



DUCKS UNLIMITED (N.Z.) INCORPORATED
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FLIGHT 2/81 ISSUE 28

JUNE 1981

"FLIGHT"



“FLIGHT”

THE COVER

"NO WETLAND IS FOREVER!"
Dr Murray Williams of
the NZ Wildlife Service
sounds a warning!
See page 6



NO 2/81	ISSUE 28	JUNE 1981
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* Elected members' representatives)

Ducks Unlimited (N.Z.) Incorporated is a private, non-profit membership organisation dedicated to the preservation, restoration and maintenance of wetlands habitat in New Zealand and to the propagation of the country's rare and prolific 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 in Wellington, New Zealand. The national headquarters mailing address is P.O. Box 74 Hamilton and the registered physical address is 84 Houchens Road, Hamilton. "Flight" is the official quarterly publication of Ducks Unlimited (N.Z.) Incorporated reaching 800 devoted members and friends concerned with waterfowl conservation. DU memberships begin at \$3 p.a. for Junior to \$12.50 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 (N.Z.) Incorporated.

Produced by: Cheryl L. Pirani, "Branta", Kahikatea Flat Road, Dairy Flat, RD2 Albany
Printer: Panicprint, 3 Lorne Street, Auckland
Photography: F. Neil Hayes, Dr Murray Williams, N.Z. Wildlife Service
Graphics: courtesy Ducks Unlimited Inc, U.S.A.



Ducks Unlimited membership badges, sized 5/8" diameter, featuring the corporate symbol in gold/white/blue are available from DU Headquarters, P.O. Box 74, Hamilton. Price is \$5 each.

DU News

IN MAY WE WELCOMED THE FOLLOWING NEW MEMBERS TO DUCKS UNLIMITED -

C.D. Bailey	(F)
Dr P.A. Burnett	(F)
Timothy Gurr	(J)
J. Hooker	(F)
W.J. Rickerby	(F)
G.D. Taylor	(F)
L.J. Wedding	(F)

(F) denotes Full membership
(J) denotes Junior member

DU DIRECTOR DEPARTS

It is with considerable regret that DU announces the resignation of the South Island based director Peter McLeod. Since 1976 Peter has performed outstanding work for DU particularly in respect of Operation Branta. Fortunately Peter will remain active in DU affairs and continue to arrange shipments of Canada geese to the North Island. We take this opportunity to record our sincere thanks and appreciation to Peter McLeod for so well assisting Ducks Unlimited (NZ).

NEW ZEALAND SHOVELER TO BE EXPORTED

Some years ago the Wildfowl Trust of Great Britain inquired of Ducks Unlimited concerning the possibility of obtaining N.Z. Shoveler for its waterfowl collection. This may sound like a fairly straightforward request but as Shoveler are rare in N.Z. collections and do not breed readily in captivity, the request did present a few problems. And for the past few seasons DU has been waiting for a member to breed Shoveler in captivity - wild caught birds could have been sent but this would be far less desirable than sending captive reared birds. The good news is that DU member, Bill Clinton-Baker of Masterton, has had an excellent season with Shoveler and has very kindly made available two pairs for DU to forward to the Wildfowl Trust. Many thanks Bill! It is proposed to send the Shoveler in early August. The Wildfowl Trust has had N.Z. Shoveler for many years but, like all waterfowl collections, an influx of new blood is essential to maintain a healthy strain.

BOOKS FOR "DUCK" PEOPLE *

"WATERFOWL: Ducks Geese & Swans of the World" by Frank S. Todd. This book is a "must" for all DU members. Contains 400 pages covering the status of the world's waterfowl, their aviculture and general management. Also has excellent chapters on the hunter/conservationist and on photography. \$42 incl. postage.

"THE INCUBATION BOOK" by Dr A.P. Anderson Brown. 246 pages detailing all aspects of gamebird and waterfowl egg incubation. \$32 incl. postage

"A COLOURED KEY TO THE WATERFOWL OF THE WORLD" by Sir Peter Scott. Priced at \$10 this publication enjoys wide popularity.

"DUCKS, PONDS AND PEOPLE" by John Swift is back in stock at \$4 per copy.

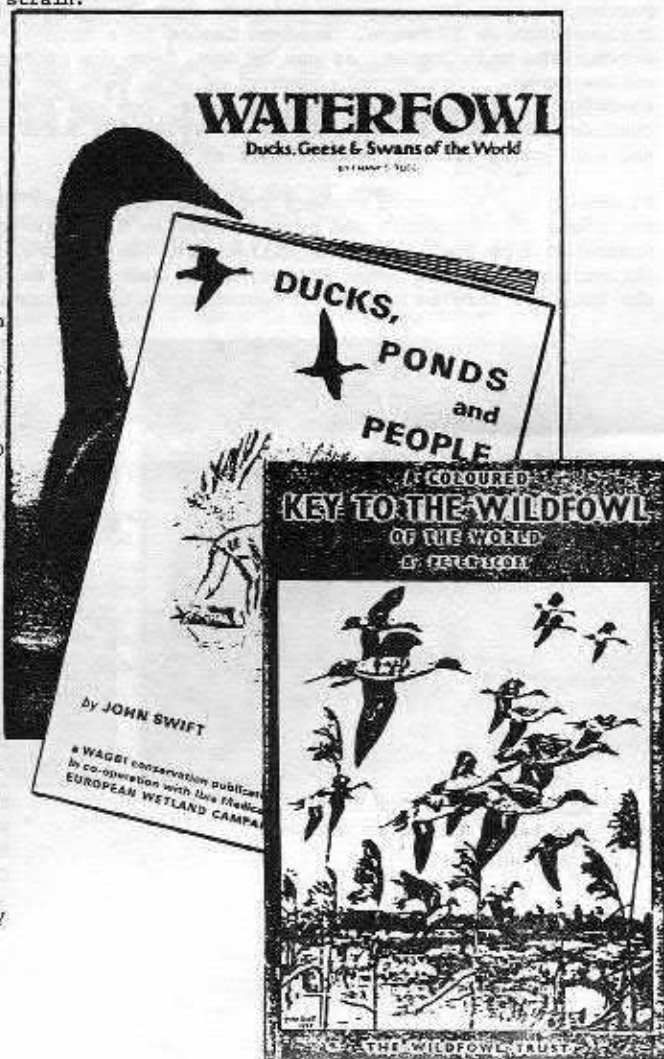
* ORDER FROM DU, BOX 74 HAMILTON

WEAR A DU SPORTSMAN'S CAP!



