

# THE BIRDS OF MALHAM MOOR

By P. F. HOLMES

*Malham Tarn Field Centre, Yorkshire*

THE area dealt with in this paper comprises the township of Malham Moor (10,973 acres) with those parts of the township of Malham which march with it, as far south as the top of the Mid-Craven fault scarp (2,560 acres). The southern boundary is thus Pikedaw—top of Malham Cove—top of Gordale Scar—Lee Gate. It is about 21 square miles of country which is virtually all over 1,000 ft., mostly over 1,200 ft. and ranging up to 2,191 ft.; part of the parish of Kirkby Malham in the Craven District of North-West Yorkshire.

The geology is described by Raistrick and Illingworth (1949) and predominantly it is an area of Carboniferous Limestone, whose geographical features Moisley (1955) has discussed. The higher ground of Fountains Fell and Darnbrook in the north-west is composed of Yoredale rocks, capped with Millstone Grit, while a small inlier of impervious Silurian is responsible for the presence of Malham Tarn. Glacial drift is patchy in distribution but especially thick on the higher slopes. Sinker (1953) has given a general account of the vegetation, and a detailed account (1960) of the immediate surroundings of the Tarn; while Manley (1957) has described the climate, which is inevitably somewhat severe due to the height and exposure. These factors, with man and his grazing animals, have interacted to produce a variety of habitats for birds which may be grouped as follows:

- (1) *Grasslands*. Perhaps 70 per cent. of the area is rough grazing for hill sheep and cattle; a complicated mosaic of mainly Fescue/Bent, Mat and Limestone grasslands, with a small acreage of meadowland on each farm.
- (2) *Moorland*. The slopes of Fountains Fell and Darnbrook Fell are partly covered with a mixed type of moor (Cotton Grass, Ling, *Sphagnum*, Bilberry, Rushes), and higher up this becomes a dissected Blanket Bog. The Tarn Moss is a Raised Bog and there are other smaller patches of peat vegetation.
- (3) *Fens, Mires, Wet Flushes*. Especially Tarn Fen and Great Close Mire.
- (4) *Streams or Becks*. Upper Gordale, upper Cowside and Darnbrook Becks, inflow and outflow streams of the Tarn.
- (5) *Open Standing Water*. Malham Tarn (153 acres at 1,229 ft.) is a calcareous water which has been described by Holmes (1956), and records for it are referred to simply as the Tarn. Fountains Fell Tarn ( $3\frac{1}{2}$  acres at 2,120 ft.) is acid, and there are also a few small pools.
- (6) *Woodland*. A mixed wood of about 26 acres on the north side of the Tarn, with smaller clumps and belts on the east side and round Tarn Moss

