

# Flight

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NEW ZEALAND REGISTERED MAGAZINE

DUCKS UNLIMITED'S  
QUARTERLY  
WATERFOWL JOURNAL



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### Photography:

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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 1800 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.

"FLIGHT" IS PRINTED BY LITHOGRAPHIC SERVICES LTD, LOWER HUTT

# PRESIDENT'S COLUMN

**W**hat a tremendous start for 1986 with the announcement in the New Year Honours of an MBE for Horace Alexander Sinclair of Outram, for Services to Conservation.

May I convey congratulations to Horrie on behalf of all D.U. members. A most deserved tribute to a gentleman whose promotion of wetlands conservation is an example to all and whose input will be unsurpassed for many years. On a recent visit to Dunedin to discuss the revised plans for the Sinclair Wetlands building complex (shown elsewhere in this issue) I was introduced to the Owen's family who have been neighbours and special friends of Horrie for many years. Their courage and enthusiasm towards the wetlands complex greatly increased my confidence in the proposed building. And while on safari with Horrie it was obvious that the whole affair had the enthusiastic support of all the locals.

Being hosted with Bill and Audrey McLay was a mighty experience and I know that with such a great group of people in Dunedin Ducks Unlimited affairs are in very safe hands.

There are many and various means to achieve an objective such as the building complex and the recently established Sinclair Wetlands Committee are greatly encouraged by the support received to date.

And with the tremendous strength and support of the QEII National Trust, the Wildlife Service and the Otago Acclimatisation Society, plus great support from individuals, we will be really able to forge ahead over the next few months.

However, I should mention that to maintain our excellent progress it is vital that we fill the THC Wairakei on the 12th July.

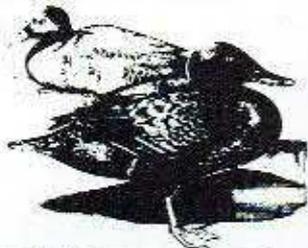
I should also, at this point, mention the enormous input for our annual meetings of Keith and Dulcie Barnett and the staff of THC Tokaanu, where we experienced four magnificent annual meetings. Their encouragement and hospitality shown to Directors at our quarterly meetings is greatly appreciated and this year we hope that Keith and Dulcie will be able to come and relax at this year's AGM at Wairakei.

To any members who have not witnessed auctioneer Bill Wilkinson in full cry at a D.U. annual meeting should come along to THC Wairakei and treat themselves to a great weekend.

Membership continues to steadily increase, but current members could perhaps be doing more to encourage all their friends and acquaintances to join. If this happened we could easily double our membership.

It is with considerable regret that I record the transfer of John Cheyne and his family from the National Wildlife Centre to Dunedin, where John will be the regional Conservator of Wildlife. Congratulations John; D.U. is extremely fortunate to have you in Dunedin and thanks you for your very significant contribution to Ducks Unlimited activities.

Jim Campbell



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**THC WAIRAKEI**

**Saturday & Sunday**

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**Plus the NATIONAL CLAY BIRD CHAMPIONSHIPS**

**JULY 11th, 1986**

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

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NUMBER ATTENDING .....

NUMBER OF ROOMS REQUIRED .....

NAME/S .....

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# Dream come true for Horrie, MBE

Receiving an MBE in the New Year's honours list capped off a dream come true for an "old Outram rabbitier."

Horrie Sinclair was awarded an MBE for his services to conservation work. A fitting honour for a man who for 20 years worked quietly away on his own conservation project while those around thought he was mad.

On October 1, 1960, Horrie Sinclair bought 779 acres (315 hectares) of wetlands between Lakes Waihola and Waipori. Originally the area had been drained for farmland, but when Horrie bought it the reversion to wetlands had begun. Horrie's aim was to maintain the wetlands, and he fought hard against pressure to drain the area.

"For the first 20 years everyone thought I was mad. Conservation was a dirty word, and anyone who practised it had lost their marbles," he said.

What other people thought was no deterrent to Horrie, who is well known for his willingness to speak out on matters that concern him. He battled on, against some heavy odds, including a massive stroke and other illness. Two years ago he retired at age 60 from the Lee Pest Destruction Board, where he'd been a rabbitier for 14 years.

Then on July 4, 1984 he announced that the wetlands were to be gifted to Ducks Unlimited, a New Zealand group set up in 1974 by a group of New Zealanders concerned that our waterfowl were not receiving the attention they deserved. One of the group's main aims is to reverse the decline of rare waterfowl, but also it is dedicated to the preservation, restoration and maintenance of wetland breeding habitat in New Zealand.

## BEST IN NZ

At the time of the announcement, the Sinclair Wetlands were already recognised as the best private wetland area in New Zealand, and ranked by international experts as among the 10 best in the world.

The agreement was signed in July last year, and the wetlands became the

property of Ducks Unlimited for the Government valuation price of the property. At the same time Horrie Sinclair became the manager of the wetlands, a position he will hold for the rest of his life.

There are some impressive plans for the wetlands, with building due to start in the very near future on a manager's residence which will include accommodation for visitors and a viewing platform. The wetlands themselves will also be developed and promise to become a real attraction for conservationists and tourists alike. The Queen Elizabeth II National Trust is also involved in the project.

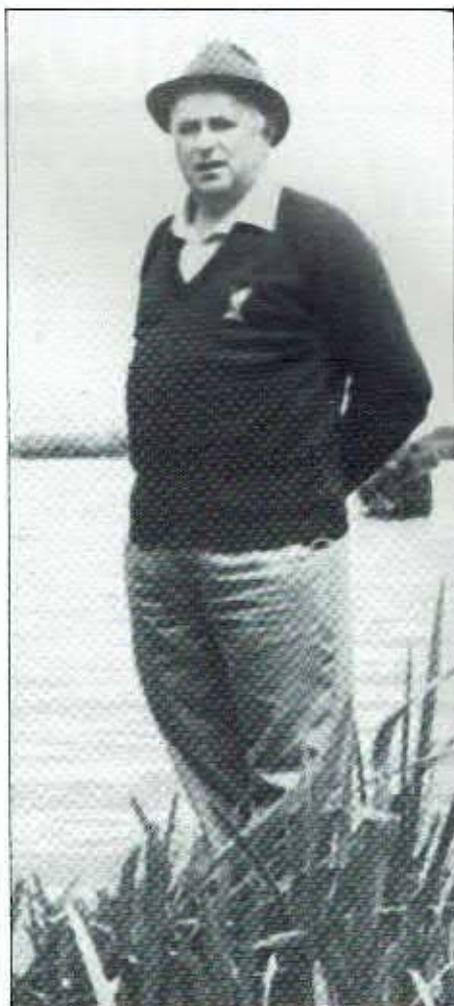
Berwick Forest is a neighbour of the wetlands, and Horrie Sinclair is a member of the Otago Youth Adventure Trust which has a camp in the forest. Already youngsters using the camp use the wetlands, and this use was allowed in the deal with Ducks Unlimited.

Until recently hunters were considered the greatest enemy of the wetlands. But when Horrie bought the area 25 years ago, hunting was one of his main purposes. He has maintained this interest and points out that in fact hunters are among the best conservationists, because it is in their interest to preserve the habitat of the game they hunt.

The Sinclair Wetlands are carefully managed, and in the weeks between pegging day and opening day little if any activity takes place in the area. Hunters are well rewarded for this constraint. One year a 30 acre lagoon in the wetlands had an estimated 100,000 ducks sitting on it.

