Threatened Waterfowl Research Group Newsletter

Coordinated by The Wildfowl & Wetlands Trust for IWRB
Edited by Janet Hunter & Andy Green

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No.7, May 1995
The Threatened Waterfowl Research Group was established in October 1990 and is coordinated from The Wildfowl & Wetlands Trust at Slimbridge, UK. There is no formal membership of the TWRG, and those receiving and/or contributing to this newsletter should consider themselves members. The TWRG and its newsletter aim to identify those Anatidae taxa across the world that are threatened with extinction, to gather and exchange information on these taxa and to promote their conservation. The Wildfowl & Wetlands Trust is an Associate member of the BirdLife International network, and this newsletter is distributed to BirdLife partner organisations.

EDITORIAL

Those of you unable to attend the recent Anatidae 2000 conference in Strasbourg missed a highly successful meeting that has brought the activities of the TWRG into a new and exciting phase, giving us renewed hope for the future of the globally threatened Anatidae.

Firstly, the conference was the excuse for us to prepare a new list of the threatened taxa, using the latest IUCN criteria, which we present within these pages. We now have only 50 taxa listed as globally threatened, a much shorter list than before. Most of the changes are due to our improved understanding of the status of many species, thanks largely to your help. Many of the articles published in previous issues of our newsletter were essential sources of information at the time of applying the new criteria.

Secondly, the conference was the starting point for an IUCN/IWRB Action Plan for the Anatidae now in preparation, in which globally threatened taxa are a top priority. In particular, this plan will be a unique tool and golden opportunity for the conservation of the majority of these taxa which are confined to poor countries and have been ignored by the series of single-species action plans produced in recent years. The TWRG network will be a major resource for the development and implementation of this plan. We need you to tell us what action is required in your region, and how it can be achieved. We will therefore be in touch with many of you to request your participation in preparing the plan. Meanwhile, we would be delighted to hear as soon as possible from anyone who would be in a position to propose and coordinate a conservation project that could be included within the plan. For example, this could be a survey of Salvadori’s Teal, research into the ecology of Torrent Duck or a project to protect the habitat of the White-winged Duck.

Thirdly, meetings were held during the conference to draft single-species BirdLife Action Plans for four globally threatened species in Europe: Marbled Teal, White-headed Duck, Red-breasted Goose and Lesser White-fronted Goose. The TWRG coordinators have compiled the plans for the first three species, and we are confident that the BirdLife and IWRB networks will make these plans a success, lifting the threat of extinction from all four. The greatest test for the strength of these networks is likely to be posed by the White-headed Duck plan, since action is required in about 20 countries to deal with the introduced and rapidly expanding North American Ruddy Duck.

One proposal during the BirdLife Action Plan meetings was for special working groups to be formed for each species, in which members working on the same species in different countries exchange research methods and results between each other. The existence of the TWRG perhaps removes the need to create such specific working groups, since this newsletter provides an ideal means of communication between researchers in different countries. Anyone sending us news about research methods or results for Marbled Teal or any other species can guarantee it will reach all the key people in other countries through the pages of this newsletter.

We look forward to hearing from you.

Andy Green, TWRG Coordinator

INSTRUCTIONS FOR AUTHORS

The TWRG newsletter publishes articles on the globally threatened and near threatened Anatidae taxa, which are those listed below. For other families of waterbirds (e.g. Rallidae, Laridae) not covered by other IUCN/IWRB Research Groups, we are keen to publish articles on species listed as globally threatened or near threatened by Collar et al. (1994). Submissions for future issues of the newsletter can be in the form of reports on the status of a taxon on a global or local scale, short papers with original data, reports on the progress of conservation projects, news items, requests for information etc. They should be in English, French or Spanish and no longer than 1,500 words, including references. When submissions are prepared on a computer, we ask you to send them on disk as ASCII files or in Word Perfect, to be accompanied by a hard copy printout. All disks will be returned. Figures should be drawn neatly in black ink and be of quality suitable for direct reproduction. Authors with an e-mail address are requested to provide it.

To be certain of inclusion in the next issue of the newsletter, submissions should be sent to the address below by 1 September 1995.

The opinions expressed in the articles in this newsletter are those of the authors, and do not necessarily represent those of the coordinators, WWT or IWRB. The coordinators reserve the right to make minor changes to submitted articles without consulting the authors. We welcome letters or notes from readers with any comments on articles in the newsletter as well as copies of recent publications on threatened waterfowl for citation within the newsletter.

Please send your submissions to:
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Front cover: Ferruginous Duck by Mark Hulme, WWT
TAXA FOR CONSIDERATION BY THE THREATENED WATERFOWL RESEARCH GROUP

We are delighted to present a new list of the globally threatened and near threatened Anatidae taxa, following application of the latest IUCN criteria for globally threatened status to all the Anatidae at the subspecies level. In recent years, the Species Survival Commission of IUCN has been developing a new system of Red List Categories for globally threatened status that provides a more objective way of classifying taxa according to their risk of extinction, and which is equally applicable across all kinds of plant and animal taxa (see Mace and Stuart 1994; Mace and Collar in press). Five distinct versions of draft criteria have been prepared, the fourth of which (Version 2.2) has recently been applied by BirdLife International to produce a new list of the world’s globally threatened bird species (Collar et al. 1994). Since the preparation of this list, the draft criteria have been further modified to produce Version 2.3 (Anon. 1994), which is expected to be formally adopted by the IUCN General Assembly in the near future with further, slight modifications.

These criteria are a great improvement on earlier versions, being much more objective and practical to apply. They make explicit the reasons for listing a given taxon as threatened, making it easy for anyone with data on the status of a taxon to review the category we’ve applied and inform us if they are not in agreement. For example, although the Spectacled Eider has been classified by Collar et al. (1994) as Vulnerable, we regard it as Endangered under criterion A1b, because we consider it credible that the population has declined by over 50% in the last 10 years, since in Alaska the population has recently declined at 14% per annum or 78% per decade (Stehn et al. 1993; Stehn 1994). Any reader of this newsletter not agreeing with the criteria and categories applied below to any taxon is urged to inform Andy Green so that the list can be updated and improved.

The following list has been prepared using Version 2.3 and applying it at the subspecies level. The Latin name of each taxon is followed by the IUCN category and criterion which it satisfies. Full details of this list is provided by Green (in press). A summary of the types of criteria (A to D) used to assign the various categories (CR, EN, VU, NT) is given below. Anyone interested in further details of the criteria should consult Mace & Stuart (1994).

CR = Critically Endangered. (A) decline of at least 80% over 10 years or 3 generations; (B) small range, fragmented, declining or fluctuating where the extent of occurrence is <100 km² or the area of occupancy is <10 km²; (C) population of <250 mature individuals and declining; (D) population of <50 mature individuals.

EN = Endangered. (A) decline of at least 50% over 10 years or 3 generations; (B) small range, fragmented, declining or fluctuating where the extent of occurrence is <5,000 km² or the area of occupancy is <500 km²; (C) population of <2,500 mature individuals and declining; (D) population of <250 mature individuals.

VU = Vulnerable. (A) decline of at least 20% over 10 years or 3 generations; (B) small range, fragmented, declining or fluctuating where the extent of occurrence is <20,000 km² or the area of occupancy is <2,000 km²; (C) population of <10,000 mature individuals and declining; (D1) population of <1,000 mature individuals; (D2) area of occupancy of <100 km² or <5 locations.

NT = Near Threatened (Lower Risk). Not a threatened category. The taxon is close to qualifying as Vulnerable. A highly subjective category.

* Subspecies whose validity is in question (Sibley & Monroe 1990). Research is needed to establish which of these are truly differentiated.

WESTERN PALEARCTIC & CENTRAL ASIA

Anser erythropus VU A1abc
Branta ruficollis VU A2 c+B1+2bod
Marmaronetta angustirostris VU A2c
Aythya nyroca VU A1bod
Pomystica stelleri VU A1ab
Oxyura leucocephala VU A2e

AFRICA (EXCEPT NORTH)
Pteronetta hartlaubi NT
Anas bernieri EN C2b
Anas melleri VU A2cd;C1;C2b
Aythya innotata CR B1+2c;C2b;D
Thalassornis leuconotus insularis VU * A1oc;C1

EAST ASIA
Anser cygnoides VU A1oc;A2cd
Anser erythropus VU A1abc
Anser fabalis middendorfi VU * A1oc;C1
Anser fabalis serrivestris VU * A1ed
Tadorna cristata CR D
Cairina scutulata scutulata EN A2c;C1;C2a
Cairina scutulata melanocephala EN C2a
Anas formosa VU A1bode
Anas gibberifrons albogularis CR C2b
Anas luzonica VU A1bod;A2cd;C1
Aythya baeri VU A1oc;C1;C2b
Polystica stelleri VU A1b
Somateria fischeri EN A1b
Mergus squamatus VU C1;C2a
Aix galericulata NT

AUSTRALASIA, EAST INDIES & OCEANIA
Dendrocygna arcuata pygmaea CR * C2b;D
Branta sandvicensis EN B1+2bde;C2a
Stictonetta naevosa VU C1
Chloephaga rubidiceps NT
Cereopsis novaehollandiae grisea CR * C2b
Hymenolaimus malacorhynchos EN C2a
Nettapus coromandelianus albipennis EN * C2b
Salvadora waiguiensis VU C1;C2a
Anas aucklandica aucklandica VU D2
Anas aucklandica nesiotes CR * C2b;D
Anas aucklandica chlorotis EN A1oc;A2ce; B1+2abde;CI