The Hamilton fundraising chapter of DU has produced a sportsman's cap every DU member will want to wear! Sturdily constructed from cotton in three colourways, this cap is useful for all year round wear. The crown is brown, sides are tan with the words "Ducks Unlimited" flanked by leaping mallards, and the "visor" brim is olive green. DU caps are \$4 each and available from Mrs Gill Barclay, DU Chapter Secretary 37 Fairview Street, Hamilton

One size fits all - made in New Zealand.



PROJECT REPORTS

OPERATION "WHIO" (BLUE DUCK)

DU's Blue Duck propagation project has made good progress over the last couple of months, with the Wildlife Service catching birds for distribution to DU members. These birds have been held by Ian Pirani for a settling-in period prior to the distribution of pairs. The majority of birds have settled down extremely well and, given the right captive environment, DU expects them to breed quite readily. Both Ian Pirani at Rotorua and Barry Rowe at Otorohanga have reared good numbers of Blue Duck the last two breeding seasons. Before next breeding season, DU is hopeful that at least 15 pair of Blue Duck will be held by members. We take the opportunity to thank the Wildlife Service for their efforts and co-operation.

OPERATION "PATEKE" (BROWN TEAL)

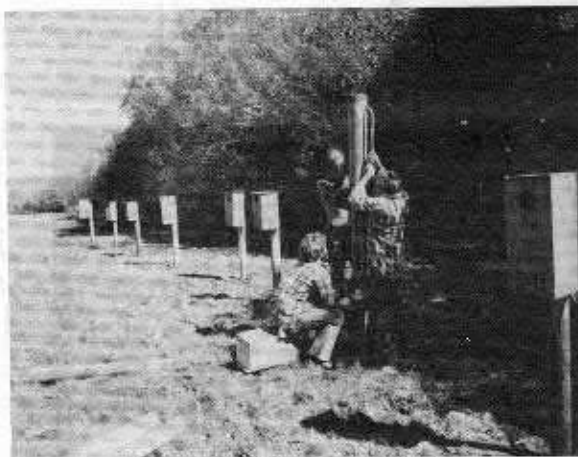
The unofficial figure for Brown Teal reared in captivity during the 1980/81 brooding season is an incredible 101! The season officially ended on 30 April 1981 and final figures will appear in the September issue of "Flight" when all results are to hand. Sig Bronger, from Matakana Island, reports that both his Brown Teal females have laid and ducklings from these eggs will start off the 1981/82 season in fine style! Further good news from the Wildfowl Trust, Slimbridge, U.K. - the progeny from the two female Brown Teal sent by DU in 1979 have commenced laying.

"The Aviculture, Re-Establishment and Status of the New Zealand Brown Teal" by F. Neil Hayes is DU's first major publication. Copies are available from DU headquarters at P.O. Box 74, Hamilton for \$ 6 per copy. This excellent, informative, easy to read reference publication demands a place on the bookshelf of all members.

OPERATION GRETEL (GREY TEAL) EXPANDS ON THE "MAINLAND"

Further encouraging progress was made when 20 nest boxes were erected at Woodend Lagoon, Christchurch on 15 March. Woodend Lagoon is a Wildlife Service management reserve of some 100 acres. The main lagoon, as can be seen from the photographs below, is surrounded by thick willow trees. Considerable numbers of Grey Teal use the area but breeding has not yet been recorded so it will be interesting to see how the species reacts to the boxes. Dr Chris Challies and Peter McLeod will be observing the boxes during the 1981/82 breeding season and will carry out maintenance work at the site.

DU thanks the following members for their assistance with Woodend - Neil Hayes, who constructed the boxes in Wellington and carried them in his pick-up truck to Woodend; Diane Pritt who travelled from Ohakune, Allan Elliott and Jim Campbell who travelled from Masterton, and Christchurch members Peter McLeod, Allan Hart, Cam Bailey and Chris Challies. Thanks, too, to the Wildlife Service and North Canterbury Acclimatisation Society for permission to erect boxes.



Allan Elliott, Jim Campbell
and Peter McLeod in action.



Some of the "workers" l. to r.
Neil Hayes, Peter McLeod, Diane
Pritt, Allan Elliott, Jim
Campbell, Allan Hart & daughter.

ALUMINIUM SMELTER - TWO VIEWPOINTS

We reprint here two views on the controversial proposed smelter at Aramoana. The harnessing of the country's very large hydro electricity generating capacity for such projects constitutes a major threat to New Zealand's wild rivers. To this extent Ducks Unlimited has fears for the future of such species as Blue Duck and has expressed its concern to the Minister for the Environment.

The following opposing views are not necessarily those of Ducks Unlimited (N.Z.) Incorporated, or its members.

* THAT SMELTER ! *

* There are less ducks now than there used to be: less trout, less deer - and not just in New Zealand. If you are interested in large-scale, long-focus history there are lessons to be learned from such simple facts as these. During the last ice-age - in the Pleistocene period when humans were first beginning to emerge in the story of the Earth - climatic conditions were harsh, and numerous species of plants and animals died out. This ice-age in fact was a natural disaster on an unprecedented scale. Unprecedented, that is, up till now. For the sad, hard truth is that we are now living through and can witness at first-hand, a natural disaster that will make the extinctions of the ice-age seem minor by comparison. In this century alone the living variety of the world has been enormously diminished. We have seen the apparently inexhaustible wildlife of Africa destroyed within our lifetime, and in every country, our own included, the toll of species rises as the wilderness is levelled.

* We are the cause of this catastrophe. The human race - us - is itself a natural disaster on a scale never before experienced on the Earth. We have taken a planet that teemed with life and provided everything our species needed, and we are proceeding to destroy it.

* A few places remain relatively untouched. New Zealand is one of them. This circumstance is not because of any wisdom on our part (we got here late, that's all). And many New Zealanders - most of them, perhaps - are keen to make up for this temporary lapse.

* This is a roundabout way to start a talk on ducks - but I'll get there, never fear. Ducks are just part of the big wilderness; and though I have met one or two exceptions, most duckshooters know it. So do most trout fishermen, and in fact so do most people of any kind who love the rivers, the swamps, the mountains and the creatures that live in them. So if we wish to keep these things - if we want our children to know them as we have done - we must save the last remaining wilderness.