And ducks aren't the only ones to live on the wetlands. An estimated 67 species of birds, including NZ Scaup, NZ Shoveler, NZ Paradise Shelduck, grey ducks, grey teal, mallard, brown teal, Black Swan, Canada geese, fern bird, bellbird, tui, native pigeon, banded rail, and so on have been found in the wetlands.

Even the Royal Forest and Bird Protection Society, which in the past has mainly been concerned with bush areas, has



HORACE ALEXANDER SINCLAIR  
MBE AT THE FAMOUS SINCLAIR  
WETLANDS/TAIERI HERALD

recognised the value of wetlands.

"We're being recognised by them and what I call the real groenies as well," Mr Sinclair smiles.

With the future of the wetlands safe, Horrie is looking forward to living out there. Until then he lives in Outram, where everyone knows the old bachelor rabbitier whose dream has come true.

(THIS EXCELLENT PIECE OF JOURNALISM IS COURTESY OF THE TAIERI HERALD AND WAS PUBLISHED 7.1.86. EDITOR)

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# D.U. NEWS

## D.U. NATIONAL RAFFLE

The cover photo in this issue shows a magnificent bronze shoveler duck. The sculpture is a full size production and sits on a sculptured copper base, which in turn sits on a solid mahogany base.

This work of art was commissioned by Ducks Unlimited and was created by Wairarapa based artist Carol Druca. Interestingly enough, Carol is an avid waterfowl hunter and actually shot the shoveler used as a specimen — during the 1985 duck season. If current plans eventuate the bronze shoveler will be the main prize in a D.U. national raffle and all D.U. members will have the opportunity to purchase tickets. Two other prizes will be offered for second and third places.

It is hoped to create a total of five bronze shovelers and the remaining four will be offered for sale, at a price yet to be finalised, but certainly not less than \$1,500 per shoveler.

The bronze shoveler certainly represents New Zealand art at its very best and we hope that this new D.U. project will be well supported by members. If the project is successful Carol has generously offered to produce a new bronze waterfowl each year. All funds raised will go towards wetland habitat creation.

## OPEN SPACE COVENANT

A QEII National Trust Open Space Covenant for the Sinclair Wetlands was signed on behalf of Ducks Unlimited by Jim Campbell, Neil Hayes and Brendan Coe at the National Trust's offices in Wellington on the 4th December.

The Covenant protects the wetlands in perpetuity from any changes that would adversely affect the unique flora and fauna in the wetlands. The covenant also sets down the criteria for long term management of the wetlands and one requirement is for the establishment of a management committee having equal representation from D.U. and QEII. Covenant signing on behalf of the National Trust was done by the Hon. Leslie Gandar, Chairman of the Trust, Dr Alan Edmonds, Manager of the Trust, and Gordon Stephenson, the Trust's Deputy Chairman.

Ducks Unlimited thanks the National Trust for its very considerable involvement and support and looks forward to a long and successful association.

## 1986 ANNUAL MEETING

As announced in the last Flight, Diane Pritt is again co-ordinating registrations and accommodation requirements for the 1986 Annual Meeting, to be held at THC Wairakei on the weekend of 11th, 12th & 13th July. Another registration form is printed in this issue and a \$30 registration fee is required. The full programme for the annual meeting will be published in the June issue of Flight.

## FATE

Some 28 years ago at Turangi two young acclimatisation society rangers shared the same quarters while attending a rangers course. Roger Sutton, who was one of those young rangers and until recent retirement

Senior Field Officer with the Southland Acclimatisation Society, received the MBE in 1984 for his services to conservation. His room mate all those years ago was none other than Horrie Sinclair MBE.

## NEW BUILDING DESIGN PROPOSED FOR THE SINCLAIR WETLAND

In an effort to include most of the criteria set down for the Sinclair Wetlands building programme — managers accommodation, visitors accommodation, public education facilities, workshop and scope for expansion — a new design of building has been proposed.

Cost of the new design would normally be considerably more than the initial proposal, but with the help being offered in the Dunedin area it seems likely that the overall costs are likely to be no greater than for the earlier design.

An architect is currently producing working drawings and specifications and these will be submitted for Government approval before seeking a building permit. In an area which has reserve status all building proposals must be approved by the Minister of Internal Affairs.

## FUND RAISING

The Sinclair Wetlands fund raising programme continues to go well and now stands at very close to \$50,000 — an incredible achievement for such a relatively small organisation.

Hopefully the fund raising pamphlet which was said to be included with the last Flight, and wasn't, will be included with this issue.

Since the last Flight donations have been received from the following:

Mrs O. Beaumont  
Mrs G. M. Todd  
J. Worth (2nd donation)  
Mair Industrial Marketing  
L. P. Nash  
A. J. Millar

D. G. Bell  
M. G. Gould  
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D. P. O'Connor  
W. Sanderling

## BAND RECOVERY

The Banding Office of the Wildlife Service has recently sent D.U. a band from a mallard (or possibly a grey duck) shot during the 1985 duck season near Auckland.

The band is aluminium and carries the stamped inscription — VIC 3 N79 D.U. Naturally the banding office thought this band had something to do with Ducks Unlimited, but D.U. Directors know nothing about it.

All bird banding in New Zealand is very strictly and legally controlled and only approved operators using official bands are permitted to carry out bird banding. As an official banding operator Ducks Unlimited is concerned that one of its members may be carrying out what is an illegal activity.

Obviously with so much interest in the captive rearing of waterfowl it is only natural that members breeding waterfowl would like to keep track of their birds after release and this can be readily achieved, but only under

**STOP PRESS**  
THE N.Z. WILDLIFE SERVICE HAS JUST ANNOUNCED AN AWARD OF \$5,000 TO D.U. N.Z. FURTHER DETAILS IN JUNE "FLIGHT"



CANADA GOSLINGS AT JIM CAMPBELLS/GARY GIRVAN

an officially approved banding programme. Incidentally, this latest band is the second of the same type to come from the Auckland district.

If you know anything about the band please write to Neil Hayes who will treat the matter with strict confidentiality.

### WELLINGTON CHAPTER FUND RAISING CLAY TARGET SHOOT

Sunday 1 December, Wellington, misty, wet, 20 shooters turned out to the Small Game Shooters' range for a fundraising shoot. The 50-bird programme consisted of all simulated field targets.

The misty conditions and showers of rain added to the realism — some shooters even withdrew, unable to see targets in the mist.

The day was enjoyed by all, regardless of the conditions and resulted in \$115.00 being raised for Ducks Unlimited.

Placegetters: 1st F. Kent  
2nd R. Moyle

Thanks to all who attended at short notice.

### EKETAHUNA CHAPTER

A D.U. Sporting clay shoot will be held at the Eketahuna Gun Club on Sunday 30th March at 10.00 am.

### THE 3RD DUCKS UNLIMITED NATIONAL CLAY TARGET CHAMPIONSHIPS

This years national championships will be held at the Taupo Gun Club on Friday 11th July 1986 commencing at 8.30am, and is again being run by the Taumarunui Chapter, who have done outstandingly well in organising these very important fund raising championships. Each event will again be limited to 60 entries, so please ensure that you send in the form below very promptly. The last two championships have seen all events fully subscribed and this annual event has developed into a major national championship. On Saturday, starting at 9am, there will be a N.Z.D.U. Team shoot, plus a 5 man Chapter teams match.

### MEMBERSHIP

**New Life Member.** Myles White of Dunedin has become our 18th Life member. D.U. was delighted to receive Myles letter in early February; his letter is certainly a pleasure to print.

\*Dear D.U.,

After a two year association with Ducks Unlimited the time has come for me to strengthen my commitment.