3
<table>
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<tr>
<th>Species</th>
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<td>CR</td>
<td>A1abe;A2e</td>
</tr>
<tr>
<td>Anas superciliosa pelevensis</td>
<td>NT</td>
<td>*</td>
</tr>
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<td>Anas superciliosa rogersi</td>
<td>NT</td>
<td>*</td>
</tr>
<tr>
<td>Anas laysanensis</td>
<td>CR</td>
<td>B1+3e;D</td>
</tr>
<tr>
<td>Anas wyvilliana</td>
<td>VU</td>
<td>D2</td>
</tr>
<tr>
<td>Anas georgica georgica</td>
<td>NT</td>
<td></td>
</tr>
<tr>
<td>Anas eatoni eatoni</td>
<td>VU</td>
<td>A2e</td>
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<tr>
<td>Anas eatoni drygalskii</td>
<td>EN</td>
<td>B1+2bde</td>
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<tr>
<td>Aythya australis extima</td>
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**SOUTH AMERICA & CARIBBEAN**

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<td>C1;C2a</td>
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<td></td>
</tr>
<tr>
<td>Chlorophaga rubidiceps</td>
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<td>Tachyeres leucocephalus</td>
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<td></td>
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<tr>
<td>Merganetta armata armata</td>
<td>EN</td>
<td>C2a</td>
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<tr>
<td>Merganetta armata colombiana</td>
<td>VU</td>
<td>C1;C2a</td>
</tr>
<tr>
<td>Merganetta armata leucogenis</td>
<td>EN</td>
<td>C2b</td>
</tr>
<tr>
<td>Anas cyanoptera tropica</td>
<td>CR</td>
<td>C2b</td>
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<tr>
<td>Anas cyanoptera berreri</td>
<td>VU</td>
<td>C1;C2b</td>
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<tr>
<td>Anas flavirostris altipetens</td>
<td>VU</td>
<td>C1;C2b</td>
</tr>
<tr>
<td>Anas flavirostris andium</td>
<td>VU</td>
<td>C1;C2b</td>
</tr>
<tr>
<td>Anas specularis</td>
<td>NT</td>
<td></td>
</tr>
<tr>
<td>Mergus octosetaceus</td>
<td>CR</td>
<td>C2aD</td>
</tr>
<tr>
<td>Oxyura jamaicensis andina</td>
<td>VU</td>
<td>C1;C2b</td>
</tr>
<tr>
<td>Heteronetta atricapilla</td>
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**NORTH AMERICA**

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<tr>
<td>Branta canadensis leucopareia</td>
<td>VU</td>
<td>D2</td>
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<tr>
<td>Branta canadensis occidentalis</td>
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<td>Anas rubripes</td>
<td>NT</td>
<td></td>
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<tr>
<td>Anas platyrhynchos diazi</td>
<td>NT</td>
<td></td>
</tr>
<tr>
<td>Polysticta stelleri</td>
<td>VU</td>
<td>A1ab</td>
</tr>
<tr>
<td>Somateria fisheria</td>
<td>EN</td>
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</table>

**REPORT ON THE ANATIDAE 2000 CONFERENCE**

The Anatidae 2000 conference was held in Strasbourg, France from 5 to 9 December 1994, and brought together 350 Anatidae experts from 58 countries. The theme of the Anatidae 2000 conference was "the conservation, habitat management and wise use of ducks, geese and swans". The results of the conference will be integrated into a forthcoming IUCN Action Plan for the Anatidae which is to be coordinated by IWRB and will be completed in 1995-1996.

The globally threatened Anatidae received a very high profile during the conference. The TWRG Coordinating Committee presented a review of the 50 globally threatened taxa to the whole conference on 6 December. Later that day, a special workshop on threatened species was attended by eighty people, and included talks by six speakers on the status and conservation of Brazilian Merganser, Andaman Teal, White-headed Duck, White-winged Duck in Indonesia and the various threatened taxa in New Zealand and Madagascar. Four evening workshops were also held to discuss BirdLife Action Plans for Lesser White-fronted Goose, Red-breasted Goose, White-headed Duck and Marbled Teal in the European and Mediterranean region. These plans are currently being finalised.

**Some key points from talks**

The talks raised a number of very important points concerning problems facing globally threatened Anatidae and actions required to prevent their extinction.

The conference as a whole showed clearly that progress to date in research into and conservation of the Anatidae has been highly concentrated in the industrialised world, and particularly on migratory taxa. Larger, more appealing and easier to study swans and geese have received much more attention than ducks. In contrast, a review of the 50 globally threatened anatidae taxa revealed the following:

1) most globally threatened Anatidae are confined to poor countries requiring external funds to develop effective programmes.
2) most globally threatened Anatidae are non-migratory.
3) ducks are the most threatened group of Anatidae.
4) the majority of threatened taxa are given no protection by the existing network of RAMSAR sites.

Talks from three speakers in the workshop concerning research and conservation programmes for five species of closely related austral teal (Brown Teal, Auckland Teal, Campbell Teal, Madagascar Teal and Andaman Teal) illustrated the clear need for more collaboration between workers and agencies addressing similar species and problems throughout the world.

The situation facing the White-winged Duck in Indonesia illustrates the need to follow-up successful field surveys of threatened Anatidae with effective habitat conservation programmes. Most of the sites important for the species in South-east Sumatra identified in a 1988 survey have since been destroyed by deforestation.

The New Zealand experience clearly demonstrates the need to

**References**


Mace, G.M. & Collar, N.J. In press. Extinction risk assessment for birds through quantitative criteria. *Ibis*.


eradicate introduced mammals from small islands holding Anatidae taxa (eradication technology is improving all the time), and to consider the establishment of island Anatidae on other, suitable islands as an insurance policy and to prevent their global extinction in the wild.

None of the 50 globally threatened Anatidae taxa are found in North-west European countries. However, a talk from Spain showed that action taken in these countries can save the White-headed Duck from extinction, by eradicating the introduced North American Ruddy Duck.

Workshop conclusions and recommendations
The threatened species workshop expressed its concern over the very serious situation facing the world’s 50 globally threatened Anatidae. Most of these taxa can be saved from extinction by an effective, international conservation programme coordinated by IWRB and other relevant organisations.

The forthcoming IUCN/IWRB Action Plan should include recommendations concerning globally threatened Anatidae at a range of levels, including actions at international and local levels. A series of specific recommendations should be incorporated for each globally threatened taxon, identifying key organisations and individuals who could undertake such action together with its approximate cost.

Great emphasis in the Action Plan should be on the need for conservation action in the field (e.g. habitat protection) to prevent extinction. Monitoring is extremely important because it allows us to establish when taxa qualify for globally threatened status, but it does not itself conserve these taxa.

The workshop recognised that an Action Plan is not an end in itself, but only a means to an end, and is not a wise use of time and resources if it is not implemented. All those involved in preparing the plan should give full consideration to possible ways of funding the implementation of recommendations at the earliest possible stage.

Although the IWRB Research Groups (particularly the Threatened Waterfowl Research Group) have the technical expertise required to draw up appropriate recommendations for inclusion in the IUCN/IWRB Action Plan, it was emphasised that they do not have sufficient funds of their own to implement these recommendations. It was felt that the IWRB secretariat, the other organizers of the conference and other relevant bodies should take all possible steps to identify funds and otherwise promote implementation.

Since the Bonn Convention is not an appropriate legal framework to ensure the conservation of non-migratory taxa, other international initiatives are required to promote the conservation of globally threatened Anatidae. The Biodiversity Convention is one possibility, and IWRB should investigate this option further.

Since habitat loss and degradation is a major threat to the Anatidae taxa, and this also affects a wide range of other fauna and flora, support for the conservation of threatened Anatidae should be sought through the framework of National Environmental Action Plans under the Convention on Biological Diversity. This mechanism has the potential to attract the level of financial support necessary to address the complex socio-economic factors affecting the long term survival of many species.

Western European countries should be encouraged to fund the conservation of globally threatened Anatidae in other countries, in the spirit of the Biodiversity Convention. The Swiss government has recently set an example by funding work on Red-breasted Goose in Bulgaria. IWRB should promote waterfowl conservation programmes as a legitimate and valuable use of international aid funds.

Parties to the RAMSAR Convention should put high priority on the importance of protecting all wetlands of importance to globally threatened Anatidae. A shadow list of these sites should be prepared and incorporated into the action plan.

There are numerous small sources of funds (e.g. the Ramsar Conservation Fund) that may be an appropriate source of finance for some projects to conserve globally threatened Anatidae.

The release or escape of exotic Anatidae should be prevented in all countries to ensure the conservation of native species. European and North African countries are urged to take action to stop and reverse the spread of the introduced North American Ruddy Duck, which is seriously threatening the White-headed Duck with extinction. Specific action has so far only been undertaken in Spain, the United Kingdom and Morocco.

The Action Plan should include recommendations targeted at Dependencies Territories of France, the UK and the USA, which are very important for globally threatened Anatidae taxa (Anas eatoni and Dendrocygnna arborea). For example, the eradication of feral cats from the Crozet Islands (to France) is perfectly feasible and would greatly improve the status of A. eatoni drygalskii.

Representatives of the New Zealand Government expressed their willingness to cooperate with other governments over the eradication of introduced predators from islands. For example, they may be able to assist with the eradication of feral cats from the Crozet Islands.

