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D.U. Grey Teal nesting boxes at Matata Lagoon.
Photo: John Dyer.



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Flight

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WATERFOWL JOURNAL

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Ducks Unlimited U.S.A., Canada and Mexico

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—FOR WATERFOWL AND WETLANDS—
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Cover Photo: Black Swan. Photo H. Egan

MISSION STATEMENT

Ducks Unlimited (NZ) Incorporated is a private, charitable, non-profit conservation organisation dedicated to the preservation, restoration, creation and maintenance of wetland habitat in New Zealand, the propagation and conservation of the country's rare waterfowl, and the advocacy of wetlands as a valuable natural resource. This is achieved through six projects each with specific aims. These are: "Operation Pateke", the reduction of the threatened status of the New Zealand brown teal through the release of captive bred birds and wise habitat management; "Operation Gretel", to increase the number of grey teal in New Zealand through the provision of suitable nesting habitat; "Operation Whio", the conservation of blue duck through the release of captive bred birds to expand the species range; "Operation Branta", to establish the Canada goose in the North Island as a valuable recreational resource; "Operation Royal Swan", the conservation of Mute Swan through the establishment of a captive breeding population; and "Operation Wetlands", to preserve, create and manage wetland areas through direct funding, technical assistance and public education of wetland values. The scientific study of wetlands and waterfowl is also encouraged through direct funding.

The organisation was founded in May 1974 by a group of concerned conservationists and incorporated by them in June 1975 at Wellington, New Zealand. Membership, in four categories, is open to anyone who supports the organisation's objectives. Junior membership is \$11.00 per annum. Full membership is \$30 per annum, Trade membership is \$45 per annum, Sponsor membership is a minimum of \$60 per annum and Life membership is \$600.00. Membership carries a subscription to "Flight", the official quarterly publication of Ducks Unlimited which currently reaches 2000 members and friends concerned with waterfowl conservation. Letter, manuscripts and photographs should be addressed to the "Flight" Editor. To assure prompt delivery, members should send subscription renewals and changes of address to National Headquarters at PO Box 9795, Auckland. Any views expressed by contributors in "Flight" are their own and do not necessarily constitute those of Ducks Unlimited New Zealand Incorporated.

Presidents Report

tradition on this journey and should tempt the Morrisons to return to New Zealand in the future.

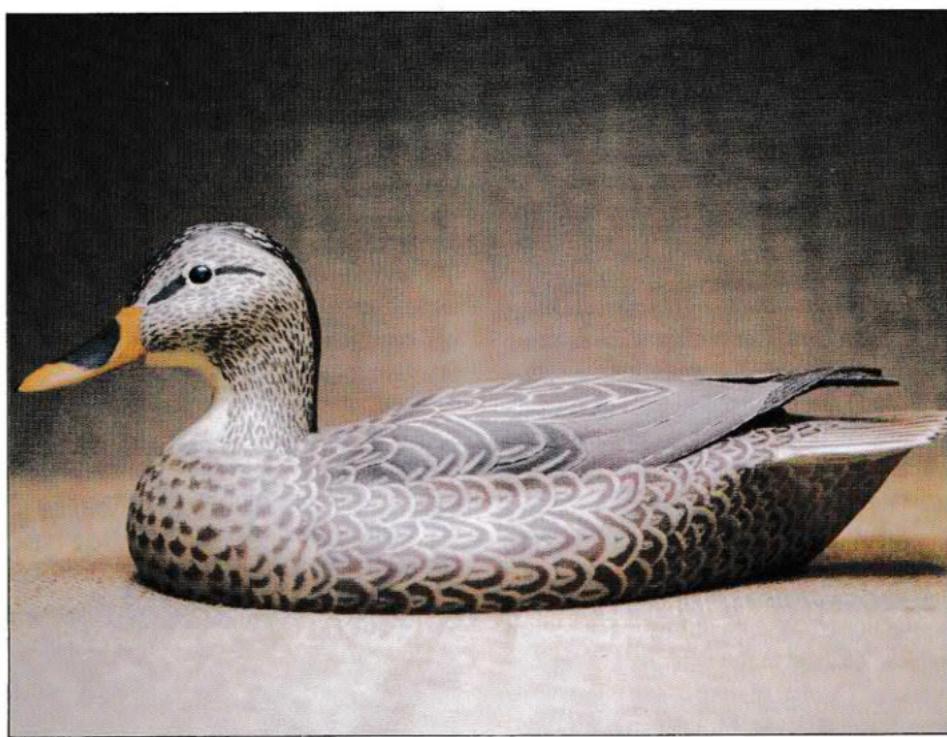
Alan Elliott has recently retired as a director after many years of staunch service to DUNZ.

Alan has travelled many miles in my company to many parts of New Zealand and assisted in every way possible, we know Alan will be there to help whenever, and Alan's wife Jane is always a willing worker out our AGM and Dinners. We thank you both for your past input and know you will be there for DU in the future especially when Hamilton Area hold another Hootnanny.

The Presidential position is moving to Auckland as from last April and I wish to extend a warm welcome to David Rice our new President and David Smith as vice President for the next two years. My position is also a new appointment to that of Chairman of the Board which aligns us with DU Inc, Canada and Mexico.

