

Ecological Communities

As well as protecting the fragile dunes, the plants growing here are the basis of a complex ecological community.

Closest to the shoreline, on the incipient dunes, is a pioneer zone where hardy trailing plants colonise fresh sand. Ghost crabs feed on the detritus washed up by the tides.

On the exposed front of the foredunes, trees such as Casuarinas and Banksias can gain a hold, and low-growing herbs cover the sand. A high proportion of the plant biomass is under the surface, in the form of roots and dead matter. Bacteria and fungi live here, and organic matter is added to the soil. The plants support insects, birds and some mammals. They, in turn, are food for snakes, goannas and carnivorous birds.

Further inland, a more complex woodland community can flourish. Cypress and Beach Bird's-eye trees form a denser canopy, and there are fewer ground-cover plants. In some places there is enough soil moisture for rain-forest plants to survive. Along the swales, fringed with Broad-leaved Paperbarks, are permanent waterholes. You're likely to hear the sharp crack of the Eastern Whipbird's call or the rustle of a Brush Turkey raking the leaf litter to build a nesting mound. You may be lucky enough to see a wallaby nibbling on a Casuarina seedling.

This community has in the past been threatened by weeds which disrupt plant germination and interrupt feeding cycles. Weeds invade mainly from the edges of the reserve, where it meets roads or private property. Property owners can help the natural community survive by choosing not to grow plants known to become problems, and ensuring that garden waste is not dumped in the bush.



Eastern Whipbird

Brush Turkey

Location information

The Marcus Beach interpretive walk is at Beach Access 47, leading from the car park off Tristania Drive, Marcus Beach. It has a companion walk about 700 m south, at Peregian Creek, Beach Access 49. You can reach this by walking along the beach, or by following Tristania Drive southwards, and continuing along the walking path at the end of Callitris Crescent.



Our project has been supported by Noosa Council

Marcus Beach Bushcare Association mbba.org.au

MARCUS BEACH INTERPRETIVE WALK

BEACH ACCESS 47



Beach Access 47 traverses the Marcus Beach Foreshore Reserve which is maintained by the Noosa Council. This reserve is designated in the Noosa Plan as both a Coastal Protection Area and an Environmental Protection Area.



This interpretive walk is an initiative of the Marcus Beach Bushcare Association. For more information, see our website at mbba.org.au.



Geological History

Coastal dunes build up when sand deposited on the beach by wave action is blown inland and stabilised by vegetation. The dunes grow when seas are calm, and are eroded when wave action is more intense.

The dunes in this area consist of a relatively thin layer of white sand, deposited from about 5 thousand years ago, overlying darker sand (often hardened into “coffee rock”) which was laid down about 100 thousand years ago.

As sea levels rise over the coming years, these dunes will be threatened by increased erosion.

What to look for at each station.

1. Entrance

Here, on the front face of a hind dune, there is a mixture of hard-leaved plants, such as the Coastal Banksia behind the sign, and soft-leaved plants such as the Cheese Tree to the right. The Cheese Tree gets its name from the shape of its fruit.



Fruit of Cheese Tree

2. Fragile rainforest in the swale

Notice the aerial roots and buttressed main roots of the Port Jackson Fig. Looking up, you can see that the top branches have been burned off by salty winds. In the branches of the Broad-leaved Paperbark further back on the track, you can see Monkey Vine, which is important to the Blue Tiger butterfly. This part of the swale is normally dry, but it becomes a temporary waterhole after heavy rain.



Blue Tiger on Monkey Vine

3. Reducing the impact of weeds

Most of the weeds have been removed from this area, but you can still see some Ground Asparagus, and in summer, Gloriosa Lilies emerge from underground tubers that are difficult to remove. The canopy of Beach Bird’s-eye helps prevent weeds germinating.



Gloriosa Lily - a weed

4. From hind dune to foredune

Heading towards the beach from here the canopy begins to thin out and it is lower than further inland because of the lack of protection from salt-laden winds on the foredune. The canopy is shaped by the force and direction of these winds. You can see the wind-burned tips of the trees not far above your head.



Tuckeroo fruit

5. Shelter in the swale

This region is dominated by Beach Casuarina and Coastal Banksia which can tolerate salty winds. The Casuarinas fix nitrogen which ends up in the sand, increasing its fertility. Ground covers such as Dianella can grow here because there is little shade, and they help bind the soil.



Beach Casuarina seed cones

6. The struggle for the foredunes

Here, you are close to the eroded face of the foredune. Plants such as Goat’s Foot Convolvulus and Beach Spinifex can survive here because they have trailing stems that can survive being buried. You can see Spinifex extending from the incipient dune, where it binds the sand, to the swale behind the foredune.



Goat's Foot Convolvulus

