Biosecurity beachcombing

Our coastlines and rivers are full of life, but they're also the frontlines for spotting early signs of environmental trouble. Beachcombers (that's you!) are often the first to notice unusual items or changes that could signal biosecurity risks, such as the arrival of non-native species that may threaten local ecosystems. For example:

- unusual species that seems new, strange, or unusually concentrated on the beach.
- driftwood or debris carrying invasive organisms, or
- Other unusual biologicals materials, such as egg cases, worm casings, and algal mats.

Beachcombing along the WA shoreline.

As a beachcomber, you'll head to your local beach or river shoreline to explore and observe the amazing biodiversity and help protect it!

Then take a 'deep dive', using a quadrat, hula hoop, or ruler to frame a small area to document what you find. Watch this YouTube video to learn how.

Kelp, *Ecklonia radiata*

Crab, *Thalamita sima*

Crab, *Charybdis japonica*

Why it matters

Your observations - especially photos - improves the likelihood of early detection of invasive seaweeds like Wakame, and marine pests such as the Asian paddle crab, and supports ongoing monitoring of Australia's waterways. Every report helps scientists understand what belongs in an ecosystem, and what doesn't.

Materials needed

- measuring frame (quadrat, hula hoop)
- ruler
- mobile phone

Activity

What to do

Download the MyPestGuide® Reporter app and report what's happening at your beach.

Low tide exposes more of the beach, revealing special treasures! The best time to beachcomb and find organisms is either early in the morning or late afternoon, especially after a storm.

1. **Understand the target species:** Learn to recognise aquatic pests and how they impact ecosystems. Some clog pipes, outcompete native species, or block sunlight from reaching other plants. As you explore, look for anything unusual and observe natural features like shells, seaweed, and driftwood.

2. **Observe the shoreline and take measurements** (optional): Use a quadrat, hula hoop, or ruler to frame a small area of the shoreline. Count and identify the species within your frame. Are there many different organisms, or just a few?

3. **Document thoroughly -** Take 4 photos including:
   - a wide view of the beach, river or estuary shoreline to show the general environment.
   - a photo of your observation frame (quadrat, hula hoop or ruler) placed on the ground. This helps show scale and the diversity of organisms in a defined area.
   - a close-up photo of anything that looks unusual or concerning, such as clusters of the same organism, unfamiliar shells, or signs of damage. Ask yourself: **Could this be a pest?**
   - a photo of anything you've never seen before. Even if it's not a pest, it might be important!

4. **Describe your observations - Complete your MyPestGuide® report:**
   - **Where:** Is it a rocky or predominantly sandy beach? Can you see lots of **seaweed** along the shoreline??
   - **I found:** What different types of animals can you see in your frame and how many there are? Do your observations indicate there could be a pest? If so, describe why you think this may be…make an informed decision (an **inference**) about what's happening on the shoreline.

Examples of inference reporting

- **Observation** (qualitative): there was lots of one type of very large brown seaweed washed up on the beach.
  Inference: there could be a temperate reef offshore made up of either our native species of kelp (*Ecklonia radiata)* or there might be an introduction of Wakame *(Undaria pinnatifida)*
- **Observation** (quantitative): there was 12 different mussel shells, 3 were a dark purple/blue colour.
  Inference: A variety of shells indicates that the biodiversity of the marine environment is probably high, and native WA mussels are a dark blue-purple colour, compared to priority invasive pest mussels *Perna viridis* and *Perna canaliculus* which have bright green edges.

Make a report

Whether you spot something or nothing at all, your report matters. Submitting a report through the **MyPestGuide® Reporter app** is easy and the impact can last years. Your reports help scientists confirm the absence of harmful pests.

Report your observations

MyPestGuide® Reporter
via app or online
mypestguide.dpird.wa.gov.au