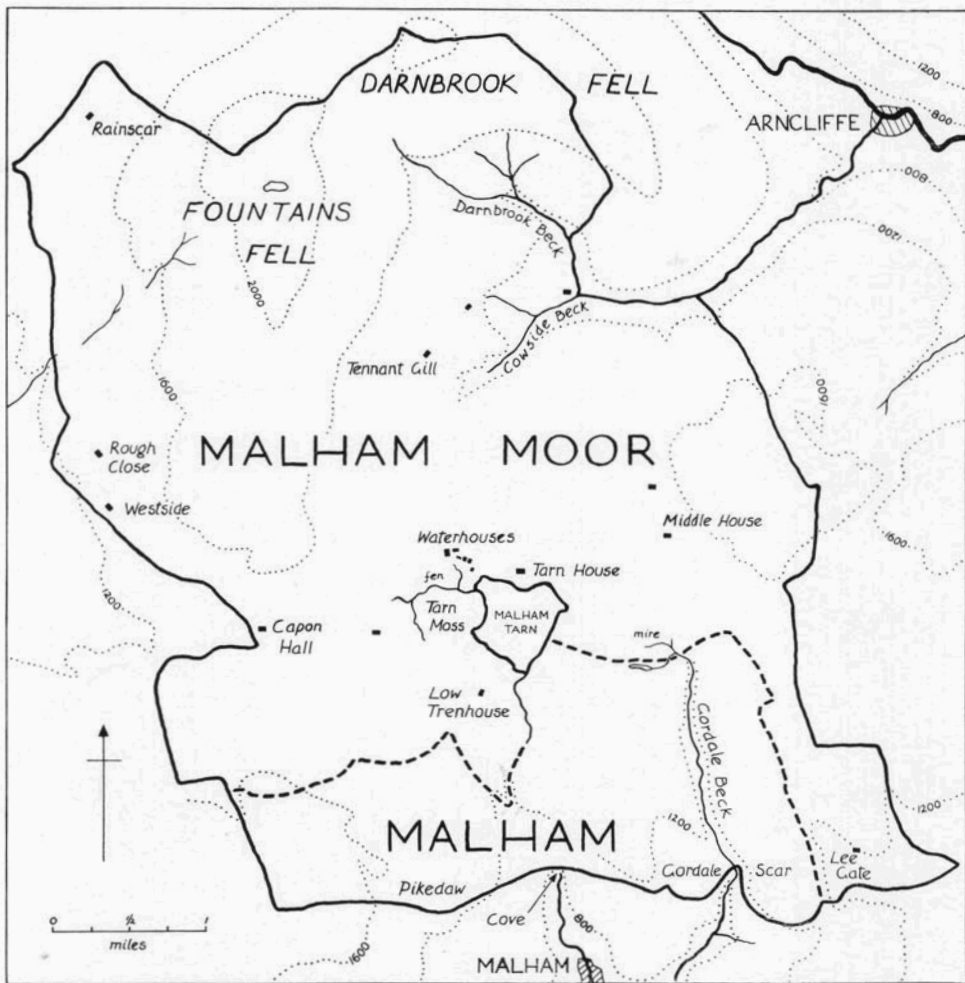


FIG. 1.

Map of Malham Moor and part of Malham, to show the area dealt with (enclosed by thick continuous line) and the place names.

(18 acres), and some 5 acres of willow/alder/birch scrub (fen carr), are referred to as Tarn woods. Apart from the fen carr, the trees are old sycamore, beech, ash, rowan, spruce, pine, larch and some yews round the Tarn House. There are few other trees except near farm buildings.

(7) *Cliffs, Scree, Limestone Pavements, Stone Walls.*

(8) *Buildings.* Ten scattered farms with outlying laithes, the Field Centre at Tarn House and five cottages nearby which are referred to as the hamlet of Waterhouses.

The presence or absence of a bird in any small area is not, however, only a matter of the broad habitats available, and there are many local factors or recent events which are also important. These cannot be discussed at length, but probably the most significant are these: felling and thinning in Tarn woods in 1953, leaving much brash—limited replanting in 1954—the isolated position of the woods—lack of bushes, hedges and arable land—keeping and shooting of birds of prey for the last 100 years—heather burning and over-grazing—fluctuation of vole populations—freezing over of the Tarn and snow lying for long periods in most winters—the winter of early 1947—mechanization on the farms and recent keeping of hens—presence of students and a greatly increased motoring public—indirect effects of myxomatosis which completely eradicated rabbits in 1955.

The birds of Yorkshire have been well documented, first by Nelson (1907) and recently by Chislett (1952), who also edits the extensive notes on Yorkshire birds in *The Naturalist* each year, and these works will often be referred to. The records are predominantly from my own notebooks between April 1948 and February 1960, in which there are many observations supplied by visitors to the Field Centre to whom my thanks are due, and especially to those listed below:

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The following abbreviations have been used:

- w.v. winter visitor, i.e. arriving in autumn or winter, staying for short or long period, and leaving in spring.
- s.v. summer visitor, i.e. arriving in spring, breeding, and leaving in autumn.
- p.m. passage migrant, i.e. passing through on migration.

The word "resident" indicates presence throughout the year and breeding. Where a season is written "Mar.-Apr." the whole period 1 March to 30 April is indicated; but where it is written "Mar./Apr." the period is only the end of March and the beginning of April. If a species has occurred six or fewer times the occasions are listed.

The nomenclature follows the B.O.U. Check List (1952).