* Until recently the problems were relatively minor. Sure, we lost rivers to "development", swamps were drained, and forests logged. But the remainder seemed large, and the rate of loss left room for hope. Things are changed now. Now we face threats of an entirely new dimension. The government is thinking Big, and you and I should be aware of what this means for the future of our country. It means, quite simply, that this land will be taken from us and exploited. For short-term money gain this country - its natural treasure - will be sold to multinational companies; to people who got rich by destroying environments similar to our own.

The evolutionary process in action: flax and cabbage trees now occupy the higher and drier land while raupo invades the open water in the first step to converting it to dry land. Only the persistent cutting by the duckshooter has prevented the raupo from invading the open water behind his maimai.

NO WETLAND IS FOREVER!

DR MURRAY WILLIAMS, NEW ZEALAND WILDLIFE SERVICE

Dr Williams presents the idea that wetlands are only temporary habitats, but many animals and plants are uniquely adapted to them and therefore at risk.



It is seldom appreciated that the wetlands which the birds depicted in this article inhabit, are, like the birds themselves, subjected to natural processes of evolution. Any body of water, be it large like Lake Taupo and formed naturally by volcanic activity, earth movements or landslides, or small like a farm pond created by Man's machines, is subjected to processes which endeavour to convert it back to solid ground. Into the basins of these impoundments, sediments are deposited, brought there by inflowing rivers or streams, by runoff from adjacent land, by wind and by wave action eroding the banks. The impoundment becomes progressively more shallow. Plants and animals also contribute to this process by depositing organic matter, skeletons and shells and providing material for further plant and animal growth. Slowly (and the rate varies depending on climate, topography and a variety of other factors), the open water becomes occluded by vegetation and the typical swamp develops. Further deposition of sediments and organic material, and the development of a soil sees the swamp transformed into increasingly solid and dry ground. As this process advances, animals and plants of the open water are replaced by those tolerant of wet swamp conditions and later, they in turn give way to species characteristic of dry land. The process continues until eventually a climax forest may be established where, some thousands of years previously, a lake had occurred.

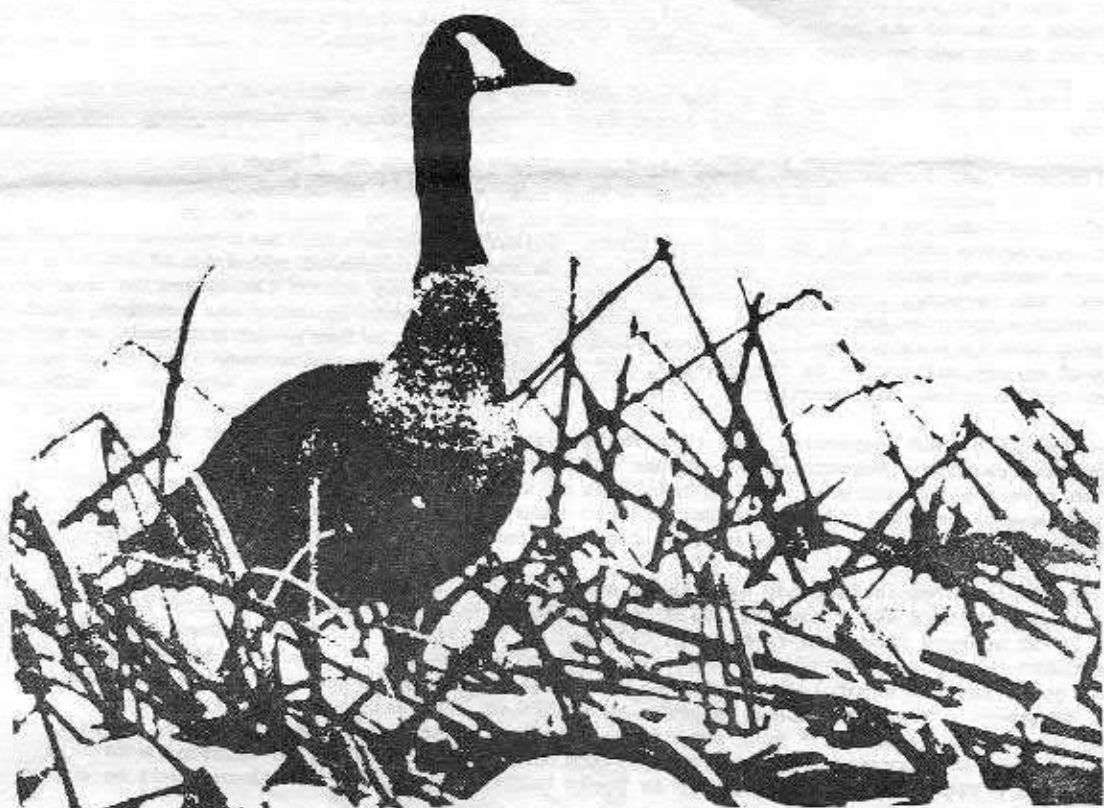
Lakes and swamps therefore, are only transitory, and it follows that the plants and animals present likewise are there only temporarily. As the evolutionary process of converting lake to dry land proceeds, species of animals and plants come and go, to be replaced by others. The birds depicted in this article are adapted to different phases in this evolutionary cycle. The Little Shag and Black Swan are very much birds of the open water; the shag diving in the water to gather other open water animals, such as fish and crustaceans, for food, the swan grazing those plants which have evolved to grow in total submergence. The shallow margins of the large water areas and the shallow basins of almost totally extinct lakes are the principal habitats for the Mallard, White-faced Heron, and Pied Stilt. There, the Mallard devours portions of aquatic and semi-aquatic plants, their seeds and a variety of invertebrates; the Heron hunts small fishes and frogs and tadpoles while the Stilt probes for invertebrates in soil and ooze. As the land becomes drier and plants, like grasses, become established, the Pukeko appears — a grazer of terrestrial or semi-aquatic vegetation.

The extinction of a lake proceeds from the edge inwards and it is often possible to see a variety of successional stages on a

single wetland. Because of this, wetlands contain a greater diversity of animal and plant life than any other terrestrial habitat. And wetlands are usually very productive places — the natural process of infilling feeds upon itself by providing more and more nutrients and the near extinct lakes, the eutrophic ones, are characterised by high biological productivity. Swampland vegetation comprises some of the biologically most productive plants known. It is this combination of great diversity, and great abundance of plants and animals that accords a uniqueness to wetlands. There is probably no better place to observe the processes of evolution in action.

