

Hedgehogs eating native animals

Studies by Landcare Research suggest that hedgehogs are responsible for significant levels of predation on skinks and ground-nesting native birds and their eggs. They also raise suspicions that mature females may be the worst culprits.

The work at Landcare Research is building a clearer picture of the extent to which hedgehogs prey on rare native invertebrates including weta and beetles.

Hedgehogs are regarded with benign indifference by most New Zealanders, who tend to see them as appealing creatures that eat garden and pasture pests. It seems, however, they also eat a broad range of native creatures.

Hedgehogs were introduced in the late nineteenth century and are now widespread. They are estimated to number between two and four per hectare in most areas, perhaps reaching as many as eight per hectare in optimum conditions.

The hedgehog's diet consists mainly of invertebrates, but there is plenty of evidence from their native Europe that they also eat other foods, including eggs and chicks of ground-nesting birds. Video monitoring by the Department of Conservation in 1994-99 revealed hedgehogs were responsible for about 20 percent of all recorded predation of banded dotterel and black-fronted tern nests in a braided riverbed system in the Mackenzie Basin.

A Landcare Research scientist, Dr Chris Jones, has been investigating the foraging behaviour of hedgehogs in the same area, with a particular focus on whether 'rogue' individuals cause more damage.

'Our initial results show that of 10 hedgehogs studied in detail, only one female habitually used the river bed

where the birds nest, while the others almost never did,' says Dr Jones.

Along with colleagues from DoC, Dr Jones has also been studying the diet of hedgehogs to determine how frequently they prey on rare native skinks. Skink remains were frequently found in the guts of trapped hedgehogs, and around one in every eight hedgehog droppings from Central Otago contained lizard remains. Adult females appeared to be the main culprits.

'This level of predation is obviously a threat to skinks, some of which are rare, and most of which already face decreasing habitat and predation from other introduced pests such as stoats and feral cats,' Dr Jones says. 'The threat to native invertebrates should also be considered — after all, hedgehogs are primarily insectivores.'

'In the Mackenzie Basin, hedgehog guts were found to contain rare endemic native beetles and weta, with one gut containing 283 weta legs. In Central Otago, hedgehogs consume rare chafer beetles. Hedgehogs also eat native grasshoppers, many of which are rare and only occur in very limited areas.'

Dr Jones says although current studies are helping to build a clearer picture of their impacts, hedgehogs remain under-researched.

'Stoats, ferrets and possums get all the attention,' according to Dr Jones. 'Hedgehogs pose a consistent background threat, however. My goal is to find out more about what that threat entails.'

'It may be that whilst all hedgehogs pose a threat, mature females may know how to get the best access to quick and easy sources of high energy, such as eggs and lizards, which are especially



Landcare Research scientists have been tracking hedgehogs using microchips to investigate how they forage. Diet studies have shown that some native birds, skinks and invertebrates are at risk from them.

important during their breeding season.

'Males go into hibernation much earlier than females, who must race to build up food reserves after a taxing breeding season and before hibernation.'

Dr Jones says because of this, he would recommend land owners and conservation

managers to lay traps for hedgehogs at the beginning of the bird-breeding season, when hedgehogs may be at their most damaging, and in the autumn, when females can be specifically targeted.

— DIANA LEUFKENS, Landcare Research.

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