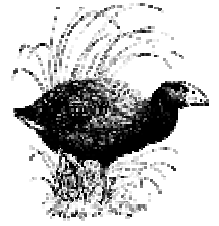


Ornithological Society of New Zealand Annual Conference, Taranaki, 2007.



Scientific Day, Sunday 3rd of June

ABSTRACTS (In alphabetical order)

Birds as pollinators and seed dispersers of the native flora

Sandra Anderson from Auckland University sh.anderson@auckland.ac.nz

New Zealand's long biogeographic isolation has left a legacy of distinctive flora and fauna. The predominance of birds as vertebrates makes them unusually important as mutualists in native ecosystems. In the pre-human avifauna, at least five species were pollinators and twelve species dispersed seed. Native ecosystems have since suffered from forest clearance, extensive hunting, and the widespread occurrence of introduced predatory and browsing mammals. As a result, endemic pollinating and seed-dispersing birds are either regionally or nationally rare or extinct on the New Zealand mainland. Nine of ten bird-pollinated plant species examined so far are pollen-limited to some extent at mainland sites. Although there are relatively few quantitative studies of levels of dispersal service to plants, these may also be suffering, and large (>1.4 cm) diameter fruits now depend on a single disperser (NZ pigeon). Conservation of functioning ecosystems requires management of native bird populations (especially tui, bellbirds and NZ pigeon) to avoid long term shifts in vegetation composition. Intensive predator control has been shown to increase the densities of mutualist bird species, suggesting that New Zealand conservation managers can augment bird-serviced plant populations by predator control, a third-order ecological manipulation.

Satellite-tracking the migrations of New Zealand's Bar-tailed Godwits *Limosa lapponica baueri*

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Alaskan-breeding Bar-tailed Godwits have long been recognised as one of the world's longest-migrating birds, and evidence has accumulated that they must be making direct flights across the Pacific Ocean to New Zealand on southward migration. With increasingly small satellite transmitters being available, attempts were made in 2005 and 2006 to directly track these flights. In 2007 16 godwits were tagged before northward migration in New Zealand to determine the flight paths and lengths and stopover site use during their northward migration. Five birds were tracked making non-stop flights of around 10,000 km to the Yellow Sea. At the time of writing, four birds had migrated to Alaska. The use of satellite transmitters has firmly established New Zealand's Bar-tailed Godwits as one of the world's greatest avian migrants in terms of endurance exercise, and generated unprecedented media attention for an under-appreciated, mud-loving, generally brown bird.

Putting Taranaki Kiwi on the map

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The Taranaki Kiwi Trust started a public kiwi records database in 2002 to ascertain the past and present range of north island brown kiwi in the Taranaki region. The database now contains nearly 600 records of kiwi from the 1935 to the present day. There is a mixture of records from members of the public, historical records, and data from surveys carried out by Wildlife Service, Department of Conservation, Taranaki Kiwi Trust and Bushy Park Trust. Any records associated with kiwi are held; birds either heard (male vs female) or seen, sign of kiwi (e.g. probe marks, scats, footprints, eggs, feathers). The public appeal for information was a useful way of promoting the newly established Trust in 2002, as well gain a lot of information. Some broad trends in the range of kiwi in Taranaki are evident, although not strong.

Rotoroa/Hamilton OSNZ Lake surveys

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Rotoroa/Hamilton Lake has been regularly surveyed by members of the Ornithological Society for over 30 years. In that time, major changes in the way it has been managed have affected the numbers of birds using the lake. The presentation will outline the major influences on, and population trends of, birds using this important freshwater resource of Hamilton City.

“How I ended up here”

Peter Fryer, OSNZ Taranaki.
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The least scientific speech of the day. Ten years of bird records gathered during numerous walks from our house to the mouth of the Waiongana stream and along the beach, located approximately 14kms north of New Plymouth. A beach like any other in North Taranaki, but unlike any other a home for a variety of shorebirds and passing migratory waders. And the joys of just being on the beach.

Australasian museum collections as a resource for ornithology

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There are 14 major museum bird collections in Australia (10) and New Zealand (4). Results of a survey quantify for the first time that these collections together hold half a million specimens, including 275,000 from Australia and 115,000 from New Zealand. Six large collections in Australia, and two in New Zealand (Canterbury Museum and Te Papa), each hold at least 30,000 birds. The largest single collection (Australian Museum, Sydney) has 78,000 birds. Overall, study-skins are the most common form of preparation (47%), followed by eggs (20%). However, for New Zealand collections alone, fossil bones are the biggest single category (56%) reflecting that country's remarkable Holocene fossil record of birds. Taxonomically, the best-represented group in the Australasian collections is the order Passeriformes, followed by Anseriformes, Procellariiformes, Psittaciformes, Charadriiformes, Columbiformes, Falconiformes and ratites (Ratitae). Most birds in Australasian collections (81%) are from Australia or New Zealand, followed by 27,000 specimens (6%) from the South-west Pacific (islands of Polynesia and Melanesia, including New Guinea). Though small compared to the collections of the great European and North American museums, the 14 Australasian bird collections together form a nationally and internationally important resource. They document the biodiversity of the birds of the Australasian biogeographic region, and allow researchers to study many aspects of avian biology, including speciation, biogeography, moult and plumages, systematics and conservation.