My first assignment will be to attend the inaugural dinner of DU Australia on the 4th of April, Dave Johnston will be with me so we will get our neighbours off to a cracking good start.
Jim C Campbell

DECoy CARVING



A superb mallard hen decoy carving by Brad Parkes.

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BLUE DUCK AND TROUT

Dale Towers

NICHE OVERLAP BETWEEN BLUE DUCK AND TROUT POPULATIONS THE POTENTIAL FOR DIETARY COMPETITION

1.0 Competition between trout and blue duck populations.

Competition between waterfowl and fish populations has been demonstrated in several studies, (Eadie et. al., 1982; Pehrsson, 1982; DesGranges et. al., 1986; Hunter et. al., 1986)

The blue duck (*Hymenolaimus malacorhynchos*) is endemic to New Zealand. Today fragmented populations of this waterfowl are restricted to the fast flowing headwaters of this country's less disturbed catchments. The diet of this bird consists of aquatic invertebrates. Kear and Burton (1971) noted that the diet of blue ducks closely resembles that of trout.

Both rainbow (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*) were introduced to New Zealand in the latter half of the last century. The diet of trout consists largely of aquatic insect larvae. McLennan et. al. (1984) found that Trichoptera larvae contributed the greatest proportion to the diet of both brown and rainbow trout resident in Hawkes Bay rivers. Ephemeroptera nymphs were also important while Plecoptera nymphs and Diptera larvae were present.

Cadwallader, (1975); Fenemore, (1976) and Sagar et. al. (1983) found similar trout diets. Allen, (1952) and McDowell, (1990) noted that diet composition differed between trout species taken from the same stream, between the same species from different catchments and throughout trout development.

Kear and Burton, (1970) found Trichoptera larvae to be numerous in blue duck faeces. Williams, (1989, unpub.) showed that the diet of blue ducks 'shifted' to less preferred

species in areas where trout were present. A decline in the blue duck population has occurred over the last one hundred years, (Kear and Burton, 1971; Bell, 1986; Williams, 1988). Direct dietary competition between trout and blue ducks may explain this decline.

The aim of my Ph.D research is to measure niche overlap between the blue duck and the two common trout species. I will endeavour to determine whether the overlap constitutes competition and to assess the impacts of any such competition in reference to blue ducks. In this proposal I summarise other fish, waterfowl competition studies and outline my intended research structure.



2.0 Waterfowl fish competition studies.

Eadie et. al., (1982) found a negative correlation between goldeneye (*Bucephala clangula*) and perch (*Perca fluviatilis*) roach (*Leuciscus rutilus*) densities. Eriksson et. al., (1979) found that goldeneye showed a preference for lakes where fish are absent as opposed to lakes containing fish.

Hunter et. al., (1986) used Morisita's, and Sneath and Sokal's index in their appraisal of dietary overlap between black duck (*Anas rubripes*) and brook trout (*Salvelinus fontinalis*). They found substantial overlap in the diet of duck and trout. Eadie et. al., (1982), using Schoener's index established that dietary overlap existed between goldeneye and perch where both were found using the same lakes. Eadie et. al., (1982)

also estimated resource limitation. He determined the daily energetic demands of both species then by deriving the daily energy available from benthic invertebrates was able to illustrate that food limitation did exist at least one study site.

Pehrsson, (1984); DesGranges et. al., (1986); Hill et. al., (1986), and Hunter et. al., (1986) found that duckling weight gains were significantly reduced when reared on water containing high densities of fish as opposed to those reared on water containing low or no fish.

DesGranges et. al. (1986) removed brook trout from his experimental area and saw marked increases in duckling weight gains. When he increased trout densities he noted the opposite trend. Pehrsson, (1979, 1984) showed that mallard ducklings raised on fish free lakes found a greater abundance of prey and the prey were larger in comparison to that found by ducklings reared on lakes containing fish. Time spent foraging and the area covered by ducklings also rose as the density of fish increased, (Pehrsson, 1984; DesGranges et. al., 1986; Hill et. al., 1986; Hunter et. al., 1986). Hill et. al., (1986) demonstrated a positive correlation between mallard duckling foraging range and duckling mortality and presented the following table illustrating the relationship between overall duckling survival on lakes with differing fish densities.

	River Ouse	Reserve
Broods (n)	6	20
Brood density (ha-1)	0.47	0.22
Fish density (Kg ha-1)	19.0	249.0
Duckling survival (%)	47	10

Comparison of Mallard broods density, fish density and duckling survival between

reserves at Great Linford in 1980. (After Hill et. al., 1986).

3.0 Methods

3.1 a) Correlation between duck and trout numbers

To examine the correlation between the number of ducks and the number of trout in each river I shall conduct:

i) Blue duck census

ii) Trout census

3.1 b) Relationship between trout and duck populations above and below waterfalls

This will involve the identification of stream/rivers associated with blue duck populations that also contain some form of natural barrier that impedes trout movement into certain areas, i.e. above the waterfall. The aquatic habitat above and below such obstacles should be of similar nature.

The examination of duck density in relation of trout density should be more independent of physical variables in such situations (i.e. communities above and below the waterfall should experience the same environmental factors).

