Wildlife Conservation in the Falkland Islands

Issue 18

FALKLANDS CONSERVATION

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Falkland Islands
Issue 18 May 2013

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Protecting the wildlife of the Falkland Islands for future generations

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Watch Group Coordinator: Caitlin Burston

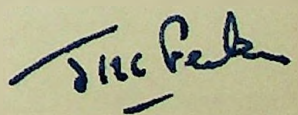
Editorial

This will be my last editorial as Chief Executive Officer of Falklands Conservation as in July I will be handing over to Dr David Doxford, our new CEO. It has been a busy two years for me, as it has been for the whole organisation, with at times up to 12 projects underway at once. These projects cover the full range of wildlife interest, from seabird monitoring to raptor research, from invasive plant control to seed collection, from involving children in the Watch Group to developing a strategy for protected areas. Unfortunately, there is not space in this magazine to cover more than a small part of this wide range of activities, but I hope you get a flavour of some of our work.

We welcome Hay Miller as a new Falkland Islands trustee. Her knowledge and insight into the organisation will be invaluable owing to the fact she was office administrator of the Falklands office for many years. Sadly, we say goodbye to Maggie Battersby, our Watch Group Coordinator, whose crowning achievement has been for the group to be runners-up in the RSPB's Club of the Year competition. In her place we welcome Caitlin Burston, who has herself come up through the Watch Group.

During the year ahead we hope to go ahead with a new Education Centre for the Watch Group. This building will be directly behind Jubilee Villas and will provide a purpose-built home for the Group and also for other community activities. We also hope to extend our office space at Jubilee Villas, which has become cramped owing to the increasing amount of work we undertake. This expanded office will include a dedicated room for the Falkland Islands National Herbarium, of which we are the custodians. We are pleased to announce that Helen Marsh from Fox Bay has volunteered to be our Herbarium Curator and she will soon be attending a course at the Royal Botanic Gardens, Kew, on herbarium techniques.

The new Watch Group Centre and the office expansion will be expensive so we will soon be launching an appeal to raise further funds for this work. Watch this space!



Dr James Fenton, Chief Executive Officer

FRONT COVER PHOTO: Short-eared owl. *Micky Reeves.*

Investigating striated caracaras in winter on Steeple Jason

Jonathan Meiburg describes observations and findings from a winter trip to an important summer breeding island for this charismatic bird of prey.

As part of Falklands Conservation's raptor project, Robin Woods, David Galloway and I, working with Micky Reeves, FC Raptor Officer, and RSPB researchers spent August 2012 on Steeple Jason as part of the Darwin Initiative-funded project 'Falkland Islands raptors – reducing conflicts with rural livelihoods'.

Robin and I were veterans of the FC surveys of breeding striated caracaras in the summers of 1997/98 and 2006, but this trip was something new – an opportunity to study these unusual, near-threatened Falkland raptors in winter on one of their most important summer breeding islands. This time, the goals were to survey the island's population of striated caracaras, to band and genetically sample individual birds, to investigate their use of available food resources and, with the RSPB research team, to test potential reactions to an attempt at eradicating mice with cereal baits.

Before we arrived, we were not certain whether there would be **any** striated caracaras on Steeple Jason since most of the seabirds whose eggs and young appear to provide much of striated caracaras' summer diet (black-browed albatrosses, burrowing petrels, and rockhopper and Magellanic penguins) remain at sea in winter. Our summer counts in 1997 and 2006 on Steeple recorded 68 and 63 pairs respectively and an estimated 100 non-breeding adult and younger birds – a large population of raptors for a 790 ha island. It seemed unlikely that Steeple could support similar numbers of striated caracaras in the absence of the seabirds.

The Steinhardt Research Station on Steeple Jason. We are grateful to the island's owners, the Wildlife Conservation Society, for allowing us to stay in this well-equipped station. Sarah Brennan

We were surprised, then, to find about as many striated caracaras on Steeple in August as we had seen in earlier summers. Multiple counts produced an estimate of 250 birds on the western half of

Striated caracara Y9 leaving a dye-marked dropping. Micky Reeves

the island, of which 136 (54%) were adults (4+ years in age), 33 (13%) were 'sub-adults' (~2 to 4 years), and 81 (33%) were first-winter birds; we counted an additional 10 adult pairs on the eastern half of the island. Our observations suggest their population could remain fairly stable year-round, though the smaller proportion of sub-adult birds suggests a high rate of emigration and/or mortality among this age group.

Understanding diet in winter

What were all these birds eating? Their distribution provided a clue. In the summer, most were distributed in territorial adult pairs or roving 'gangs' of non-breeders around the albatross colony on Steeple Jason's southwest-facing slopes. This winter, however, we found only a few pairs near the vacant albatross colony, while a large group gathered on the northeast-facing slopes near the field station, digging and scratching in the peaty soil with their powerful talons. These birds were foraging for invertebrates, including beetle grubs and earthworms, and their strength and industry were remarkable; they had excavated large patches of tussac peat mould in the sheep's sorrel upslope from the remaining coastal tussac grass. These raking striated caracaras were often accompanied by tussacbirds, sifting through the disturbed clumps of peat and roots torn up by the caracaras. We are still analysing 120 freshly regurgitated pellets collected from 17 separate roosts, but many of them appear to be composed primarily of peat and earth, plant fibres, and the mouth parts of beetle grubs, suggesting that soil invertebrates are an important part of striated caracaras' winter diet on Steeple Jason.

The pellets also contained evidence of other animal food sources – penguin and goose feathers, and fur from sea lions or fur seals. Gentoo penguins gather at their colonies on Steeple Jason throughout the winter in groups that range in size from tens to

Robin and David digging for invertebrates alongside foraging striated caracaras. *Jonathan Meiburg*

Beetle grubs are a favourite prey item for striated caracaras. *Jonathan Meiburg*

Young birds cleaning the carcass of a gentoo penguin. *Andy Stanworth*

Striated caracaras foraging for invertebrates in the peaty soil. *Andy Stanworth*

Banding and genetic sampling with Keith Bildstein; Jonathan has just taken a blood sample from this bird. Jonathan Meiburg

several thousands of birds, and upland and ruddy-headed geese remain on the island year-round, as do southern sea lions and fur seals. We did not observe striated caracaras attacking geese, penguins or sea lions, but we did see them cleaning fresh carcasses of penguins and geese and up to 50 striated caracaras at any one time were observed over a few days feeding on an old sea lion carcass in a gully near the field station. These occasional 'bonanzas' of carrion almost certainly play a significant role in sustaining the striated caracara population.

Genetic sampling – new for Steeple Jason

Keith Bildstein, from Hawk Mountain Sanctuary in Pennsylvania, USA, is working with Falklands Conservation as a collaborator on the raptor work, and he accompanied us in the first week of our study in conjunction with his own research on Saunders and Carcass islands. Under Keith's supervision, we banded and genetically sampled 70 striated caracaras – the first time this had been attempted on Steeple Jason. We gathered more

Micky photographing a group of striated caracaras feeding on the remains of a southern sea lion. Jonathan Meiburg

Raptor project update

The Darwin Initiative 'Falkland Islands raptors – reducing conflicts with rural livelihoods' project has now been under way for 10 months. As the title suggests, part of the project's aim is to record the effects that four species (striated caracara, southern caracara, turkey vulture and southern giant petrel) have on rural livelihoods (sheep farming) in the Falklands and to develop an action plan to reduce conflicts. Questionnaires were sent to all landowners, with very good responses, and September and October were spent in the field observing lambing.

Another objective of the project is looking at the birds' behaviour, especially their movements around the Falklands and how they survive the winter when their summer food sources (seabirds) have left to forage at sea. Working in conjunction with Keith Bildstein from Hawk Mountain Sanctuary in the United States, we are satellite tracking and leg-banding striated caracaras at three locations: Saunders Island, Carcass Island and Steeple Jason. We are using uniquely coloured bands for each island population (yellow for Saunders, white for Carcass, and black for Steeple Jason) to learn about their movements from observational efforts. So far we have had reports from landowners, the public, and FC staff of Saunders-banded birds appearing on Steeple Jason, Carcass Island and Pebble Island, and a bird banded on Steeple Jason was seen at Dunbar.

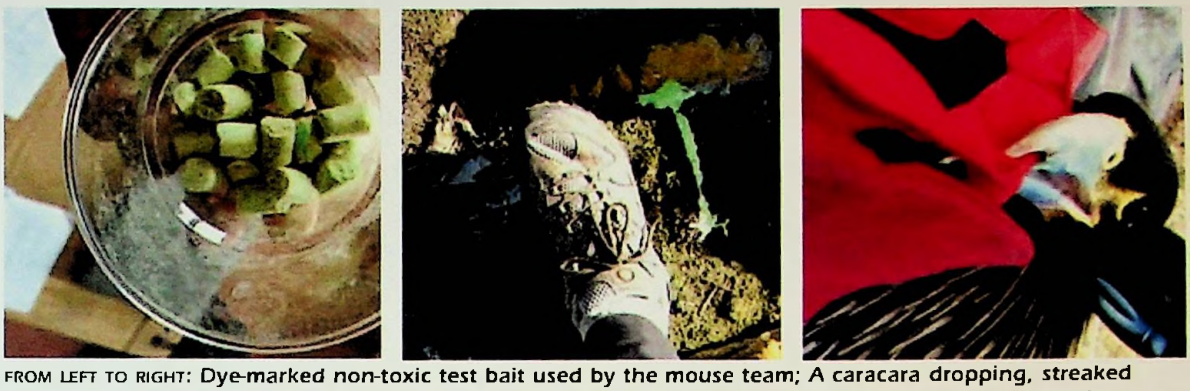
In conjunction with the banding programme, we will be deploying satellite trackers on individual birds to give us finer details of their movements over a certain period of time. During January 2013 the raptor project also banded a small number of striated caracara chicks at the nest. They were given a plain white band on the opposite leg from the numbered band; this will easily identify them as this year's chicks from Carcass. The banding of chicks will help us to learn whether birds return to their natal areas and how long they live in the wild. We also used time-lapse cameras to record chick provisioning, a non-invasive way for us to learn more about caracaras during their breeding period.

Catching and handling wild raptors is usually challenging, but not so with striated caracaras. Due to the curious nature of these birds, once caught and banded many go straight back to the baited traps and get caught all over again!

If you see a striated caracara (Johnny rook) wearing a band please note the **colour** of the band, its **letter** and **number**, and send the information, along with the **date** and **location**, via Falklands Conservation's Facebook page or email raptors@conservation.org.fk.

I would like to thank all the landowners of these islands for their invaluable help in this important work and the people who have been sending in sightings of banded birds.

Micky Reeves, Raptor Project Officer



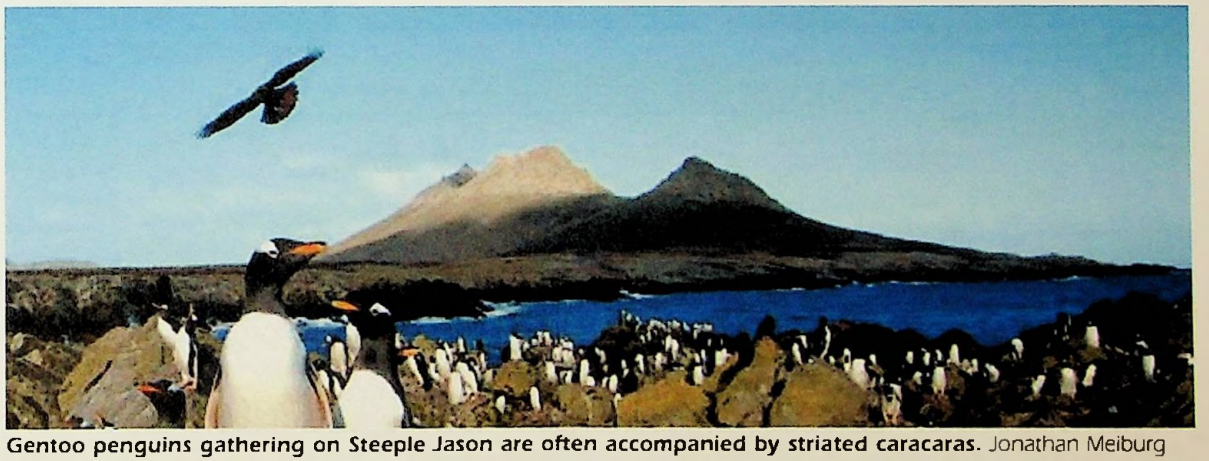
FROM LEFT TO RIGHT: **Dye-marked non-toxic test bait used by the mouse team; A caracara dropping, streaked with fluorescent dye; An adult Johnny Rook's tongue glows under UV light, indicating bait consumption.** *Jonathan Meiburg*

than 500 re-sightings of these birds during our study, including the first known banded pairs and a banded 'trio' of birds that displayed together. These banded birds will continue to be of use in future studies on Steeple Jason, and should help to shed more light on their poorly-known movements between and among islands. (One bird, for example, was seen at Dunbar settlement on West Falkland on 27 November 2012, after being re-sighted on Steeple Jason by Andy Stanworth on 28 October.)

Reactions to non-toxic bait

The banded birds were especially helpful in understanding how striated caracaras might react to an attempt at eradicating introduced house mice with an aerial drop of cereal baits. Though only one of 39 birds we presented with dead mice consumed a mouse, we observed 18 individual banded birds eating the mouse team's dye-marked non-toxic test baits or producing dye-marked faeces. Clumps of the bait were also present in regurgitated pellets recovered from striated caracara roosts near the mouse team's test plots. We also saw upland geese, tussacbirds, and Falkland thrushes consuming inert bait and producing marked faeces, raising the possibility of secondary poisoning if striated caracaras fed on dead birds.

From these observations, it appears likely that aerial spreading of poison bait island-wide would result in a great deal of bait consumption by non-target species including geese, striated caracaras and small passerines. Falklands Conservation endorses in principle the eradication of mice from Steeple Jason, but further studies are needed to determine whether eradication without unacceptable side effects is possible in practice.



Gentoo penguins gathering on Steeple Jason are often accompanied by striated caracaras. Jonathan Meiburg

Acknowledgements
Robin, David, and Jonathan funded their own travel to and from the FI, but gratefully acknowledge the Darwin Initiative's support for inter-island travel and accommodation costs through the 'Falkland Raptors – reducing conflict with rural livelihoods' grant. We also thank Graham Harris and the Wildlife Conservation Society for their kind permission to use the Steinhardt Research Station; Rob McGill and Michael Clarke for their essential logistical support; Keith Bildstein for banding gear, expertise, and access to his research; former FC CEO Craig Dockrill for assisting with the preparation of the Darwin grant; FC's Conservation Officer Andy Stanworth and current CEO James Fenton, and the RSPB's Kalinka Rexer-Huber and Graham Parker for their invaluable support and advice during the trip.

Celebrating a global partnership

Falklands Conservation joined BirdLife International as a full Partner in June 2009. In March this year, BirdLife celebrated its 20th anniversary but its history goes back 90 years. Here we celebrate the development of the world's oldest international conservation organisation and the largest 'grassroots' partnership for nature.

BirdLife was founded as the International Council for Bird Preservation (ICBP) on 20 June 1922. The meeting was called by T. Gilbert Pearson, President of Audubon (now BirdLife Partner in the US), and attended by delegates from France, Holland and the UK. By the end of the meeting, they had established the outline of the world's first truly international conservation organisation.

Among its earliest campaigns, ICBP called for the protection of insect-eating passerines because of their benefits to people by controlling agricultural pests, and for an end to the trade in feathers of wild birds. When in May 1928 ICBP held its first formal conference, resolutions were passed for the creation of bird sanctuaries; against the collection of large numbers of eggs of rare species; and for a 'closed season' on shooting and trapping of birds on their spring migration and while breeding. Indeed, the protection of birds on migration was a natural fit for ICBP's international structure and remains a major focus today.

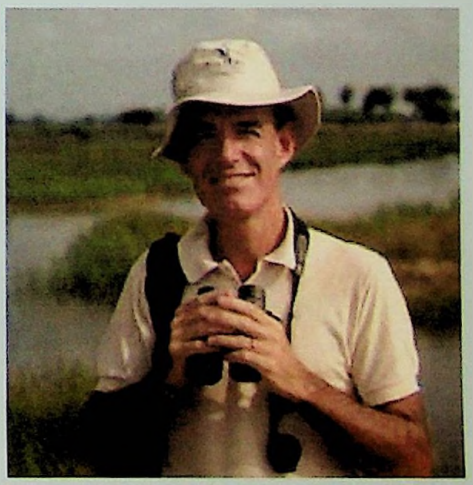
The beginnings of BirdLife

Although ICBP's many conservation successes were impressive, it became clear the organisation was wrestling with its loose structure as a federation of many groups with varying philosophies. In 1992, the first set of 15 'lead organisations', as the BirdLife Partners were then called, signed the Partnership agreement with ICBP to replace the national sections in anticipation of the launch of the new federation that would have one selected representative organisation per country. But before the official launch on 3 March 1993, there was still much to be done, including finding a name and logo for the new organisation.

The name chosen was BirdLife and a stylised arctic tern, renowned as the world's long distance migratory bird unifying continents during its journeys, symbolised the need for international collaboration.

Today, Falklands Conservation and the other 116 Partners all over the world are an effective force for conservation on the world stage. The BirdLife Partnership is represented in all continents and unites over 7,500 staff, 2·7 million members and 10 million supporters all working for conservation. We are proud to be part of this unique and exciting Partnership for nature.

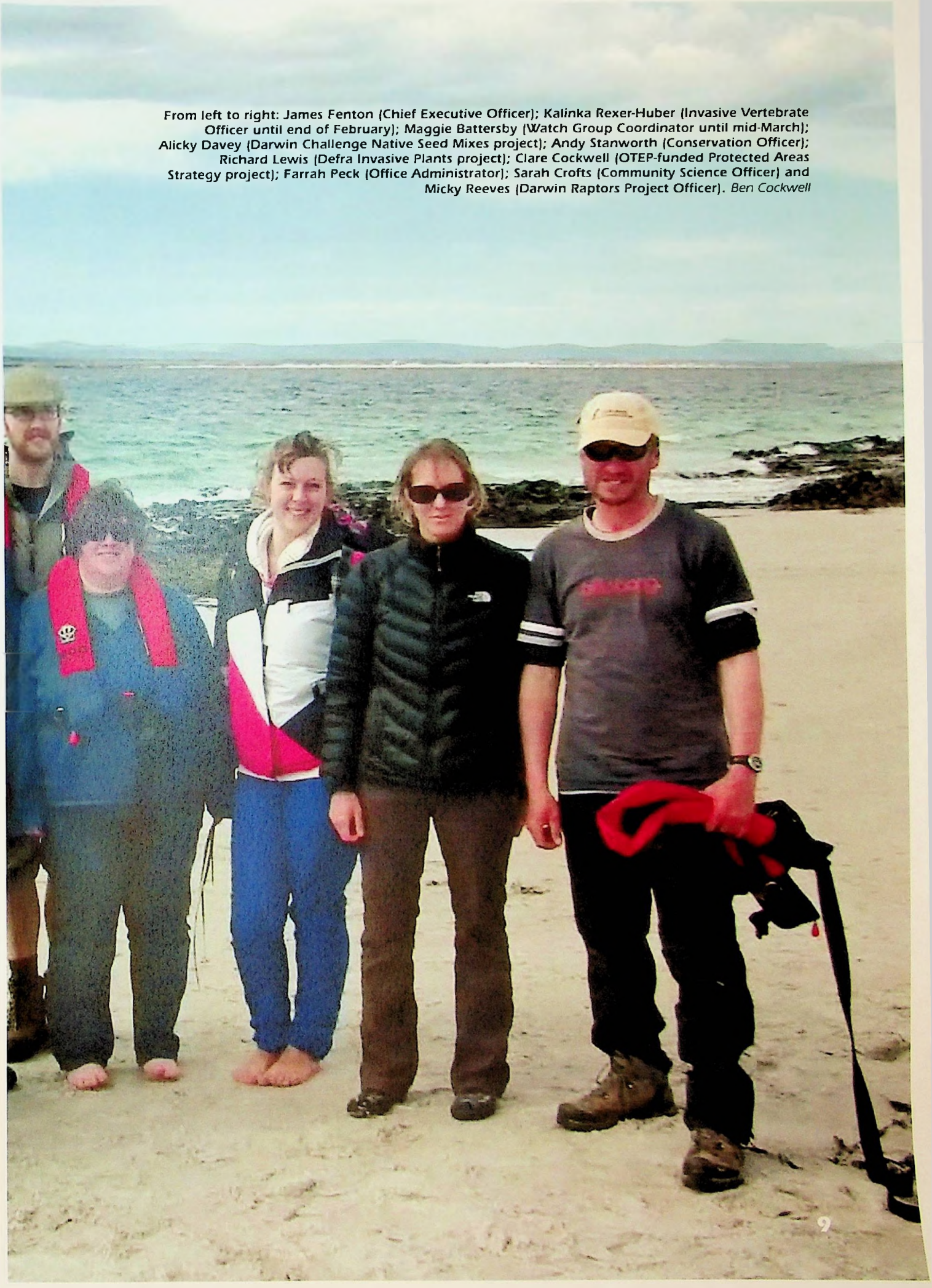
'Ninety years ago a group of people from different countries and united by their passion for birds concluded that the only effective answer to the growing trade of wild bird feathers or the threats to migratory birds across the continents had to be through coordinated international action. Much has changed in 90 years but the fundamentals have not. The rationale for international collaboration has grown only stronger and with it the crucial need to empower local conservation capacity around the world. It all seems so logical today but it was truly visionary back in 1922. We should be full of admiration for the vision of our founders and today's relevance. I am honoured to be part of this wonderful project called the BirdLife International Partnership.'



Marco Lambertini, BirdLife CEO

Introducing the team

With so much fieldwork happening across the Islands during the Falklands summer, it's not often the whole team can get together. Here they are having just arrived by boat on FC-owned Middle Island. It seemed too good an opportunity to miss not to capture the moment and to enable you to put a face to a name. Together with a group of volunteers, the team collected seed for the Native Seed Mixes project and undertook tasks listed in the FC management action plan for the island. Unfortunately, Sarah Brennan (UK-based Executive Officer and WCFI Editor) was unable to join them on this occasion.



From left to right: James Fenton (Chief Executive Officer); Kalinka Rexer-Huber (Invasive Vertebrate Officer until end of February); Maggie Battersby (Watch Group Coordinator until mid-March); Alicky Davey (Darwin Challenge Native Seed Mixes project); Andy Stanworth (Conservation Officer); Richard Lewis (Defra Invasive Plants project); Clare Cockwell (OTEP-funded Protected Areas Strategy project); Farrah Peck (Office Administrator); Sarah Crofts (Community Science Officer) and Micky Reeves (Darwin Raptors Project Officer). *Ben Cockwell*

NOTICEBOARD

New CEO

We are delighted to welcome Dr David Doxford as FC's new Chief Executive Officer. He joins the team in early July and will be replacing Dr James Fenton. Our grateful thanks go to James for his work over the last two years and we wish him well on his return to Scotland.

David joins us having had a varied background in conservation, National Parks, higher education and rural development. Having been bitten by the conservation bug while working as a volunteer with the British Trust for Conservation Volunteers, he enrolled on a BSc Environmental Studies course. This led to a series of posts with Northumberland National Park, interrupted by six years as a Senior Lecturer at the University of Sunderland. More recently, David has worked in the Scottish Government, mostly in the Environment & Rural Affairs Directorate. Away from work, his interests include sailing, cricket and creative writing.

Trustees

Carol (Hay) Miller was elected as a new Trustee in the Falkland Islands at our AGM in London in November 2012 and Sally Blake, Mike Morrison and Louise Taylor (all based in the Islands) and Tim Carr and Mandy Shepherd (in the UK) were all re-elected. Bill Featherstone stepped down as Hon Treasurer and we would like to thank him for all his hard work over the last 10 years. Bill will remain a UK Trustee. Our new Treasurer is Tym Marsh and we are grateful to him for taking on this important role.

Sir Rex Hunt

It was with great sadness we heard the news that Sir Rex Hunt, one of our Vice-Presidents, had died in November 2012. He was a great friend and supporter of our work and will be much missed.

New Darwin Plus project

At the end of March we received the good news that we have received Darwin Plus funding for a two-year project on 'Biodiversity Action Planning in the Falkland Islands'. The aim is to develop an easily accessible digital format for classifying and prioritising tasks to aid future fundraising for the highest priority conservation needs across the Islands.

Penguin News

▲ New native plants garden

Falkland Islands Community School now boasts a new native plants garden at its entrance, built by the pupils of Ross House. Science teacher Jon Carlin, who is the inspiration behind the project, says the garden will help students understand their local environment. It was created using a grant from Falklands Conservation's small grant scheme with Stanley Nurseries providing the plants.

▼ Our grateful thanks

On his return from a two-year posting in the Falklands with the MoD, Simon Watkeys was inspired to put on an exhibition of his photographs and memorabilia at the Fishslab Art Gallery in Whitstable. At the end of his exhibition, Simon very generously sent us a £500 donation from the proceeds. In addition, he had spent a lot of his spare time in the Islands volunteering on habitat restoration and invasive plant clearance conservation projects and helping to construct the new oiled wildlife rehabilitation centre. Many thanks for everything, Simon!

Simon Watkeys on Cow Bay beach

Oil development in the Islands

It is an interesting time in the Falkland Islands. There is major oil development just around the corner, but this oil wealth is not here yet and there will be difficult decisions ahead on how to distribute the oil revenue around the islands. We hope that some of it at least will be used to strengthen environmental protection and management.

A recent report commissioned by the RSPB on environmental legislation in the Overseas Territories[1] indicates that the Falklands come out as 'Moderate' for species protection and 'Weak' for site protection and development control. The site protection issue is currently being addressed through our OTEP-funded Protected Areas project, although this project is currently concentrating on terrestrial sites rather than the sea.

There are not as yet any Marine Protected Areas around the Falklands, but, in spite of this, development control currently is much stronger at sea than on the land. A well-regulated oil industry should provide little threat to the wildlife of the archipelago, but there will always remain the low probability but high impact risk of an oil blowout or major spill. However, the history of the North Sea oil development over the past 50 years does illustrate that major oil exploration can take place without major long-term impact on wildlife populations. But Falklands Conservation will continue to monitor the oil company activities, scrutinise critically their Environmental Impact Assessments, assist the filling-in of gaps in essential biodiversity data, and advise on marine spatial planning and oil spill response.

1 *An assessment of environmental protection frameworks in the UK Overseas Territories.* Produced by The Foundation for International Environmental Law and Development (FIELD) and The Royal Society for the Protection of Birds (RSPB), February 2013.

▲ Watch Group award

FI Governor, Nigel Haywood, presented certificates to everyone in the Watch Group at an event to celebrate their achievement in becoming runners-up in the RSPB's Club of the Year 2012 competition. This success was achieved through the sterling work of Maggie Battersby, Watch Group Coordinator, and it was for her a fitting swansong before leaving for pastures new. We would like to welcome her successor, Caitlin Burston, who was once a Watch Group member herself. We are grateful to Standard Chartered Bank for their ongoing sponsorship.

▼ New reserve opening

Tony Blake cut the ribbon to formally open Hawks Nest Pond as the Lyn Blake Nature reserve on 2 February, in honour of his late wife. Tony was joined by West Falkland friends and neighbours and also the Watch Group.

