

It may be of interest, however, to add that stray individual Barnacles are occasionally found with flocks of other geese, especially Greylags and Pink-footed. The writer has also noted that geese of all species, when unable to undertake northward migration through injury, will join forces during the summer months. In the summer of 1964, for example, two Barnacles, two Greylags and one Pink-footed Goose formed an almost inseparable unit which was temporarily supplemented in September by one Brent Goose *Branta bernicla*.

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Records of Barnacle Geese on passage in autumn were obtained from *Scottish Birds* and from the county bird reports for Northumberland and Yorkshire.

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Wildfowl Survey in south-west Asia: progress in 1965

CHRISTOPHER SAVAGE

Summary

In this first full year of the survey, information and observations have been collected from Jordan, Iraq, Iran, Pakistan and India, and two working papers have been prepared. The reconnaissance of wildfowl habitats in West Pakistan was continued with special attention to those in Sind and a visit was made to Chitral to study the incidence of trapping during the spring migration. The ringing of ducks in West Pakistan was got under way and special efforts have been made to improve the rate of reporting Russian rings. Of special interest during the year were the protection of the White-headed Duck *Oxyura leucocephala* at its principal habitat in West Pakistan, and news of the Falcated Duck *Anas falcata*, Chinese Spotbills *Anas poecilorhyncha zonorhyncha*, and the White-winged Wood Duck *Cairina scutulata* from Assam.

Introduction

The survey has continued to develop as outlined in the 16th Annual Report (Savage, 1965a), and has benefited from valuable information contributed by several new observers. The Central Ringing Bureau in Moscow and the Institute of Zoology, Academia Sinica in Peking have shown interest in the project with promise of future co-operation and exchange of information. Liaison with the Game Departments of Iran and Pakistan, and with the Bombay Natural History Society has also been developed as corner stones of the project.

Plans for 1966 include intensification of the project with the help of the World Wildlife Fund, to which a gift for wildlife conservation in Pakistan has already been

made by Volkart Brothers. A plan has also been submitted to the British Government for providing a training course in wildfowl conservation and management for selected Game Inspectors from Iran and Pakistan. The trainees on return would be expected to train staff to implement conservation programmes and ringing schemes in both countries.

Distribution of species and habitat

In addition to the author's own observations, valuable notes have been received from Jordan, Iraq, Iran, East and West Pakistan, and India. As a result it has been possible to complete a preliminary assessment of the wildfowl situation in West Pakistan (Savage 1965b) and information for a similar study of the situation in East



Pakistan and West Bengal is not far behind. The greatest dearth of information remains in respect of the Ganges - Jumna basin in northern India as well as central and southern India. Information of any kind, particularly any old records and game bags would be welcomed from Members who should forward them direct to the author, c/o IIF Gulberg, Post Bag 704, Lahore, West Pakistan or, c/o the Wildfowl Trust, Slimbridge.

The main conclusions in regard to West Pakistan are that though numbers of most wintering species have decreased greatly in recent decades, this decrease is largely explainable by loss of habitat. Some signs of distribution changes have been found within West Pakistan but further information from adjacent areas is required before conclusions can be drawn. The most serious decrease has been in the Greylag Geese visiting the Punjab but this again may be due to a change in distribution. It is interesting to note that the Mir of Hunza's records of Greylag shot during the autumn migration show no such signs of decrease and the numbers seem consistent with the small flocks still wintering in the Punjab. If there is a correlation here, then the decrease is possibly related to a separate population which used to spend part of the winter in Kashmir and which used to be found in large numbers (a thousand have been shot in a day!). The small numbers of Greylag wintering today in the coastal areas near Karachi have been seen on migration north-westwards and possibly belong to the breeding population in Sistan referred to in last year's report.

