growth in Taroona's marine mollusc species list.

Taroona may not host the same spectacular species that one could find on a tropical Australian beach, but ours have their own charms, and we may well trump the tropics for sheer diversity in our local species pool. Also, unlike tropical Australia's fauna, most of our local species are not found beyond southern Australia (and some not beyond Tasmania), making our local patch extra-special. That said, the shape of the curve in Figure 1 implies that while I should expect to keep finding additional species in Taroona, they will be increasingly hard to come by. There will eventually come a time when I will have to decide that enough is enough and that my collecting efforts are better focused elsewhere (one of those tropical beaches, perhaps?).

The biggest single factor contributing to the continued increase in recorded species has been my focus on micro-molluscs. Over the past few years I have collected about fifteen fist-sized samples of shell-grit from Dixons Beach, Taroona Beach and the Alum Cliffs. Once each sample has been washed in fresh water and then dried, I have used a microscope to sort through the sample in stages, removing the micro-molluscs of interest. There are typically 100 to 1000 micro-molluscs per sample, with each sample containing 20 to 200 species – although I have not found more than about 120 species in any single Taroona sample. The greater challenge is then in identifying what was extracted. My technique involves first separating the micro-molluscs into apparent species, and putting all the specimens of each species into a transparent gelatine capsule. These capsules are normally used by pharmacists for dispensing drugs, but can be bought in bulk from entomological suppliers. Because they are transparent, it is often possible to view the shells within under a microscope without the need to tip them out, making identification and processing a little quicker. The reward for all this effort has been the realisation that micro-molluscs constitute perhaps a third of all the marine mollusc species recorded at Taroona, as Figure 2 demonstrates. Although most species are in the macroscopic length-range of 5 to 50 mm, many of these larger species are also only revealed in shell-grit samples, in which they occur either as shell fragments or as the shells of juveniles. A selection of common micro-mollusc species from Taroona is illustrated in Plate 1, to whet the appetite of naturalists prepared to go down this route.

There are still no easy ways to put names to Tasmanian micro-molluscs. I expect to remedy this in a year or two because I am working on a comprehensive species-by-species guide with photos and accompanying text. Because of high publishing costs, this will probably be web-based. In the mean time, the main source of taxonomic information is the checklist that I co-authored (Grove *et al.*, 2006) and which was reviewed in the previous volume of *The Tasmanian Naturalist* (Bonham, 2007), while the main source of illustrations to aid identification is still May &

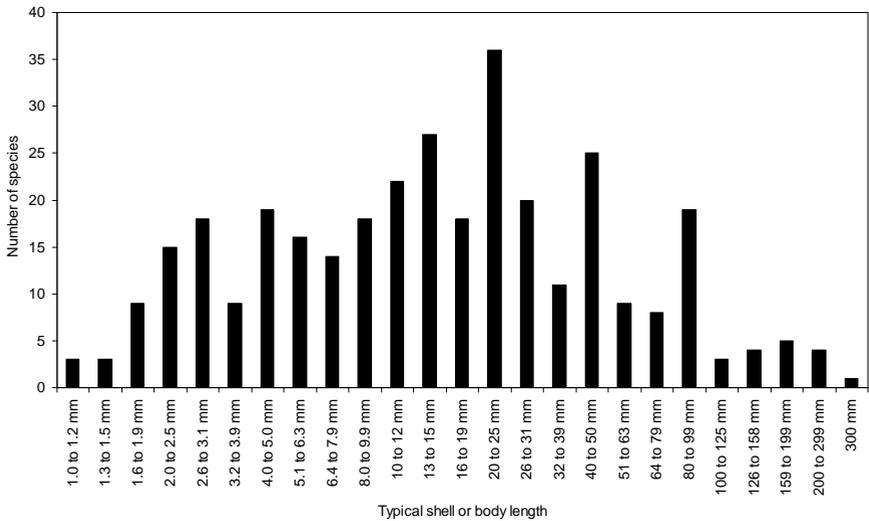


Figure 2. The number of species of marine mollusc recorded at Tarooona, grouped by length-classes of the shell (or of the body for shell-less species) arranged on a logarithmic scale, from the smallest at the left-hand end to the largest at the right-hand end.

MacPherson (1958). However, the line-drawings in this publication are themselves (rather ordinarily) reproduced from originals in the earlier work of May (1923), which were themselves of variable quality. Furthermore, the nomenclature used in May & MacPherson (1958) is very outdated. Even the 2006 checklist is now a little outdated, not only in nomenclature but also in taxonomy (because there has been continued lumping and splitting of species, and the higher taxonomy of molluscs is undergoing overhauls based on molecular work). There have also been changes in our understanding of which species are or are not present in Tasmanian waters, which are not reflected in either of these publications.