RED-THROATED DIVER, *Colymbus stellatus*. Recorded from Tarn by Nelson (1907) but no dates given.

GREAT CRESTED GREBE, *Podiceps cristatus*. Regular s.v. to Tarn, first arrivals beginning of Mar. (18 Feb.-27 Mar.) and departure Sept./Oct. (27 Oct.). Since 1948 numbers have varied from 4 to 9 pairs but only 3 pairs can breed successfully due to shortage of suitable nesting sites. One wintered 1951/52 and slight passage noted during July in some years. First nesting pair in 1921 (Booth, 1933).

SLAVONIAN GREBE, *Podiceps auritus*. One on Tarn 10 Sept. 1948 (Chislett, 1949).

BLACK-NECKED GREBE, *Podiceps caspicus*. One adult with traces of breeding plumage on Tarn 23 Dec. 1949.

LITTLE GREBE, *Podiceps ruficollis*. Usually only one pair resident, nesting Tarn inflow stream. Late summer and w.v. in small numbers, especially Oct.-Nov.

GANNET, *Sula bassana*. One on Tarn 30 Mar. 1958 after foggy night, seen diving at fish.

CORMORANT, *Phalacrocorax carbo*. Two on Tarn 1 June 1948 and one present 6-10 Sept. 1950.

HERON, *Ardea cinerea*. Regular visitor to Tarn, fen and streams in all months, most frequently in autumn and winter.

MALLARD, *Anas platyrhynchos*. Up to 7 pairs breed in the area and may be resident. W.v. but not in the large numbers seen on lower reservoirs, about 40 being maximum on Tarn.

TEAL, *Anas crecca*. A few pairs breed and may be resident, nesting from Tarn level up to 2,100 ft. on Fountains Fell. W.v. in small numbers.

WIGEON, *Anas penelope*. Regular autumn visitor, first arrivals about 22 Sept. (60 on 14 Sept. 1949) and usually leaving before Dec. A few birds reappear late Feb.-Apr. in some years. Adult with young on the Tarn in 1901 suggested breeding (Nelson, 1907).

PINTAIL, *Anas acuta*. One confirmed record, a ♂ on Tarn 25 Sept. 1959.

SHOVELER, *Spatula clypeata*. Irregular w.v. in small numbers late Sept.-Dec., occasional in spring. Ten is maximum seen on Tarn, 3 Dec. 1958.

SCAUP, *Aythya marila*. Single birds on Tarn 28 Oct. 1951, 25 Oct. 1953, 11 Oct. 1955 and in 1954 one ♂ 16 Apr., 2 ♂ 7 June.

TUFTED DUCK, *Aythya fuligula*. The commonest duck on the Tarn in all months, 6-10 pairs breed. Late summer and w.v.; influx of 30-40 ♂ in first week of July most years, and numbers reach maximum Oct.-Nov. (113 on 27 Oct. 1949), but all depart when Tarn freezes over. Considerable passage Mar.-Apr. Nelson (1907) mentioned the Tarn as one of the few places in Yorkshire where the species bred at that time.

POCHARD, *Aythya ferina*. Regular w.v. and a few have been recorded in every month. Maximum 105 on 11 Dec. 1949. Bred at the Tarn in 1906 (Chislett, 1952).

GOLDEN-EYE, *Bucephala clangula*. Regular w.v. to Tarn in very small numbers Nov.-Apr., often single birds; 7 on 23 Dec. 1957 and 12 on 30 Mar. 1958 were exceptional.

COMMON SCOTER, *Melanitta nigra*. Occasional p.m., settling on Tarn for a few hours only. Thirty-six on 5 Sept. 1954, 30 on 10 Oct. 1957 and 6 ♂ on 17 June 1958.

GOOSANDER, *Mergus merganser*. Regular w.v. Nov./Dec. to early April (13 Nov. 1952, 23 Apr. 1944). Winter maximum usually 15-20 birds, but 30 on 20 Mar. 1950, and 40 on 10 Feb. 1960.

SMEW, *Mergus albellus*. Occasional late w.v. to Tarn. Two ♀ 21 Feb. 1950, pair 23 Jan. 1951, ♂ 7 and 17 Mar. 1953, ♂ 16-18 Apr. 1954, 3 on 22 Jan. 1956.