Ben Cockwell

In addition, we would like to thank the Cotswold Wildlife Park & Gardens and the Dingle Oceanworld Aquarium for donations from their penguin collection boxes, and to Sea Life London Aquarium for donations from their Penguin Week and adoption scheme.

Rare and Vagrant Birds 2012

Mike Morrison

This report summarises the sightings of rare and vagrant birds in the Falkland Islands during 2012.

Soft-plumaged Petrel *Pterodroma mollis*
Three birds were seen off Cape Pembroke on 24 February and a single bird on 25 March by Alan Henry.

Atlantic Petrel *Pterodroma incerta*
A single bird was seen off the end of Cape Pembroke by Alan Henry on 24 February.

Cocoi Heron *Ardea cocoi*
A single bird was seen by Micky Reeves at Cow Bay, Johnsons Harbour on 27 January and 27 February; possibly the same bird was seen in the same location by Micky on 14 December. On 2 October Alan Henry found the remains of a bird which had been dead for a long time near Stanley Airport.

Cattle Egret *Bubulcus ibis*
The first report this year was of two birds at the king penguin colony, Volunteer Point by Derek Pettersson on 4 April. Micky Reeves also saw a single bird at Volunteer house on 19 April and one the next day at Volunteer Point. Alan Henry saw one in the fields at the Market Garden on 15 April and one at the roadside by Government House on 24 April. Alan also saw five birds on Victory Green, Stanley on 5 May. A single bird was seen in the yard at 10 Fitzroy Road East, Stanley on 21, 24 and 29 May by Mike and Sue Morrison.

Black-faced Ibis *Theristicus melanopis*
A single bird, which first appeared on 6 February, was seen by many observers along the Stanley sea front from Ross Road West to the Narrows Bar up until 2 April.

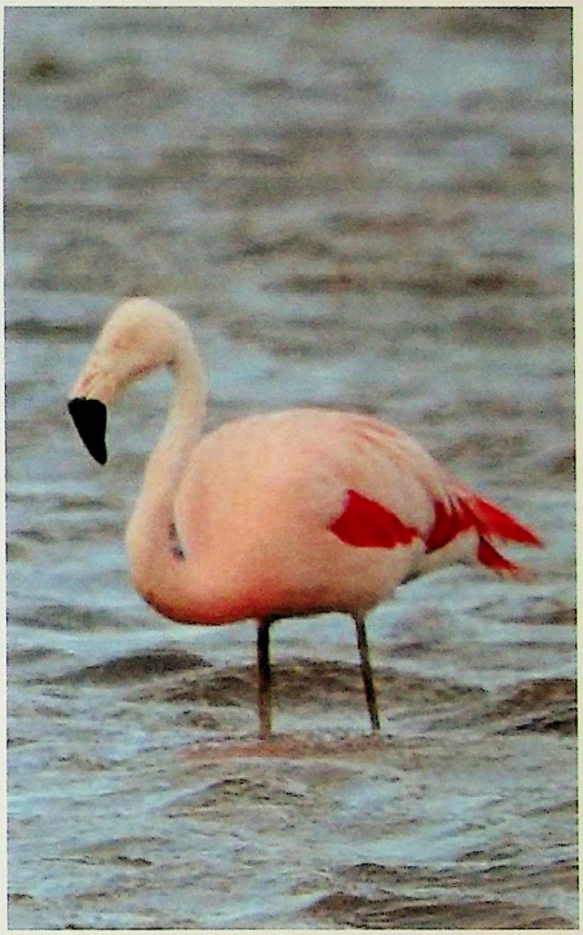
Chilean Flamingo *Phoenicopterus chilensis*
Isobel McLeod saw a single bird in a small pond in Low Ground camp, Fitzroy on 2 January; it was still in the same location two days later.

Coscoroba Swan *Coscoroba coscoroba*
Three birds were seen on the Big Pond in Whale Point, Fitzroy on 11 November by Mike and Sue Morrison.

Cinnamon Teal *Anas cyanoptera*
A single male was seen in Whalebone Cove by Liz Penrose on 24 June, possibly the same bird was seen on Yorke Bay Pond on 1 July by Mike and Sue Morrison. A male was also seen on Big Pond, Pebble Island by Micky Reeves and Jackie Bennett on 14 October and Alan Henry on 14 November. Another male bird was seen on a small pond by the Mare Harbour Road by Alan Henry on 14 December.

Black-faced Ibis. *Mike Morrison.*

Tawny-throated Dotterel. *Micky Reeves.*



Chilean Flamingo. *Mike Morrison.*

Chimango Caracara *Milvago chimango*
A single bird was seen at the neck on Steeple Jason Island on 2 September by Micky Reeves, seen again the next day in the area of the house by Micky Reeves and Jonathan Meiburg, and on 4 September by Andrew Stanworth.

Red-gartered Coot *Fulica armillata*
A single bird was seen on the West Lagoon pond on 15 October by Micky Reeves.

Tawny-throated Dotterel *Oreopholus ruficollis*
Two birds on Steeple Jason Island seen on 17 August by Micky Reeves and Andrew Stanworth, up to the 30th (Micky Reeves) and on 31 August by Jonathan Meiburg and Robin Woods.

Lesser Yellowlegs *Tringa flavipes*
Micky Reeves saw a single bird at Cow Bay, Johnsons Harbour on 7 January.

Sanderling *Calidris alba*
Two birds at Cow Bay beach were seen by Micky Reeves on 1 January, and two at Volunteer beach on the 6th by Derek Pettersson and Micky Reeves. The following were also all seen at Volunteer beach – three birds on the 17th and four on 20 January (Micky Reeves), 12 birds on 23 January (Tim Earle) and 19 birds the next

Chimango Caracara. *Micky Reeves.*

day (Micky Reeves). There were also some sightings in February – one bird on the 6th and six birds on the 27th (Micky Reeves). Alan Henry saw 13 birds at East Cove beach on 4 March.

Baird's Sandpiper *Calidris bairdii*
A single bird with a couple of white-rumped sandpipers at Bertha's Beach was seen by Alan Henry and Mark Cutts on 26 September. Another single bird was seen with a flock of 15 white-rumped sandpipers by Alan Henry on 14 October near the runway at Stanley Airport, two birds on 19 October and 29 November near the runway at Stanley Airport, Cape Pembroke (Alan Henry).

Pectoral Sandpiper *Calidris melanotos*
Four birds at the large pond east of the airport runway, Cape Pembroke on 29 January seen by Alan Henry; two birds still present the next day (Sue Morrison). Micky Reeves saw four birds on Cape Pembroke on 4 February. Alan Henry saw a single bird near Yorke Bay pond on 24 October and two birds in the same location on the 30th; possibly the same two were seen at the ditch at Penguin Walk, Cape Pembroke on 3 November by Alan Henry. A single bird at the small ponds on the south side of the road, Cape Pembroke was seen by Mike and Sue Morrison on 13 November. Alan Henry saw five birds in the Yorke Bay pond area on 19 December.

Least Seedsnipe *Thinocorus rumicivorus*
A single bird in the back yard at 19 Fitzroy Road, Stanley on 6 July during a period of snowy weather was reported by Les and Jill Harris.

Eared Dove *Zenaida auriculata*
Jeremy Poncet reported a single bird on the driveway at Government House on 16 February, and possibly the same bird was seen in the back yard of 7 Ross Road West between 18 and 22 February by Bill and Lillian Kidd. Likewise, Paul Chapman reported a single bird in his garden between 28 February and 3 March, again possibly the same bird. A single bird was also reported at Fitzroy settlement in mid June by Allan Eagle and Isobel McLeod.

Chilean Swallow *Tachycineta meyeni*
A dead bird was collected by Maggie Goss at Horseshoe Bay farm on 24 February; the bird had unfortunately fallen prey to a domestic cat. Five or possibly six birds were seen at Volunteer House by Micky Reeves on 28 February. Four birds were seen at 55 Fitzroy Road, Stanley on the afternoon of 12 March and one was still present in the evening (Alan Henry). Sam Miller reported a single bird at Moody Brook on 4 September. Sarah Crofts reported a single bird on the fisheries patrol vessel *Protegat* when 60 nautical miles north of the Falklands on 17 October. A single bird was also seen at Bull Point, North Arm on 27 October by Sue Morrison.

Cliff Swallow *Petrochelidon pyrrhonota*
A single bird was seen near the Cape Pembroke lighthouse on 12 January by Alan Henry; it was still present three days later (Carol Peck).

Barn Swallow *Hirundo rustica*
On 7 October a 'swallow' flew in front of the vehicle as we drove up the Mare Harbour road which was possibly this species (Mike and Sue Morrison). Alan Henry saw a bird between Hadassa Bay and Gypsy Cove on 20 October, and this was possibly an immature bird. Kristaine Thorsen reported a bird at the Market Garden on 29 October; two days later an adult bird got into one of the large polytunnels and, on 6 November, Kristaine reported two birds at the Market Garden.

Least Seedsnipe. *Mike Morrison.*

Cliff Swallow. *Alan Henry.*

Southern House Wren *Troglodytes musculus*

Jeremy Poncet reported a single bird in the gardens at Government House on 18 April; this bird was photographed by Alan Henry on the 24th and was also seen again in the trees to the south of Government House on 26 June. A single bird was also observed and photographed several times on a fishing trawler and the fisheries protection vessel *Protegat* when they were about one kilometre apart 66 nautical miles north-west of the Jason Islands on 13 October by Anton Wolfaardt, Graham Parker and Sarah Crofts. A bird was seen on both vessels and it is thought to be the same bird travelling between the two ships.

Patagonian Sierra-Finch *Phrygilus patagonicus*

A single male bird was in the gardens at Government House on 25 June; this sighting was also reported by Jeremy Poncet. On 4 August it was found in a large greenhouse at Government House gardens by Sonia Felton who informed Alan Henry; he caught and released the bird into the gardens again. A single bird was also seen on Steeple Jason by Jonathan Meiburg and others on 15 August and was observed near the house on Steeple over the next couple of weeks.

Rufous-collared Sparrow *Zonotrichia capensis*

A single bird on Steeple Jason seen by Andrew Stanworth on 18 August was also seen around the house on Steeple on 24, 29, 30 August and on 2 September when it was heard singing near the Research Station (Robin Woods). A single bird was also seen on Carcass Island on 7 September by Micky Reeves. Micky also reported a single bird on Pebble Island on 11 November.

Yellow-winged Blackbird *Agelaius thilius*

Alan Henry found a single bird near the Cape Pembroke lighthouse on 11 January; this bird was seen in the area feeding on the beach where there was rotting kelp up until 15 January. This is the first reported sighting of this species in the Falkland Islands.

Chilean Swallow. *Sarah Crofts.*

Yellow-winged Blackbird. *Alan Henry.*

Many thanks to everyone who reports their sightings.

Habitat restoration – one seed at a time

Alicky talking to Ben Berntsen at Elephant Beach Farm. *Tom Heller.*

The 2012-13 field season saw the start of a new Darwin Challenge Fund project being led by Alexandra (Alicky) Davey to tackle habitat restoration. Erosion is one of the major threats to habitats in the Falklands. Previous restoration work has principally focused on planting tussac grass or blue grass tillers with some success. The aim of this project is to investigate the use of a more diverse range of native seeds to re-vegetate a wider range of eroded substrates such as sand, clay or peat using less planting effort.

Eroded ground is a cost to landowners and farmers through the loss of productive grazing pasture and dust contamination of sheep fleeces. Currently, the only seed available to buy in the Falklands comprises non-native species. A number of farmers have already expressed an interest in using a native seed mix on their land if it was available and could be shown to be successful.

The aim is to create two mixes – one that contains good coloniser species which rapidly provide ground cover and another containing a wider range of pasture species. Species for the latter mix have been chosen in consultation with the FI Department of Agriculture to include those that are valuable for grazing. Thus, this project offers a positive opportunity to marry biodiversity conservation with agriculture.

Alicky's main task has been to make sizeable seed collections of 15 target species and she has been overwhelmed by the support of a number of willing and energetic volunteers who have helped her to do this. Alicky was also joined for two weeks in January by Tom Heller from Kew's Millennium Seed Bank Partnership. The collected seeds have been shipped in airtight containers to the Seed Bank for cleaning and storing at –20 °C until required for trials back in the Falklands.

The next step is to apply to Darwin Plus to seek funding for a full three-year implementation project.

FALKLANDS CONSERVATION

www.falklandsconservation.com

Wildlife Conservation in the Falkland Islands

Issue 19

FALKLANDS CONSERVATION

Wildlife Conservation in the
Falkland Islands
Issue 19 November 2013

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FALKLANDS CONSERVATION

Protecting the wildlife of the Falkland Islands for future generations

www.falklandsconservation.com

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Editorial

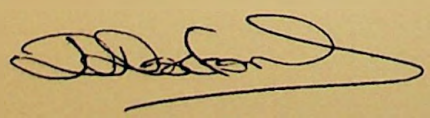
Donald Rumsfeld, then US Secretary of Defense, managed to mire himself in controversy during a press conference on the Iraq conflict when he started talking to reporters about 'known-unknowns' and 'unknown-unknowns'. The subsequent media feeding frenzy tended to drown out an important point; in managing complex and fast-changing situations we give inadequate consideration to what we don't know. Decisions tend to be made on the information we have to hand, however incomplete.

This is as true of conservation in the Falkland Islands as it is of other aspects of modern life. The recent discovery of a new species of vascular plant in the Falklands (covered by Dr Rebecca Upson in this issue) shows that there are surprises afoot even in areas that we think we know well. The stalwart efforts of the Shallow Marine Surveys Group (SMSG) have begun to reveal the treasure-trove of species lying just offshore. These are catalogued in the new, handy *Marine Life of the Falkland Islands* by Dr Karen Neely and Dr Paul Brickle.

Our 'known-unknowns' include areas such as lower plants, cetacean distribution and behaviour and the breeding populations of petrels, shearwaters and prions. We are attempting to address these with applications to Darwin Plus and other funding sources and through co-operative action with other Overseas Territories. For example, we are leading a bid with the National Museum of Wales to conduct the first ever systematic survey of lower plants (mosses, lichens and liverworts) in the Falklands. A fascinating and (literally) overlooked branch of our flora that is critical for water retention, prevention of soil erosion, soil formation, nutrient cycling and stock nutrition.

The 'unknown-unknowns' are obviously more difficult. The recent discovery of the *Pandoravirus* on the Chilean coast has potentially opened up a whole new branch of biology. This giant (in relative terms) virus only infects amoebas and was previously unknown to science. It's illustrative of the Shakespearean concept that "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

The big 'unknown-unknown' for us is climate change – will the Falklands continue to become warmer and drier? What will happen to the pattern of ocean currents? It is beholden on us to proceed cautiously, to monitor as much as we can and to encourage robust and diverse ecosystems which are more resilient in the face of change.



Dr David Doxford, Chief Executive Officer

FRONT COVER PHOTO: Black-browed albatrosses – winner of the British Ecological Society's photo competition. *Zoe Davies.*

Counting penguins

Falklands Conservation has been monitoring penguins for almost 25 years. Conservation Officer, Dr Andrew Stanworth, provides an insight into the annual Seabird Monitoring Programme and outlines this year's penguin results.

The Falkland Islands Seabird Monitoring Programme (FISMP) completed its 24th season this year. Nearly a quarter of a century of counting penguins! It has actually been around longer than Falklands Conservation – well in name at least – as back in 1989 when it was conceived, Falklands Conservation was the Falkland Islands Foundation. In those early days, FISMP's main aim was to identify potential conflicts between the globally significant seabird populations of the Falkland Islands and the fishing industry. As you might expect though, things have changed over 24 years.

In its first year the Programme covered four species at six sites and, until the early nineties, it not only involved seabird counts but dietary study as well. Although there is no longer a dietary study element (now usually covered in individual species research projects), both the number of species and sites have increased.

Currently, FISMP involves six species, namely: gentoo penguin *Pygoscelis papua*; southern rockhopper penguin *Eudyptes chrysocome*; king penguin *Aptenodytes patagonicus*; Magellanic penguin *Spheniscus magellanicus*; black-browed albatross *Thalassarche melanophrys*; and southern giant petrel *Macronectes giganteus*. It now takes in 13 sites covering locations on East and West Falkland as well as offshore islands.

The FISMP is not a complete census, but aims to be a representative sub-sample of seabird colonies used to give an indication of what the populations as a whole may be doing. In its present form, the FISMP focuses on providing breeding pair and breeding success estimates so that trends in these two indicators of 'well being' for these species can be followed. Long-term data sets like these are very important tools in identifying natural fluctuations, but they also serve as important baseline information for identifying impacts of new or existing threats - they also feed into assessments of conservation status.

How is the information collected? Maybe surprisingly, given the constant advances in technology, almost all of the counting is done in the field at the various sites by observers, with manual tally counters and waterproof notepads (though we are trialling photographic methods).

Southern rockhopper penguin.
Andrew Stanworth.

This means, in very approximate terms for this last season, we completed seven weeks in the field at 13 locations, travelling 270 km by boat, 2,000 km by 4×4 and 2,450 km by plane, and counting 71,000 seabirds (most of which were penguins).

The FISMP covers four of the five penguin species that breed in the Falklands. Although the fifth species, the macaroni, is the world's most numerous penguin, it is classified as 'Vulnerable' due to population declines. It occurs in low numbers in the Falklands sometimes forming mixed pairs with rockhopper penguins that together can produce hybrid offspring (see article in WCFI 15, November 2011). It is not feasible to obtain a robust or meaningful figure for the population trend year on year, but each season a few breeding birds are recorded during counts.

Magellanic penguins are burrow-nesting birds that are widely dispersed over coastal areas around the Islands. They are classified as 'Near Threatened' due to moderately rapid declines in South America where oil and fisheries are threats. Because of their breeding habits, there is still no established reliable means of assessing population trends in the Falklands. This is a work in progress for us. At the moment the FISMP monitors a single Magellanic colony at Gypsy Cove – the most accessible site to the capital, Stanley, and a popular tourist destination. Burrow occupancy rates appear relatively constant at this site.

Gentoo penguins make up the majority of birds counted. Their colonies are generally quite accessible and in discrete closely packed groups making them relatively easy to count both by eye and using photographs.

The gentoo is classified as 'Near Threatened' as, whilst some populations are increasing, others are experiencing moderately rapid declines. The positive news is that estimated breeding pair numbers at monitoring sites in the Falkland Islands from this past season were up by 5·9% on last year. This last season also saw the highest number of pairs recorded at the current monitoring locations, continuing a general positive trend over the last 10 years. Estimated average breeding success was down from the previous season to 0·95 chicks/pair, taking it below the average for the last 21 years.

Magellanic penguin (TOP) and gentoo feeding chick. (BOTTOM) *Andrew Stanworth.*

There is a great deal of variability not only between colonies but between sub-colonies and, whilst averages vary, there is no apparent declining trend in breeding success.

Rockhopper penguins are classified as 'Vulnerable' due to rapid global population declines that have worsened in recent years. They breed on steep rocky coastlines, often mixed with imperial shags *Phalacrocorax atriceps*, making them much more challenging to count. In 2012/2013, estimated breeding numbers of southern rockhopper penguins at monitored sites changed little from the previous season (down 0·3%), following a general increase over the past six years. Mean breeding success was estimated at 0·54 chicks/pair, which remained below the average for the past 19 years, but again, as with gentoos, there is no clear downward trend.

King penguin colony. *Andrew Stanworth.*

FROM TOP TO BOTTOM: **Volunteer David Schutt counting gentoo penguins.** *Jonathan Handley;* **volunteer Kiernan Edwards braving the penguin fleas to check if a Magellanic burrow is occupied.** *Andrew Stanworth;* **king penguin chicks.** *Andrew Stanworth*

The breeding cycle of **king penguins** extends over a year and consequently is not synchronised to summer breeding as with the other penguin species. The chosen unit of measure for king penguins is pre-fledged chicks that have survived the winter. This is not a measure of the total number of chicks produced (as some will have perished over the winter), nor is it an exact indicator of the number of breeding pairs either. Estimated numbers of pre-fledged king penguin chicks at the key colony increased by 51% to 717 chicks after a decline over the previous three seasons. This was the highest number recorded since monitoring of the site began.

Volunteers have been an integral part of the Programme since it began. Our thanks go to all those who have given their time to help gather this important information and also to FIG's Environmental Studies Budget which has part-funded this work. Overall, indications were quite positive for penguin populations in the Falkland Islands in 2012/13 and hopefully this will continue as the FISMP turns 25 this coming season.

Bird's eye view of nesting gentoo. *Jonathan Handley*

NOTICEBOARD

Dr Colin Clubbe.

Workshop on Ascension Island

Conservation workers, landowners and policy makers from across the region gathered on Ascension Island for an intensive five-day programme of presentations, discussions, group activities and field visits on the theme 'Monitoring Protected Areas in the South Atlantic'. Organised as part of the OTEP-funded South Atlantic Protected Areas Project, the workshop provided an opportunity to renew contacts, make new ones and explore ways to manage and monitor special places for wildlife more effectively. Delegates had an opportunity to present their success stories and examples of best practice, and participants went away with renewed inspiration and a network of contacts to support them in what can be challenging work in quite isolated circumstances. Thanks are due to everyone who supported the workshop: our hosts on Ascension Island; the Falkland Islands Government who provided funding through the environmental Studies Budget; and overseas partners, RBG Kew and the RSPB, who supported the planning and delivery of the workshop. A fuller account of the week's activities written by co-facilitator, Dr Colin Clubbe, can be found at http://www.kew.org/news/kew-blogs/ukots/ukots-ascension-workshop.htm

Immersed in plants

Helen Marsh spent three weeks at the Royal Botanic Gardens, Kew, to equip her for the role of volunteer curator of the Falkland Islands National Herbarium. According to Helen, the content was very wide-ranging, including pressing and mounting specimens, seed collecting, learning about plant taxonomy, and visiting The Millennium Seed Bank and experts at the Natural History Museum. Helen would like to thank Rebecca Upson and the UK Overseas Territories team at Kew, all staff involved in her training, the John Cheek Trust Fund, JNCC and Falklands Conservation. She added, 'I am excited about my role and looking forward to the coming months and years being involved with the Herbarium.'

Notice of AGM and Members' Evening

This year's Annual General Meeting will be held at 6 pm on Friday 13 December at the Chamber of Commerce, Stanley. In the UK, our Members' Evening will take place on Wednesday 20 November from 6.30-9 pm at the Union Jack Club, Waterloo, London. We look forward to updating you on this year's exciting conservation work.

New pin badge

This lovely new addition to our range of pin badges depicts the pale maiden, the national flower of the Falklands. It is available for sale from our shop in Jubilee Villas in Stanley, our webshop and from the UK office (address on page 2).

We would like to thank...

...the following for their generous donations to our work over the last few months – The H.B. Allen Charitable Trust, the A.S. Butler Charitable Trust, Thrigby Hall Wildlife Gardens, The Seabird Group, and also for a bequest from the late Mrs Rachel Quinlan Marshall.

We are also very grateful to Consolidated Fisheries Ltd, One Ocean Expeditions, Noble Energy, UK Hydrographic Office, Morrisons Falklands Ltd, Malvina House Hotel, Government House, Arch Henderson, Falkland Islands Company, Seafish Chandlery, Waterfront Hotel, Premier Oil, and tourism providers, local artists and many other individuals for contributing to the success of our annual Charity Ball in the Islands – over £20,000 was raised at the event in September 2013.

Falklands Conservation Review of the Year 2012-13

(July 2012–June 2013)

Achievements and Performance

Our 2012-13 work programme, again supporting the 2010-19 Strategic Plan, reflects our mission to engage and empower the people of the Falkland Islands to take action with us to conserve biodiversity and manage landscapes and seascapes for the benefit of nature and people.

FC staff update

Dr James Fenton remained as Chief Executive Officer and Sarah Brennan as our UK Executive Officer. Dr Andrew Stanworth continued as our Conservation Officer, Sarah Crofts our Conservation Science Officer, and Farrah Peck as our Office Manager in the Falklands. Maggie Battersby was Watch Group Coordinator for most of the year until her resignation at the end of the field season. Caitlin Burston took over this position in March. We also appointed Helen Marsh as honorary herbarium curator.

We have also had several project staff over the year: Clare Cockwell, Protected Areas Officer; Richard Lewis, Invasive Plants Officer, based at the Royal Botanic Gardens, Kew, over the winter and in the Falklands during the summer season; Louise Taylor, Richard's assistant for a short period at the end of the summer; Micky Reeves, Raptor Project Officer; Alexandra Davey, Habitat Restoration Officer; and Kalinka Rexer-Huber to coordinate the invasive mice study on Steeple Jason. With this staff complement, together with the assistance of many dedicated volunteers both locally and overseas, we have had a successful year. We thank each and every one of them.

Vice Presidents: Sir David Attenborough, Julian Fitter, Robert Gibbons, Peter Harrison, Sir Rex Hunt (died November 2012), Rebecca Ingham and Robin Woods.

Board of Trustees as at 30 June 2013

Henry Robinson (Chairman), Mandy Shepherd (Vice Chair), Darren Christie (FI Chairman), Roger Spink (Vice Chair), Bill Featherstone (Hon Treasurer – to Nov 2012), Tym Marsh (Hon Treasurer – from Nov 2012), Keith Biles (FI Hon Treasurer), Sally Blake, Tim Carr, Jan Cheek, Colin Clubbe, John Croxall, Michael Evans, Carol Miller, Ian Moncrieff, Mike Morrison (resigned Jun 2013) and Louise Taylor (resigned Dec 2012).

Here are some of the year's highlights:

- Our conservation operations are managed from our office at Jubilee Villas in Stanley. We have been finalising the plans for both expanding our office space and building a new environmental education centre at the back of the Villas, with work expected to start in the next financial year. We have also helped to create a new native plants garden at the entrance to the community school to showcase native flora to young people.
- **The Annual Seabird Monitoring Programme** continued into its 24th year. This long-running survey of rockhopper, gentoo and king penguin populations, together with black-browed albatross and southern giant petrel, is invaluable for assessing long-term trends. In terms of breeding success, this has been a good year with most populations increasing.
- **The Black-browed Albatross Demographic Study** continued for a seventh year on Steeple Jason. Adult birds and chicks within the study site were ringed, and information gathered will help to assess the survival of individual birds.
- **Conserving Falkland Islands Rockhopper Penguins**: Fieldwork has now come to an end and the writing up will result in a Rockhopper Penguin Species Action Plan. We supported the second year of a project looking at the **foraging ecology of gentoo penguins** on the Falkland Islands.
- **The Falkland Islands Raptors Project** has now completed its first year. It aims to provide a scientific basis for government policy regarding management of conflicts between raptors and rural livelihoods in the Falkland Islands, particularly sheep farming. This year most emphasis has been placed on investigating the population and distribution of striated caracaras.
- **The Native Plants Project** is now coming to an end. The Red Data List of vascular plants of the Falkland Islands has been updated, and a new checklist published on our website. A directory of the Important Plant Areas has also been produced. Fieldwork was undertaken during the summer to study the recently discovered endemic *Nassauvia* species.
- **Survey, Early Intervention Control and Developing a Long-Term Strategy for Invasive Non-Native Plants in the Falkland Islands**: The project officer has been developing a co-ordinated strategy to deal with all invasive plants in the Falklands and this will be published soon.
- **Developing Native Seed Mixes for Habitat Restoration in the Falklands** is a project to identify the most suited native species for future restoration or agricultural work. Extensive fieldwork was undertaken this summer to collect seed for viability and suitability testing.

