

Cape Range Bush Blitz

Molluscs

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Nomenclature and taxonomy used in this report is consistent with:
The Australian Faunal Directory (AFD)

*or WoRMS where that is more up to date.

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Abstract

One hundred and thirty seven lots of marine and terrestrial molluscs were collected from 5 classes (Polyplacophora, Gastropoda, Bivalvia, Aplacophora and Scaphopoda). This diversity was spread across 51 families, with gastropods dominant (124 lots), then the Bivalvia (9 lots). Minor classes included one scaphopod or tusk shell *Pictodentalium formosum*, two uncommonly found aplacophorans and one chiton. Almost half of these lots were micromolluscs (less than 1 cm, with 57 less than 0.5 cm) and we had many significant finds here. Within the gastropods, heterobranchs were dominant with many microgastropods, nudibranchs and land snails. Highlights include a population of small montacutid bivalve commensals living around the mouth of irregular sea urchin *Breyenia desori*. We collected the urchin host via hand dredge off Bundegi Reef, and the commensal bivalves appear to represent a new genus and a new species. Several even smaller (<1 cm) microgastropods that are poorly known but of high evolutionary significance were also live taken, including the standout *Rhodope*, the first record of this little known worm-like mollusc from WA. There were a number of beautiful sea slugs including a lucky strike in the aquarium at the Ningaloo Visitor Centre, where a large, stunning and rarely seen candy cane sea slug was 'discovered'. Inquisitive cuttlefish and hunting octopus at a number of sites including shallow reef flats were observed and photographed but not collected. Given the WA Museum has worked in this region recently, the fauna taken on this trip reveals a number of new species, new records and other significant discoveries, indicating we have not yet fully grasped the biodiversity of this region.

1. Introduction

The Cape Range peninsula forms the westernmost area of continental Australia in a climatic zone defined as tropical arid (Humphreys 1993). The marine environments surrounding the Cape Range peninsula can be divided into roughly two areas. The west coast is dominated by Ningaloo Reef, which is a 260km long narrow fringing/barrier coral reef with an extensive back-reef lagoon (Wilson 2013). The lagoon is generally quite shallow (mostly a few metres deep) and the water relatively clear. The lagoonal benthic habitat is dominated by sand and rubble substrata with subtidal patch reefs of mostly *Acropora* corals, and extensive sandstone rocky intertidal platforms along the shoreline (Cassata and Collins 2008). Ningaloo Reef was protected as a marine park in 1987, and in 2011 was recognised with World Heritage Status.

To the east is the large embayment known as the Exmouth Gulf, some 40 km wide and 80 km long (ca 3000 km²). The gulf is quite different than the west coast. Unlike Ningaloo reef, it is dominated not by coral reefs but by soft sediments with widespread filter-feeder communities of sponges and soft corals. Much of the gulf has been subjected to widespread prawn trawling since the early 1960s (Kangas et al. 2007). The north western edge of the gulf is fringed with intertidal reef platforms and sandy beaches, leading to weedy rubble reefs and subtidal seagrass communities. The eastern and southern edges of the gulf are very turbid and support broad mudflats and mangrove lined tidal creeks. A row of subtidal shoals and emergent islands some 5-10 km off the eastern shore provide dense and diverse coral reefs that have not been trawled.

Ningaloo Reef is bathed by the southern flowing warm-water Leeuwin Current and is a well-studied and well-loved fringing reef system. As a result the molluscan fauna is relatively well documented. Existing WAM records from Ningaloo Reef indicate ~2167 records of marine molluscs in our collections. Exmouth Gulf is more poorly studied than Ningaloo, but has received some attention. Recent research initiatives led by WA Museum supported by the Net Conservation Benefits Fund (2014-present) have added greatly to knowledge of this interesting area. At present WA Museum records indicate ~1141 existing records of marine molluscs from the gulf. Although the subtidal and coastal region of the upper gulf has seen more attention, the mangrove systems are little known. The Cape Range, a 330 m high anticline of Miocene limestone, has been the focus of terrestrial work for many years (Humphreys 1993). Existing WAM mollusc holdings total ~383 lots of land snails.