Originally one of Horrie Sinclair's recruits, I was sceptical of what could be achieved, but in a short time I have been a member great progress has been made — you have had a healthy increase in membership, your programme of rearing and releasing some of our endangered waterfowl, and most important of all some prime habitat has been saved.

I can see that D.U. will in the future have an ever increasing part to play to ensure the preservation of what little wetland we have left, and thus secure the survival of all our waterfowl.

To these ends I realise the importance of money and manpower and I want to be able to offer you both. I have therefore decided to become a Life member. Would you please accept my cheque for \$500.

Yours etc,  
Myles White\*

**New Trade members.** Messrs J. R. Morris of Hikurangi, Northland, R.A. Stanton of Christchurch, M. Wennick of Galatea and A. Terpstra of Murupara have become new Trade members.

**New Sponsor member.** Mr J. C. Field of Hastings has recently become a D.U. Sponsor member.

Membership continues to rise at a healthy rate, thanks largely to a TV repeat of the Country Calendar/Sinclair Wetlands programme in December and to the efforts of Horrie Sinclair who sent in twenty new members in January this year! Just shows what's possible.

### NEW PROJECT

Over the last fifteen years the Mute Swan population in the wilds of New Zealand has shrunk from several thousand to possibly less than one hundred birds. It is likely that the infamous 'Wahine Storm' in 1968 was a major contributor to the decline.

Ducks Unlimited, in association with the Wildlife Service and through the generosity of the Isaac Wildlife Trust, hope to rectify the situation by establishing a broad based captive rearing programme for Mute Swan and releasing progeny in to suitable wild areas. Around twenty D.U. members have so far been invited to participate in the project and the initial response has been excellent.

Naturally a well fenced pond is required for Mute's and supplementary feeding will be essential. Ponds will also need to be un-shot.

One condition applying to those joining the project is that all progeny must be passed on to D.U. for release in to the wild or for transfer to other breeders.

D.U. Director Jim Glover is acting as D.U.'s project supervisor and if any members who have not already been asked are interested in joining this important project please let Jim know through P.O. Box 44.176.

### VIDEO TAPES

A reminder that we have three video tapes for loan to members — D.U./Country Calendar, Sinclair Wetlands/Country Calendar and Sinclair Wetlands/Hidden Places. The tapes are available for two week periods from Box 44.176, Lower Hutt. Please remember to include \$10 to cover postage and packing.

### WETLAND POLICY ANNOUNCED

A national policy for the management of wetlands has been ratified by the Government.

The Minister for the Environment, Mr Marshall, said that, as a signatory to the interna-

### 1986 DUCKS UNLIMITED N.Z. CHAMPIONSHIP ENTRY FORM

	Entry fee	Targets	Sweep	Total cost	Your Total
Skeet (25 tgts)	\$7.00	\$4.50	\$2.00	\$13.50	
Sporting (20)	7.00	3.60	2.00	12.60	
Sparrows (15)	7.00	2.70	2.00	11.70	
Double Rise (10 pr)	7.00	3.60	2.00	12.60	
Single Rise (25)	7.00	4.50	2.00	13.50	
Single Barrel (20)	7.00	3.60	2.00	12.60	
Pointscore (20)	7.00	3.60	2.00	12.60	
High Gun	—	—	2.00	2.00	

NAME & ADDRESS .....

TOTAL \$91.10

11th & 12th  
JULY  
1986

Skeet Grade .....

DTL Grade .....

(Please tick the events you wish to enter)

TAUPO  
GUN  
CLUB

POST TO: Gavin Brears, P.O. Box 124 TAUMARUNUI. (Entries close June 30th)

tional Convention on Wetlands. New Zealand shared international concern for the loss of wetlands as a habitat.

"The need for a co-ordinated policy has been long overdue, and this move recognises the need to retain natural wetland ecosystems."

It also recognised the many functions of wetlands — importance to native flora and fauna, hydrological role, and importance to landscape. Objectives of the National Wetlands Policy include:

- Acting urgently to protect by reservation additional wetlands.
- Protecting wetlands of national importance, and where appropriate, wetlands of regional and local importance.
- Protecting and managing habitats important to native flora and fauna and giving priority to rare and endangered species and habitats of importance to migratory bird species.
- Promoting public awareness of wetland values and encouraging public participation in planning.
- Preserving opportunities afforded by wetlands for education, scientific study, and recreation.
- Promoting the tourism and recreational potential of wetlands.

#### BILLION DOLLAR PLAN FOR WATERFOWL IN NORTH AMERICA

More than 3.6 million acres of Canadian prairie wetlands are to be protected and improved under a billion-dollar international program designed to halt the plunge in North America's waterfowl population.

In the planning stage for the past year, the North American Waterfowl Management Plan (NAWMP) will harness conservation resources of federal, state, provincial and

private agencies for a determined assault on the problem of disappearing habitats and tumbling waterfowl populations.

Prepared by a task force of high level U.S. and Canadian wildlife officials, NAWMP is under review by provincial wildlife ministers in Canada and state and regional waterfowl managers in the U.S. Following revision, the 15-year plan will be released for public input at the end of October, with an enabling agreement to be signed March 15, 1986.

The plan calls for a massive flow of U.S. and Canadian private and public funds into Western Canada — particularly Alberta — in hopes of reversing the loss of waterfowl habitat that, together with drought and increased hunting, has reduced North America's waterfowl population to a level 40 per cent below what it was a decade ago.

The plan calls for:

- Compensation for farmers and other landowners to discourage them from ploughing up marginal wetlands and encouraging them to permanently dedicate these to waterfowl habitat. A flexible system of cash payments, tax concessions, or other inducements, such as property improvements or mortgage interest rate relief is envisaged.
- Encouraging provincial and state governments to earmark suitable public wetlands as permanent waterfowl habitat. Co-operating provinces or states would get credit in calculating contributions to the overall cost of the plan.
- Construction over a 15-year period of hundreds of canals, dams, weirs, and other water retention, transfer and control works throughout the three prairie provinces, the summer home and breeding ground for 70 per cent of North America's waterfowl population.

• Major public funding for the preservation work of private volunteer agencies, notably Ducks Unlimited.

• Eventual introduction of an agricultural component into the NAWMP plan, which would ensure that NAWMP projects also produce a residual benefit for agriculture in the form of improved soil quality and irrigation enhancement.

#### D.U. MEMBERS SUCCESSFUL AT N.I. CHAMPIONSHIPS

Two D.U. members achieved notable success at the recent North Island Clay Target Championships; Gavin Brears, Taumarunui Chapter Chairman, won the Sparrows Championship and Barry McDonald won the Double Rise Championship.

#### "RIVER IN QUESTION" — MANGANUI-A-TE-AO

A video film is now available about a river — a beautiful unmodified river, seen by some as a potential source of hydro-electric power, by others as an irreplaceable piece of wild New Zealand.