3.2 Calculations of niche overlap

Niche overlap between different species has been measured in several recent studies (Eadie et. al., 1982; McLennan et. al., 1984, Hunter et. al., 1986). Formulae allows quantification of 'diet overlap', 'diet breadth' and 'resource limitation' within systems. The following data will require collection for the formulae analysis:

i) A representative sample of the benthic invertebrate community. Such samples may be gathered by kick sampling. The samples will be examined for taxa/species present, taxa/species as proportion of the sample, and size of the different larva present.

ii) Collection of duck faecal samples from which the diet of the birds will be determined.

iii) The collection of a representative sample of trout stomachs, so the diet can be examined. Stomachs will be collected from different trout species and size classifications. This will require electro fishing and gill netting to gain samples of all trout size categories.

3.3 Exclusion Experiments

I plan to remove trout from streams using rotenone, netting, electro fishing or a combination of these. Once trout exclusion has been achieved the population dynamics of the resident blue duck population will be observed. Such observations may focus on duck density, territory size, breeding success, foraging times and changes in diet. Data collection may need to span several years. A trout free environment will therefore need to be maintained throughout the study duration (at least three years). It may be possible to remove trout from above a waterfall or some other natural obstruction. A man made barrier may be required, i.e. water flow velocity barrier.

3.4 Duckling Observations

Several studies have used ducklings in their effort to assess dietary competition between fish and waterfowl species (Pehrsson, 1984; DesGranges et. al., 1986; Hunter et. al., 1986). Broods of young hatchlings were imprinted on the observer, who then assessed their weight gains when exposed to differing concentrations of fish. In light of the limited number of blue ducklings hatched in captivity the possibility of duplicating this type of experiment seems small. Repeated capture of wild ducklings would also seem impractical due, firstly to

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GREY TEAL NEST BOXES

John Dyer



the difficulty in catching the ducklings and secondly the possible risk of increasing duckling mortality.

Reed (Msc, unpub) noted that black stilt (*Himantopus novaezealandiae*) chicks reared in captivity with access to more abundance and higher quality food grew faster and fledged earlier than their wild counterparts. Williams (1974) in his study of creching behaviour in shelducks, (*Tadorna tadorna*) estimated duckling age by noting plumage development. Pengelly and Kear (1970) noted the plumage development of hand reared blue ducklings and listed the time duration taken in reaching each stage of feather development. They also presented weight gain data for the ducklings for the first 23 weeks. Using this method of estimating duckling age from plumage development and relating it to weight gain data derived from Pengelly and Kear, and other captive reared broods I may be able to compare the growth of various broods reared on waters containing different densities of trout thereby gauging the effect of trout presences at this critical time.

4.0 Fieldwork/research Chronology

The chronology of fieldwork may be as follows:

4.1 Estimation of niche overlap The timing of data collection is as shown in Table 1. Table 1. Months in which data collection will be undertaken

Month	Reason for collecting during this month
February	Neither duck/trout breeding Trout getting ready for spawning Migration
July	Trout Spawning Ducks preparing for breeding
September	Fly present Ducks laying eggs
November	Fingerlings present Ducklings present

During each month the appropriate data for niche overlap analysis will be collected. Such sampling will be conducted during 1991, '92 and '93.

4.2 Duckling Observations

The peak of blue duckling breeding takes place between September and December and it is during this period that duckling development observations will be conducted. Kear (1970) found that ducklings took between 70 to 77 days to achieve their first flight. Therefore total duckling development should be observed if observations are conducted over the time period stated. Duckling observations will be conducted outside of this time period if required. Plumage development data will be collected for the 91/92, 92/93 and possibly the start of the 93/94 season.

4.3 Exclusion experiment

The start time for the exclusion experiment will be based on the finds of the niche overlap studies. This will allow those streams containing removable populations of trout, monitorable populations of ducks that have a degree of overlap to be identified. Thus the building of a trout barrier and the removal of trout will take place probably in early 1992. The monitoring of the duck populations will then follow at regular intervals. Relevant data collection will continue through to the end of the 1993 season.

4.4 Correlation Analysis

As duck and trout data becomes available, I will correlate them.

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Parasitic laying in grey teal (*Anas gibberifrons*) has been closely studied in NZ and the subject of two recent papers in Flight (June 89, Sept 90).

The author's conclusion was that "it would appear that parasitic laying at (Windermere site) during 1988 was not detrimental to productivity." The same author inferred that extra egg production probably increased duckling production.

This may have been a perfectly valid conclusion to draw from limited data, however, in Carolina Wood Duck (*Aix sponsa*) which also exhibit parasitic laying...

"A long term study 1976-87 of wood ducks (in Illinois) revealed that as frequency of

brood parasitism and clutch size per box increased, percentage of eggs hatching per clutch decreased markedly. In years of high wood duck populations frequency of brood parasitism was also high and productivity suffered. Similar inverse relationships between clutch size and hatchability of eggs, and between population density and nesting efficiency have been documented elsewhere; these effects have been associated with crashes in duckling production" (Semel el at 1990) my italics.