SHELD-DUCK, *Tadorna tadorna*. One adult alighted on Tarn 22 Sept. 1948 and later flew off south.

PINK-FOOTED GOOSE, *Anser arvensis*. Skeins of geese are sometimes seen passing over Oct.-Jan., only rarely alighting on Tarn after dark. According to Chislett (1952) they are most likely to be Pink-footed Geese, *A. a. brachyrhynchus*.

CANADA GOOSE, *Branta canadensis*. One ad. and 2 imm. on Tarn 4 Apr. 1954 and 7 on 1 Apr. 1956.

MUTE SWAN, *Cygnus olor*. Nine were introduced onto the Tarn in 1928 and the one remaining bird died in Jan. 1949.

WHOOPEE-SWAN, *Cygnus cygnus*. Irregular w.v. or p.m. Nov.-Mar., not staying more than a day. Usually small numbers but 25 on 7 Jan. and 32 on 20 Mar. 1950.

BEWICK'S SWAN, *Cygnus bewickii*. Fourteen on Tarn 15 Mar. 1956.

BUZZARD, *Buteo buteo*. Occasional p.m. or wandering bird, June-Nov.

SPARROW-HAWK, *Accipiter nisus*. One ♂ wintered Tarn woods 1949/50 from 19 Dec., joined by ♀ on 1 Mar., probably bred. Successful breeding in 1953 but rarely seen since.

PEREGRINE FALCON, *Falco peregrinus*. A pair has attempted to breed just outside the area in several years. Occasional visitor to the cliffs near Tarn, usually Oct.-Nov.

MERLIN, *Falco columbarius*. May have bred Fountains Fell or Darnbrook in 1950, now rarely seen.

KESTREL, *Falco tinnunculus*. Up to 4 pairs may breed when voles are plentiful. Odd birds are resident but most leave in autumn.

RED GROUSE, *Lagopus scoticus*. Resident and common where there is still heather (*Calluna*). Fountains, Darnbrook and Rainscar Fells were good grouse-shooting moors up to 1939, but now that the shooting and farming are under separate owners the heather is overgrazed and dwindling rapidly. Several pairs resident on Tarn Moss.

BLACK GROUSE, *Lyrurus tetrix*. Resident formerly in very small numbers; distinct increase in last 4 years, probably indirect result of myxomatosis before which Blackcock were often caught in rabbit snares. Occasionally seen now in Tarn woods and on Moss, regularly in certain other places. A lek at which about 16 ♂ assemble lies just outside the area.

PARTRIDGE, *Perdix perdix*. Uncommon resident in years following 1947 winter, now several large coveys seen often, up to 1,600 ft.

PHEASANT, *Phasianus colchicus*. Irregular resident Tarn woods. Disappeared during 1947 winter, odd birds in following years and now 2 pairs.

WATER-RAIL, *Rallus aquaticus*. Recorded from Tarn by Nelson (1907) and one seen on Tarn Fen 26 May 1949. A dead bird was picked up in Malham village 27 Oct. 1956.

SPOTTED CRAKE, *Porzana porzana*. One on Tarn Fen 13-20 June 1948, calling almost continually from dusk to dawn (Holmes, 1949).

CORNCRAKE, *Crex crex*. Now a very scarce s.v. or p.m. Heard Malham Moor and near Malham in late May 1952 and early June 1954, and in Littondale just north of the area in July 1959, where it may have bred.

MOORHEN, *Gallinula chloropus*. Usually 2 or 3 pairs resident on Tarn and its inflow stream, also has bred Great Close Mire and upper Gordale Beck. One killed by Gannet diving at it under water 30 Mar. 1958.

COOT, *Fulica atra*. Four to 7 pairs resident on Tarn. Large numbers arrive late summer and autumn, usual pattern being: 30-40 July and Aug., c. 60 Sept. and further influx

Oct.-Nov., reaching winter maximum of 150-240. All depart when the Tarn freezes over, except residents which probably remain in inflow stream. A few birds, up to 40, return Feb.-Mar. and leave by early Apr.

