

## BIRD REMAINS FROM GOUGH'S CAVE CHEDDAR, SOMERSET

by

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### ABSTRACT

Re-examination of the surviving bird remains from the 1927-1931 excavations at Gough's Cave confirms the presence of 11 forms, 6 of which can be reliably attributed to the main Lateglacial phase of human occupation. Remains of Whooper Swan *Cygnus cygnus* and Ptarmigan *Lagopus mutus* show direct evidence of human modification. The environmental and potential cultural significance of each species is examined and discussed where appropriate to the wider interpretation of the site.

### INTRODUCTION

Of the faunal material found in Gough's Cave, bird bones are comparatively few in number. The specimens on which this account is based were collected by R. F. Parry between late 1927 and early 1931. These specimens were initially studied by D. M. A. Bate, an associate of the British Museum (Natural History). She provided a list of species that was included in the first report (Bate in Parry, 1929), and continued to identify material found by Parry in later seasons of excavation. More recently the material has been rechecked (Harrison, 1980). Four original identifications are now regarded as invalid through re-assignment of specimens - ?Mute Swan *Cygnus Olor*, Pochard *Aythya ferina*, Black Grouse *Lyrurus tetrix*, and Mistle Thrush *Turdus viscivorus*. A specimen assigned to Shelduck *Tadorna* sp. has not been traced.

Faunal remains from Gough's Cave are apparently restricted to the Cave Earth/Breccia unit. The specimens were marked when collected with a number indicating a working layer of spit of six-inch depth, within the cave deposits. The birds have been tabulated in relation to these spits, 19 being the deepest from which bird remains have been recovered (TABLE I). The lower spits, up to and including spit 10, produced many Lateglacial flint, bone and antler artefacts. Individual large mammal fossils from within these spits have been dated to around 12,000 radiocarbon years bp (Burleigh *et al.*, 1985; Burleigh, this volume). Spits 11 to 7 incorporated a small number of chipped flints believed to be of early Flandrian (Mesolithic) age as well as bones of sheep (Bate in Parry, 1929). From spit 9 upwards a sharply diminishing number of Lateglacial and a few early Flandrian chipped flints were mixed with many Iron Age and Roman pottery fragments. (For a discussion of the significance of Parry's spits see contributions by Jacobi (1986) and Currant, this volume.)

TABLE I — *Spit records of Lateglacial and Flandrian birds from Gough's Cave, 1927 to 1931*

spits	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	N.D.
<i>Cygnus cygnus</i>														*					*	*
<i>Anser anser</i>																				*
<i>Anas platyrhynchos</i>					*															
<i>Falco peregrinus</i>											*	*	*	*	*	*	*			
<i>Lagopus mutus</i>											*	*	*	*	*	*	*			
<i>Lagopus lagopus</i>										*	*			*						
<i>Gallus gallus</i>		*			*															
<i>Columba oena</i>															*					
<i>Tyto alba</i>							*												*	
<i>Turdus merula/torquatus</i>							*			*				*						*
<i>Turdus pilaris</i>																		*		*

N.D. = no data

## ENVIRONMENTAL INFORMATION

The Gough's Cave bird remains can be divided into three groups. The majority of the material is clearly associated with the main Lateglacial archaeological horizons. A smaller group from the higher spits is apparently Flandrian in age. The remaining material has no spit numbers.

## (a) Lateglacial Group, spits 19 to 10

The Whooper Swan *Cygnus cygnus* recorded from spits 19 and 14 is a migrant species breeding in more northerly regions and occurring in southern Britain as a winter visitor. Until recently it has bred intermittently in northern Scotland. Like the Ptarmigan it could have been a breeding species in southern Britain in the later Devensian.

Ptarmigan *Lagopus mutus* occur in spits 17-11 and Willow/Red Grouse *Lagopus lagopus* in spits 14, 11 and 10. The occurrence of Ptarmigan is significant since game birds tend to be sedentary and are therefore useful indicators of climatic conditions. Ptarmigan now usually occur on cold tundra or a montane equivalent, with Willow Grouse being found in birch or willow scrub. The British Willow Grouse isolate, the Red Grouse *Lagopus lagopus scoticus* sometimes regarded as a separate species, has become adapted to heather (*Calluna vulgaris*) moorland. Both species occur together at the present time in mountain areas of northern Scotland, with the Ptarmigan on the high bare hilltops and the Red Grouse on the lower slopes. This may have been the situation on Mendip during the Lateglacial period.

Remains of Peregrine Falcon *Falco peregrinus* from spits 16-11 appear to be the scattered bones of a single individual. This is a fast-flying bird of prey which prefers hunting in open country and will take prey up to the size of a Mallard.

The Stock Dove *Columba oena*, present in spit 15, nests in cavities in trees, burrows or rock clefts, but unlike the Rock Dove *C. livia* does not use cave interiors for nesting.