Marine macromolluscs have been the focus of a number of collecting expeditions over the last several decades, but virtually nothing is known about the marine micromolluscs (Middelfart et al. 2016). The lack of a comprehensive baseline is especially relevant given renewed interest in the area (Fitzpatrick et al. 2019). This represented an excellent opportunity to focus on the micromollusc faunal component to achieve a more comprehensive understanding of the total malacofauna and to discover new species, which fulfils the aim of the activity. This report summarises the results of a two week targeted survey of molluscs in the Cape Range area, with emphasis on micromolluscs in Exmouth Gulf.

2. Methods

2.1 Site selection

Most sampling sites were located in Exmouth Gulf, with a few targeted collections on the west coast of the Cape Range peninsula. Sites were chosen to represent as wide a range of habitat types as possible, including subtidal and intertidal coral reefs, sponge and rubble reefs, algae and seagrass pavements, and mangroves and mangrove-lined creeks. Site locations were partly determined by accessibility via boat, 4WD or helicopter and OHS requirements.

2.2 Survey techniques

Field

Molluscs were sampled by several methods. The first method of sampling was targeted hand collection by SCUBA or snorkel. This allowed collection of small cryptic species as well as larger mobile species. The second method involved direct or indirect procurement of sediment for micromollusc capture. Sediment was sampled directly by scooping a fraction (~1 L) into Ziploc bags using a measuring cup/scoop. Sediment was also indirectly sampled by collecting macroalgal fronds and placing these into Ziploc bags. Both of these sampling methods were elutriated (see below). Sometimes algal samples were left to sit overnight in bowls to capture small molluscs that crawled off overnight. The third method was sampling of terrestrial snails, which was conducted by walking and turning vegetation or small rocks to find samples, as well as sifting leaf litter. Samples were then carefully hand collected and placed in calico bags.

Shore or boat deck

Gravel or algal samples of about 1L were placed into a barrel in approximately 30L of seawater. This was agitated and swirled in a circular motion to instigate centrifugal forces for approximately 30 seconds to 1 minute. Once agitation ceased, sediment would start to settle to the bottom. At this point, the water was poured into a set of 500 μm and 250 μm sieves (occasionally accompanied by a 1mm sieve), leaving behind the sediment, but taking the suspended biota in the sieves. The barrel was then refilled with seawater and the method repeated. The elutriate in the sieve was washed into Ziploc bags for chilled transportation, and were sorted under a dissecting microscope at the lab.

Lab

Macromolluscs were sorted, provisionally identified, labelled, imaged, and preserved in 70 or 100% ethanol and/or formalin (with tissue subsamples in 100% ethanol), and placed in field

plastics then packed for transport. Data was entered into field notebook that were later transcribed into a database input form, and imported into the main database at WAM. Elutriations were placed in bowls and then subsampled via a clean pipette into petri dishes for microscopy. Each sample in a petri dish was sorted, and selected specimens were provisionally identified and imaged. Samples retained were usually placed in 100% ethanol in cryolok vials with a registration number sticker on top. Data were recorded in a notebook and later transcribed into a database input form, and imported into the main database at WAM.

Elutriation step starts at Stinky Creek (CR19/31), Lisa Kirkendale. Photo: Nerida Wilson/WA Museum.



Members of the Aquatic Zoology group on a west coast intertidal platform (CR19/02). Photo: Nerida Wilson/WA Museum.



Nerida Wilson collecting subtidal sediment for elutriation of micromolluscs (CR19/28). Photo: Lisa Kirkendale/WA Museum.



2.2.1 Methods used at standard survey sites

Sampling at standard survey sites was led by terrestrial teams. Please see 2.2 above for terrestrial snail collection methods.