Studies of habitat in West Pakistan have shown the important role played by private

preserves, particularly in a season such as 1965/66 when the whole continent is suffering from drought. These areas are mostly preserved for a 'V.I.P.' shoot in late November, or early December, after which they are seldom shot over more than two or three times a month till the birds depart in February and March. Irrigation water is used to maintain water levels and often rice is grown specially to attract and hold the birds. Such marshes are often characterised by small islands of vegetation, usually *Tamarix articulata* or bushes of *Suaeda sp.* which give rise to a topography of potholes much favoured by most species. These areas thus provide refuge conditions for vast numbers of duck which otherwise would be continually harried by hunters. One such preserve near Larkhana in Sind, covering an area of six square miles, has five hundred acres of rice specially cultivated as duck food, and teems with duck (before the first shoot) at a density comparable with the pens at Slimbridge in winter.

Arising from these studies the most promising conservation projects seem likely to be associations with owners of preserves in setting aside part of these as permanent sanctuaries with provisions for observation of wintering flocks and ringing. At the same time by analogy it is possible that similar conditions could be synthesised in rice-growing areas of the Punjab to the benefit not only of the wildfowl but wild-fowlers.

Chitral reconnaissance

Travellers in Chitral have often remarked on decoy pools in the river valleys which were said to be used for catching ducks on

their northward migration. Others, on third-hand information, have suggested that excessive slaughter on these important migration routes may have been one of the causes of the decline in numbers of wild-fowl visiting West Pakistan. This obviously needed investigation.

We flew into Chitral by DC3 on 21st March, 1965. It was the first flight for three weeks due to bad weather and heavy snow falls. We left again on 24th March, the last flight before the service was suspended on the loss of the aircraft en route to Chitral a few days later. We heard that large flights of duck had passed up the valley immediately before our arrival, having presumably been held up by the weather, but no further flights appeared during our stay. The roads were only jeepable near Chitral itself as up the valley landslides and avalanches had not yet been cleared. We therefore had to content ourselves with seeing little, but with considerable opportunities of hearing first-hand accounts which we could check against one another.

Ducks are caught in the upper valleys of Chitral by means of ingenious decoy pools, but it would seem that there are no longer more than about a hundred in existence, many of which are disused. Weather conditions limit the number of days in the short season when they can be operated, but the usual morning's catch is 20 to 100 duck. The decoy pool is a small lozenge-shaped tank, fed from the river, and surrounded by a low dry stone wall. It measures some 50 yards long by 20 yards wide at its widest with a wickerwork funnel constructed over the pointed end of the lozenge. The rivers of Chitral, being torrential in character, provide no resting places for migrating duck which come readily to these decoy pools in the very early hours of the morning, usually before dawn. The hunters lie in wait for them in hides constructed in the perimeter wall. When there are adequate numbers in the pool a man at the furthest end gently waves a horse's tail or a soft broom to look like the tail of an animal, upon seeing which the duck swim towards the wicker funnel. At a given moment the men show themselves and drive the birds up the funnel and into a trap made of large stone slabs. A movable slab is then quickly rolled into place to close the trap. A small hole in the top of the stone trap permits a man to go inside to remove the catch.

Officially, the use of the decoy trap is prohibited in Chitral State as it is thought that too many birds are killed at a time. In practice, however, this regulation is only enforced within 20 or 30 miles radius of

Chitral. The principle of the decoy pond however, is used in constructing flight ponds beside main river courses throughout the State. To judge by the number of butts round a small 'shikargah' and the admitted fact that the birds are 'browned' on the water it is questionable whether the lives of many ducks are saved by the banning of decoy traps.

An interesting feature of all these decoy ponds and shikargahs is the use of extremely rudimentary but effective decoys made of mud and pebbles. The decoys are nearly twice life size but of course are intended to entice migrating ducks during the hours of darkness or very early morning. The ducks are consumed locally where the softer feathers and down are saved and woven into homespun 'undercoats' which are much valued for their warmth in winter. An example of this was obtained subsequently from one of the upper valleys and has been presented to the Trust.

From the scanty information obtainable and from impressions gained from discussions with residents of Chitral, the author estimates the annual kill to be of the order of 10-25,000 duck. These numbers are high in proportion to the small human population of the State and important on account of their occurrence so late in the season. It is certain that hunting in Chitral should be curtailed but this must await a national policy as the annual duck 'harvest' is of undoubted economic importance to the peasantry of the area.