OSTERCATCHER, *Haematopus ostralegus*. Several pairs breed just outside the area by the Aire, Ribble and Skirfare. Occasional birds visit Tarn, Mar.-Aug.

LAPWING, *Vanellus vanellus*. Common s.v., returning to Malham Moor second half of Feb. Small flocks form mid-June, flocks up to 200 July-Aug., most leave early Sept. though a few may be seen in Malhamdale Oct.-Nov.

RINGED PLOVER, *Charadrius hiaticula*. Perhaps regular p.m. in very small numbers though not noticed every year. First recorded from Tarn 10 and 23 May 1909; in 1937 a pair bred on Great Close Mire (Bedford, 1937) and probably in several succeeding years. Since 1948 there have been three late May records, 10 June 1954 and 18 Aug. 1950.

LITTLE RINGED PLOVER, *Charadrius dubius*. One on Great Close Mire 12 June 1950 and 2 June 1951.

GOLDEN PLOVER, *Charadrius apricarius*. S.v. breeding on higher ground, especially the 2,000 ft. summit ridge of Fountains Fell, and down to 1,400 ft. In 1950 perhaps 13 pairs breeding Fountains Fell, but usually many less; return to Moor Feb./Mar. Common p.m. late Mar.-Apr., birds feeding in same fields every year and about 30 per cent. are the Northern race, *C. a. altifrons*. Flocks up to 60 seen in autumn (Aug.-Nov.) are probably p.m. or w.v.

DOTTEREL, *Charadrius morinellus*. One on Fountains Fell 14 Sept. 1952 (Chislett, 1953) and two in same place 28 May 1955.

TURNSTONE, *Arenaria interpres*. Three by Tarn 15 May 1958.

COMMON SNIBE, *Capella gallinago*. Numerous s.v., breeding at least up to 1,800 ft. "Drumming" is heard near Tarn from mid-Mar. to mid-July. Small numbers in winter are probably residents.

WOODCOCK, *Scolopax rusticola*. One pair usually breeds in Tarn woods. Irregular w.v. late Oct.-late Dec., when may be met high up on open fells.

CURLEW, *Numenius arquata*. Occasional birds heard in winter months but essentially a common s.v., returning Feb./Mar. and breeding especially about Tarn level, only occasionally up to 2,000 ft. Flocks of c. 100 on Tarn Moss in Mar.-Apr. are probably p.m. or non-breeders. A large moulting flock starts to assemble in Tarn area mid-June and sometimes reaches c. 3,000 birds by early Aug.; in most years the flock dwindles slowly through Aug. and Sept. This may be a moulting halt by foreign (? Scandinavian) birds, in what must formerly have been a very undisturbed place.

WHIMBREL, *Numenius phaeopus*. Regular p.m. in very small numbers, usually single birds. One 23 Apr. 1955, 2 May records, often in July (10-31), 3 in Aug., 2 in Sept.

BAR-TAILED GODWIT, *Limosa lapponica*. Five in non-breeding plumage by the Tarn 29 June 1947 (Chislett, 1952).

GREEN SANDPIPER, *Tringa ochropus*. Rare p.m. in late summer by Tarn or Great Close Mire; 12-18 Aug. and 25 Sept. 1950, 12 Aug. 1952.

COMMON SANDPIPER, *Tringa hypoleucos*. S.v., 4 to 5 pairs breeding near shores of Tarn; also Cowside and Darnbrook Becks. Breeding birds arrive about 21 Apr. and leave July/Aug. Some passage mid-Aug. to mid-Sept.

REDSHANK, *Tringa totanus*. S.v., perhaps 7-10 pairs breeding in the area, especially Great Close Mire. First arrivals in spring usually 10-16 Mar. (25 Feb.-26 Mar.), breeding birds leave July-early Aug. Passage noted some years Apr. and Sept.

GREENSHANK, *Tringa nebularia*. Irregular late summer p.m., usually single birds (29 July-28 Aug.).

KNOT, *Calidris canutus*. One by Tarn 14 Nov. 1949.

