Hutton's Shearwater CHARITABLE TRUST

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Kia Ora Koutou - From The Chair

I am fairly new to the Trust, but not new to Hutton's shearwater conservation nor chairmanship. I was involved in the early days of the Hutton's shearwater working group, prior to the Trust's formation. There were not many weeks that Paul McGahan (former Trustee) and I didn't talk to each other in those days. During each of the translocations I spent time as a volunteer feeding and measuring chicks.

I grew up mainly on farms, as my father was a farm worker during much of my childhood. My uncle Peter was a Wildlife Ranger, and then became Secretary Manager of the Auckland Acclimatisation Society. So I was often out with uncle Pete, counting and banding birds, tracking down bats, and trapping ferrets. Birds

Fly Safe Event

Kowhai River Colony

Kaikōura Peninsula Colony

and bird stories were a part of growing up.

I studied at Waikato University, with a broad science interest. I was fortunate to have lecturers like Alan Edmonds for ecology, Harry Higgs for soils, and Peter Molan for biochemistry. I studied marine ecology at Auckland with John Morton. The latter part of my childhood was spent at Waitakaruru, so the mudflats of the Firth of Thames, with their amazing bird and marine life, was home.

I met Ailsa Howard (also a Trustee) here in Kaikōura 25 years ago, and Kaikoura has now been our home for 18 years. So maybe not quite a local in some eyes, and not a stranger either.

I like to find out how things work. I ask questions. I suspect that for many people I ask too many questions. I'm not very good at accepting that something is likely to be accurate just because someone else (or everyone else) believes it. I like to weigh up evidence. I like looking for more useful explanations and models. This makes me useful as a Chair, as it usually means I can act as translator when members of a group are using different paradigms of understanding or different sets of values.

For the past 32 years I have run a software company. I have been involved in local and regional government, and currently chair the Kaikōura Zone Water Management Committee. I have been interested and active in various communities for many decades, including fisheries management, conservation, philosophy, politics, artificial intelligence, evolution, existential risk and global security. I am engaged in many national and international groups.

Hutton's shearwaters are at risk because of the actions of people. We have introduced competitors and predators to their world. I see the future of humanity resting in our acceptance of our need to act as responsible stewards to the natural world. The unique Hutton's shearwater is iconic to Kaikōura - they are both emblematic and systematic of the risk and the promise that humans bring.

We hold the possibility of delivering sustainable abundance to all humans, all life, yet we have adopted a system of monetary values based in scarcity, that values abundance at zero. We face some real challenges, and I am cautiously optimistic for our future, both for the Hutton's shearwater, and for humanity generally. And it is by no means a certain thing. Both will require active thought, and choice leading to effective action, by many people.

It is my honour and pleasure to have been chosen by such an active and dedicated group of people to take on the role of Chair. We are a diverse team of Trustees, with diverse skills and values, and I look forward to working with all.

I would like to take this opportunity to farewell Jody Weir-Judkins and Sabrina Luecht from the Trust. Both worked incredibly hard as Trustees. Jody was excellent at events and education in her role as Trustee, while Sabrina furthered the Trust in her role as Project Coordinator (as well as a former Trustee). Thank you very much from all of us. We also welcome Emma Williams to the Trust, who will act as an Advisory Trustee.

Ted Howard, Chair

Hutton's Shearwater Light Disorientation

Research update

In the last newsletter we outlined the aims of a new study investigating fallout events in Hutton's shearwaters, in relation to Kaikōura's lights during the fledging season each March to April. This year's study ran in conjunction with the Trust's Fly Safe event. A huge thank you to everyone in the community who helped collect data upon rescuing a crash landed bird, as well as to Encounter Foundation who generously funded major parts of this year's research.

2016 is the third year during which the Trust (in collaboration with the University of Canterbury) has been collecting data on crash landed birds via public logs filled in by Kaikōura's community. A report to the Trust, as well as the funding body, is currently underway. Here we share some preliminary results.