"Interference in the form of dump nesting, nest desertion and egg cracking results in declining nesting efficiency. Cracked eggs are the product of struggles between females

in boxes"..."in most extreme cases of density strife females are injured or killed while struggling with conspecifics in boxes" (Bellrose 1986 in Soulliere, 1990). (Mr Peter Nola tells me that the only box checked to date at Windermere this season had 15 eggs (i.e. obviously two females laying) and that half of these were crushed. Mr Nola also informs me that seven or eight grey teal were found dead in boxes in the 1990/91 breeding season though not in a manner which suggested predation. The boxes were all fitted with predator guards and extensive predator trapping is practised on site. Also nothing of this sort has been noted in previous years).

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Feature Article



So it seems quite plausible that grey teal are suffering from density strife caused by the artificial clumping of boxes and the 'queues' of birds waiting to use each one.

In natural conditions grey teal or wood duck use randomly spaced nest sites and covert entry is therefore the rule rather than the exception. With a hundred or more artificial nest boxes in ready view of each other covert entry is practically impossible. 'Parasite' hens observe the departure of laying hen from a box and enter and lay their own eggs (hence the term 'dump' nesting). If the original hen is still present the parasite can become quite aggressive and the resident

hen may have to fight off a series of these attacks every day. Many abandon the nest. Some, it seems, are killed while fighting in the confined space.

The corrective approach used by US wildlife managers is to relocate boxes to visually occluded sites. For instance, by using bays, peninsulas, islands and other visual barriers between adjacent boxes or simply by spacing them well apart (i.e. 90 m plus). This minimizes the deleterious consequences of 'dump' nesting and hatchability in wood ducks increases significantly.

I must therefore caution anyone erecting

new teal boxes to avoid clumping them together unless long term grey teal productivity can be shown to differ from wood duck under such circumstances.

References cited: Semel B, P W Sherman and S M Byers 1990 Nest boxes and brood parasitism in wood ducks: A Management Dilemma.

Soulliere G J 1990 Regional and site specific trends in wood duck use of nest boxes.

Both in L H Fredrickson, G V Burger, S P havera, D A Graber, R E Kirby and T S Taylor, Eds: Proc 1988 North American Wood Duck Sympo. St Louis MO.



THE WILD DUCK

Twilight. Red in the west.
Dimness. A glow on the wood.
The farmer plods home to rest.
The wild duck come to glean.
O souls not understood,
What a wild cry in the pool;
What things have the farm ducks seen,
That they cry so - huddle a cry?

Only the soul that goes,
Eager, eager, flying.
Over the globe of the moon.
Over the water that glows.
Wings linked. Neck astrain,
A rush and a wild crying.
A cry of the long pair,
In the reeds of a hidden lagoon,
In a land that no man knows.

Maxine R Greerslade

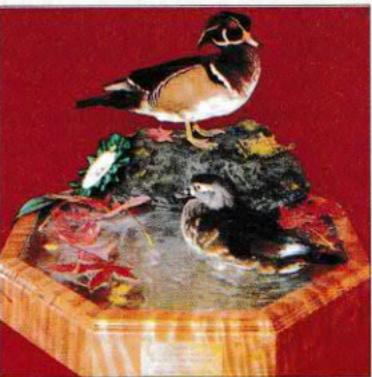
MORNING WALK

I saw a butterfly rise from a flower
with wings aflame;
And a bird in a puddle taking a shower,
and a cat which came
to look at itself in the lake, then wandered
away,
to lie in the sun
on the bank; I saw a boy racing by with his
dog,
and a man with a gun.

In the distance a young foal played in a
paddock,
as a horse trotted by;
In a garden a girl was singing, picking some
flowers,
and the sun was high.
Then with a whirring of wings, from the lake
ducks rose to the sun
and the joy of my walk was destroyed
by the sound of a gun.

Maxine R Greerslade

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Feature Article

DUCK BONDS

Starting on 1 April 1992, Ducks Unlimited New Zealand Inc will offer for sale, Duck Bonds. A unique conservation concept.

The Concept: For the past five years, Ducks Unlimited has operated on a very tight budget. If it wasn't for the generosity and enthusiasm of members who do so much for the organisation voluntarily, DU would not be the strength it is today. DU, however, can be stronger. To continue to achieve and maintain the results in the field that have been demonstrated in the last fifteen years, it is essential that we widen our funding base.

Ducks Unlimited NZ receives tremendous support from members and our DU counterparts in USA and Canada, as well as waterfowl experts worldwide and major sponsors - now you, too, can also help.

As can be seen in our Financial Statements, a large proportion of expenditure goes to serving the Pearce Wetland's mortgage. With the introduction of Duck Bonds, sufficient finance will help to eliminate this by raising funds to reduce the mortgage.

Bonds are issued in multiples of \$100. Every Bond unit enters a draw for repayment at each Annual General Meeting. Prior to the AGM the Board of Directors will determine the amount of funds allocated for Bond repayment. This will be a minimum of \$1,000. Ducks Unlimited will repay Bonds not drawn within five years at the end of the five year term per Bond. Obviously Bonds which have been drawn for repayment will not be entered into subsequent draws.

The amount repaid per Bond is the amount the Bond was purchased for with no interest.