Ecological research is an essential aid to the conservation of Anatidae. There are many globally threatened species in developing countries whose habitat requirements are unknown, and urgently require study. There is a need for more collaboration between researchers studying Anatidae biology in developed countries, and those studying globally threatened Anatidae in developing countries. The TWWRG will promote such collaboration.

Representatives of New Zealand and United States Government agencies expressed their willingness to cooperate with other agencies over research programmes into globally threatened Anatidae. This could be achieved for threatened taxa in the Andaman Islands and Colombia for example.
WHITE-HEADED DUCK IN GREECE

G.J. Handrinos, Ministry of Agriculture, Wildlife Management Dept., 3-5 Hippokratous str., 101 64, Athens, Greece.

Status and distribution
The White-headed Duck Oxyura leucocephala was first recorded in Greece in the winter of 1857/58 by Powys (1860). He found them to be common in Epirus and he believed they were resident in the Louros Delta, Amvrakikos. This is the only indication that the White-headed Duck has ever bred in Greece, though no nests have been found.

Existing data suggest that the species was much more widespread in the 19th century, when specimens were collected as far south as Attica, Spercheios Delta and Messolonghi (n=8) (Reiser 1905; Naumann 1905). For more than 50 years since the 1900s, there were practically no records. In 1960 the species was recorded again, this time in the Thermaic Gulf, Thessaloniki (Bauer et al. 1969). Interestingly, Bauer et al. report that White-headed Ducks may have bred in Greece in 1957/58 (Cramp & Simmons 1977), but no precise data or even the location are mentioned, so this record should be treated with caution. Lambert (1957) listed the species as "accidental/vagrant" in Greece.

Today, the White-headed Duck is a regular but very local and rare winter visitor in Greece. Since 1960 there have been 28-30 recorded observations, all within the Period of December to early April and with half of these (n=14) in January. With the exception of two, these records are from Macedonia and Thrace, particularly Lake Vistonis (n=10), Lake Ismaris (n=4), Lake Koronia (n=4) and Lake Kerkini (n=2). Data from the IWRB midwinter counts (Table 1) show that the wintering population ranges from five to 423 birds (mean = 142).

Table 1. Numbers of White-headed Duck wintering in Greece, 1982 to 1994 (IWRB midwinter counts).

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<th>Date</th>
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<tr>
<td>1 22-1-1982</td>
<td>12</td>
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<td>2 29-1-1983</td>
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<td>5 26-1-1987</td>
<td>85</td>
<td>Lake Vistonis</td>
</tr>
<tr>
<td>6 01-2-1988</td>
<td>405</td>
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<td>7 13-1-1989</td>
<td>266</td>
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<td>7 21-1-1989</td>
<td>5</td>
<td>Ptolemais Lag.</td>
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<td>8 27-1-1990</td>
<td>423</td>
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<td>10 12-1-1992</td>
<td>54</td>
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<td>11 77-1-1993</td>
<td>&quot;a few&quot;</td>
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<td>12 17-1-1994</td>
<td>338</td>
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<td>12 27-1-1994</td>
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Between 1982 and 1985, White-headed Ducks were seen only in Lake Ismaris. However, since 1987 the entire wintering population has shifted to nearby Lake Vistonis. Today, this lake is the main stronghold for the species in Greece, though in 1993 and 1994 a few were also seen in Lake Kerkini, west-northwest of Lake Vistonis. On 12 December 1994, 850-900 birds were seen at Lake Vistonis (Ph. Pergantis & S. Grigoropoulos pers. comm.), the largest number ever recorded in Greece.

White-headed Ducks have not been recorded on the Greek islands, except for Lesbos where one female was shot in December 1991. In recent years, the species has also been seen/shot in the Evros Delta; one pair in February 1991 and one female in December 1993, and "a few" were shot in the Kalamas Delta in the winter of 1991.

Biology and ecology
There is very little data on the ecology of White-headed Ducks wintering in Greece.

The birds apparently arrive in Greece in early to mid-November. In the spring of 1987 the last birds left Lake Vistonis in early April (Meininger-1990). Meininger (1990) reported White-headed Ducks actively diving for food in daytime in mixed flocks of Common Pochards Aythya ferina, Tufted Ducks A. fuligula and Common Coot Fulica atra. All three species were diving for a bivalve, Anadonta sp. It is therefore reasonable to assume that this bivalve, which is abundant in Lake Vistonis, was also a prey item for White-headed Ducks. Analysis of the stomach contents of two females and one male, presumably shot, in Lake Vistonis in the winter of 1993, did not give any results since the stomachs and gizzards contained only grit (Handrinos unpubl. data).

Due to lack of data on the species' ecology in Greece, it is still not known why almost the entire wintering population prefers Lake Vistonis, especially the south-eastern part where the birds are always seen. Since ducks are notoriously traditional, it is seems that the White-headed Ducks wintering in Lake Vistonis form a distinct sub-population, returning every winter to exactly the same part of the same lake. The origin of these birds is still not known. The female shot on Lesbos suggests that the population of White-headed Ducks wintering in Greece is connected with those wintering in Turkey.

Conservation problems
Lake Vistonis, Lake Ismaris and Lake Kerkini, which support almost the entire population of White-headed Ducks wintering in Greece, are Ramsar sites and designated as Special Protection Areas (SPA) under the 79/409/EEC Birds Directive. With the exception of Lake Kerkini, these key-sites still lack official definitions of their boundaries and specific management plans. A short description of these three sites and their main conservation problems are given in Table 2.

Despite official designation as Ramsar sites and SPAs, the three main wetlands are affected by development activities in their catchment areas i.e. road construction, house building, modernisation of agricultural practices, uncontrolled use of water for irrigation etc. Moreover, in Lake Vistonis, there are plans to construct a large dyke for reclaiming the marshland adjacent to the south-southeastern part of the lake, exactly the area where the White-headed Ducks overwinter.
Table 2. Habitat description and impacts of human activity in the key-sites for the White-headed Duck in Greece.

<table>
<thead>
<tr>
<th>No.</th>
<th>Site</th>
<th>Habitat</th>
<th>Human activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>L. Vistonis</td>
<td>Brackish/freshwater lake, fringed with Phragmites, patches of Tamaria, patches of riverine forest, salt-marsh, wet meadows, surrounded by farmland.</td>
<td>Pollution from urban wastes, eutrophication, commercial fishing, grazing, some illegal shooting.</td>
</tr>
<tr>
<td></td>
<td>4059N 2511E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. 6000 ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Lake Ismaris</td>
<td>Natural freshwater lake with extensive Phragmites zone, partly covered by floating and patches of riverine forest, surrounded by wet meadows and farmland.</td>
<td>Excessive use of water for irrigation, pesticide and fertilizer run-off, grazing, commercial fishing, some illegal shooting.</td>
</tr>
<tr>
<td></td>
<td>4059N 2519B</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. 4500 ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Lake Kerkini</td>
<td>A freshwater reservoir for irrigation and flood control, partly covered by floating vegetation and by remnants of riverine forest, surrounded by farmland and wooded hills.</td>
<td>Significant fluctuation of water level due to irrigation. Commercial fishing, disturbance from heron colonies, some grazing.</td>
</tr>
<tr>
<td></td>
<td>4112N 2309E</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. 8000 ha</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The White-headed Duck is protected under Greek legislation (Joint Ministerial Decision L/14985/85) and hunting from boats is prohibited in all three key-sites. Shooting from the shores is, however, permissible and occurs on the eastern shores of Lake Vistonis, where White-headed Ducks spend most of their time feeding and/or roosting. Although hunting is not at present a major problem for this species, some White-headed Ducks are shot each winter.

Fishing activities are limited in both Lake Vistonis and Lake Ismaris. However, there is a lot of commercial fishing in Lake Kerkini which is very productive. The possibility of White-headed Ducks being accidentally drowned in fishing nets should be investigated.

The problem of hybridisation between White-headed and North American Ruddy Ducks Oxyura jamaicensis (Anonymous 1993) does not exist in Greece as Ruddy Ducks have never been recorded in the wild or kept in avaries in Greece.

Conclusions and recommendations
Existing data suggest that White-headed Ducks in Greece are not currently threatened. However, the small size of the wintering population and its very local and restricted distribution make it vulnerable. For this reason the White-headed Duck has been listed as endangered in the Red Data Book of Greece (Handrinos 1992). Recommendations for future action that will ensure the conservation of the White-headed Duck in Greece are as follows:

1. All key-sites for the species in Greece, particularly Lake Vistonis and the Porto Lagos Lagoons complex, should be adequately protected through definition of boundaries, management plans and wardening against illegal activities.
2. All key-sites should be monitored in order to detect any changes in their ecological character.
3. The population of White-headed Ducks wintering in Greece should be under constant surveillance. More inventories are needed to identify additional potential wintering and staging sites, e.g. on Lesbos. Research on phenology and timing of migration, food preferences and general wintering ecology is also required.
4. Illegal hunting should be controlled and law enforcement, combined with education of local hunters, is necessary at all key-sites. Hunting on the eastern shore of Lake Vistonis should be stopped immediately.
5. Environmental campaigns, aimed at local people such as fishermen and hunters, which include the need to conserve the White-headed Duck and other rare bird species are needed.

References

CURRENT STATUS OF THE WHITE-HEADED DUCK IN ROMANIA

Dan Munteanu, Romanian Ornithological Society, Republicii 48, Cluj 3400, Romania.

