



BE PEST-FREE!

WHEN YOU VISIT THE GREAT BARRIER REEF ISLANDS

Photo: Justin Heitman © Qld Govt

A pest hiding in your gear or boat might seem harmless, but even small pests pose a big threat to our world heritage-listed islands.

The Great Barrier Reef is the world's largest World Heritage area and stretches almost 2000km along Queensland's coastline. The World Heritage status protects more than the reef—it also includes the area's islands, many of which are further protected as national parks.

Their World Heritage listing means the islands and reefs are internationally important. However, the isolation and small size of many islands make them vulnerable to pest impacts and this biosecurity risk threatens their World Heritage values.



Queensland's outstanding national park islands are worth protecting now and for future generations
Photos: Tamara Vallance © Qld Govt (left and above left); John Augusteyn © Qld Govt (above right)

PESTS THREATEN ISLAND RESILIENCE

Maintaining a healthy ecosystem is a lot like maintaining a healthy body. Just as a healthy person can easily recover from a cold or flu, a healthy ecosystem can better withstand and recover from natural impacts caused by cyclones, storms and wildfire. Pests compromise ecosystem health in many ways.

For example:

- Weeds can quickly colonise disturbed areas, pushing out native species and change an ecosystem's structure, making it easier for other pests to take hold.

- Introduced grasses can burn with more intensity, increasing the damage caused by wildfires.
- Rats can predate on vulnerable species, such as seabirds and their eggs, putting even further pressures on already threatened populations.

Maintaining healthy ecosystems supports the natural resilience of islands and interconnected ecosystems such as reefs. In turn, this will help the Great Barrier Reef World Heritage Area weather the effects of climate change.



WHAT IS A PEST?

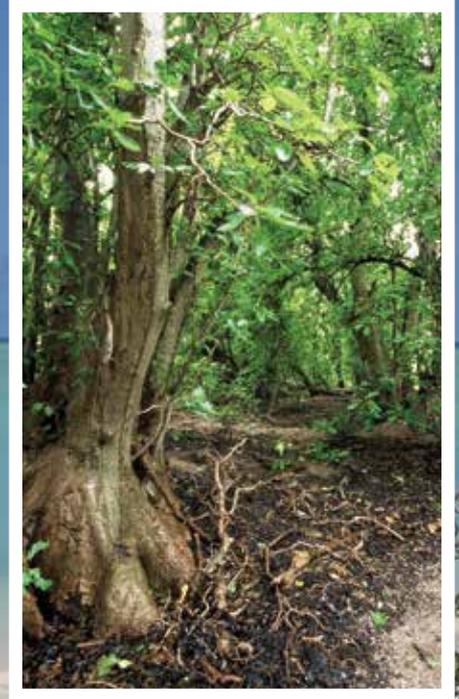
A pest can be any species that occurs beyond its normal environmental range. Pests can be mammals, insects (including ants), birds, plants, algae, fungi, amphibians and even bacteria. Australian native species can also be pests when they occur outside their normal range.

ISOLATION IS A DOUBLE-EDGED SWORD

Island ecosystems are usually not as resilient as the mainland. They are 'naive' ecosystems, meaning that historically they were less exposed to pests due to their isolation, so hadn't developed much resistance. Many have stayed pest-free for a long time.

These days an increased connectivity between the islands occurs because more and more visitors, who may be carrying pests, are travelling to and from these once-isolated isles. Once pests arrive on an island they can establish themselves

without the usual checks and balances that exist in mainland ecosystems. However, an island's isolation can work in their favour, as Queensland Parks and Wildlife Service (QPWS) has a better chance of containing, controlling or eradicating the pest if they do establish.



Some habitats, such as those found in the Capricornia Cays National Park, only occur on the World Heritage-listed islands, making them unique and highly vulnerable to pest impacts.

Photos: Andrew McDougall © Qld Govt

< Many island species such as ground-nesting roseate terns rely on the isolation and pest-free status of their island homes.



Introduced African big-headed ants were an instrumental aspect of Tryon Island's catastrophic loss of pisonia forest. Photo: © B Hoffman

SMALL PEST—BIG PROBLEM

They might be difficult to see, but with the help of introduced ants, scale insects have deforested Tryon Island in the Capricornia Cays National Park. Introduced coastal brown ants (also known as African big-headed ants) farmed the scale for honeydew secretions and also defended them from naturally occurring predators. The scale outbreak took only seven years to devastate the island's pisonia forest, an important seabird breeding area. QPWS laid hundreds of ant baits in 2007 and 2008 near big-headed ant nests. This successful baiting program means the island's forests have almost fully recovered.