- **Mapping the Falklands**: This project, being led by the Durrell Institute for Conservation and Ecology (University of Kent) with Falklands Conservation as partners, aims to produce a landcover/vegetation map of the Falklands to aid biodiversity and agricultural planning.
- **Falkland Islands Protected Areas Strategy – Cooperative Management of Biological Diversity** is now into its second year. The existing protected areas (National Nature Reserves) do not currently embrace all the Islands' best wildlife sites so, on behalf of the Falkland Islands Government (FIG), this project aims to provide a framework for building a comprehensive network of terrestrial protected areas. To date, it has involved extensive background research and consultations with all the various interested parties and, in time, will result in recommendations to FIG.
- **Developing Knowledge to Eradicate (non-native) House Mice from UK Overseas Territories** is a short project that took place over the southern winter involving extensive fieldwork on Steeple Jason. It was part of a wider RSPB-led project. It was followed by another short project to update the data on the distribution of all invasive mammal species in the Islands.
- **Inshore Cetaceans of the Falkland Islands**: Static acoustic monitoring devices were deployed at two sites this year, with the main fieldwork now planned for 2013/14. This project aims to trial survey techniques of inshore cetaceans (primarily Peale's and Commerson's dolphins) prior to a full survey (funding permitting).
- **Biodiversity Action Planning in the Falkland Islands**: We were successful in gaining funding for a new project that aims to complete the suite of Action Plans for the Falklands and thereafter to prioritise future biodiversity action. An Assistant Biodiversity Planner is to be employed.

- We had a formal opening of the **Lyn Blake Nature Reserve** at Hawks Nest Pond on West Falkland in February. Through our **Small Grants Scheme** for landowners, we provided assistance for creating fenced enclosures to protect native vegetation from grazing. We arranged volunteer weekends for the planting of both native tussac grass and blue grass on eroded ground.
- Work continued on fitting-out our new **Wildlife Rehabilitation Centre** (for oiled penguins and other wildlife); British Forces South Atlantic Islands at the Mount Pleasant Complex have been particularly helpful by providing volunteers.
- Our efforts to build appreciation and understanding of wildlife and conservation continued through the work of our **Watch Group**. We were delighted to be awarded second place in the RSPB's Club of the Year competition.

Future plans for 2013-14

Drawing upon our Strategic Plan 2010–2019, Falklands Conservation Trustees have set an ambitious workplan for the coming year, under the direction of the new CEO, Dr David Doxford. We will continue with the activities and projects outlined above, in particular the raptor and protected areas projects. We will be employing an Assistant Biodiversity Planner for the new Darwin Plus project on biodiversity action, and also a new Administrative Assistant in the Islands to cope with our ever-increasing workload. We intend to employ a temporary staff member to an RSPB-funded post to help us with our marketing and profile-raising both in the Islands and overseas. We will be putting together a bid to Darwin Plus to take forward the project on native seed mixes for habitat restoration for which we received Darwin Challenge funding last year. We are also leading on a Darwin Plus bid to fund a project on the lower plants.

We will continue to fundraise for our new Watch Group building and, once we have raised enough money, building work will commence. We will also be reviewing our strategic direction with the aim of maintaining our position as the lead environment organisation in the Falkland Islands. We will be in discussion with the Falkland Islands Government to agree a new Memorandum of Understanding to start when the existing one expires in June 2014. We will contribute to the new Environmental Mainstreaming Group, which aims to support government in the implementation of the Falkland Islands Biodiversity Strategy and ensure that environmental considerations are taken on board in all activities in the Islands. We will also continue to be represented on the Environmental Committee, the Offshore Hydrocarbons Environmental Forum and the Seabird Bycatch Committee.

Our thanks and acknowledgements – we could not have achieved so much without you!

Major supporters of project work (in terms of funds, help or advice, often all three) in the past year were the Falkland Islands Government, UK Government's Overseas Territories Environment Programme, the UK's Department for Environment, Food and Rural Affairs, including their Darwin Initiative, Darwin Challenge Fund and Darwin Plus programmes, the RSPB, the Royal Botanic Gardens – Kew, Wildlife Conservation Society, BirdLife International, the Mohamed bin Zayed Species Conservation Fund, Royal Zoological Society of Scotland, Hawk Mountain Sanctuary, Boise State University, the British Antarctic Survey, Oxford University, The Seabird Group, Nelson Mandela Metropolitan University, The H.B. Allen Charitable Trust, the John Cheek Trust, A.S. Butler Charitable Trust, Standard Chartered Bank, Hurtigruten, Lavinia Corporation, Cotswold Wildlife Park & Gardens, Drusillas Park, Sea Life London Aquarium, Dingle Oceanworld Aquarium, Stanley Nurseries, Beaver Island LandCare, Falkland Islands Community School, Mrs Mariacristina Rapisardi, the late Mrs Rachel Quinlan Marshall, and Simon Watkeys.

For the Charity Ball we would like to thank our major sponsor Consolidated Fisheries Ltd; One Ocean Expeditions, Government House, Malvina House Hotel, Waterfront Hotel and local artists for contributions to auction prizes; Seaview Ltd and local tourism providers for raffle donations; and also Falkland Islands Company, Seafish Chandlery and many other individuals for their donations to the event.

Of course, none of our work would be possible without our members, who support our important conservation work with generous donations, thoughtful ideas, advice, and their belief in the work we undertake. We wish to thank you all, including our many penguin adopters.

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Photo credits: COVER: Main picture – *Stuart Bennett*; insets left to right – *Tim [illegible], Ben Cockwell, [illegible]*; CENTRE PAGES: Commerson's dolphins – *Stuart Bennett*; Ben Berntsen and Alicky Davey – *[illegible]*; striated caracara survey – *Jonathan M[illegible] Stuart Bennett*.

A new endemic plant for the Falkland Islands

Dr Rebecca Upson tells the story behind finding and describing Falkland nassauvia.

Botanical surveys carried out in the remote hills of West Falkland have led to the description of a new, charismatic endemic plant, Falkland nassauvia *Nassauvia falklandica* (daisy family). It is over 25 years since the last species new to science (Moore's plantain *Plantago maritime*) was described for the Falkland Islands, making this find all the more exciting. This brings the total number of endemic vascular plant species to 14, representing 8% of the total native flora.

The story of this species' discovery started in the summer of 2008/09 when Jessica Abbott, a keen botanist and hill walker, volunteered to carry out botanical surveys for Falklands Conservation in the Hornby Mountains on West Falkland. Jess recalls "I was delighted to have the opportunity to volunteer for Falklands Conservation during a period of leave that I had from working on charter yacht, SV *Seal*. We had just returned from a Kew Gardens/Buglife expedition to South Georgia studying invasive species where I had enjoyed assisting with botanical work. Falklands Conservation provided me with a list of rare plants, a GPS and some seed-collecting equipment for the Kew Millennium Seed Bank, and sent me up into the Hornby Mountains."

Jess spent two weeks plant hunting in the Hornby Mountains and came back with lots of great records and photos. On seeing the plant, she recognised it as something unusual, "I'd already covered many miles hiking in the mountains of the Falklands and Tierra del Fuego, yet I hadn't seen it before and, notably, it wasn't on the list of 'rare plants' that I was on the lookout for."

Rebecca Upson, who followed up on the plant's discovery with field and laboratory research

Back at Falklands Conservation's office, the records and photos taken by Jess were eagerly studied and I was excited to find a plant that I also had not seen before that displayed similarities with other species in the genus *Nassauvia*. That Jess had recorded something exciting was certain, but whether it was a new endemic or a native previously only found in South America was not at first clear. The next step was to go back to the original site where the photo was taken, find out if there were more individuals, write a detailed description of the plant and its habitat and, if possible, make a herbarium collection.

In the summer of 2009/10 two further visits were made to the site. Fewer than 250 mature individuals were recorded in an area roughly 125 x 70 m, so no whole plants were collected but rather several strategic cuttings were made to enable further study with a dissecting microscope.

The delicately beautiful flowerheads of Falkland nassauvia. *Margaret Carr.*

Falkland naussavia's habitat in the Hornby Mountains. *Rebecca Upson.*

This collection ultimately allowed (with a fortuitous opening of several buds in the fisheries laboratory on Christmas Eve) the species to be confidently placed in the genus *Nassauvia*. Investigations of various daisy family manuscripts and keys were then carried out and, with the help of Nicholas Hind, daisy family expert at Kew, it could eventually be confirmed that the species was indeed 'new to science'.

Nassauvia is the only genus in the Falkland Islands that contains more than one endemic species – the other two species being the snakeplant *Nassauvia serpens* and coastal nassauvia *N. gaudichaudii*. Forty species of *Nassauvia* are known globally and all are restricted to South America; they occur from southern Bolivia along the Andes into Patagonia and across to the Falkland Islands. The majority (91%) of vascular plant species native to the Falkland Islands have colonised from South America, most likely via dispersal through the air by wind. Like the other endemic Falkland species, the three Falkland *Nassauvia* have almost certainly evolved from South American ancestral species that dispersed to the archipelago.

Panoramic view of the plant's habitat on Hornby Mountain. *Rebecca Upson.*

Up close and personal

Falkland nassauvia is a small perennial herbaceous sub-shrub with branching stems up to about 5 cm long that are covered with tightly overlapping leaves. Its leaves are only up to 7 mm long and about 4 mm wide and are more or less thickened and curved downwards at their tips. Uniquely amongst its closest relatives, Falkland nassauvia has evolved a row of 7–13 narrow pits, about 2 mm long and containing stiff white hairs, on the undersides of its leaves – these have been likened to hairy nostrils by some! The flowerhead is a cluster, 10–13 mm in diameter, of around 15 daisy-like white flowers called 'capitula'. The bracts around the base of each capitulum are a beautiful purple-green colour. The seed is attached to a single pappus scale which drops off easily. Falkland nassauvia is similar to coastal nassauvia and the snakeplant but neither of the latter two has pits on the underside of its leaves.

Falkland nassauvia is found on exposed hill summits and ridges and grows in gravel/mineral substrate within a sparsely vegetated habitat at about 400–500 m above sea level. Microscopy studies carried out in the Jodrell laboratory at Kew have shown us one of the ways in which the Falkland nassauvia

Falkland naussavia. *Margaret Carr.*

Underside of Falkland naussavia leaf (×25) showing the narrow pits unique to this genus. *Rebecca Upson.*

copes with the strong, drying winds to which it is subjected at its upland sites. Pore openings on plant leaves, called stomata, allow gases to enter but also water to be released. The stomata of Falkland nassauvia are only found within the pits on the undersides of its leaves – this means that the wind cannot reach them directly and helps to reduce the amount of water lost from the plant, a clear benefit in the harsh environment in which it grows.

This new species has now been formally described in the journal *Kew Bulletin* by Upson *et al.* (2013). The fact that new endemic and native species are still being discovered emphasises the continued value of baseline botanical surveys in an archipelago that contains remote, unstudied areas and the beauty is that everyone can get involved. The chances of making a new record are high, as many Falkland residents and visitors who have been bitten by the plant-hunting bug will testify.

How you can help

If you are living in or visiting the Falklands and would like to get involved with botanical surveys or other plant conservation work, please contact us at info@conservation.org.fk or telephone (+500) 22247.

Jessica Abbott on Saunders Island, self-portrait.

Acknowledgements

Thank you to all the landowners involved in this project for being so welcoming and allowing us to survey on their land: Critta and Becky Lee and Myles Lee; Peter and Shelley Nightingale; Tony and Susan Hirtle; Keith Alazia and Glynis Newman; Kenneth and Josie McKay; Fraser McKay. Thanks also to Richard Lewis and Brian Bond for assisting with the first collecting field trip. In addition, special thanks to Neil Clark for making a second collection trip feasible. Thanks also to Dr Tom Gregory at Kew for preparation of specimens and technical assistance for scanning electron microscopy.

Rebecca's early work led to welcome funding from the Mohamed bin Zayed Species Conservation Fund to investigate other potential locations for this rare endemic – we will report on this and other exciting plant-hunting trips in the next issue.

SPOTLIGHT ON

Falklands Conservation Watch Group

John Carlin, Science Teacher and Falklands Conservation volunteer; has recently joined the FC team as the Watch Group Coordinator and sends us this report on his plans for the Falklands Conservation youth arm and highlights what the group gets up to in the name of conservation and FUN!

The Watch Group is an 8-15 year old inclusive youth group centred around learning about the inspiring marine and terrestrial, plant and animal life of the Islands. We meet approximately twice monthly, indoors and outdoors, doing a range of activities to stimulate a passion and appreciation for all things green, fluffy and feathery. The range and breadth of the topics are endless but the group has a few commitments and annual events that keep our feet on the ground.

Our annual commitments include looking after the Gilbert House Garden, which is the Falkland Islands Government Administrative building, by planting and tending native species such as tussac. And this theme is also extended into habitat regeneration in places such as Elephant Beach Farm. We support the SCB marathon, and also update and renew the FC display on permanent exhibition at the museum housed in the San Carlos settlement, which is regularly attended by military service personnel and veterans. All of these projects are about to be reinvigorated in the coming summer season and form part of our meetings and activities.

We are also committed to send Watchers to as many Camp settlements as possible to help with local conservation events and study their varied local wildlife. During the summer months we enlist the help of local boat owners to do whale and dolphin watching trips to see the cetaceans on their annual migration past our rocky shores. These visits are our biggest undertaking and could not happen without the substantial support of Standard Chartered Bank here in Stanley through their annual contributions and also the Falkland Islands Government Air Service who transport as many Watchers as possible to visit the outer islands. Small-scale camping trips to settlements are supported by local landowners and our thanks go to them. These inclusive camping trips offer fun and adventure to the whole group and make any learning experience immersive and stimulating whilst offering many their only experience of Camp life.

It can only be a positive thing to encourage this appreciation and awe in our local environment at this young age, but through other educational

"Well, Watch Group was really interesting. All of the kids enjoyed the various activities that got us outdoors for a bit and I think it certainly helped me learn a lot more about the wildlife of the islands. I can recognise most of the different types of plant and animal that lives here. Of course, it also gave us the opportunity to go to different parts of the islands, which would've been too expensive otherwise! All of it helped us learn more about the Falkland Islands and what makes it special, which is very important (to know about your country) and gives us a greater respect for the outdoors."

Sorrel Pompert Robertson, now studying science in the UK.

◀ All this and more is published in *Rocky's News* – our regular update on all things seasonal and green.

"I love the Watch Group. My background has been in the great outdoors, natural history and education. So being the Watch Group Coordinator is a dream role" says John.

activities we don't shy away from the pressures and challenges that face the local environment. Watchers are encouraged to be aware of their environment through presentations from local stakeholders, such as fisheries, landowners and the agriculture department, and also practical involvement such as the recent beach clean around Stanley Common's beaches. Sarah Crofts analysed over 180 kg of waste collected in a 90-minute blitz. The effect of litter on the local environment highlights just one of the issues we work on with the Watchers.

A home for the Watch Group

To encourage ownership of these issues and challenges and to foster a culturally responsible attitude is an ongoing task with each generation and one we are keen to develop in these young guardians of the future in as fun a way as possible. To that end, FC has committed to create a learning space that can be used for regular meetings and events and open up the role of the Watch Group to include school children of all ages and backgrounds by having its own home.

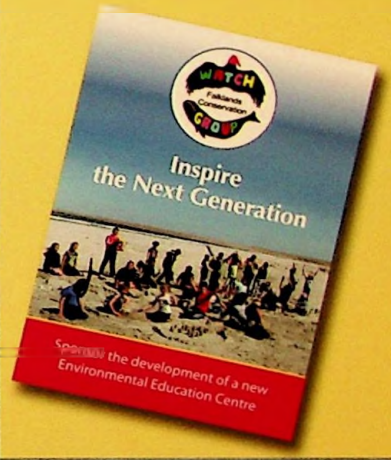
Our aim is to widen the reach of our work by including elements into curricula studied at school and foster a more cohesive educational programme. The group is homeless at present and uses community meeting places around town, but it would be of major benefit to the group and the community to have a space they can call their own to display work and create projects at their indoor meetings and to help continue outdoor activities indoors.

Primarily for use by the Watch Group, the proposed Environmental Education Centre will also provide and enhance the learning experiences of the local community, as well as visitors to the Islands, while focusing on the unique natural environment of the Falklands.

We are appealing for funds to get the project off the ground and would be most grateful to any of our readers who are able to help. Thank you!

How you can help

Please help John to provide the surroundings to excite and inspire the Watchers to get involved in learning about local wildlife and environmental issues by donating to our appeal. Please see the leaflet enclosed with this magazine or donate via our website www.falklandsconservation.com



Learning more about black-browed albatrosses

Dr Andrew Stanworth at the study site on Steeple Jason. *Jonathan Handley.*

The black-browed albatross is currently classified as 'Endangered'. An estimated 66-70% of the global population breeds in the Falkland Islands. Therefore, the global conservation status of the species is critically dependent on the status of the Islands' population.

The demographic study colony at Steeple Jason was chosen in 2006 and a ringing programme initiated to investigate survival rates in this species.

Adults, and ultimately their chicks, generally return to breed at the same site each year. Each season FC staff visit the study area in late October/early November. Nests with previously ringed adults in attendance are marked – adults on marked nests without rings receive rings and pair associations are recorded. In late March, chicks from marked nests are ringed too.

So far data have been collected for 1,305 ringed adults and 1,877 ringed chicks. Actual recoveries of dead, ringed birds are rare, but using long-term data sets of re-sightings at colonies, such as those recorded above, survival probabilities can be calculated using computer models. All but one estimate of the probability of an adult surviving the next season are 94–96%. The exception, an estimate of 79% in 2010, followed a severe storm in which several adults and almost all chicks died at the study site, reflecting that any individual had much less chance of surviving that particular season.

Albatrosses are generally considered as forming long-term pair bonds, but data from the study colony also indicate potentially quite high rates of partner changes – on some occasions up to three times in five years. This may be driven to a certain extent by mortality of pair members (such as after the severe storm in 2010 when significantly more partner changes were observed), but it is apparent this is not the sole driver in this study as pair changes do occur even if both birds are alive and present at the breeding site.

As birds banded as chicks early in the study are now increasingly being re-sighted at the study site, it will be fascinating to see how this story unfolds over the next few years.

We would like to thank the Wildlife Conservation Society for allowing us access to Steeple Jason, to Mike Clarke and Rob McGill for logistical support, and to the many volunteers who have participated in data collection. We are also grateful for financial support from the Falkland Islands Government's Environmental Studies Budget.

FALKLANDS CONSERVATION

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Wildlife Conservation in the Falkland Islands

Issue 20

FALKLANDS CONSERVATION

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FALKLANDS CONSERVATION

Protecting the wildlife of the Falkland Islands for future generations

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Editorial

The Botanists' Return

No, not a new pub name (although it has potential in the Kew area?) or a crafty stroke in tennis (possibly hugging the ground?) but a news announcement instead. After a bit of a gap in botanical expertise, we will soon have two experts in 'non-bird wildlife' in the FC ranks. As a result of successful Darwin Plus applications, we have recruited project officers for two new projects: Habitat Restoration and Lower Plants.

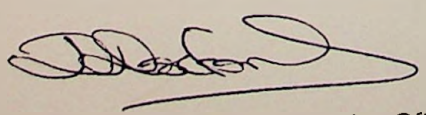
The Habitat Restoration project builds on earlier work by Alicky Davey developing a Native Seed Hub. It will generate new restoration approaches for eroded and degraded areas using native species. Our good friends at Stanley Growers Ltd are project partners; they have been multiplying our precious native seed collection in polytunnels and now in an outdoor plot too. The next stage is to move to full scale field trials in a variety of situations. In the longer term, we are looking for a self-sustaining system whereby locally produced seed is available for restoration work.

The Lower Plants project results from a short, Darwin Initiative funded expedition by lichen and moss experts (in 2010) which produced very promising initial results. It aims to fill a major gap in our knowledge of the Falkland Islands by surveying and categorising lower plants to complement the existing data set on vascular plants. The probability of discovering species new to science is very high; new records for the Falkland Islands are guaranteed. Given the critical role of lower plants in binding soil and retaining moisture, it is important that we gain a good understanding of their ecology as the climate changes.

There will be local volunteer opportunities on both of these two year projects, especially for the green fingered and numerate!

The project officers will undertake training in the UK with the Royal Botanic Gardens, Kew, and the National Museum of Wales before starting in earnest.

Helen Marsh (our Herbarium Curator) will be helping with the expansion of our voucher collection into lichens, mosses and liverworts. So I guess that means more cupboards in my office...



Dr David Doxford, Chief Executive Officer

FRONT COVER PHOTO: Rockhopper penguin colony at Beauchêne Island. *Sarah Crofts.*

Plant hunting on West Falkland: searching for Falklands nassauvia

Margaret Carr tells the story of three remote botanical survey trips with her husband, Tim, on the trail of a newly discovered endemic plant.

In December 2012, Tim and I arrived in the Falklands to embark on three months' botanical fieldwork on West Falkland. It had all started with an exciting telephone conversation six months earlier inviting us to search the mountains of West Falkland for rare plants. Dr Rebecca Upson had set up a project to look for further populations, record the ecology and threats faced by the newly discovered endemic Falklands nassauvia *Nassauvia falklandica*, a montane cushion plant unique to the Falklands and newly confirmed on Green Mountain in the Hornby Mountains.

Before travelling to the Islands we received a week's training at the Royal Botanic Gardens, Kew, from Rebecca and her colleagues, learning how to use the data recording software, techniques for preserving plant material, and using the amazing facilities in the Herbarium to improve our knowledge of the grasses, sedges and rushes of the Falkland Islands.

Selecting target survey sites

To prioritise the areas of focus objectively, Rebecca developed a habitat suitability model for *Nassauvia falklandica* using the available information about its ecology and background environmental

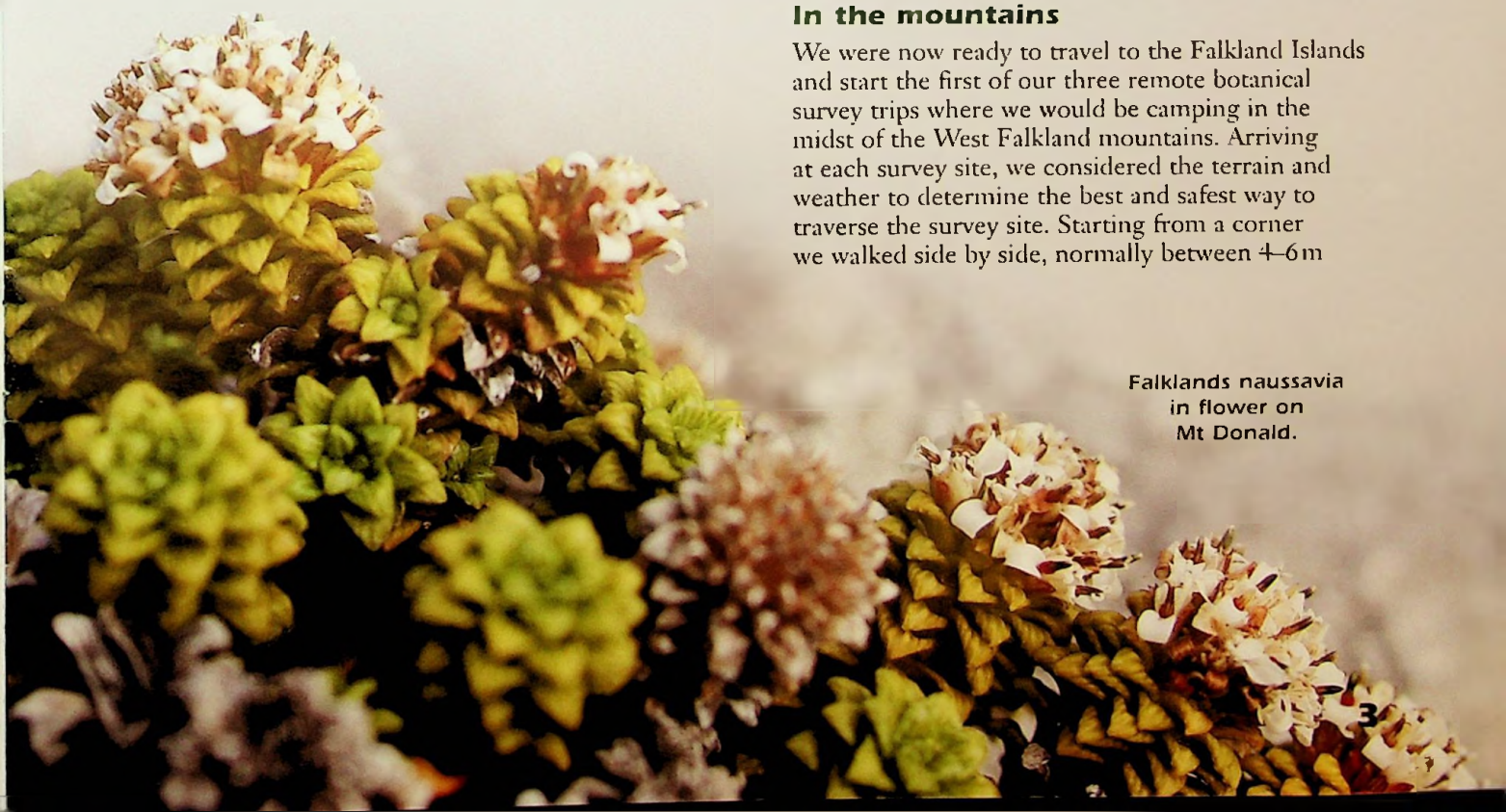
Tim recording data on Mt Edgeworth.

data for the Falkland Islands (such as the mean temperature of the warmest quarter). Next these areas (Figure 1) were compared using GoogleEarth imagery to identify sites with predicted highly suitable conditions and sparse vegetation (a condition that previous survey work suggested it prefers).

The project's fieldwork was limited to six weeks, allowing trips to three discrete areas. Eight target survey sites were selected in the Hornby Mountains and 15 in the Hill Cove Mountains. Most landowners readily gave us their permission to carry out botanical surveys on their land, so giving us access to 19 sites. During the fieldwork in the Hill Cove Mountains, we had time to visit further summits so chose three that looked most promising and where permissions were in place, thus increasing the survey sites to 22.

In the mountains

We were now ready to travel to the Falkland Islands and start the first of our three remote botanical survey trips where we would be camping in the midst of the West Falkland mountains. Arriving at each survey site, we considered the terrain and weather to determine the best and safest way to traverse the survey site. Starting from a corner we walked side by side, normally between 4–6 m



Falklands naussavia in flower on Mt Donald.

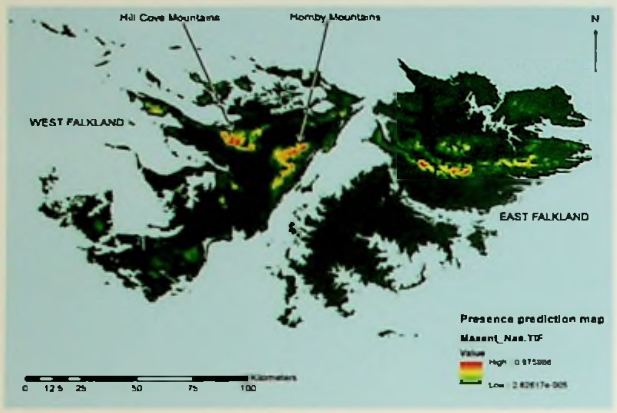


Figure 1: MaxEnt results predicted suitable sites for presence of Falklands nassauvia.

apart (depending on visibility) scanning 2–3 m each way, continuing to the far edge. We returned in a similar manner surveying the neighbouring strip, continuing until we had covered the whole area. For five days we searched fruitlessly. The sixth site, the NW Ridge of Clay Mountain, looked very different from the previous rock strewn sites. It was eroded red clay with fine mineral gravel. Thrillingly, we almost immediately found several Falklands nassauvias and one was even in flower!