At the time of repayment, the owner may decide to donate the repayment to Ducks Unlimited. This being the case, a receipt will be issued for the amount of the Bond, allowing the donor to take advantage of a charitable tax deduction.

Duck Bonds can also be purchased for example, in the name of your child. Your child is then the 'owner' of the Bond and their name is entered in the register of Bond holders. They are then the recipient of the \$100 when the Bond is repaid. You can purchase as many Bonds as you like. Bonds for yourself, your children, a friend, or Ducks Unlimited if you like.

Operating Conditions:

- Ducks Unlimited Duck Bonds can only be purchased for the face value of the Bond.
- Duck Bonds are fully transferable. Bonds may be purchased for family and friends etc.
- Once a Bond has been purchased it can be sold back to DU for the initial purchase price (face value) under special circumstances.
- The monies received from the sale of Duck Bonds will be used to reduce our mortgages. Additional funds can then be expended on other projects and field work.
- A register of Ducks Unlimited Duck Bonds will be maintained by the Secretary of Ducks Unlimited.
- Prior to the AGM the Board of Directors will determine the amount of funds available for Duck Bond repayment. (Minimum of \$1,000).
- Duck Bonds purchased during the previous financial year will be eligible for repayment.
- Repayment will be made at the Annual

General Meeting each year. The first draw will occur at the 1993 AGM.

- Duck Bond holders drawn for repayment but who are not in attendance at the AGM fundraising dinner will be sent a cheque for the amount during the week following the AGM.
- For Duck Bonds that are donated to Ducks Unlimited, a receipt will be issued for the purchase price for tax purposes.

The Chapter dinners and auctions will continue to be held, as will the national raffle and other regular fundraising events.

These activities along with the Duck Bonds will raise the necessary funds to fulfill the objectives of the organisation that is committed to 'Waterfowl and Wetlands.'

Donations can still be made to specific projects that DU is involved with. Duck Bonds simply add another dimension to the success and continuance of Ducks Unlimited.

Enquiries can be made to: The Secretary, Ducks Unlimited, Freepost 3246, P O Box 9795, Newmarket, Auckland. (No stamp required). Phone (09) 686-772.

OPERATION BRANTA REPORT

The 1991 breeding season has been very successful for most of our waterfowl species, with a plentiful supply of water through most of the country. The Canada Goose has, in the North Island, nested well with a high success rate and we are assured of continuing population expansion.

We have continued with our efforts to band populations this year but unfortunately for various reasons were unable to band the Northern Wairarapa population.

Our Ohakune flock banding occurred mid January with continuing support from local DOC, Taranaki Fish & Game and DU members.

We were able to avail ourselves of Taranaki Fish & Game's capturing equipment, which was erected in lightning time by our now experienced crew on the 'Mitredale' back dam. It was here we struck our first minor hitch with the operation, when some 150 birds were discovered to have disappeared

during the preceding week. The remaining birds were quickly driven into the pen and banded. For the first time with this flock we were experiencing some recaptures which will allow us to start to monitor the population. It is pleasing to note that the 'missing' birds have decided on a new moulting site and we will be monitoring and banding this large dam in the future.

There are reports coming in from some of the Fish & Game Councils of crop damage being done by Canada Geese and that these problems are being handled on an individual case basis by the appropriate authorities.

Members requiring pairs of Canada Geese are reminded that they should advise the operation supervisor of their requests to enable provision to be made to capture birds next year.

Contact: Chris Hooson, C/- P O Box 9795, Auckland.

D.U. News

APOLOGY FOR DECEMBER FLIGHT DELAY

The board would like to apologise for the delayed publication of the December issue of "Flight." Unfortunately due to the publication being affected by the 'Great N.Z. Christmas Shutdown,' the magazine was delivered to members late. We apologise for any inconvenience that this may have caused.

In an effort to ensure this does not happen again, and as an attempt to line the magazine publication dates more closely to the annual DU work plan, the board has decided to change the "Flight" publication dates to APRIL, JULY, OCTOBER and JANUARY. This is effective as of this issue and will mean that members will receive issue No. 1 each year at the beginning of the financial year.

DU AUSTRALIA LAUNCH

It is now official that the launch of DU Australia will be on April 4th in Adelaide, South Australia. DU New Zealand will be represented at the launch ceremony by Mr

Jim Campbell. A number of DU Canada officials will also be attending, and hopefully we will be able to host them in N.Z. on their way home to Canada. DUNZ looks forward to furthering ties with DU Australia and we wish them well in their early stages of development.

DUNZ ARTIST OF THE YEAR PAINTING LAUNCH

On March the 17th at the Centra James Cook Hotel in Wellington, DUNZ officially launched the 1992 'DUNZ Artist of the Year Painting.' This year's artist is Pauline Morse who painted a pair of Brown Teal. An article on Pauline and her work will be in the next issue of "Flight."

The Minister of Conservation, The Honourable Mr Denis Marshall, unveiled the painting at the function which was attended by a number of invited guests. Members will have an opportunity to view Pauline's work when it appears on the front cover of July's "Flight."