Background
The White-headed Duck Oxyura leucocephala has always been a rare species in Romania. It was first identified in the central plateau of Transylvania in the first half of the 19th century. From the mid-1800s until the early 1900s, the White-headed
Duck was often recorded on the lakes of this region where several nests and young birds were found or collected. The last nest in Transylvania was found in 1908, and the last individual was seen on 21 December 1969.

In the eastern part of Romania; Moldavia, East Muntenia/ Vâlachia and Dobrojda, the White-headed Duck was considered a rare passage migrant. The first known records date from 1880 to 1898. No further observations were recorded until after the Second World War. The first evidence of breeding in eastern Romania was recorded on Lake Agigea in the Dobrojda region in August 1957 (Munteanu 1959).

Current status
All recent records (1960 onwards), with the exception of the individual recorded in Transylvania in 1969, come from Dobrojda. Dobrojda is situated between the Danube and the Black Sea and includes the Danube Delta, the Razim-Sinoe lagoon complex and several other lakes.

The White-headed Duck in Romania is currently a passage migrant, a winter visitor and a rare breeding species. Passage begins around the 10th of October, the species occurring in small groups. The largest recorded flocks number 108 in November 1968 and 75 on 25 November 1993. It is likely that the passage period is over by the beginning of December and that ducks seen later than this are wintering. The few existing spring observations suggest that spring passage takes place in March.

When wintering, the White-headed Duck is recorded on salt lakes (mostly on Lake Tekirghiol), on freshwater lakes situated along the sea coast (before they freeze), and on the sea just off-shore. As a rule, flocks consist of five to 15 individuals, though sometimes two to three or solitary birds are seen. The total number of White-headed Ducks in the Romanian part of Dobrojda at the beginning of winter does not exceed an estimated 200 individuals. The number of birds within each area declines as winter progresses, and is probably due to natural causes.

The presence of passage and wintering White-headed Ducks in the Dobrojda raises the question of their origin i.e. where are these birds breeding? The answer will be obtained by corroborating our knowledge of the species’ distribution over the whole of eastern Europe. A few recent observations suggest that White-headed Duck occasionally breed in the Danube Delta. Several birds have been seen during the breeding season; there are records for July 1961, June 1968 and August 1970, and a pair with three young were observed in the middle of the Delta on 20 July 1991.

CONTROL DE OXYURA JAMAICENSIS
EN ESPAÑA Y CONSECUENCIAS PARA OXYURA LEUCOCEPHALA


Summary
The Spanish population of the White-headed Duck Oxyura leucocephala has greatly increased in recent years due to an effective conservation program, but is now severely threatened by the spread of the introduced North American Ruddy Duck Oxyura jamaicensis, which is hybridising with the native species. Details of the spread of Ruddy Ducks and hybrids in Spain, and measures taken to control them, are presented. Effective measures to eradicate Ruddy Ducks from other European countries and from Morocco are urgently required if the White-headed Duck is to be saved from extinction.

En los años 70 la Malvasfa cabeciblanca Oxyura leucocephala estuvo a punto de desaparecer de la avifauna española. Numerosos esfuerzos por parte de ONGs, como la Asociación Amigos de la Malvasfa, y Gubernamentales, como la Agencia de Medio Ambiente de la Junta de Andalucía, así como otros Organismos e Instituciones con competencias en medio ambiente, salvaron a la población española de Malvasfa cabeciblanca Oxyura leucocephala de una extinción casi segura.

La prohibición de la caza de esta especie, así como la protección de numerosas zonas húmedas, que han sido declaradas Reservas Naturales, llevaron a la población española de Oxyura leucocephala, de los 22 individuos censados en 1987, hasta los 786 contabilizados en 1992. Durante este período la Malvasfa cabeciblanca se ha expandido por numerosas zonas húmedas, observándose en más de 72 localidades distintas de 5 Comunidades Autónomas.

Cuando la recuperación de Oxyura leucocephala era tan esperanzadora, la introducción de otra especie del mismo género, la Malvasfa canela Oxyura jamaicensis la ha puesto de nuevo en grave peligro de extinción. La expansión de Oxyura jamaicensis por todo el Paléarctico y la hibridación entre O. leucocephala y O. jamaicensis, se ha convertido actualmente en el más grave problema de conservación con el que se enfrenta la población de Oxyura leucocephala. Si no se toman las medidas adecuadas para evitarlo, la Malvasfa cabeciblanca podría desaparecer como especie genéticamente pura.

El problema se acrecienta si tenemos en cuenta que la Malvasfa canela también se ha visto en Marruecos, poniendo en peligro a las poblaciones de Malvasfa cabeciblanca del Norte de África, y en Ucrania, Israel y Turquía amenazando a la población Oriental.

La gravedad del problema llevó a la realización de 3 Reuniones Técnicas Nacionales en las que numerosos expertos trataron sobre el tema. Desde el primer momento se decidió como única solución posible la eliminación de todos los
ejemplos de Malvasía canela y de los híbridos entre Malvasía canela y Malvasía cabeciblanca.

La dimensión internacional del problema motivó que se pidiera la colaboración de todos los países implicados. Para ello se han celebrado hasta la fecha dos Reuniones Técnicas Internacionales, a las que asistieron representantes de una decena de países de distintas Administraciones Públicas con competencias sobre Medio Natural y ONGs, así como representantes de la Unión Europea y del Convenio de Bonn. La primera se realizó en Arundel (Reino Unido) el 1 y 2 de Marzo de 1993 y la segunda en Córdoba (España) el 29 y 30 de Septiembre de 1994. En ambas reuniones se apoyó la idea de eliminar a Oxyura jamaicensis de todo el Palearctico Occidental. Se propusieron una serie de recomendaciones para que los Gobiernos implicados realicen los cambios en su legislación que permitan el control de Oxyura jamaicensis y comienzan cuanto antes dicho control.

Por el momento, España ha sido el único país que ha tomado serias medidas de control contra Oxyura jamaicensis, estableciendo desde 1989 hasta nuestros días un efectivo sistema de seguimiento y control de la especie.

El mecanismo de seguimiento consiste en la realización de 5 censos coordinados al año, en los cuales se controlan simultáneamente durante un mismo día todos los humedales donde alguna vez se ha observado Oxyura leucocephala u Oxyura jamaicensis. Además las zonas más importantes son objeto de un control más continuo.

Cuando en cualquiera de estos censos se ha observado algún ejemplar de Oxyura jamaicensis o algún híbrido, se ha puesto en marcha inmediatamente un dispositivo para eliminarlo. El control se ha efectuado con tiradores de élite, acompañados por ornitólogos expertos.

El seguimiento y control de la Malvasía canela es realizado por un equipo de mas de 80 personas que además realizan los censos de Malvasía cabeciblanca. En dichos censos colaboran las Delegaciones Provinciales de la Consejería de Medio Ambiente de Andalucía, el ICONA (Parque Nacional de Doñana), la Consejería de Agricultura y Medio Ambiente de Ciudad Real y de Toledo, la Agrupación Naturalista ESPARVE (Talavera de la Reina), la Conselleria de Medi Ambient de la Generalitat Valenciana, la Agencia de Medio Ambiente de Madrid, y la Consellería d' Agricultura i Pesca del Govern Balear, correspondiendo a la Delegación Provincial de la Consejería de Medio Ambiente de Córdoba, la coordinación de los Censos Nacionales de Malvasía canela y Malvasía cabeciblanca y la recopilación de toda la información sobre ambas especies. Así mismo, numerosas personas e instituciones también han aportado información sobre observaciones de Malvasía canela.

Resultados obtenidos
El proceso de expansión de la Malvasía canela en España ha originado la realización de 166 observaciones entre Octubre de 1983 y Octubre de 1994, implicando a 114 ejemplares puros y a 52 híbridos (Tabla 1). Cada observación comprende el seguimiento de un individuo en una localidad concreta durante un periodo de tiempo determinado, al final del cual el ejemplar es eliminado o se marcha a otra localidad distante, que no se puede precisar.

Tabla 1. Observaciones de Malvasía canela e híbridos realizadas en España hasta Octubre de 1994. [Records of Ruddy Ducks (puros) and hybrids (híbridos) in Spain since October 1994]. M: Machos [males], H/I: Hembras o Inmaduros [females or immatures].

<table>
<thead>
<tr>
<th>Año</th>
<th>Puros</th>
<th>H/I</th>
<th>Híbridos</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>H/I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1984</td>
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<tr>
<td>1985</td>
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<td>0</td>
</tr>
<tr>
<td>1988</td>
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<td>4</td>
</tr>
<tr>
<td>1989</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
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<td>1992</td>
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<td>57</td>
</tr>
<tr>
<td>1993</td>
<td>2</td>
<td>5</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>1994</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>81</td>
<td>30</td>
<td>22</td>
</tr>
</tbody>
</table>

Podemos distinguir 3 fases distintas:
La primera desde 1983 hasta 1988, marcada por, llegadas de individuos puros de forma ocasional pero repetida, que provocan observaciones esporádicas de Malvasía canela puras, las cuales van siendo eliminadas a medida que se detectan.
La tercera etapa que comienza en 1994, tras el episodio de la segunda fase, se distingue por una disminución del número de observaciones de Malvasía canela. Así, entre Enero y Octubre de 1994 solo se realizaron 7 observaciones de Malvasía canela (3 machos puros, 2 hembras puras, 1 macho híbrido y 1 hembra o inmaduro híbrido) en 6 localidades distintas (Tabla 1 y 3). El macho y la hembra híbridos han sido eliminados y, por las fechas de las observaciones es posible que solo queden vivos un macho y una hembra puros.