After finding a Falklands nassauvia plant, we marked its position and started counting the population. We also took herbarium specimens, pressing them in our portable flower press. There was no funding for genetic work but, to enable future research at the RBG Kew, we collected leaf/stem samples, drying them in small polythene packets filled with silica gel. We also collected soil samples. By high summer, the Falklands nassauvia seeds were ripe. We collected seeds from two sites. Most have been stored in RBG Kew's Millennium Seed Bank, but some were propagated by Cynthia Williams at Stanley Growers. Excitingly, these were the first to be germinated outside the wild. We also delivered 20 cuttings to her from the Falklands nassauvia population on Mt Donald. It is thrilling to learn she now has 16 multi-stemmed plants and that some flowered this spring.

Irrespective of whether or not we found Falklands nassauvia, we carried out vegetation surveys at each of the sites and also in the surrounding areas to further define the habitat characteristics of the mountains. Our data were recorded using a handheld computer with in-built Global Positioning System accompanied by lots of photographs. We made a total of 192 records.

We found Falklands nassauvia populations at six sites, with two separate populations on Clay Mountain NW Ridge and re-confirmed its presence on Mt Donald.

Young plant on Mt Donald.

Where we found Falklands nassauvia we noticed the following:

- All populations were above 450 m above sea level.
- All sites were clay.
- Often the Falklands nassauvia plants appeared in bands running down the slope. A high proportion of the immature plants on Clay Mountain NW Ridge were on the west-facing slope upwind from the mature plants. Seeds of *Nassauvia* species are generally wind-dispersed, but our observations suggest the seeds of Falklands nassauvia are locally dispersed by water runoff.
- No evidence of Falklands nassauvia being grazed.
- The two largest populations found on the ungrazed Clay Mountain NW Ridge were the healthiest with the highest proportion of young plants. It may be that the species benefits from lack of disturbance by passing stock.
- The large eroded area on Clay Mountain NW Ridge below the mature plants on the summit provides a large potential seedbed with lack of competition.
- The Falklands nassauvia was generally found in sparsely vegetated areas often associated with balsam bog *Bolax gummifera*, but growing separately.
- Fir clubmoss *Huperzia fuegiana*, a rare species vulnerable to grazing, was found near the largest population, indicating the area may not have been intensively grazed in the past.

Common features at survey sites where Falklands nassauvia was not found:

- Below 450 m above sea level.
- Lack of summit rocky refuge where we hypothesise the species could survive during times of high grazing.
- Stone runs.
- Former grassland now eroded.
- Eroded summit areas, along routes of travel by the stock and shepherds especially along fence lines, or old radar station site or military firing target.

Background: Hole Ridge, Mt Robinson.

- Some sites surprised us at the lack of Falklands nassauvia. One was Black Mountain. Here the altitude (451-500m) was in the correct range, there were refuge rocks, clay shale, abundant valerian bog *Valeriana sedifolia* cushions (a species associated with Falklands nassauvia) but, perhaps being closer to Port Howard, it has suffered greater disturbance. The profusion of coastal nassauvia *Nassauvia gaudichaudii*, usually only seen in sheltered spots, is also unusual, so perhaps it is simply too clement.

Threats to the vulnerable habitat where Falklands nassauvia was found (although it should be borne in mind that human use of this remote area is very low):

- Livestock – damage to plants from direct trampling.
- Erosion – both natural from wind and rain and unnatural caused by man, stock, vehicles alongside fence lines, development (eg radar stations) and the military.
- Land ownership/management – changes can result in alterations to the use and to grazing regimes. However, populations could be protected from grazing by fencing.
- Climate change – climate warming threatens all summit-living alpine species, as they are unable to migrate to cooler locations at higher altitudes. Climate models forecast weather becoming more severe with increasing risks of erosion.

What next?

An important aspect of the project was gathering general vegetation data and records of other rare species as there are few botanical records for the West Falkland mountains. These will now be available for other botanists to use and study.

The seven new populations of Falklands nassauvia increased the fully confirmed and recorded populations from one to eight and from 133 known mature individuals to approximately 2,500. They cover a wide area with several different owners/managers and grazing regimes. These populations have a good west-east range from Mt Donald, through Mt Edgeworth to Clay Mountain and a good north-south range too.

Using the data obtained, the conservation status of Falklands nassauvia will be re-assessed. The Falklands nassauvia seed and cutting collections taken during this project will help secure the species for future generations.

Camp site in Hornby Mountains.

One of the six mature cushions on Mt Robinson.

Cynthia Williams from Stanley Growers with the Falklands nassauvia cuttings.

Photographs by M Carr and T Carr.

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Our special thanks go to: The Mohamed bin Zayed Species Conservation Fund for funding the project, RBG Kew, Neil Clark, Tony and Susan Hirtle, Critta and Becky Lee, Myles Lee, Kenneth and Josie McKay, Peter and Shelley Nightingale, Jim and Lesley Woodward, Falkland Islands Government, Stanley Growers and the Department of Agriculture in Stanley.

Tracking crested penguins

Dr Norman Ratcliffe describes how the winter distributions of crested penguins were revealed by geolocator tracking.

In 2011, I swapped the damp of South Georgia and the cold of the South Orkneys for wind on the Falkland Islands. My motivation was not merely to dry out and warm up: I also wanted to study the winter distribution patterns of crested penguins in the southwest Atlantic and Scotia Sea. So I organised an expedition to the Falklands to do this, ably assisted by Sarah Crofts, Al Baylis and Micky Reeves from Falklands Conservation.

In March 2011, we deployed 82 tiny geolocator tags on moulting rockhopper penguins, splitting these equally between Beauchêne and Steeple Jason Islands. At the same time, BAS research assistants deployed 40 tags on macaroni penguins on Bird Island. We returned to recover them the following spring and retrieved 79% of devices overall: a fantastic result.

Analysis of the data revealed that birds from Steeple Jason mainly wintered in the shallow, warm and productive waters over the continental shelf of South America. This was expected as Klemens Pütz found similar results when tracking small numbers of rockhoppers from several colonies around the Falklands using satellite tags. Birds from Beauchêne Island showed very different distribution patterns, with most birds heading to the deep and less productive pelagic waters to the southeast and some moving west through the Drake Passage into the Pacific Ocean or east to South Georgia. Their distribution was more similar to that of rockhoppers from Staten Island in Argentina than that of birds from other Falkland colonies. This may be due to segregation of wintering areas among the two colonies to avoid competition or, possibly, the Beauchêne birds having a South American provenance and them retaining cultural fidelity to ancestral wintering areas.

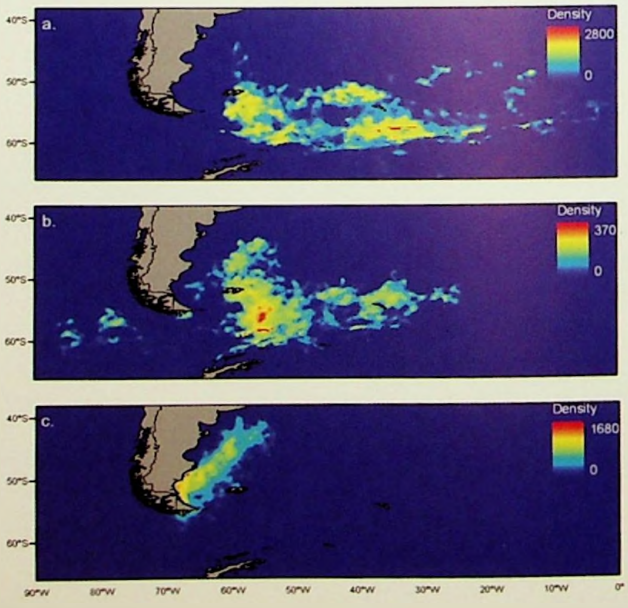
Macaroni penguins had a very wide pelagic distribution across the whole of the Scotia Sea with some distinct aggregations, one of which occurred to the southeast of the Falkland Islands. This shows that macaroni penguins are more common winter visitors to Falkland waters than previously suspected from ship-based counts.

Our results have implications for conservation as they will allow us to assess overlaps between the winter distribution of these populations and possible threats, such as krill fisheries and oil spills: we will investigate this further in a collaborative project

FROM TOP TO BOTTOM **Norm and Sarah equip a rockhopper with a GLS tag; Job done: a GLS tag fitted and ready to go.** *Norman Ratcliffe*

with Falklands Conservation and SAERI (South Atlantic Environmental Research Institute).

For those interested in reading a full account of the findings, the article is published in the *Journal of Biogeography* and available open access by following this link: http://onlinelibrary.wiley.com/doi/10.1111/jbi.12279/full



Winter distribution of the density of a) South Georgia macaroni penguins, b) Beauchêne rockhopper penguins and c) Steeple Jason rockhopper penguins.

Norman Ratcliffe is a seabird ecologist working for the British Antarctic Survey.

Determining a Species Action Plan for the southern rockhopper penguin

Sarah Crofts

A Species Action Plan for southern rockhopper penguins was completed earlier this year and presented to and endorsed by the Falkland Islands Government Environmental Committee.

What species need Action Plans?

At the Falklands there are four species that have IUCN* status of 'Vulnerable', including the southern rockhopper penguin *Eudyptes c. chrysocome*. Rockhopper penguins have experienced population declines throughout their breeding ranges with some of the largest occurring at the Falklands, and the causes remain largely elusive. Despite seeing population increases between the 2005 and 2010 Island-wide censuses, the Falklands' population is still only 20% of that estimated 80 years ago.

What do Species Action Plans do?

In order to help a priority species there is typically a three-step process involved: 1) identifying problems driving population declines, 2) understanding these causes, and 3) developing solutions to address the problems to improve the species conservation status. This information is compiled in a regional Species Action Plan and used as a point of reference to assist with management prioritisation.

Threats faced by Falkland rockhopper penguins

Rockhopper penguins come ashore to breed, but rely on vast areas of the ocean to feed. Overall, threats on land (eg predation, invasive species and human disturbance) were perceived to be relatively low at the Falklands; the majority of rockhopper penguins breed on remote offshore islands, effectively giving them the best protection. The highest risks were found to exist in their marine environment, but how do you go about protecting a species that relies on vast areas of the sea for its survival?

Climate change is predicted to have an impact but, at the moment, this is at an unknown level – it is simply too early to pinpoint how the population will respond to climate induced changes. However, emerging information through research is showing that shifts in sea temperatures and wind patterns, which alter the availability or ease of capturing prey, do act negatively on individual survival.

* The International Union for the Conservation of Nature 'Red List of Threatened Species' highlights the species that are facing a higher risk of global extinction (ie those listed as Critically Endangered, Endangered and Vulnerable). www.iucn.org

At the same time, human activities in the surrounding seas, such as large-scale commercial fisheries, can also influence modifications to the ocean's food systems. More recently, hydrocarbon development poses a direct risk through pollution.

The way forward?

The main emphasis of the Species Action Plan is to highlight how important and valuable long-term monitoring will be to better understand this long-lived but slow reproducing species. The continuation of the Falkland Islands Seabird Monitoring Programme, led by Falklands Conservation, will provide good long-term information but, crucially, must be robust enough to relate population trends to changes that become apparent in the marine and terrestrial environments. The continuation of the demographic study (providing data on breeding success, adult and juvenile survival) through the New Island Conservation Trust was also ranked as a high priority, as was investigating the impacts of the current offshore hydrocarbon industry. The challenge will be making this species more resilient in its marine environment, especially in the face of changing climatic conditions and increasing marine resource extraction, and this will need to involve careful considerations in the future management of our marine spaces.

You can download the full Falkland Islands Southern Rockhopper Penguin Species Action Plan from http://www.falklandsconservation.com/projects/southern-rockhopper-penguin

Acknowledgements
This work was funded by the Overseas Territories Environmental Programme and the People's Trust for Endangered Species.

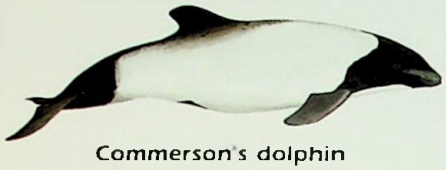
Developing dolphin data using Darwin funding

Project officer; Grant Munro, is aiming to increase our knowledge of the distribution, abundance and biology of the dolphins around the Falklands' coast. Here he describes the techniques he is using in the Darwin Challenge funded Inshore Cetacean Survey project.

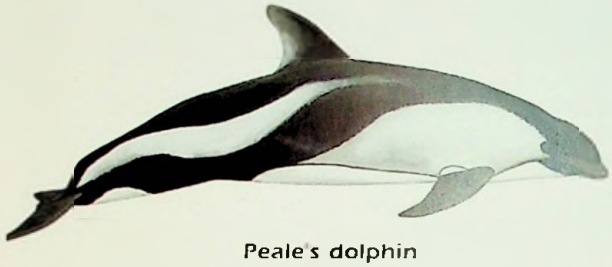
Twenty-five whale and dolphin species have been recorded in the waters around the Falkland Islands. Many of these species are known only from historical strandings on beaches, from deep-water surveys conducted from fisheries patrol vessels (as part of the Falklands Conservation and JNCC Seabird at Sea surveys carried out in the late 1990s) and, more recently, incidental sightings from oil exploration supply vessels.

Beyond the known presence or absence of species, we know little about their biology or occurrence within the Falkland Islands' waters. This is especially true of the near-shore and in-shore waters of the islands where little or no dedicated survey effort has been expended.

Two species of small inshore cetaceans are known to occur within the Falkland Islands archipelago, Commerson's dolphin *Cephalorynchus commersonii* and Peale's dolphin *Lagenorynchus australis*. Both species are recognised as being of international conservation concern and are subject to international plans of action under the Convention on Migratory Species (CMS) as well as a Falklands' National Species Action Plan within the Falkland Islands Biodiversity Strategy.



Commerson's dolphin



Peale's dolphin

Despite the acknowledged importance of both species, and their position as an apex predator, relatively little is known about their distribution, abundance or biology. This lack of information on which to base management decisions has been recognised as a major threat to effective conservation, and the CMS Action Plan prioritised the following areas of biological study:

- Distribution, abundance and trends in dolphin populations
- Stock identity of sub-populations
- Natural history studies on population structure, diet and habitat utilisation to assess potential anthropogenic impacts.

However, it is not easy to study animals that never come ashore and spend the majority of their time submerged. Unlike birds and seals, population estimates cannot be obtained from breeding counts;

and tags/rings and satellite trackers cannot easily be attached or recovered. Estimates must therefore come from: careful survey with known observer effort that can allow for correction of animals that were present, but may not actually have been seen by the observer; and recognition of individual animals from markings, scars and fin shapes that allow capture/recapture modelling to be conducted and group dynamics to be discovered.

More recent advances utilise the fact that cetaceans use bio-sonar for echo-location and communication and thus can be monitored through hydrophones recording sound instead of observers using sight. This is especially useful in studying daily and seasonal occurrence in an area as hydrophones can be deployed continuously, recording in poor weather and at night when human observers have gone home. When compared to boat charter and visual observers, it can be a cost-effective alternative. However, each method has its advantages and disadvantages and tells only one part of the story and, owing to the use of boats and need for multiple observers, studies can become costly. If mistakes are not to be made, it is essential to have a clear idea of which options will work in the Falklands and to have some basic baseline information to know what are the priority questions that must be answered and at what scale a survey must be undertaken to be

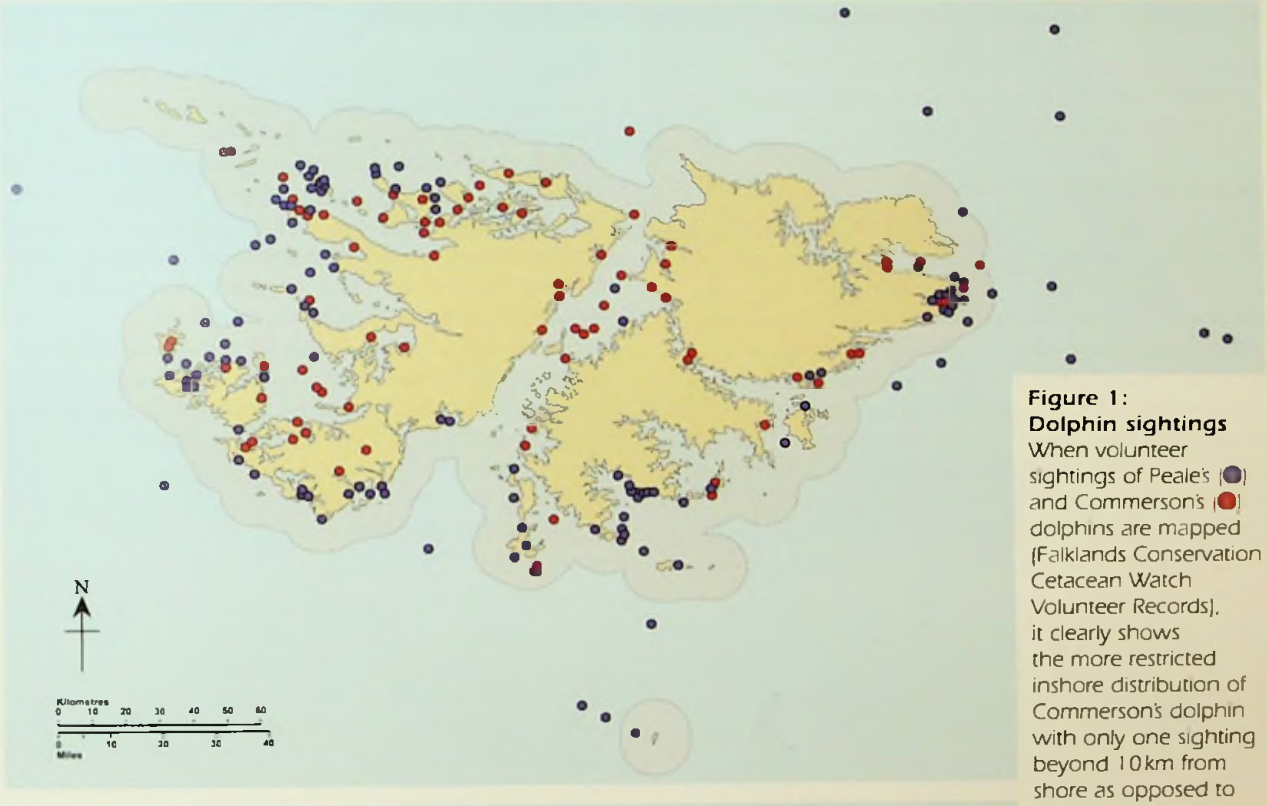


Figure 1: Dolphin sightings
When volunteer sightings of Peale's (●) and Commerson's (●) dolphins are mapped (Falklands Conservation Cetacean Watch Volunteer Records), it clearly shows the more restricted inshore distribution of Commerson's dolphin with only one sighting beyond 10km from shore as opposed to the wider distribution of Peale's dolphin. There is, however, a wide overlap between the species around inshore kelp banks and how these two sympatric species may share and split the resource to avoid inter-species competition is of interest.

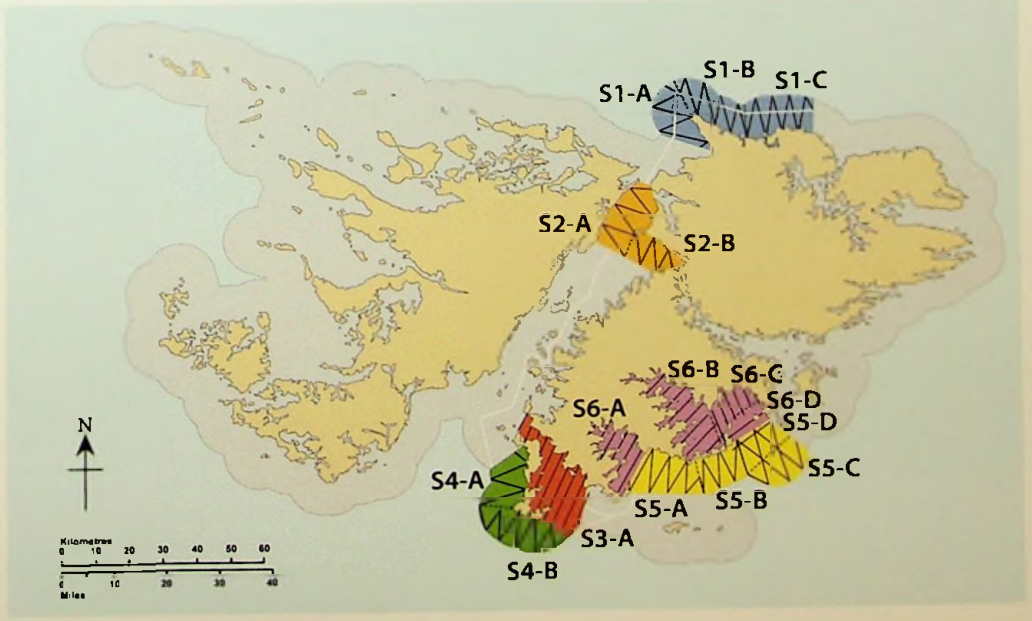


Figure 2: Dolphin surveys
Initial planning for the 10-day survey involved identification of similar coastal habitats or 'strata' and establishing a semi-randomised series of transect survey lines.

Commerson's dolphins in a breaking wave off Saunders Island. *Stuart Bennett*

statistically robust. With a small pilot study it will be possible to establish the best and most cost-effective options for the Falklands' situation.

A pilot study approach

The aim of the small-scale Inshore Cetacean Project is to test at a pilot scale some of the techniques and to obtain initial estimates of dolphin and whale density, sighting rates and variance that will allow a larger and more complete survey to be designed at a scale that will be appropriate to place density estimates around the Falklands. Whilst conducting this survey, photo-identification shots of encountered animals will also be taken to confirm whether there are sufficient distinct markings between animals to identify individuals (this is likely for Commerson's, but may be more difficult for Peale's dolphin).

Past volunteer sighting programmes (shown in Figure 1) and the Seabirds at Sea surveys of the late '90s allow us some basis to start from. Whilst these studies cannot be used to give numbers or density, both studies show that Commerson's dolphin is limited to inshore water fewer than 10km from the coast (only a couple of observations have been made beyond this and are limited to the north of Falklands Sound) and favour sheltered coastal waters, whilst Peale's dolphins range across the continental shelf from shallow coastal waters to the 200m depth contour. The two species may overlap in the coastal kelp fringes. The limited range of Commerson's dolphin is particularly important as it is likely the species is now genetically isolated from the South American population.

The inshore survey will therefore be limited to the 10km buffer zone around the Falklands and will select a number of similar coastal habitats, such as closed harbours, open bays and exposed along-shore areas. In each of these habitat types or strata, we will conduct line surveys or transects as a series of parallel lines or in a zig-zag 'saw tooth' pattern. A continuous watch will be kept along each line and the perpendicular distance to the transect line of any sightings will be recorded. This provides us with a quantified level of observer effort and allows us to calculate a 'detection function' for each species with distance. It is assumed that every animal on the vessel trackline (zero distance) will be observed, but the detection function allows us to account for the proportion of animals at greater distances that may not have been observed and recorded as sighted. By obtaining estimates, encounter rates and variances within each of these habitat types, initial estimates on species composition and density will be possible. More importantly, it will give the baseline data needed to feed into how more detailed survey effort can be designed in the future.

At-sea survey

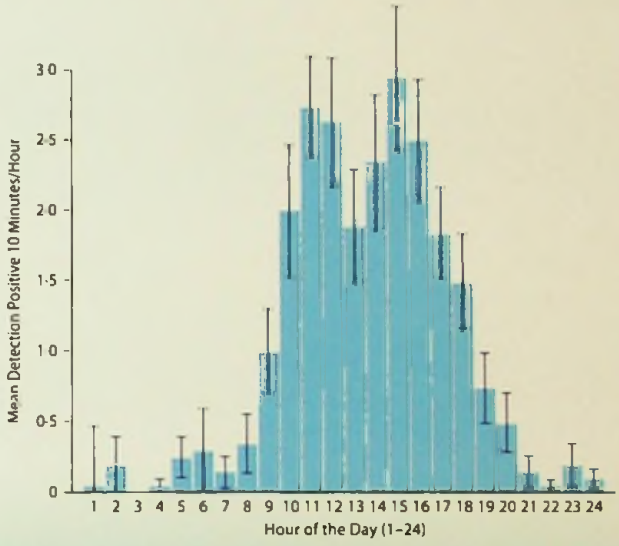
The 10-day survey will begin at Carcass Island to the north of West Falkland and traverse through the sheltered coastal waters inside Weddell, Keppel and Pebble Islands, as well as near-shore coastal waters to the north of West Falkland when weather permits. It will then pass south down through Falkland Sound to the southern bays of Lafonia on East Falkland. As well as line surveys in the larger strata, a system of 'total' counts will be performed in some of the narrower harbours.

In addition to the boat survey, the use of C-Pod Dolphin Click Detectors is also being trialled. Both Peale's and Commerson's continuously emit high-frequency echo-location clicks which they use to hunt prey, and for navigation and communication, not dissimilar to the bio-sonar and echo-location used by bats. These high frequencies (at 130kHz) are unlike almost any other background ocean noise and can be identified and separated by a small onboard processor linked to an underwater hydrophone within the C-Pod. The C-Pod then records certain parameters of the click-stream and the time. It is possible to identify some behaviours such as feeding 'buzzes' which are rapid accelerations of the click rate as an animal homes in on prey. However, more importantly, they give a continuous record of occurrence.

