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# Getting science into and out of penguins

The Trust had reason recently to take stock of its links with science and science folk. How much, we asked ourselves, have we made use of new penguin knowledge to keep our work on track? And how much have we helped science to generate that knowledge?

The answers to both questions were, well, quite a bit! In fact, we felt so pleased and rewarded by our science connections that we celebrated them at Dunedin's Yellow-eyed Penguin Symposium in August. Here's a brief summary.

The Trust itself sprang from John Darby's energetic studies of yellow-eyed penguin biology and population trends. Our ambitions grew from his startling prognosis that local populations were headed for extinction. His advice on remedies shaped our early management practices.

Our goals have remained unchanged since then — we have to and will save these remarkable birds. But we have constantly adjusted our revegetation, trapping and monitoring regimes to reflect what new research tells us about the penguins and their needs. We have posed our own questions to fill gaps in our knowledge. And, as we did for John Darby at the outset, we have paid for research to answer them. More than \$0.6 million since 1997, in fact.

Our association with science has deepened and diversified over the years. Penguin-minded researchers here and overseas have become familiar members of the Trust's extended family. Their science and good counsel informs a great deal of what we do.

We have reciprocated in kind through funding their research, sharing our data and making our penguin habitats accessible. Our



staff and vehicles are often on loan to meet logistical needs or help with field-work.

Looking back, we were surprised at just how many sciences we have called upon and helped. The diversity of social and biological disciplines is a strength and a true reflection of the conservation enterprise.



Yellow-eyed penguin ecology, threats and recovery needs are crucial study focuses, of course. But as you see in the diagram below, our research interests have extended far beyond. Studies have informed us about our penguin's fellow travellers at sea and ashore, and about the human and natural histories of conserving these vital associations. We have supported studies to quantify the many benefits of our work for people and penguins alike. We have researched the most effective means of finding the resources for our task. And so much more.

#### Where did all these researchers come from?

Since 1997, more than 40 experts from government agencies, universities and consultancies have helped us with management advice, plans and strategies. We have built working relationships with 13 universities and other learning institutions locally and worldwide. As well, we have supported the studies of more than 35 students, including six PhDs and 18 Masters candidates.

Our science investments are broader still. We are committed to science outreach. For instance, the Trust has sponsored more than a dozen public symposia on penguin research and conservation. Trustees and staff alike participate in science advisory groups, workshops and related projects. We encourage researchers to use our events for science communication.

How will science help us tomorrow? One example will suffice. Our coastal restoration project at Long Point in the Catlins will rely on experts and their research to help us rebuild the intricate natural systems on which our penguins and their many plant and animal associates depend. Returning forest and related coastal-edge communities to their former splendour, literally from grass-roots, is one of New Zealand's most ambitious and challenging restoration projects. Science will keep us well directed and well able to measure our success. In return, we propose to make this challenging place and project a national and international centre for restoration learning.

It's going to be, we trust, a formative and rewarding relationship.

# Banks Peninsula Conservation Trust



Banks Peninsula is home to a small breeding population of the northern-most yellow-eyed penguin with several nests and up to 30 birds seen every summer, mostly in the south-eastern corner of Banks Peninsula in an area called the Wildside. Wildside is being managed as an open sanctuary with predator control over a vast area of coastline; some 700 traps control stoats, ferrets, weasels and cats.



Possums and rats are also targeted, while huge numbers of hedgehogs are caught every year.

Wildside is an outstanding area of biodiversity with large areas covenanted or managed as reserves; it has the South Island east coast's only marine reserve and the largest mainland penguin colony in New Zealand, of little blue white-flippered penguins. Large areas remain as family farms running sheep and cattle, with many farms having covenants. In one bay a network of covenants runs from the summit at 560 meters down to the sea.

Twenty years ago local farmers and conservationists noticed penguin numbers declining and found a ferret in a little blue penguin burrow; they started trapping, initially with six borrowed traps which expanded over time to hundreds. Predation was still occurring in the breeding colony so DoC started an extensive trap line up to the ridge lines and across three bays to reduce the inward migration. Over the years the predator numbers have declined (except hedgehog numbers which remain steady) and predation has declined within the trapped area.

