



Birds New Zealand

PREFERRED STUDENT RESEARCH TOPICS:

GUIDANCE FOR APPLICATIONS FOR THE BIRDS NZ RESEARCH FUND (BNZRF)

University students tend to carry out research over a 1-3 year period on a fairly specialised topic. The Birds New Zealand Council regards the following topics as priorities for future research. Students and researchers are encouraged to use this list as guidance for funding applications.

Terrestrial species (RP)

1. Do the foraging heights and habitats of common native scrub- and/or forest-inhabiting bird species (e.g. fantail, warbler, silvereye) change through summer, autumn and winter? In particular, do these and any other species spend more time foraging on or near the ground in winter?
2. Are bellbird populations male biased, or are the sexes using different food resources that result in males aggregating at high-value resources and therefore being more conspicuous?
3. Harriers are known to make long distance movements during the non-breeding season, including moving from south to north across Cook Strait, especially juveniles. With the use of solar-powered transmitters, could the movements of several individuals be documented in detail?
4. Weka forage diurnally and nocturnally, however there has been no quantitative study of the species foraging habits as regards proportion of time spent foraging diurnally compared to nocturnally, and how this differs with gender, time of year (breeding season versus non-breeding season, soil moisture, prey availability), and stage of the breeding cycle. Also, what senses do weka use to locate prey, particularly at night?

Waterfowl, herons and shags (PS)

1. Expansion of dairy farming has resulted in a large increase in the number of on-farm water storage ponds. What use (breeding, feeding, roosting) is made of these by wetland birds (especially waterfowl, gulls and terns) and what habitat features (e.g., riparian vegetation) affect the numbers and diversity of these birds?
2. Irrigated farmland provides feeding habitat for gulls, terns, stilts, oystercatchers and white-faced herons. Does the use made of pasture by these species vary with irrigation method e.g., border-dyke and centre-pivot spray?
3. Little black shags forage in freshwater and sheltered marine environments, but there has been no quantitative study of their diet in NZ. The shags are presumed to feed primarily on fish, and so an analysis of pellets regurgitated at roosts would enable an assessment of species composition and size range of prey taken by little black shags.

4. The numbers and breeding distribution of royal spoonbills have increased markedly over the past 30 years. Whilst their spread has been well documented by Birds NZ surveys, little has been reported about the food and feeding of the species, especially with respect to habitats favoured for feeding and time of day over which feeding occurs.
5. The population of white herons at NZ's only breeding colony is small (150-200 birds) and apparently stable. However, there are occasional influxes of white herons, presumably from Australia, for example during the 1970s and most recently in 2012-13. What influences the influx of these birds to NZ? Is it associated with good breeding in Australia, resulting in increased dispersal of young birds? Or is it dry conditions in the areas where white herons occur in Australia, resulting in unfavourable feeding conditions, and so increased dispersal of adults?

Seabird species (GT)

Still to come.

Waders (DM)

Still to come.

The following is a list of fairly broad topics within which student projects could be developed and that might be suitable for BNZRF funding:

- a) Impacts of climate change on the distribution and population dynamics of NZ native bird species
- b) Impacts of farming practices on NZ native bird species
- c) Filling information gaps in our understanding of the basic biology of NZ native bird species. The following are some project suggestions with regard to "filling the gaps":

Scientific Committee / Updated 17 January 2018