Several additions to my earlier list deserve further comment. One is the cowrie *Notocypraea subcarnea*, which, as Kevin Bonham noted in a previous volume of *The Tasmanian Naturalist* (Bonham, 2006), has been reinstated as a valid species after a century subsumed in two other species. It seems to be genuinely rare throughout its range (which appears to be Tasmania only), but I have turned up five so far at Tarooona. It is possible that it prefers to live at slightly greater depths than the more common *N. angustata* and *N. declivis*, since all the specimens that I have found have been very worn as though they have spent a long time travelling to the beach. Several other additions to the Tarooona list are also likely to live in relatively deep waters and thus only occasionally beached.

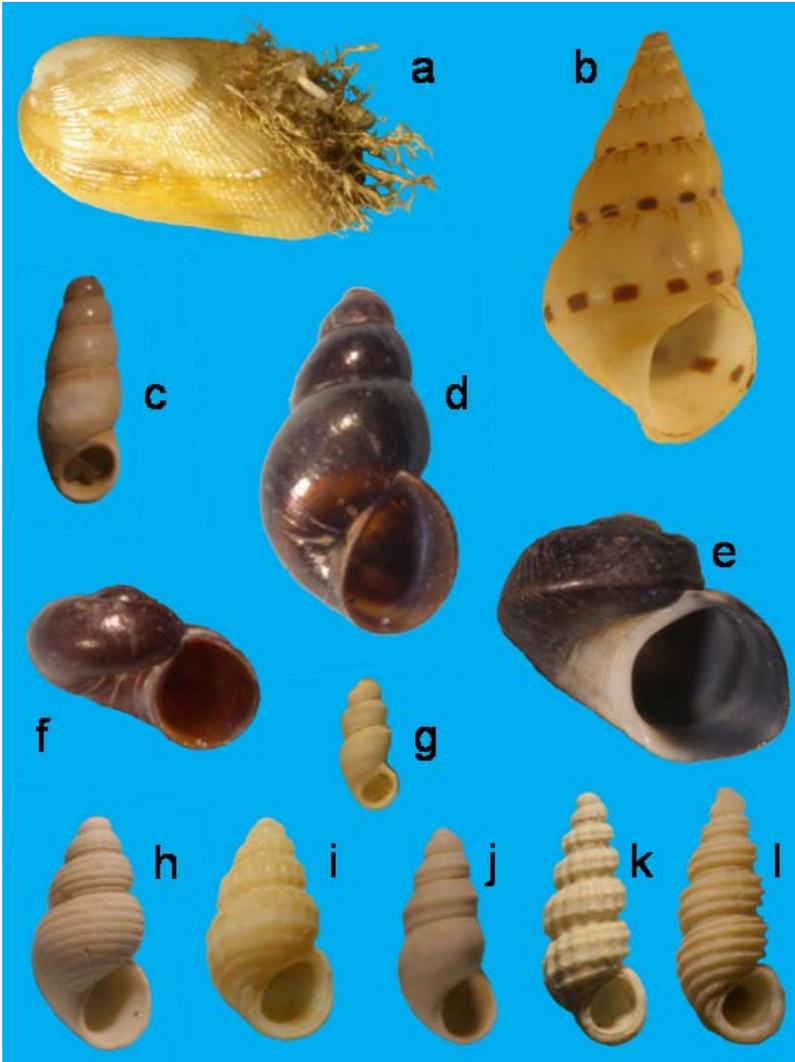


Plate 1. Adult specimens of twelve species of micro-mollusc, shown to scale. As a guide, the actual length of the ‘large’ shell (d) in the middle is 5 mm. All specimens illustrated were collected from shell-grit at Taroona and photographed by the author. a. *Trichomusculus barbatus* (Mytilidae); b. *Alaba monile* (Litiopidae); c. *Badepigrus badia* (Anabathridae); d. *Laevilittorina mariae* (Littorinidae); e. *Risellopsis mutabilis* (currently placed in Littorinidae); f. *Rufolacuna bruniensis* (Littorinidae); g. *Anabathron contabulatum* (Anabathridae); h. *Onoba multilirata* (Rissoidae); i. *Alvania fasciata* (Rissoidae); j. *Lironoba unilirata* (Rissoidae); k. *Merelina cheilostoma* (Rissoidae); l. *Lironoba australis* (Rissoidae).