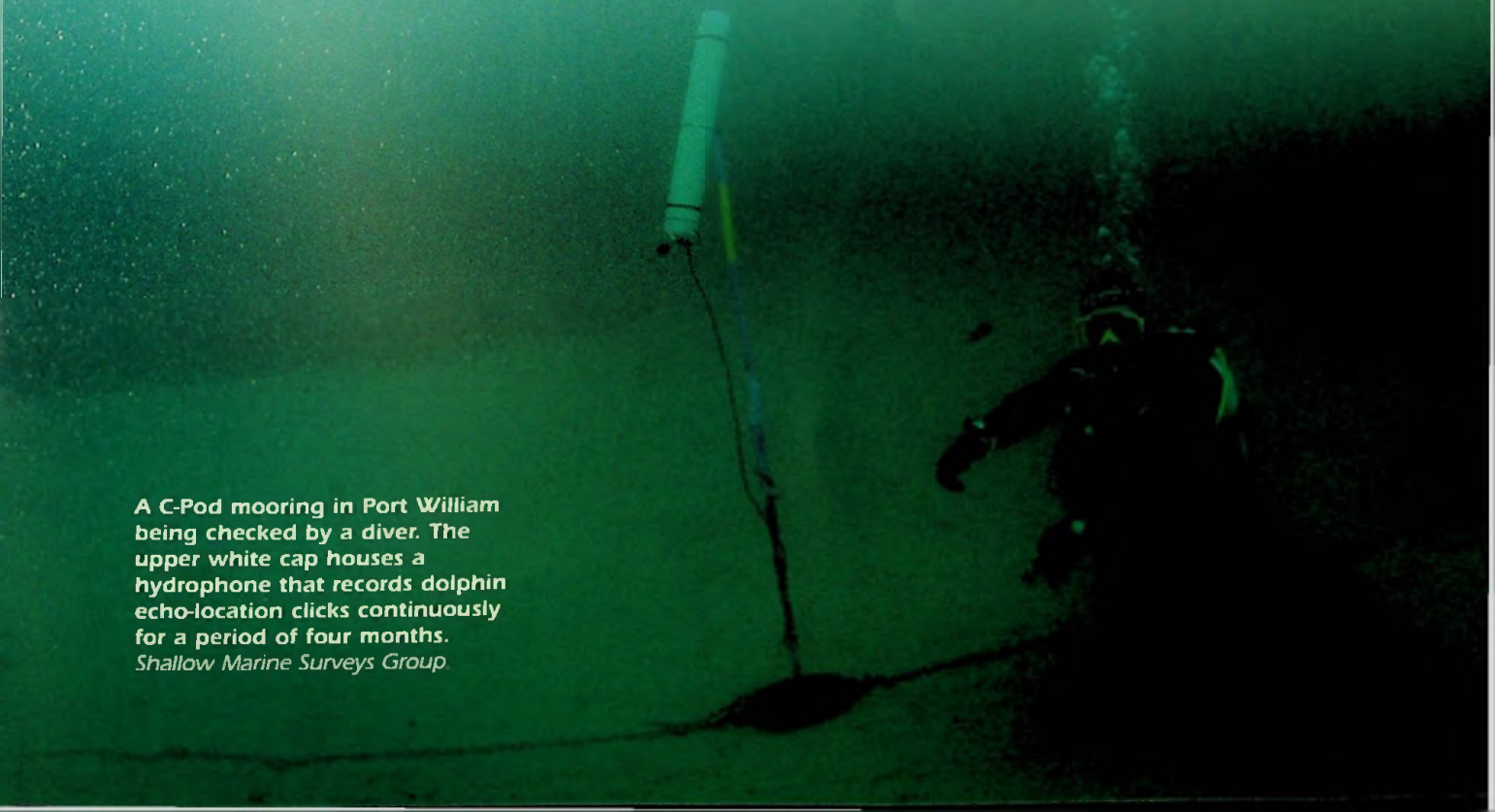
It is possible to look at 'dolphin positive minutes' through a day to observe whether attendance and utilisation is influenced by the daylight or tidal-state. It is also possible to look at 'dolphin positive hours' through the day or by month and season to look at the seasonality of presence. For example, anecdotal evidence would suggest that in summer Commerson's dolphins occur in smaller residential groups in distinct areas. However, in winter, occurrence appears to decline as they become absent from many sheltered harbours. As this is not matched by any increase in off-shore occurrence it begs the question: Where do they go and, if they all leave, do they form larger winter groups in near-shore waters? These are questions that C-Pods may help to answer if they can be deployed at a range of sites through the year.

It is not possible to look at seasonal changes yet, but a C-Pod moored at Port Howard has shown distinct daily patterns. Animals would appear to be present through the day with activity peaking at solar midday, activity then declines and animals are almost absent at night-time. This would have been impossible to discover by human observers where, for obvious reasons, observations cannot be conducted in darkness at night. Animals were also absent in days following heavy rain where water visibility was severely restricted. This might suggest that animals move into shallower water through the day to hunt predominantly by sight, but during night and periods of low visibility they move to deeper water to forage, where they rely on echo-location where it is more efficient and less affected by reflection, refraction and multiple echo paths as it is in shallow kelp obstructed waters.

Figure 3: The number of 10-minute periods within an hour (minimum = 0, maximum = 6) during which Commerson's dolphins were recorded as present at Port Howard. This shows a clear peak around the middle of the day when light levels would be highest. This may be a factor of visibility or prey availability (prey may migrate in the water column or sediment column dependent on light levels). However, low attendance rates during periods of low water visibility following rain might suggest the former.



Acknowledgements
Our grateful thanks to the Darwin Initiative Challenge Fund; Port Howard Farm; and the Sea Mammal Research Unit.



A C-Pod mooring in Port William being checked by a diver. The upper white cap houses a hydrophone that records dolphin echo-location clicks continuously for a period of four months. *Shallow Marine Surveys Group.*

A positive move for the black-browed albatross

Conservation Officer, Dr Andrew Stanworth, explains the background to the changing status of this flagship species on the IUCN Red List.

In late 2013, the status of the Black-browed Albatross (BBA) on the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species™ changed from 'Endangered' to 'Near Threatened'. What does this mean, particularly for those BBAs in the Falkland Islands, and how was Falklands Conservation (FC) involved in this process? To give a little background, the Red List is a means of evaluating the conservation status of plant and animal species. It uses scientifically rigorous approaches and partnership organisations of experts to determine risks of extinction to species and has become a widely accepted global standard. The IUCN Red List categories are shown opposite and from this you can quickly deduce that the BBA has moved out of the 'Threatened' categories to one of a reduced extinction risk – a very positive move.

The BBA has spent the last 10 years as an 'Endangered' species after slipping to 'Vulnerable' at the start of this century due to very rapid population declines. Threats to the species as a whole have been and still remain to be introduced rodents and cats, volcanic eruptions, climatic events, and, notably, fisheries bycatch in trawl and longline fisheries from the Southern Ocean to the coasts of southern Africa. The likelihood and magnitude of these threats vary, some can be mitigated or removed, and new threats can arise. Some fisheries, such as those in Falklands' waters have reduced bycatch considerably by the development and use of bycatch mitigation measures. This can only make a positive contribution, but other fisheries lag well behind and further improvements can be made.

Change in status occurs through a process involving Red List Authorities which, in the case of birds, is BirdLife International (BLI), of which FC is a partner. In 2013, BLI assessed the status of BBA against data from a recent Agreement on the Conservation of Albatrosses and Petrels (ACAP) review of the species. FC has conducted three Falkland Island-wide censuses for BBA in 2000, 2005 and 2010, the findings of which contributed to the ACAP review. This review concluded that studies indicated a 4% per annum increase in the population between 2005 and 2010. Furthermore, the population is likely to have increased since the first archipelago-wide ground survey in 2000, and possibly even since the initial ground-based surveys were conducted at Beauchêne and Steeple Jason islands in the 1980s. The review also provides an estimate of the breeding population of between 475,500 and 535,000 breeding pairs for the Falkland Islands. As this figure represents around 70% of the estimated world population of the species, it has been re-categorised as it is no longer considered to be undergoing very rapid population declines.

Why 'Near Threatened' and not 'Least Concern'? As well as providing data, FC was involved in the assessment consultation process. There is still some uncertainty over population trends; much of the evidence for an increase is based on only 10 years' data in the Falklands, and indications are that the population on South Georgia continues to decline. On top of this, high levels of mortality of this species are still reported from longline and trawl fisheries in the South Atlantic. For these reasons, and until further data are forthcoming, it was suggested as a precautionary measure to re-classify as 'Near Threatened' rather than 'Least Concern'. FC continues to monitor annual trends in breeding pairs of BBA on Steeple Jason (the main breeding site for this species in the world) and has an ongoing demographic study to estimate survival rates (see back page of WCFI 19) to support the understanding of the conservation status of this species. Hopefully, the positive trend will continue, but clearly monitoring is a critical process in determining the continuing conservation status of this species.

Photographs by Andrew Stanworth.

The IUCN Red List categories

As the designated Red List Authority for all birds, BirdLife International is responsible for providing the assessments to IUCN for the Red List. To achieve this, it collates all the relevant data on each species, and applies them to the Red List criteria in order to assign each species to a category of extinction risk.

The criteria have quantitative thresholds for each category, and are based on combinations of range and population size, trend and structure.

The IUCN species category assignment process

SPECIES **NOT EVALUATED** ▶ Not Evaluated **NE**

SPECIES **EVALUATED**

▼

Species data **not adequate for assessment** ▶ Data Deficient **DD**

Species data **adequate for assessment** ▶ ASSIGNMENT TO CATEGORIES using Red List criteria

- Extinct **EX**
- Extinct in the Wild **EW**

THREATENED

- Critically Endangered **CR**
- Endangered **EN**
- Vulnerable **VU**

- Near Threatened **NT**
- Least Concern **LC**

Acknowledgements
Our grateful thanks to the Falkland Islands Government Environmental Studies Budget for funding; the Wildlife Conservation Society and local landowners for allowing annual access to breeding bird colonies.

NOTICEBOARD

Trustees update

Dr Paul Brewin and Steve Massam (FI) and Professor Edward Maltby and David Spivack (UK) were elected as new Trustees at our AGM in Stanley in December 2013, and Jan Cheek, Mike Evans, Roger Spink and Louise Taylor (all based in the Islands) and Henry Robinson (in the UK) were all re-elected. Bill Featherstone had stepped down as a Trustee a few weeks earlier and we would like to take this opportunity to thank him for all his hard work, especially in his role as Treasurer for many years.

Falklands plants on social media

One of the most exciting native species discovered in the past few years is the Patagonian yellow-orchid *Gavilea araucana*. Attention of this species was first drawn to botanists by a photograph posted on Facebook. Hill Cove residents, Peter and Shelley Nightingale have known the whereabouts of the orchid for some time and photographed it on a rare day when the flowers were fully open, revealing the labellum (the lower inner petal) and the long green tips to the outer sepals. These key features identify the species from another rare species, the pale yellow-orchid *Gavilea australis*. With so many parts of the Falklands still not surveyed by botanists, there are probably several more species out there waiting to be discovered.

Another development in social media is the website www.ispotnature.org/falklands. This website, developed by the Open University, allows anyone to learn more about wildlife and improve their identification skills. You simply sign up for free and then post your photos of plants or other wildlife. These photos can then be seen by other users, including a range of local and international experts, who can help you identify your wildlife photos. There is even a free app for Android smartphones, so you can send photos straight from your phone.

The website was originally set up for users in the UK so, to use it in the Falklands, always remember to add the '/falklands' part at the end of the web address, and enter 'Falklands' or 'Falkland Islands' as a 'descriptive tag' when posting your photographs.

Patagonian yellow-orchid. *Shelley Nightingale*

We would like to thank...

...the following for their generous donations to our work over the last few months – Polar Cruises; Dingle Oceanworld Aquarium; Cotswold Wildlife Park & Gardens; and the Detroit Zoological Society. Our grateful thanks go to the Malvina House Hotel and Falkland Islands Holidays for covering the cost of shipping promotional material to the Islands for us.

We would also like to thank all those Members who have contributed to the ongoing Watch Group building appeal. This appeal, to provide a permanent home for our junior group, is still open if you would like to send a donation (addresses on page 2 or via our website at www.falklandsconservation.com).

Raptor Rover

THE ROYAL ZOOLOGICAL SOCIETY OF SCOTLAND

The Falklands Conservation Raptor project received a donation from the Royal Zoological Society of Scotland (RZSS) that went towards buying a Landrover for completing fieldwork. Many thanks to RZSS for this fantastic donation! The rover is seen here sporting FC and RZSS logos and being admired by the local wildlife.

Rare and Vagrant Birds – Austral Autumn 2013

Mike Morrison

This report summarises the sightings of rare and vagrant birds in the Falkland Islands from January–June 2013.

Cocoi Heron *Ardea cocoi*
A single bird was seen at the south end of Cow Bay beach, Johnsons Harbour by Derek Pettersson on 17 April.

Cattle Egret *Bubulcus ibis*
The first report this season was of a single bird flying over Stanley on 7 March by Micky Reeves. Three birds at Goose Green settlement and one at North Arm settlement; the 23 March one was seen at Goose Green again on 30 March by Mike and Sue Morrison. Twenty were reported by Bernadette Paver at Moody Brook on 8 April. Around 20 were seen by Alan Henry by the Rugby Field on 12 April. Single birds were seen at Ross Road East by Sue Morrison on 13 April, at Fitzroy Ridge on the 14th by Mike Morrison and Stuart Bennett, and on the greens at Volunteer Point on the 21st by Mike Morrison and Stuart Bennett.

Black-faced Ibis *Theristicus melanopis*
Derek Pettersson reported a single bird at Cow Bay, Johnsons Harbour on 27 March.

Coscoroba Swan *Coscoroba coscoroba*
On 30 January, Derek Pettersson saw a single bird on the greens at Volunteer Point. Three birds were seen on the pond opposite Gull Island pond on the Mare Harbour Road on 25 April by Alan Henry.

Cinnamon Teal *Anas cyanoptera*
Alan Henry saw a single male bird on the pond opposite Gull Island pond on the Mare Harbour road on 25 April.

American Kestrel *Falco sparverius*
A female bird was reported by Derek Pettersson at the house at Volunteer Point on 8 April.

White-winged Coot *Fulica leucoptera*
Two birds were seen on the ponds in Elephant Point, Saunders Island by Micky Reeves on 8 February and on the 27th by David Spivack.

Hudsonian Godwit *Limosa haemastica*
Micky Reeves saw three birds at Kelp Point, Fitzroy on 6 January.

Pectoral Sandpiper *Calidris melanotos*
Two birds at Yorke Bay pond, Cape Pembroke were sighted by Mike and Sue Morrison on 2 January.

Arctic Skua *Stercorarius parasiticus*
A single bird was seen at Bullhill, Sea Lion Island on 4 January by Mike Morrison. There have been reports of an Arctic skua at this location in 2006 and 2011; it is possible that it is the same bird returning each season.

Eared Dove *Zenaida auriculata*
Walter Maerkel, a tourist on Carcass Island, saw a single bird near the jetty on 20 February. Later the same day it was seen by the shearing shed at the settlement by Micky Reeves.

White-crested Elaenia *Elaenia albiceps*
Micky Reeves reported a single bird at Carcass Island on 18 February.

Chilean Swallow *Tachycineta leucopyga*
Derek Pettersson reported a single bird at Volunteer house on 22 April; this bird stayed in the area for three days.

Barn Swallow *Hirundo rustica*
On 27 January, Kristiane Thorsen saw a single bird at Teal Inlet settlement.

American Kestrel. *Derek Pettersson.*

Arctic Skua. *Mike Morrison.*

Chilean Swallow. *Derek Pettersson.*

Many thanks to everyone who reports their sightings.

Falkland Islands Biodiversity Project

FROM LEFT TO RIGHT **Fuegian yellow violet.** *Andrew Stanworth.* **Striated caracara.** *Melissa Bobowski.* **Andy and Freya.** *Farrah Peck.*

Our Assistant Biodiversity Planner, Freya Gill, and our Conservation Officer, Andrew Stanworth, are partway through a two-year Darwin Plus funded project on 'Biodiversity Action Planning in the Falkland Islands', which began in July 2013. This project is driven by the need to make biodiversity action planning recommendations realistic and match available resources. This will be supported by the development of an easily accessible digital system for hosting actions, and the production of a method for classifying and prioritising biodiversity actions across the Islands.

At the start of the year, Freya and Andy published a review that evaluates the state of all biodiversity action planning within the Falkland Islands to date. The review examines the characteristics of current actions in the context of how well actions were defined, and how well performance against them could be measured. A further document evaluating the issues and options available for the future of action planning in the Islands will be produced, in conjunction with a range of overseas practitioners of action planning, and a workshop for stakeholders and decision makers here in the Islands.

During a visit to the UK in March this year, Freya visited and collaborated with several of these overseas practitioners, including Ulric Wilson, the Technical Project Manager and JNCC lead on the UK's digital BARS (Biodiversity Action Repository System), and Liz Charter, the lead on the Biodiversity Strategy for the Isle of Man. Liz visited the Islands at the start of 2014 and collected some plant species records for Falklands Conservation and the Royal Botanic Gardens, Kew. She has lived in the Isle of Man for almost 16 years, during which time she has mainly managed the Wildlife and Conservation directorate. Whilst in the Isle of Man, Freya presented information about the Biodiversity Action Planning project, and was able to speak to people involved in the biodiversity planning work there. Freya and Andy are in discussion with contacts from several UK Overseas Territories, and will be sharing their findings with them more as the project progresses.

Wildlife Conservation in the Falkland Islands

Issue 21

FALKLANDS CONSERVATION

Wildlife Conservation in the
Falkland Islands
Issue 21 November 2014

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FALKLANDS CONSERVATION

Protecting the wildlife of the Falkland Islands for future generations

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Protected Areas Strategy Officer: Clare Cockwell
Raptor Project Officer: Micky Reeves
Assistant Biodiversity Planner: Freya Gill
Administrative Assistant: Vicky Collier

Editorial

Our office has been kept busy over the last few weeks by four rambunctious king penguins in our wildlife rehabilitation facility. Caring for George Harrison, June Carter, Janis Joplin and Callum is the sort of activity that people expect from Falklands Conservation. It's also certainly one of the reasons why we come to work every day.

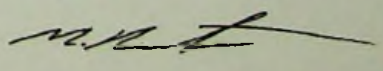
On the surface, our work to save oiled penguins is another wildlife good news story. The sort of thing that makes great reality TV and, yes, our penguins are stars on both Falkland Islands Television and will also be seen by two million viewers on the UK TV show *Island Parish*. For me though, it's not a wildlife story. It's a people story.

It likely begins with an uncaring or careless ship's captain who decides to clean fuel tanks or discharge oily bilge water into one of the world's richest seabird habitats. Next, a member of the public cares enough to catch the penguin, call us and often cares for it for a few days until it can be collected. We can drive several hours or a pilot makes a special trip to one of the Island settlements to pick it up. Local fishing companies donate hundreds of kilos of small fish and we store these in people's freezers all over town. It ends when the penguins are released. In between, Falklands Conservation staff, veterinary staff and dedicated volunteers like Nathan have given up hundreds of hours of their valuable time.

One evening last week I was having a quiet pint of excellent locally brewed Rockhopper beer in the pub just up the road from our offices. Conversation turned to our penguins and someone asked why we bother. "After all", they said, "it's not as if saving our four penguins will make any difference one way or another." I thought about this for a while and, objectively, they are right. I then thought about our volunteers, staff, our friends on Saunders Island looking after a fifth king called Percy and realised the answer really had much less to do with wildlife. The answer I said is "Because we care."

Falklands Conservation is so much more than an environmental organisation. It is a community of people who care. A community, both local and global, brought together by a passion for the Falkland Islands, its wildlife, plants and globally important terrestrial and marine ecosystems. At its heart is our staff who are dedicated not just to the wildlife, but to helping our community care.

When I leave the position of Interim Chief Executive Officer in September and return to my home in Oregon, it won't be the king penguins that I will hold in my heart, memorable as they are – even feisty Janis who takes so much after her namesake. It will be the community of people, both near and far, who support us in everything we do.



Professor Michael Harte

FALKLANDS CONSERVATION

BirdLife INTERNATIONAL

FRONT COVER PHOTO: Commerson's dolphin. *Keith Warmington.*

Protecting the special places

Working with the local community, Clare Cockwell describes mapping a way forward as part of the Protected Areas Strategy project.

Clare Cockwell

After nearly three years, the Overseas Territories Environment Programme (OTEP)-funded Falkland Islands Protected Areas Strategy project is drawing to a close. It has been a long, fascinating and occasionally frustrating journey, but one which could ultimately result in some positive changes for terrestrial conservation across the Islands. One of the project's Steering Group members commented to me recently "Those of us who've been on this journey with you have learnt a huge amount; let's see if we can engage the people who haven't and bring about some change." This sums up neatly some of my feelings about the positive aspects of the journey, and the progress we have been able to make in involving the community in a conversation about the special places of the Falklands. It also points out that it is time to hand over the work to other people, not all of whom have been on the 'journey' with us.

What was the project for?

The aim was to move the protected area agenda forwards in the Falklands in a way that recognises community values and fosters a co-operative approach. This is important; a top-down approach, particularly if that were to involve the compulsory designation of private land, would not be appropriate for the Falklands. Such an approach would run counter to Falkland Islands Government (FIG) policy, and it would face opposition politically and within the wider community.

The focus on a co-operative approach brings its own challenges. Although a protected areas policy for the Falklands needs to reflect our unique situation, it also has to recognise that we are part of the wider world. We have obligations to meet that go with being an overseas territory, and part of the international community.

The Watch Group celebrating the opening of the Lyn Blake Nature Reserve at Hawks Nest Pond on West Falkland. This special place, managed by Falklands Conservation, is open to the public to use and enjoy. *Ben Cockwell.*

Organised as part of the OTEP-funded Protected Areas project, conservation workers, landowners and policy makers from across the South Atlantic region gathered on Ascension Island for an intensive five-day programme of presentations, discussions, group activities and field visits on the theme 'Monitoring Protected Areas in the South Atlantic'. *Colin Clubbe.*

Our protected areas will be judged and measured by international standards whether we like it or not. The systems we adopt need to take into account the need to evaluate performance and report successes, within the Falklands and internationally, without compromising the autonomy and rights of individual landowners or government agencies to act in their best interests.

What does a protected areas strategy need to take into account?

The brief was to reflect community values in policy recommendations. To do that it is necessary to find out what they are. A variety of methods was employed to find out what Falkland Islanders think about their natural environment, including discussion groups, workshops, surveys, interviews, comment boards, and art and photography. The consultation activities yielded a wealth of insights into the feelings we have about the natural world and the ways that protected areas might help us to look after the things we value. However, for practical purposes, the outcomes may be summarised as follows:

The Protected Areas System should be:
- Voluntary for private landowners
- Simple
- Supportive of private landowners.

It should not be:
- Linked to access on private land.

Further:
- FIG should lead by example through the management of publicly owned land.

Towards a Protected Areas Strategy for the Falklands

The most important output of the project will be a Protected Areas Strategy which will have been agreed by stakeholder groups and which aims to synthesise all the discussions, opinions and ideas examined during the life of the project. A draft has been prepared that has two main sections:

1 Our principles for building the protected area system

These were developed and refined by the project Steering Group over the course of the project and set out a vision of how we would like the protected area system to develop. Our principles are grouped around three key themes:

- Conserving natural landscapes, ecosystems and species
- Providing social, health, educational and economic benefits to the community; and
- Practicality and urgency of designation and management.

2 The Protected Areas Indicators

These 'principles' by themselves are unlikely to progress the cause of protected areas; they outline what we would like to do, but not how we plan to do it. To help us turn our ideas into action, a set of indicators has been developed to show the essential areas in which we need to build capacity. An assessment has been made of where we are now, and a series of steps are provided to map a route to improvement. Specific actions are recommended and measures of success are suggested so that improvements can be reported and celebrated.

The project placed equal emphasis on social, cultural and biodiversity conservation aspects of protected areas. A varied programme of education and outreach activities enabled the community to explore the environment around them. *Ben Cockwell.*

The State of the Protected Areas Report

The other main output of the project will be a report that provides the background and case for the judgements and recommendations made in the Protected Areas Strategy, together with tools, templates and procedures for choosing, prioritising and managing both new and existing protected areas.

Although the report is still being finalised, the conclusions are becoming clear; as a country and as a community, we do not devote enough resources to site-based conservation. Although some good conservation work on the ground is carried out by individuals and non-governmental organisations acting as unpaid 'stewards' of nature, the general picture is that we do not spend enough time thinking about it and planning a strategic approach, and we do not spend enough time and money actually doing it. When we do conservation at important sites, it often fails to have a long-term impact and legacy because we have not thought it through properly or we have not got the resources to sustain the effort. The analysis has focused on publicly owned sites, but the same challenges and barriers to progress (shortage of funds, scarcity of labour and expertise and quick turnover of staff) could apply equally to other privately owned conservation land and organisations working on protected area planning.

The question often asked is "Yes, we can see we need to do better, but how much is it going to cost?" The Protected Areas Strategy and project cannot answer that question; the amount we spend as a country looking after our special wildlife sites is a political decision. However, the project has produced a wealth of suggestions and mapped a way forward that is broadly acceptable to the Falkland Island people, would deliver measurable improvements with a fairly modest injection of funds, and has the potential to bring benefits to all of us.

Acknowledgements

I would like to extend my grateful thanks to the people of the Falklands who took part in the project; everyone who came to a meeting, contributed a comment to a board, responded to an email, came to an event or read an article, and the Camp community who made me very welcome and generously shared their time and experiences of doing conservation at the sharp end. I'd especially like to thank the members of my Steering Group, who kept turning up, read everything I wrote, and helped me to learn patience when things took a long time.

I'm also grateful to Falklands Conservation for giving me the chance to try a different career, and for the opportunities I've had to experience the wild Falklands in totally new ways (experiencing it from the wheelhouse roof of the MV *Condor* on the cetacean survey was a particular high point). I will be spending next year at Oxford University studying for an MSc in Biodiversity, Conservation and Management on an FCO Chevening Scholarship, but hope to work with you all again one day.

Looking for dolphins and whales

This past austral summer, in late-February and March 2014, Falklands Conservation conducted the first dedicated cetacean survey in the inshore waters of the Falkland Islands. Grant Munro describes the aims and results.

The primary objective of the Darwin Challenge funded project was to establish basic survey parameters on whale and dolphin occurrence rates rather than provide absolute population estimates. The need for an inshore cetacean survey has previously been identified, but the ability to progress a project and fill baseline data gaps have been hampered by the lack of basic statistical data to define an appropriate scale and resolution for a wider project. The pilot survey has now provided the first basic parameters on cetacean occurrence and sighting distances that can be fed into design algorithms to ensure that any future survey is statistically robust and can provide accurate population estimates.

The 10-day pilot survey conducted between 25 February–7 March 2014 on board the local vessel *Condor* surveyed a range of coastal habitats between Carcass Island in the west, down through Falkland Sound to Bleaker Island in the east – a total distance of almost 700 km of survey effort. The seven volunteers on the survey completed an average of 9.5 hours of survey effort each day.

A total of 414 Commerson's dolphins (110 encounters), 147 Peale's dolphins (43 encounters) and 77 sei whales (47 encounters) were observed.

In addition to providing basic data on encounter rate, variation and survey strip widths, the results have highlighted some interesting patterns in distribution. The suspected pattern of Commerson's dolphin in enclosed inshore waters and Peale's dolphin in more exposed near-shore waters was followed; however, areas of high occurrence, areas of species overlap with co-occurrence, and some more puzzling unexpected 'anomalies' were observed which will all make further research and study more exciting. The high occurrence of Commerson's dolphins in the more open waters between Pebble and the north of Falkland Sound was not fully expected, nor was their absence from the sheltered bays and kelp banks of Bay of Harbours, East Falkland.