Kokako Recovery Projects

Mike Graham, OSNZ Auckland, Kokako Recovery in the Mangatutu Forest, North Pureora.
Phil Bradfield, National Kokako Recovery Group, Department of Conservation, Te Kuiti.

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Phil Bradfield currently leads the Kokako Recovery Group comprising DOC scientists and field officers involved with kokako recovery plus representatives from volunteer groups working with them. Phil will update members on the general status of kokako in New Zealand and summarise the strategic plans for the future management of the species.

Mike Graham has been involved with kokako recovery work in the Mangatutu forest of north Pureora since 1996 when a DOC survey recorded 29 remaining birds. Mike will describe the efforts of a volunteer group who took ownership of the project and whose efforts have seen the population double every four years since that time.

Five Minute Bird Counts and the Future

Lynette Hartley, Terry Green, Moira Pryde, Ian Westbrooke.

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This presentation will provide an update on the Five Minute Bird Count project. The project will be placed in the context of other work the Department of Conservation (DOC) is undertaking to improve the quality of its data collection and data management. This mass of biological data at staff's finger tips will lead to better, more informed decisions.

I spoke at the OSNZ meeting three years ago when I was compiling a spreadsheet listing all the five minute bird count studies that have been undertaken in New Zealand. Since then we have created a purpose-built 5MBC database and entered over 70,000 counts.

I will briefly describe the series of initiatives aimed at improving the way DOC staff collect and manage data. We are working on "the toolbox" which will guide staff when deciding how best to conduct monitoring. We are developing training packages for several of the most frequently-used techniques and developing data logger programmes so electronic data can be collected in the field for key techniques. In other related projects staff are evaluating and calibrating several different bird count methods and investigating issues related to the analysis of data from studies where sites are repeatedly re-visited.

Enemy recognition in the cuckoo host whitehead (*Mohoua albicilla*)

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Hosts pay a large fitness cost when parasitised because cuckoo chicks typically evict host eggs and nestmates. This study experimentally tested whether whiteheads (*Mohoua albicilla*), the North Island host of the long-tailed cuckoo (*Eudynamis taitensis*), recognise their brood parasites as a potential and specific threat to their nest, even in the absence of ongoing parasitism. Taxidermic mounts of a longtailed cuckoo, a morepork (ruru, *Ninox novaeseelandiae*, a predator), and a song thrush (*Turdus philomelos*, a harmless control) were presented in the proximity of nests and breeding groups of translocated whiteheads on Tiritiri Matangi Island. Behavioural measures of the latency and intensity towards these different mounts revealed that whiteheads showed similar and stronger responses to both parasite and predator model compared to the control model, irrespective of nesting stage, indicating a lack of specific, anti-parasite responses to cuckoos.

Why did bellbirds (*Anthornis m. melanura*) return to New Plymouth, and why have they gone again?

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Between the 1850s and the early 1900s, almost all of the native forest of western Taranaki was intentionally and systematically destroyed, mainly by felling and burning. This destruction would have been a sufficient cause of itself to account for the disappearance of bellbirds (*Anthornis m. melanura*), and other birds, from most of that area. The return of bellbirds to New Plymouth in the early 1920s may have been a direct result of the increased amount of suitable food that had become available to them there, particularly during the cooler months of the year when their energy needs are greatest. Bellbirds have become an increasingly rare visitor to New Plymouth over the last 2 decades. This study indicates that a possible reduction in the population of bellbirds in Egmont National Park and/or increasing ambient temperatures in cooler months of the year may be primarily responsible for the decline in the number of those birds that visit New Plymouth now.

Aspects of kereru ecology in and about New Plymouth

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The kereru is an iconic species for the New Zealand public because of its large size, distinctive form and colouration, confiding habits, and because they occur in private gardens and parks of some towns and cities. The public are keen to maintain kereru populations in rural and urban areas as has been evident by councils, landcare groups, and individuals planting food species specifically to attract kereru, caring for injured kereru and returning them to the wild, and carrying out weed and pest control in native forest patches. The Department of Conservation recognises that it can not carry out conservation efforts for all species everywhere, and that it needs to empower others to carry out such activities beyond the conservation estate. By using the kereru as a flagship species for conservation efforts by councils and the public in rural and urban landscapes there are likely to be benefits for a wide range of species, both plant and animal. To this end the Department funded a 4-year study into various aspects of the ecology of kereru and tui in urban and rural landscapes about New Plymouth and Invercargill. In this presentation we will provide information about kereru foods, movements, mortality and nesting success about New Plymouth, with some comparisons with findings from Invercargill. The main findings include that kereru can be highly mobile, are habitat and food generalists, and that their nesting success is compromised by introduced predatory mammals (rats, possums, stoats, cats), and possibly in the long-term, by weed invasion of native forest patches, their nesting hotspots.

Atlas of Bird Distribution in New Zealand 1999-2004.

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Launch date 13 August 2007. This is your ATLAS!

Movement of Arctic Waders in New Zealand: What's out there after three years?