I find it strange that I have only once found a black nerite at Taroona. In the previous volume of *The Tasmanian Naturalist* I described how Tasmania now lays claim to two such species, chiefly separable by the colour of the operculum of the living animal (Grove, 2007). Unfortunately, my Taroona specimen has no operculum, so I cannot be sure whether it is the western, black-operculum *Nerita atramentosa* or the eastern, brown-operculum *N. melanotragus*. Both species can occur sporadically (and sometimes together) in the southern part of the State, but for some reason neither seems to penetrate the Derwent to any great extent. Given that I have only found one specimen, it's all the more surprising that it was a fully-grown adult, since this suggests that the local environment is not inherently hostile to the species' development to maturity. The same cannot be said for some other species that I have only found as immature specimens, which I suspect means that the local conditions normally prevent them from reaching maturity after the planktonic larvae are transported here on coastal currents. One such species is the lamelliariid *Lamellaria ophione* (a relative of the local ribbed-cowrie *Trivia merces*, although it looks more like a bubble-shell or a *Sinum*). While it is not uncommon along Tasmania's northern coastline, I have only found it once in Taroona, a juvenile on Dixons Beach. It is possible that the flamed topshell *Clanculus flagellatus* and the yellow sundial shell *Philippia lutea* also fall into this category: while both are relatively common in the warmer waters of northern and eastern Tasmania, they are rare in southern waters and I have only once found them in Taroona – in each case a juvenile washed up below the Alum Cliffs.

One group whose identification has proven more challenging than their appearance would suggest is the dove-shells in the family Columbellidae. These predatory molluscs are small, but mostly not microscopic, and their beached shells are often noticed because of their beauty and abundance. Their identification has traditionally been based primarily on colour patterning, but recent studies by Des Beechey at the Australian Museum have suggested that this varies greatly both within and among species. It is more useful to think of each species as possessing a spectrum of possible colour patterns, and to use this as a guide only, with shell shape providing supporting evidence (although this is variable too!). On this basis the Taroona complement of dove-shell species includes some newcomers such as *Mitrella lincolnensis*, while my earlier records of some other species (such as *M. tenuis*, formerly known as *M. pulla*) now have to be reallocated. Previously, I had assumed that one of the most common local species was *M. tayloriana*, but it transpires that on available evidence this species occurs no closer to Taroona than the Bass Strait islands, with all local records now referable to either *M. leucostoma* or *M. lincolnensis*. The confusion is not helped by several species having multiple synonyms (partly because of recent taxonomic lumping – e.g. the strikingly banded *M. vincta* is now subsumed into *M. leucostoma*), nor by the wrong names having been applied to illustrations in some of the popular field guides. Currently, the best place to look for diagnostic pictures and descriptions of dove-shells (and indeed

many other Tasmanian molluscs) is the excellent web-based *Seashells of New South Wales* (Beechey 2008). However, not all Tasmanian species are covered, and there is also some regional variation that further complicates matching up Tasmanian material with the specimens illustrated.

My 2005 article listed a few other species whose occurrence at Taroona I no longer think plausible, and whose inclusion in that list I now put down to inexperience. For the record, these are: the mussel *Xenostrobus inconstans* (which I now believe to have been an unusually brown juvenile of the abundant and normally black *X. pulex*); the minute bivalve *Hamacuna hamata* (probably a very worn specimen of the much more common *Notomytilus ruber*); the smoked venerid *Eumarcia fumigata* (probably a very worn *Callista diemenensis*); the bivalve *Petricola rubiginosa* (probably an aged and worn *Venerupis anomala*); the slit-shell *Sinezona pulchra* (probably the more common *S. atkinsoni*); the rice-shell *Rissoina rhyllensis* (probably the more common *R. fasciata*); Comptons cowrie *Notocypraea comptoni* (probably the more common *N. angustata*); tacit wentletrap *Epitonium tacitum* (probably the more common *E. jukesianum*); the dove-shell *Mitrella legrandi* (probably *M. lincolnensis*); the dove-shell *Pseudamycla dermestoidea* (the correct name for the local species is *P. miltostoma*); the mitre-shell *Mitra carbonaria* (that name is now reserved for a species whose closest occurrence is probably the Bass Strait islands; our local species is *M. badia*); and the 'turrid' (now reallocated to the cone-shell family) *Guraelus mitralis* (probably *G. tasmanicus*). Additionally, the species of sand-snail that I called *Polinices tasmanica* in my previous listing is what I currently refer to as *P. didyma* – although I reserve judgement on whether it really is this species. The name *P. tasmanica* appears no longer to be in general use despite the specimens with characteristics that I attribute to this name (small, thick shell with faint banding) being confined to southern Tasmania. Typical *P. didyma* occurs from northern and eastern Tasmania northwards.