Fallout numbers

During the 2016 fledging season 87 crash-landed Hutton's shearwaters (including 15 dead individuals) were collected. This compares to 274 Hutton's shearwaters (including 1 dead individual) collected in 2015, and 66 (including 11 dead individuals) Hutton's shearwaters collected in 2014. Such strong annual variation cannot only be explained by variation in search effort or public awareness over the years and is likely to be related to a suite of environmental factors, e.g. overall weather patterns.

Effect of weather conditions on fallout events

Linking different weather parameters (rain, fog, wind etc.) to the temporal distribution of crash landing events is still ongoing. Overall, the 2016 season saw mostly fairly moderate weather conditions, whereas the 2015 season unfolded in lieu of some severe storms. The common perception that bad weather events (poor visibility) cause an increase in crash landing birds has yet to be validated.

Analysing data from the last three years with regards to moon phase, however, showed a clear pattern of fallout events predominantly occurring around New Moon, i.e. dark nights. Results like this will help identify periods during the fledging season when people should be particularly vigilant and try to keep outdoor lighting to a minimum, as well as keep pet cats and dogs (which prey on fledglings) inside. On a larger level it is hoped that overall town lighting will be reduced (by dimming or switching off lights sources) during peak times.

Spatial distribution of fallout events in relation to artificial light sources

To date, data is only available for 2014 and 2016 with regards to the spatial distribution of crash-landed birds. Linking crash landings to street light types was mostly inconclusive in 2014 - because the data often did not allow a clear spatial link to a certain light source. As such we are currently in the process of identifying general crash landing hotspots (i.e. locations with a high densities of crash landings) across Kaikōura, and how this might relate to certain light types or overall light spill.

As with fallout numbers, we also found annual variation in the distribution of crash landing sites. While in 2014 crash landings were more spread out along the main Kaikōura Bay and township, in 2016 we observed obvious clustering along the northern parts of the Esplanade and Torquay Street. Anecdotal reports on crash landing locations from 2015 seem to confirm this pattern.

The 2016 season included a thorough search effort of dark areas around Kaikōura, as well as distinctly lit areas such as dairy farms or the Ocean Ridge subdivision, in order to avoid results being biased by concentrating search effort on township areas only. While the odd bird was found grounded in dark areas, we could confirm what appears to be the general pattern: The majority of Hutton's shearwater fledglings crash along the lit coastal stretch of the main Kaikōura Bay, while both Ocean Ridge or South Bay lights attract little to no birds. This is particularly tragic as the birds often perish only meters from the ocean. The vicinity to the water could be one of the possible explanations as to why this happens, when birds already smell their 'destination' but then follow the wrong trigger (artificial lights on land vs. reflection of moon light on the water) with regards to when and where to land. The intensity and extent of the overall light spill is likely to play a role here too, and potentially other factors influencing the bird's flight path when coming down from their mountain colonies.

These preliminary results have been presented to the Kaikōura District Council in a submission hearing for the Annual Plan 2016/2017, in order to create a focus on future mitigation measures with regards to lighting in areas of particular concern. The reduction of overall light spill along the coastline during fledging season seems to be paramount.

Furthermore, the annual variation observed with regards to fallout events highlights the need for ongoing research over the years to come. Particularly to assess whether mitigation measure will have the anticipated effect in reducing and preventing crash landings in Hutton's shearwaters.

Lorna Deppe, Advisory Trustee

2015/2016 Monitoring Results

Department of Conservation staff Mike Morrissey and Mike Aviss flew into the Kowhai River colony on 30 November 2015 and set up 122 burrows to monitor for the season; 75 above the hut and 47 in the top colony further up the valley. We returned on 16 February 2016 with burrow scopes and recorded a 75% survival rate, a very good result. They sighted evidence of chamois and deer damage to some burrows during the February colony visit, which was followed up by Dave Walford who managed to shoot 5 chamois in the area several days later.