Rob Schuckard, Phil Battley and David Melville.

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After three years of fieldwork a significant number of Arctic Waders has been individually colorbanded. Many members of the society have participated in this project with catching and resighting efforts. Due to the sheer volume of hundreds of resighting records waiting to be processed, it is not well possible at this stage to provide a briefing of the results. The cut off date for reporting color band combinations will be the first of July 2007. Winter count 2007 data from June wader census can still be added to the data base.

Birds were caught over the whole length of New Zealand, between Invercargill and Parengarenga Harbour at 10 different sites. It has been very pleasing that two very successful trips were organized to the Far North, Parengarenga Harbour. After a presentation at the local Marae, the project was endorsed by local Iwi and they provided logistical support for the catching efforts in harbour. This help was crucial for the success of this expedition.

Just over 800 Bar-tailed Godwits have been marked, about 60% in the South Island and about 40% in the North Island. About 350 Red Knots were caught, 90% in the North Island and 10% in the South Island. It was very disappointing that after several trials, no Red Knots were caught at the most important South Island site for this species, Farewell Spit.

Monitoring population change in Shoveler and Mallard duck

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For the last seven years Fish and Game New Zealand, in conjunction with other groups such as OSNZ, have counted shoveler duck (*Anas rhynchos*) in early August at approximately 250 sites nation-wide in order to monitor change in the New Zealand population. Population change was examined using the average of the regression coefficients of the natural log of the count for each site. The national population of shoveler appears to have undergone a minor decrease over the 2000 – 2006 period. Sex ratios were examined using chi-squared goodness of fit test. Males were significantly more numerous ($P < 0.001$) in the 2006 count, with a ratio of 1.3 males to female. This sex ratio imbalance was consistent with that obtained in previous counts.

In the Wellington Region, Fish and Game New Zealand has counted dabbling duck along 40 randomly selected 10km long aerial transects for the last eleven years to estimate population change and provide information for the setting of gamebird hunting season regulations. The eleven-year trend shows an increase in count of, on average, 5% per year.

New Zealand garden bird survey 2006

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A small-scale trial garden bird survey was undertaken in July 2006 (16 gardens). Twenty-two species of birds were recorded (average 6.5 species per garden). Blackbirds were recorded in nearly 90%, silvereyes 81%, house sparrows 56%, hedgesparrows 50%, and other species in less than 50% of gardens. House sparrows were recorded in the greatest numbers (average 7.7 per garden) although this included one garden with 84 house sparrows feeding on bread, grain, and scraps. Silvereyes were the second most abundant species recorded (average 6.3 per garden). This included one garden with 33 silvereyes around sugar-water feeders. Blackbirds averaged 2.1, California quail 1.7, starlings 1.3, fantail 1.0, and other species less than 1.0 per garden. The average number of California quail was exaggerated by one garden with 24 California quail. In general, more birds were recorded in gardens where food was put out. A second trial survey is planned for 14–22 July 2007.

Banding Studies of Caspian Terns, particularly in Auckland Region

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Caspian Terns were banded as chicks in the colonies at South Kaipara Head and Mangawhai Spit from 1978 to 1984, using colour combinations unique to each site and year. Some 750 birds were banded at the western location and 330 the east coast during this society project conducted by local OSNZ members. Information gained over the subsequent 20-year period from numerous sight records and the various band recoveries will be analysed and discussed, in relation to studies of the species elsewhere in New Zealand.

NZ falcon (*Falco novaeseelandiae*) breeding behaviour and development in a plantation pine forest.

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Abstract: New Zealand falcon (*Falco novaeseelandiae*) nest on the ground in pine forests, providing an excellent opportunity to study their breeding behaviour and development. Two NZ falcon nests were observed during most of the incubation period and then throughout the entire nestling period. The nests were observed using a hide for concealment, and observations totalled ~282 hrs at the first nest and ~350 hrs at the second. Both pairs fledged two offspring, two males at the first nest and one of each gender at the second pairs' nest. The male shared some of the incubation duties at both nests throughout the incubation period. The males provided nearly one third of the total incubation. The percentage to time spent brooding remains relatively constant for the first five days post hatching, it then decreases steadily until day 12, by which time the chicks are able to thermoregulate. This coincides with the rapid growth phase of the chicks.

Urban Flyers: an investigation of avian species abundance, richness and behaviours along a variably urbanised gradient.

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Historically, urban landscapes have been the domain of introduced species but more recently we have witnessed re-invasion by the native forest bird fauna.

This research aims to describe the nature of this re-invasion by increasing our understanding of how birds, especially native species, use resources in Wellington. This study will quantify avian species abundance, richness, behaviours and distribution within the Wellington urban area and document their use of available resources. It will increase understanding of what characteristics of the urban environment birds are selecting or avoiding.

The research design uses six routes within a 5 km radius of central Wellington. All routes are strip transects that include a pronounced gradient from urban green space to the central business district. Each route includes stratified random five-minute bird counts (5BMC). Forty-nine 5BMCs were conducted monthly from February to April 2007.

Here I present and discuss summaries of my initial 3 months fieldwork.