Enter Man! Man is both a creator and a destroyer of wetlands but his impact on the natural wetlands of New Zealand and their associated plant and animal life has been enormous. Man has accelerated the natural extinction process by a variety of means especially by drainage. The process of drying out a wetland, something which naturally may take thousands of years can be achieved in a matter of days by constructing a drainage ditch. The removal of the natural plant growth from the wetland's edge allows the soil to be more easily eroded and greater amounts are carried by the streams into the wetland basin. Nutrients in the soil are more rapidly released, and artificial fertilizers from agricultural activity are added to the wetland, both promoting more rapid plant and animal growth. The process of eutrophication and wetland death is speeded up. Man has also altered the plant communities at the edges of existing wetlands. Instead of allowing the development of a variety of seral stages such as flax and totip communities, manuka and other shrubs and eventually forest on the drier land, the pursuit for increased agricultural production has led him to develop pasture almost to the very water's edge. By so doing Man has removed the opportunities for existence for plants and animals adapted to the wetland's margins: animals like the flax snails and birds like fernbird and brown duck have now gone from large areas of New Zealand because their habitat no longer exists; plants like the endemic rushes *Sporodanthus traversii* and *Hydatella inconspicua*, the sedge *Baumea complanata*, the orchid *Corybas unguiculatus* and the fern *Thelypteris confluens* once so widespread, are now restricted to but a few localities and in grave danger of extinction.

But it is part of the contradiction of Man that having caused the rapid extinction of most natural wetlands he is busy creating new ones. Farm ponds and the hydro-lakes are obvious examples. They serve Man's specific needs but at the same time provide habitat for a variety of otherwise displaced



"Sentry" High Contrast Photo by Charles E. Brownell, Jr.

Annual Report

1981



PRESIDENT'S REPORT - 1980 OPERATIONS

The 1980s are truly with us - bringing with them connotations of accelerating change, uncertainty, insecurity and even fear. Ducks Unlimited, however, looks upon the 80s as a time for opportunity, challenge, growth - a time of promise for our waterfowl, achieved by teamwork, energy, motivation for the common cause. Our sportsmen and friends are becoming much more acutely aware of waterfowl conservation - therefore more willing to support DU's style and characteristic way of "getting the job done". These elements of style and character have evolved since DU's establishment in 1974 - have often annoyed DU critics and competitors" in other areas of the conservation arena. Ducks Unlimited was begun because of the strong urgency to fill a need - a gap which was not being met by other organisations.

This year, 1981, is an election year in New Zealand. New Zealanders traditionally don't become very excited or enthusiastic about such an event. Apathy, of course, has its own reward. We get what we deserve! Similarly, apathy towards our environment and particularly that for waterfowl, reaps its own reward! Supportive "votes" (that is, dollars) for waterfowl are hard to come by - they must therefore be earned. "Courting" votes here isn't popular - its even harder to motivate the general public towards conservation efforts in the difficult 1980s unless of course there is a particularly emotive issue such as a proposed aluminium smelter, increased hydro dam development, mining etc. When issues such as these particular ones affect the lifestyle of individuals - energies are suddenly, determinedly devoted towards opposing the scheme. We shouldn't have to have an "emotive" reason though - everyone of us has great untapped resources of energy waiting to be "triggerred", and channelled into a massive dose of enthusiasm for waterfowl conservation.

There are some large and respected, long established organisations in conservation which are steeped in tradition, bureaucratic; appear to be wallowing in past successes; who do not seem to have any forward plan. To be fair, some of them support a great many conservation efforts and demands on their "donations dollar" are immense. Ducks Unlimited is deliberately small - without bureaucracy - is more mobile, flexible and able to achieve results quickly.

The efforts of your organisation may seem small compared with larger groups with more prestige, funds, members etc - however, DU's results speak volumes! Brown Teal bred in captivity by DU members increased from 19 in 1976 to 101 in 1980/81 - 101 Brown Teal bred this year represents 10 per cent of the estimated world population - the "turnaround" has begun! The Canada goose faces a hopeful future in the North Island through a controlled breeding and placement programme. These and other benefits to waterfowl have arisen because you "put your money where your mouth is" - your supportive vote has counted for something. The support over the past year of farmers, corporate groups, the Wildlife Service and DU volunteers is Ducks Unlimited's vitality. Our membership is Ducks Unlimited! Without it there would be a bleak future for waterfowl.

There is no room for complacency however - apathy will always be a great enemy. In New Zealand we have few major threats to wildlife or its environment - at least not to the extent of some countries where irreversible situations exist. Here we are not exposed to the fears and dangers to our personal lifestyle (except perhaps in the case of smelters, mining proposals). We can appreciate the "battles" of other conservation bodies, but we must continue our battle for our share of the donations dollar.

Last financial year we were pleased to note an increase in excess funds for development. DU is confident the return on your investment in waterfowl futures will be a satisfying one. We found it necessary to increase membership fees this year - primarily to meet the costs of operation such as promotion, the cost of "Flight", as well as day to day costs e.g. postages. Your directors consider this increase completely justified - members will be aware that the annual accounts do not truly reflect the costs of the operation as so much time, money and equipment is freely donated. In spite of the increased membership income, DU still requires funds on top of this for project work to be accelerated.

"Thinking Big" has become fashionable (or unfashionable!) in New Zealand. DU "thinks big" but "operates small" to achieve practical results. DU believes it should evaluate and research; pursue all appropriate opportunities even if these appear to have not much potential - these are often the areas where little effort achieves maximum results). This year we hope to raise a substantial sum of money from corporate groups to fund research, in conjunction with the Wildlife Service, to benefit Brown Teal on Great Barrier Island. It would be easy to unwittingly spread our resources (of manpower and finance) toward the achievement of other conservation goals, however worthwhile. We must not lose sight of our specific target. We have a stake in the future of waterfowl and its environment - an environment we all share - its our responsibility to ensure that, as far as we can control or influence the situation, we take up the challenge.

Give Ducks Unlimited your "vote" for the coming year so we can make an even greater impact on waterfowl population levels. You must elect to participate - DU needs your "vote" - your dollars. Your support will smooth the way for innovative programmes such as the Blue Duck project and success in this and other work will hopefully attract financial support from corporate and other institutions (as it has done with Brown Teal for example).

