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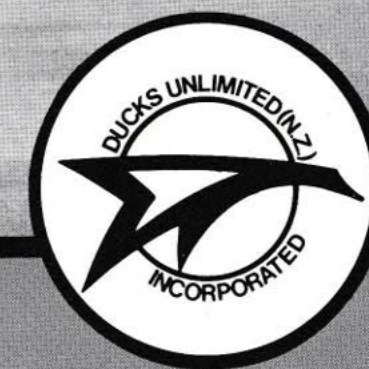
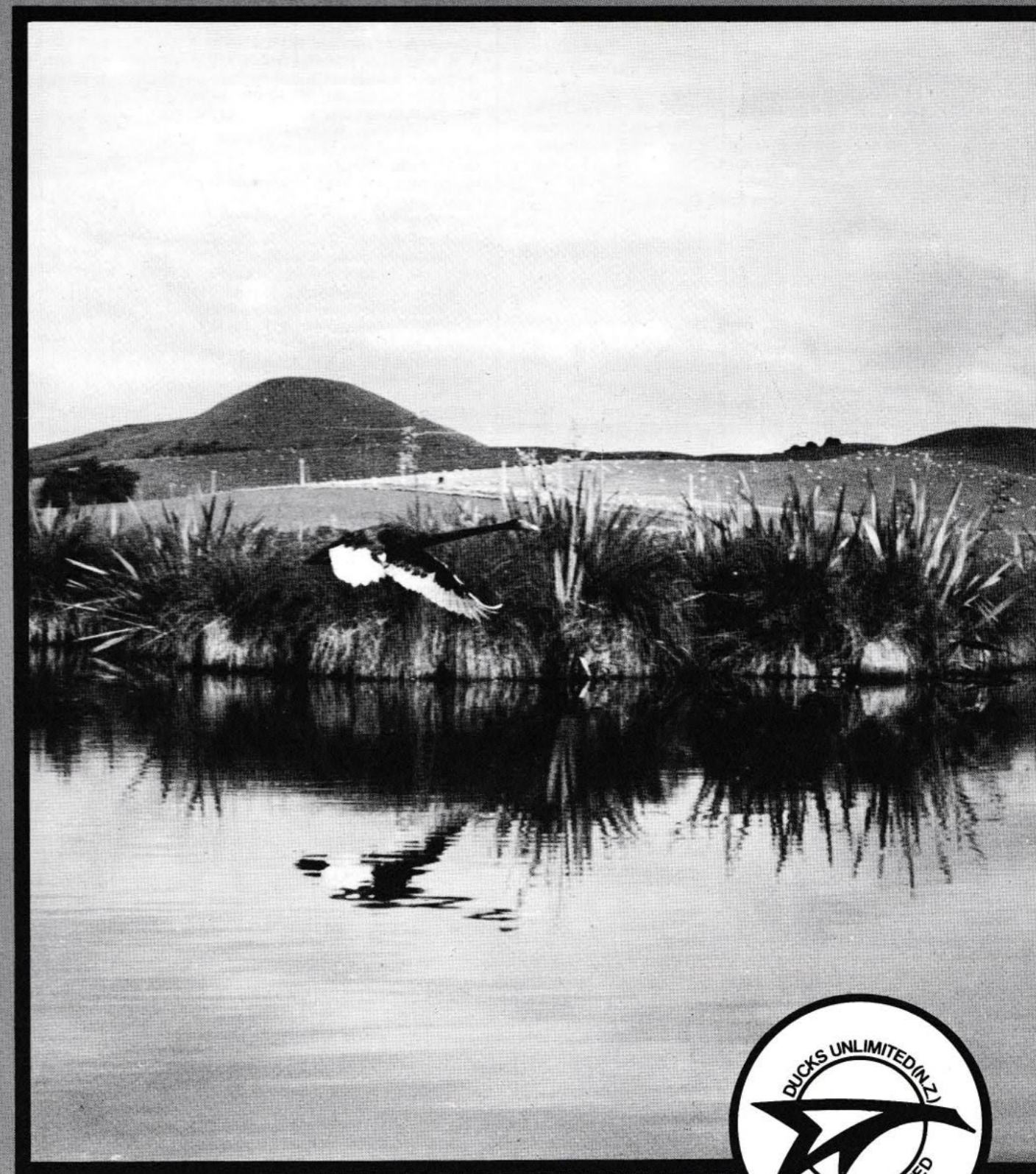
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# Flight

No. 4/85 — ISSUE 46 — DEC 1985

NEW ZEALAND REGISTERED MAGAZINE

DUCKS UNLIMITED'S  
QUARTERLY  
WATERFOWL JOURNAL



# DUCKS UNLIMITED (N.Z) INC., — FOR WATERFOWL AND WETLANDS — PO BOX 44-176 LOWER HUTT, NEW ZEALAND

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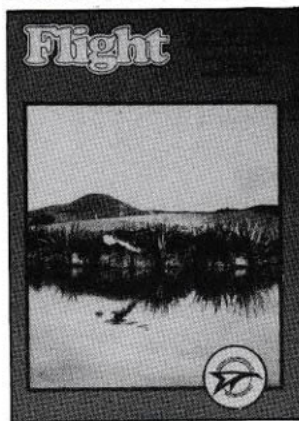
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**COVER PICTURE:**  
Black Swan at the Sinclair Wetlands.  
Neil Hayes.  
**Photography:**  
Roger Sutton, Neil Hayes.  
Peter McLeod.

Ducks Unlimited (NZ) Incorporated is a private, non-profit membership organisation dedicated to the preservation, restoration, creation and maintenance of wetlands habitat in New Zealand and to the propagation of the country's rare waterfowl as a valuable natural resource. The organisation was founded in May 1974 by a group of far-sighted conservationists and incorporated by them in June 1975 at Wellington, New Zealand. The national headquarters mailing address is PO Box 44176, Lower Hutt. "Flight" is the official quarterly publication of Ducks Unlimited (NZ) Incorporated reaching 1500 devoted members and friends concerned with waterfowl conservation. DU membership begins at \$5.00 pa for Junior to \$15.00 for full membership with provision for trade and life members. Membership of Ducks Unlimited carries with it subscription to this publication. To assure prompt delivery, members who move are urged to forward their new address along with current membership details to national headquarters. Letters and contributed manuscripts and photographs should be addressed to the "Flight" Editor. Views expressed by contributors are their own and do not necessarily constitute those of Ducks Unlimited (NZ) Incorporated.