Conviene destacar que el número de Malvasías canelas puras presentes nuestro país nunca ha sido muy elevado. Nuestra hipótesis cifra la presencia de Malvasía canela en España en un máximo de 16 individuos puros (14 individ. que se han eliminado y 2 que quedan en libertad). Estos ejemplares no parecen proceder de llegadas masivas de individuos foráneos, sino de
ocasionales pero repetidas llegadas de individuos aislados, que en un momento determinado comienzan a reproducirse entre sí, y luego se hibridan con la Malvasia cabeciblanca originando al menos 35 híbridos (n° de ejemplares híbridos eliminados hasta la fecha). La diferencia entre estas cifras y el número de observaciones está motivada por la imposibilidad de seguir exactamente el movimiento de los ejemplares entre localidades distantes.

Tabla 2. Ejemplares de Malvasia canela e híbridos eliminados cada año, hasta Octubre de 1994. [Number of Ruddy Ducks (puros) and hybrids (hibridos) shot each year, up to October 1994]. M: Machos [males], H/I: Hembras o Inmaduros [females or immatures].

<table>
<thead>
<tr>
<th>Año</th>
<th>Puros</th>
<th></th>
<th></th>
<th>Híbridos</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>H/I</td>
<td>M</td>
<td>H/I</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>1984</td>
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<td>0</td>
<td>1</td>
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<td>1989</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>2</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>12</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>7</td>
<td>20</td>
<td>15</td>
<td>49</td>
<td></td>
</tr>
</tbody>
</table>

El incremento de la población de Malvasia canela en España ha llevado consigo un aumento de las localidades donde se ha detectado la especie. Se ha observado en 33 localidades distintas pertenecientes a 13 provincias y 6 comunidades autónomas (Tabla 3). En 24 de estas localidades también está presente la Malvasia cabeciblanca. Destacan las Comunidades Autónomas Andalucía con 24 localidades distintas y la Comunidad Valenciana con 3, en una de las cuales, el Paraje Natural del Hondo (Alicante), se ha reproducido la especie y se han observado y eliminado el mayor número de ejemplares de Malvasia canela.

El proceso de control de la Malvasia canela en España ha provocado la eliminación de 49 ejemplares, 14 de ellos puros y 35 híbridos (Tabla 2 y 4). Dicho control se ha realizado en 14 localidades distintas y 3 Comunidades Autónomas (Andalucía, Valenciana y Castellano-Manchega). El resultado de este proceso ha conducido a la probable reducción de la población española de Malvasia canela a tan solo 2 individuos.

Conclusiones

Hay que continuar efectuando un preciso control de la población ibérica de Malvasia cabeciblanca y con ello, tratar de localizar a los individuos de Malvasia canela que puedan seguir llegando, eliminándolos inmediatamente, e impidiendo por encima de todo que se reproduzcan en España. En este sentido, solicitamos la colaboración de todos los ornitólogos profesionales o aficionados que detecten alguna Malvasia canela, comunicándonos inmediatamente cualquier observación que realicen, para actuar rápidamente en su control.

Con respecto al tema de la hibridación, habría que estudiar la posible incidencia en este asunto de los ejemplares de Oxysura leucocephala criados en cautividad. Mientras tanto habría que plantearse la posibilidad de detener el programa de sueltas que se viene realizando en España. En este sentido resulta preocupante el programa de reintroducción de Malvasia cabeciblanca en Italia y Francia, que habría que detener hasta no tener garantizado el control de Oxysura jamaicensis en estos países.

Tabla 3. Localidades donde se ha observado la Malvasia canela hasta Octubre de 1994. [Sites where the Ruddy Duck has been seen since October 1994].

<table>
<thead>
<tr>
<th>Localidad</th>
<th>Provincia</th>
<th>Comunidad autónoma</th>
<th>Año observacion</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Albuferas de Arda</td>
<td>Almería</td>
<td>Andalucía</td>
<td>89,90,91,92,93,94</td>
</tr>
<tr>
<td>#2 Cañada de las Norias</td>
<td>Cordoba</td>
<td></td>
<td>89</td>
</tr>
<tr>
<td>#3 Salinas de Cerrillos</td>
<td>Cadiz</td>
<td></td>
<td>89,90,91,92</td>
</tr>
<tr>
<td>#4 Laguna de Medina</td>
<td>Cadiz</td>
<td></td>
<td>91</td>
</tr>
<tr>
<td>#5 Laguna Salada (PT-S.M')</td>
<td>Navarra</td>
<td></td>
<td>91</td>
</tr>
<tr>
<td>#6 Laguna Salada (Zorrilla)</td>
<td>Cordoba</td>
<td></td>
<td>91</td>
</tr>
<tr>
<td>#7 Embalse de la Albufera</td>
<td>Castellón</td>
<td></td>
<td>89</td>
</tr>
<tr>
<td>#8 Laguna Dulce (Zorrilla)</td>
<td>Castellón</td>
<td></td>
<td>91</td>
</tr>
<tr>
<td>#9 Laguna de Jeli</td>
<td>Castellón</td>
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<td>91</td>
</tr>
<tr>
<td>#10 Laguna de Montellano</td>
<td>Cordoba</td>
<td></td>
<td>91</td>
</tr>
<tr>
<td>#11 Laguna de Tácoro</td>
<td>Cordoba</td>
<td></td>
<td>92,93</td>
</tr>
<tr>
<td>#12 Embalse Fuente del Rey</td>
<td>Cordoba</td>
<td></td>
<td>92</td>
</tr>
<tr>
<td>#13 Embalse Malpaisillo</td>
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<td>#14 Laguna del Rincon</td>
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<tr>
<td>#15 Laguna Amarga</td>
<td>Cordoba</td>
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<td>91</td>
</tr>
<tr>
<td>#16 Lagunas de Zolar</td>
<td>Cordoba</td>
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<td>86,87,89</td>
</tr>
<tr>
<td>#17 Parque Nacional Doñana</td>
<td>Huelva</td>
<td></td>
<td>85,90</td>
</tr>
<tr>
<td>#18 Marismas del Rocío</td>
<td>Cordoba</td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>#19 Laguna Dulce (Campillos)</td>
<td>Malaga</td>
<td></td>
<td>90,91</td>
</tr>
<tr>
<td>#20 Veta la Palma</td>
<td>Sevilla</td>
<td></td>
<td>89,90,92,93,94</td>
</tr>
<tr>
<td>#21 Embalse de la Coronela</td>
<td>Cordoba</td>
<td></td>
<td>90,91</td>
</tr>
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<td>#33 Marismas de Bentazos</td>
<td>Coruña</td>
<td>Gallega</td>
<td>91</td>
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</table>

El incremento de la población de Malvasia canela en España ha llevado consigo un aumento de las localidades donde se ha detectado la especie. Se ha observado en 33 localidades distintas pertenecientes a 13 provincias y 6 comunidades autónomas (Tabla 3). En 24 de estas localidades también está presente la Malvasia cabeciblanca. Destacan las Comunidades Autónomas Andalucía con 24 localidades distintas y la Comunidad Valenciana con 3, en una de las cuales, el Paraje Natural del Hondo (Alicante), se ha reproducido la especie y se han observado y eliminado el mayor número de ejemplares de Malvasia canela.

El proceso de control de la Malvasia canela en España ha provocado la eliminación de 49 ejemplares, 14 de ellos puros y 35 híbridos (Tabla 2 y 4). Dicho control se ha realizado en 14 localidades distintas y 3 Comunidades Autónomas (Andalucía, Valenciana y Castellano-Manchega). El resultado de este proceso ha conducido a la probable reducción de la población española de Malvasia canela a tan solo 2 individuos.

Conclusiones

Hay que continuar efectuando un preciso control de la población ibérica de Malvasia cabeciblanca y con ello, tratar de localizar a los individuos de Malvasia canela que puedan seguir llegando, eliminándolos inmediatamente, e impidiendo por encima de todo que se reproduzcan en España. En este sentido, solicitamos la colaboración de todos los ornitólogos profesionales o aficionados que detecten alguna Malvasia canela, comunicándonos inmediatamente cualquier observación que realicen, para actuar rápidamente en su control.

Internacionalmente hay que concentrar todos los esfuerzos en tratar de eliminar a la Malvasia canela de todos los países donde no es una especie nativa y evitar que se reproduzca, como ya ha sucedido en, Irlanda, Holanda, Francia, Islandia, Bélgica, España y por supuesto en el Reino Unido.

Esto no se conseguirá sin una reducción rápida y efectiva de la población del Reino Unido como origen del problema, y donde esta especie tiene que dejar de ser una especie protegida.


<table>
<thead>
<tr>
<th>Localidad</th>
<th>Provincia</th>
<th>Puros M</th>
<th>H/I</th>
<th>Híbridos M</th>
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<td>1</td>
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<td>Laguna Encanysada</td>
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<td>-</td>
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<tr>
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<td>2</td>
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<td>2</td>
<td>4</td>
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Total: 7 7 20 15 49

Bibliografía


MADAGASCAR TEAL PROJECT

MAY - JUNE 1994

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Following fieldwork at Lakes Bemamba and Masana in 1992 (Young et al. 1993a), recommendations were made for the conservation of the Madagascar Teal *Anas bernieri*. These included further survey work and the initiation of a captive breeding programme. In July 1993 four live teal were captured and exported to Jersey (Young et al. 1993b & 1993c).