The future - implementing the promises - will not be easy. A worthwhile task never is. DU will continue to seek new opportunities in existing and innovative fields. However in the short term its energies will be devoted primarily to the growth and improved performance of existing projects. Like our politicians, we make promises. Promises tempered with realism: Realism to benefit our waterfowl - to protect and enhance its future. This *singleness of purpose* is largely responsible for past successes and is one we must hold with tenacity through the 1980s. We thank you for your dollars - your unselfish hard work - tenacity and encouragement this past year. A new horizon beckons.

Paul B.C. Pirani - President



DUCKS UNLIMITED (N.Z.) INC.
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 MARCH 1981

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Hull Co**

	<u>1981</u>	<u>1980</u>
<u>INCOME</u>		
Subscriptions : Life	250	275
: Active	2248	1994
: Supporter	492	520
: Junior	46	30
: Trade	60	140
<u>TOTAL SUBSCRIPTIONS</u>	<u>3096</u>	<u>2959</u>
<u>PLUS OTHER INCOME</u>		
Donations	757	736
Conference Income	3274	3572
Profit on T Shirt Sales	14	31
Profit on Lapel Badge Sales	186	31
Profit on Book Sales	336	-
Sundry	371	337
Grant : Department of Internal Affairs (\$500 Gretel, \$50 Pateke)	550	500
: Mobil Oil (Pateke)	-	750
Interest	180	-
<u>TOTAL INCOME</u>	<u>8764</u>	<u>8916</u>
<u>LESS EXPENDITURE</u>		
Audit & Accountancy Fees	167	127
Advertising	866	1142
Duplicating	51	152
Operation : Gretel	671	3000
: Pateke	1261	248
: Branta	138	246
Postage	584	468
Printing	1690	1204
Stationery	223	5
Sundry	528	393
Travelling expenses - board meeting	179	1459
A.G.M. Expenses	836	-
<u>TOTAL EXPENSES</u>	<u>7194</u>	<u>8444</u>
<u>EXCESS INCOME OVER EXPENDITURE</u>	<u>\$1570</u>	<u>\$472</u>

STATEMENT OF ASSETS AND LIABILITIES

AS AT 31 MARCH 1981

	<u>1981</u>	<u>1980</u>		<u>1981</u>	<u>1980</u>
<u>LIABILITIES</u>			<u>ASSETS</u>		
Bank Overdraft	452	691	Petty Cash	-	20
Accounts Payable	-	561	Bank of New South Wales	-	-
			Debtors	-	200
			T Shirt stocks	216	230
<u>ACCUMULATED FUNDS</u>			Lapel Badge stocks	106	2
Balance 1.4.80	752	280	Term Deposit	1500	1500
Plus Excess of Income over Expenditure	1570	472	Machinery	52	52
	<u>2322</u>	<u>752</u>	Books	900	-
	<u>\$2774</u>	<u>\$2004</u>		<u>\$2774</u>	<u>\$2004</u>

AUDITORS REPORT

We have examined the Income and Expenditure Account and Statement of Assets and Liabilities together with the books and records of the Association and have obtained such information and explanations as we consider necessary. In common with similar organisations, control over the income prior to its being recorded is limited and there were no practical audit procedures to determine the effect of this limitation. Subject to the above qualification the Income and Expenditure Account and the Statement of Assets & Liabilities present fairly the results of the Association's activities for the year ended 31 March 1981.

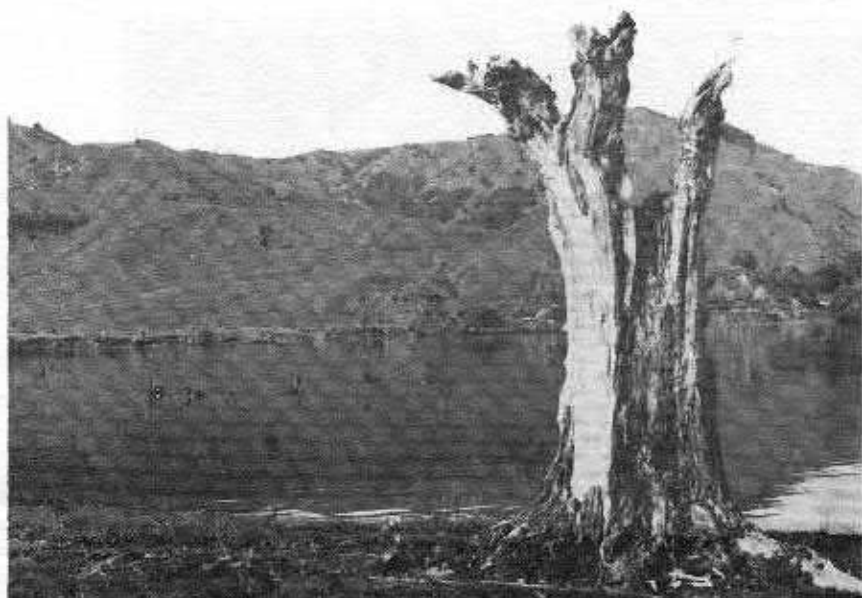
Hutchison Hull & Co

Note for Members

The final set of Accounts, with Statement of Accounting Policies, signed by the President, Secretary and Auditors was not available at the time of publication. The signed copy will be available for perusal by any member of Ducks Unlimited (NZ) Inc. at the Annual Conference on 18 July 1981.

F.N. Hayes - Secretary

A typical wetland in New Zealand pastoral land - the inhabitants of the open water zone are well catered for but there is nothing for those of the marginal zone.



plants and animals. They and the few remaining natural wetlands also provide Man with recreational opportunities and efforts are sometimes made to arrest the wetland's natural extinction process. Witness every year the activity of duck shooters cutting back the encroaching plants, like raupo, from around their favoured hunting areas. Ways of reversing ecological succession or temporarily halting it in wetlands favoured for boating include water-level manipulation and the selective application of herbicides, and careful plantings can reduce the amount of sediment available to be transported by wind. These are however mere stalling techniques. Inevitably these wetlands will die because all factors contributing to the extinction process cannot be controlled. At best, the rate of extinction can only be slowed down.

What is the future for wetlands in New Zealand? By his activities Man is preventing the creation of new natural wetlands. Water-tables are lowered to prevent lakes forming, rivers and streams are channelled to prevent the development of the ephemeral wetlands usually associated with 'wild' watercourses, and vast engineering projects alter entire drainage systems.