DUCKS UNLIMITED NEW ZEALAND 1992 NATIONAL CLAY TARGET CHAMPIONSHIPS

hosted by: Taupo Gun Club Centennial Drive Taupo

SUNDAY 19 JULY 1992 commencing 9 am sharp

ENTRY:

\$79.00 includes compulsory \$2.00 sweep per event and \$2.00 High Gun. All sweeps paid out in full.

EVENT 1.

25 target SKEET Championship - current holder: G Whale

EVENT 2.

15 target SPARROW Championship - current holder: G Paton

EVENT 3.

10 pair DOUBLE RISE Championship - current holder: M Havill

EVENT 4.

20 target SINGLE BARREL Championship - current holder: R Nixon

EVENT 5.

20 target POINTS SCORE Championship - current holder: Denis Smith

EVENT 6.

25 target SINGLE RISE Championship - current holder: M Havill

CHAMPIONSHIP HIGH GUN OVERALL SIX EVENTS - current holder: Denis Smith Shootoffs: only for HOA or first in grade - other shooters share sweep one metre rearward movement per break to 22 metres then on a first miss basis.

MEDALS TO HOA AND FIRST IN EACH GRADE PLUS SASH TO HIGH GUN - PLUS CHAMPIONSHIP TROPHY TO EACH EVENT HOA TO HOLD FOR 12 MONTHS.

NOTE: A PORTION OF EACH ENTRY GOES DIRECTLY TO DUCKS UNLIMITED FIELD WORK TO CREATE WATERFOWL HABITAT. ONLY FINANCIAL MEMBERS ELIGIBLE TO ENTER



MARKETING

30 Renata Crescent,
Te Atatu North, Auckland
P.O. Box 45-186, Te Atatu, Auckland
Phone & Fax 09-834 6743

Dave Sampson

Les Ingle

• MARKETING • ADVERTISING •
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The JIM CAMPBELL Decoy Carving Trophy

This trophy will be competed for annually by carvers from around New Zealand. The competition will be judged and the trophy awarded at the Annual Conference.

Get your entry in for the 1992 competition

BROWN TEAL

A further 64 birds were released on the Purerua Peninsula in the Bay of Islands in February. Mr Dallas Greenaway the manager of the property has been siting birds as far away as KeriKeri. DOC are considering further predator trapping at the site to assist the release programme.



MEMBERSHIP COMPETITION

Win copies of our book "Wetlands: Discovering New Zealand's Shy Places". To be in the next draw simply fill out the attached coupon, or send us a copy, and both you and the new member you introduce will go into a draw. The more members you sign up, the more chances you have of winning. The draw for the April issue of Flight closes on 15th March.

Recent winners are:
J.R. Morris of Hikurangi,
Kim Johnson of Whangarei.

Ducks Unlimited
subscriptions are:

Life Members \$600

Gold Sponsors \$250 per yr

Silver Sponsors \$125 per yr

Bronze Sponsors \$60 per yr

Trade Members \$45 per yr

Contributor
Members \$30 per yr

Junior Members
(Under 16) \$11 per yr

Ducks Unlimited New Member Competition
P.O. Box 9795, Auckland

Please enrol _____

Address _____

as a _____ member of Ducks Unlimited

A subscription of \$ _____ is enclosed

Please charge Visa/Bankcard No: _____

Expiry Date: _____ Signature: _____

New member introduced by: _____

Address: _____

Tick for a gift subscription.

Please send renewal notices to: _____

All donations to Ducks Unlimited are Tax Deductible

be good numbers of birds existing, there are however one or two sites that are causing some concern. It is encouraging that DOC are progressing well with further habitat protection work at several sites.

BLUE DUCK RESEARCH

At the February board meeting, the

BACKGROUND

The idea of a public wetland Centre which enables visitors to learn about wetlands through exploration of the habitat and observation of the wildlife at close quarters, which also combines such educative recreation with conservation-led land management and research, was a novel one when the late Sir Peter Scott founded The Wildfowl & Wetlands Trust in 1946 at his Slimbridge Centre, on the River Severn in southwest England. Since that time, such an integrated, centre-based approach to wetland education and conservation objectives has been adopted by other organisations and agencies around the world, and there are now numerous public wetland education-conservation centres in existence. The Wildfowl & Wetlands Trust currently operates eight such Centres in the UK, with work about to start on the ninth, in the heart of London.

The foundation of Wetland Link International (WLI) represents a

landmark in this approach. Sir Peter Scott's idea was to link centres around the world, to facilitate the sharing of expertise and resources, and to enable fertile discussion of the challenges facing those involved, thereby providing mutual, developmental, support towards common goals, and reducing the duplication of effort and resources resulting from repeated 'reinventions of the wheel'.

The idea was developed by The Wildfowl & Wetlands Trust, and in 1990 The British Petroleum Company p.l.c. (BP) became the Founder Sponsors of WLI.

Initially, the most important task was to clarify the precise niche which WLI should fill; already there exist a number of active international agencies in wetland conservation. It was universally agreed that the gap which existed was that of raising public awareness and improving education about wetland functions and values. WLI will address this gap, operating uniquely, through public wetland conservation-education Centres

Directors approved funding support for a new Blue Duck research project to be based at Massey University. This project is to be carried out by Dale Towers who spent two years working on Grey Teal, with DU support, while he was at Waikato University, and will be supervised by Dr Clare Veltman.