In 1994, permission was granted by the Tripartite Commission to capture a further 10 live teal for export to Jersey. The team of four travelled to Lac Bemamba via Morondava and Belo-sur-Tsiribihina. The journey from Antananarivo to Bemamba took six days.

Following the advice of Carl Mitchell of the Wildfowl & Wetlands Trust, two elastic 'whoosh' nets and a portable cannon net were transported to Bemamba from Britain. The team arrived at Bemamba on May 21st and set up camp at the location used in 1993. Traps were set in shallow water lying over an open area of sand within the extensive *Juncus* marsh at the southern end of the lake. A temporary five-run holding cage was built from Netlon and five carrying crates, which were brought out from Jersey.

The water area at the sand bar was only 10% of that in 1993 and this was evaporating rapidly. Seven teal were seen on May 22nd. Their behaviour and calls identified them as three pairs and a single female. During subsequent days, teal numbers dropped and after one week only one pair or a single bird was seen. On several days no teal were observed.

Teal behaviour differed from that observed in 1993. Birds fed only on the sand bar for short periods, whereas in 1993 ducks were present throughout the day. Trapping was attempted over 16 days (May 24th - June 8th), during the night when there was a full moon, in the morning (0400-0700) and evening (1600-1830). No teal were trapped. With so few teal present and without the encouragement of a successful capture, the trapping attempt was abandoned on June 8th. No other site for teal was located at Bemamba. Despite extensive searching over several days, the whereabouts of the ducks when they were not at the sand bar was not determined.

Lac Antsamaka, which held 35 Madagascar Teal in August 1993 (Safford 1993) was visited on May 28th 1994; water levels were high, there were many lilies and no teal were observed. Ankilitoaka, which held 14 teal in 1993 (Young et al. 1993b) was visited on May 30th 1994; again water levels were high and no teal were observed. High water levels following a recent cyclone may have produced numerous temporary lakes and resulted in dispersal of the teal, while
siltation caused by the cyclone may have reduced water levels at the Bemamba sand bar.

Numbers of other waterbird species feeding and roosting at the sand bar appeared similar to those seen made during fieldwork in 1992 and 1993. Birds present did not appear unduly disturbed by the trapping effort and individuals of several other species could easily have been captured.

Whilst in the field we were assisted by personnel from Eaux et Forêts Antsalova and Ambireny and staff at the PNUD Tsingy de Bemaraha project, Antsalova. Michel Louys of UNESCO had arranged to fly teal from Ambireny to Antananarivo. We are indebted to Olivier Langraud and Richard Lewis for their help with this project. Travel between Britain and Nairobi/Kenya was arranged by British Airways Assisting Conservation.

The three surviving drake teal at Jersey are doing well and we hope that further capture attempts will be made in the near future. Recent survey work at sites at the west coast of Madagascar continues to indicate the decline of the Madagascar Teal and low population size. There are still large and important gaps in our knowledge of the biology of this species.

References


WHITE-WINGED DUCK IN MEHAO AND PAKHUI SANCTUARIES OF ARUNACHAL PRADHESH

Dr. Anwaruddin Choudhury, Near Gate No.1. of Nehru Stadium, Islampur Road, Guwahati - 781007, Assam, India.

The Mehao Wildlife Sanctuary (28°15'N, 95°50'E) of Dibang Valley district and Pakhui Wildlife Sanctuary (27°05'N, 92°50'E) of East Kameng district of Arunachal Pradesh, cover 282 km² and 862 km² respectively. Both areas are hilly with small areas of plains along stream-beds (Fig. 1). Field trips were made to Mehao in September and December of 1992, March and May of 1993, and February and March of 1994. Field trips were made to Pakhui in April 1990 and October 1994. During the trips, reports of White-winged Duck Cairina scutulata were received from two lakes, one in each Wildlife Sanctuary.

There are no past records of the species in these areas. Scott (1989) mentioned Dri river as a potential site for the duck in Mehao, but field visits disproved that theory. The Dri, or Deopani River as it is better known, is a fast flowing hill stream. The nearest area to Pakhui where there are past records of the duck is Behali RF of the Sonitpur district of Assam (Gee 1958), which is about 30km from the sanctuary.

In Mehao Sanctuary, the only potential site is Mehao Lake, a large lake created during the earthquake of 1950 at an elevation of approximately 1400m in the Mistumi Hills. Surveys carried out at the lake in 1989/90 (Katti et al. 1992; A. Sen, DFO pers. comm.) did not record any White-winged Duck. However in March 1993, two ducks were seen on the water (Teron, forester pers. comm.). The same person saw a lone duck on the water in January 1994. This is the first confirmed record of the species in Mehao Sanctuary. There is one more small lake near Mehao Lake which may also be frequented by the ducks. Sally Lake near Roing is too disturbed and is therefore unlikely to be visited by the duck.

In Pakhui Sanctuary, at the foot of the eastern Himalayas, the White-winged Duck has been recorded in an unnamed lake, about 12km from the Khari Beat Office. Two ducks were seen on the water at around midday in January 1991 and again in April 1992 (J. Pancha, sanctuary warden pers. comm.). A local Nishi (Daffa) tribal, who works in the sanctuary, also told me of sightings of White-winged Duck in the same lake on many occasions. The ducks were either on the water or perched on fallen logs. He also imitated their honking call. This is the first record of the species in Pakhui Sanctuary.

The reliability of all the reports has since been confirmed with the help of a poster. Both lakes are inside protected areas and because of their interior location, they are not affected by poaching and illegal logging.

References


WHITE-WINGED DUCK IN DIBRUSAIKHOWA WILDLIFE SANCTUARY

Bibhab Kumar Talukdar and P.C. Bhattacharjee, Animal Ecology and Wildlife Biology Laboratory, Department of Zoology, Gauhati University, Guwahati 781014, Assam, India.

The Dibru-saikhowa Wildlife Sanctuary (27°40’N, 95°24’E) in Assam is a conservation stronghold for Anatidae including the endangered White-winged Duck $Cairina scutulata$. In 1986, the State Government of Assam decided to combine the Dibru and Saikhowa Reserved Forests and declared the area as the Dibru-saikhowa Wildlife Sanctuary. The main objective in creating this sanctuary was to conserve the White-winged Duck.

The sanctuary lies within the civil district of Tinsukia in eastern Assam at an altitude of 90-100m above sea level and, covering 650 sq km, it is the largest wildlife sanctuary in Assam. The vegetation consists of tropical moist deciduous forest, tropical semi-evergreen forest, bamboo and cane brakes, reedbeds and alluvial grasslands. The climate can be termed as "subtropical moist". Annual rainfall varies from 2500mm to 3500mm, average temperatures have a maximum of 36°C and a minimum of 5°C, and relative humidity is 64-86%. Wetland sites important to the White-winged Duck for feeding and resting are Kolomy beel, Xal beel, Dighali beel, Torali beel, Buri beel, Thekera beel and Dimorrhola Nala.

The breeding periods of the four resident duck species are shown in Table 1. The breeding activities of White-winged Duck start in February and eggs are reported to be laid in the holes of Salix tetrasperma, Terminalia myriocarpa and Mesua ferrea from mid-April onwards.

Table 1. Breeding periods of four resident duck species in Dibru-saikhowa Wildlife Sanctuary.

<table>
<thead>
<tr>
<th>Species</th>
<th>Breeding period</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Cairina scutulata$</td>
<td>February - June</td>
</tr>
<tr>
<td>Dendrocygna bicolor</td>
<td>June - September</td>
</tr>
<tr>
<td>Dendrocygna javanica</td>
<td>May - August</td>
</tr>
<tr>
<td>Nettaeus coromandelianus</td>
<td>July - September</td>
</tr>
</tbody>
</table>

We recommend that movements of un-authorised people (mostly villagers and fishermen) within these areas should be controlled so as to minimise disturbance. The expected result would be an increase in the White-winged Duck population within the sanctuary.

MARBELED TEAL STUDY AT THE RANGLA COMPLEX, PAKISTAN

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Mohammad Sajid Nadim, Zoology Department, University of the Punjab, Lahore-54590, Pakistan.
Mohammad Hussain Gishkori, Head Taunsa Wildlife Sanctuary, D.G. Khan, Pakistan.

A study was carried out with the aim of updating information on the breeding status of Marbled Teal $Marmaronetta angustirostris$ and the wetlands of Muzaffargarh district, southern Punjab (Fig. 1). This work was initiated in response to reports that Marbled Teal were breeding at a wetland known as Rangla Dhand (Khan & Shah 1993). Observations of breeding activity were recorded and discussions with people of the local community were held.

Figure 1. Map of Pakistan showing the location of the Rangla Dhand study area.

Several sites of major importance were thoroughly surveyed for Marbled Teal, other bird species, vegetation patterns, threats to the wetlands and waterfowl and the dependence of the locals on the wetlands. These sites were Rangla Dhand, Drowle, Bari Wala Dhand, Kutae Wala Dhand, Bhando and Dori Head. Other areas were visited later on in mid August after the breeding seasons (Fig. 2).