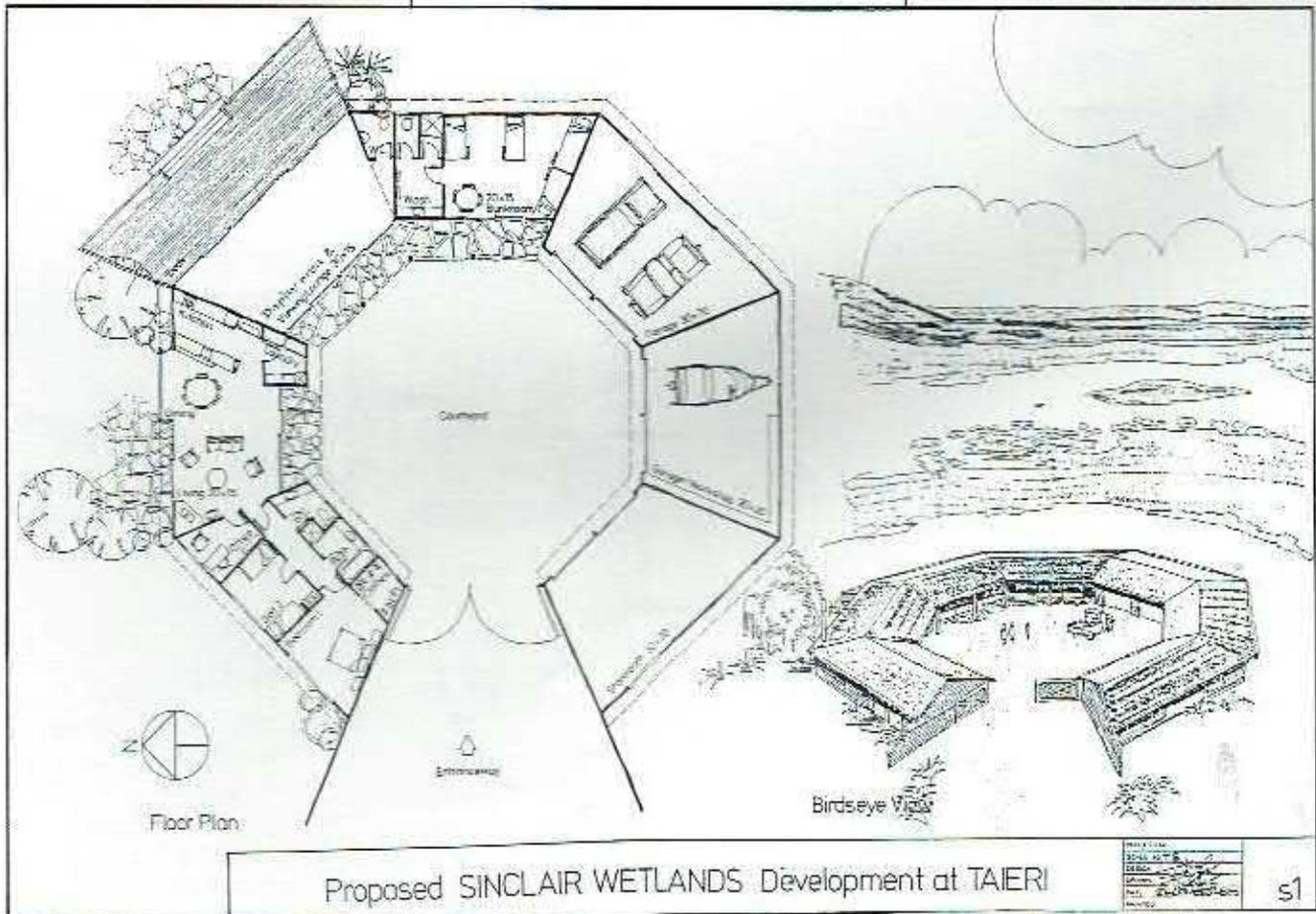
Through native bush, farmland and remote gorges, the film follows the Manganui-a-te-Ao from its source on volcanic Mount Ruapehu to its meeting with the Wanganui River.

Rare blue duck, brown and rainbow trout and other natural values together with Maori history and legends are explored through the eyes of the scientists, anglers, and white water rafters who seek to protect this unique river.

Two video versions available — 50 minutes and 30 minutes.

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# WATERFOWL AND WETLANDS

Impressions from a visit to Victoria, Australia and participation in the RAOU's 'Waterfowl and Wetlands' symposium at Geelong in May 1984

K. E. Westerskov  
University of Otago

The decline in wetlands and the associated downturn in the maintenance and survival of waterfowl and other waterbirds are a universal problem, as acute in Australia as anywhere.

A two day seminar on 'Waterfowl and Wetlands' under the auspices of the Royal Australasian Ornithologists Union was held in Geelong, Victoria, 25-26 May 1984. This is a brief report of this important event which brought together a variety of people: wildlife biologists, ornithologists, wildlife managers, students and wildlife administrators, all sharing a common concern for the plight of waterbirds depending upon an easily affected habitat: the low-water, easily drained swamps, ponds and estuaries. My participation was made possible by grants from the University of Otago and the Otago Acclimatisation Society to which I am grateful for the opportunity to hear, see and learn and share views with Australian colleagues.

The first day was an all-day seminar session with ten talks and discussion, and the

second day was spent in the field, visiting a large waterfowl area (Werribee, Lake Borrie and the Murrumbidgee Wildlife Area) and the Sorredip Wildlife Research Station at Lara, operated by the Fisheries & Wildlife Division, Victoria Ministry of Conservation.

## Climate and waterbirds

Two papers were presented on the interaction of climate and waterbirds. Henry Nix spoke about the influence of climatic variables and the effect of bioclimate on the distribution of waterbirds; central Australia is dry, only coastal regions are wet; there is an increase in the number of species present up to an annual rainfall of 1000 mm, then decline. A moisture index is used. Differences in precipitation and dryness during the year are more important than either wet or dry all year round. In South Australia there is a close pattern of vegetation growth, water levels and waterfowl brooding. Typical of Australian waterfowl are their direct and immediate response to the advent of rain and associated growth of vegetation and provision of open water.

Norman McKay spoke of the climate of the Murray River system and its effect on waterbirds. The key feature of the climate is its variability. There is a general pattern of

summer rain in the north and winter rain in the south-east of the catchment, but rains are far from being reliable or predictable. Heavy rain causes variable stream-flow, resulting in opportunistic breeding behaviour of many species of waterbirds. Stocks of perch as well as waterfowl will only breed when the rain comes, perch will absorb eggs if there is no flush of water. Just water is not enough: it is when, how much and flow rate that are important for waterfowl.

## Waterfowl habitat and its management

Two papers dealt with the wetland habitat, the home of waterbirds.

Barry Dexter discussed the River Murray red gum forest, river regulation and management problems, especially in the Barman State Forest in northern Victoria. The red gum forest is usually flooded in winter and spring, forming a natural flood control reservoir protecting farm land. Natural regeneration of the forest is irregular

Grey duck (in Australia called black duck) is Australia's number two game duck; in foreground an Australian coot, now also breeding in New Zealand. — Photo K.E. Westerskov.



# DUCKS IN AUSTRALIA

following flooding, drought, seeding, and competitive vegetation. During droughts seeds are destroyed by rabbits and kangaroos, cattle grazing keeps weeds in check. Management attempts to maintain the red gum forest at various stages of development, enabling best use for timber production, recreation, grazing and as a waterbird habitat. This is achieved only if the forest is flooded at least every second year; however, recent intensive river regulation has seriously reduced winter/spring flooding in low lying areas, new problems to overcome to secure the red gum forests.

Also on the topic of Burmah forest, Richard Loyn spoke of the fluctuations of waterbird numbers in response to flood conditions. Peaks in waterfowl numbers in different areas of forest do not coincide, reproductive success depends upon local water conditions. Mean water levels must be high in September-October for successful waterfowl breeding. It is also important to keep water available, especially in colonial nesting species as ibises, long enough to

enable breeding cycles to be completed. Many ducks (including grey teal, grey duck in Australia called black duck, chestnut teal and pink-eared duck) nest in tree holes or open nests in tree holes or open nests in trees over water.