The extinction of existing natural wetlands is hastened by drainage, by accelerated sediment flow and by increased fertility. Since the arrival of European settlers 140 years ago, over 80% of New Zealand's natural lowland wetlands have disappeared — the remaining swamps and bogs of Southland and Waikato stand as Nature's last frontier! But no doubt! Man looks with pride at the wetlands he has created or 'controlled'. The hydro lakes are fine amenities and good wildlife and plant habitat. What is overlooked is that these and the other created wetlands provide habitat for only one group of plants and animals — those adapted for life in or on the open water. That large transition zone between open water and dry land, that ecologically diverse habitat which is home to so many plants and animals, and which lends so much character to a wetland, is eliminated. If Man continues to hasten the extinction of our natural wetlands or to severely modify them, then the animals and plants adapted to and restricted to the transition zone will disappear forever. Over that long interval during which natural processes will create new transition-zone habitat around the shores of Man's wetland creations, there will be nowhere for them to call 'home'!



DUCKS UNLIMITED (NZ) INC - ANNUAL CONFERENCE 1981

The seventh annual conference of Ducks Unlimited (NZ) Incorporated will be held at the Shaw Savill Lodge, Kilbirnie, Wellington on Saturday, 18 July 1981 at 2.00 pm.

BUSINESS

1. 1.30 pm Registration
2. 2.00 pm Welcome and apologies
3. 2.05 pm Minutes of 1980 annual conference and matters arising
4. 2.15 pm President's report and presentation of annual financial statement
5. 2.25 pm Appointment of Auditors for 1981/82
6. 2.30 pm Election of four (4) Directors from the floor to represent members
7. 2.40 pm Report on Operation "Pateke" (J. Gill/F.N. Hayes)
8. 2.50 pm Guest speaker: Mr Maui W. Pomare, Trustee of the World Wildlife Fund of New Zealand will address the meeting on the work of the Fund.
9. 3.30 pm Break for refreshment (President's "shout")
10. 3.45 pm Guest speaker: Mr Allan Head, Secretary, Wellington Acclimatisation Society, will comment on his recent visit to Canada
11. 4.30 pm Report on Operation "Gretel" (D.G. Bell)
12. 4.40 pm Report on Operation "Branta" (F.N. Hayes)
13. 4.50 pm Report on Operation "Whio" (D. McNeil)
14. 5.00 pm General business
15. 5.30 pm Refreshments
16. 6.30 pm Annual dinner
17. 7.30 pm Annual auction
18. 9.00 pm Refreshments

* * * * *

A copy of the Rules of Ducks Unlimited (NZ) Incorporated will be available for perusal by any member at the conference. All members and friends of Ducks Unlimited (NZ) Incorporated are invited to attend.

F.N. Hayes
Secretary
P.O. Box 74, Hamilton

YOURS FOR THE BIDDING



MEMBERS

DON'T MISS THE ANNUAL CONFERENCE AND DU'S MAJOR FUNDRAISING EVENT.....
PARTICIPATE IN A MEMORABLE OCCASION AND BENEFIT NEW ZEALAND WATERFOWL!

The 1981 Ducks Unlimited Annual Conference takes place on Saturday 18 July 1981 at Shaw Savill Lodge, Kilbirnie, Wellington, commencing at 2 pm. This provides an annual opportunity for you to get together with other DU members, introduce the organisation and its work to friends and family, participate in the excitement of the auction which follows the sumptuous dinner prepared by Shaw Savill's chef. Interesting guest speakers, project highlights, displays, sale table of items such as T Shirts, lapel badges, cards, notepaper and other items of interest - all form part of a stimulating afternoon and evening. There are sale and auction items to fit every budget; every interest - whether indoor or outdoor.

Registration fee is \$ 15 per head and includes the delicious buffet dinner. The cost for your guest is also \$ 15 each. You may if you wish renew your subscription or enrol new members. If you wish to stay at Shaw Savill Lodge, please make independent hotel reservations to avoid disappointment.

Items donated for the DU auction this year are among the best ever - they include framed waterfowl art, camouflage hats, padded camouflage gun case, wooden gun case, prestige knife-sharpening kit, waterfowl china, ammunition and much more. Ducks Unlimited in U.S.A. has donated a magnificent assortment of gifts this year - among them a carved wooden decoy by T.J. Hooker Wildlife Sculpture which is a signed, numbered artists proof with protective cloth bag. T.J. Hooker's imagination and skilled craftsmanship has elevated the working decoy from a simple hunting tool to an artistic, decorative masterpiece to grace your home or office. Another item from our DU American friends is a superbly designed, insulated portable cooler - it has the DU Inc monogram on the exterior, sturdy handles and the interior has a customfit tray and re-freeze bottle - every outdoorsman/woman will want to bid for this! Two handsome volumes detailing the history of DU in the United States and Canada have been donated (N.Z. receives a mention!) - these are collectors', de luxe, limited editions. One of the most unusual and exciting gifts from DU Inc is a DU Commemorative 1981 Wood "Gunner's" Box, limited edition. This cartridge case is a beauty on the outside with its handsome antique finish, leather-hinged cover and special DU Inc insignia. Inside are two plastic ammo carriers which hold 4 boxes of 12g shotgun cartridges each. DU Inc has also donated a collection of fine waterfowl art prints and artists proofs to benefit the N.Z. organisation - these are by internationally known artists such as Lee Le Blanc, Allen Hughes, Guy Coheleach, William P. Tyner.

All auction proceeds benefit DU waterfowl projects for 1981/82. This is your opportunity to help raise funds in an exciting and happy atmosphere, in the company of friends, and to obtain for yourself some of the magnificent auction items. Directors and officers extend a warm invitation to you to attend and look forward to seeing you on Saturday 18 July - Shaw Savill Lodge.



continued from Page 5

* * * * *

* The second aluminium smelter is the most sinister of the projects so far mooted. *
 * What it will do to our rivers is now common knowledge and Birch, the Energy *
 * Minister, has devoted much of his own energy to assuring us that we can have *
 * aluminium smelters and rivers too. Do you believe this? It is only necessary *
 * to look around the world, or travel a little in the countries blessed with *
 * excessive industrial development, to see the shabby truth behind the rosy *
 * promises. Ask the labourers of Dagenham or Detroit, or the well-paid slaves *
 * of Japan or Germany. As them how many trout and salmon they have recently been *
 * catching - or how much duckshooting is not owned and reserved for the sole use *
 * of their masters. *

* It can't happen here, you say. Why not? Some of the companies our government *
 * is courting have internal budgets larger than our whole nation's. They have *
 * the ability and power to make this place a wasteland, if it profits them to do so. *