The high incidence and widespread distribution of sei whales during the survey was of particular interest. This Endangered species is at greater

TOP **Observations took place from the roof of the *Condor's* pilot house, as the highest point of the boat. Observers rotated every half hour and Sonja Heinrich enjoys her off-watch 30 minute break.** *Ben Cockwell.*

MIDDLE **Iris Thomsen recording sighting and weather data on the GPS linked computer.** *Iris Thomsen.*

BOTTOM **Sei whale sighting in Grantham Sound with the Sussex Mountains in the background.** *Iris Thomsen.*

FACING PAGE **Whilst spectacular to watch, the bow-riding behaviour and attraction to the vessel of Peale's dolphin make density and population estimates difficult and can overestimate numbers if not corrected for. This correction factor will have to be incorporated into a larger programme.** *Sarah Crofts.*

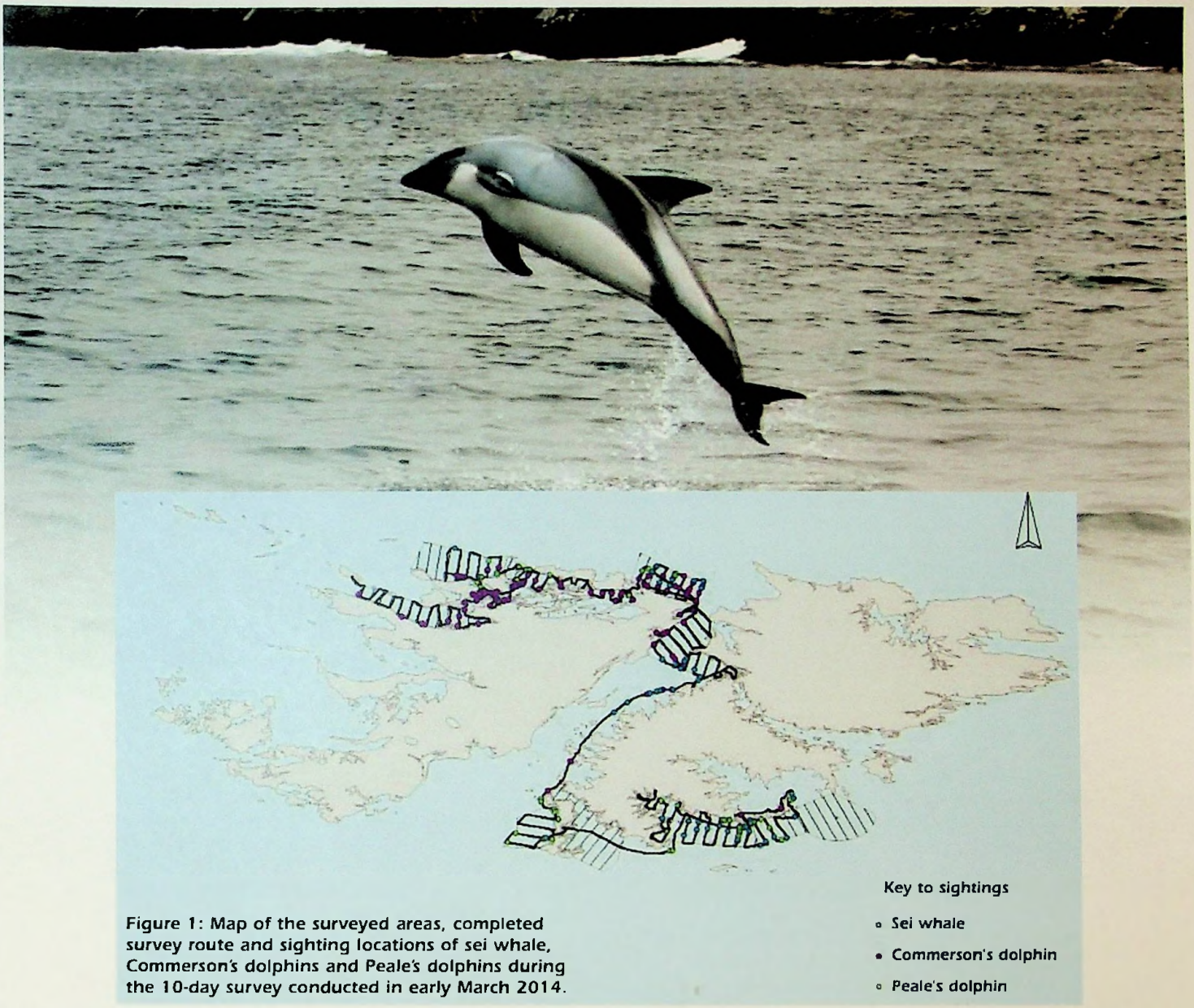


Figure 1: Map of the surveyed areas, completed survey route and sighting locations of sei whale, Commerson's dolphins and Peale's dolphins during the 10-day survey conducted in early March 2014.

conservation risk than any of the seabird or pinniped species that breed within the Falklands, and yet its biology and movements within the South Atlantic are poorly understood. At-sea surveys have shown a summer occurrence in offshore Falkland waters, whilst anecdotal coastal sightings have suggest increasing numbers in inshore waters in the late summer. However, in the past, sightings have been limited to where people are there to see them and the number of animals involved is uncertain.

The current survey conducted over a short period showed that sei whales were widespread around the Islands, from north of Saunders all the way through Falkland Sound to the eastern bays of East Falkland. In addition to alongshore sightings, the species occurred in some very shallow waters adjacent to kelp beds in Falkland Sound, the entrance to Speedwell Pass and even inshore of the Fanny Islands in Bay of Harbours. The overall numbers and the milling non-directional behaviour of some groups suggest the seasonal importance of the inshore waters of the Falklands for this poorly studied species.

The results of the survey have allowed a scaled-up island-wide survey to be designed, and it is estimated that 42 days of survey effort would be required to obtain a population estimate with an approximate equivalence of 90% confidence.

These results and design will now be used to develop a wider Falklands cetacean project over the coming year so that funding can be sought. It is hoped that in the future it will be possible to report further findings.

Acknowledgements

Thanks are given to Michael and Jeanette Clarke on the *Condor*, Iris Thomsen and Dr Sonja Heinrich from Saint Andrews University, the Darwin Challenge Fund, and to all the local volunteers who assisted and, with fixed focal stare, climbed up onto the wheelhouse roof in sometimes cold and inclement weather.

NOTICEBOARD

Since the last issue of the magazine, there have been a number of changes to the team in the Islands. We would like to welcome the following:

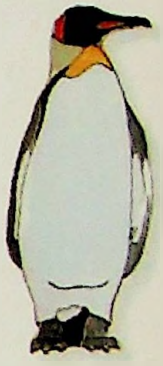
Dafydd Crabtree joined the team in May as the Lower Plants Officer. He will be leading the Darwin Plus-funded 'Lower plants inventory and conservation in the Falkland Islands' project. The main aims of the project are to create an updated list and database of the mosses, liverworts and lichens of the Falkland Islands. Dafydd has spent many months collecting data and surveying in some of the most remote areas of the UK and also overseas. A knowledge of bryophytes has been an essential constituent of other surveys he has conducted, for example recording habitat types using the National Vegetation Classification system (NVC). He has worked for the Bardsey Island Trust, as a field surveyor on the Native Woodland Survey of Scotland, carried out biomass experiments for Forest Research and training potential surveyors to survey standards.

Vicky Collier started as our new Administrative Assistant on 1 September 2014. Vicky is a former member of the Watch Group who went away to complete her further education before returning the Islands.

Liz Milston moved to the Islands in October 2013 having studied Environmental Science at University. She joined FC as Administrative Assistant in May this year and was promoted to Community Engagement Manager on 1 September. This new position includes the Watch Group, publicity, marketing and promoting community involvement.

Dr Stuart Smith is the most recent recruit. He joined in July as the Habitat Restoration Project Officer and will be managing the Darwin Plus-funded project 'Building capacity for habitat restoration in the Falkland Islands'. With a strong research background in studying grazed systems and awareness of many of the environmental issues associated with such management in temperate and shrubland systems in the UK, Stuart has worked in many remote mountainous regions of the UK. He has worked with the Unit of Comparative Plant Ecology and also the Department of Animal and Plant Sciences. Most recently, Stuart was at the Institute of Biological and Environmental Sciences at the University of Aberdeen.

New pin badge



A new-design king penguin pin badge is the latest addition to our range. It is available from our Jubilee Villas office in Stanley, our webshop and from the UK office (addresses on page 2).

Working with the business community

We would like to thank our Corporate Supporters: Pebble Island Lodge, Sea Lion Island Ltd, International Tours and Travel Ltd, South American Atlantic Service Ltd, Premier Oil Exploration and Production Ltd, Trant Construction Ltd, and also the following Corporate Members: Consolidated Fisheries Ltd, Morrison (Falklands) Ltd, Van Wijngaarden Marine Services, Noble Energy Inc, British International, PolarQuest.

Please contact Liz Milston at community@conservation.org.fk if your company is interested in supporting our work in this way.

AGM notification

This year's Annual General Meeting and Members' Evening will be held at 6.30 pm on Tuesday 18 November at the Union Jack Club, Waterloo, London. After the formal business of the AGM, there will be presentations by Becky Ingham and Dr Colin Clubbe. We hope to see you there.

New team members (left to right): Liz Milston, Vicky Collier, Dr Stuart Smith and Dafydd Crabtree.

Falklands Conservation Review of the Year 2013-14

(July 2013–June 2014)

Our 2013–14 work programme, underpinned by the 2010–19 Strategic Plan, encompasses Conservation and Research; Protected Areas and Policy Advocacy; Education and Outreach; and Capacity Building. The work we do reflects our mission to engage and empower the people of the Falkland Islands to take action with us to conserve biodiversity and manage landscapes and seascapes for the benefit of nature and people.

Our conservation operations are managed from our office at Jubilee Villas in Stanley.

FC staff update

Dr David Doxford replaced Dr James Fenton as our Chief Executive Officer in July. Dr Andrew Stanworth continued as our Conservation Officer, Sarah Crofts as Conservation Science Officer, Farrah Peck as Office Manager in the Falklands and Sarah Brennan as our UK Executive Officer. Roxanne King joined as Administrative Assistant and left in June to continue her degree course in the UK and, in May, handed over to Elizabeth Milston. John Carlin was Watch Group Coordinator until his resignation at the end of the field season.

We have also had several project staff over the year: Clare Cockwell, Protected Areas Strategy Officer; Micky Reeves, Raptor Project Officer; Freya Gill, Assistant Biodiversity Planner; Alexandra Davey, Habitat Restoration Officer; Carol Peck, Marketing Officer; and Dafydd Crabtree joined the team in May as the Lower Plants Project Officer.

With this staff complement, together with the assistance of many dedicated volunteers both locally and overseas, we have had a successful year. We thank each and every one of them.

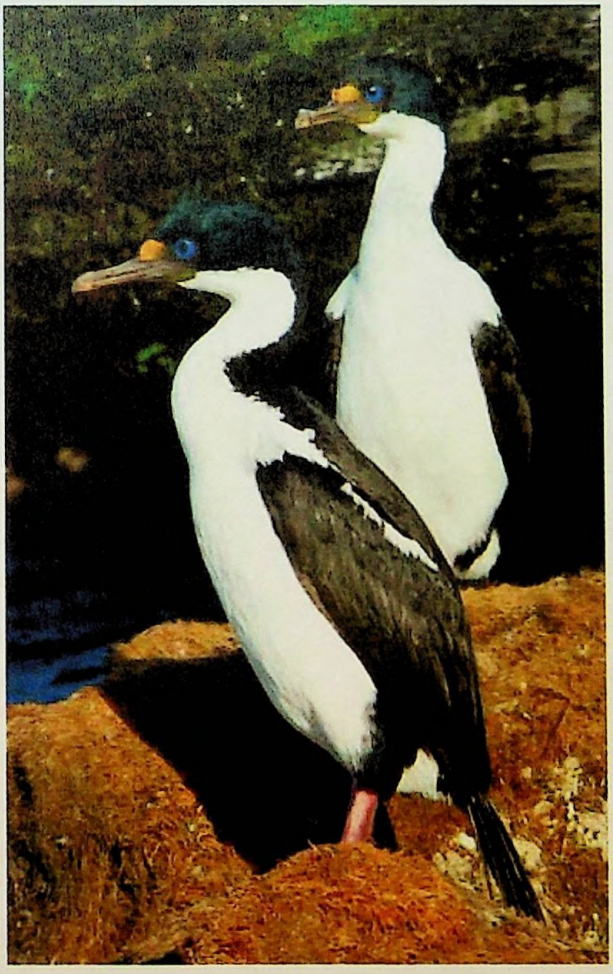
Vice Presidents: Sir David Attenborough, Julian Fitter, Robert Gibbons, Peter Harrison, Rebecca Ingham and Robin Woods.

Board of Trustees as at 30 June 2014

Henry Robinson (Chairman), Mandy Shepherd (Vice Chair), Darren Christie (FI Chairman – resigned May 2014), Roger Spink (FI Vice Chair), Tym Marsh (Hon Treasurer), Keith Biles (FI Hon Treasurer), Sally Blake, Paul Brewin, Tim Carr, Jan Cheek, Colin Clubbe, John Croxall, Michael Evans, Bill Featherstone (resigned Nov 2013), Edward Maltby, Steve Massam, Carol Miller, Ian Moncrieff, David Spivack and Louise Taylor.

Here are some of the year's highlights:

The Annual Seabird Monitoring Programme
The Annual Seabird Monitoring Programme, supported by the Falkland Islands Government's (FIG) Environmental Studies Budget (ESB), continued into its 25th year. This is a survey of rockhopper, gentoo and king penguin populations, together with black-browed albatross and southern giant petrel; its long run of data is proving invaluable for assessing long-term trends. This year has seen considerable regional variability in both breeding pair numbers and breeding success. However, there remains an apparent upward trend in breeding pairs for all monitored species.



The Black-browed Albatross Demographic Study
The Black-browed Albatross Demographic Study, again supported by the ESB, continued for an eighth year on Steeple Jason. Adult birds and chicks within the study site were ringed, and the information will be useful in the long term in assessing the survival of individual birds.

Tracking cormorants
In summer 2013–14, a small project was undertaken to investigate the two species of Falkland shags (imperial and rock) by deploying GPS trackers and dive loggers on breeding birds at two island locations: FC-owned Middle Island and WCS-owned Steeple Jason. The data reveal how shags utilise their inshore environment and will help contribute to the management of potential inshore developments. The project is funded by The Seabird Group (UK) and FIG ESB with assistance from British Antarctic Survey.

The Falkland Islands Raptors Project
This project, funded by the Darwin Initiative, aims to provide a scientific basis for government policy regarding the management of conflicts between raptors and rural livelihoods in the Falkland Islands, particularly sheep farming.

The project has completed its second year. Fitting GPS units to striated caracaras has been achieved after a few problems getting the units to stay on the birds. A population census of the north-west islands was carried out on striated caracaras, along with continued banding.

Interviews with stakeholders continue and this work is expected to be complete in the next couple of months, once the answers from questionnaires on farming and raptor interactions in the Falklands have been analysed.

Falkland Islands Protected Areas Strategy – Cooperative Management of Biological Diversity
This OTEP-funded project is now into its third and final year and, on behalf of FIG, aims to provide a framework for building a comprehensive network of terrestrial protected areas.

We signed a Memorandum of Understanding (MoU) with the Falkland Islands Development Corporation to undertake the practical management of Sea Lion Island Nature Reserve.

Biodiversity Action Planning in the Falkland Islands
Biodiversity Action Planning in the Falkland Islands is a two-year Darwin-funded project in partnership with FIG and the Royal Botanic Gardens, Kew. Its purpose is to review the current management system for delivering biodiversity action in the Falkland Islands and devise an effective means of prioritising action and allocating resource. In its first year, following the completion of a review of Falkland Islands Action Planning, the project has held workshops in the Falklands and Ascension, where the project shared the review findings and expertise, and engaged stakeholders in guiding the project forward.

Inshore Cetaceans of the Falkland Islands
In late February and March 2014, we conducted the first dedicated cetacean survey in the inshore waters of the Falkland Islands, through funding provided by the Darwin Challenge Fund.

The primary objective of this project was to establish basic survey parameters on whale and dolphin occurrence rates rather than provide absolute population estimates. Peale's and Commerson's dolphins, as well as sei whales, were included in the survey.

Wildlife Rehabilitation Centre
The team successfully cared for and released a number of oiled penguins over the year. Our rehabilitation centre is still a work-in-progress, but the pool has already proved invaluable for the recovering penguins.

Marine Debris
The first Island-wide quantitative survey of marine debris at the Falklands was started in the 2013–14 summer with 122 beaches surveyed or 33 km of coastline across the archipelago, including many of the offshore islands. The surveys will be completed this upcoming summer with a focus on East and West mainland, whilst also providing opportunities for FC volunteers and members to get out and about with FC. The project is part-funded by FIG ESB.

Marketing
With funding from the RSPB, we started a project looking at activities to help raise our public profile in the Islands and beyond and to increase unrestricted income.

Watch Group
Our efforts to build appreciation and understanding of wildlife and conservation continued through the work of our Watch Group. We also started to raise funds to build an environmental education centre in Stanley.

Future plans for 2014–15

Drawing upon our Strategic Plan 2010-19, the Trustees have approved an ambitious workplan for the coming year under the direction of a new Chief Executive Officer, who will be joining the team in the new year. We will continue with the activities and projects outlined above as well as two new Darwin Plus-funded projects on lower plants and habitat restoration. We will also continue to provide independent, science-based scrutiny of large-scale development proposals, with a special focus on the oil and gas sector. Other activities include conservation management work on Sea Lion Island, arranging member and volunteer events, maintaining the National Herbarium, responding to wildlife emergencies, and providing technical advice to the Marine Spatial Planning project led by the South Atlantic Environmental Research Institute (SAERI). We will continue to fundraise for our new environmental education building at the heart of the community and aim to complete the fitting-out of the wildlife rehabilitation facility. As in previous years, we will be represented on the Environment Committee, Environmental Mainstreaming Group, Fisheries By-catch Committee, Offshore Hydrocarbons Environmental Forum and the SAERI Board.

FACING PAGE **GPS trackers and dive loggers were used on imperial shags to find out how they use their inshore environment.**

RIGHT **Freya Gill cleaning an oiled king penguin found at Surf Bay. This process is repeated daily until the bird is able to begin preening to re-waterpoof its feathers, which can take several weeks.**

Our thanks and acknowledgements – we could not have achieved so much without you!

Major supporters of our work (in terms of funds, help or advice, often all three) in the past year were the Falkland Islands Government, UK Government's Overseas Territories Environment Programme, the UK's Department for Environment, Food and Rural Affairs, including their Darwin Initiative, Darwin Challenge Fund and Darwin Plus programmes, the RSPB, the Royal Botanic Gardens – Kew, Wildlife Conservation Society, BirdLife International, Royal Zoological Society of Scotland, Hawk Mountain Sanctuary, Boise State University, the British Antarctic Survey, Oxford University, National Museum Wales, Sea Mammal Research Unit, Detroit Zoological Society, People's Trust for Endangered Species, The Seabird Group, Nelson Mandela Metropolitan University, The H.B. Allen Charitable Trust, A.S. Butler Charitable Trust, Polar Cruises, Sea Life London Aquarium, Dingle Oceanworld Aquarium, Cotswold Wildlife Park and Gardens, Thrigby Hall Wildlife Gardens, Standard Chartered Bank, Malvina House Hotel, Falkland Islands Holidays, Stanley Growers, the John Cheek Trust, Beaver Island LandCare, and Falkland Islands Community School.

For the Charity Ball we would like to thank our major sponsor, Consolidated Fisheries Ltd, and other sponsors, Morrisons Falklands Ltd, Arch Henderson, Premier Oil and SAAS; One Ocean Expeditions, UK Hydrographic Office, Malvina House Hotel, Government House, Noble Energy, FIGAS, SMSG and local tourism providers and artists for contributions to auction prizes; the Waterfront Hotel, Harris Building Services and BFSAI for spot prizes; and Seafish Chandlery, Falkland Islands Company, Bitter Sweet and South Atlantic Trading and many individuals for their donations to this successful event.

Of course, none of our work would be possible without our Members, who support our important conservation work with generous donations, thoughtful ideas, advice, and their belief in the work we undertake. We wish to thank you all, including our many penguin adopters.

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Registered office: 14 East Hatley, Sandy, Bedfordshire SG19 3JA, UK.

Photo credits: COVER: Main picture – *Roo Campbell*, Insets left to right – *Jonathan Handley, Shallow Marine Surveys Group, Keith Warmington*. CENTRE PAGES: Imperial shag – *Ruedi Abbühl*, Oiled king penguin – *Andrew Stanworth*. BACK: *James Fenton*.

@FI_Conservation

For more information please visit our website

www.falklandsconservation.com

Find us on Facebook

Terrestrial environments of the Falklands in a changing climate

Dr Rebecca Upson updates us on progress of the EU BEST-funded project.

Climate predictions for the Falkland Islands

The first phase of our project has allowed us to facilitate climate change predictions to be made by the team, led by Professor Phil Jones, at University of East Anglia (UEA). We presented the results in the Falkland Islands for the first time in May 2014. Further analysis of local weather station records have concluded that the mean annual temperature of the Falklands has increased by 0·5°C over the past 100 years. This may seem a fairly small increase but, to set this temperature rise in context, UEA is predicting that over the next century the temperature is likely to increase at six times that rate: UEA predicts an increase in the mean annual temperature of 3°C by 2100. These increases are real and significant. In contrast, no significant trend in annual rainfall was seen over the last 100 years and no change is predicted by 2100. However, it is worth noting that rainfall is more difficult to model than temperature and, unfortunately, no insights into the seasonality of rainfall were possible.

How could climate change affect native and invasive plant diversity?

One key aspect of our research has been to use data of plant distributions across the Falkland Islands to investigate how the flora is likely to respond to climate change. We have been using the environmental data we have for species' current locations to investigate what their distributions are likely to be under future climate scenarios. We are finding that some groups of plants, such as specialist upland species, are likely to be particularly vulnerable to the predicted climatic changes. Others, such as some species currently restricted or more prevalent in the west of the Islands, are likely to benefit from climate change. Other species are responding in unpredicted ways.

Overall, we can be sure that the composition of our plant communities will change. What is less clear is exactly what they will change to, in part owing to the lack of knowledge about the physiological tolerances and other aspects of the biology of the species in question.

These results point to the need to take a precautionary approach and maintain as much plant diversity as possible in order to give us the best 'insurance policy'. To make sure, for example, that within our pastures we have maintained populations of species that are best able to benefit from or cope with the environmental changes we face. In other words, it is sensible to build as much resilience into our natural habitats as possible to give them the best chance to thrive. The ability of pastures to cope under warmer climates will be very much associated with the maintenance of favourable levels of all other resources needed by plants, including water. So our research is also investigating the likely impacts of warmer temperatures on soil moisture content in the Falkland Islands.

Upland habitats, as seen in the background of this photograph, are likely to be extremely vulnerable to the predicted warming. *Roo Campbell.*

The likely impact of warmer temperatures on soil water availability

Our research shows that a 3°C increase in air temperature would increase evaporation of water from the soil and loss of water through plants. Given this predicted temperature increase, more rain would be needed to re-wet the soil: our best estimates suggest that 113 mm of rainfall rather than 75 mm would be needed each growing season to bring the soil moisture content back to field capacity. With no predicted change in rainfall, this would effectively increase the moisture deficit period (the period when water loss from evaporation and through plants is greater than the water coming in as rain). The moisture deficit period currently occurs between 7 October through to 12 March, whereas in a warmer climate it would run from about 28 September to 22 March.

Responding to these moisture predictions is crucial, as with the temperature predictions, to ensure that pastures are as resilient as possible to water stress. Increasing the water-carrying capacity of soils through, for example, enabling adequate root systems to develop is just one way positive action can be taken.

Climate change workshops

In May of this year we visited the Islands to run a seminar and workshop around the theme of climate change and its potential impacts on the vegetation and soils of the Falkland Islands.

We would like to thank those of you who responded to the call for participants and contributed – your input was invaluable. Workshop sessions began with a discussion of climate change impacts that have been identified as a potential issue for the Falkland Islands. We asked participants to score each potential impact based on the level of species and habitat loss predicted. In addition, the perceived urgency was also assessed for each of these impacts.

The priority potential climate change impacts to be further investigated were identified as:

- Drier soils
- Increased soil erosion
- Changes in invasive plants
- Changes in the ranges of different plants
- Agricultural intensification
- Habitat disturbance by extreme events (eg increased storminess, increased fires).

It is clear that soil health is a key concern within the Falkland Islands and it was definitely a unanimous concern during the workshop discussions. Apparently 3-6 inches of soil are lost annually in some areas of the Falkland Islands already; worryingly, a longer period of soil moisture deficit has the potential to increase this soil loss. High-intensity weather events are also likely to become more frequent, which would put added pressures on the land especially where areas are sparsely vegetated or eroded.

This map shows areas of the Falkland Islands which are currently predicted to be suitable for the endemic sub-shrub *Nassauvia falklandica* and the reduced area predicted to be suitable in 2080, when the mean annual temperature is predicted to increase by 3°C.

The climate change workshop organisers (Rebecca Upson, Jim McAdam, Colin Clubbe, David Doxford and Nick Rendell) with some of the participants. Sadly, we didn't manage to catch everyone on camera!

Next steps

Alongside continuing the research mentioned here, we will be moving forward with the project by, where possible, considering the level of risk associated with each priority impact identified during the workshop. We will be using all available evidence, including expert opinion, to assess the likelihood of each impact occurring and the probable magnitude of its effect. We will then review this risk assessment with the Falkland Islands Government and identify policies to mitigate against the highest risk impacts in the short, medium and long term.

Please contact Rebecca Upson (R.Upson@kew.org) or Jim McAdam (Jim.McAdam@afbini.gov.uk) for further information about the project or to add your views.

Only currently known from the west of the Falklands archipelago, the fern *Blechnum cordatum*, shown here between stands of the more widespread *Blechnum magellanicum*, is predicted to be one of the species likely to expand its range under a warmer climate in the Falkland Islands. *Alastair Wilson.*

Highlights of rare and vagrant bird sightings in the Falklands

It is not just cruise ship tourists who sometimes seem a bit lost in the Falkland Islands. Every year we receive many windblown avian visitors. Sharp-eyed birdwatchers document these strangers and provide a list to Mike Morrison. Here are just some of the visitors and where they were found.

Creamy-bellied thrush *Micky Reeves*

July 2013 – June 2014

Adelie penguin
Pygoscelis adeliae

Spotted by Jeff Halliday at Pretty Banks, near Teal Inlet settlement. Adelie penguins normally make their home in the cold waters of the Antarctic Ocean.

Snares crested penguin
Eudyptes robustus

These two birds, which normally make New Zealand their home, were seen by Adam and Alison Howe at Black Point on the north coast of Elephant Beach.

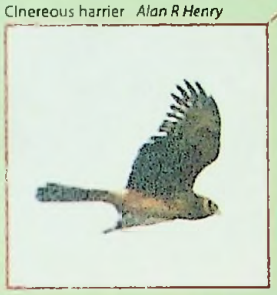
Neotropic cormorant
Phalacrocorax brasilianus

Two birds were seen on Pebble Island by Nigel Hewitt. They are a long way from their usual home of the tropical and sub-tropical waters of the Americas.

Rosy-billed pochard
Netta peposaca

The last report of this common South American species was in October 2006 but this summer brought in an influx of reports. Five birds were even seen at South Georgia. The first report of this year was by Brian and Monica May at Estancia Brook.

Cinereous harrier *Alan R Henry*



Cinereous harrier
Circus cinereus

Micky Reeves saw a single bird of this South American species at Steeple Jason.

Wilson's phalarope
Phalaropus tricolor

Andy Stanworth saw a single bird at Motley Point, Walker Creek. Breeding in the prairies of North America, this bird winters in the Southern Andes.

Chilean pigeon
Patagioenas araucana

This wayward pigeon mistook Eileen Davies's garden in Stanley for a temperate Chilean forest.

Eared dove
Zenaida auriculata

This New World tropical dove is known to be a great coloniser of new homes. Maybe it was checking out a future Falklands home. Reported by many last year, Annie Pitaluga saw the first one at Salvador.

Austral negrito
Lessonia rufa

A handsome male bird from Chile and Argentina was seen at Fanning Head, Race Point Farm by Michelle Jones.