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# PRESIDENT'S COLUMN

The continuing dedication of Neil Hayes to the production of Flight surpasses any input one could possibly hope to achieve through this column; however I shall try to keep Flight readers informed of the latest board decisions and director involvement as I see them personally.

The wetlands committee is fortunate to have Brendan Coe's enthusiasm and efficiency in the present very busy scene which involves The Sinclair Wetland Building Fund; Final arrangements with QEII re Covenant document and Joint Management Plan for the Sinclair wetlands in conjunction with QEII; Home Lagoon in the Wairarapa; Proposed wetlands improvement on Matthews' property — Wairongomai; Pearce Wetlands — raupo control, plantings etc.

A team of Directors from Auckland headed north to Mimiwhangata to assess possible wetland additions and improvements to this Brown Teal liberation area in Northland. D.U. (N.Z.) was extremely fortunate to have Stew Morrison and family participants at the Tokaanu A.G.M. The injection of enthusiasm and encouragement which they promoted not only at the meeting but the next week within our homes, wandering round wetlands and the Wildlife Centre at Mt. Bruce, or climbing the Elliott Hills at Hukanui at daybreak was much appreciated. Stew has sent a wealth of information to us since he returned, including a video

tape on the D.U. fund raising scene. I feel the least we New Zealanders can do is front up to D.U. Canada's 50th Convention with a strong team!!

I travelled to Dunedin with John Cheyne and personally witnessed the tremendous local enthusiasm towards their 'Country Calendar' star Horrie Sinclair. Horrie now signs on 2 members without even stepping out of his Landrover!! Nice one Horrie. We are indebted to Adrienne Longuet and the Country Calendar team for producing a top programme promoting such a fantastic wetland. John Cheyne was involved with this area 10 years ago and my thanks to him for his mine of valuable information on the scene, then and now.

The Wildlife Service Blue Duck Seminar was well attended in September. A wealth of expertise and information from Dr Murray Williams, Don Merton and Ian Bryant. Sixteen D.U. members attended, some travelling many miles to participate in this excellent and informative programme. Finally I thank all those contributors to the Sinclair Building Fund. This appeal is really showing the strength of D.U. members and the enormous potential we have within our ranks.

The Wildlife Service and the Acclimatisation Societies have provided tremendous support and I feel co-ordination and co-operation within D.U., Wildlife and the Acclimatisation Societies

are essential in the present financial climate if we are to achieve the ultimate objective for all.

SEASONS GREETINGS TO ALL D.U. MEMBERS AND SUPPORTERS.

JIM CAMPBELL



## Q: WHAT DO WILD HORSES AND GIANT SNAILS HAVE IN COMMON?

**A: US!** While our pioneering work with endangered birds is well known here and throughout the world, perhaps our continuing conservation efforts with other species are less familiar? The future of the Kaimanawa wild horses and our intriguing carnivorous snails, along with a host of other animals, depends on care and wise management by our team of wildlife officers, scientists and technicians. We're proud of our reputation gained from a long apprenticeship and hard work. We are totally dedicated to ensuring that future generations of New Zealanders will benefit from our efforts.



## NEW ZEALAND WILDLIFE SERVICE

Department of Internal Affairs Wellington

CONSERVATORS OF YOUR WILDLIFE HERITAGE

# D.U. NEWS

## SINCLAIR WETLANDS

**TITLE** The Title to the Sinclair Wetlands is now in D.U.'s hands and by the time this copy of 'Flight' is in your hands the QEII National Trust Open Space Covenant will have been attached to the Title; to protect the property in perpetuity.

## VIDEO TAPES

We now have available the Horrie Sinclair/Country Calendar programme on VHS video tape. This, together with the Hidden

Places/Horrie Sinclair and the D.U./Country Calendar tapes, are available on loan — maximum period 2 weeks — for \$10 from Box 44-176, Lower Hutt. We have three copies of each tape, but don't panic if you don't receive the tapes by return post. If all tapes are out they will be sent when available. If you would like to borrow one tape only please send \$5 and specify which tape you require.

## FUND RAISING

Fund raising is going extremely well and in mid

November we were getting close to the \$40,000 mark. Such a figure means that there will be no need for D.U. to borrow any large amount of money to complete Stage 1 of the project; which is to erect a manager's residence, workshop, storage facilities and visitors accommodation.

Originally it was planned to write to all contributors to the fund raising appeal, but the fantastic response has made this financially difficult so we have decided to list in 'Flight' all those who have contributed. A receipt has, of course, been sent to all contributors. Many donations have been quite considerable with 3 of \$1,000 each, 3 of \$500, several of \$200, numerous \$100's, lots of \$50's and many many smaller contributions, which are vitally important. As we predicted, D.U. supporters have again shown why D.U. has so rapidly become a major conservation force in its very short history.

An encouraging number of acclimatisation societies have sent in donations and these are listed below, together with all who have contributed to date:



S. Millar, Mr & Mrs I.H. Pirani, Mrs E.M. Russell, D.G. Smith, H.F. Cooper, C.H. Rose, L.J. Graham, R.M. Chipchase, M. Bell, M. Bowker, G.R. Watson, J.R.M. Chorlton, J.D. Cooke, M. Saunders, S.G. Steel, B. Smith, M.W. Williams, Miss M.E.G. Kite, B. Coe, M.D. Midgley, W.R. Duncan, J.A. McLeod, G.W. Van Der Loo, C.J. Clark, J.A.F. Garrick, D.F. Crawford, J. Smith, T. Egerton, S.J. Wilson, J. Downs, N.W. Gunson, B.V. Gillespie, I. Armstrong, F.S.S. Bailey, G.T. George, J.N. Murdoch, R.R. Sutton, J.H.B. Ward, Mrs C.G. Blair, W.R. Duncan, J.W. Hibbard, Mrs Bridson, S.J. Abernethy, W. McFarland, R.E. Smith, R.S. Kwapisz, R.C. Wills, G.A. Grant, G. Butts, N. Scott, J. Tollemache, Mr & Mrs F.N. Hayes, Mr & Mrs J. Hayes (U.K.), A. Hutson, A.M.J. Kingsford, Mr & Mrs T.H. Kennedy, W.A. Morrison, P.M. Yallop, T.H. Sampson, C. Hudson, B.H. Paddy, N. Mair, L.M. Hooson, J. Worth, Mr & Mrs A.S. Garrick, F. Rouse, S.A. Kerr, R.B. Miles, C.W. Hooson, Dr & Mrs M.J. Taylor, L.G. Bell, L.W. Penniall, P.J. Lawson, C.W. Paton, P.A. Morrison, Mrs Jane Parkes, M.J. Bourke, J.M. Muller, A. Bourne, J.M. Williams, J.A. Williams, R.T. Adams, J. Begg, A.J. Wilks, Stew Morrison (Canada), G. Donnelley (U.S.A.), J. Glover, Rod Hall (U.K.), Mr & Mrs R. Matheson, R.M. Win-