## Ibises and royal spoonbills

Kim Lowe presented an interesting account of the relationship and dependence of sacred ibises and royal spoonbills as predators on a local, widely distributed shrimp. The spoonbills depended largely on these shrimps and dropped 4% in May-July and 9% in August-December. A high dependence was shown of large wading birds on one or a few prey species, an equilibrium which can easily be upset through man's intervention.

## Duck foods and wood ducks

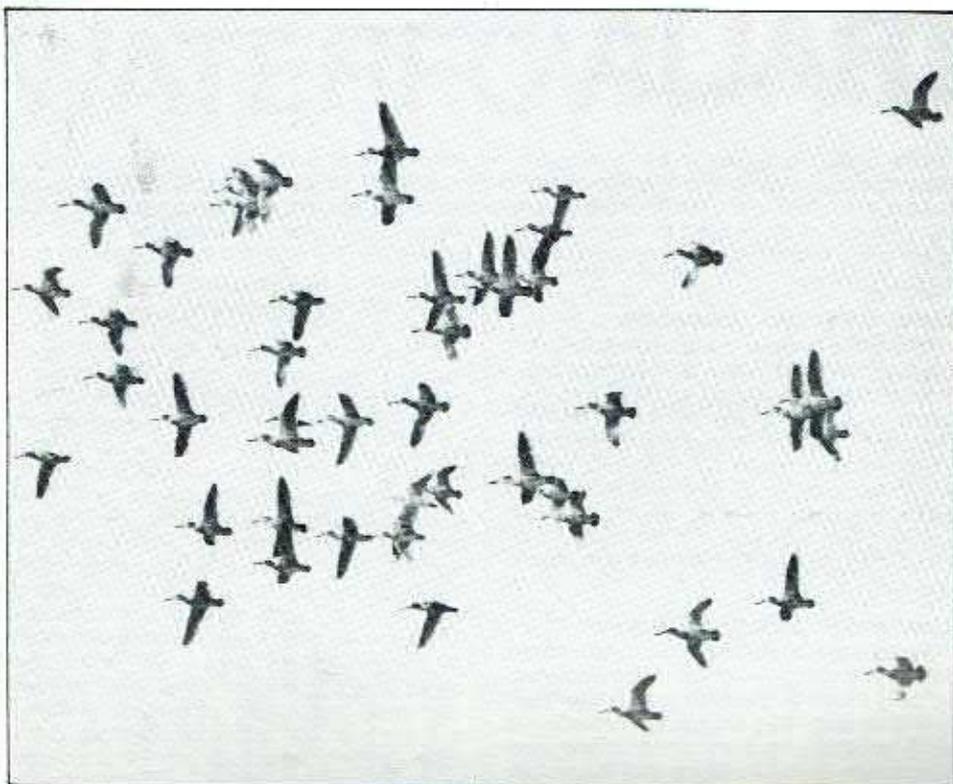
Earlier work by Dr Harry Firth had pointed out the existing relationship between wetland flooding, food supplies and waterfowl breeding. Sue Briggs continued this work by studying plant productivity and water chemistry in wetlands and found that plant productivity and nutrient levels were high in freshly flooded wetlands as plants respond to rising water. She also found that plant productivity was high in a flood year following wetland drying; accumulated plant matter provides food for invertebrates which

in turn are important for waterfowl brooding success. Continuous flooding was not beneficial and not recommended, whereas wetlands managed for waterfowl should be allowed to dry and re-flood periodically for maximum production.

The wood duck (also known as maned goose and not to be confused with the Carolina wood duck from North America recently introduced into New Zealand) was being studied by Richard Kingsford, a PhD student from Sydney University. Wood ducks had increased as a result of the building of farm dams (we call ponds) on pastorally improved agricultural land. This goose-like duck is a grazer much like our paradise duck, it is largely terrestrial and extremely wary; it grazes within close reach (20 m) of dams. In dry seasons no food is produced, and duck survival and reproduction are low; as examples of such variation, production figures were given for 3 study areas where in the good wet 1981-season 181 wood ducks were produced, surviving to flying from 204 ducklings hatched; in the following poor (dry) year only 31 ducklings were hatched of which 5 reached flying stage. The farm dams were very important in the further increase of this species, creating discrete habitats and increasing potential for reproduction.

A typical Australian waterfowl habitat — the billabong — the ponds, lakes, widened rivers, surround by gum trees and with changing water levels. — Photo by K.E. Westerskov.





### Classification and evaluation of wetlands

The last three papers were by Roger Jaensch on surveying for waterbirds, Andrew Corrick on wetland classification and mapping, and Robert Pressey on the various approaches to the evaluation of wetlands for conservation. An attempt has been made to develop a ranking system to identify areas with highest priority for protection. Two important attributes of wetlands were inherent biological value and those reflecting conservation capability. The waterbird survey in Western Australia was a major project with a leader and field assistant, both full-time; also co-operating were some 100-120 enthusiasts; birdwatchers, sportsmen, farmers. Difficulties were encountered in observing cryptic species such as bitterns and crakes; counts of the more visible ducks were much more reliable. Duck calls and recorded tapes were used. The large number of helpers were a very useful adjunct with much more data collected than by paid staff (and at less cost). It was found that individual observers as a result of varying ability. The survey is in

The pink-eared duck, also called zebra duck, is one of Australia's unique ducks, the only species in the world of its genus. It has a distinctive, erratic flight, showing off its enormous bill, head held high. — Photo K.E. Westerskov.

progress and plans are being made for a useful abundance index. Wetlands suitable for waterfowl were classified and mapped in Victoria, minimum sizes considered were 1 ha; 6 broad categories were used, such as freshwater meadows and shallow freshwater marshes. Many small and few large wetlands were encountered. The retention and preservation of wetlands depend in future to a large extent on private landowners.

### Murtcalm Wildlife Area and Lake Borrie

After an informative and full day of lectures and associated discussion, it was a pleasant but still useful experience to spend a morning visiting the large M.M.B.W. Farm area near Werribee, south-west of Mel-

bourne. Large numbers of waterbirds were observed in the extensive reservoirs near the sea. There were nesting colonies of various species of shags in addition to a great variety of waterfowl: Black swan, grey teal, the delightful pink-eared ducks (also called zebra ducks from their barred plumage).

The common game ducks of Victoria are (with percentage figures from shooting season kill of 82,000 ducks shot in south-east Australia, 1972-81, reported by L. W. Braithwaite):

	Per cent
Grey teal	52
Black duck (our grey duck)	24
Pink-eared duck	8
Wood duck	7
Shoveler	3
	94

The remaining 6 per cent made up of 7 other species.

A few more figures from Braithwaite's research are of interest to the New Zealand duck shooter — if for no other reason to show us how lucky we are here: over the 10-year period 1972-81 the number of duck hunters based on licence sales increased from 37,000 to 53,000 in Victoria; over this period the annual bag of ducks per hunter varied from under 2 to 8, average for the whole period: 2 ducks; average bag on opening day varied between 1 and 3 ducks per shooter. The most commonly shot ducks, grey teal and grey duck made up on average 75 per cent of the kill. There are no mallards in Australia — they are, however, found in pure or hybrid form (with grey ducks) in some city parks, occasionally elsewhere, but play no role at all as a game bird. In fact, Dr H. Frith wrote in his 'Waterfowl in Australia': "There is nothing at all to recommend mallards in the Australian bush and they should be shot on sight".