Two separate questionnaires were developed; one for recording observations of Marbled Teal and the other for recording activities on the wetlands. The second questionnaire was filled in while surveying and talking to the villagers, landowners, locals and hunters. From the discussions with the locals, we were able to establish their plans for the wetlands, their dependence on the wetlands and the size of bird populations, especially the Marbled Teal. Vegetation was collected from all sites and identified. Marbled Teal were studied by foot and boat surveys. Boat surveying proved to be more useful as it was easy to gain access to the thick $Typha$ plantation at Rangla.
Marbled Teal were observed in flocks of eight to 15 birds. Occasionally, males were seen with other waterbirds such as Black-Headed Gull Larus ridibundus and Pochard Aythya ferina. Males are larger than females and can be identified by their prominent nuchal crest (Roberts 1991). A maximum of 35 Marbled Teal were observed in September with records from May to September (Table 1). To be certain of the breeding status, the whole wetland area was surveyed, especially Marbled Teal roosting sites. Based on available descriptions of Marbled Teal nests, some potential nests were found in June, July and August but no eggs or ducklings were recorded. The teal liked to stay in the cover of dense stands of Typha and reeds. A small amount of disturbance will cause it to fly off or hide in the dense reed beds. It therefore prefers to roost in areas where there is little disturbance and little human and livestock activity. Marbled Teal were continuously observed moving from east to west and west to east at Rangla Dhand, the cause of which was due mainly to disturbance by livestock.

Marbled Teal were also observed at Bari Wala Dhand, Bhand and Dori Head (Table 1), all of which are located at a distance of 18-22 kms from each other. Dori Head and Bhando provide good roosting sites for Marbled Teal due to their dense vegetation (40% vegetation and 60% open water). No Marbled Teal were observed at Drowle wetland which is approximately three times bigger than Rangla Dhand. The reasons for the lack of Marbled Teal are probably commercial fishing, presence of nearby villages, activities of fishing guards and competition from fish.

The fact that Marbled Teal are present on these wetlands but that no eggs or ducklings were seen, indicates that it may breed in other wetlands of the Muzaffargarh district of southern Punjab, thus warranting further survey work.

Other breeding birds include Little Grebe Tachybaptus ruficollis, Black-winged Stilt Himantopus himantopus, Red-wattled Lapwing Vanellus indicus, Coot Fulica atra and Moorhen Gallinula chloropus. Little Grebe were breeding in large numbers; we counted 30-35 nests in the last weeks of July and beginning of August. Black-winged Stilt were breeding almost everywhere in wetlands and in small water bodies along the roadsides. We suspect that Ferruginous Duck Aythya nyroca are breeding in this area because a significant number were observed at Rangla Dhand and Drowle wetlands.

The vegetation was similar at all the wetlands (Table 2) and was dominated mainly by Typha angustata, Phragmites karka and Tamarix galica which provided thick cover for the waterfowl populations. Other plant species include Paganum halmala, Suaeda fruticosa, Capparis aphylla, Aequa jawnica, Solvadara oleoides and Prospus cineraria.

Table 1. Numbers of Marbled Teal observed on different wetlands of the Rangla complex, Punjab, May - Sept. 1994.

<table>
<thead>
<tr>
<th>Month</th>
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<td>August</td>
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<tr>
<td>September</td>
<td>35</td>
<td>-</td>
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</tr>
</tbody>
</table>

Rangla village is located in the vicinity of Rangla Dhand, and supports a population of 300-400 people and 30-40 homes. People felt reluctant to answer questions regarding the birds and hunting activities. However, with the help of the local authorities, it was determined that the majority of men aged between 14 and 45 hunt, occasionally in the summer season but especially in the winter. Some hunters have preserved samples of birds including Marbled Teal, Mallard Anas platyrhynchos and Kingfishers. Some hunters admitted that they had hunted Marbled Teal many times and are not aware
of its importance. The land around the wetlands is shared by Khandoia family (villagers) and local Sardars (landlords). These people rely on the wetlands for various resources e.g. hunting, recreation and Typha cutting for making mats and building roofs, and grazing for livestock.

There are no roads to health units or medical aid centres, no schools and no electricity. The locals have been demanding these for a very long time, especially a road, but this would adversely affect the wetlands and birds as people from Muzaffargarh and Kot Addu would be attracted to the area to hunt. The result would be an increase in the threats to species such as Marbled Teal and Ferruginous Duck.

Threats to the wetlands include intensive reed cutting and over-grazing, which reduce the amount of habitat available for nesting teal, hunting pressure imposed by locals, officials and sardars to whom little information on the Marbled Teal is available, domestic waste from villages, commercial fishing at Drowle, road development which is allowing increased access for hunters and accidental drainage from the western part of the Rangla Dhand.

We are confident that Marbled Teal are breeding in this area; if not at Rangla Dhand, then at some other place in the Rangla complex. Extensive surveying at places such as Bhu denen, Mubarak Wala, Naie Wala Bhangon and Drawe Wala is required. This and other species of breeding birds also require protection from pressures such as disturbance by livestock and large scale reed cutting.

The community in this area is very cooperative regarding research, awareness and development of bird and wetland conservation. They are facing many problems and a mutual understanding is required.

Recommendations
1. Rangla Dhand should be protected by law and given Wildlife Sanctuary status.
2. A complete one year survey starting from March and lasting until the end of the next winter should be launched with the aim of obtaining more precise information about Marbled Teal breeding in this area.
3. Information regarding Marbled Teal should be spread among the residents of the area, especially the hunters.
4. Serious dialogue should be established between locals, hunters and authorities to initiate a better conservation strategy.
5. Efforts must be made to stop the exploitation of these dhands, restricting livestock activities. Livestock were seen destroying the nests of breeding birds.
6. Typha and Phragmites cutting should be stopped immediately. Game wardens should check the area regularly.
7. A hunter/staffman training workshop should be arranged. Hunters should be trained on the shooting of protected and non-protected birds, the importance of wetlands and their role.
8. People of the area demand that the Muzaffargarh canal be cemented (Soling) to stop waterlogging of this vast area. A study designed to determine whether this will affect the wetlands should be initiated.

9. A management plan for the Rangla complex is essential. It should incorporate sustainable development in relation to the socio-economics of the residents, their demands, necessities and social problems.

References

MARBLED TEAL IN UZBEKISTAN

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In his review of the global status of the Marbled Teal Marmaronetta angustirostris, Green (1993) cited very few records of the species from Uzbekistan in recent years. However, we are able to report that the species has been repeatedly observed on the salt and fresh-water lakes in the south-western part of Uzbekistan over the last several years.

Marbled Teal were first observed by us in the Bukhara region during 1982-84 when small migratory groups and one case of nesting were noted on small lakes in the Amudarya river basin (Mukhina & Lukashevitch 1989). More thorough research on the species was undertaken in 1991-1993 when it was found to be nesting in some areas of Amudarya river basin, preferring the new, small artificial lakes along the Amu-Bukhara canal. From the spring of 1991 to August 1993, a total of 346 adult Marbled Teal were counted, together with 744 chicks and young in 83 broods.

Marbled Teal began to appear in the observation area during April, the first record of the year ranging from 11 April (1993) to 27 April (1991). The latest record has been 16 October. Marbled Teal appear in the nesting area in small groups of 3 to 11 individuals which divide into pairs during May. Broods appear between the second half of June and the end of July. The first fledged young are observed from the end of July. During August and September, young birds leave the breeding areas and join up with adults ready for autumn migration.

The preferred habitats of Marbled Teal in this area are small salt and freshwater lakes with a winding bank and surrounded by reeds, with an area of 0.1-0.3 hectares. These sites are not protected and there are livestock farms and agricultural fields nearby. However, owing to the absence of direct persecution the Marbled Teal are able to breed successfully. At any one time in the observation area, numbers recorded ranged from a few pairs to 30 adults, and from 1 to 10 broods. From 1 to 5-7 broods have been observed in each lake. Brood sizes vary from 3 to 14 (average 9.5 for broods with small chicks [n = 21] and 6.6 for broods with large young [n = 12]). Sometimes several broods join together to form groups of 20-25 chicks.
Our observations show that Marbled teal populations can recover quickly. This species is adapted to a hot climate and can use small waterbodies associated with rivers and lakes. However, fluctuations of water levels threaten the nesting habitats and leads to variation in the number of birds present. The Marbled Teal is included in the Red Data Books of the Central Asian Republics. It is listed as a disappearing species in the new edition of the Red Data Book of Uzbekistan currently in preparation. Hunting of Marbled Teal was, and still is, forbidden.

We are currently seeking funds to do more detailed surveys for the species, to do ecological and behavioural research and to prepare a conservation plan for the Marbled Teal in Uzbekistan. Anyone who has any ideas about potential funders is asked to contact me.

References

TEACHING HAWAIIAN GEESE PREDATOR AVOIDANCE BEHAVIOUR

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Introduction
Despite extensive conservation efforts and the release of large numbers of birds (2127 between 1960 and 1991) the Hawaiian goose or Nene Branta sandvicensis has not yet established a self-sustaining population in the wild (Hunter & Black 1994; Black 1995). High mortality and low reproductive rates in released captive-reared birds have been recognized as causes. Up to 52% of known releases died before the second year (Black et al. 1991). High mortality and low reproductive rates are partly due to predation of nests, goslings and adults by introduced mongoose, feral cats, dogs and pigs (Banko 1988, Black 1990, Black et al. 1991). Like many endemic island species, Nene have evolved with little risk of predation since ground dwelling predators were originally absent from the Hawaiian Islands and aerial predators like the native Hawaiian Hawk or Io Buteo solitarius seldom attacked the geese.