Dale's Ph.D project is an investigation of the competitive feeding interactions between Blue Duck and trout, and will cover several main lines of inquiry. The study proposal which outlines this project appears elsewhere in this issue of "Flight."

NEW DUNZ PRESIDENT

As of the 1st of April Mr David Rice became the President of Ducks Unlimited. David has been the Auckland Chapter Chairman for the past several years and brings a wealth of experience to the position. The past president Mr Jim Campbell has become the Chairman of the Board, a newly created position to ensure continuity on the Board

GAME MANAGEMENT ADVISER

Fully qualified, with ten years experience, as well as good deer farm skills is seeking full-time employment on private or commercial hunting estate. Only serious employers please write to: Gamekeeper, P O Box 2202, Rotorua.



Lance Dickey and Chris Ziesler inspect the auction items at the recent Auckland Chapter Dinner.

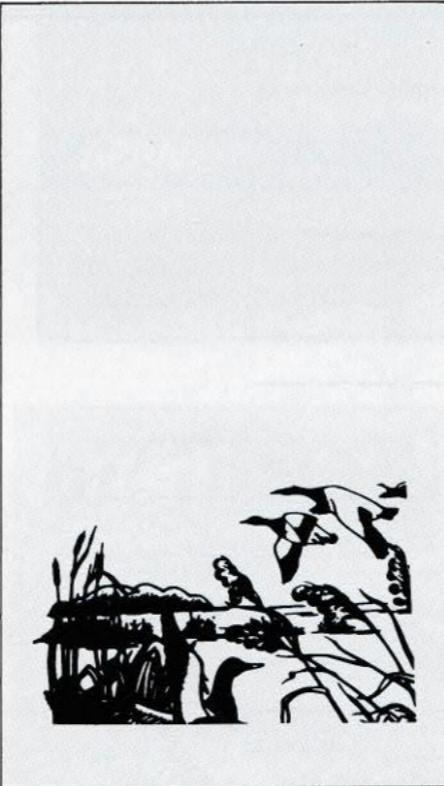
AUCKLAND CHAPTER EVENTS

The Auckland Chapter held its 4th annual charity dinner/auction this year on Feb 29th at the Centra Hotel in the City. The evening was thoroughly enjoyed by 70 members and friends. Approximately \$5000 profit was raised. The committee would like to particularly thank a number of major sponsors, including THE HOWICK GUN SHOP, RELOADERS SUPPLIES, SPORTWAYS, OLIN CORPORATION, ANDY TANNOCK HUNTING AND FISHING, HOOSON INDUSTRIES, JIM AND RAANA CAMPBELL, MARK NEWCOMB, TONY FLEXMAN, PETER NOLA, CANADIAN AIRLINES, KELVIN MACKIE, FRED BAILEY, BECKETT PUBLISHING, HALCYON BOOKS and BRAD PARKES of PUKEKO INDUSTRIES.

This year Mr Noel Osbourne from Trout Unlimited was the auctioneer, and his special

charm and humour, including his free gifts and mystery ladies item were particularly well received and added a unique quality to the main auction. The Committee would also like to pay special tribute to Christine Mangain, whose creativity and hard work transformed the Centra Ballroom into a wetland complete with maimai, flying birds, flax displays and centre table arrangements portraying a small wetland. Thank you also to the Centra staff who were extremely helpful, and provided a superb banquet. Lastly mention must be made of all members and friends who attended the evening and made it the fun event that it was.

The Auckland Chapter is to hold its second Sporting Clay Shoot at Mr David Smith's Farm in Ness Valley Road, Clevedon in late April. For further information please contact Marie McEntee on (09) 6386-772. DUAK members will be notified of the specific date through the mail.



NATIONAL SALES ITEMS

CONFERENCE PROGRAMME

FRIDAY 17 JULY

5.00 pm - Registration Desk, Conference Room and Bar Opens
7.00 pm - Friday Conference, Happy Hour begins
8.00 pm - Friday Conference, Happy Hour ends
12.00 pm - Conference Room and Bar closes

SATURDAY 18 JULY

Early - Guided trout fishing (time to be arranged)
10.00 am - Guided walk to Lake Rotopounamu
9.30 am - Conference Room and Registration Desk opens
10.30 am - Open Discussion and Morning Tea in Conference Room
12.00 - Buffet Lunch (not included in registration price)
1.45 pm - Annual General Meeting opens Welcome from the chair
Apologies
Confirmation of 1991 AGM minutes
1.50 pm - President's Annual Report
1.55 pm - Treasurer's Annual Report Notification of Auditors
2.00 pm - Executive Director's Annual Report
2.10 pm - Election of four Directors from the floor
2.15 pm - "Operation Wetland" Annual Report
2.20 pm - Sinclair Wetlands Annual Report
2.25 pm - Pearce Wetlands Annual Report
2.30 pm - "Operation Pateke" Annual Report
2.35 pm - "Operation Whio" Annual Report
2.40 pm - "Operation Royal Swan" Annual Report
2.45 pm - "Operation Gretel" Annual Report
2.50 pm - "Operation Branta" Annual Report
2.55 pm - Editorial Report