Fork-tailed flycatcher
Tyrannus savana

Kristiane Thorsen reported an eye-catching male bird at the Market Garden in Stanley. Wandering widely, this bird breeds from Mexico to Argentina.

Bank swallow (Sand martin)
Riparia riparia

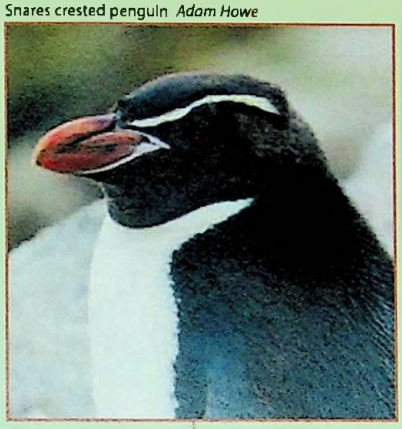
Will Miles sighted a single bird just to the east of Johnson's Harbour settlement. The species is found throughout Europe, the Americas and South Asia.

Shiny cowbird *Jim Woodward*

Creamy-bellied thrush
Turdus amaurochalinus

A single bird was seen at the house on Steeple Jason Island by Micky Reeves, Andy Stanworth and Will Miles. This is the third record of this common South American species in the Falkland Islands, all within the last four years.

Snares crested penguin *Adam Howe*

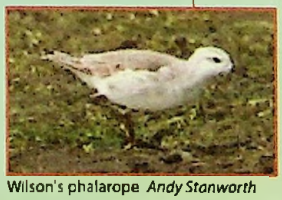


Bank swallow *Andy Swash*

Rosy-billed pochard *Martin Beaton*

Cinnamon teal *Mike Morrison*

Coscoroba swan *Mike Morrison*



Wilson's phalarope *Andy Stanworth*

Adelie penguin

Chilean pigeon *Eileen Davies*

Shiny cowbird

Molothrus bonariensis

Jim Woodward photographed this mystery bird at Little Chartres and it was later identified as this species. Like a cuckoo, it lays its eggs in the nests of other birds and its range is spreading quickly throughout the Americas.

Austral blackbird

Curaeus curaeus

Les and Jill Harris saw a single bird on Fitzroy Road in Stanley which they believe to be this species from Chile and Argentina; this would make it a first record for the Falkland Islands.

A pdf of the full list of sightings from the period can be found at **www.falklandsconservation.com**

A big thank you to everyone who takes the time to send in these reports.

25th anniversary of surveying seabirds

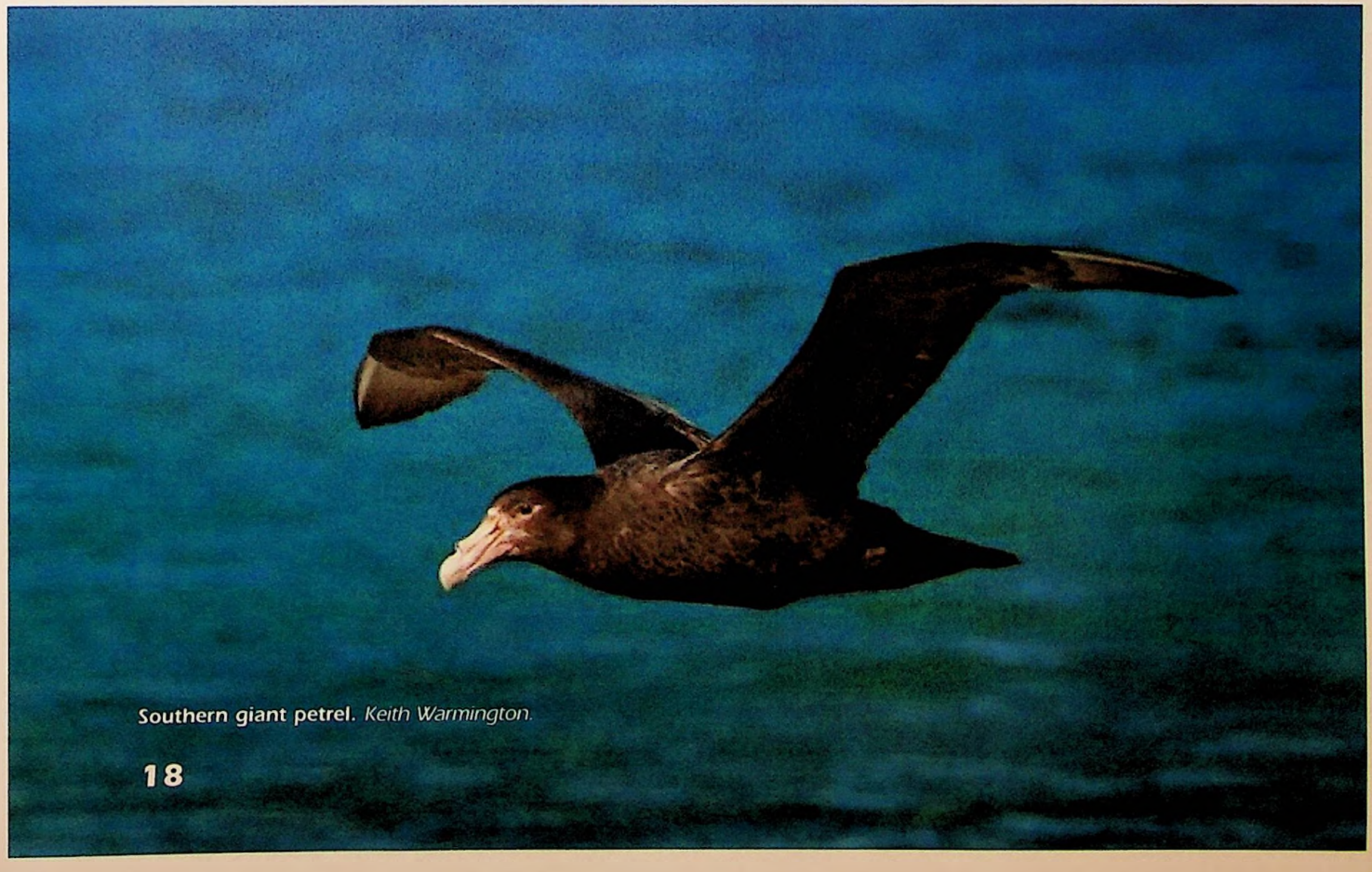
Dr Andrew Stanworth, Conservation Officer, looks back briefly over the life of the Falkland Islands Seabird Monitoring Programme.

Dr Kate R. Thompson (pictured) initiated the Falkland Islands Seabird Monitoring Programme (FISMP) that has now run almost annually for the past 25 years. The first fieldwork was carried out by Dr Thompson and D.E. Hale who visited the Falklands from 17 October 1989 to 27 March 1990. The origins and intentions of the FISMP are described in Dr Thompson's own words from the first FISMP report (pictured).

'In 1986, the Falklands Islands Foundation [FIF] commissioned a research project to investigate the potential impact of [new commercial fisheries in Falklands' waters] on the internationally significant seabird populations. The main research emphasis was placed on the investigation of the breeding season diets and foraging ecology of a representative range of seabird species (three penguins, a small petrel, a cormorant and an albatross), so that those vulnerable to direct competition with the fisheries could be identified.' 'The report recommended that a long-term seabird monitoring programme should be established in the Falklands.' 'In 1989 the FIF obtained funds to enable it to begin the task of setting up a seabird monitoring programme over a two years period.'

Dr Kate Thompson in the field, and the cover of the first report published in June 1990.

Thompson, K.R. 1990. *Report on Seabird Monitoring in the Falkland Islands* 1989/1990. Falkland Islands Foundation.

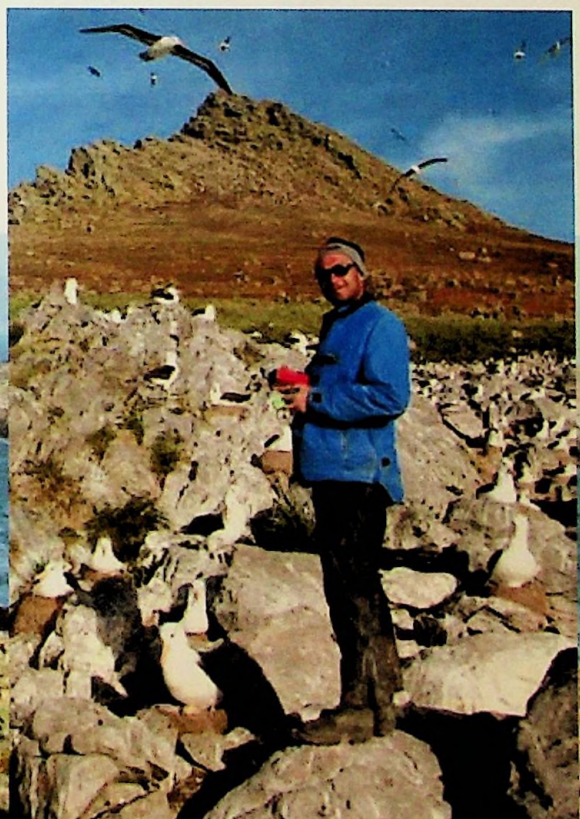


Southern giant petrel. *Keith Warmington.*

The Falkland Islands Foundation went on to become Falklands Conservation in 1991.

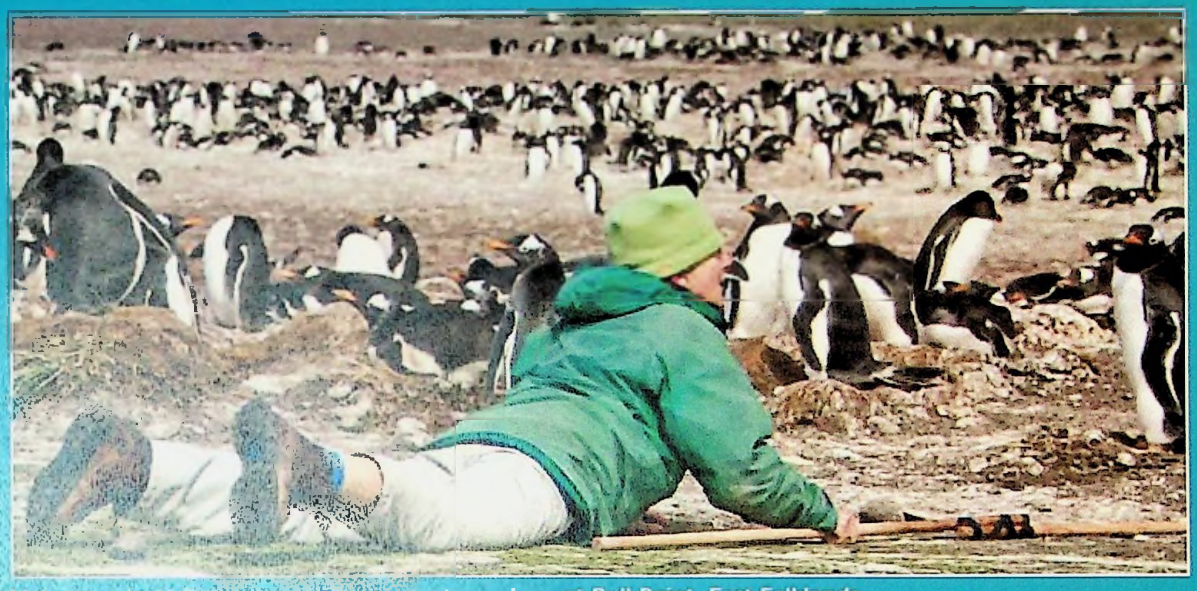
Since 1989, eight other authors (Mike Bingham 94-95; Rebecca Ingham 97-98; Nick Rendell 98; Andrea Clausen 99-2001; Nic Huin 01, 03, 04, 06, 07; Pierre Pistorius 08; Alastair Baylis 09-11; Andrew Stanworth 12-13) have led the fieldwork and produced the reports that summarise the 25 years of data that have been generated and provide valuable insight into the population trends and breeding success of seabirds in the Islands.

Much of the programme has remained unchanged over this time (further details of the FISMP methods were reported in WCFI 19). The work continues to be supported by the Falkland Islands Government, along with landowners and the contributions of hundreds of volunteers, who have given their time in the name of counting what now must amount to a few million seabirds (a summary of this year's data can be found on the back cover). Here's to the next 25 years!



These photographs show some of the authors of the Seabird Monitoring reports – CLOCKWISE FROM TOP: **Becky Ingham (right)** *Euan Dunn;* **Dr Al Baylis (centre) with Dr Anton Wolfaardt and Nick Rendell (right)** *Eileen Davies;* **Nic Huin on Steeple Jason island** *Cleo Smallwood;* **and current Conservation Officer, Dr Andrew Stanworth (right)** *Sarah Crofts.*

Seabird statistics



Volunteer Jacki Bennett [illegible] gentoo colony at Bull Point, East Falklands.

Results of the Falkland Islands Seabird Monitoring Programme for the 2013-14 season are summarised as follows:

Gentoo penguin
Estimated numbers of breeding pairs at monitored sites decreased by 13% from the previous season. Estimated breeding success was also down. Although the overall picture was one of a decline, this was in part due to some mid-east and south-east colonies showing relatively large reductions compared to other areas – interestingly coinciding with lower than usual sea surface temperatures in this region. Similar fluctuations have previously been evident in what has been an increasing population trend over the last nine years. There is currently no indication of any overall decline.

Southern rockhopper penguin
Estimated breeding numbers at monitored sites increased on those from the previous season (up 6·7%), taking it to the highest number recorded since monitoring began, and continuing a general increase over the past seven years. Mean breeding success fell from the previous season, remaining below the seasonal average.

King penguin
Estimated numbers of pre-fledged chicks were down 14·9% on the previous season. As with gentoo penguin, there is currently nothing to suggest that this was anything but natural variation in the existing general increasing trend.

Black-browed albatross
Indications from the monitoring sites at Steeple Jason were of stable to increasing numbers at the largest breeding colony of this species. Breeding success at Steeple Jason remains relatively high compared to historical data.

Southern giant petrel
There is a general upward trend in estimated breeding pairs at monitored sites, though there was no significant change compared with last year's figures this season. This coincides with a steady downward trend in estimated breeding success over the same period.

FALKLANDS CONSERVATION

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Falkland Islands WILDLIFE CONSERVATION

Issue 22 • July 2015

Habitat Restoration

Lower Plants Survey

Local Champions for Nature

Monitoring Falklands Seabirds

FALKLANDS CONSERVATION

Falkland Islands WILDLIFE CONSERVATION

Issue 22 • July 2015

Partnering with the local and international community to conserve the Falkland Islands natural environment

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www.falklandsconservation.com

Cover photo: National flower of the Falkland Islands, Pale Maiden, Alistair Wilson

editorial

What sort of people inspire you? For me, it is people who are willing to go that extra mile for something they care about, to stick their neck out, however difficult that might be for them.

Here at FC we are constantly experiencing examples of people sticking their neck out for the natural world. Doing things that probably no one would even be aware of, such as giving talks to local schools about nature, taking children to visit some of the natural gems of the islands, coming to tend the FC wildlife garden, washing a penguin, managing the FC herbarium, or doing a few hours in the office as a volunteer.

Or out in camp, trying out different techniques to give the natural world the best chance, leaving an area ungrazed and seeing what grows or replanting native species.

Within industry, coming together to discuss ways to reduce waste, manage the environmental effects of their work or engage on being trustees of environmental organisations.

In government, instigating Earth Day activities, pushing forward difficult environmental legislation or looking for ways to improve the island plan.

To reflect all these people, we are starting a feature on local champions for nature. Whether they be landowners, government workers or industry players.

Nature is something we can all get behind. It is in our interests and it has an influence on our lives every day. But there are very different reasons behind why we decide to do something to help conserve it. We want to try and understand what those different reasons are.

In this edition we are featuring the work of two people, who manage their own land or carry out work for others, for the pure pleasure of giving nature a chance.

One of them is collecting her medal from the Queen as this goes to print. The other was made an Honory FC life member for his contribution to the natural world (we just need to find some royalty to present it now!). Read about their hopes for nature on page 6-7. We look forward to featuring more of you in coming editions, so please do let us know if you want to nominate anyone. We look forward to reading all about the big or small things people do for the natural world.

Esther Bertram

Chief Executive Officer

An Island-Wide Restoration Trial Using Native Seeds

Stuart Smith Habitat Restoration Officer

Bare clay patch visible from a FIGAS flight

Anyone who has taken a FIGAS flight over the Falkland Islands will surely have noticed plenty of areas of bare clay, peat and sand scattered across the landscape. These patches have often been there for several decades, and the loss of vegetation, whether through burning or grazing, has exposed the soil to wind and rain erosion.

Native seed mixture for the Falkland Islands

[illegible] mixture was comprised [illegible] species including [illegible] one species. [illegible] included:

[illegible]osia flexuosa (Wavy-hair grass)
[illegible] magellanicus (Feugian couch [illegible])
Festuca [illegible]acta (Land tussac)
Festuca magellanica (Magellanic fescue)
Hierochloe redolens (Cinnamon grass)
Poa alopecurus (Bluegrass – both peat and sand ecotypes)
Poa flabellata (Tussac)
Trisetum phleoides (Native fog)

Rush, Sedge and Woodrush
Juncus scheuchzeriodes (Native rush)
Carex fuscula (Dusky sedge)
Luzula alopecurus (Native woodrush)

Forbs
Acaena magellanica (Prickly-burr)
Gunnera magellancia (Pigvine)
Leptinella scariosa (Buttonweed)

While there have been lots of individual efforts to restore eroded land, we currently lack a more comprehensive and effective approach to re-vegetate soil on the Islands. Natural colonisation following the exclusion of domesticated and wild grazers, such as sheep, cattle and hares, may take several decades, while planting Tussac (Poa flabellata) tillers is only effective on peat. What is more, commercially available grass mixtures are not only inconsistent colonisers but they are all non-natives, thus contributing further to problems with invasive plant species across the Falklands.

Building on a pilot study conducted on the Islands in 2013, I am currently running a two year Darwin Plus funded project that investigates the effectiveness of sowing native seeds to re-vegetate eroded and degraded soil across the Falklands. Throughout the summer of 2014, a dedicated group of volunteers and I established a series of native seed restoration trial sites across East Falkland. So, there we were, standing in claggy bare clay, rakes and seed packets ready, at the Frying Pan on Fitzroy Farm on East Falklands on Christmas Eve to finish the last site of the island-wide restoration trial.

Working on a clay eroded patch on Christmas Eve was no coincidence or desperate effort. Rather, from a restoration perspective, it was the result of a success story. From the pilot study we found that a native seed mixture could colonise the harshest soil type found on the Islands, namely bare clay. We had designed a native seed mixture that contained good colonisers, but also high quality fodder species (see Box left for a species list). We then sowed the seeds and applied a number of supportive treatments that were intended to be low-cost but effective. A year later we had promising results with 69% plant cover on the most effective treatment. However, it was questionable whether our success was a lucky one-off, so we wanted to investigate this re-vegetation approach more thoroughly across different soil types. In 2014, we were awarded the Darwin Plus project funding that enabled us to establish an island-wide restoration trial.

For the wider experimental trial, we selected 14 sites across East Falkland. The sites differed in exposed soil type, including clay, peat and sand. The selected sites were on three farms (Fitzroy, Goose Green and Saladero) as well as the conservation area of Cape Pembroke near Stanley. Areas intended for re-vegetation were fenced-off to exclude sheep, cattle and hare grazing – unfortunately upland geese could not be excluded!

We used a split plot design where experiment trial sites at each location are paired by eroded soil type. For example, we have two sites on bare clay at Saladero farm and these together have the full suite of treatments. We

PHOTO: © STUART SMITH

PHOTO: © STUART SMITH

Re-vegetation success a year after sowing native seeds and sheep dung and dag on bare clay at the Fitzroy pilot study established in 2013.

used successful treatments from pilot studies, including sheep dung, dags (woolly off-cuts from sheep), coir matting (made from coconut husk fibers) and a combination of these. Each site has 8 plots measuring 2 m × 2 m and include four treatment plots, two control plots (no seed and treatment control) and two plots intended to be harvested to give an indication of plant productivity. All the plots were raked twice to a depth of approx. 3 cm, first in the direction of the prevailing wind and then perpendicularly to the wind direction. Large rocks (>10 cm) were removed by hand. In fact, all our restoration efforts were done by hand, which was only possible with help from our diligent volunteers.

In December 2014, the seed mixture was sown at a rate of 10.32 g seed per plot (or 2.6 g m-1). This included approximately 400 seeds of each species per plot. After the seeds were sown, treatments were applied (sheep dung, dags and a combination of dung and dags) on top, with the final covering being coir geotextile. These treatments were designed to provide nutrients for emerging plants and also buffer seedlings against strong winds.

Since establishing the trial sites, plots have been monitored monthly for soil moisture, soil temperature and ground surface wind-speed. In March 2015, we undertook a plant survey to provide an estimate of total plant cover across different treatments and soil types. Our preliminary results looked promising with the most effective treatment being sowing native seeds in combination with sheep dung, dags and geotextile, which increased plant cover on average by 7.9% across soil types over three months. Thus far, soil type has had little influence on plant cover; however, plant canopy cover was negatively correlated with soil temperature range (maximum minus minimum). Plant canopy cover has been greater for plots with a lower soil temperature range suggesting that effective treatments create a stable microclimate for plants to germinate and establish.

In December 2015 we will be conducting a survey that measures plant species canopy cover. This will help to identify species that have been good general colonisers as well as species that establish on specific soil types or only with certain treatments. To supplement this work, we have also recently been awarded a Shackleton Scholarship Fund to determine the effect that re-vegetation has on soil carbon storage. As part of both the Darwin Plus and Shackleton Fund we aim to determine whether re-vegetation using native seeds can increase peat/humose topsoil as well as abating further soil erosion. We hope that the island-wide restoration trial will identify a low-cost but effective approach using native seeds that can be used by farmers and landowners to address the problem of soil erosion on the Falkland Islands.

Falklands Conservation would like to thank all the volunteers that helped collect seeds and establish restoration trial sites, particularly: Susanna Karlsson, Phil Robinson and Louise Taylor. We thank Brian Aldridge for erecting all the fencing. We have greatly appreciated all the support from landowners and farm managers directly involved in the project and supplying us with our treatments. The project is also a collaborative effort with help and guidance from Rebecca Upson and Alicky Davey at Kew, staff at the Millennium Seed Bank Kew and Brian Bond (independent statistician). Stuart is funded by Darwin Plus project (DPLUS023).

An experiment trial site on shallow bare peat on Teal ridge, Goose Green Farm set up in December 2014.

Community Environmental Education Centre – an update

FALKLANDS CONSERVATION strives to be an organisation that works in partnership with the local community for the benefit of the natural environment. As you know we have been fundraising to develop a physical centre, which will be able to house WATCH group activities, other community events focussing on the natural environment and, showcase the uniqueness of the Falklands natural environment and all those putting their efforts into managing it, as well as to house FC's offices.

Plans have developed since we last provided an update, on how best to achieve this goal. So, for those of you who have very kindly donated much needed finance to this project – here is where we have got to.

The centre was planned to be positioned in the sheds at the back of Jubilee Villas and the Villas were to be joined together to create space. Following long discussions and planning, it was decided that this construction would prove too difficult to allow the centre and offices to both work effectively. It was therefore concluded that a better space for this centre would be the new Dockyard site, behind the museum. We were delighted to be able to be part of a joint bid for this site, with the Falkland Islands Museum and National Trust (another charity), who are looking to expand their premises.

We are very pleased to announce that recently FIG Executive Council (Exco) have approved the museum and FC as preferred organisations to build the centre and the separate museum expansion building, on the site.

However, until the lease and various other details have been approved by Exco, we cannot go full steam ahead, but we have our fingers firmly crossed that in our next publication, we will be able to give you good news and that work can get underway on the building.

In the meantime, we would like to take this opportunity to thank once again, our existing sponsors to this project

PHOTO © ARCH HENDERSON

Falklands Conservation new proposed site at the Dockyard

for their very generous donations, and for their patience in seeing this centre come into being. And many other individuals that have made generous donations under £1000.

If any readers would like to make a donation to this building, please don't hesitate to get in touch with us! (Contact email community@conservation.org.fk)

For now we would like to thank all of you, once again, for sharing our vision for this new centre, and for your ongoing support of FC.

Thank you to our sponsors:

Standard Chartered Bank (£12,030)
Premier Oil (£5,000)
Noble (£5,000)
JK Marine (£5,000)

Proposed site plan Dockyard

Local Champions for Nature

by Liz Milston

As mentioned in Esther's editorial, Falklands Conservation have introduced a feature on local champions for nature. These first interviews are from Ben Berntsen and Sally Poncet.

Ben owns Elephant Beach Farm, an 8400 hectare farm in the north of East Falkland, with 3.500 fine wool Dohne Merino sheep, and 40 beef cattle. Along with a rotational grazing system, Elephant Beach Farm initiated their tussac plantation project at 'Rustling Grass' plantation in 2005. Falklands Conservation volunteers have been assisting Ben to extend the tussac plantations as a winter event each year. This year it is the 10th Anniversary of the tussac planting trips, with Falklands Conservation awarding Ben with an honorary life membership to acknowledge his dedication restoring the tussac habitat in the Falklands.

Sally Poncet has been involved in environmental research in the Falklands, South Georgia and the Antarctic for over 30 years, with a special interest in seabird and habitat conservation, and rat eradication programmes. She is a joint owner of Beaver Island, a 4856 hectare farm which lies west off Weddell Island and south of New Island, off West Falkland. Among her many achievements, Sally was recently awarded the Polar Medal, a prestigious prize awarded to UK citizens for conspicuous contributions to the knowledge of Polar Regions.

BEN

Why do you think sustainable farming is important?

As the world population grows, and our own population grows, we all need to eat, and it is my belief that long-term sustainable farming will provide a good quantity of this food.

What measures / methods do you use to ensure sustainability?

I am actively trying to re-establish the natural tussac grass back to my coastline, and also Cape Dolphin coastline since taking on management, along with this comes the natural re-appearance of other native highly nutritional plants that have been grazed away over the years, the other part is fencing the land into smaller camps which allows me to move the animals on a regular basis, high concentration for short periods followed by good rest periods, this means the animals are depositing their natural fertilisers in a smaller concentrated area tramping it in, and

after the spell period nice new nutritional growth returns.

What inspires you to take these measures?

Since taking up the grazing rotation with the inspiration of Riki Evans nearly a decade ago, it is the changes in the land, behaviour and performance of the stock, along with increasing wild-life presence, and just a natural love for our environment.

What positives have you seen from your sustainable farming methods?

Most importantly I would say, the [illegible] and the diversity of natural [illegible] plant species along with the [illegible] of soil erosion, good animal [illegible] from a natural grazing [illegible] stress free management as [illegible] no longer feral and scared

What would you like to see?

The number one thing I would like to see is, tussac grass being replanted on a massive scale, all Falkland fresh produce being produced under natural conditions, millions of penguins, sea lions and other wildlife living in harmony and aiding farming/tourism businesses, in a pristine natural environment.

What challenges have you faced?

Making decisions to reduce stock numbers during very low income times, to initiate the much needed land spell period, wondering if I could keep up the mortgage repayments or afford the next months fuel bill, changing from a wool producing sheep flock to a dual purpose sheep flock to react to establishment of the abattoir, trying to keep my sanity while others thought I was going mad, making all the changes.