For a tiny animal, scale insects can cause a huge problem. Photo: John Olds © Qld Govt



BE PEST-FREE!

Pests can easily hitch a ride with people. They can hide in luggage, camping equipment, supplies and even on your clothes and shoes. Make sure you don't carry pests next time you visit a Great Barrier Reef island.

Cobblers pegs love hitching a ride on socks, jeans and shirts. >

Photo: Mike Korotcoff © Qld Govt

< The spiky seeds of Mossman River grass easily attach themselves to unwary visitors.

Photo: © Joel Plumb



BEFORE YOU VISIT

- Clean out your camping gear when you're packing it in preparation for your trip.
- Ensure your clothes are seed-free before you arrive on an island. Don't forget to check your socks, pockets and hook and loop fastening strips such as *Velcro*.



- Ensure no rodents, toads, geckos, ants and other insects (and their eggs) are hiding on your vessel, your aircraft or in your luggage, food, equipment or supplies before heading to an island.
- Leave pets on your vessel or at home. They can harbour fleas, ticks and other pests. They aren't permitted in national parks, or on some beaches adjoining national park islands.



WHEN ON AN ISLAND

- Stay on the marked walking tracks to avoid spreading weeds across the island.
- Always clean up before you move from one island to the next.

Hook and loop fastening strips are notorious for catching weed seeds. Stop before you leave for an island and check your shoes, clothes and gear and leave unwanted pests behind.

Photos: © Fiona O'Grady (far left); © Qld Govt (left & below)



IF LIVING ON AN ISLAND

If you live the island life and have a national park as your neighbour, you can help make a difference by following these additional guidelines.

- Ensure all goods and supplies being shipped to an island are pest-free before they depart the mainland.
- Use plants native to the island in your gardens and prevent garden escapees from invading national parks.



Asian house geckos are particularly good travellers, having hitchhiked their way from India and Indonesia (left); black rats are well-known stowaways, hiding in unlikely places (above left); most national park islands are still free of cane toads (above centre); lantana is readily spread and has high impact on island biodiversity (above).

Photos: © Chris Maple (black rat and lantana); © Qld Govt (cane toad); Harry Hines © Qld Govt (gecko)

WHAT DOES QPWS DO?

Biosecurity (being pest-free) is a vital part of safeguarding the integrity of Queensland's Great Barrier Reef islands. Under Queensland's new biosecurity legislation, everyone must play their part to protect island biosecurity.

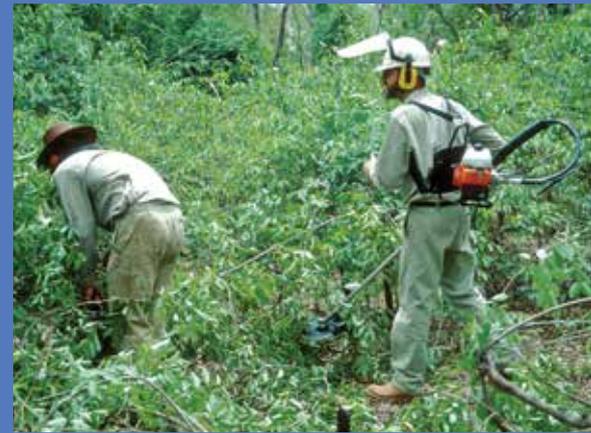
The QPWS Rangers, often in conjunction with local councils, manage island pests by spraying weeds and revegetating affected sites, baiting ants, and trapping and removing pests. More recently they have used biological (or natural) control methods with considerable success.

QPWS complements the Great Barrier Reef Marine Park Authority's biosecurity efforts as well as the other Queensland Government departments' pest management endeavours.

But it doesn't stop there. New, and some more well-known, pests are still a threat.

QPWS keeps improving internal work procedures and is helping tourism and transport operators, who ferry supplies and visitors around the islands, to be pest-free when they visit.

Please play your part and be pest-free when you visit our beautiful Great Barrier Reef islands.



Weed management is an important part of the work of QPWS
Photo: Andrew McDougall © Qld Govt



QPWS Rangers remove seeds from their uniforms to help prevent weeds from spreading throughout the protected areas they manage.
Photo: Lisa Scott © Qld Govt



Releasing native predatory ladybirds helped control a scale insect outbreak on Wilson Island (Capricornia Cays National Park) before the effects were catastrophic.
Photo: John Olds © Qld Govt



North Keppel Island, Keppel Bay Islands National Park
Photo: John Augusteyn © Queensland Government