### Serendip Wildlife Research Station

In the afternoon we visited the Victoria Fisheries & Wildlife Division's field research station, 60 km south-west of Melbourne. The area covers 250 hectares with a 30 hectare lake in the centre. The research station was established in 1959 in this lowland, flat farming area; the lake was improved, grazing stock kept out, plantings made, ponds established. As vegetation flourished, new species of wildlife appeared with the result that today some 115 bird species have been observed, 60 species breeding.

The main emphasis of the research, management and development programme



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has been on the role of farmland in wildlife conservation. Experimental and display ponds show Australian waterfowl to the visitor. There is also an active breeding programme of both waterfowl (including the declining magpie goose and Cape Barren geese) and open country species now threatened by agriculture (such as bustard and brolga). The station and its wildlife has become a favourite place to visit for study by school parties, also sportsmen's groups and individual visitors. There is also a walk-through aviary with parrots and many other native birds.

What I found of particular interest from the sportsman's point-of-view were the special demonstration areas, in particular a demonstration pond which showed how it was built and how it is now managed for waterfowl (provision of logs for loafing spots, nest-island rafts, safe nesting cover, nest-boxes for grey teal, etc.). This ideal is well worth transplanting to New Zealand: establishment near some of our bigger cities (for easier access and maximal use) of one or two such demonstration ponds with adequate shelter for viewers — so the birds are disturbed as little as possible — and

The magpie goose, a somewhat ungainly combination of swan and goose, is a bird of northern Australia, formerly with breeding colonies also in Victoria. At the Serendip wildlife research station this bird is being bred and studied for future re-introduction into old haunts. — Photo K.E. Westerskov.

use and display of management tools, such as feeding and nesting shelters, nest-boxes, covered nest-island rafts, rest areas; hereto



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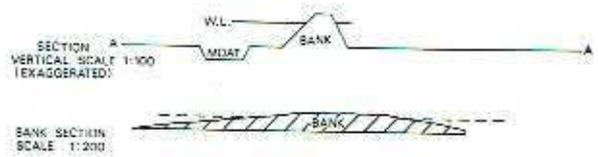
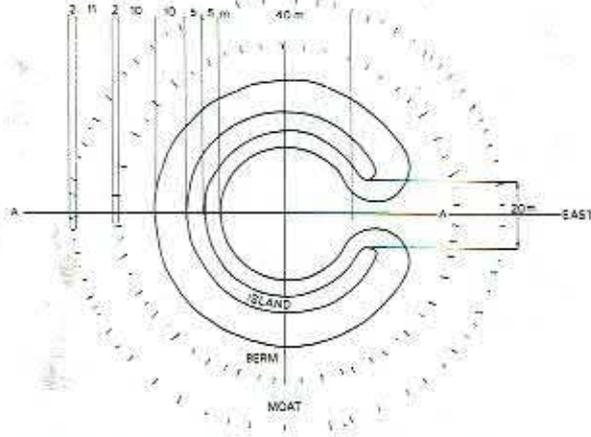
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OUTSIDE DIAMETER - Top: 40m Toe: 80m  
 LENGTH OF WATERLINE: 395m  
 VOLUME: 2470m<sup>3</sup> (Island = moat)  
 SURFACE AREA ABOVE WATERLINE: 1350m<sup>2</sup> (top width 9m)

Islands provide loafing, roosting, nesting and feeding space for ducks as well as more shore-line edge which in turn maximizes shallow (feeding) areas. An ideal waterfowl pond (shown here) with extended shore-line is described in the Victoria Fisheries & Wildlife Divisions Management Leaflet No. 2: Islands for wildlife in dams and swamps. Ideal water depth is 50 cm, height of island

50 cm, allowing for settling after construction. The U-shaped island shown has twice the length of edge than a circular island of similar size. Planted shrubs (and trees) provide shelter and nest cover, planted rushes and sedges in shallow water provide further cover. Plant only safe, locally-known, acceptable and useful vegetation.

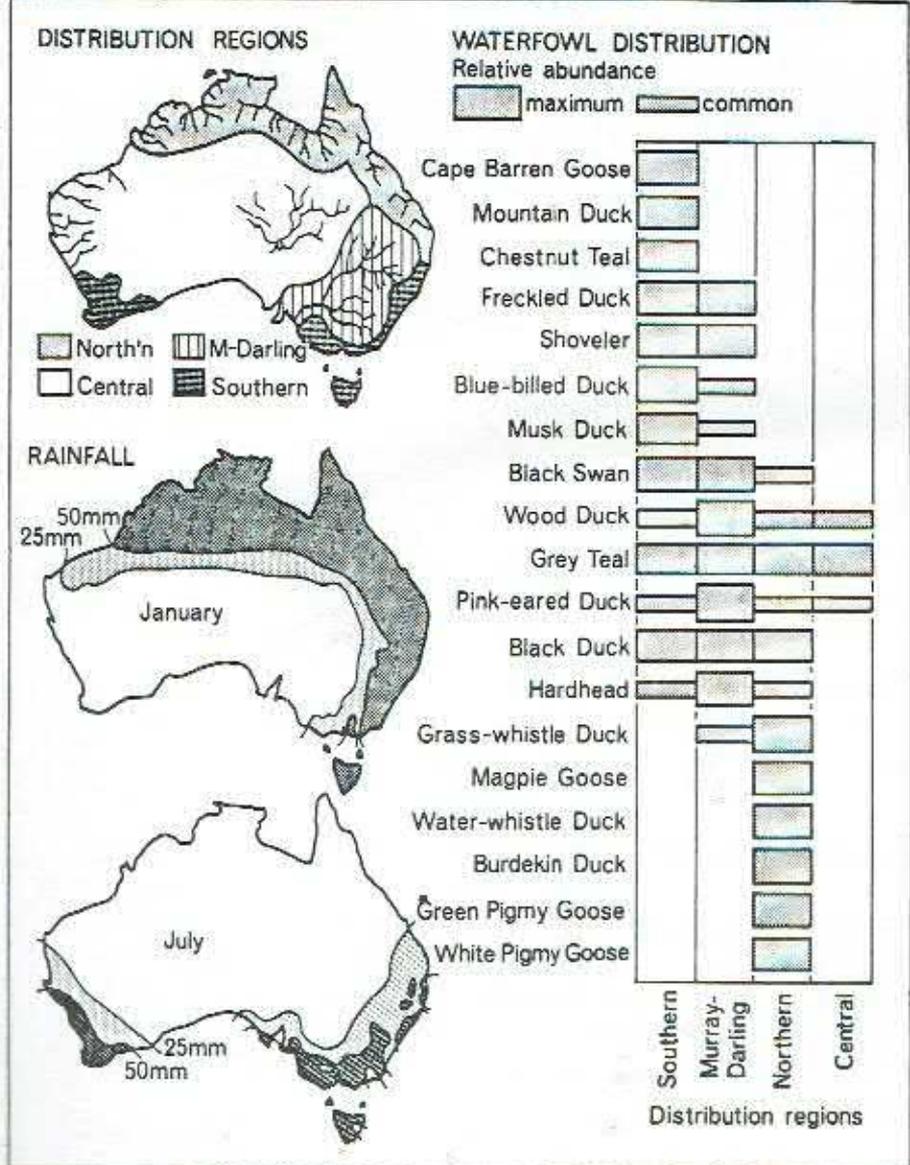
also descriptive explanations on posters. In addition to practical management and the experimental breeding programme, there has also been an active research programme with duck banding, breeding studies, weight and growth studies. Various native marsupials and introduced (hog) deer are also being studied.

