

Mute Swan 1961

Title

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Description and Summary of Results

In 1960 there were few reliable data on the numbers of Mute Swans *Cygnus olor* but there were some suggestions that numbers were increasing quite fast. For example swan-upping figures found 412 swans between Henley and the Pool of London in 1948, but by 1956 the number had risen to 1311; numbers on the River Tweed had risen from 280 in 1952 to 372 in 1956. However the only available data on the whole population were from the BTO census carried out in the spring of 1955 and repeated on a limited scale in 1956. This census provided a good estimate of the total population although the coverage was somewhat uneven.

If the increase was genuine there could be economic problems with potential damage to agriculture and other human activities, and there had been pressure for the removal of the protection afforded to the species. But before this could be considered it was clearly desirable that the present status should be further investigated. So the Home Office asked the Nature Conservancy to pursue the matter and under their aegis, the Wildfowl Trust co-operated with the BTO to carry out the necessary work. The principal object was to establish whether the increase was continuing and, if so, to obtain a reliable figure for the rate of increase. Information, incidental to the census, was also collected on breeding biology and the extent of the damage which the species was alleged to cause.

The gross figures cannot properly be compared with the 1955-56 totals since the coverage was not necessarily the same each time. The raw data showed only a slight difference: 7363 swans in 1955 and 7800 in 1961; but confining the comparison to those areas for which the earlier records were sufficiently detailed to ensure exactly the same coverage suggested that the slight rise may have been due to differences in cover in the two years and not to any real increase in the number of swans. If numbers had continued to increase since 1955 at a rate of 16% pa, as suggested by the lower Thames figures between 1948 and 1956, the 1961 raw total would have been about 14000 instead of 7800. Clearly an increase of this order had not occurred.

A detailed comparison between the ground and aerial counts in the six counties in which both methods were applied showed very similar results suggesting that there is little difference between the accuracy of the two techniques -- 2322 swans were recorded from the ground census in places where 2247 birds were seen from the air.

The winter indices from the National Wildfowl Counts broadly supported these results with a rapid increase around 1955, but that the rate of increase slowed up considerably after 1956/57 with the total number probably reaching a peak in 1959. The subsequent decrease had brought the population back to a level not much above what it had been in 1955-56. The survey also collected some information on breeding parameters and nest sites, and on alleged damage caused by the birds. Little of the latter was reported but could be summarised under the headings of: Agriculture -- by far the most frequent complaint was grazing on spring grass but it was always very localised; Fisheries -- opinion was divided

with fly fishermen regarding it as an unmitigated nuisance while coarse fishermen were neutral; Other waterfowl -- criticism was largely for the swan's hostility towards other wildfowl and came from naturalists who preferred ducks and geese to swans, and wildfowlers who wished to preserve the ducks, many of them hand-reared, for shooting; and Electric cables -- electricity failures due to the collision of flying swans with overhead cables were increasing at a rate rather greater than that at which new mileages of cable were being erected. However in general all these complaints were few and often without great substance.

Methods of Data Capture

For this survey it was decided to repeat the 1955 census in a selected number of counties, primarily those where the previous coverage was good or which were of special interest in view of their large swan population. As far as possible, the same observers were used. In addition, the census was widely advertised in ornithological and country journals, and a request for help was sent to 115 natural history societies in these counties. Provision was made on the forms for recording the exact locality of nests and herds and for a description of the habitat. Observers were asked to distinguish adults holding territories from those in groups and a separate column was provided for paired swans holding territories but without nests or young. Details of brood and clutch size were also requested. The reverse of the form was set aside for information about damage caused by swans or other points of interest.

In addition, an aerial census was made at the same time in 14 counties (Berkshire, Cambridgeshire, Dorset, Essex, Gloucestershire, Hampshire, Herefordshire, Norfolk, Oxfordshire, Shropshire, Somerset, Warwickshire, Worcestershire and Wiltshire), six of which were also covered from the ground. The purpose was to provide a mutual check on the accuracy of the ground counts and to extend the cover to counties not included in the ground census. The great advantage of aerial survey lies in the rapidity with which the data can be collected and analysed. Two observers were used, one of whom was the pilot, flying at about 500 feet (160m) above ground level at 85-90mph (150kph). Swans could easily be seen and it was possible to locate nests and count broods. Each county was covered by flying along rivers, canals and coastlines, as well as large lakes, reservoirs and smaller ponds near rivers, and in some areas, eg the Somerset levels, overland transects.

Purpose of Data Capture

A complete census in a selected sample of counties designed to determine any changes to total numbers of swans since the complete census of 1955.

Geographic Coverage

Selected counties in England and Scotland – mainly those which were well-covered in the 1955-56 census. In England: Buckinghamshire, Cheshire, Devon, Essex, Kent, Leicestershire, Lincolnshire, London, Norfolk, Northumberland, Oxfordshire, Shropshire, Somerset and Wiltshire; in Scotland: the Lothians, Fife, Kinross and Stirlingshire. The aerial survey

covered 14 including Essex, Norfolk, Oxfordshire, Shropshire, Somerset and Wiltshire from those also covered by the ground survey.

Temporal Coverage

The breeding season of 1961.

Other Interested parties

The survey was organised and run by the BTO with help and support of the Wildfowl Trust. The Nature Conservancy provided financial support for the project.

Organiser(s)

Keith Eltringham.

Current Staff Contact

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Publications

The main report of the survey is:

Eltringham, S.K. 1963. The British population of the Mute Swan in 1961. *Bird Study* 10: 10-28.

The survey was noticed in *Bird Study* vol.8 nos.1-3 (March, June and September 1961).

Available from NBN?

No.

Computer data -- location

None.

Computer data -- outline contents

N/A.

Computer data -- description of contents

N/A.

Information held in BTO Archives

Nothing found. The whereabouts of the original data cards are unknown.

Notes on Access and Use**Other information****Notes on Survey Design****Specific Issues for Analysis**