Mike Morrissey flew into the Shearwater Stream colony with Matt Kavermann (Puhi Peaks Farm Manager) in early December 2015 and set up 106 burrows to monitor. They returned on 10 March 2016, which is later than usual, due to weather and availability. The late return meant that they missed the critical time and some birds had already fledged. The recorded survival rate was 59.4%, however its more likely it was about 65% or higher. Many of the chicks were in full adult plumage and there was evidence of down in otherwise empty burrows which points to the birds moulting and fledging prior to this visit.

As per usual there was evidence of deer in the colony and two stags were sighted in the colony during the day. An aerial shoot in April 2016 netted 205 goats on the property, including five in the Shearwater Stream colony.

The results of the burrow-scoping work have been encouraging with a high chick survival rate, which is likely to have been a contributing factor towards the increase in the shearwater population that we recorded in the mark-recapture study in September 2014. Chick survival rates from 2008/09 until 2015/16 average ~60%. The Kowhai River colony average was 58%, while the Shearwater Stream colony average was 62% over the eight year period. This is a small difference, and supports the theory by Richard Cuthbert that the Kowhai River population is not impacted overall by stoat predation.

Mike Aviss, Department of Conservation

Fixed-Term Project Coordinator

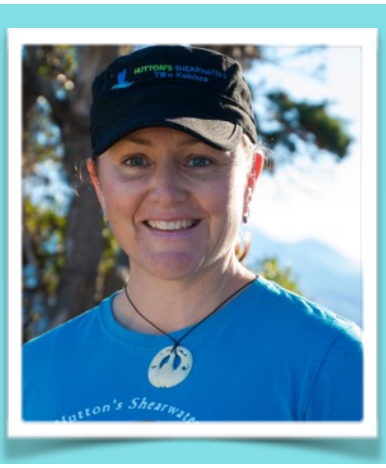
The key to the Trust's success is the highly motivated, focused, dedicated and creative contribution made by everyone that makes up the Trust.

We have been provided with funding from the **DOC Community Fund** for a part-time Project Coordinator based in Kaikoura. A person with the following skills or attributes is required:

- Experience at fundraising
- Marketing skills
- Website and computer skills
- Ability to work under pressure
- Motivated team player
- Enthusiasm for conservation
- Advocacy and education skills

Please forward your resume to: Ted Howard, 1 Maui Street, Kaikōura

Or email to: ted@fishnet.co.nz



Join Us - Become A Friend!

We offer a structured membership: individual ($25), family ($30), school ($30), corporate ($120) or life ($300).

Your contribution assists conservation of this endangered species, both at the Kaikōura Peninsula/Te Rae o Atiu colony, and at the only two remaining wild colonies in the world. You can become a Friend of the Hutton's shearwater on our website: www. huttonsshearwater.org.nz, or request a membership form from admin@huttonsshearwater.org.nz

Fly Safe Event

The Trust's first annual '**Fly Safe Hutton's Shearwater/Hoki Ora Atu Tītī**' event was held from 4 March to 3 April 2016. The month-long event was a success, raising a wide level of awareness on light induced crash landings during the fledging season. The highlight was the creation of a centralised drop-off point at the **Hutton's Hub** adjacent to the Kaikoura DOC office; to process (measure, weigh, band and release) collected crash-landed birds.

The event involved the Hutton's Hub opening (attended by the DOC Threatened Species Ambassador), coordinated volunteer searches for crash-landed birds, media releases, social media blitzes, public presentations and finished with the annual **Ra E Nga Tītī/Farewell** ceremony at the Kaikōura Peninsula colony.

The Trust is hugely appreciative of the work that Jody Weir-Judkins put into the event. Thank you to Lorna Deppe for her University of Canterbury research coordination. Special mention to Encounter Foundation for their amazing support. Thank you to Jodie Denton (former Trustee), and all the volunteers who helped to collect crash-landed birds!

Clare Reilly Print

50 individually counter signed Hutton's shearwater prints from Clare Reilly are now available.

This stunning print is unique and will be a favourite amongst Hutton's shearwater and seabird lovers.

