

19. Birds as biological indicators

Discussion topics and information

Birds basically help to look after the bush. They are vital to the pollination processes of many local indigenous plants. They also help in the control of insects and other plant parasites, thus helping to keep native vegetation healthy. Birds of prey and other scavenging species help to 'clean up' carcasses and keep feral mice and rats under control.

Frogs and macroinvertebrates are a common indicator of the health of rivers and creeks. On land, the number of birds and types of birds can help to indicate how healthy our ecosystems are. A large diversity of birds with only a few feral bird species will tell us that our system is quite healthy, especially if they are visited by threatened or declining species.

A threatened species is generally any species which is listed as either rare, vulnerable or endangered under Schedules 7, 8 and 9 of the *National Parks and Wildlife Act 1972*. Birds listed as 'declining' on the bird chart have not yet become so reduced in numbers that they require listing as a threatened species, but their survival is of great concern to bird experts who are keeping a close watch on their numbers.

Why have these species become 'threatened' or considered to be declining in numbers?

Loss of habitat and food supply due to land clearance and weed invasion (only 2.7% of Adelaide's original vegetation cover remains), are considered to be the most significant factors leading to the decline of our local bird species. This problem is compounded by competition for reduced resources with feral and aggressive native species such as Noisy miners and Rainbow lorikeets. Despite being native, these species are naturally more aggressive and do well from the decline of other birds as they generally have broader dietary and habitat requirement,

eg they adapt well to urban and disturbed areas or utilise feral plants. It is often the case that these more aggressive species have actually managed to grow in numbers and expand their natural home range since European settlement, displacing other smaller birds. For this reason, these species are often referred to as *increaser* species.

Other factors contributing to the decline of bird species include nest predation by rats, Brushtail possums and cats and deterrence from food supply by cats, dogs and humans.

What can we do to help these bird species?

Helping to stop the decline of local native species includes finding out what these animals need to survive and identifying their threats and managing them accordingly. Researching their habits, restoring food source and habitat, controlling feral and aggressive species are some of the techniques often employed. See the recommended resources for weblinks to current threatened species recovery programs.

Lesson ideas

Have students perform a research activity eg. web search, bird guide search, on their favourite bird or on any of the threatened or declining bird species on the bird chart and answer:

1. What does the bird eat?
2. Where type of habitat does it need?
3. Where does it currently live?
4. What are the threats contributing to its decline?
5. What can we do to stop their species' decline in the future?