chester, J. Nelson-Parker, Mr & Mrs W. Clinton-Baker, G.P. McLeod, P.W. Munro, R. Sutton, R.D. Fenwick, B. Fotheringham, M.C. Smythe, J.F. Dillon, D. Buchanan, Mr & Mrs E. Hansen, P. Harvey, A.J. Tweed, Mr & Mrs J.C. Campbell, N.M. Newcomb, Halcyon Publishing Co., K. Lowry (Aust), Hawera Acclimatisation Society, Wanganui Acclimatisation Society, Te Aroha Branch Auckland Acclimatisation Society, Stratford Acclimatisation Society, South Canterbury Acclimatisation Society.

Another fund raising pamphlet is enclosed with this issue of 'Flight'. Please pass the pamphlet on if you have already made a contribution and accept our sincere thanks.

If you haven't yet managed to contribute — absolutely any amount will be most gratefully received. D.U. will continue its fund raising campaign until at least the middle of next year.

A letter from one of our junior members sums up the fund raising sentiments nicely:

"Dear Sir,

I was very pleased to hear of the generous gift to D.U. of the Sinclair Wetlands. This is a most kind gesture by Mr Sinclair and I have pleasure in donating \$10 in support of the building fund.

I am only 15 years old but have been interested in wildlife conservation for many years, as well as being a keen duck shooter.

I have successfully bred Canada geese for three years now, with very satisfying results.

Wishing you the very best in this venture."

R. Miles Winchester  
Ashburton

## STOP PRESS

The Otago Acclimatisation Society has written to say that they will be contributing \$3,000 to the fund raising campaign. Ralph Adams, Wildlife Service Director has also just written to say that the initial contribution from the Service will be \$1,000. A much appreciated contribution from both organisations.

## MEMBERSHIP

**New Life Member.** D.U. is pleased to announce that its latest Life member is none other than Bob Eberhardt, Chairman of the Board of Ducks Unlimited America. In his note which accompanied his Life membership subscription Bob congratulated D.U.(N.Z.) on its efforts to date.

**Subscriptions and new members.** The Country Calendar programme about Horrie resulted in another considerable boost in membership, particularly amongst the farming community and over 1800 copies of the last 'Flight' had to be printed to meet the demand. Renewal subs have also been coming in

thick and fast, but if you haven't yet renewed for 85-86 please do so as soon as possible.

**New Sponsor Member.** Bill Becroft of Papakura has become our latest Sponsor Member.

## 1986 ANNUAL MEETING

As announced in the last 'Flight' the 1986 Annual Meeting will be held at THC Wairakei on Saturday 12th July.

The D.U. Annual Clay Target Championships will be held at the Taupo Gun Club on Friday 11th July 1986. The weekend will therefore follow a similar pattern to the last two years, except that we will be slightly further north.

Diane Pritt, Smiths Road, OHAKUNE, will again be co-ordinating all bookings for the annual meeting and a Registration Form is enclosed. A \$30 registration fee must accompany the form. Registration fee on the day of the annual meeting is expected to be \$30 per head and will cover a first class THC dinner. A follow-up registration form will be included in the March 'Flight'

## WELLINGTON CHAPTER

On Sunday 20th October, 34 Wellington Chapter members ventured to the Wairarapa to inspect the D.U. created wetlands on the property of Mark Pearce. The party also inspected the Home Lagoon area where D.U. has been working hard to re-establish the lagoon, which was seriously affected by the drainage of Lake Te Hopai. The plan at Home Lagoon is to re-flood the lagoon by taking water from the Ruamahanga River, which is only about 70 metres away, via a pipe through the stopbank, subject of course to a water-right being granted. D.U., the Wildlife Service and the Wellington Acclimatisation Society are working together with the property owner Denis Handyside to ensure water in Home Lagoon for most of the year.

The D.U. party also viewed another large area in south Wairarapa where D.U. is negotiating to create more wetland areas.

A great day was had by all and \$200 raised. The Wellington Chapter is indebted to Mark Pearce for the guided tour and for his enthusiastic involvement.

Wellington Chapter's annual social function will be held at the Shaw-Savill Lodge, Kilbirnie, on Saturday 29th March 1986; commencing at 7.30pm.

## EKETAHUNA CHAPTER

Thanks to the generosity of Jim Campbell the Eketahuna Chapter arranged an open day at the Campbell farm for Wairarapa D.U. members and Wairarapa Royal Forest & Bird Protection Society members.

Over eighty people turned out on Sunday 17th November and were treated to a guided tour of the 30 plus wetland areas on the pro-

perty. The group was also able to view the 20 odd brown teal resident in D.U.'s holding aviary, broods of brown teal and grey teal, lots of pheasant chicks, good numbers of Canada broods were seen, plus numerous other Campbell conservation projects.

## NEW NAME AND NEW CATALOGUE

D.U. Trade members Kelly (Rotorua) Ltd have recently announced a change in the company's name, which is now Kilwell Sports Ltd. The company has also just published an impressive, new 160 page catalogue, which is available from all sports stores and covers a wide range of sporting goods marketed by Kilwell Sports.

## DU SALES DEPT. NEW ITEMS

**DU SHIRT \$38.00**  
**DU JERSEY \$59.00**  
in Red or Blue  
with Jumping Mallard  
and "Ducks Unlimited"  
Approx. 6 week delivery.  
Specify size required.