In other areas holho pairs continued to struggle, with predation of chicks by ferrets and cats. Christchurch City Council, ECan, The International Antarctic Centre, Eureka Trust, Josef Langer Trust, Hickory Bay Farm and MWH have all contributed to extending trapping which now covers roughly thirty-five kilometres of coastline and extends inland for several kilometres. In the 2010/11 season no predation was recorded.

The goal is to reduce predation of penguins at Wildside down to a negligible level while improving the trapping programme and monitoring to ensure that the entire ecosystem benefits from lower predation levels to create a healthy working and living landscape.

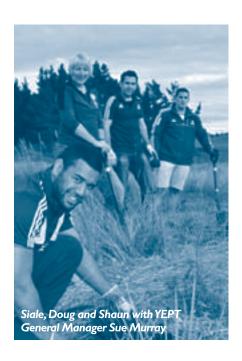
# International Day of Biological Diversity – good on ya mate

Thanks to the Speight's Brewery Environment Fund, the Yellow-eyed Penguin Trust Nursery kicked off their planting season this year on International Day of Biological Diversity, Sunday 22 May, 2011 at Tavora Reserve, East Otago.

Over 20 Trust volunteers, staff and supporters pitched in alongside Highlander players Siale Piutau and Shaun Treeby, and Highlander marketing manager Doug McSweeney, to plant 1000 native trees, shrubs, flaxes and pikao. The aim of the day was to extend the current planting towards the southern beach to enhance the biodiversity where the rare yellow-eyed penguins breed. The restoration of these riparian strips provides ecological and environmental benefits for integrated land-use practices and is the way forward for conservation.

The Speight's fund was a catalyst for the Highlanders to support the Trust on our first planting day of the season and they have indicated they hope to continue to support the Trust on future planting days.

International Day of Biological Diversity recognises this area as an endangered ecosystem. The planting of trees and shrubs further enhances this rare ecosystem and gives the community a chance to experience what the coastline used to be like. The Trust will maintain the new plantings for at least three years, spraying competing exotic grasses and ensuring the protective wire cages are secure, to stop rabbits and hares from damaging the trees.







**Sunday 31 July** is internationally recognised as World Ranger Day, so the Trust invited its members to view the work of their own ranger and participate in activities at Tavora Reserve. The forty visiting rangers planted native trees, identified pests and footprints and learnt how transponders are used to identify penguins. One of the most enjoyable activities for young and old was throwing hacky sacks to set off the traps! A sunny day, fun activities, delicious bar-b-que, informative displays; all-in-all a memorable day. Book early to be part of this in 2012!

## Port Chalmers Seafood Festival



Yellow-eyed penguins waving donation buckets in their flippers greeted visitors to the Port Chalmers Seafood Festival on 1 October. Children clamoured to be photographed with their favourite penguin and were invited to visit the Yellow-eyed Penguin Trust stand.

Here they could see eye-to-eye with a real (stuffed) penguin and learn more about its life and how to help the Trust grow trees to enhance its habitat. Thousands of people enjoyed sampling the seafood on offer at the festival and were able to learn more about a flippered expert on seafood at our stand.

## Happy Feet Competition

Recently the public has been captivated by the finding, recovery and release of an emperor penguin fondly named 'Happy Feet'. The penguin turned up on Pekapeka beach 60km north of Wellington in June, about 3200km off course from its home in the Antarctic. It fell ill after eating sand and sticks instead of its usual diet of fish, krill, squid and a range of marine invertebrates.

Emperor penguins are the largest penguins, and can reach more than a metre tall and weigh up to 30kg. (Yellow-eyeds are on average about 65cm tall and adults can weigh up to 8kg). The only other time an emperor penguin had been recorded in New Zealand was on Oreti Beach near Invercargill, in 1967.

After nine weeks of specialised care at Wellington Zoo, Happy Feet was released into the Southern Ocean at 53 degrees, the northernmost known range for juvenile emperor penguins. It was armed with a Sirtrack satellite tracker so we could watch progress. Unfortunately the device stopped tracking after nine days and so the fate of this penguin is unknown. Did the device become unstuck or has something happened to Happy Feet?

Many of you may have received the following cartoon about what may have happened. This cartoon is full of biological inconsistencies, so we thought it would be fun to see if you can identify the biggie, write a caption for the cartoon and be in to win a prize from the Trust.



Happy Feet Competition Entry Form What's the main biological error in this cartoon?
My caption
Name:Address:
Phone: Email:

Send to: Happy Feet Competition, Yellow-eyed Penguin Trust, PO Box 5409, Dunedin

## Meet Piko online



Some of you might already know me if you are on Facebook!