There are still some major taxonomic gaps in my species list. Among the gastropods, these include the sinistral-creepers in the family Triphoridae. These micro-molluscs are distinctive in that they coil in the opposite direction to normal (i.e. sinistrally rather than dextrally). However, beyond this they are notoriously difficult to identify, with separation into different species or even genera often reliant on the nature of surface sculpturing of the protoconch (i.e. the first few whorls, laid down by the juvenile mollusc). Since surface sculpturing is one of the first features to be worn away, sometimes even before the mollusc dies, it is perhaps unsurprising that I have so many unidentified and so few identified triphorids in my collection. Similar identification difficulties apply to the microscopic members of three other gastropod families, the Anabathridae, Rissoellidae and Eatoniellidae. The paucity of chiton species on the list, on the other hand, is partly an artefact of the tendency for these eight-plated molluscs to

disassemble once the animal dies, rendering identification challenging because most species are identified using a combination of shell-plate and animal girdle characters. Meanwhile, I have very few records of non-shelled molluscs such as the sea-slugs, octopus and squid for Tarooma, as these are seldom washed up in a state fit to identify. Diving surveys and light-trapping or squid-jigging would be required to better capture their respective diversity.

I conclude this update with a revised taxonomic list of marine molluscs that I have recorded at Tarooma up until July 2008 (Appendix). My hope is that it spurs others on into seeking to understand their own local marine mollusc diversity.

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Note: grey-scale embedded image in this article is shown in full colour and enlarged in the central pages of this volume.

APPENDIX. A taxonomic list of the marine molluscs recorded by the author in Taroona, Tasmania, to July 2008. Questionable records (where the author's identification is considered provisional, or where the taxonomic status of the species concerned is uncertain) are indicated by an asterisk*.

Families are listed in taxonomic order, while the species within families are in alphabetical order. Gastropod taxonomy is largely on Bouchet & Rocroi (2005) and other taxonomy on Beesley *et al.* (1998).

CHITONIDAE

Chiton glaucus Gray, 1828

Sypharochiton pelliserpentis (Quoy & Gaimard, 1836)

ISCHNOCHITONIDAE

Ischnochiton australis (Blainville, 1825)

MOPALIIDAE

Plaxiphora albida (Blainville, 1825)

NUCULANIDAE

Nuculana crassa (Hinds, 1843)

NUCULIDAE

Ennucula obliqua (Lamarck, 1819)

Pronucula pusilla (Angas, 1877)

ARCIDAE

Barbatia pistachia (Lamarck, 1819)

Barbatia reticulata (Gmelin, 1791)

GLYCYMERIDIDAE

Glycymeris striatularis (Lamarck, 1819)

LIMOPSIDAE

Lissarca rhomboidalis Verco, 1907

PHILOBRYIDAE

Cosa fimbriata Tate, 1898

Micromytilus crenatuliferus (Tate, 1892)

Notomytilus ruber (Hedley, 1904)

LIMIDAE

Limatula strangei (Sowerby, 1872)

MYTILIDAE

Austromytilus rostratus (Dunker, 1857)

Modiolus albicostatus Lamarck, 1819

Modiolus areolatus Gould, 1850

Musculus impactus (Hermann, 1782)

Mytilus galloprovincialis planulatus Lamarck, 1819

Solamen recens (Tate, 1897)

Trichomusculus barbatus (Reeve, 1858)

Xenostrobus pulex (Lamarck, 1819)

OSTREIDAE

Crassostrea gigas Thunberg, 1793

Ostrea angasi Sowerby, 1871

PECTINIDAE

Equichlamys bifrons (Lamarck, 1819)

Mimachlamys asperima (Lamarck, 1819)

Pecten fumatus Reeve, 1852

MALLEIDAE

Vulsella spongiarum Lamarck, 1819

PTERIIDAE

Electroma georgiana (Quoy & Gaimard, 1834)

TRIGONIIDAE

Neotrigonia margaritacea (Lamarck, 1804)

HIATELLIDAE

Hiatella australis (Lamarck, 1818)

Panopea australis Sowerby, 1833

CORBULIDAE

Corbula gibba Olivi, 1792

PHOLADIDAE

Barnea obturamentum Hedley, 1893

Pholas australasiae Sowerby, 1849

TEREDINIDAE

**Bankia australis* (Calman, 1920)

CLEIDOTHAERIDAE

Cleidothaerus albidus (Lamarck, 1819)