## OTHER NEW ITEMS AVAILABLE

The Landscape Tee Shirts with logo (state size)	\$6
Swiss Army knives engraved with D.U.'s name and logo	\$12.50
Bic ball point pens engraved with D.U.'s name and logo (10 pack)	\$6
Duck Head lapel pins	\$5
Camouflage Parker roller pens engraved with D.U.'s name and logo	\$20
Wine glasses (best crystal) with D.U.'s name and logo. Per set of 6	\$75
Beer tumblers (best quality) with D.U.'s name and logo. Per set of 6	\$75
8" Diameter magnetic D.U. logos	\$40/pr

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## DUCKS UNLIMITED (N.Z.) INC

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1986 ANNUAL CONFERENCE

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Saturday & Sunday

July 12th & 13th, 1986

Plus the NATIONAL CLAY BIRD CHAMPIONSHIPS

JULY 11th, 1986

At the TAUPO GUN CLUB

A \$30 registration fee is required and must be included with this form.

I/WE WILL BE ATTENDING THE ANNUAL CONFERENCE

I/WE WILL REQUIRE ACCOMMODATION FOR ..... NIGHTS ON .....  
(DATES)

NUMBER ATTENDING .....

NUMBER OF ROOMS REQUIRED .....

NAME/S .....

ADDRESS .....

Or charge to my  
VISA/BANKCARD/DINERS/AMEX  
(Delete to suit)

CARD No. .... EXPIRY DATE .....

SIGNATURE .....

REGISTRATION FEE OF \$30 IS ENCLOSED  
POST TO:  
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# PROJECT REPORTS

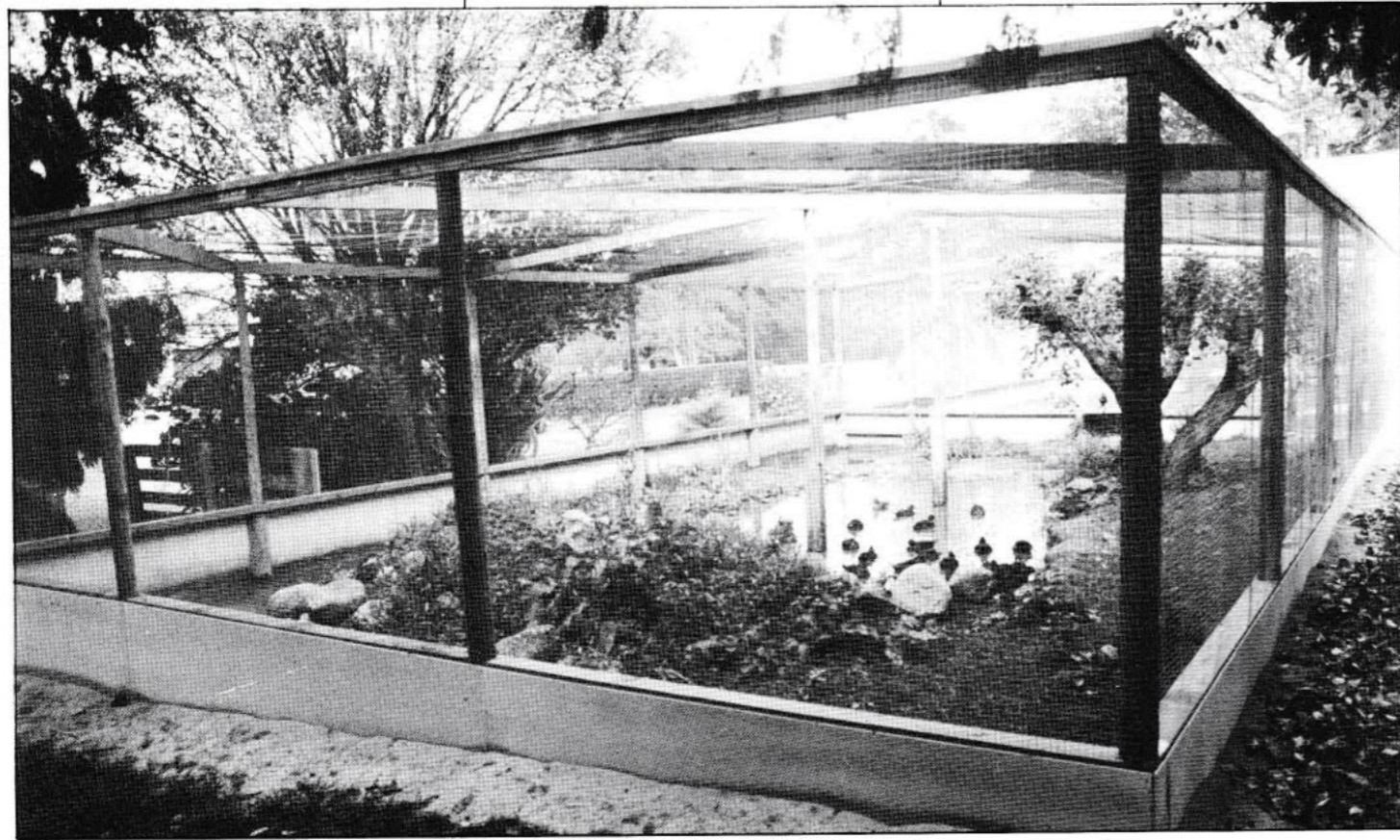
## OPERATION PATEKE

**1984-85 Breeding Season Results.** As mentioned in the September 'Flight', the last breeding season was another good one with 127 Brown Teal being reared; this being the second highest figure to date. The successful breeders for last season were;

Mary Atkinson	6
David Brenkley	7
Bill Clinton-Baker	10
Roy Dench	1
Ron Denny	5
Jim Glover	2
Neil Hayes	11
Hilldale Zoo	6
Nga Manu Sanctuary	2
Ron Munro	24
Otorohanga Zoo	10
Melvin Pike	3
Lawrence Piper	1
Wesley Sanderson	14
Wellington Zoo	7
Wilf Wright	4
National Wildlife Centre	14
<b>TOTAL</b>	<b>127</b>

Congratulations and thanks to these successful Brown Teal people.

The 1985-86 breeding season is now well underway and in early November 24 Brown Teal had already arrived in our holding aviary at Jim Campbells — see photo.



Release plans for the next period have still to be finalised, but it is expected that the programme of releases in Northland will continue.

## July Release of Brown Teal in Northland.

In late July Neil Hayes and Allan Elliott took 55 Brown Teal to Northland and 45 of these were released at the Takou Bay brown teal roost site. Ten were retained at the Kerikeri Wildlife Centre.

