WATERBIRDS
OF THE MURRAY–DARLING BASIN

Australia has signed international agreements to protect places visited by migratory birds. There's the most well-known Ramsar Convention on wetlands of international importance; but also agreements between us and Japan (JAMBA), China (CAMBA) and Korea (ROKAMBA). This is because many species routinely travel between breeding and feeding sites in different countries. Many are endangered or vulnerable, so it is vitally important that when their destinations (often many thousands of kilometres apart) are reached, their homes, food sources and water bodies are available to them and in good condition.

There are over 30,000 wetlands in the Murray–Darling Basin; 16 are Ramsar-listed and many others are major breeding or feeding sites. Many wetlands have reduced in size because dams capture (and people use) much of the available water that once 'recharged' them. Without flow coming in, the water quality reduces and fewer plants, frogs and insects are found there – these things provide food and shelter for waterbirds.

Australian Government

MURRAY–DARLING BASIN AUTHORITY

Royal spoonbill
(Platalea regia)
Prefers shallow wetlands and estuaries, but may visit dams and sewage ponds. As shown here, grows a crest in breeding season. Size: 74–81 cm.

Yellow-billed spoonbill
(Platalea flavipes)
Uses its bill to scoop for invertebrates in muddy water. In breeding season, its yellow face is lined with black and black-tipped outer wing plumes appear. Size: up to 77 cm.

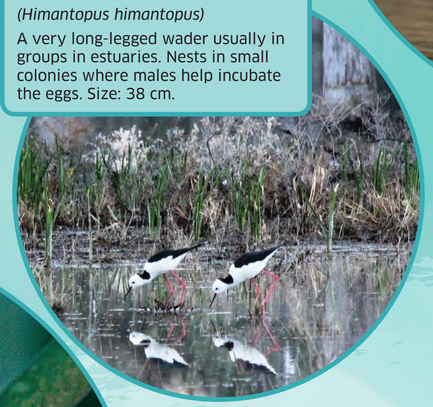
Australasian painted snipe
(Rostratula australis)
Endangered species. A stocky wader with a long pinkish bill, most often found in reedy wetlands. Usually nests in a scrape in the ground. Size: 22–25 cm.

Image: Wikimedia Commons

Grey teal
(Anas gracilis)
Very common. Highly nomadic, moving around in response to rainfall and flooding. Feeds by 'dabbling', and dives occasionally. Size: 37–47 cm.

White ibis
(Threskiornis molucca)
Often a pest in urban areas, this species is declining in its natural wetland habitat in the Basin. When suitable wetlands do flood, colonies of 30,000+ congregate. Size: 69–76 cm.

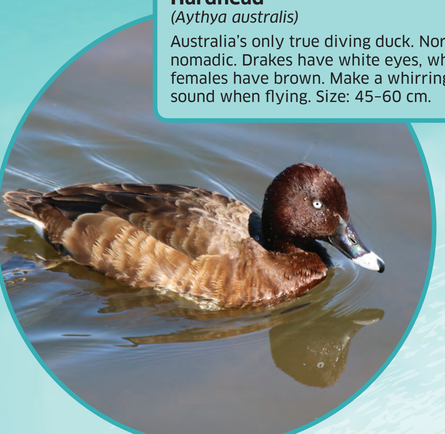
Straw-necked ibis
(*Threskiornis spinicollis*)
May appear black and white, but its body is actually metallic purple, green and bronze. It loves to eat grasshoppers and locusts, earning it the nickname 'farmer's friend'. Size: 60–75 cm.



Black-winged stilts
(Himantopus himantopus)
A very long-legged wader usually in groups in estuaries. Nests in small colonies where males help incubate the eggs. Size: 38 cm.

White faced heron
(Egretta novaehollandiae)
Common and widespread. Usually seen alone and 'stalking' around edges of wetlands or along banks. Size: 60 to 70 cm.

Little pied cormorant
(Microcarbo melanoleucos)
Fishes for small crustaceans. Can be discrimated from the larger pied cormorant by its size (50–66 cm) and lack of orange–yellow face patch.



Hardhead
(Aythya australis)
Australia's only true diving duck. Normally nomadic. Drakes have white eyes, while females have brown. Make a whirring sound when flying. Size: 45–60 cm.

Hoary-headed grebe
(Poliocephalus poliocephalus)
Usually alone, but can form colonies of hundreds of floating nests, which may be joined together to form a raft. Size: 29–30 cm.

Sacred kingfisher
(*Todiramphus sanctus*)
Despite its name, prefers insects and small reptiles. Often seen perching on exposed branches in woodlands. Size: 19–24 cm.

Image: Bernard Dupont

Unless otherwise specified, all images by Dr Vic Hughes, MDBA.

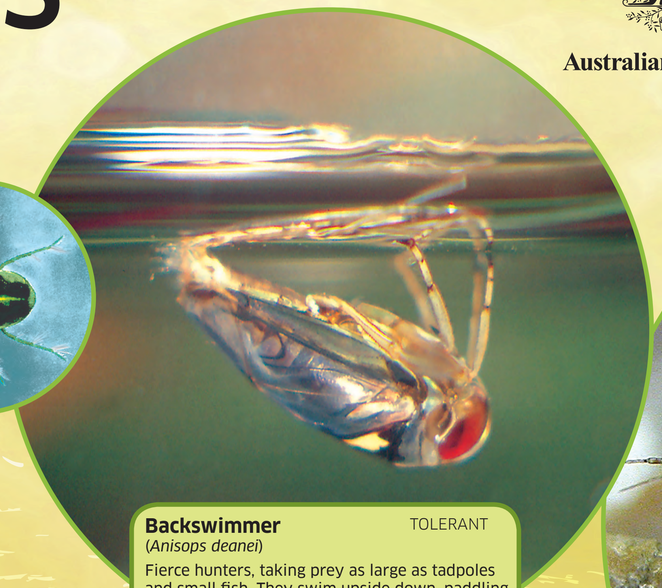
MACROINVERTEBRATES
OF THE MURRAY–DARLING BASIN