I am Piko, an endangered yellow-eyed penguin. I live on the Otago Peninsula, known as the wildlife capital of New Zealand. It was my birthday on the 8th November so help me celebrate in penguin style by 'liking' me on my Facebook page. I'm getting ready for my next breeding season, so keep an eye out for my upcoming posts. I'm hoping to be able to share much more news with you this summer, including showing you our nest, newborn chick (or chicks if Mrs P and I are really lucky), watching them growing up and getting ready to leave the nest. Of course, I am very handsome so I'll try and make sure there are plenty of pictures of me! See you soon — Piko

# Buzz the People

Want to help raise funds for the Trust?
Simply sign up to "Buzz the People" and
complete the online surveys, and for every one
completed the Trust will receive funding. Sign
up now at www.buzzfundraising.co.nz

## **Balmacewan School**



Room 14 at Balmacewen Intermediate School has helped revegetate the Tayora dunes since 2007.

Each year a fresh team of new students arrive with trowels to help plant pikao and to learn what a native dune system looks like. This year the planters were rewarded for their effort with a walk and the viewing of three penguins with our Ranger Leith Thomson. We hope that the students will bring their families and friends back in years to come to check on the dunes and view their good work.

## Opoho School



The Fantails Club, a hardy group of students from Opoho Primary School, is dedicated to doing things to help the environment and is supported by the Enviroschools programme.

They joined Ranger Leith Thomson and Nursery staff, Toby Bulow and Anita Pillai, at Okia to help plant pikao in the native dune systems that we have been developing and to learn about these systems.



# Nursery goes to Tahuna



During Conservation Week Tahuna Intermediate School's Room 15 invited the Yellow-eyed Penguin Trust into their classroom to talk about plant propagation, penguins and to show the Trust what conservation measures their school is taking to save the planet.

Armed with buckets of potting mix, pots and seed trays, Nursery Manager Anita Pillai invaded the classroom. After a talk with pictures on penguins and the work of the Trust, the main business started. Each pupil learnt how to "prick out" a plant and pot them to take home to nurture until adult size and eventually to plant out where they choose. By the end of the session many of these plants had become so precious they had names!

But the fun really started when they made seed balls. This was tremendously popular as they mixed clay, compost and seeds into a mud mess then formed them into balls. Again the pupils took them home to throw into coastal places needing a native plant boost. The greatest thing of all is that at the end of the session Room 15 could recount an impressive amount of what they learnt and did a great job of cleaning up. Thank you Room 15 for being such great participants.

### Tairua School

Room 5 students from Tairua School on the east coast of Coromandel Peninsula have been raising funds for the Trust's conservation work by asking local businesses to donate money for a tree.

This money allows the Trust to produce plants required to improve the yellow-eyed penguin habitats. Thank you to Tia, Bayden, Phoenix, Kory and Sandy for organising this wonderful fundraising event.

# Good news... 514 breeding periods estimated

## North Otago

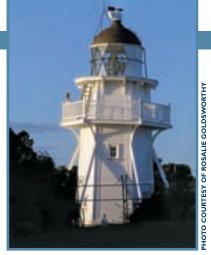
### Estimated minimum total of 66 nests

Similar to previous seasons.

#### Average chicks fledged per nest 1.34

A year of good chick production as defined by Peter Moore as anything over 1.2 chicks fledged per pair. Reference: Moore, PJ, 1994. What is a bad season for Yellow-eyed penguins? Conservation Advisory Science Notes No.103, Department of Conservation, Wellington.

Average weight at fledging 5.26kg



A yep checks out Moeraki lighthouse

## **Catlins**

#### Estimated minimum total of 227 nests





Mel Young (DOC) catches a chick to measure

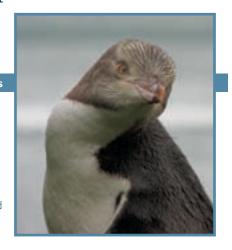
Notable increases in nest numbers from the previous season occurred at Long Point, Cosgrove Creek, and Hina Hina Cove with the only disappointing decrease being at Nugget Point which dropped from 24 nests in the previous season to 16 nests.

## Average chicks fledged per nest **1.41**Average weight at fledging **4.94kg**

A Fiordland crested penguin nest was also found but unfortunately this nest failed as one of the adult birds died.