2.3 Identifying the collections

Identification of vouchered specimens was made by the authors, initially in the field and then all retained vouchers were identified in the laboratory, using the preserved specimens or dead dried specimens, microscopes, fresh colour photographs, available literature and museum collections including images of vouchered museum specimens (the latter was especially important for micromolluscan identifications). Identification in the laboratory was done by a number of authors beyond the two principles, with additional identification for macromolluscs by Glad Hansen and Hugh Morrison, land snails by Corey Whisson and micromolluscs by Peter Middelfart. Primary literature sources included Wilson 1993 (macrogastropods initially with update to nomenclature afforded by WoRMS), Lamprell and Whitehead 1992, Lamprell and Healy 1998 and Huber 2010 (bivalves), Stanisic et al. 2018 (land snails), other specialist books for different families of gastropods, and primary literature (micromolluscs).

3. Results and Discussion

Appendix 1 lists all molluscs collected during the Bush Blitz.

3.1 Un-named or not formalised taxa

Given the focus on micromolluscs, where there is much taxonomic uncertainty, many taxa are not fully identified to species at this stage (including new species). This reflects the time necessary to formally identify species in this challenging size range but also given that some may be new to science but require further data to ascertain whether or not they belong to older available names.

| Table 1. Putatively un-named or not formalised taxa | |
|---|-------------------------------------|
| Taxon | Comment |
| <i>Acteon</i> sp. | juvenile |
| <i>Bornella</i> sp. Bush Blitz Cape Range 1 | likely new, also known from Dampier |
| <i>Caecum</i> sp. Bush Blitz Cape Range 1 | |
| <i>Caecum</i> sp. Bush Blitz Cape Range 2 | |
| <i>Caecum</i> sp. Bush Blitz Cape Range 3 | |
| <i>Caecum</i> sp. Bush Blitz Cape Range 4 | |
| <i>Caecum</i> sp. Bush Blitz Cape Range 5 | |
| <i>Caecum</i> cf. <i>folini</i> | |
| <i>Parastrophia</i> sp. Bush Blitz Cape Range 1 | |
| Calopidae sp. Bush Blitz Cape Range 1 | |
| Calopidae sp. Bush Blitz Cape Range 2 | |
| <i>Strepsitaurus</i> sp. indet. Bush Blitz Cape Range 1 | |
| <i>Rissoina</i> cf. <i>ambigua</i> | |
| Cerithidae sp. Bush Blitz Cape Range 1 | |
| cf. Liotiidae sp. Bush Blitz Cape Range 1 | |
| <i>Chromodoris</i> aff. <i>striatella</i> WA B | See Layton et al 2018 |
| <i>Goniobranchus</i> cf. <i>roboi</i> | Now under description |
| <i>Hypselodoris</i> cf. <i>maculosa</i> | |
| <i>Cima</i> sp. Bush Blitz Cape Range 1 | |
| <i>Cima</i> sp. Bush Blitz Cape Range 2 | |
| <i>Cima</i> sp. Bush Blitz Cape Range 3 | |
| <i>Graphis</i> sp. Bush Blitz Cape Range 1 | |
| Nuculanidae sp. Bush Blitz Cape Range 1 | |
| <i>Cysticus</i> sp. Bush Blitz Cape Range 1 | |
| <i>Halgerda</i> sp. Bush Blitz Cape Range 1 | Known only from Exmouth |
| Eatoniellidae sp. Bush Blitz Cape Range 1 | |
| Eatoniellidae sp. Bush Blitz Cape Range 2 | |
| Eulimidae sp. Bush Blitz Cape Range 1 | |
| Eulimidae sp. Bush Blitz Cape Range 2 | |
| Eulimidae sp. Bush Blitz Cape Range 3 | |
| Eulimidae sp. Bush Blitz Cape Range 4 | |
| <i>Hemiliostraca</i> sp. Bush Blitz Cape Range 1 | |
| <i>Gastrochaena</i> cf. <i>philippinensis</i> | |
| <i>Okenia</i> cf. <i>mellita</i> | Known only from Exmouth |
| <i>Haminoea</i> sp. Bush Blitz Cape Range 1 | |
| <i>Haminoea</i> sp. Bush Blitz Cape Range 2 | |