3.00 pm - Presentation of the Ducks Unlimited New Zealand Artist of the Year Award
3.10 pm - Annual Conference Guest Speakers Address
4.00 pm - General Business
4.15 pm - Annual General Meeting closes

SATURDAY 18 JULY

7.00 pm - President's Shout begins in Conference Bar
7.15 pm - Presidents Shout ends
7.30 pm - Annual Conference dinner
8.45 pm - Return to Conference Room
- Presentation of the Brown Teal Breeder of the Year Award
- Presentation of the Blue Duck Breeder of the Year Award
- Presentation of the Mute Swan Breeder of the Year Award
- Presentation of the Jim Campbell Decoy Carving Trophy
- Chapter's present annual fundraising totals
- Presentation of the Chapter Challenge
- Presentation for the Bill Barrett Trophy
- Annual Conference Fundraising Auction
Late - Conference Room and Bar closes

SUNDAY 19 JULY

8.30 am - Ducks Unlimited National Clay Target Championship begins at Taupo Gun Club
10.00 am - Morning Tea and Trade Displays in the Conference Room
1.00 pm - Conference Room closes

DUCKS UNLIMITED NEW ZEALAND INC. 18TH ANNUAL CONFERENCE 17-19 JULY 1992 AT THE TOKAANU HOTEL IN THE NEW CONFERENCE FACILITIES

CONFERENCE REGISTRATION

Please register _____ people for the Ducks Unlimited Annual Conference.

Name: _____

Address: _____

Phone: _____

I/We will require accommodation for the nights of _____

Number in party _____

Conference Registration \$50 each x _____ people \$ _____

Tokaanu Hotel Room Deposit \$75 per room x _____ rooms \$ _____

or Tokaanu Lodge Room Deposit \$30 per room x _____ rooms \$ _____

Please charge my VISA/BANKCARD No: _____

Signature: _____

Expires: _____

My cheque for \$ _____ is enclosed

PLEASE SEND YOUR REGISTRATION TO: Diane Pritt, Smiths Road, Ohakune Ph: 06-385-8016 a/h or 06-385-8244 wk

BOOKS

Duckshooters: Sportsmen & Conservationists	20.00
Complete Book Australian Birds (Readers Digest)	85.00
Coloured Key to the Waterfowl of the World	14.50
Ducks, Ponds and People	14.50
New Zealand Birds	11.30
The Hawaiian Goose	25.50
Ponds and Lakes for Wildfowl	36.00
Wildfowl by Eric Hosking	50.00
Wetlands by Gordon Stephenson	15.00

STATIONERY

DU Ballpoint Pens Clic Bic - per box of 10	11.20
DU Maxipens - per box of 10	11.20
DU Maxipens - single	1.50
Janet Marshall Bird Cards - set of four	6.00
Ornithological Society Bird Cards - packs of 10	6.00
Waterfowl Writing Paper and Envelopes - set of 10	9.00
Waterfowl Note Paper and Envelopes - set of six	6.00
Postcards - Mute Swan/Brown Teal 10 pack	4.00

APPAREL

DU Hat - Blue/Grey (one size fits all)	25.00
DU Jersey - Red/Green/Blue (state size)	76.00
DU Polo Shirt - Dark Blue	40.00

BADGES

DU Decal	1.20
DU Cloth Shoulder Patch	9.60
DU Canada 50th Anniversary Badge	5.60
DU Duck Head Badge - Large Gold	6.75
DU Duck Head Badge - Small Gold/White & Green	5.60
DU Duck Head Stick Pin	5.60

GENERAL

Limited Edition Art Prints	
Blue Duck Art Print by Paul Martinson (Members Price)	85.00
Shoveler Art Print by Russell Jackson (Members Price)	85.00
Mallard Art Print by Janet Marshall - numbered & unsigned	49.50
Fenn Traps Mk 6	28.00
DU Duck Head Flag 62cm x 44cm	41.00
DU Cam-O-Paint	10.00
DU Ashtray	4.60
DU Bottle Opener	4.20
DU Key Ring	4.60
DU Key Ring Nail Clippers	4.20
DU Letter Opener	4.20
DU Tea Caddy Spoon	4.20
DU Teaspoons	4.20
DU Plastic Ruler	1.50
DU Plastic Mugs - set of 3 assorted colours	2.00
Number Plate Surrounds (Pairs) Red, Blue, Green	33.00
Engraved Crystal Decanter	50.00
Roll Bag	24.00
Camo Back Pack	36.00

10% DISCOUNT

off selected items

Roll Bag	\$21.00
Jerseys	\$68.50
Polo Shirts	\$36.00
Hats	\$22.50

Orders through Sales Dept

I ENCLOSE MY CHEQUE FOR \$ IN PAYMENT
OR PLEASE CHARGE TO MY VISA/BANKCARD (Delete to suit)

CARD NO EXPIRY DATE

NAME (Please print)

ADDRESS

POST TO DIANE PRITT, SMITHS ROAD OHAKUNE (58-016)
BUSINESS HOUSES: TAX INVOICE REQUIRED (Tick)