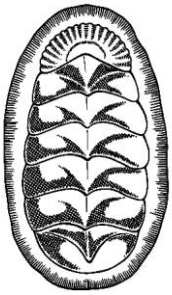
Molluscs of the intertidal zone- Hanging on for dear life ... *Madeline Ovens*

... Line drawings courtesy of Parks Victoria

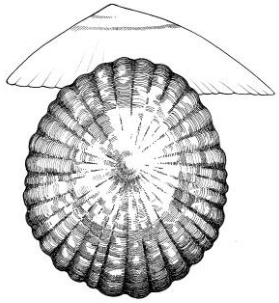
Next time you visit a rock platform along the Victorian coast, spare a thought for those creatures doing it tough in this testing environment. Imagine living and surviving in a place that is subjected to two droughts and two floods, daily! Such is the life of a myriad of plants and animals that call the intertidal zone 'home'. One such group of animals, the Molluscs, are well adapted to this lifestyle, and as a result are commonly found on the rocky shores and reefs of Victoria. Over 120,000 species of mollusc are known to inhabit the waters surrounding Australia, but here are some you are likely to come across in our local area.

Chiton class *Polyplacophora*



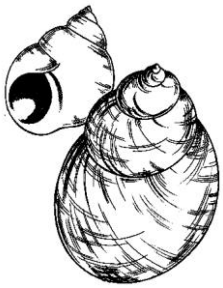
Chitons are a fascinating animals that resembles the common slater, although they are more closely related to a garden snail. Fossil records place their origins at over 400 million years ago. They can be found hiding in crevices and under rocks in the mid-lower intertidal zone. Chitons are more active after dusk than during the day, and will move quickly to evade light, if exposed by an upturned rock. Size varies from that of your fingernail to that of your palm, and colour can differ between individuals. However, all are distinguished by armour of eight overlapping plates covering their body, allowing increased flexibility. Individual plates can be found washed into rock pools among the shells and sand. Common species include Green/ Southern Chiton *Ischnochiton australis* and Giant Chiton *Plaxiphora albida*. Chitons use a rasp-like radula to scrape algae from rocks, although there are carnivorous species, which use their girdles to crush small invertebrates. Several species have been found to possess a mysterious homing ability; the chiton will leave its home spot to feed, but return to the same place on the same rock. Researchers are still unsure as to the exact process used.

Variegated limpet *Cellana tramoserica*



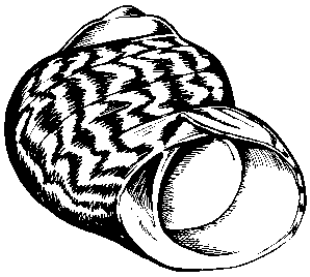
The conical shape, which protects the large muscular foot of the limpet, helps to shed water, and also prevents the animal from drying out during low tide. These limpets can grow quite large, up to 50 mm high, although smaller animals are more commonly found. As the name suggests, this species can vary greatly in colour and patterning, from shades of yellow and orange, to darker purples and grey. These limpets actively scrape micro-algae from rocks using a radula. Interestingly, this animal also has an in-built homing device, in which it uses chemical sensors to follow a mucous trail back to its home spot after roaming to feed. Other common species include the smaller, but distinctly ribbed shell of Ribbed limpet *Patelloida alticostata*. False limpets, such as *Siphonaria diemenensis* are different, in that they have spaces beneath their shell to act as lungs, whereas true limpets possess a network of gills along the edge of their shells.

Blue Periwinkle *Austrolittorina unifasciata*



Although small (growing up to 15 mm high), these gastropods' tightly fitted operculum allows them to retain moisture for long periods of time between tides. This particular periwinkle can be found so high up on the rock platform that it will often survive solely from splashes of water during the high tide. This lovely pale blue species is the most abundant mollusc in the Victorian high, intertidal zone, and you will see why when you next visit a rocky platform. They are commonly found in clusters, often in the vicinity of barnacles and tube worms, grazing on lichen off the rocks.

Warrener snail *Turbo undulatus*



The Common Warrener, or Turban shell, can commonly be found in abundance on rocky reefs, and washed ashore on beaches. The snail can grow quite large, up to 50 mm high, and is identified by its distinctive green/brown and white markings. The animal feeds off large algae such as Kelp, and where they occur in abundance, can sometimes leave a reef completely bare of vegetation. The operculum of the Common Warrener (sometimes called a 'cat's eye') is also quite commonly found on beaches and rocky shores. This 'front door' is closed to retain moisture during dry times, and also provides protection from predators.

References:

Edgar, Graham J. 2008, *Australian Marine Life: the plants and animals of temperate waters 2nd edn*, Reef New Holland, Sydney

Porter, C.M et al. 2010, *Life on the rocky shores of south-eastern Australia*. VNPA: Melbourne.