| | |
|---|-----------------------|
| Leptochitonidae sp. Bush Blitz Cape Range 1 | |
| Litiopidae sp. Bush Blitz Cape Range 1 | |
| Monticutidae n. gen. n. sp. Bush Blitz Cape Range 1 | |
| <i>Murchisonella</i> cf. <i>anabathron</i> | |
| <i>Murchisonella</i> sp. Bush Blitz Cape Range 1 | |
| <i>Kolonella</i> sp. Bush Blitz Cape Range 1 | |
| Nassariidae sp. Bush Blitz Cape Range 1 | |
| Neomenidae sp. Bush Blitz Cape Range 1 | |
| <i>Spiniphiline</i> sp. Bush Blitz Cape Range 1 | |
| Pleurobranchidae sp. Bush Blitz Cape Range 1 | |
| <i>Gymnodoris</i> cf. <i>inornata</i> | |
| Pyramidellidae sp. Bush Blitz Cape Range 1 | |
| Pyramidellidae sp. Bush Blitz Cape Range 2 | |
| Pyramidellidae sp. Bush Blitz Cape Range 3 | |
| <i>Rhodope</i> sp. Bush Blitz Cape Range 1 | Now under description |
| Rissoellidae sp. Bush Blitz Cape Range 1 | |
| <i>Scaliola</i> sp. Bush Blitz Cape Range 1 | |
| <i>Liotella</i> sp. Bush Blitz Cape Range 1 | |
| <i>Lodderena</i> sp. Bush Blitz Cape Range 1 | |
| Skeneidae sp. Bush Blitz Cape Range 1 | |
| <i>Spirostyliferina</i> sp. Bush Blitz Cape Range 1 | |
| <i>Stomatella</i> cf. <i>impertusa</i> | |
| Strombidae sp. Bush Blitz Cape Range 1 | |
| <i>Terebra</i> sp. Bush Blitz Cape Range 1 | |
| Tonnidae sp. Bush Blitz Cape Range 1 | |
| <i>Trivia</i> sp. Bush Blitz Cape Range 1 | |
| <i>Lamellaria</i> sp. Bush Blitz Cape Range 1 | |
| <i>Chione</i> sp. Bush Blitz Cape Range 1 | |

3.2 Putative new species (new to science)

In this report, 'putative new species' means an unnamed species that, as far as can be ascertained, was identified as a new species as a direct result of this Bush Blitz.

| Species | Comment |
|------------------------------------|--|
| Montacutidae new genus new species | A population of small montacutid bivalve commensals was recovered off Bundegi reef during a short dredging trial. The bivalves were living around the mouth of two |

| | |
|--|---|
| | individuals of the irregular sea urchin <i>Breynia desori</i> . |
| <i>Rhodope</i> sp. Bush Blitz Cape Range 1 | This represents the first record of this little known worm-like mollusc family in WA. It is likely a new species. It was collected off Bundegi reef living in gravelly bottom (meiofauna) in a sponge garden. |

Two specimens of urchin-inhabiting bivalves (Montacutidae) (CR19/27), clustered around the mouth of the urchin. Photo: Nerida Wilson/WA Museum.



Rhodope sp., a worm-like sea slug collected amongst sand grains at 20m (CR19/25). Photo: Nerida Wilson/WA Museum.



3.3 Exotic and pest species

No exotic or pest species of molluscs were recorded.

3.4 Threatened species

No molluscs collected during this survey are listed by EBPC or State/Territory as conservation priority.

3.5 Range extensions

It is not possible at this time to assess range extensions for many taxa that have not been fully identified. Please see below range updates to date for significant fauna.