* Events are fast reaching crisis point in many areas. Resources are now hard to *
 * find and the peasant populations of exploited former colonies are waking up to *
 * the real meaning of foreign loans and factories. The multinationals know this, *
 * and they are engaged in a last-ditch attempt to beat the odds. If we can keep *
 * them from New Zealand for ten years it will suffice. By then even the dumb *
 * average voter will have recognised the folly of tying ourselves ever more tightly *
 * to a sinking ship. *

* I am appealing to you for money to stop the second smelter. This is the menace *
 * of first priority, and we can stop it dead. We can succeed in this because the *
 * smelter makes no sense - even in the narrow financial terms of its promoters *
 * it is a loser. You are involved, no matter where you live. No matter if your *
 * delight is a wild, empty ocean beach, or a frozen marsh on an autumn morning. *
 * These things are in danger. To do nothing - to shrug your shoulders and say *
 * that such affairs are too big for you to handle - is to contribute to defeat. *
 * You are either with us or against us, and we need more from you than just good *
 * wishes. *

Dave Witherow

* Members who wish to make contact with Mr Witherow can contact him at *
 * Coalition for Rational Economic and Environmental Development in New *
 * Zealand (CREEDNZ INC) P.O. Box 5370, Dunedin. *

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ANOTHER SIDE TO THIS STORY IS ON PAGE 15

Fletcher Challenge Ltd

INTRODUCTION

Fletcher Challenge Limited, Swiss Aluminium Australia Limited, and Gove Alumina Limited (a subsidiary of the Australian company CSR Limited) propose to establish an aluminium smelter and associated downstream processing facilities at Aramoana near Dunedin. The project will be export orientated and will comprise:

- Two potlines, each producing from alumina 100,000 tonnes per annum of primary aluminium;
- an anode plant to produce carbon anodes used in the potlines;
- downstream processing facilities.

The programme calls for construction to begin early in 1982. First production of aluminium will be in 1984 with the plant reaching full capacity during 1986. The project is estimated to cost \$650 million (mid 1980 NZ dollars).

Fletcher Challenge is responsible for arranging a 50% share of the project. Gove Alumina and Swiss Aluminium will each arrange 25% of the equity. The merger of Fletcher Holdings Limited, Challenge Corporation Limited, and Tasman Pulp and Paper Company Limited has been important in enabling a New Zealand owned and managed company to take, without Government financial assistance, such a prominent position in such a major industrial development. The three partners have set up a company, South Pacific Aluminium Limited, to select a site, conduct feasibility studies and obtain planning approvals for the project.

CONSTRAINTS ON ECONOMIC GROWTH

The major constraint on the growth of the New Zealand economy is an inability to generate a satisfactory level of foreign exchange.

If the economy is to grow, thereby raising the standard of living and creating employment opportunities, New Zealand must earn money overseas by the sale of locally produced goods and services. The earning of further foreign exchange enhances New Zealand's capacity to import the additional goods and services that are essential for the economy to grow.

If New Zealand goods and services are to be sold internationally they must be cost competitive. Fletcher Challenge and previously Fletcher Holdings and Challenge Corporation have evaluated export orientated industrial projects that would utilise national resources and be internationally competitive. Aluminium has been selected as an attractive opportunity.

THE ELECTRICITY RESOURCE

New Zealand is an internationally competitive generator of electricity. However, electricity can only be exported in the form of a product which requires electricity for its manufacture. Aluminium is such a product.

The New Zealand Government as well as local and overseas companies have undertaken extensive studies of a range of electricity intensive industries. Of those seen to be viable, aluminium represents an excellent prospect. **While aluminium projects now do not preclude other electricity based developments they do provide an immediate opportunity to earn foreign exchange for New Zealand.** Aluminium also provides a desirable diversification of the country's export base.

ALUMINIUM DEMAND GROWTH

Aluminium will continue to be a growth industry. Growth in demand will continue because of its natural characteristics of low weight, high strength, resistance to corrosion, and workability. To take an example, aluminium's properties ensure that it will be increasingly required by the transport industry in its drive to conserve energy.

World growth in aluminium usage over the last twenty years has been around 8% per annum. Even if demand growth over the next decade is only 4% per annum, supply must increase by three smelters the size of Aramoana each year. Known world expansion plans leave a considerable shortfall particularly when the contraction of existing Japanese supply is taken into account. This contraction resulting from Japan's reliance on oil-fired power stations, almost matches the total current expansion plans in Australia.

Facts about the proposed Aluminium Smelter Project

NATIONAL BENEFIT

The project will generate net foreign exchange earnings of \$150 million per annum.

To achieve this it will require New Zealand resources that are in excess supply and have no alternative use. The most important of these are labour, building materials for power station and smelter construction, Dunedin infrastructure and electricity.

The New Zealand building industry has contracted by over 50% and South Island building materials and labour are underemployed, as is Dunedin's infrastructure. Hence no other export orientated development, whether agricultural, industrial, or other, is precluded or restricted by the allocation of real resources to increased aluminium production.

Similarly, over 80% of the total funding of the project will be raised overseas specifically for the project, thus having no impact on the availability of finance for other export orientated developments.

\$150 million per annum of net exports will permit \$150 million per annum of additional imports. This would allow total domestic activity to expand by around \$500 million per annum. This would be a 2% real growth in gross national product (GNP), which is about the total growth in the entire New Zealand economy over the last five years.

Such an increase in domestic activity would allow the employment of around 25,000 additional people.

SHARING OF BENEFIT

The sponsors will invest \$650 million which has no alternative use. To justify this they will enter into long term supply contracts for alumina, other raw materials, electricity and finance. Sales contracts for primary metal and downstream products will also be long term. Current indications are that these will result in project economics comparable with those of similar Australian smelter developments being sponsored by the world's major aluminium producers.

The Government receives two direct benefits, first as a seller of electricity, and secondly through increased taxation revenue.

The NZED's electricity supply contract will be similar to the alumina supply contracts, with an initial base price that yields a satisfactory return on investment to the supplier. The price will then escalate every three months at the same rate as the escalation in aluminium metal prices. This will ensure the supplier's return is not eroded by inflation. The return is guaranteed by the obligation of the sponsors to pay for the agreed constant quantity of electricity whether it is used or not.

The increase in taxation revenue plus savings in unemployment benefits arising from the economic growth enabled by the project's foreign exchange earnings will exceed \$100 million per annum.