Blackbird/Ring Ouzel *Turdus merula/torquatus* (spits 10 and 14) and Fieldfare *Turdus pilaris* (spit 18) are now widely distributed species that would not be out of place in a Lateglacial environment. Unfortunately Blackbird and Ring Ouzel cannot be distinguished on osteological characters alone. If Fieldfares were breeding in Britain, as they might have been in a colder period, then they would have needed some kind of woodland or scrub for cover and nesting.

(b) *Flandrian Group, spits 9 to 1*

A few bird bones occur in the upper spits of Gough's Cave. There is a specimen of Barn Owl *Tyto alba* in spit 7, a bird that will frequent caves for roosting and breeding, but has limited tolerance of human disturbance and would be unlikely to have occurred at a period when the cave was regularly used by man. The Blackbird/Ring Ouzel in the same spit might have been its prey. The Mallard Duck *Anas platyrhynchos* in spit 5, and the larger-boned domesticated form of the Fowl *Gallus gallus* in spits 3 and 2 are likely to be the results of later phases of human occupation.

(c) *No spit data*

In addition to the above listed records there are a few bones lacking numbers and hence of unknown age. A Whooper Swan ulna bearing cut marks may be the missing "Mute Swan *Cygnus olor*" from spit 18 in the original list (Bate in Parry, 1929). Greylag Goose *Anser anser* is likely to have been a human food species. Like the Ring Ouzel, it could be linked with either cooler or more temperate climatic conditions. The same is true of the *Turdus* species which also recur as unmarked bones.

## HUMAN ASSOCIATIONS

Mourer-Chauviré (1983) has studied large samples of Pleistocene bird remains from caves in France. She found that there is a preponderance of humeri and femora at sites of human occupation and of coracoids, carpometacarpi and tarsometatarsi where avian raptors were the predators. The bird specimens from Gough's Cave constitute so small a sample that they can only be evaluated tentatively on this basis. In spits 19-11, when Lateglacial human populations are known to have been present, at least intermittently, the presence of 9 humeri and 3 femora as against 5 coracoids and 1 tarsometatarsus would agree with the proposed model. In contrast, in an examination of bird specimens of Lateglacial age from the nearby site of Soldier's Hole (Harrison, in press) the statistical evidence suggests that the predator was likely to be an avian raptor, possibly Eagle Owl *Bubo bubo* or White-tailed Sea-eagle *Haliaeetus albicilla*.

Only four bird bones from the Lateglacial assemblage at Gough's Cave show direct evidence of human usage or association. A Ptarmigan coracoid (part of BM(NH) A1906) from spit 11 and an unlocalized left ulna of a Whooper Swan (BM(NH) A1903) show a number of fine transverse cuts towards one end. All three known Whooper Swan bones

show marks of human usage, and it is probable that individuals of this species were killed by human rather than by mammal or avian predators.

The proximal end of a Whooper Swan humerus (BM(NH) A1809) from spit 19 has the caudal (anconal) side of the shaft where it joins the head worked for the removal of needles, leaving characteristic residual grooves. The bone has been broken across in this region after the removal of the slivers.

The proximal end of a Whooper Swan ulna from spit 14 (Cheddar Caves Museum 1.5/52) has been prepared as a tool (Parry, 1929, pl. 20, no. 8). It has been shortened so that the larger proximal end fits into the palm of the hand, with the shaft end projecting only a short way beyond the fingers of the closed hand. The projecting proximal olecranon of the bone has been crudely removed so that it fits more comfortably into the hollow of the hand; and the bone's surface is polished, presumably by handling and usage. The shaft has been cut away diagonally from the cranial side to leave on the rounded caudal side a short, bluntly rounded projection sharpened to its outer edge, forming the tip of the tool.

The bone has several longitudinal and slightly irregular cracks, one of them commencing to one side of the rounded tip. They are atypical of such bird bones, and not of natural origin. They slant diagonally into the thickness of the bone, all in a similar fashion, and indicate that the bone has been subject to considerable pressure from being twisted in a rotary fashion against a resistant surface. If the sharp point is viewed end on, the cracks indicate that the rotation would have been clockwise.

The tool appears to have been used in a strong rotary or gouging movement involving relatively little forward movement of the sharp end. If it were held in the right hand the movement would be upwards and inwards. The fit is not particularly comfortable and the movement is weak. If it were held in the left hand the fit is much more comfortable and the downward and inward rotation is stronger. The evidence suggests that it was the tool of a left-handed user.

Another species which may have been brought into the cave by man is the Peregrine Falcon. The distribution of the bones might be interpreted as evidence of a number of occurrences in spits 16, 15, 14, 12 and 11; but all appear to be the remains of a single individual. Most of the principal bones are present. Unlike the remains of most animals in the cave, which have been dismembered and scattered, these appear to have remained together, suggesting that the specimen was buried rather than discarded.