DUNLIN, *Calidris alpina*. S.v., 3-4 pairs breeding from 1,220 to 2,100 ft. Arrive Apr. and probably leave Aug., though "trilling" was heard by Tarn 26 Sept. 1957. Passage sometimes noted May and Aug.

ARCTIC SKUA, *Stercorarius parasiticus*. One at the Tarn 4 Sept. 1940, a light form probably immature (Chislett, 1952).

GREATER BLACK-BACKED GULL, *Larus marinus*. Irregular visitor to the Tarn in very small numbers. Has been recorded in all months except May and July, most often in winter.

LESSER BLACK-BACKED GULL, *Larus fuscus*. Frequent p.m. late Mar.-end Apr., roosting on Tarn and often seen scavenging in lambing meadows; maximum 37 on 23 Apr. 1950. In 1948 and 1949 many frequented grasslands on the Moor from late May to end of June, attracted by vast numbers of Antler Moth caterpillars; 304 assembled on Tarn 14 June 1949 (Holmes, 1953). In subsequent years only a few birds scattered over area May-July, but numbers roosting on Tarn rise Aug./Sept. to c. 150, decreasing again to 2 or 3 in early Dec.; occasional odd birds late Dec. to mid-Mar. A few bred on Tarn Moss in 1920 and 6-7 pairs in 1921, but keepers prevented the colony continuing (Booth, 1921, 1922, 1923). The Scandinavian form, *L. f. fuscus*, was recognized 28 Sept. 1955 in a mixed flock with the British form.

HERRING GULL, *Larus argentatus*. Probably regular visitor to Tarn for roosting Sept.-Nov. and Apr., in small numbers.

COMMON GULL, *Larus canus*. Common p.m. visiting Tarn for roosting. Small numbers begin to arrive early Mar. and several 100 by Mar./Apr. A few usually appear July, rapidly increase in Aug. and 300-600 roost Sept. to early Dec. most years. Only occasional birds late Dec.-Feb. A pair bred on edge of the Tarn June/July 1955, the first Yorkshire breeding record.

BLACK-HEADED GULL, *Larus ridibundus*. Common daily visitor to Tarn for roosting, mainly Mar.-Apr. and July-Dec., up to 800 in autumn. Small breeding colony Fountains Fell Tarn from 1953 onwards, reaching 20 pairs 1959. Since 1955 a few have also nested each year either by Tarn, on Tarn Moss or Great Close Mire.

BLACK TERN, *Chlidonias niger*. Irregular p.m., feeding over Tarn usually for a day. In May, 18 in 1948 (19th), 21 in 1954 (9th), 4 in 1959 (24th); single birds 18 Aug. 1949, 13 Oct. 1950, 1 Sept. 1956.

COMMON TERN, *Sterna hirundo* or

ARCTIC TERN, *Sterna macrura*. Irregular p.m. in small numbers. One record for Apr. (29th), 3 for May (16th, 19th, 31st), 3 for June (7th, 26th, 27th), 2 for July (6th, 12th), 1 for Sept. (17th).

LITTLE TERN, *Sterna albifrons*. One by Tarn 17 Sept. 1950 with a Common Tern, after a severe storm.

RAZORBILL, *Alca torda*. One picked up in March 1894 "on the high moorland near Malham Tarn" (Nelson, 1907).

STOCK-DOVE, *Columba oenas*. One pair usually breeds on a limestone cliff near the Tarn, where it is s.v., arriving second or third week in Mar. Breeds also Malham Cove and possibly other cliffs in the area.

WOOD-PIGEON, *Columba palumbus*. Normally s.v. and absent from Tarn woods Oct.-Jan., but c. 10 wintered 1956/57 after exceptional beech mast crop. Perhaps 4-8 pairs breed, date of return dependent on weather (19 Feb.-26 Mar.).

CUCKOO, *Cuculus canorus*. S.v. in variable and sometimes very small numbers, parasitizing Meadow Pipits. Arrive Apr./May.

BARN-OWL, *Tyto alba*. One flushed from cliff face behind Tarn House 6 Sept. 1948 and another from a barn 8 Feb. 1959.