Australian Government

MURRAY–DARLING BASIN AUTHORITY

Macroinvertebrates are small creatures that live in fresh water. 'Macro' means they are big enough to be seen with the naked eye, although most are quite small. They may be plant or meat eaters or live on detritus (dead organic matter). These creatures like to live in good quality water, but some are more sensitive to pollutants than others. Studying which macroinvertebrates can be found (and which are missing) can therefore tell us a lot about the level of pollution in a water body.

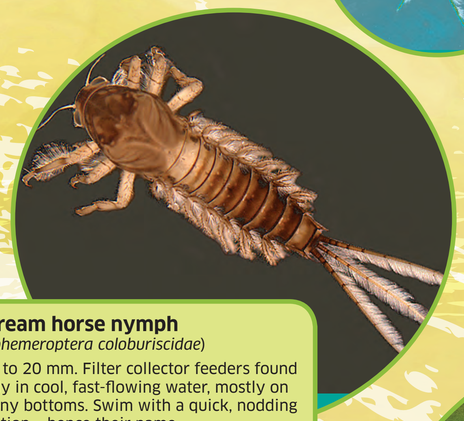
Mites SENSITIVE
(*Acarina*)
Up to 5 mm, but often tiny 'dots'. May be red, green, blue or yellow. Parasitic: feed by attaching to and sucking the body fluids of insects and crustaceans.



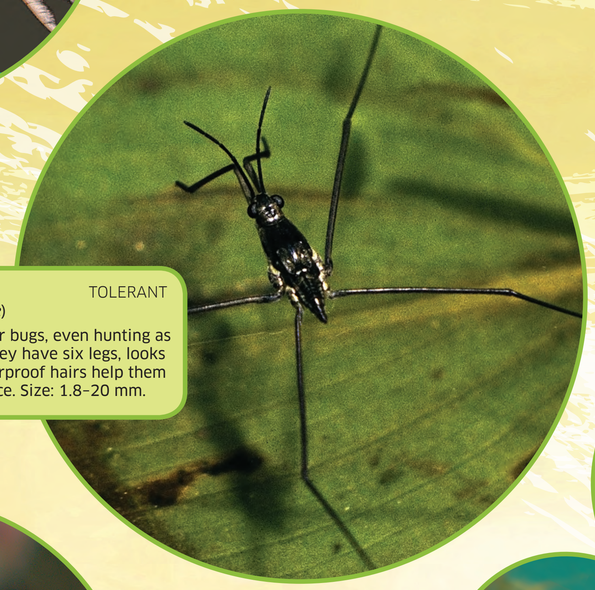
Backswimmer TOLERANT
(*Anisops deanei*)
Fierce hunters, taking prey as large as tadpoles and small fish. They swim upside down, paddling with hair-fringed legs. They make air bubbles to stay afloat and can fly. They can 'stab' humans, like mosquitos. Size: 4.2–11.5 mm.

Damsel fly larvae SENSITIVE
(*Coenagrionidae*)
Predators found in many aquatic habitats, mostly among submerged plants. Some types only live eight to ten weeks; some defend territory. Size (mature): 15–30 mm.

Long-horned caddis SENSITIVE
(*Trichoptera leptoceridae*)
Make a case from sand, bits of sticks or leaves or hollow stems. Shred and scrape plants/algae and detritus. Size: 2–20 mm.



Stream horse nymph
(*Ephemeroptera coloburiscidae*)
Up to 20 mm. Filter collector feeders found only in cool, fast-flowing water, mostly on stony bottoms. Swim with a quick, nodding motion – hence their name.
VERY SENSITIVE



Water strider TOLERANT
(*Hemiptera gerridae*)
Prey on other water bugs, even hunting as a pack. Although they have six legs, looks like four. Tiny waterproof hairs help them 'skate' on the surface. Size: 1.8–20 mm.

Whirligig adult TOLERANT
(*Coleoptera gyrinidae*)
Usually in large groups, they secrete 'detergent', helping them skim across the water; often in circles. An antenna sensor 'scans' for prey: insects. Size: 3.5–15 mm.

Yabby TOLERANT
(*Decapoda parastacidae*)
Often under stones or rotting logs or amongst leaves. Mostly eat detritus but also hunt. Create burrows where they can shelter during drought by sealing the entrance with mud. Size: 4–76 cm.

Lacewing larvae VERY SENSITIVE
(*Neuroptera*)
Quick swimmers found in fast-flowing streams, under rocks and moist litter. Prey on other small bugs. Size: 10–12 mm.

Whirligig larvae TOLERANT
(*Coleoptera gyrinidae*)
Found on edges of lakes, dams and slow-flowing creeks/rivers. Stay under and feed on the bottom for worms and other larvae. Obtain oxygen through gills. Size: to 20 mm.

Diving beetle TOLERANT
(*Dytiscus*)
Most common on edges of waterways. Breathe at the surface, store extra air in a bubble, then dive below. Eggs laid in slits in aquatic plants. Size: 1–34 mm.

Images courtesy of The Murray–Darling Freshwater Research Centre.