Rocky shores of the Gold Coast

Rocky shores are an attractive feature of our city’s coastline (see Figure 1).

The Gold Coast has long been renowned for its vast stretches of sandy beaches. A lesser-known environment is the rocky shore, which ‘punctuates the long sweeps of sandy beaches’ that dominate this environment. The various locations of these rocky outcrops are shown in Figure 2. Each rocky shore has its own distinct ecological composition. This is heavily dependent on aspect and exposure to wave energy.

Figure 1. The rocky shore at Burleigh Heads (Source: GCCM)

Figure 2. Map showing the distribution of rocky shores on the Gold Coast.
Between a rock and a hard place

The rocky shore is a tough environment to live in. Here, animals in the intertidal zone are exposed to high energy waves that surge over the surface. On the other hand, those left high and dry can be exposed to scorching temperatures and vulnerable to predation from seabirds.

Rocky shores are highly variable environments. On a daily basis, the shore experiences both submersion (high tide) and exposure (low tide) (see Figures 3 and 4, respectively). In the longer term, sand supply along our coastline is in natural flux. Wave action moves sand along the coast, sometimes covering rocky outcrops. The flora and fauna of this ecosystem have adapted to deal with this dynamic environment.²

Spotted: Wildlife of Gold Coast’s rocky shores

Wildlife on the rocky shore have adapted to these pressures in various ways. For example, species in the intertidal/wash zone are quite flat to minimise drag and reduce vulnerability to wave impact. They can also cement themselves to the rock—think oysters, barnacles, sponges, and sea squirts—or have a strong muscular foot to hold themselves in place (such as limpets).

Others wedge themselves into shaded crevices and holes to avoid being washed away. This can also protect them from predation by birds (at low tide) or fish (at high tide). You can find a diverse number of animals under rocks and in the crevices of a rocky shore, including:

♦ Sponges (Poriferans)
♦ Sea-squirts (Urochordates)
♦ Anemones (Cnidarians)
♦ Lace corals (Bryozoa)
♦ Crabs, shrimp (Arthropods)
♦ Brittle stars, sea cucumbers, spiny sea urchins (Echinoderms)
♦ Bristle worms (Annelids)
♦ Peanut worms (Sipunculans)
♦ Snails and bivalves (Molluscs)

Look but don’t touch

There are many interesting creatures on our rocky shores. Many of them are protected, such as those found at the Burleigh Heads National Park. Some may also cause injury. Please help us to look after this special environment: tread carefully, don’t litter, and avoid catching and collecting rock pool animals. Rough handling damages their skin, and some animals can even desiccate (dry out) when removed from the water. Many shore animals are found under rocks and boulders. Roll rocks over carefully, in order to look underneath but remember also to return them carefully to their original position, so as not to damage any creatures found there.

References