

## Urban predator research: Who are the important nest predators in Hamilton City?

Predation on either eggs or chicks is the major cause of nesting failure in birds, and reducing the numbers of known predators has been shown to improve nesting success. Determining the

impact a suspected predatory species has requires that all predators in an area are identified and the proportion of predation events caused by each is determined. Nest predation has been studied in many different types of habitats in New Zealand, but never in urban ecosystems... until now, that is!



Harrier hawk preying on blackbird chicks

This bird breeding season (September 2006 – February 2007), researchers from the University of Waikato and Landcare Research are going to determine who the predators of bird nests are and which species are doing the most damage in Hamilton City- **and we need your help!**

### Why is this research important?

As mention above, predation is the main cause of nesting failure in birds. In Hamilton, there are relatively few nesting native species (compared with introduced birds); although, there are conservation groups that aim to promote recolonisation of the city by birds such as tui and kereru (e.g, Tui 2000). The University of Waikato is committed to urban environmental research in Hamilton City, and an exciting multi-levelled research programme where many aspects of urban ecosystem restoration are to

be studied has already begun. Part of this programme involves trying to encourage resident populations of our native birds back into the City. Therefore, the proposed study is important because it will identify the major nest predators in an urban environment that will help managers



Ship rat preying on eggs



Cat preying on song thrush chicks

plan and initiate appropriate pest management strategies in the future to protect highly desirable species during the nesting season.

### **Where will nests be monitored?**

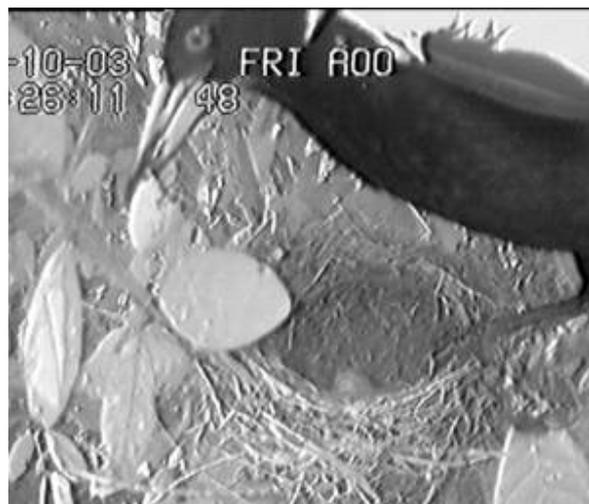
This is where you come into the project! We want to monitor nests in three broad types of urban habitat: (1) pure residential, (2) gully systems and (3) recreational parks. Monitoring nests in purely residential zones is fairly straight forward, but because there are one or two nasty people out there, we do not want to leave all our video recording gear for a week or two in the middle of an urban park or gully! Therefore, as a compromise, we want to monitor nests in resident's back yards close to these types of areas because the predators are likely to be the same. So, if you have birds nesting in your yard, and you live in one of these three habitat types, **we would really appreciate hearing from you!**

### **How will nests be monitored?**

We will be monitoring nests using time-lapse recording. Continuous time-lapse video recording is perhaps the best way to monitor bird nests and identify predator. This is because the level of disturbance to the nest that is being monitored is very small, meaning the results gained from using this technique can be assumed to be practically free from experimenter bias. Furthermore, studies using this method to monitor nests have been successful conducted in forest, coastal, braided river and rural ecosystems- now it is time to use this technique in urban habitats.

Once a nest is found, a small camera is quickly set up to film it. The camera is connected by a cord to a time-lapse video recorder (able to record continuously), which would be stored in your house. After that, the only input from you would be to put in a new tape every day and then let us know when something happens to the nest.

The length of time that nests are usually monitored for can vary greatly. If nothing preys on the nest contents, most birds take about two weeks for incubation, and 2-3 weeks for chick rearing. Unfortunately, a predator will usually visit the nest before this, so this time is generally much less; for



Australian magpie robbing song thrush eggs

example, in a similar study where 38 nests were filmed, 12-13 days was the average time that each nest was monitored (some as short as only one night).

**Who is running this project?**

This project is being run by Dai Morgan and Joe Waas from the University of Waikato, and John Innes from Landcare Research. We have worked together before studying nest predation on rural birds; a summary of those results can be found at [www.rsnz.org/publish/nzjz/2006/004.php](http://www.rsnz.org/publish/nzjz/2006/004.php). Please contact Dai if you would like to participate in this exciting project, or have any further queries.

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Song thrush at nest