Is it meaningful for you to have some sort of recognition for helping the conservation effort in the Islands? (Ben has recently been awarded an honorary life membership by Falklands Conservation)

I always consider myself as a good hearted helpful person who gets pleasure from helping others, and not really expecting much more than a thank-you in return, so to have this sort of recognition for my contribution towards helping Falklands Conservation is very meaningful something I will cherish and share with my family and friends.

SALLY

What inspires you to undertake your endeavours?

Inspiration comes from the landscape, the wildlife, the sea, fresh clean air, soil and water, uncluttered horizons and being part of a community that is proud of its environment. Being fortunate enough to have all those things is an inspiration in itself, so giving something back, especially when you enjoy doing it as well - whether its gaining more knowledge via research, or practical fieldwork projects like rat eradications and tussac island surveys, or attending meetings (not always so enjoyable!), talking to people, sharing the pleasure of field trips with youngsters – is my way of contributing to activities that hopefully add value to our efforts in looking after our Islands.

What would you like to see?

Land restoration is one area I'm particularly interested in, and rat eradication has been one way of achieving this. It's an area of conservation action that produces spectacular results fast: remove the rats and the birds return, and equally important, the tussac island itself has a chance to recover. For me, these islands – the ones with tussac, bluegrass, swordgrass, wildflower meadows and no livestock, rats, cats, foxes or mice – are among our 'national treasures'. If there's one thing we're not short of, it's land: there's more than enough to go round, for people to farm and build on. Leaving these tussac islands for wildlife only is surely not that difficult a concept to understand and put into practice?

What challenges have you faced?

A lot of the projects I've been involved with have looked at trying to redress our legacy of environmental 'disasters' – eradicating rats from otherwise 'pristine' tussac islands, fencing off eroded coastal areas and planting tussac, resting land that's tired after 100 years of set-stocking. The biggest challenge in all of this is to maintain the momentum, particularly when you're not part of a larger institutional setup. Luckily for me, FIG's Environmental Planning Department and the Antarctic Research Trust have been very supportive over the years, not only with funding but also in developing projects that revolve around this notion of 'land care'. Falklands Conservation has also played a part in this, as have a handful of landowners who manage their land solely for the benefit of wildlife and the land, and also those farmers who are moving towards more sustainable pasture management practices. There's a wide range of interests and opinions there, and that's another challenge: to understand and accept the different viewpoints while working towards a common goal of caring for the land.

Is it meaningful for you to have some sort of recognition for helping the conservation effort in the Islands?

Recognition is not something I would have expected – there are others out there who are equally committed in their own way to long-term environmental protection – but I think that the recognition itself is very meaningful because it's a reflection of how public support and appreciation for environmental endeavours have changed (for the best!) in the 30 years or so I've been in the Islands.

New population estimate for Striated Caracara

The Striated Caracara (*Phalcoboenus australis*) has a breeding range confined to the southern most parts of the Southwest Atlantic. The species is described as rare across its range but locally numerous on some of the islands of the Falklands. Classified globally as Near Threatened on the IUCN Red List, their small population is estimated at 1500 - 4000 individuals (Birdlife International 2015).

This work was funded by

Historical reports suggest the population in the 19th Century was much higher than today; Charles Darwin on his voyage to the Falklands in 1833/34 wrote that not only were they 'exceedingly numerous' but also 'extraordinarily tame and fearless'. The decline in species population arose in conjunction with human activity across the archipelago, from the arrival of sealers, who depleted their natural resources through to the subsequent island-wide spread of human activities, such as farming.

Population surveys at the Falkland Islands were first undertaken around 1963 by Ian Strange, and a series of early counts resulted in an island estimates of around 450 breeding pairs. In 2006, Robin Woods re-assessed the population indicating approximately 600 breeding pairs.

To re-evaluate the breeding population and range of this species, through the Darwin Funded Raptor Project 2012-2015, we conducted [illegible] of 79 offshore islands [illegible] 2013 [illegible] 2014. A large portion [illegible] work was undertaken [illegible] yacht, Peregrine. *[illegible] indicated surveys at [illegible] Lion Island, [illegible] Grand Jason. The survey [illegible] range of 750 - 850 known [illegible] potential breeding pairs, based on nest sightings or breeding pairs within territories. Islands visited by surveyors between 1963 and 2014 show a total of 120 islands had a presence of breeding Striated Caracara at some time or another, although we weren't able to visit all these islands this time around. Still, the new population estimate indicates that the Striated Caracara population has slowly increased since the last census in 2006, and this could be related to more abundant and healthy populations of seabirds, their main diet source in the summer.*

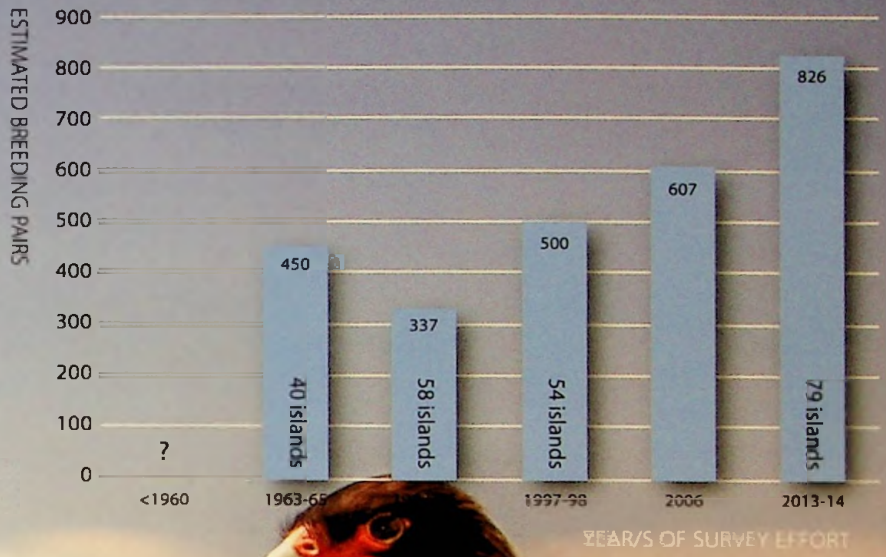
Our survey results showed the five most important islands in terms of numbers of potential territories were: Grand Jason (96), Steeple Jason (89), New Island (86), Beauchêne Island (70)

by Micky Reeves

Raptor Project Officer

Micky making a GPS waypoint of a nest.

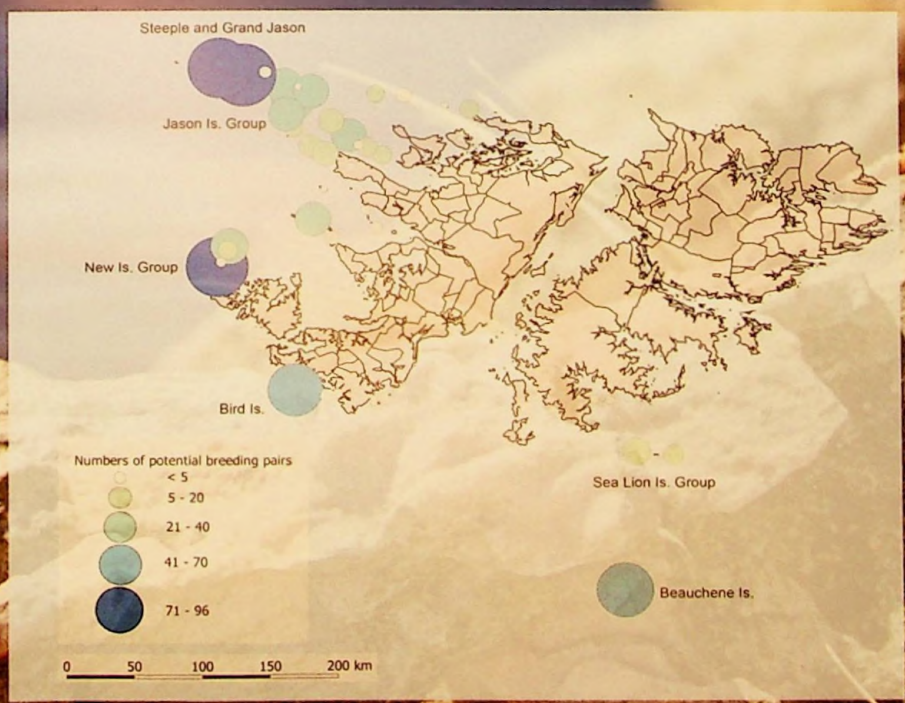
Johnny rook at nest with two chicks at Steeple Jason Island, using camera traps.



Results of all census attempts for Striated Caracara at the Falkland Islands since 1963 (Surveys by Ian Strange (1963-65); 1983-86, Robin Woods &Jeremy Smith 1997/98; Robin Woods 2006 and Nicky Reeves 2013/14).

and Bird I[illegible] (66). These five islands hold abo[illegible] %) of the potential territori[illegible] d Caracara. It is unkno[illegible] opulation figures of Striat[illegible] were before man arrived [illegible] slands, but today, the species is mostly absent from East Falkland (juveniles birds are sometimes spotted) and only very small numbers breed on the mainland of West Falkland. Their breeding range remains restricted to offshore islands, which has not significantly changed since the first censuses in the 1960s. The breeding population is still strongly associated with seabirds; the highest territorial densities are reflected by high numbers of burrowing seabirds and a pristine or near pristine fussac habitat.

The surveys were funded by the Darwin Initiative Project 19-030, The Royal Zoological Society of Scotland and the Falkland Islands Government Environmental Study Budget. We are very grateful to all landowners who allowed access to islands, Leiv Poncet, Mike and Jeanette Clarke for transport to Steeple and Grand Jason. Finally thanks to all the field volunteers that assisted with the surveys, often in challenging weather and terrains!

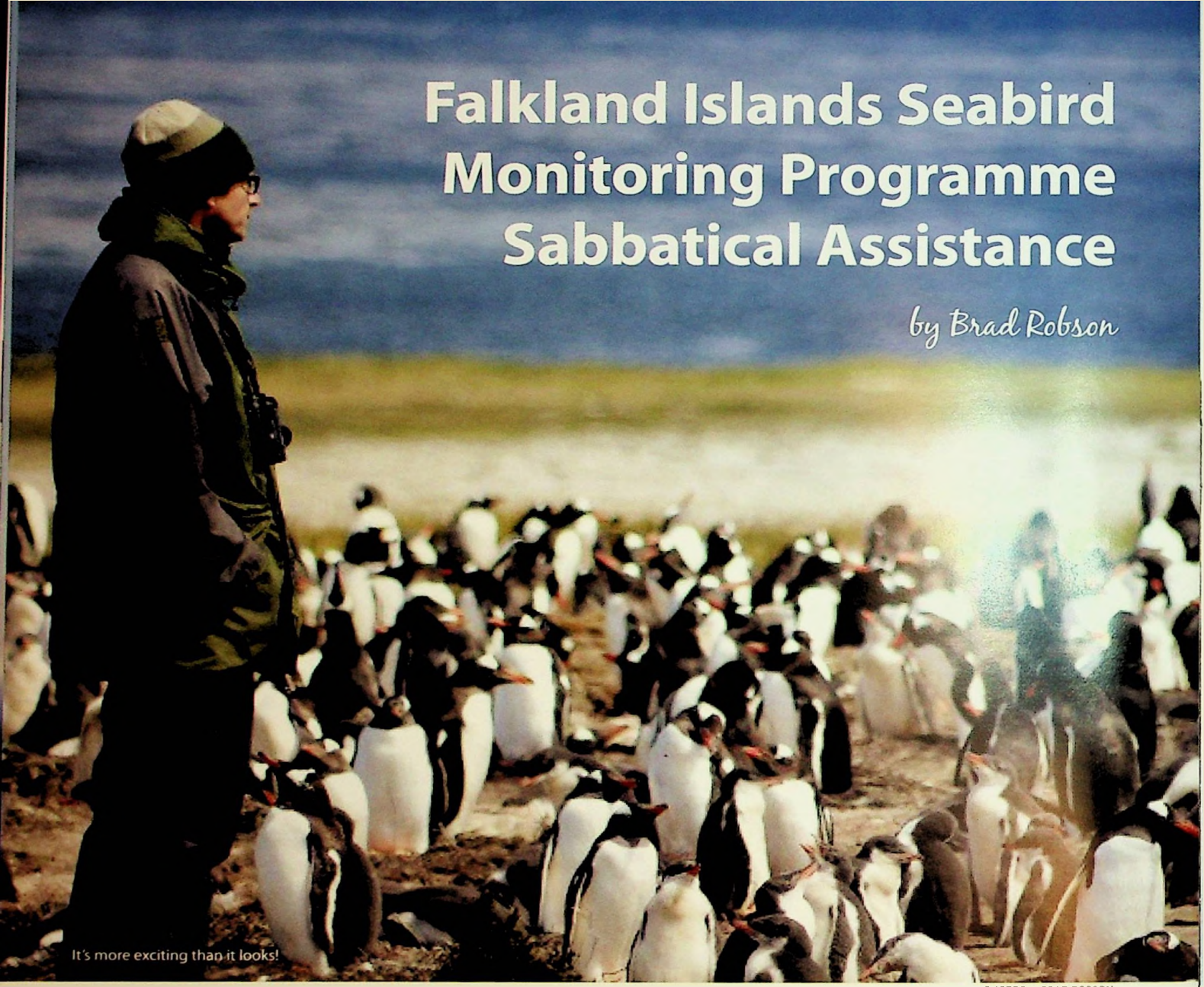


Distribution and abundance of estimated breeding territories of Striated Caracaras at the Falkland Islands from surveys conducted during 2013/14 and 2014/15.

PHOTO: © ANIKET SARDANA

Falkland Islands Seabird Monitoring Programme Sabbatical Assistance

by Brad Robson



It's more exciting than it looks!

PHOTOS: © BRAD ROBSON

RSPB employees are entitled to a sabbatical every seven years of continuous employment to work on conservation projects with other BirdLife Partners. Having previously spent a year in the South Atlantic on Tristan Da Cunha and having met so may people from the Falklands over the years I had hoped for some time to be able to spend my third sabbatical working with Falklands Conservation.

Having made contact with FC staff Sarah Crofts and Andy Stanworth their offer of a month assisting on the annual Seabird Monitoring Program was too good to turn down. I arrived on 1st January a great start to a new year.

The first period of fieldwork saw Andy and I travelling the length of East Falkland assessing breeding productivity, a measure of how successful or otherwise the breeding season had been, in Gentoo and Southern Rockhopper Penguins. The Gentoos were new to me and the nature of their far scattered rookeries caught me by surprise. It was difficult in some instances to know just what was driving them to lay eggs in some particular locations or for small groups to separate off from the main group by a matter of meters or tens of meters. The chicks were mostly at an ideal age to count, big enough to see easily but not so old as to be charging around in large creches which makes accurate counts difficult or on occasion impossible. There was variation across all of the rookeries we counted and some were a lot easier to count than others.

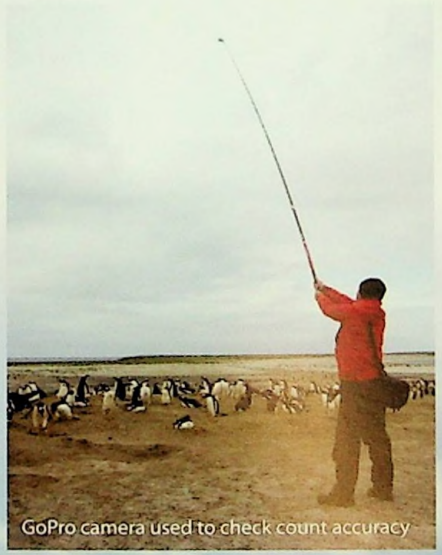
The Rockies were another kettle of fish altogether. I had spent two seasons counting Northern Rockhoppers on Tristan though we had not attempted to count chicks. The Rockies on the Falklands can nest in some fairly precipitous situations and I'll admit to not having a great head for heights. There were however, additional benefits and that was seeing the Imperial Shags which nest amongst the Rockies at some sites; beautifully coloured birds looking just as majestic as their name implies.

Travelling to Bull Point, Motley Point, New Haven, Race Point and Volunteer gave me a great experience of camp life, the terrain, wildlife and ever changing skies. Much reminded me of home in the north west of Ireland yet there was still something very different.

The second part of the program was to continue work on Steeple Jason Island. The flight provided a fine view of West Falkland and the sea was kind on a calm voyage north west. At last I found some summer weather and not a drop of rain in a week now that is very different from home. Whilst Micky and Vicky battled with Johnny Rooks, Andy and I were b[illegible] to cou[illegible] Gentoo and Rocky chick[illegible] was ti[illegible]ting now that was im[illegible] alon[illegible] the variety of species making the island their home. The visit provided the opportunity to collect samples from albatross chicks, a far more enjoyable activity than it might sound. From dusk Common Diving Petrels, Slender-billed Prions, Wilson's and Grey-backed Storm Petrels were seen coming in to the high ridges of the island's spine and on one evening two Southern Royal Albatrosses cruised close inshore past the field station. It really is a unique place.

All too quickly my time was over; I was made to feel very welcome and I thoroughly enjoyed life around Stanley as well as in the field. I would like to thank everyone at Falklands Conservation, a fine group of very dedicated people

Windswept Rockies Berkeley Sound



GoPro camera used to check count accuracy

Steeple Jason Island

A Summer Survey of Bryophytes and Lichens

Dr Ray Tangney on Weddell Island

Dafydd Crabtree Lower Plants Officer

IN JANUARY AND FEBRUARY THIS YEAR as part of Darwin Plus Lower Plants and Lichen Project at Falklands Conservation, three internationally renowned specialists in South Atlantic bryophyte and lichen flora visited the islands for three weeks. The team visiting included Dr. Ray Tangney (bryologist and Head of Lower Plants, National Museum Wales), Dr. Alan Fryday (lichenologist from the Michigan Herbarium, Dept. of Plant Biology, Michigan State University) and Alan Orange (lichenologist at the Department of Botany, National Museum Wales).

In the short time they were in the Falklands we tried to visit as many places and habitats as possible on East and West Falkland. The first week was spent in the vicinity of Stanley including areas such as Cape Pembroke, Mt. Kent, Two Sisters and Vantan Arroyo. Although there was a little drizzle on the first day, the next 20 days were spent in glorious sunshine. The survey commenced on West Falkland following three days on Weddell Island with thorough visits to the Hornby Mountains, Fox Bay, Sulivan and Port Stephens.

Although species level identification takes longer with these three taxonomic groups than with vascular plants, the preliminary results of the field trip are starting to come through. The first report from Dr. Alan Fryday was very promising for the project, and for the creation of an updated lichen species list for the Falkland Islands.

380 lichen collections were made in the three weeks from the various sites mentioned. Among the species added to the lichen biota of the islands were *Candelariella flava* (North Arm), previously an Antarctic endemic; the bipolar species *Collema coccophorum* (North Arm) and *Massalongia carnosa* (Patricia Luxton NNR), both genera new to the islands. Other genera found that have not previously been reported from the islands included species of *Arthonia* (North Arm), *Bacidina* (North Arm, Patricia Luxton NNR), and *Hymenelia* (Lafonia). Although it is not yet been possible to identify these latter three specimens to species level, at least one, the Arthonia, which is a lichenicolous lichen growing on a *Buellia* sp., appears to be new to science.

Two species not seen on the islands for over 100 years, *Carbonea phaeostoma* (Port Stephens) and *Peltigera didactyla* (North Arm) were also rediscovered, along with a second locality for *Bartettiella fragilis* (Mt Kent), which has otherwise been reported only from North Island, New Zealand.

Other interesting species so far discovered include an alpine, bryicolous species of *Caloplaca* (Mt Maria), saxicolous species of *Cliostomum* (Two Sisters, Mt Maria), *Tasmidella* (Port Stephens), and a *Trapeliopsis* species (Vantan Arroyo). All probably represent undescribed species. Material was also collected of some apparently undescribed taxa (e.g.,

Dr Ray Tangney and Dr Alan Fryday on the Two Sisters mountain.

New records to the Falkland Islands. *Dendroligotrichum squamosum*

Codriophorus laevigatus

Acarospora sp., *Coccotrema* sp., *Lecidea* sp. *Ochrolechia* sp.) as well as some described taxa of uncertain systematic position (*Lithographa graphidioides, Rimularia andreaeicola, R. subpsephota*) that will be used for DNA sequencing to identify their correct systematic position.

Before this visit, approximately 300 lichen taxa were known from the islands, of which c. 15 appeared to be endemic. Although work on the collections has hardly begun, it is already clear that the lichen biota of the islands is very far from being completely known. Collections from this visit have already added substantially to these totals with an estimated 50 taxa being added to the overall list and a further 8-10 undescribed species being collected.

Early results from Dr. Ray Tangney were just as promising. New moss records for the Falklands archipelago since the start of the project include *Dendroligotrichum squamosum*, which is only found on the summit of Mt. Maria, and *Codriophorus laevigatus*, which has been found at the summit of Mt. Usborne, Mt. Maria and Byron Heights. Other new records include *Buckandiella didyma, Tetraplodon mniodes, Pyrrhobryum mniodes, Conostotum magellanicum* and *Racocarpus pupurascens.*

The most recent list of mosses for the Falkland Islands (Matteri, 1986) recorded 141 species and a number of varieties. A state of knowledge review of the Falklands moss flora since 1986 shows that the reassessment of some taxa has resulted in a reduction in the number of species known from the Falklands. This reduction has been countered by the subsequent specimen study and new collections have added species to the list. It is anticipated that ongoing analysis of recent collections will add further species. Currently ten species have either been added to the list or confirmed by the recent field expedition including many observations of the distributions of species and the composition of bryophyte habitats.

Another six weeks of field work will commence in the next austral summer towards the end of 2015, with all the usual suspects returning to embark on the follow-up survey. An addition to the team will be a hepatic specialist to make liverwort collections as this will permit recommendations to be made for the conservation of unusual and valuable lower plant communities. It is already clear from early work in the project, that these taxonomic groups are under recorded in the Falklands, and that there are several areas of rich and rare lower plant diversity in the Falkland Islands that do not correspond with the "Important Plant Areas" for higher (vascular) plants.

The project is funded by the UK government through DEFRA and the Darwin Initiative. (DPLUS017)

DARWIN INITIATIVE

The January 2015 Survey Team (L-R) Dafydd Crabtree, Dr. Alan Fryday, Dr. Ray Tangney and Alan Orange outside Falklands Conservation

noticeboard

Staff come and go...

Welcome David Spivack

DAVID SPIVACK JOINED the Falklands Conservation team in February as UK Director, and is based in the UK. This new role aims to increase awareness, membership and income, and to encourage partnerships with other NGOs.

David was born in London and started volunteering for conservation groups at the age of 14. During the 80s he was an active volunteer for the RSPB, running a successful YOC Group as well as undertaking membership recruitment and fundraising. He then joined the RSPB in 1990, and for ten years continued to work on youth, volunteering and fundraising programs in the North of England.

David briefly left the RSPB in 2000 to work as Head of Corporate Relations with the Wildlife Trusts UK Office, before returning to the RSPB in 2005, this time working at the RSPB's UK Headquarters in Corporate Relations, and in 2011 he became the RSPB's Area Manager for Bedfordshire & Hertfordshire. Through these roles, David has much experience in working with large multinational companies, conservation delivery on farming operations and managing nature reserves, and generating income from a range of different sources to support conservation projects across the UK.

David's interest in the Falklands was piqued with his visit on an RSPB sabbatical in 2013, where he worked with Falklands Conservation to refresh tourism and public relations.

Outside work David is a keen birder and enjoys canoeing and walking, as well as taking the controls of light aircraft on occasions, having held a UK private pilot's licence. He now lives in South Cambridgeshire with wife, Amanda, and rescue dog Hooby.

David Spivack
UK Director for Falklands Conservation

Freya Gill
Assistant Biodiversity Plan

Goodbye & good luck Freya

AFTER SEVERAL YEARS of living and working in the Islands, I'm moving back to the UK for a variety of family and personal reasons. Until the end of April, I continue to work on the "Biodiversity Action Planning in the Falkland Islands" Darwin plus project from overseas, which will still be overseen in the Islands by Andy Stanworth. Watch this space for more news on this!

I would like thank all who work at and support Falklands Conservation for the opportunities and experiences I've had since my arrival in the Islands in 2011 when I joined up as a volunteer. It has been rewarding to be part of an organisation that does such an important range of work here in the Islands, and I'm sure will continue to do so long into the future.

New diddle-dee pin badge

NOW AVAILABLE to buy from our shop in Jubilee Villas, Stanley, or online via our webshop. £2 each.

AGM Notice

THIS YEAR'S AGM will be held on Thursday 3 December at the Chamber of Commerce, Stanley. In the UK, there will be a Members Evening on Wednesday 9 December at the Union Jack Club, Waterloo, London. We look forward to seeing you all, and updating you on another year of exciting conservation work.

How you can help us:

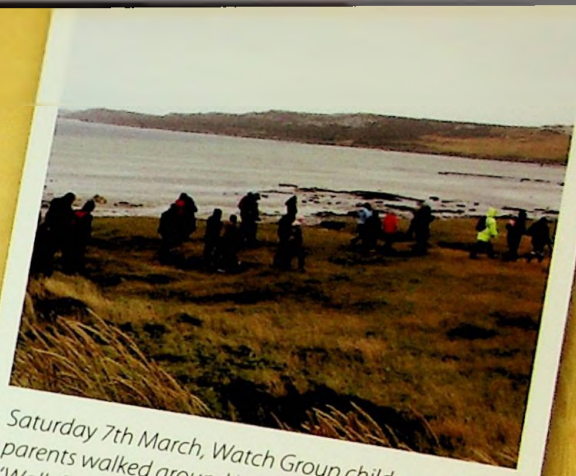
- Become a member
- Adopt a penguin
- Make a donation
- Leave a legacy

Or to find out more about our work, go to

www.falklandsconservation.com

WATCH GROUP

THROUGHOUT THE 2014 AND 2015 SEASON, the Watch Group have been on trips to Fox Bay, Port Edgar, Port Stephens, Pebble Island, Saunders Island and Bleaker Island. They have also taken part in a very wet and cold Christmas camp to Volunteer Point, 'Clean Up Stanley Day', 'Earth Day', and lots more. There have been 45 members aged between 8 and 16 this season. If you are in the Falkland Islands, and have a child aged 8 or above who would like to join the Watch Group, email community@conservation.org.fk for membership forms, or phone 22247 for more information.



Saturday 7th March, Watch Group children and parents walked around Hooker's Point on a 'Walk for Wildlife'.

The weekend of the 14th and 15th March saw 9 members travel out to Saunders Island to study Johnny Rooks. Raptor Officer Micky Reeves showed how he catches Johnny Rooks to measure their wingspan, legs, bill, and to take a blood sample.

4th April 2015 saw the Watch Group take part in an 'Easter Bug Hunt' in Falklands Conservation's native plants garden and around Stanley. Species found included woodlice, worms and centipedes.

On the weekend of the 11th and 12th April, there were four Watch Group trips on the Hans Hansson to investigate the wreck of the John R. Kelly. Divers brought up marine wildlife, and live video feed from the wreck was watched.

22nd March, Watch Group members manned the water stations for the Standard Chartered Bank marathon.

Saturday 30th May, members of the Watch Group were taught how to silk paint by Karen Armstrong-Ford.

Standard Chartered

Partnering with the local and international community to conserve the Falkland Islands natural environment.