**Conclusion**

The two-day conference on 'Waterfowl and Wetlands' was an outright success. Some concrete suggestions come to mind: (1) Anyone with an interest in waterfowl and wetlands and going to Melbourne should make a point of visiting Serendip research station; (2) Demonstration waterfowl ponds could be established near some of our major cities to show in practice how it is done and what can be accomplished; (3) Seeing a group of ornithologists, wildlife ecologists, administrators, wildlife managers, duck shooters and rangers together and sharing knowledge and practical know-how, one could not help but wonder what we could gain here in New Zealand from getting a similar group together, sharing similarly each from their own expertise and forgetting trivial political and personal views. The disappearance and decline of wetlands is also in this country one of the major problems facing conservation as well as wildlife management and thus ultimately also the duck shooter.

**SUGGESTED READING**

BRAITHWAITE, L.W. 1975. Managing waterfowl in Australia. *Proceedings of the Ecological Society of Australia* 3: 107-128.  
 BYRNE, J. 1974. *Duck Hunting in Australia and New Zealand*. A.H. & A.W. Reed, Wellington. 243 pp.  
 FRITH, H.J. 1982. *Waterfowl in Australia*. Angus & Robertson, Sydney. 332 pp.  
 HAIGH, C. (Ed.) 1984. *Wetlands in New South Wales*. National Parks & Wildlife Service, Sydney. 72 pp. (Of special interest: S.V. Briggs: Ducks, geese and swans. Pp. 45-51).  
 FISHERIES & WILDLIFE DIVISION VICTORIA. 1981. *Islands for wildlife in dams and swamps*. Wildlife Management Notes 2: 1-3. *Floating islands for waterbirds*. Wildlife Management Notes 3: 1-8. (These useful instruction leaflets are available from: Fisheries & Wildlife Division, 250 Victoria Parade, East Melbourne 3002, Australia).



Map and Diagram showing in a nutshell the distribution of Australian waterfowl and relationship with seasonal rainfall, based on the major drainage basin. Note high duck numbers in

coastal south-eastern Australia with light rainfall regimes, and shift in species occurrence and abundance from south to north. (After L.W. Braithwaite, 1975).

(A slightly abbreviated version of Dr Westerskov's paper originally appeared in the Otago Acclimatisation Society's 1985 Annual Report and we are indebted to the society for their kind permission to publish the paper in 'Flight'. Editor).

# PROJECT REPORT

## 'PATEKE'

### Captive breeding

The 1985-86 captive breeding programme for brown teal is going well and indications are that over one hundred birds will again be reared by members. All birds reared, apart from those retained for flock mating, will be held over until July and released in Northland. Unfortunately Wesley Sanderson of Taumarunui, who had four pairs of brown teal, has had to pull out of the project because of his pending move to Northland. When established in Northland he hopes to re-join the project. In the meantime he will be sadly missed.

On a happier note, Neil Hayes was able to retain one of Wesley's breeding pairs and two months to the day of being placed in their new aviary produced six ducklings from six eggs.

Again on a happier note, Melvin Pike of Carterton is currently building seven aviaries for seven pairs of brown teal. Great work Melvin.

But if we are to maintain our great work with Pateke and expand the project we need more members to participate. Many members have shown what can be achieved on the 'Kiwi quarter acre' and if any members are interested in joining the project please write to Neil Hayes for further info.

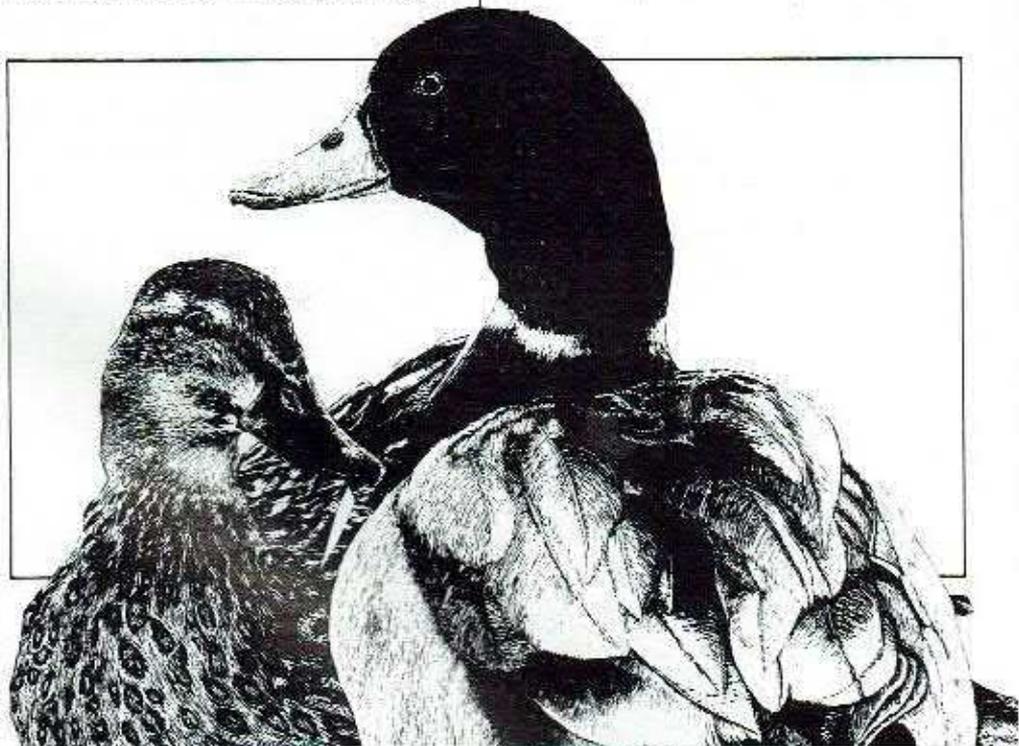
### Success in the wild

D.U. member Donna Exance of Whangarei reports one brown teal duckling sighted,

along with six adult brown teal, at our release area at the Matapouri Estuary. Donna sighted these birds in September and it is further strong evidence that our Pateke birds are already 'doing their thing' in

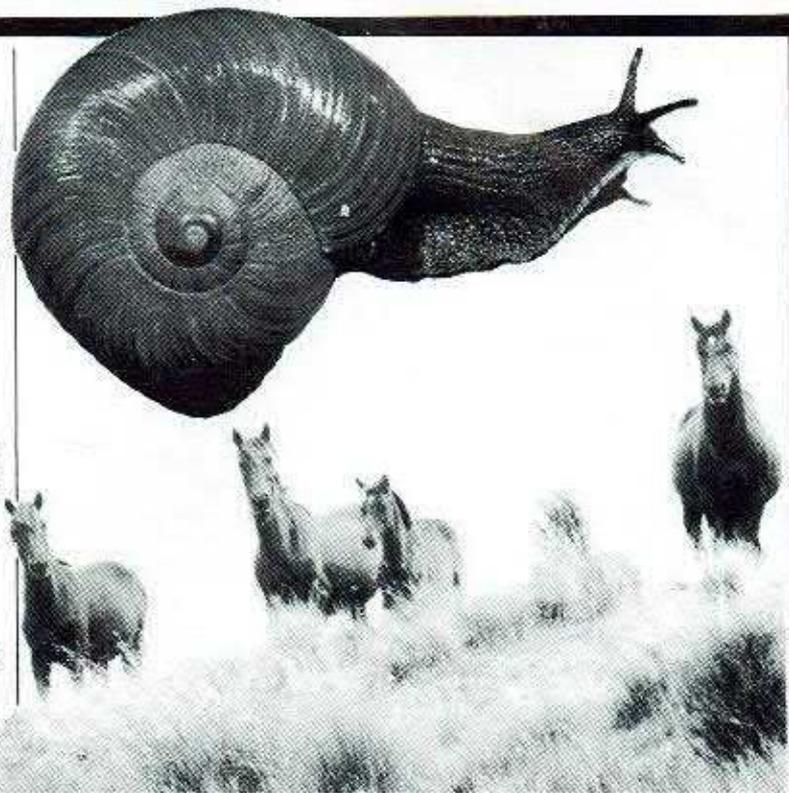
Northland.