Two factors are thought to be responsible for the high rates of predation in Nene:
1. Eggs, nesting females and young goslings are targeted by predators; research into predator control measures using breeding enclosures is currently being carried out in Hawaii (Stone et al. 1995).
2. Captive-bred, hand-reared birds are more likely to be predated due to inappropriate behaviour and lack of experience.

Marshall and Black (1992) have shown that in contrast to parent-reared goslings, hand-reared youngsters approach rather than avoid predators (a dog in this case) and are also less vigilant after a confrontation. The implications are that hand-reared birds may benefit by being taught appropriate behaviour towards ground-dwelling predators before they are released into the wild. Research into this area is currently being carried out at the Wildfowl & Wetlands Trust in Slimbridge and is summarized here.

Methods
Before developing any teaching methods it is important to know the innate, or genetically predisposed, abilities of Nene goslings in regard to predator recognition/avoidance. If they exist, these abilities can be enhanced when teaching the birds. As a first step, it was determined whether Nene goslings have an innate response to potential predators. Naive sibling pairs aged two, seven and twelve days were placed in a specially designed pen. After recording their behaviour for five minutes they were presented with a dark-coloured ferret (mongoose substitute) and the behaviour of the goslings recorded for a further two minutes. The ferret was kept in a glass aquarium which allowed it to move freely without endangering the goslings. Control groups of goslings were presented with an empty aquarium. After the confrontation, the birds’ behaviour was monitored for another five minutes before being returned to their parents.

Results and discussion
The control goslings (those which were not exposed to the ferret) wandered freely around the pen, calling, feeding and investigating objects. The goslings presented with the ferret were quieter and froze in the corner of the pen furthest away from the ferret as soon as they caught sight of it. In the wild, goslings of that age would still be with their parents and it would seem that staying quiet and motionless when suddenly confronted with an unknown danger is a safe strategy until they learn how to react from their parents.

Further experiments with two to four year old captive/hand-reared adults have shown that this innate reaction does not automatically result in appropriate avoidance behaviour. It is our hypothesis that by building on innate behaviour, developing goslings can be taught the appropriate predator avoidance actions. As a next step, therefore, we tried to develop a method for modifying the mobbing behaviour shown towards a predator by hand-reared fledglings (Marshall & Black 1992). In this instance a dog was chosen as the predator in response to problems in Hawaii where wild and domestic dogs have been known to attack newly released Nene. The idea was to give the birds enough of a scare that would cause them to immediately run or fly away the next time they saw a dog. Preliminary experiments with two year old, parent-reared adults showed that a simple visual confrontation is not sufficient to elicit the desired flight reaction. An intensified scaring experience involving actual physical contact with the dog (the birds were immobilized without being harmed) resulted in an immediate flight reaction when these Nene saw the dog several days later.
However, when these experiments were repeated with parent-reared fledglings (eight weeks old; the approximate age of release for hand-reared birds on Hawaii) the Nene froze instead of running (or flying) away. Obviously, at fledgling age, the birds still react as goslings rather than adults. There are some indications that the lie down-and-freeze behaviour will be replaced by more appropriate run away-and-hide tactics depending on the ways in which the goslings are raised. This will be the subject of further research during the next breeding season.

References

MELLER’S DUCK IN MAURITIUS

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The Meller’s Duck *Anas melleri*, endemic to Madagascar, was introduced to Mauritius in the mid 19th century. It never spread widely and appears to have always been confined to the remoter parts of the central plateau. It has become an accepted part of the Mauritian wildlife and is one of the few exotics whose introduction is never lamented. However very few people have seen any lately, and there is confusion between this species and the Mallard A. platyrhynchos, which has become established in the wild more recently. Madge and Burn (1988) stated the Meller’s was the only duck on Mauritius; many visitors expect to see them and some might even hope that Mauritius might hold the last safe population, should the species follow the path of the Madagascar Pochard *Anatya innotata*.

Many Mauritians are concerned by the rarity of the canard sauvage and among these is M. Andre Chauveau. From a brood of feral ducklings which he caught at Villemain, he successfully bred the species in captivity, gave birds to numerous individuals in Mauritius, encouraging them to breed them, and released small numbers of birds himself (McKelvey 1977). The Jersey Wildlife Preservation Trust and The Wildfowl & Wetlands Trust also received birds, which bred successfully. All M. Chauveau’s remaining captive birds were recently poisoned in a tragic accident at a crayfish farm; fortunately, although M. Chauveau no longer keeps any Meller’s Ducks, the birds he had given to others still survive. Wild birds are vulnerable to poachers, who shoot them or catch them with baited hooks. Many eggs are also lost to rats.

Meller’s Duck have long been rare on Mauritius and the best place to see them is generally thought to be Valettera Reservoir, where Glyn Young saw three in November 1987 and Simon Tonge and I saw one in August 1989; despite several searches, I have seen none since. M. Chauveau recently told me that they still survive around Valettera, especially in small marshes and rivers in private estates, such as Piton du Milieu, Villemain and Bar-le-Duc, where he saw six in 1992, and that there are certainly no more than 30 pairs in total. They are said to moult between late February and April, becoming especially difficult to see during that period.

The Mallard, known locally as Colvert, now certainly outnumbers the Meller’s Duck on Mauritius. I have seen up to 31 at Tamarin Falls Reservoir, and also recorded smaller numbers at Mare Longue Reservoir, Mare aux Vacoas and Piton du Milieu Reservoir. They sometimes fly over the native forest areas of the south-west, near these lakes. Where the range overlaps with that of Meller’s Ducks, M. Chauveau says that they do not hybridise. However, very few Mauritians distinguish between the two species, so reports need to be checked.

With so many critically endangered endemic species to contend with, the tiny Mauritian population of Meller’s Ducks is unlikely to get international attention, but any sightings should be reported to the Mauritian Wildlife Appeal Fund (Tamarin).

References
OBSERVATIONS OF FERRUGINOUS DUCK AT SIDI BOU GHABA, MOROCCO

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The Ferruginous Duck Aythya nyroca breeds in considerable numbers in Algeria (Boumezbeur 1992) but is rare in Morocco. From 12 to 23 February 1995, I conducted a study of the ecology of Marbled Teal Marmaronetta angustirostris at Sidi Bou Ghaba, Morocco, one of the most important wintering sites for this species in the Western Palearctic (Green 1993). During this period, repeated observations were made of a small number of Ferruginous Duck on the main part of the lake. Owing to the extremely limited information on the biology of this globally threatened species, I made some basic observations on the behaviour of these birds, which I report here.

Birds were observed on five separate days between 0900 h and 1500 h local time. A male and a female were seen together on 12 February. A male and two females were seen together on 18, 19 and 21 February. One male and three females were seen together on 23 February. Lone birds were also seen, but these were thought to be individuals seen with other birds at other times. Resting, preening, swimming and flying were regularly observed but no feeding or courtship display was recorded. There was no evidence that the male was paired with any of the females, and he was seen alone on several occasions.

The main lake at Sidi Bou Ghaba, where the Ferruginous Duck were observed, consists of an open expanse of water surrounded by a fringe of emergent vegetation. The dominant emergent plant species at the water’s edge are (in order of abundance): Typha angustifolia, Scirpus holoschoenus, Phragmites communis and Carex hispida. Ferruginous Duck always stayed close to the emergent fringe on the west bank of the lake, always using the zone from 0 to 20 metres away from the fringe. They were always closer to Typha angustifolia than to any other emergents. In contrast, the c.160 Common Pochard A. ferina and c.8 Tufted Duck A. fuligula present on the lake made much more use of open water zones and were often found 100 metres or more from the emergent fringe. The Ferruginous Ducks were never seen to associate with other diving ducks. They showed very similar microhabitat selection to the Marbled Teal, which also concentrated at or near the Typha fringe. Both species are probably highly dependent on highly structured wetlands with extensive emergent and submerged vegetation, and the loss of such wetlands is probably a major cause of the rapid declines recorded across their ranges.

In their review of the ornithological importance of Sidi Bou Ghaba, Thévenot (1976) found Ferruginous Duck to be extremely rare, with only four observations of single birds on 31.1.65, 28.2.66, 26.8.73 and 10.11.75. Evidence from visits in 1994 and 1995 suggests Sidi Bou Ghaba is probably a regular wintering site for small numbers of birds. During a brief visit to Sidi Bou Ghaba on 21.1.94, 10 Ferruginous Duck were recorded (J.J. Chans & A. Green) in exactly the same part of the lake where the birds were seen in 1995. Owing to its preference for densely vegetated microhabitats the species is probably under-recorded.

Until now, the Ferruginous Duck has been practically ignored by biologists, and our understanding of its biology and causes of decline is extremely limited. There is a particular need to define its habitat requirements in more detail. We hope that this brief article will stimulate other workers with information on the ecology and behaviour of Ferruginous Duck to publish it in this newsletter, to improve our shared understanding of this poorly known bird.

References

CORRECTION

Newsletter 6 contained an article by J.D. Navarro, F. Robledano, G.A. Ballesteros and E. Martínez entitled “Marbled Teal in Murcia Region (South-eastern Spain)”. Owing to a change to the manuscript made by the editors of the newsletter, reference was made to the breeding of Marbled Teal in the Cañada de las Norias Ornithological Reserve in El Ejido, Almería, Andalucía in 1993. Breeding was confirmed at this site by José Manuel López Martos and Concha Raya. Contrary to what was stated in the article, breeding was not confirmed in 1994. The editors accept full responsibility for this error.
SOME RECENT PUBLICATIONS ON THREATENED WATERFOWL