MYOCHAMIDAE

Myadora brevis Sowerby, 1829

Myadora complexa Iredale, 1924

CARDIIDAE

Fulvia tenuicostata (Lamarck, 1819)

Nemocardium thetidis (Hedley, 1902)

CARDITIDAE

Cardita excavata Deshayes, 1854

Venericardia bimaculata (Deshayes, 1854)

CONDYLOCARDIIDAE

Condylocardia limaeformis Cotton, 1930

Condylocardia pectinata (Tate & May, 1900)

Condylocardia rectangularis Cotton, 1930

Condylocuna projecta (Hedley, 1902)

Cuna concentrica Hedley, 1902

Cuna delta (Tate & May, 1900)

Ovacuna atkinsoni (Tenison Woods, 1877)

CYAMIIDAE

Cyamiomacra communis Hedley, 1906

- Cyamiomactra mactroides* Tate & May, 1900
Gaimardia tasmanica (Beddome, 1882)
NEOLEPTONIDAE
Neolepton planilirata (Gatliff & Gabriel, 1911)
SPORTELLIDAE
Anisodonta subalata (Gatliff & Gabriel, 1910)
GALEOMMATIDAE
Lasaea australis (Lamarck, 1818)
Marikellia solida (Angas, 1877)
Melliteryx acupuncta (Hedley, 1902)
**Myllita deshayesi* d'Orbigny & Récluz, 1850
Myllita tasmanica Tenison Woods, 1875
Mysella anomala Angas, 1877
Mysella donaciformis Angas, 1878
Mysella dromanaensis (Gatliff & Gabriel, 1912)
Mysella lactea Hedley, 1902
LUCINIDAE
Divalucina cumingi (A. Adams & Angas, 1863)
Epicodakia tatei (Angas, 1879)
Myrtea mayi (Gatliff & Gabriel, 1911)
Wallucina assimilis (Angas, 1868)
UNGULINIDAE
Diplodonta tasmanica Tenison Woods, 1876
Fellaniella globularis (Lamarck, 1818)
MACTRIDAE
Mactra rufescens Lamarck, 1819
Mactra antecedens Iredale, 1930
Spisula trigonella (Lamarck, 1818)
MESODESMATIDAE
Anapella cycladea (Lamarck, 1818)
Paphies elongata (Reeve, 1854)
Paphies erycinaea (Lamarck, 1819)
SOLENIIDAE
Solen vaginoides (Lamarck, 1818)
PSAMMOBIIDAE
Gari livida (Lamarck, 1818)
Soletellina biradiata (Wood, 1815)
TELLINIDAE
Merisca margaritina (Lamarck, 1818)
Pseudarcopagia botanica Hedley, 1918
Tellinella albinella (Lamarck, 1818)
VENERIDAE
Callista diemenensis (Hanley, 1844)
Circomphalus disjecta (Perry, 1811)
Dosinia caerulea Reeve, 1850
Irus carditoides (Lamarck, 1818)
Irus griseus (Lamarck, 1818)
Katelysia rhytiphora (Lamy, 1935)
Katelysia scalarina (Lamarck, 1818)
Placamen placidum (Philippi, 1844)
Tawera gallinula (Lamarck, 1818)
Tawera lagopus (Lamack, 1818)
Timoclea cardioides (Lamarck, 1818)
Venerupis largillierti (Philippi, 1849)
Venerupis anomala (Lamarck, 1818)
SEPIADARIIDAE
Euprymna tasmanica (Pfeffer, 1884)
SEPIIDAE
Sepia novaehollandiae Hoyle, 1909
LEPETIDAE
Propilidium tasmanicum (Pilsbry, 1895)
LOTTIIDAE
Lottia mixta (Reeve, 1855)
Notoacmea alta Oliver, 1926
Notoacmea corrodenda (May, 1920)
Notoacmea flammea (Quoy & Gaimard, 1834)
Notoacmea mayi (May, 1923)
Notoacmea petterdi (Tenison Woods, 1876)
Patelloida alticostata (Angas, 1865)
Patelloida insignis (Menke, 1843)
Patelloida latistrigata (Angas, 1865)
Patelloida profunda calamus (Crosse & Fischer, 1864)
Patelloida victoriana (Singleton, 1937)
NACELLIDAE
Cellana solida (Blainville, 1825)
PATELLIDAE
Patella peronii Blainville, 1825
NERITIDAE
**Nerita melanotragus* E. A. Smith, 1884
FISSURELLIDAE
Amblychilepas javanicensis (Lamarck, 1822)
Amblychilepas nigrita (Sowerby, 1834)
Emarginula candida (A. Adams, 1851)
Hemitoma submarginata (Blainville, 1819)
Macroschisma tasmaniae Sowerby, 1866
Montfortula rugosa (Quoy & Gaimard, 1834)
Puncturella demissa Hedley, 1904
Puncturella harrisoni Beddome, 1882
Scutus antipodes Montfort, 1810
HALIOTIDAE
Haliotis rubra rubra Leach, 1814
SCISSURELLIDAE
Incisura rosea remota (Iredale, 1924)
Sinezona atkinsoni (Tenison Woods, 1877)
CALLIOSTOMATIDAE
Calliostoma hedleyi Pritchard & Gatliff, 1902