Table 5. Range extensions or significant infill in distribution records for species

| Species | Location sighted/observed | Distance from nearest known record (km) | Comments |
|---|---------------------------|--|---|
| <i>Thyca astericola</i> , an ectoparasite on the sea star <i>Iconaster longimanus</i> | Exmouth Gulf | Asia | No records on OZCAM, ALA, AFD. None known from Australia previously. |
| <i>Spiniphiline</i> sp. | Exmouth Gulf | Only known also from Moorea and Papua New Guinea (records unpubl). | Genus described from Aldabra Atoll. None known from Australia previously. |
| <i>Parastrophia challengerii</i> | Exmouth Gulf | Queensland | No records on OZCAM, ALA but records from Queensland in AFD. None known from WA previously. |
| <i>Rhodope</i> sp. | Exmouth Gulf | Nearest in Edithburgh, SA or Darwin, NT. | None known from WA previously. |
| <i>Spirostyliferina lizardensis</i> | Exmouth Gulf | Dampier | Need to sequence material from type locality to ascertain if it's the same species, conservative ID. (Layton et al. 2019) |
| <i>Chromodoris</i> aff. <i>striatella</i> WA B | Exmouth Gulf | Port Hedland | Need to sequence material to confirm ID. |

3.6 Genetic information

Tissue samples were taken from selected marine macromolluscs. Some will be used to aid in identification and for large scale phylogenetic work on certain groups. All samples were preserved (100% ethanol preservation of a tissue sample or entire voucher) to facilitate genetic work in the future. Almost all micromolluscs were stored in ethanol for later sequencing.

4. Information on species lists

Given the focus on micromolluscs, where there is much taxonomic uncertainty, many taxa are identified only to genus or to family for now. More research is necessary to fully identify these taxa. There are very few experts able to work on these groups and more support is necessary to continue. Some will be new to science.

5. Information for land managers

The site off of Bundegi reef referred to as the deep sponge garden (CR19/25) contains several important faunal records. This first record of *Rhodope* (outlined in Table 2 above) was found here during this expedition. *Thyca astericola*, an ectoparasite on sea stars, specifically *Iconaster longimanus*, was found at this site, and is the first record for Australia. As well, rare

Neotrigonia bivalves have been found at the same site during previous surveys. Many species are endemic to Australia and are evolutionarily significant. At this same site, a recently described species of medium sized cardiid or cockle bivalve was found live for the first time (*Ctenocardia pilbaraensis*).

6. Other significant findings

Goniobranchus cf. *roboi*. This species was known from a few photographs from Exmouth. This survey has provided the first physical vouchers, and its description is now underway with collaborators at the California Academy of Sciences.

Bornella sp. This species was 'discovered' at the Ningaloo Visitor Centre aquarium (collected in the south east side of Exmouth Gulf), and is most likely new to science. The possibility of an older available name is being currently investigated, and it is being included in a molecular phylogeny of *Bornella* species that was underway at the time of the survey.

7. Conclusions

We obtained a highly significant 137 lots of marine and terrestrial molluscs with extraordinary familial diversity (51). Our focus on this expedition was on microscopic (<0.5 cm) marine gastropods, with almost half of the total lots representatives from this assemblage. A population of small montacutid bivalve commensals living around the mouth of the irregular sea urchin *Breyntia desori* represents a new genus and new species. The colorful *Rhodope* is the first record of this little known worm-like mollusc from the state. The caecid *Parastrophia challengerii* is a new record for WA, previously known from Queensland. *Thyca astericola* an ectoparasite on sea stars, specifically *Iconaster longimanus* here, has not been reported in Australia until now. No threatened or endangered molluscan species or pests were recovered. The site off of Bundegi reef referred to as the deep sponge garden (CR19/25) was highlighted as significant given the several important faunal records recovered over the last several years. There is still much more research to do to properly place and appreciate this faunal collection. We are enormously grateful for this opportunity, and the support and encouragement to improve estimates of Western Australia's biodiversity.