All profits from sales will go directly towards Hutton's shearwater conservation.

Print size: 400 x 400
Paper size: 560 x 560

Cost: $250 each including GST, packaging and postage.

You can purchase the print on our website, under the Merchandise section.

Or email admin@huttonsshearwater.org.nz to purchase a print.

Kowhai River Colony - 2015/16 Research

This research was a continuation of work that began in October 2014, and is currently being prepared as a journal paper to be submitted to *Notornis*.

Although never discounted, we now have evidence that translocated Hutton's shearwater chicks may return to their natal colonies, even though in two cases they had been recorded as having been at the Kaikōura Peninsula/Te Rae o Atiu colony (but only for one night). This begs the question as to whether birds should somehow be restricted from flying for a period after first emergence, to allow further site-imprinting to occur.

We measured chicks at the Kowhai River and Kaikōura Peninsula/Te Rae o Atiu colonies at times as close together as we could arrange. The averages at each site were very close and not significantly different. This indicates that flying the extra 20 km and climbing 1200 m in altitude to the Kowhai River colony to feed chicks and a cooler environment has little effect on chick growth compared to the Kaikōura Peninsula/Te Rae o Atiu colony.

Other observations at both sites showed that first emergence and fledging dates were similar, that breeding birds visited other burrows during the season, and chicks go walkabout visiting other burrows before fledging.

The overall conclusion is that there is no evidence from this research that chick growth, and adult and chick behaviour at the two colonies differ.

The Trust is extremely grateful to the Birds New Zealand Research Fund for a grant that made this work possible, and increases our understanding of Hutton's shearwater behaviour.

Lindsay Rowe, Treasurer

Hutton's Shearwater Tees & Polos

The Trust sells tees and polos in a variety of styles (unisex, ladies, kids) and colours (navy, blue, white, pink, green) under the Merchandise section of our website. Please see: www.huttonsshearwater.org.nz

Merchandising is one of the many ways that our charitable Trust fundraises.

By purchasing our merchandise you directly help conservation of the endangered Hutton's shearwater. Thank you!

Kaikōura Peninsula/Te Rae o Atiu Colony 2015/16

The 2015/16 breeding season finished with a slightly disappointing end. From 16 eggs laid, we only had 6 chicks fledge (8 eggs hatched and two chicks died of unknown causes). The last chick fledged on 29 March 2016.

However the good news as reported earlier, was that two chicks that hatched at the colony in 2012 and fledged in March 2013, returned home. The first seen, X17334, was recorded visiting 8 different nest boxes since its arrival at the colony on 6 November 2015 and was last recorded on 17 January 2016. A totally unexpected arrival at the colony was X19644, recorded at Box 51 on 20 January 2016. This bird was another of our chicks, which departed Box 58 on 21 March 2014, less than 2 years previously, and about a year earlier than any other returning bird that we know of that fledged there.

Since the last newsletter we have recorded additional birds at the colony during the breeding season. In total we have had 13 and 15 birds return from the 2012 and 2013 translocations, a very pleasing result for the efforts put in. Sixty two birds were recorded this year at 32 nest boxes. If these young birds can return again, and with more birds set to return for the first time as 4 and 5 year olds, and then breed - the boost in numbers will ensure a greater number of chicks fledging and a thriving colony.

Lindsay Rowe, Treasurer

2015/2016 Chick Sponsors

We would like to thank our Hutton's shearwater chick sponsors for the 2015/16 season, whose sponsorship directly benefited this endangered species. We will be offering sponsorships again next breeding season.

Chick #41 – Storm Rider, Sponsored by Lorna Deppe
Chick #42 – Sponsored by Caleb Armstrong
Chick #45 – Sponsored by Geoff Harrow
Chick #46 – JeanieB, Sponsored by Carol Howard
Chick #59 – Sponsored by Jeremy and Ilana Miller
Chick #70 – Sponsored by Blair Rowe
Chick #72 – Sponsored by Caleb Armstrong

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