## Otago Peninsula Estimated minimum total of 221 nests

There were only minor fluctuations in the numbers of nests reported on the Otago Peninsula compared with the previous season, and at Sandfly Bay there were ten nests, which is an increase on the previous season. However, a diphtheria event at Sandfly Bay and at Boulder Beach limited the productivity at



Average chicks fledged per nest 1.08 due to the diphtheria event that occurred.

Average weight at fledging 5.16kg

In the May 2011 edition of *Hoiho* (page 9), it was reported that it had been a good breeding season for yellow-eyed penguins on the Otago Coast.

Final figures for that year were collated and checked over the winter months, and we are delighted to report that the last season was even better than earlier reported with a total of 514 estimated breeding pairs of yellow-eyed penguins on mainland New Zealand at the 34 monitored sites. Monitoring of hoiho productivity has also occurred on Banks Peninsula, Codfish Island and the Bravo Islands near Stewart Island.

A total of 498 chicks were seen at pre-fledge, which equates to around 1.27 chicks fledged per pair:

Chick weight at pre-fledge was very similar to the previous season at around five kilos and 314 chicks were marked using either bands or transponders for future identification.



# pairs of yellow-eyed penguins on mainland NZ

The yellow-eyed penguin database is one of the longest standing collections of statistics about a species' breeding success, and has had input from the many people who undertake the monitoring of populations along our eastern coastline. The Trust wishes to acknowledge all of these people, together with Mel Young, a Department of Conservation Coastal Otago Area biodiversity ranger, who oversees the collation and management of this data.

As this edition of *Hoiho* goes to print, the Trust and volunteers will have completed the 2011 nest searches in the Trust-owned reserves and assisted the Department of Conservation on a survey of Banks Peninsula and the Catlins coastline. This latter survey is undertaken every 5-6 years and involves teams searching every kilometre of the Catlins Coast from Nugget Point to Slope Point.



### TRUST RESERVES

## Otapahi

Estimated minimum total of 23 nests

Similar to previous seasons.

Average chicks fledged per nest 1.04

Average weight at fledging 5.37kg



## Tavora

Estimated minimum total of 3 nests

Same as previous seasons.

Average chicks fledged per nest 1.0

Average weight at fledging 4.8kg



Estimated minimum total of 20 nests

An increase on previous seasons.

Average chicks fledged per nest 1.35

Average weight at fledging 4.72kg



YEPT ranger Leith Thomson finds a yellow-eyed penguin in the nest box

## Okia

Estimated minimum total of 16 nests



Slight increase on previous seasons.

Average chicks fledged per nest 1.18

Average weight at fledging 5.32kg

## Long Point

Estimated minimum total of 50 nests

Increase on previous seasons.

Average chicks fledged per nest **1.44**Average weight at fledging **4.91kg** 



Volunteer helper Aviva Stein weighs a chick pre-fledging

## Spring is the time for planting

#### LONG POINT / IRAHUKA

The Long Point Draft Management
Plan was publicly notified for comment,
pursuant to section 41 of the Reserves
Act 1977. Only three submissions were
received and as this newsletter goes
to print, these are being considered.

## Catlins community battle the elements at Long Point

The first Catlins community planting day was held at the reserve in September and despite sometimes trying weather conditions, which were probably more suitable for the penguins, 20 participants from the community came along.

The planting site, near the *Manuka* memorial, had magnificent views out to Long Point and it is hoped that the planting will become an annual event.

"Despite the weather the planting was a great success with all 500 trees, shrubs and flax planted and caged to protect them from hares and possums" said Sue Murray, Trust General Manager.

For several planters this was the first time they had seen the new carparks, tracks and signage giving access to Long Point and Helena Falls Beach.

Yellow-eyed Penguin Trust Field Manager David McFarlane commented "the Trust was impressed by the enthusiasm of all those who took part and we feel that the planting days and community involvement have a great future at Long Point".

#### Clutha District Council grant for traps

The Trust greatly appreciated the support of the Clutha District Council, which funded the purchase of traps for Long Point out of their Biodiversity Fund. The 40 new DOC 200 traps will protect yellow-eyed penguins this breeding season.