The Takou bay roost site was fenced and planted in 1980 and wild birds are regular visitors in small numbers. Observations indicated an excellent survival of our captive reared birds. The Takou Bay site is owned by Mr Leo Moslin and we are indebted to his support and involvement.

**D.U. Directors visit Northland.** In early November three D.U. Directors — P. Pirani, Newcomb and Bailey — journeyed from Auckland to the Mimiwhangata Farm Park, which is some 40km from Whangarei. Their visit was a follow-up to discussions with the Mimiwhangata Farm Park Trust and the firm, Turbott and Associates (D.U. members), who are drafting the management plan for the farm park.

The farm park is owned by Lion Breweries and managed by the Mimiwhangata Farm Park Trust. The Trust is attempting to show, and is doing it very successfully, how farm

management can be integrated with conservation.

Some 20 ponds have been constructed and fenced and all support good numbers of Brown Teal. The larger ponds — where D.U. released 42 Brown Teal last year — have successfully developed in to Brown Teal roost sites.

Draft proposals are to increase the number of ponds to around 40 and we hope that D.U. will be able to provide some finance to assist this work.

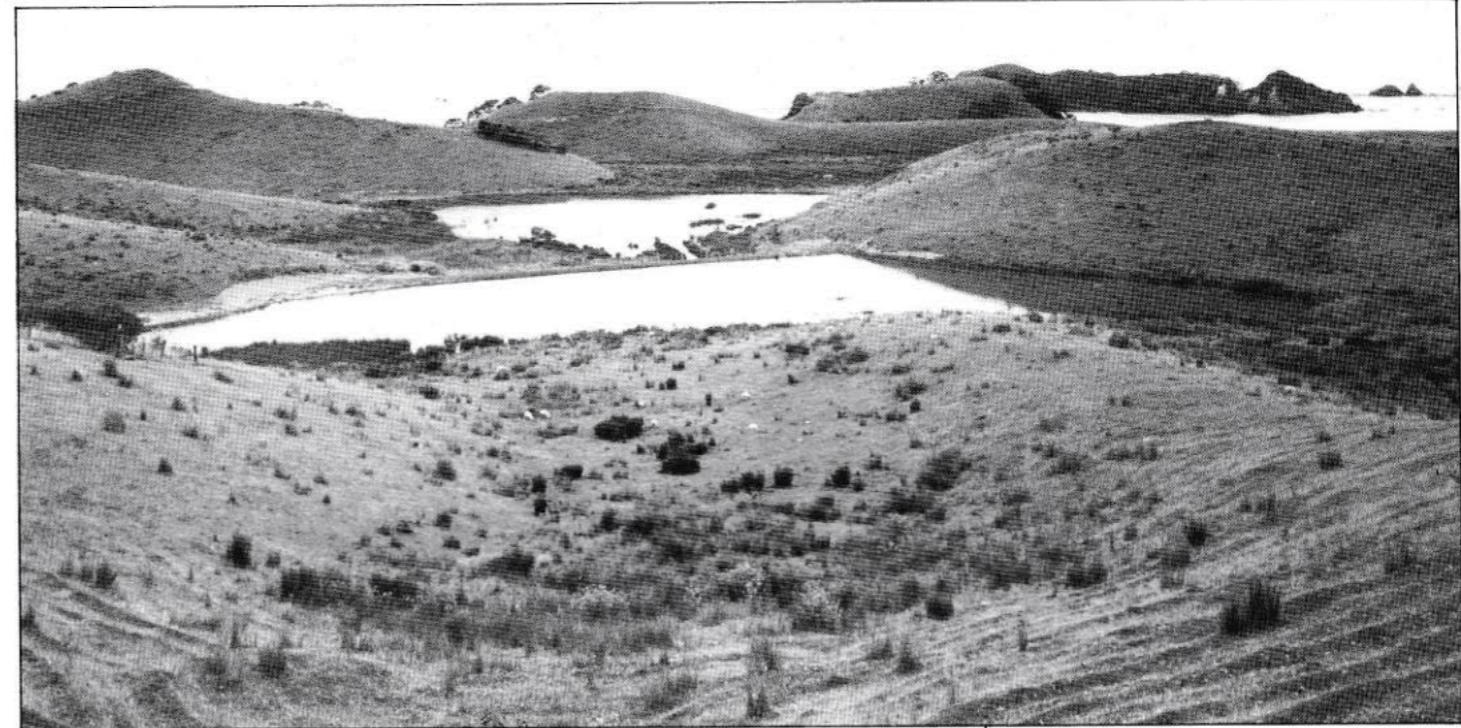
As mentioned in previous issues of 'Flight' D.U. sees Mimiwhangata as being vital to long term Brown Teal survival in Northland.

Around 40 Brown Teal were seen by the group and they were delighted with the prospects for Mimiwhangata. (Please see operation 'Wetlands' report for further details on D.U.'s work in Northland)

## OPERATION WHIO

As mentioned in the President's column, a Blue Duck Seminar was held at the National Wildlife Centre on the 20th September. The Seminar was organised by the Wildlife Service and was chaired by John Cheyne, officer in charge of the National Wildlife Centre, and was attended by sixteen D.U. members from all over the North Island. Together with four Wildlife Service rare bird experts.

*The finished Brown Teal holding aviary at Jim Campbell's. Neil Hayes. Photo*



*The main lagoons at the Mimiwhangata Farm Park. Neil Hayes. Photo*

The Seminar was considered to be well worthwhile and was expertly chaired by John Cheyne. As a result of the seminar D.U. has made a number of suggestions to the Wildlife

Service and we will report more fully on these in the next 'Flight'. The D.U. Board of Directors has appointed John Cheyne and Neil Hayes as joint co-ordinators of Project Whio.



## OPERATION GRETEL

Usage of grey teal nest boxes has again been dramatic, with large numbers of eggs being reported from Pike's Lagoon, Bartors Lagoon, Matthews Lagoon, Pokeno, and the Sinclair Wetlands. Two reports were received, one from Pokeno and one from the Sinclair Wetlands, about predation of grey teal eggs in our 'predator proof' nest boxes. In both instances stoats were the culprits, but thanks to determined efforts the predators have been caught and dealt with.

## OPERATION WETLANDS

At the Sinclair Wetlands clearing and planting of the 6 hectares of Ram Island has been undertaken by a team of D.U. members, organised by Horrie.