TROCHIDAE

- Austrocochlea brevis* Parsons & Ward, 1994
Austrocochlea constricta (Lamarck, 1822)
Bankivia fasciata (Menke, 1830)
Cantharidella tiberiana (Crosse, 1863)
Chlorodiloma odontis (Wood, 1828)
Clanculus aloysii Tenison Woods, 1876
Clanculus flagellatus (Philippi, 1848)
Clanculus limbatus (Quoy & Gaimard, 1834)
Clanculus plebejus (Philippi, 1851)
Clanculus undatus (Lamarck, 1816)
Diloma concamerata (Wood, 1828)
Fossarina petterdi Crosse, 1870
Fossarina legrandi Petterd, 1879
Gibbula hisseyiana (Tenison Woods, 1876)
Herpetopoma aspersa (Philippi, 1846)
Nanula tasmanica (Petterd, 1879)
Phasianotrochus eximius (Perry, 1811)
Phasianotrochus irisodontes (Quoy & Gaimard, 1834)
Phasianotrochus rutilus (A. Adams, 1853)

PHASIANELLIDAE

- Phasianella australis* (Gmelin, 1791)

TURBINIDAE

- Astraliium aureum* (Jonas, 1844)
Brookula angeli (Tenison Woods, 1876)
Brookula crebresculpta (Tate, 1899)
**Brookula nepeanensis* (Gatliff, 1906)
Cirsonella weldii (Tenison Woods, 1876)
Lissotesta contabulata Tate, 1899
Lissotesta micra (Tenison Woods, 1876)
Lodderena minima (Tenison Woods, 1876)
Turbo undulatus Lightfoot, 1786

ATAPHRIDAE

- Acremodontina translucida* (May, 1915)

PLESIOTROCHIDAE

- Plesiotrochus monachus* (Crosse & Fischer, 1864)

CERITHIIDAE

- Cacozeliana granaria* Kiener, 1842
Cacozeliana icarus (Bayle, 1880)

DIALIDAE

- Diala suturalis* (A. Adams, 1853)

LITIOPIDAE

- Alaba monile* (A. Adams, 1862)
Alaba translucida (Hedley, 1905)

SILIQARIIDAE

- Ctenagodus weldii* (Tenison Woods, 1875)

TURRITELLIDAE

- Colpospira australis* (Lamarck, 1822)

- Gazameda gunnii* (Reeve, 1848)

- Gazameda tasmanica* (Reeve, 1849)

- Maoricolpus roseus* (Quoy & Gaimard, 1834)

CALYPTRAEIDAE

- Calyptraea calyptraeformis* Lamarck, 1822

- Maoricrypta immersa* (Angas, 1865)

EATONIELLIDAE

- Crassitoniella erratica* (May, 1913)

- Crassitoniella flammea* (Frauenfeld, 1867)

- *Eatoniella atrella* Ponder & Yoo, 1978

- Eatoniella atropurpurea* (Frauenfeld, 1867)

- Eatoniella melanochroma* (Tate, 1899)

CYPRAEIDAE

- Notocypraea angustata* (Gmelin, 1791)

- Notocypraea declivis* (Sowerby, 1870)

- Notocypraea subcarnea* (Beddome, 1896)

EPITONIIDAE

- Epitonium jukesianum* (Forbes, 1852)

- Opalia granosa* (Quoy & Gaimard, 1834)

- Opalia australis* (Lamarck, 1822)

ACLIDIDAE

- Austrorissopsis brevis* (May, 1919)

- *Apicalia brazieri* (Angas, 1877)

- Curculima petterdi* (Beddome, 1882)

- Eulima augur augur* Angas, 1865

- Hebeulima kilcundae* (Gatliff & Gabriel, 1914)

- *Melanella orthopleura* (Tate, 1898)

LITTORINIDAE

- Afrolittorina praeternissa* (May, 1909)

- Austrolittorina unifasciata* (Gray, 1826)