It appears to have been placed in deposits corresponding to spit 16. The fact that some bones have been disturbed upwards from the right hand side suggested that it might have been lying on its left side, but the presence of the strongly keeled sternum in spit 15 makes it more likely that it was on its back with the breastbone thrusting upwards. The left coracoid is missing; but of the right-hand bones the femur of the upper leg is displaced up to spit 14, and of the right wing the humerus is missing, radius and carpometacarpus are in spit 12, and the ulna in spit 11. The separation of bones such as the radius and ulna suggests that this occurred some time after burial.

Another point of interest about this bird is the bones that are missing. Although most of the ribs and vertebrae are lacking it might be expected that there could be a failure on the part of the excavators to match up such generalized items with a body. However, although the lower mandible is present, the skull and attached upper mandible are absent. Even if the more fragile cranium was shattered one would have expected to find the upper mandible. Other bones which one would also expect to find but which are missing are the toe bones and claws. These are both sturdy and recognizable.

The possible significance of these missing elements could lie in the fact that the Peregrine Falcon has always been admired for its power of hunting, from at least Ancient Egypt to the present day. Its head, and toes with claws, are its power symbols. These parts of falcons and eagles have been found associated with human burials of early periods (Clark, 1952).

The claws of large owls such as Eagle Owl *Bubo bubo* and Snowy Owl *Nyctea scandiaca* may also have had the same symbolic importance. Mourer-Chauviré (1983) lists finds of large numbers of toe bones of Snowy Owls at four Palaeolithic sites in France, and in particular at Morin where there was evidence of at least 84 individuals; of 1129 specimens more than half were the terminal joint of the toe or the claw. It would appear that these were saved for some purpose. There is no evidence on these specimens of markings or perforations that might suggest that they were used as ornaments such as pendants; but merely that the ends of toes complete with claws were severed and assembled for some reason.

The Peregrine Falcon is an unlikely species to be in the hands of early man for it is not easy to approach. If birds were obtained as young from a nest they would be likely to show evidence of immaturity in their bones. Even were one kept, it would be unlikely to survive for long, for until the last few decades falconers found it difficult to keep birds alive through even the first moult.

It would be difficult to approach near enough to kill one; but if other birds were wounded in the course of being killed a fluttering injured bird might lure a hungry Peregrine near enough to be struck by a thrown or projected weapon. A falcon might similarly be lured to a tethered bird.

In the Middle East falcons such as Peregrines have been caught alive by being lured with a tethered bird such as a pigeon. In the simplest technique a number of simple loop snares were attached to the back of the decoy, and the swooping peregrine would be caught when it seized the prey in its feet. More complex methods involve a net with a pull-rope which could be pulled over the falcon when it struck the tethered bird. Such methods, if used, would presumably leave little evidence with the passage of time. Clark (1952) refers to ground birds being taken with snares in Upper Palaeolithic times, but this appears to be an assumption based on the frequency of grouse, Ptarmigan and hares as prey at this period and the fact that at the present day some isolated tribes habitually use snares to catch these species.

## MATERIAL EXAMINED

The relative completeness of individual specimens has not been indicated. The prefix S refers to spit numbers. Four-figure numbers with the prefix A are B.M.(N.H.) collection registration numbers, the material with one exception now being in the collection of the Department of Palaeontology, British Museum (Natural History).

Whooper Swan *Cygnus cygnus*, S19 humerus A1899; S14 ulna, Cheddar Caves Museum 1.5/52; S? ulna A1903.

Greylag Goose *Anser anser*, S? tarsometatarsus A1900.

Mallard *Anas platyrhynchos*, S5 carpometacarpus, coracoid A1901.

Peregrine Falcon *Falco peregrinus*, S16, 2 tarsometatarsi, 2 tibiotarsi, femur, pelvis, vertebrae, coracoid, fucula, humerus, radius, ulna, carpometacarpus, lower mandible; S15 sternum; S14 femur; S12 carpometacarpus, radius; S11 ulna; all A1898.

Ptarmigan *Lagopus mutus*, S17 sternum A1908 (part); S16 sternum A1908 (part); S15 femur A1906 (part); S14 coracoid, femur A1906 (part); S13 humerus A1905; S12 2 coracoids, femur A1906 (part); sternum A1908 (part); S11 two coracoids A1906 (part).

Willow/Red Grouse *L. lagopus*, S14 humerus; S11 humerus; S10 humerus, all A1902.

Domestic-type Fowl *Gallus gallus*, S5 femur A1917; S2 humerus A1909.

Stock Dove *Columba oena*, S15 two humeri A1904.

Barn Owl *Tyto alba*, S7 humerus A1897.

Blackbird *T. merula*/Ring Ouzel *Turdus torquatus*, S14 humerus A1895 (part); S10 2 ulnae A1896 (part); S7 pelvis A1895 (part); S? lower mandible A1895 (part), ulna, radius, tibiotarsus, all A1896.

Fieldfare *T. pilaris*, S18 tarsometatarsus; S? tibiotarsus, all A1895 (part).

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