In July last year Neil Hayes and Allan Elliot had sighted four broods of brown teal at Mimiwhangata and strongly suspected that some of the parents were Pateke birds.



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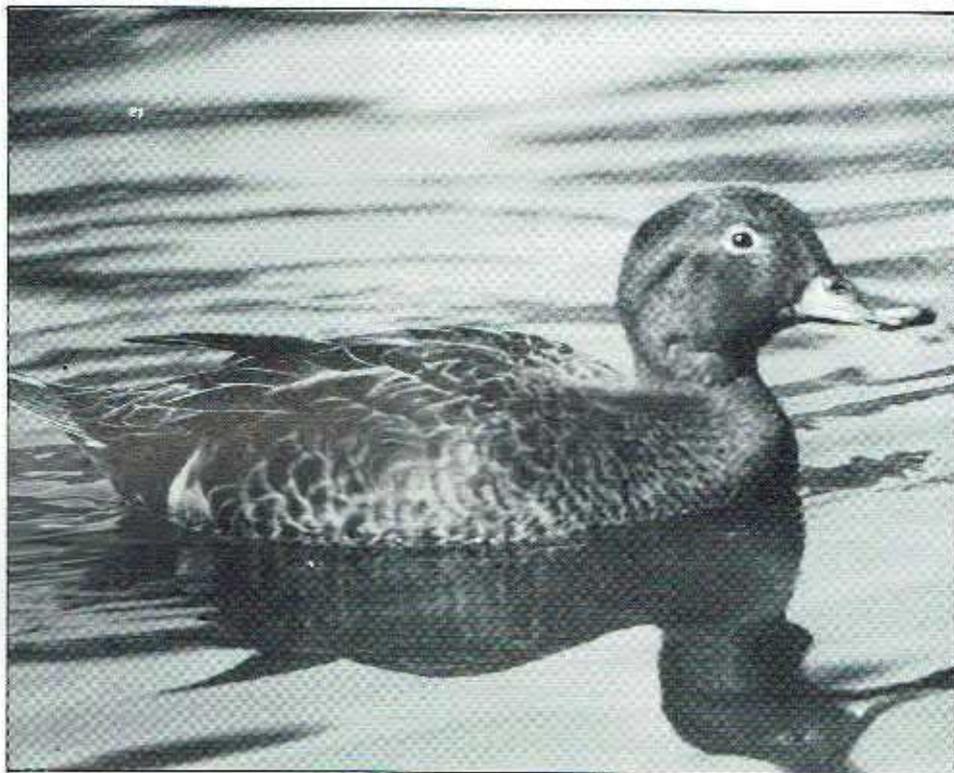
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# GRANT DUMBELL'S THIRD GREAT BARRIER ISLAND BROWN TEAL RESEARCH REPORT

The winter and spring period, from May until December 1985, included the first full breeding season since fieldwork began, as well as the resumption of banding, after the annual moult. Since May, five trips have been made to the island to extend the total field time to five months. Of these the July trip and the Nov/Dec trip were the most significant.

During July, Alan Saunders, Tony Roxburgh and Craig Hodsell, from the Wildlife Service, provided nest searching expertise with a pair of dogs. In four days, interrupted by bad weather, 18 nests were found in four different areas. This allowed me to fol-



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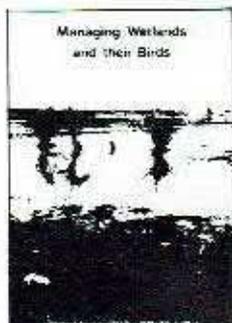
low 17 nests through the hatching and has provided information on characteristics of the nest site, clutch size, egg production and hatching success in the wild. The clutch sizes ranged between three and eight with an average of 5.4 eggs. Of the 91 eggs, 57 (62.6%) successfully hatched and these young left the nest. Three clutches (14 eggs) were deserted after a heavy flood while eight eggs were destroyed by predators. Twelve eggs failed to hatch for unknown reasons. Signs of predation by both cats and rats were recorded. One clutch of five, plus the sitting female, were destroyed by a cat. The peak of nesting occurred during July, meaning broods were most common in August. However broods were seen as early as May and as late as October indicating that breeding isn't confined to the winter months. No evidence of egg dumping or double clutching was recorded.

The Nov/Dec trip saw the resumption of banding, and although the trapping wasn't as successful as last year, 58 more brown teal were colour banded bringing the total to 243. Of these, blood samples were taken from 54, from the three main trapping areas. Samples were taken by syringe from a blood vessel in the humeral region of the wing. This site proved adequate for the 1 ml required and although some haematomas developed these did not prove troublesome. One bird was rehandled five days later and although it had developed a haematoma during the bleeding, no sign of it remained, nor was any infection evident.

The samples were split into serum and cellular fractions, and were frozen in liquid nitrogen within four hours of collection. They have been flown to Wellington where they will be analysed, in the new year, with the help of Dr Charles Daugherty from Victoria University. While the main aim of this work is to further illuminate the brown teal population structure on Great Barrier Island, this genetic data will also serve for comparison of Auckland Island and Campbell Island teal in the future, and should allow firmer conclusions to be drawn about the species evolutionary history.

Now that field work has covered a complete year, a first approximation of the birds annual cycle has been achieved. Work for the coming months will be designed to further resolve this, and to add more detail to what is already known. In particular the characteristics of the pair bond will be investigated. During 1985, courtship was conspicuous by its absence, although brown teal are known to possess all the typical *Anas* display behaviours. The status of the pair bond can be difficult to see during the post moult period when unpaired juveniles, indistinguishable from adults, are known to be present. The male's input to parental care implies that the pair bond of brown teal is unusual among the Anatinae and, therefore, begs attention.

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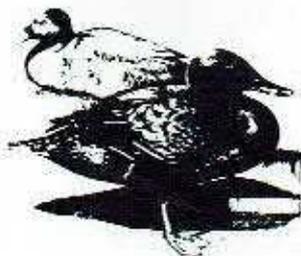
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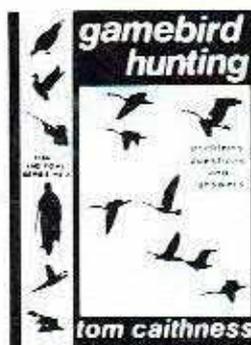
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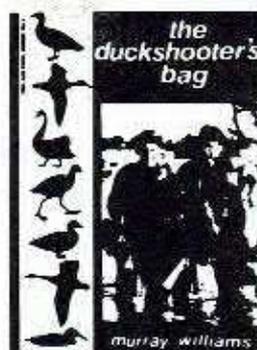


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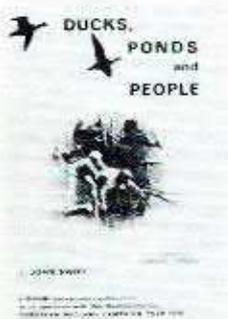
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Duck Shooters Bag by Murray Williams. 120 pages covering facts, figures and wildlife management of waterfowl in N.Z. Price \$7.00 incl p&p.



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