Ringling programme

A start was made on ringling wintering ducks in West Pakistan in the name of the Game Department. Various methods and places were tried with a view to selecting a procedure suitable for regular ringling in significant numbers. After trying various expedients and discussing methods with professional trappers throughout the length of the country it became clear that the most appropriate general method would be by means of the 'dhubbi' net (pronounced Dubby). This is an underwater clap net particularly suited to conditions in Pakistan. It can be operated in water up to 12 inches deep and when closed forms a trapezoidal tent over the birds. The trap needs to be baited with rice paddy and in favourable conditions can catch a hundred or so in a throw.

Up to 31st December, 1965, over two hundred birds had been ringed of seven species - Pintail, Common Teal, Garganey, Shoveler, Common Pochard, Ferruginous Duck and White-headed Duck. A review of all available data on migration of ducks and geese in S.W. Asia was prepared

(Savage 1965c), of which the most important conclusion is that there is a need for a 'crash programme' for ringing in all countries of S.W. Asia, with a target of 50,000 over the next five to ten years. In addition, it is necessary to secure the reporting of all rings recovered in this region so that the maximum advantage may be taken of the valuable ringing being done in the U.S.S.R.

White-headed Duck *Oxyura leucocephala*

As a result of the attention drawn in the 16th Annual Report (Savage 1965b) to the numbers of White-headed Duck visiting West Pakistan and of subsequent investigations, arrangements have been made for local protection of the species at Khabbaki Lake in the Punjab Salt Range. This lake is the only important permanent habitat of the species within a 500 mile radius of their believed breeding grounds in Sistan. A watcher (recently the chief predator) resident nearby has been appointed full-time guardian. These arrangements are expected to be very beneficial, since the White-headed Duck is particularly vulnerable due to its habit of feeding by day in shallow water near the shore.

Notes from Assam

A correspondent in Assam, M. J. S. Mackenzie, reports that Falcated Duck

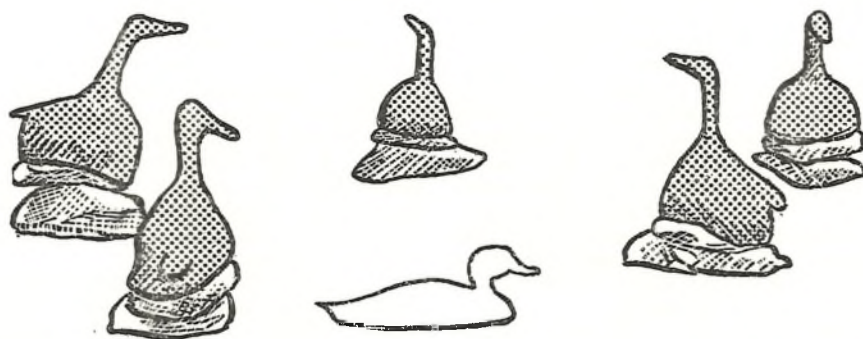
Anas falcata are now regular visitors to upper Assam and occur in greater numbers than formerly supposed. Falcated Duck commonly associate with Gadwall and are often shot in a ratio of one in twenty.

It has also been found that the migratory Chinese race of Spotbill *Anas poecilorhyncha zonorhyncha* occurs regularly in the bag. The absence of the red spot and the presence of a well marked 'moustache' stripe distinguishes it readily from the resident Indian race. This race has been recorded before from Assam, but bag records over a number of years have shown it to be more than a vagrant. An intermediate specimen was seen but unfortunately was not available for preservation. Such intermediates have also been found in the past and are to be expected where two races mix.

Lakhimpur District of Assam has long been known as an important habitat of the White-winged Wood Duck *Cairina scutulata*. These now occur only in a certain forest reserve where in spite of protection they are still hunted by the local population. Only a tiny population remains which urgently needs conservation, but the species though locally endangered is understood to be still numerous in the interior of Thailand and on this basis does not feature in the I.U.C.N. 'Red Book'.

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Decoy ducks formed from clay and stones as used in Chitral - Mallard outline shows size. Drawn by C. D. W. Savage. See page 46.