### Roy Johnstone, finalist in the Otago Conservation Awards

Congratulations to Roy Johnstone, Chair of South Otago Branch – Forest & Bird who was a finalist in the recent Department of Conservation "Coastal Otago Conservation Awards". Roy has been a valued volunteer for the Trust at Long Point/ Irahuka, assisting with trapping, penguin monitoring and planting. As chair of the local Forest & Bird Branch, he also plays a key role in driving their involvement in seabird restoration as a partner with the Trust.





## Update HOIHO HABITATS

#### **OTAPAHI RESERVE**



### Elephant seal mecca

Following the sighting at Otapahi of a large male elephant seal and a pup in August-September 2010, it is noteworthy to report another male elephant seal hauling out at Otapahi again this year. Neighbouring landowner and farmer Sam Neill reported the sighting.

YEPT ranger Leith Thomson has been carrying out ongoing maintenance of plantings over the winter months and reports good plant survival.

#### **OKIA RESERVE**





Fonterra Stirling and Mosgiel staff planted 300 trees and shrubs on the dunes at Okia in September, to enhance nesting habitat for yellow-eyed penguins. Led by Fiona Mathers, Stirling Environmental Team Leader, the team enjoyed the experience and it is hoped this will become a regular part of their calendar. It was also very appropriate that Stirling was involved, given the significant quantity of Mainland cheese that is produced at the site.





#### **TAVORA RESERVE**

University of Otago Geography Department planning students continued a long-standing involvement at Tavora Reserve, when they helped clear blackberry from a native planting area. Associate Professor Mike Hilton, who has an interest in coastal dune restoration, included Tavora Reserve as a stop on a multi-day field trip looking at coastal issues in North Otago and South Canterbury.

A grove of totara was planted at Tavora Reserve to mark the recent passing of Sir Paul Reeves, husband of Lady Beverly, Patron of the Trust from 1988-2006. Situated among a riparian planting at the south end of the reserve, it complements a group of totara planted by Lady Beverly in 2000.

Staff from NHNZ helped plant more than 600 trees and shrubs in the riparian area beside Tavora Creek in June as part of their annual support of the Trust. The standard and speed of planting and caging was impressive, with one individual digging at least a couple of hundred holes single-handed.



## What's up with Anton OUR PATRON'S OPINION

The news from me is that I've been accepted into Cambridge to read an EMBA, which is an acronym for Executive Master of Business Administration. The executive bit means that the course is designed for people who are working. The EMBA is exactly the same syllabus as the full time MBA – it's just spread out over 20 months instead of 12.1 chose Cambridge because of my interest in energy and Cambridge has its immense research departments/silos that the business school horizontally cuts right across and has visibility on all of them. Over the last 20 odd years Cambridge has also become a hub for tech start-ups and is called Silicon Fen (a take on Silicon Valley and Fen is the marshland surrounding Cambridge). I wanted to put myself in an environment of cutting edge technology, visionary thinking and business acumen, turning ideas into realities.

Because I started the whole business malarkey so late in the piece on account of chasing a funny oval thing I want to fast track my learning as quickly as I can and I see studying at the same time as my real life, on the job learning, as the best way to do this.

I always knew the 180 degree transition from footy into something I know nothing about, across the other side of the world where I didn't know anyone, would involve a few hard yards. Well it will involve a few more — not the least 20 months of bloody study. After this, no more examinations and degrees. I think four is plenty!

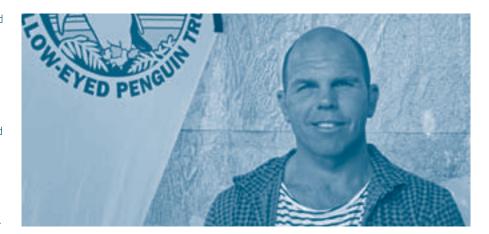
So that's me. I'm projecting positive energy to the universe and hoping that it reciprocates with some positive energy right back!

Regards

Anton Oliver

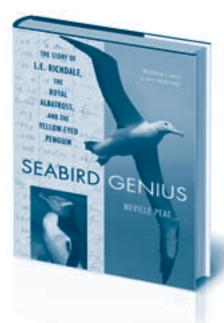
Patron, Yellow-eyed Penguin Trust

P.S. "Have you seen I am campaign manager for the yellow-eyed penguin in Forest & Birds 'Bird of the Year' competition? Get online and vote for our yep now www.birdoftheyear.org.nz"





# "Seabird Genius"



Dr Lance Richdale was a pioneer of penguin studies and conservation, and an inspiring teacher of natural history.