In Northland the fencing of the Whananaki brown teal roost site has commenced and will be completed over the summer. Fencing material costs have been born by D.U. and the Wildlife Service and the fencing work is being done by property owner Jeff Carson, with some assistance from D.U. members. The project has been expertly co-ordinated by Wildlife Service officer Allan Munn.

Fencing of roost site is seen as being vital to the survival of the brown teal, primarily because of the revegetation that occurs once an area has been fenced, and it is the resulting cover that provides brown teal with the essential protection and security. The roost site is where brown teal congregate after the breeding season and is where the vital pair ponds are established. Where fencing has already been done in Northland good numbers of brown teal will be found.

In the Wairarapa the Pearce Wetlands are looking superb and as reported elsewhere in this issue our efforts to re-establish Home lagoon are shaping up well.

*D.U. member David Mitchell of Christchurch, with son Jeffrey, on a recent inspection of Grey Teal boxes at Woodend Lagoon. Peter McLeod Photo*

# Redcliff Wetlands

## A Created Habitat

by Roger R Sutton

### INTRODUCTION

The Sinclair Wetlands at Waihola are now well known to readers and indeed the wider community. Among their many notable features is the fact that they are "re-created" wetlands. Redcliff Wetland Reserve situated at the western end of the Takitimu Mountains and some twelve kilometres south of Manapouri is notable among other things in that it is a "created" wetland. It is owned, managed and has been developed by the Southland Acclimatisation Society.

Situated on the Waiau river flats on the western portion of Redcliff Station was a large and very old river ox-bow. It consisted almost entirely of a heavy growth of flax, carex and some native shrubs. There were only two small open water ponds in the whole area. For many years the Acclimatisation Society had been interested in the area because of its existing and potential wildlife habitat values. This interest was understood by the Station owner Mr Bill Speight. His subsequent generosity has proved to be something of a milestone in wildlife management in the deep south.

In the early 1970s while in the process of carrying out major agricultural developments on the Station, Bill Speight offered the ox-bow area to the Society as a gift subject to the Society bearing the cost of boundary definition and survey. This splendid offer was gratefully accepted by the Society. Subsequent to the pay-

ment of a nominal 10 cents and a \$1500 survey bill, the Society acquired freehold title to the 257 acre property.

### PLANNING AND DEVELOPMENT

A thorough assessment of development potential was undertaken by the Society's field officers and in particular Ian Mathieson who has outstanding ability in this respect, but generally it was team work as usual.

There were two main initial activities. Firstly taking careful levels to determine the height and length of dams to impound water, and secondly much probing along the proposed dam sites to ascertain depth of soil and nature of the substrate. It was found that soils were generally shallow and overlaid heavy boulders and gravels of the old river bed except for one critical area where there was 14 feet of soft mud. This created an engineering problem but was solved by using explosives to blow a deep trench prior to filling with solid material.

It was concluded that by raising water levels 20" 36" respectively, shallow water areas of 40 acres and 70 acres could be created. Following the survey a comprehensive report covering objectives, proposed works and estimates was presented to the Society's Council with staff recommendations that the work proceed. Work included approximately 1000 metres of earth dams, fencing, access tracks and tree planting. A water "right" to divert a creek and impound the water were necessary and was subsequently granted by the Southland Catchment Board in generous terms. "For a period of such as the area is designated a wildlife habitat".

The principal objectives of the project were



1976 assessments — shrewd eyes assess the wetland potential.

1. The securing, and if possible, the enhancement of the habitat for the benefit of wildlife.
2. Obtaining the maximum use of the area for recreation, study and general enjoyment by members of the Society, local residents and the general public without endangering the wildlife or its habitat.

The Council supported the staff recommendations strongly and works commenced in February 1977 under staff supervision. The South Island Council of Acclimatisation Societies supported the proposal with a \$3,300 grant. Total expenditure over the whole development was in excess of \$20,000.

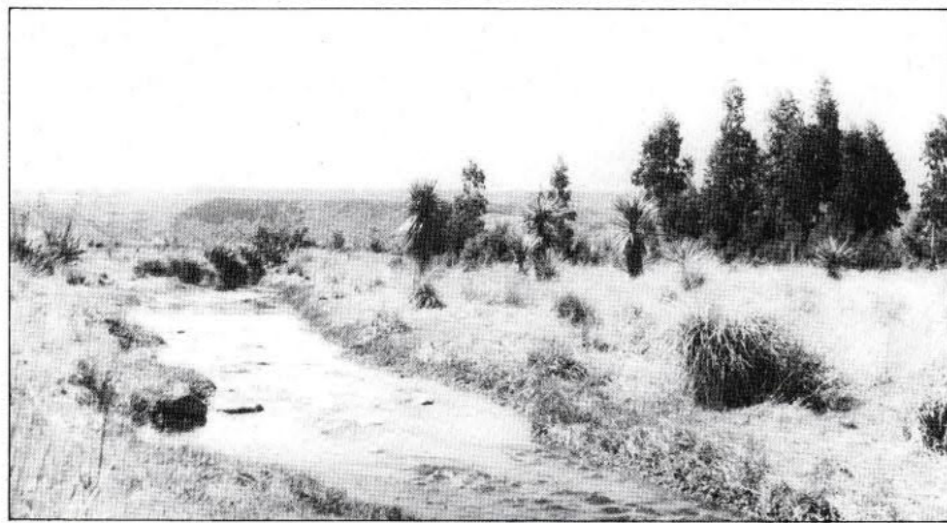
Work went according to plan although not without problems. Good dam building material was at a premium but ingenuity and tenacity prevailed. To the credit of all concerned the new earthworks withstood an all time heavy flood two months later, but not without some anxious moments and more tenacity on the part of Field Officer Mathieson.

Essential fencing came later as did tree planting and a work base hut. Signposting and an off road picnic area and observation point was established with the approval of Wallace County Council. Mainly native trees were planted. In particular kowhai, hebe and cab-

Commencement of earthworks on the 600 metres lower dam wall, 1977. In lieu of using explosives a trench was cut in the underlying soft mud, with the bulldozer operating from an initial working platform.



Redcliff Wetland Reserve site, pre development in 1976.