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BHP participants

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Appendix 1. List of Molluscs recorded during the Cape Range Bush Blitz

| Family | Species | Common name | Putative new species | Threatened (EPBC Act) | Threatened (State Act) | Exotic/ pest |
|-----------------|---|-------------------|----------------------|-----------------------|------------------------|--------------|
| Achatinidae | <i>Erelopeas interioris</i> | land snail | No | No | No | No |
| Acteonidae | <i>Acteon</i> sp. | | No | No | No | No |
| Aglajidae | <i>Chelidonura pallida</i> | | No | No | No | No |
| Aplysiidae | <i>Aplysia reticulata</i> | sea hare | No | No | No | No |
| Bornellidae | <i>Bornella</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Bullidae | <i>Bulla ampulla</i> | bubble snail | No | No | No | No |
| Caecidae | <i>Caecum</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Caecidae | <i>Caecum</i> sp. Bush Blitz Cape Range 2 | | No | No | No | No |
| Caecidae | <i>Caecum</i> sp. Bush Blitz Cape Range 3 | | No | No | No | No |
| Caecidae | <i>Caecum</i> sp. Bush Blitz Cape Range 4 | | No | No | No | No |
| Caecidae | <i>Caecum</i> sp. Bush Blitz Cape Range 5 | | No | No | No | No |
| Caecidae | <i>Caecum cf. folini</i> | | No | No | No | No |
| Caecidae | <i>Caecum sepimentum</i> | | No | No | No | No |
| Caecidae | <i>Parastrophia challengerii</i> | | No | No | No | No |
| Caecidae | <i>Parastrophia</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Calopidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Calopidae | sp. Bush Blitz Cape Range 2 | | No | No | No | No |
| Camaenidae | <i>Rhagada capensis</i> | land snail | No | No | No | No |
| Camaenidae | <i>Quistrachia lefroyi</i> | land snail | No | No | No | No |
| Camaenidae | <i>Promontoconchum superbum</i> | land snail | No | No | No | No |
| Camaenidae | <i>Strepsitaurus</i> sp. indet. Bush Blitz Cape Range 1 | land snail | No | No | No | No |
| Cardiidae | <i>Tridacna noae</i> | Noae's giant clam | No | No | No | No |
| Cerithidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Chromodorididae | <i>Chromodoris aff. striatella</i> | sea slug | No | No | No | No |
| Chromodorididae | <i>Chromodoris colemani</i> | sea slug | No | No | No | No |
| Chromodorididae | <i>Glossodoris rufomarginata</i> | sea slug | No | No | No | No |
| Chromodorididae | <i>Goniobranchus cf. roboi</i> | sea slug | No | No | No | No |
| Chromodorididae | <i>Goniobranchus fidelis</i> | sea slug | No | No | No | No |

| | | | | | | |
|------------------|--|---------------------|-----|----|----|----|
| Chromodorididae | <i>Hypselodoris cf. maculosa</i> | sea slug | No | No | No | No |
| Chromodorididae | <i>Mexichromis macropus</i> | sea slug | No | No | No | No |
| Chromodorididae | <i>Verconia romeri</i> | sea slug | No | No | No | No |
| Cimidae | <i>Cima</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Cimidae | <i>Cima</i> sp. Bush Blitz Cape Range 2 | | No | No | No | No |
| Cimidae | <i>Cima</i> sp. Bush Blitz Cape Range 3 | | No | No | No | No |
| Cimidae | <i>Graphis</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Cuspidariidae | <i>Cuspidaria</i> sp. Bush Blitz Cape Range 1 | clam | No | No | No | No |
| Cysticidae | <i>Cysticus</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Dentaliidae | <i>Pictodentalium formosum</i> | tusk shell | No | No | No | No |
| Discodorididae | <i>Discodoris lilacina</i> | sea slug | No | No | No | No |
| Discodorididae | <i>Halgerda</i> sp. Bush Blitz Cape Range 1 | sea slug | No | No | No | No |
| Discodorididae | <i>Halgerda tessellata</i> | sea slug | No | No | No | No |
| Discodorididae | <i>Thordisa villosa</i> | sea slug | No | No | No | No |
| Eatoniellidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Eatoniellidae | sp. Bush Blitz Cape Range 2 | | No | No | No | No |
| Eulimidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Eulimidae | sp. Bush Blitz Cape Range 2 | | No | No | No | No |
| Eulimidae | sp. Bush Blitz Cape Range 3 | | No | No | No | No |
| Eulimidae | sp. Bush Blitz Cape Range 4 | | No | No | No | No |
| Eulimidae | <i>Hemiliostraca</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Eulimidae | <i>Thyca astericola</i> | ectoparasitic snail | No | No | No | No |
| Gastrochaenidae | <i>Gastrochaena cf. philippinensis</i> | boring bivalve | No | No | No | No |
| Goniodorididae | <i>Okenia cf. mellita</i> | sea slug | No | No | No | No |
| Haminoeidae | <i>Haloa</i> sp. Bush Blitz Cape Range 1 | bubble snail | No | No | No | No |
| Laternulidae | <i>Laternula anatina</i> | clam | No | No | No | No |
| Leptochitonidae | sp. Bush Blitz Cape Range 1 | chiton | No | No | No | No |
| cf. Liotiidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Litiopidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Litiopidae | <i>Styliferina goniochila</i> | | No | No | No | No |
| Montacutidae | New genus n. sp. Bush Blitz Cape Range 1 | | Yes | No | No | No |
| Murchisonellidae | <i>Murchisonella cf. anabathron</i> | | No | No | No | No |
| Murchisonellidae | <i>Murchisonella</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |

| | | | | | | |
|---------------------|---|-----------------|-----|----|----|----|
| Murchisonellidae | <i>Koloonella</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Mytilidae | <i>Septifer cumingii</i> | mussel | No | No | No | No |
| Nassariidae | <i>Nassarius dorsatus</i> | mud whelk | No | No | No | No |
| Nassariidae | sp. Bush Blitz Cape Range 1 | mud whelk | No | No | No | No |
| Neomenidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Philinidae | <i>Spiniphiline</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Phyllidiidae | <i>Reticulidia fungia</i> | sea slug | No | No | No | No |
| Plakobranhidae | <i>Thuridilla gracilis</i> | sea slug | No | No | No | No |
| Plakobranhidae | <i>Thuridilla indopacifica</i> | sea slug | No | No | No | No |
| Plakobranhidae | <i>Thuridilla moebii</i> | sea slug | No | No | No | No |
| Pleurobranchidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Polyceridae | <i>Gymnodoris</i> cf. <i>inornata</i> | sea slug | No | No | No | No |
| Pupillidae | <i>Pupoides myoporinae</i> | land snail | No | No | No | No |
| Pyramidellidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Pyramidellidae | sp. Bush Blitz Cape Range 2 | | No | No | No | No |
| Pyramidellidae | sp. Bush Blitz Cape Range 3 | | No | No | No | No |
| Pyramidellidae | <i>Odostomia</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Rhodopidae | <i>Rhodope</i> sp. Bush Blitz Cape Range 1 | | Yes | No | No | No |
| Rissoellidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Rissoinidae | <i>Rissoina</i> cf. <i>ambigua</i> | | No | No | No | No |
| Scaliolidae | <i>Scaliola</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Skeneidae | <i>Liotella</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Skeneidae | <i>Lodderena</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Skeneidae | sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Spirostyliferinidae | <i>Spirostyliferina lizardensis</i> | | No | No | No | No |
| Spirostyliferinidae | <i>Spirostyliferina</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Strombidae | sp. Bush Blitz Cape Range 1 | stromb | No | No | No | No |
| Terebridae | <i>Terebra</i> sp. Bush Blitz Cape Range 1 | auger shell | No | No | No | No |
| Tonnidae | sp. Bush Blitz Cape Range 1 | tun shell | No | No | No | No |
| Tritoniidae | <i>Tritoniopsis elegans</i> | sea slug | No | No | No | No |
| Triviidae | <i>Trivia</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Trochidae | <i>Stomatella</i> cf. <i>impertusa</i> | false ear shell | No | No | No | No |
| Turbinidae | <i>Astralium pileolum</i> | top shell | No | No | No | No |

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|-------------|---|------------------|----|----|----|----|
| Velutinidae | <i>Lamellaria</i> sp. Bush Blitz Cape Range 1 | | No | No | No | No |
| Veneridae | <i>Chione</i> sp. Bush Blitz Cape Range 1 | venus clam shell | No | No | No | No |