He was a man possessed. This New Zealander has been described as the father of albatross research and a legend in seabird science generally. His studies of the yellow-eyed penguin, royal albatross and other seabirds were both epic and internationally acclaimed. He guarded the albatrosses of Taiaroa Head near Dunedin to ensure the first fledging in 1938 – a colony that thrives there today – and he wrote the



world's first long-term study of a seabird population, *A Population Study of Penguins* (Oxford University Press 1957).

Besides albatrosses and penguins, petrels also featured in his work. At tiny Whero Rock in Foveaux Strait, near Stewart Island/Rakiura, he camped for weeks at a time, often in atrocious weather, to study five species of petrel, including the sooty shearwater or muttonbird.

He had an exceptional talent for researching seabird biology and behaviour. As an itinerant teacher based at Dunedin, he toured schools throughout Otago for over 30 years, leaving lasting impressions with tens of thousands of children, who dubbed him 'Mr Rich, the Nature Study Man'. His story is awe-inspiring.

Neville Peat describes the life and times of Lance Richdale in a biography, published by Otago University Press in early November: It is called Seabird Genius – The story of L. E. Richdale, the Royal Albatross and the Yelloweyed Penguin and will be available at selected bookstores.

## YEPT Annual General Meeting

Date:

Wednesday 30th November at 7:30pm

Place

Alexander McMillan Room Dunedin Community House 301 Moray Place, Dunedin

Guest Speaker:

Neville Peat, on researching and writing the Lance Richdale biography.

All welcome



# Mainland Update

Here at Mainland we believe in lifelong friendships, which is why we are still proud to be supporting our littlest friends, the yellow-eyed penguins. We always say good things take time and this year we are celebrating the

21st anniversary of our sponsorship of Hoiho, a relationship we know that all New Zealanders value as much as we do.

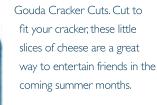
In the 1980s, the yellow-eyed penguin was in real trouble. But, thanks to the hard working people at the Yellow-eyed Penguin Trust, and some help from Mainland, breeding pairs are on the rise. We'd love to keep seeing the little Hoiho making strides, and helping us to do this is easy. Simply send in any Mainland barcode featuring the yellow-eyed penguin and we will donate \$1 to the Trust (up to \$75,000 annually).





Along with our butter pats, grated cheese and ever popular cheese blocks, we now have a new product featuring the yellow-eyed penguin barcode. New Mainland Cubes are handy packs of perfectly diced cheese, ideal

for barbecues, platters, salads or just on their own. These come in New Zealand's favourite cheese types, Tasty and Edam, and will be available in store from November 14th. While you are there, check out our new Edam and



For more information about Mainland products, product recipes or how you can help us raise funds for the

yellow-eyed penguin, visit www.mainland.co.nz

The Mainland team 0800 CHEESE (0800-243-373)



#### Thank you to our regular supporters:

Supporters Group Nursery supporters

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NHNZ

Otago Polytechnic Horticulture, Arboriculture & Landscape Depts

Pikao Recovery Group

Strategy First

Thank you for Funding from:

BP Vouchers for Volunteers

Buzz The People

Clutha District Council

**DOC Biodiversity Fund** 

Heseltine Trust

Honda Tree Fund (ORC)

Integrated Mapping Support

NHNZ

### Special thanks this issue to:

Balmacewan Intermediate School Betty Osmand (since deceased)

Clearwater Contracting

Fonterra Stirling & Mosgiel

Freya Duval-Smith

Fergus Sutherland

Hayden McLean

Gail Loughrey

Kate Middleton

Lydia McLean

Melanie Paddon Nicole Wurster

Opoho School

Phoebe Morrison

Rustic Pathways

Sam McMahon

SBS Dunedin Tairua School

#### Special thanks to:

Our American volunteers who are returning to the States - Jeremy Beck and

Rosemary Devere

World Ranger Day volunteers

#### Thank you to:

All the landowners who have contributed to our habitat protection work

### Thank you to all Volunteers:

We are tremendously grateful to all the other volunteers, including the regular Nursery workers and the Habitat Volunteer Team for their valuable contributions to our work.

Special thanks to the team at AdArt for the

design of this newsletter.

The Hoiho newsletter is printed on Royal Offset Hi-Brite paper which passes the green test.

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