The sign at the roadside picnic and observation area. Shown in the photo is Southland Acclimatisation Society Field Officer Ian Mathieson.

bage trees. Many flowered for the first time in 1984.

One of the very first undertakings had been the complete spraying of limited noxious weeds in the area. Tight control of this had been maintained. Complete eradication is an attainable objective.

A section of the 'created' outlet creek. 1978 tree plantings and protected stream margins showing up well in the absence of browsing stock.

**WILDLIFE RESPONSE**

Wildlife present prior to development was minimal but in some respects important. Marsh crake and Pukeko were present as was a modest population of fernbirds. Odd pairs of Paradise, Grey and Mallard duck had been recorded, mainly in the breeding season.

In presenting the development proposal, certain predictions were made as to the species that would be attracted as a result. Within one month of completion of earthworks all these predictions were realized. This included the arrival of Grey Teal, Shoveler, N.Z.

Scaup, Black swan and Canada goose. Later there were some very pleasant surprises including three species of grebe present at the same time. Bittern were recorded breeding. In the initial year breeding species increased by 76.9% and it was apparent that the project was headed for success. The question of future management and status of the area arose.

**MONITORING PERIOD**

Following monthly observations over year one, Council resolved that it would be inap-

propriate to adopt a management programme on minimal data and at a time when both fauna and flora were still undergoing adjustment. It was decided that two more years of regular observation were required before writing a management plan. The results of three years of monthly counts of water associated birds are summarised in table I which indicates the status and relative abundance over the period 1978-80.

As can be seen N.Z. Scaup were the dominant species, the average number present at any one time was 176. They were also the

**TABLE I**

Species	Average Annual % of Population	Breeding	Feeding	Loafing	Moulting
Grey Duck	5.27	x	x	x	x
Mallard Duck	19.33	x	x	x	x
Paradise Duck	16.55	x		x	x
Shoveler Duck	7.92	x	x	x	x
Grey Teal	1.90	1978 Only	x	x	?
N.Z. Scaup	20.43	x	x	x	x
Black Swan	1.18	x	x	x	x
Canada Goose	5.48	x	x	x	
Pukeko	2.48	x	x	x	x
Bittern	.03	x	x		
Marsh Crake	.01	Probably	x	x	x
White-faced Heron	.38		x	x	
Little Shag	.52		x	x	
Black Shag	.19		x	x	
Pied Stilt	1.68	x	x	x	
Spur-winged Plover	1.40	x	x	x	x
S.I.P. Oystercatcher	.20	1978 Only	x	x	
Black-billed Gull	13.52		x	x	x
Black-backed Gull	.62			x	
Black-fronted Tern	.04		x		
Hoary-headed Grebe	.18	x	x	x	x
Aust. Little Grebe	.09	?	x	x	
Crested Grebe	.009	(1 record only)	x		
Welcome Swallow	.18		x		
Fernbird	.02	x	x	x	x
Harrier Hawk	.45	x	x	x	x
N.Z. Falcon	.003	(1 record only)	x		

**PERCENTAGE - GAME AND NON GAME BIRDS**

	1978	1979	1980	3 Year Average
Game Birds	50.24%	57.58%	55.94%	55.58%
Non Game Birds	49.76%	42.42%	44.06%	45.41%

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dominant breeding species. Paradise duck were also strong breeders. Moulting flocks of Paradise built up over the period to about 1,300. By the summer of 1985 peak moulting flocks was about 3,500.

Ever present species such as crake, fern-bird and bittern were never adequately assessed due to their secretive habits. Numbers recorded for these species were absolutely minimal as indeed was the case with most other species.

During the monitoring period it became apparent that a useful self-supporting trout fishery had also been created. Brown and rainbow trout of up to 6lbs in weight have been regularly caught by anglers in the larger and deeper pond. Trout have also become established in the half mile of new creek created by development works.

#### MANAGEMENT AND STATUS

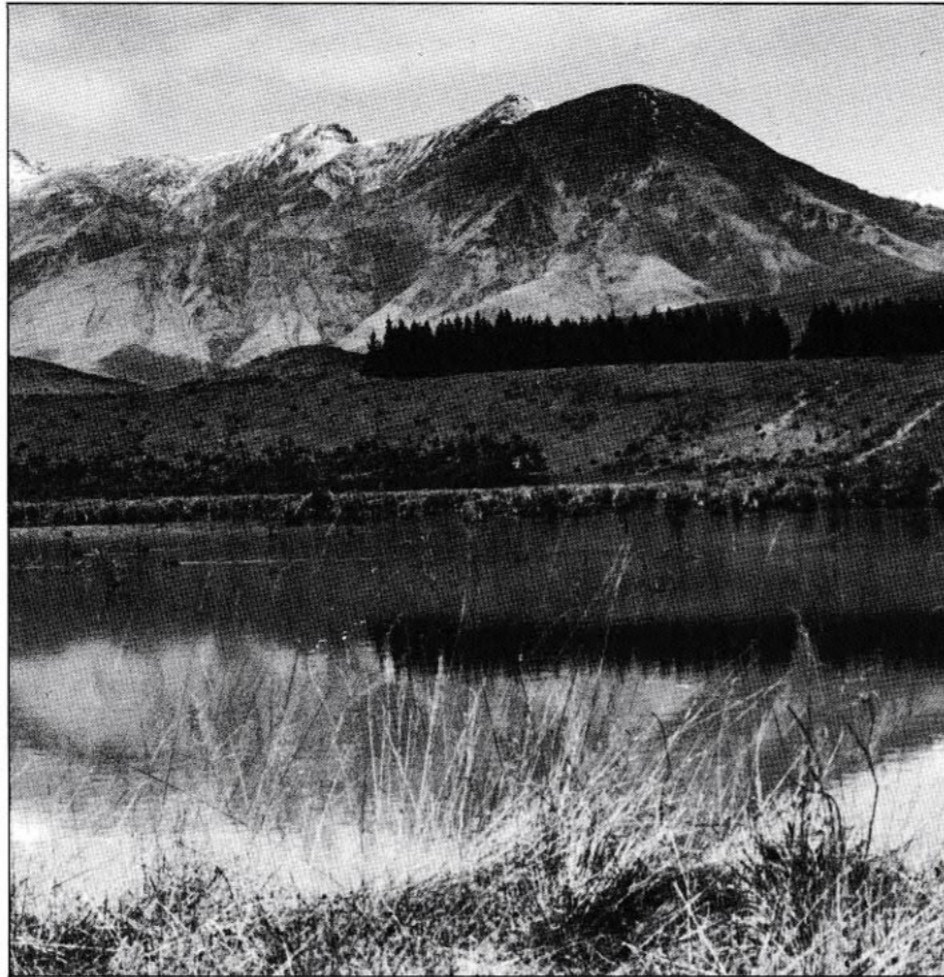
It will be noted that about half the wildlife present are non-game bird species. This had some bearing on the decision not to permit shooting within the reserve. The various options open to the Society regarding the reserve status were closely examined. It was finally decided that an "open space covenant" with the Queen Elizabeth II National Trust was the best choice. The adopted management plan is an integral part of the covenant agreement. In making the choice two main factors became apparent