- Bembicium auratum* (Quoy & Gaimard, 1834)

- Bembicium melanostomum* (Gmelin, 1791)

- Bembicium nanum* (Lamarck, 1822)

- Laevilittorina mariae* (Tenison Woods, 1876)

- Risellopsis mutabilis* May, 1909

- Rufolacuna bruniensis* (Beddome, 1883)

NATICIDAE

- Eunaticina umbilicata* (Quoy & Gaimard, 1833)

- Frigaticina beddomei* (Johnston 1884)

- Polinices conica* (Lamarck, 1822)

- *Polinices didyma* (Röding, 1798)

- Sinum zonale* (Quoy & Gaimard, 1833)

ANABATHRIDAE

- Amphithalamus obesus* H. Adams, 1866

- Anabathron contabulatum* (Frauenfeld, 1867)

- Anabathron luteofuscus* May, 1920

- Badepigrus badia* (Petterd, 1884)

- Badepigrus pupoides* (H. Adams, 1865)

- Pisinna approximata* (Petterd, 1884)
Pisinna frenchiensis (Gatliff & Gabriel, 1908)
Pisinna kershawi (Tenison Woods, 1878)
**Pisinna labrotoma* (May, 1919)
HYDROBIIDAE
**Ascorhis victoriae* (Tenison Woods, 1878)
POMATIOPSIDAE
Coxiella striata Reeve, 1842
RISSOIDAE
Alvania fasciata (Tenison Woods, 1876)
Alvania strangei (Brazier, 1894)
Lironoba australis (Tenison Woods, 1877)
Lironoba unilirata (Tenison Woods, 1878)
Merelina cheilostoma (Tenison Woods, 1877)
Merelina gracilis (Angas, 1871)
Onoba multilirata (May, 1915)
Onoba perpolita (May, 1919)
Onoba rubicunda (Tate & May, 1900)
Onoba australiae (Frauenfeld, 1867)
Rissoina elegantula Angas, 1880
Rissoina fasciata (A. Adams, 1853)
Rissoina angasi Pease, 1872
RANELLIDAE
Argobuccinum pustulosum (Lightfoot, 1786)
Cabestana spengleri Perry, 1811
Cabestana tabulata (Menke, 1843)
Ranella australasia australasia (Perry, 1811)
Sassia eburnea (Reeve, 1844)
Sassia verrucosa (Reeve, 1844)
TONNIDAE
Semicassis semigranosum (Lamarck, 1822)
Semicassis pyrum (Lamarck, 1822)
CERITHIOPSIDAE
Seila albosutura (Tenison Woods, 1877)
Specula turbonilloides (Tenison Woods, 1879)
Tubercliopsis dannevigii (Hedley, 1911)
NEWTONIELLIDAE
Socienna apicicostata (May, 1919)
Zaclys semilaevis (Tenison Woods, 1877)
TRIPHORIDAE
Aclophoropsis festiva (A. Adams, 1851)
**Hedleytriphora scitula* (A. Adams, 1851)
Tetraphora granifera (Brazier, 1894)
HIPPOCIDAE
Antisabia foliacea (Quoy & Gaimard, 1835)
Hippoxis australis (Lamarck, 1819)
TRIVIIDAE
Trivia merces (Fredale, 1924)
- VELUTINIDAE
Lamellaria ophione Gray, 1849
VERMETIDAE
Magilina caperata (Tate & May, 1900)
Serpulorbis waitei Hedley, 1903
BUCCINIDAE
Cominella lineolata (Lamarck, 1809)
Penion mandarinus (Duclos, 1831)
Penion maximus (Tryon, 1881)
Tasmeuthria clarkei (Tenison Woods, 1876)
COLUBRARIIDAE
Fusus reticulatus (A. Adams, 1855)
COLUMBELLIDAE
Aesopus solidus (May, 1910)
Anachis atkinsoni (Tenison Woods, 1876)
Anachis fulgida (Reeve, 1859)
**Mitrella axiaerata* (Verco, 1910)
Mitrella leucostoma (Gaskoin, 1852)
Mitrella lincolnensis (Reeve, 1859)
Mitrella semiconvexa (Lamarck, 1822)
Pseudamycla miltostoma (Tenison Woods, 1876)
FASCIOLARIIDAE
Fusinus novaehollandiae (Reeve, 1847)
Pleuroploca australasia (Perry, 1811)
NASSARIIDAE
Nassarius pauper (Gould, 1850)
Nassarius nigellus (Reeve, 1854)
Nassarius pauperatus (Lamarck, 1822)
CANCELLARIIDAE
Cancellaria lactea Deshayes, 1830
CONIDAE
Asperdaphne desalesii (Tenison Woods, 1877)
Conus anemone Lamarck, 1810
Etrema bicolor (Angas, 1871)
Etrema denseplicata (Dunker, 1871)
Guraleus tasmanicus (Tenison Woods, 1876)
Guraleus alucinans (Sowerby, 1896)
Guraleus incrustus (Tenison Woods, 1876)
Guraleus pictus (A. Adams & Angas, 1863)
TEREBRIDAE
Duplicaria ustulata (Deshayes, 1857)
Hastula brazieri (Angas, 1871)
TURRIDAE
Austrodrillia beraudiana (Crosse, 1863)
Epidirone philipineri Tenison Woods, 1877
COSTELLARIIDAE
Austromitra analogica (Reeve, 1845)
Austromitra tasmanica (Tenison Woods, 1876)

