URBAN ANTICS!

An Octopus's Garden

For those of us who live along the seacoasts of the world, it is difficult to realise how many millions of other people have never seen an ocean and have never stood alone in the tangy mists of a rocky coast or a sandy beach watching massive waves that thunder in from the open sea. Such an experience gives a unique view of our planet, and tugs at some primeval instinct flickering deep within our minds.

The first and strongest impression of the sea to a terrestrial being is the powerful smell of salt and rotting seaweed cast up by the tide. Unfortunately, most people are exposed to seaweed when, as dead flotsam, it slithers like a serpent around our bodies in the shallows, or as beach litter, either prickles our bums or accosts our nostrils.

The underwater vegetation off our coast is made up of two types. Seagrasses, which are like land grasses, with leaves, fibrous roots, flowers that produce pollen and creeping stems that spread similar to lawn runners, and seaweeds, which are in fact *algae*.

About 14 species of seagrass out of 50 throughout the world are found in the Perth area. This richness in numbers is due to shelter from offshore reefs, and a combination of clear, sun-lit, low nutrient water, a clean sandy sea-floor and little run-off from the coastline.

Ribbonweeds *(Posidonia spp.)*, with their long strap-like leaves, and wireweeds *(Amphibolis spp.)*, which have wiry stems with bunches of leaves on the ends, are the two dominant genera around Australia. Other species form small communities in patches of bare sand or in areas that have greater water movement.

After storms, heaps of ribbon-like leaves mixed with wireweed are a familiar site to Perth beach walkers. Along the tide line one can also see 'hair balls', which are formed from the fibres of *Posidonia australis* leaves as they break up and roll around the sea floor. In summer, the small green fruits from ribbonweed are often found washed up.

Seagrass meadows teem with life. They are the nursery of rock lobster and herring, while many other fish live on the filter feeders, molluscs, worms, crabs, shrimps, starfish, urchins and algae that live there. When the seagrass sheds its leaves after a few months of growth, attached organisms and algae, and the leaves themselves, are broken up by wave action to form an important source of food and nutrients.

Seaweed (algae) encompass a large number of biologically simpler plants. They can be visually appealing or grotesque and either edible or poisonous to humans. The seaweeds can absorb food-building nutrients through their entire body surface and need no root system other than a sucker-like base called a 'holdfast' to anchor them to rock or seagrass.

The foliage of seaweed is not always leaf-like and is therefore called the 'thallus', or 'lamina' or 'blade'. Some have a stalk-like 'stipe', while others have masses of delicate tissues emanating from the holdfast. Some have wide beautiful fleshy platforms and others look like ugly blobs of jelly.

Two forms recognisable on Perth shorelines are the bright green sea lettuce *(Ulva lactuca)* on most rocky waterlines, and the large brown shaggy thallus of Ecklon's kelp *(Eklonia radiata)* washed up on beaches.

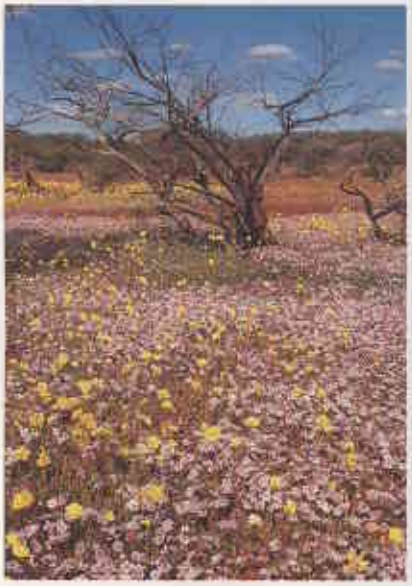
Whilst we might think that dead vegetation on our beaches is just nuisance rubbish, we can rest assured, that the nearby ocean is in the good hands of mother nature. It is essential that seaweeds and seagrasses grow in profusion, for they are the pastures of the sea.

BY JOHN HUNTER

DID YOU KNOW

- *The rhizomes (horizontal underground branches) of ribbonweed seagrass meadows form a dense mesh, which stabilises underwater sandbanks, while the canopy leaves protect the substrate (ocean floor) from wave or current action.*
- *Forty times more animals live in seagrass than on adjacent 'bare sand'. Once destroyed, some meadows, such as ribbonweed, take decades to grow back. Sometimes they never do.*
- *Seaweeds do not bear flowers and seeds. They reproduce their kind by releasing thousands of single cells (gametes and spores) from the surface of the foliage.*

The waters off Western Australia's south coast are home to a rich diversity of marine plants and animals. Read about them on page 28.



Burnerbinmah Station, in WA's Murchison Region, fills an important gap in the State's flora and fauna reserve system. See page 42.

LANDSCOPE

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Was it created by a meteorite crashing to Earth, or more slowly over time? Find about Curiosity Swamp on page 50.

Imagine a commercially-owned and managed sanctuary in the hills east of Perth and you have 'Karakamia Sanctuary'. Find out how it was created on page 17.

The Western Blue Gum, a commercial variety of the Tasmanian bluegum, was developed for WA conditions, but tree breeders continue to improve the strain. See page 36.

FEATURES

REGULARS

COVER

Is the forest red-tailed black-cockatoo rare or just rarely seen? Find out the answer to these questions on page 10.

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