a. The open space covenant gave the area the best measure of protection in perpetuity.  
b. It gave the Society complete control of the area on their own terms without risk of Departmental interference which all other options including the provisions of the Wildlife Act presented.

The covenant is now registered against the Society's title to the land and management is now proceeding according to plan. This has encouraged many organized groups and individuals to visit the area for study and enjoyment. Ornithologists in particular are attracted to the area. Off site, indirect benefit to game bird hunters is apparent.

#### OBJECTIVES FULFILLED

The development of the Redcliff Wetland Reserve is among the largest of many habitat



Looking east to the Takitimu Mountains, across a portion of the upper ponding area.

creation and maintenance projects undertaken by the Southland Acclimatisation Society over recent years. It is squarely in line with the Society's statutory obligations and a good example of the benefits which accrue to non game protected species as a result of habitat development work carried out by Acclimatisation Societies.

Watching the vacuum formed by the creation of new habitat being filled has been an exciting and satisfying experience. This created

habitat is described by some as the most significant of its kind in New Zealand. The immediate benefactors are the birds and fishes. Continued good management should insure benefits to man also in perpetuity.

(Roger Sutton retired recently after many years as Senior Field Officer with the Southland Acclimatisation Society. He was awarded the MBE last year for his services to conservation. In his 'retirement' Roger acts as regional representative of the QEII National Trust and in this capacity performed outstanding work in producing the initial draft of the Management Plan for the Sinclair Wetlands. Editor)

# GRANT DUMBELL'S SECOND GREAT BARRIER ISLAND BROWN TEAL RESEARCH REPORT

This second six month period, to the end of May, has spanned the summer months and has included four more trips to the island for a total of 57 days in the field. During this time the birds have completed their annual moult and the males have undergone their second body moult to assume their nuptial plumage.

The colour banding programme has continued and 166 birds have now been trapped. A roostwise breakdown of the banding totals is given in Table 1. Of these 47 (28.3%) have subsequently been resighted while only 3 (1.8%) have been recaptured. Trapping has been discontinued over the winter as this is when the teal breed on Great Barrier. This will also allow the birds time to forget their trapping experiences and will hopefully promote the same trapping success this November as was achieved last November when 90 birds were handled in five days.

BANDING SITE	FEMALES	MALES	TOTAL	SEX RATIO
Whangapoua (Northern site)	31	21	52	1.48 : 1
Awana (Central site)	39	23	62	1.70 : 1
Saltwater (Southern site)	29	23	52	1.26 : 1
TOTAL	99	67	166	1.48 : 1

TABLE 1: A roostwise breakdown of banding success to date.

Even though these sex ratios appear to be markedly skewed a chi-square test shows that none are significantly different from 1:1. However, this doesn't rule out the possibility that a significant asymmetry will be detected with further data. Having such a spread of banded birds across the island has allowed movements away from the trapsites to be detected. Already eight (4.8%) birds have been resighted away

from their banding sites and the largest movement detected has been 19km. This bird has subsequently been resident in its new area for three months.

Since December an island survey has been

D.U. member Donna Exance assisting with the release of Brown Teal at Takou Bay. Neil Hayes. Photo.



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completed each trip. These surveys take in 24 count sites around the island. These sites are either known or presumed to be used by teal at some stage during the year and by building up this survey data any gross annual habitat changes can be detected. Weller (*Notornis* 22:246-7) first noticed these in 1974 when he recorded the teal's seasonal use of estuaries on Great Barrier Island. It appears that some birds move into the island's west coast harbours to feed in a marine environment over the summer. Those that remain in the large roosts may also feed on the coast as indicated by the amount of black mussel shell in faeces collected from the roosts expect the teal to abandon the west coast over the winter breeding period. Numbers on the roosts are also expected to drop between late June and August as paired birds leave to nest in seclusion. A more refined habitat recording system will be used now that broad trends are known. This system has been developed by the Wildlife

Service through their work on the Ahuriri River and at Lake Wairarapa.

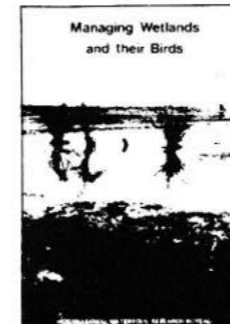
The island surveys also generate a minimum number alive statistic and currently the best counts have been of at least 1015 Brown teal over a 53 hour period. This implies that previous population estimates have been conservative but it doesn't give any indication as to the status of the population. Is it increasing, stable or declining? Further work is needed to determine the age structure of the population. In this respect captive teal are being used to arrive at aging criteria for both ducklings and fledged birds. The Otorohanga Zoological Society have made their population of teal available for this work through the generosity of Martin Fingland, and already a rough idea of duckling growth has been achieved from an out of season clutch. Once this can be combined with productivity and age class mortality, the population's capacity for increase will be revealed.

The population structure will be further investigated using gel electrophoresis. Blood samples will be taken from a sample of birds from each trap site in an effort to determine whether there is geneflow between the roosts. This cannot be determined by simply recording movements between roost sites because there is no guarantee that a bird will breed at its new roost. Obviously the management implications for several small and discrete sub-populations are completely different compared to one large free mixing population.

Now that the breeding season is approaching, the birds use the roosts for courtship and pair bonding can be investigated. This work will continue over the winter and spring until at least November when the birds are known to moult. At that stage a complete annual cycle will have been witnessed and this will allow a further refining of study objectives. Any problem areas will then be illuminated and can then be dealt with over the ensuing months.



Brown Teal habitat at Takou Bay, Northland. Neil Hayes.



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