ENVIRONMENTAL CONSIDERATIONS

As with most industrial processes, aluminium smelting does produce wastes. However modern control techniques ensure that the plant will comfortably satisfy relevant environmental protection standards.

There is comparatively little liquid waste and what there is can be treated by well-proven conventional treatment methods. Some solid wastes are generated over time and undesirable impurities which are washed from these wastes are easily collected and neutralised. The smelting process produces large volumes of gas containing fluorides and sulphur dioxide. Much of the recent development in smelting techniques has been directed at better control of these gases and substantial improvement has resulted. The gases will be collected, dry scrubbed to remove pollutants and discharged into the atmosphere. **In the case of the main concern, fluoride, more than 98% is removed.** Thus the emission will be very substantially below that of the Tiwai Point Smelter where constant monitoring has shown no adverse effect on the surrounding environment. The testing of air flow patterns at Aramoana reveals that excellent dispersion will occur.

The sponsors, under the supervision of the Health Department, will continuously monitor effects on vegetation and animal life to ensure that there is no risk to health or relaxation of standards.

Aluminium smelting is not noisy, but special control measures will be instituted to ensure traffic noise and plant noise are within acceptable levels.

It is intended that the adjacent salt marsh area and inter-tidal flats at Aramoana will become a reserve.

There will be no harmful discharges into the harbour.

The New Zealand Wildlife Service has stated that the albatross colony at Tairāroa Head is in no danger from the smelter and will not be disturbed.

Attractive landscaping and the site layout will minimise visual impact on the local area.

Vehicle traffic through Port Chalmers will increase. To minimise this, heavy construction plant and materials will be barged to the site where appropriate. The road to the plant will be widened and resurfaced although the overall character of the road, including the stone sea walls, will be retained and access to the foreshore improved. The main public beaches at Aramoana will be unaffected.

The land comprising the site includes sections leased from the Otago Harbour Board and terminable on three months' notice. These are used for holiday cottages, some of which are permanently occupied. As heavy industry is not compatible with such a residential area, the occupiers of these sites are being offered compensation and alternative sections in a comparable seaside location.

THE ARAMOANA SITE

Electricity will be fed to the plant from the national grid rather than from any particular power station. Most of the present spare generating capacity and potential for further development is available from the South Island hydro lakes and it is most efficient to use electricity close to its source. This dictated location in the South Island.

Bulk handling facilities are necessary to unload the large volume of alumina and other raw materials coming into the smelter, and to ship the finished product to world markets. Thus the site, which must be a large area of flat land, should be close to a sheltered deep water port. For environmental reasons care should be taken to avoid scenic disruption or location in an area with either high population or poor air circulation. The availability of staff and back-up service industries and facilities in an already established city close to the site, is a further important consideration.

At Aramoana near Dunedin, all these requirements can be met. The site chosen has been owned by the Otago Harbour Board since 1868, and earmarked for industrial use since 1958. It is immediately adjacent to the deep water Otago Harbour, close to the strong infrastructure available in Dunedin City and has excellent wind conditions. The site has low productive agricultural value and can be used for the project without damage to the surrounding environment.

BENEFITS TO OTAGO

The most significant advantages for the region will be the stimulation the project gives to the local economy arising from the number of jobs created and hence the injection of salaries, wages and spending on support services.

During construction the workforce will peak at about 1500 and once the plant is fully operational about 1000 will be permanently employed. However it is estimated that a further 2000 jobs will be created or maintained in Dunedin's smaller businesses servicing the needs of the plant. **Salaries, wages and purchases will inject about \$30 million a year into the local community.**

Experience overseas and in Southland indicates that the effect of this is to increase local trade generally by about twice this amount. The impact on Dunedin will be to add new impetus and growth and to reverse present trends in employment and industrial migration.

Apart from giving added strength to the city's commercial base, the aluminium project will improve utilisation of Port Chalmers as a container port, provide relief for the depressed building and construction industry, increase business confidence, and make better use of local authority and other services in the city.

CONCLUSION

The Aramoana smelter and associated downstream processing will generate \$150 million net foreign exchange per annum. This would permit a growth in national domestic activity of \$300 million per annum supporting the employment of 25,000 people. The project will use resources with no present alternative use and provide a welcome injection into the Otago economy without damage to the environment. Because the project is internationally competitive in a growth industry the sponsors should earn a good return on their investment.



Joan Taylor



J Taylor

DU MEMBERS !

PURCHASE ENCHANTING GREETING CARD/NOTES
AND BENEFIT DUCKS UNLIMITED

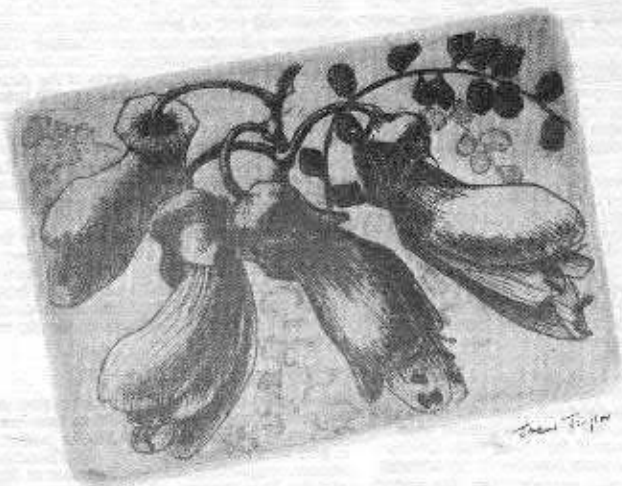
Joan Taylor, art teacher and well known member of the Hutt Art Society has produced reproductions of her larger etchings of natural subjects in greeting card and note form for sale. Packs contain 6 cards with envelopes, either assorted pack of 6 individual bird or floral studies, or 6 of one type of floral or bird study - depending on your preference. Cards are blank inside for you to write your own message. These delightful notes, in subtle colours, also make fine gifts.

Bird cards are \$ 2.50 for pack of 6 cards.
Floral studies are \$ 2.00 for pack of 6.

Orders can be placed directly with

Joan Taylor
66 Lake Road
Devonport, Auckland 9

A percentage of Joan Taylor's earnings from the sale of these delightful cards to DU members will be donated to Ducks Unlimited to benefit waterfowl. Purchases can also be made at the annual conference in Wellington on Saturday, 18 July 1981.



Joan Taylor



P. H. H. O.

Joan Taylor