CYSTISCIDAE

Cystiscus angasi (Crosse, 1870)

MARGINELLIDAE

Austroginella formicula (Lamarck, 1822)

Mesoginella pygmaeoides (Singleton, 1937)

Mesoginella turbinata (Sowerby, 1846)

MITRIDAE

Mitra badia Reeve, 1844

Mitra glabra Swainson, 1821

MURICIDAE

Agnewia tritoniformis (Blainville, 1832)

Bedeua paivae (Crosse, 1864)

Dicathais orbita (Gmelin, 1791)

Haustrum vinosum (Lamarck, 1822)

Litozamia brazieri (Tenison Woods, 1875)

Litozamia petterdi (Crosse, 1870)

Phycothais reticulata (Blainville, 1832)

Prototyphis angasi (Crosse, 1863)

VOLUTIDAE

Amoria undulata (Lamarck, 1804)

Ericusa sowerbyi (Kiener, 1839)

Livonia mammilla (Sowerby, 1844)

VOLUTOMITRIDAE

Waimatea obscura (Hutton, 1873)

OLIVELLIDAE

Belloлива leucozona (A. Adams & Angas, 1864)

OLIVIDAE

Amalda marginata (Lamarck, 1811)

ARCHITECTONICIDAE

Philippia lutea (Lamarck, 1822)

ORBITESTELLIDAE

**Microdiscula charopa* Tate, 1899

Orbitestella mayi (Tate, 1899)

PYRAMIDELLIDAE

Kolooneella anabathron (Hedley, 1906)

**Kolooneella coacta* (Watson, 1886)

Kolooneella micra (Petterd, 1884)

Miralda suprasculpta (Tenison Woods, 1878)

Odostomia diaphana (Verco, 1906)

Odostomia mayii (Tate, 1898)

Odostomia deplexa Tate & May, 1900

Oscilla tasmanica (Tenison Woods, 1877)

Puposyrnola harrisoni (Tate & May, 1900)

Puposyrnola tasmanica (Tenison Woods, 1877)

Syrnola metcalfei (Pritchard & Gatliff, 1900)

Syrnola simplex (Angas, 1871)

Syrnola bifasciata Tenison Woods, 1875

Syrnola tincta Angas, 1871

Turbonilla acicularis (A. Adams, 1853)

Turbonilla fusca (A. Adams, 1855)

Turbonilla mariae Tenison Woods, 1876

Turbonilla tasmanica Tenison Woods, 1875

Turbonilla portseansensis (Gatliff & Gabriel, 1911)

RISSEOELLIDAE

**Rissoella confusa robertsoni* Ponder & Yoo, 1977

APLYSIIDAE

Aplysia juliana Quoy & Gaimard, 1832

Aplysia parvula Guilding in Mörch, 1863

HAMINOEIDAE

Haminoea maugeansis Burn, 1966

CYLICHNIDAE

Adamnestia arachis (Quoy & Gaimard, 1833)

Austrocylichna exigua (A. Adams, 1850)

PHILINIDAE

Philine angasi (Crosse & Fischer, 1865)

RETUSIDAE

Retusa atkinsoni (Tenison Woods, 1876)

Retusa pelyx Burn in Burn & Bell, 1974

PLEUROBRANCHIDAE

Pleurobranchaea maculata (Quoy & Gaimard, 1832)

SIPHONARIIDAE

Siphonaria diemenensis Quoy & Gaimard, 1833

Siphonaria funiculata Reeve, 1856

Siphonaria tasmanica Tenison Woods, 1876

ELLOBIIDAE

Marinula parva (Swainson, 1856)

Marinula xanthostoma A. Adams & H. Adams, 1855