LITTLE OWL, *Athene noctua*. At least 1 pair resident along top of Mid-Craven fault scarp at about 1,100 ft. Two caught in traps at Dalehead under Penyghent in 1951 and birds have been seen in last 3 years at Middle House (1,500 ft.) and Capon Hall.

TAWNY OWL, *Strix aluco*. One to 3 pairs resident in Tarn woods, numbers dependent on the state of the small mammal cycles.

SHORT-EARED OWL, *Asio flammeus*. Perhaps regular p.m. Mar.-Apr. and Sept.-Oct., but passing through quickly if no voles available. One or two pairs have bred on lower slopes of Fountains Fell when short-tailed voles are abundant, certainly in 1949 and 1958. Several wintered 1948.

SWIFT, *Apus apus*. P.m. and frequent visitor for feeding in summer, especially near Tarn. Breeds just outside the area in Malham and Arncliffe, and formerly on the cliff at Malham Cove.

KINGFISHER, *Alcedo atthis*. Regular autumn visitor to Tarn 1948-1954 and again in 1957, appearing 14 Aug.-20 Sept. and disappearing late Dec. Only single birds in most years, probably local dispersal from Malhamdale.

GREEN WOODPECKER, *Picus viridis*. Occasional autumn visitor to Tarn woods, appearing Aug. to mid-Sept.; in 1951 a bird stayed from 19 Aug. to 26 Oct. Also seen at this time in Dry Valley above Malham Cove.

GREATER SPOTTED WOODPECKER, *Dendrocopos major*. One Tarn woods 19 Oct. 1948, and another was watched arriving there from the south 11 July 1957, flying from telegraph pole to telegraph pole.

LESSER SPOTTED WOODPECKER, *Dendrocopos minor*. One Tarn woods 10 Aug. 1950.

SKYLARK, *Alauda arvensis*. Common S.v., returning to the Moor during last 10 days of Feb., often when snow is still on ground but during a thaw. Breeding numbers variable but never really abundant, leaving Sept.-Oct. Regular p.m. Feb.-Mar. and Oct.-Nov., both resting flocks and flying over.

SWALLOW, *Hirundo rustica*. S.v. in small though variable numbers, and p.m.

HOUSE MARTIN, *Delichon urbica*. S.v., up to 8 pairs nesting on two cottages in Waterhouses, and a few at Darnbrook Farm; these birds often arrive late (6 May in 1959). Some passage seen Apr.-May and Sept. (At Malham Cove, House Martins nest on the cliff face.)

SAND MARTIN, *Riparia riparia*. S.v., small colony of about 7 pairs nesting in vertical peat bank at west side of Tarn. A few on passage over Fountains Fell at 1,900 ft. seen in late Apr. 1949 and 1952.

RAVEN, *Corvus corax*. One pair frequently attempts to breed in the area or just outside it. Irregular w.v., 6 based on Penyghent winter 1950/51 and 4 based on cliff behind Tarn House 20 Sept.-18 Dec. 1959. "Nearly a dozen ravens" were noted on the keeper's gibbet at the Tarn on 27 May 1934 (Booth, 1935).

CARRION CROW, *Corvus corone*. Common resident and w.v., many assembling Tarn woods to roost in winter. 148 on keeper's gibbet in 1934 were the result of two years' work (Booth, 1935), and give some idea of numbers in the area and the difficulty of controlling this pest. Sucked eggs found in a crow's "larder" on Tarn Moss on 4 July 1955 included Curlew, Redshank, Lapwing, Sandpiper, Red Grouse, Dabchick, Mallard and Tufted Duck. An albino crow is occasionally seen.



HOODED CROW, *Corvus cornix*. Two near Capon Hall Farm, 8 to 30 Jan. 1951.

ROOK, *Corvus frugilegus*. Common and often daily visitor from surrounding dales, especially summer and autumn, feeding on grasslands up to 1,700 ft. A rookery of 10 nests was founded at Low Trenhouse Farm (1,250 ft.), just south of Tarn, in Apr. 1959.

JACKDAW, *Corvus monedula*. Frequent visitor from surrounding dales, often in fields where hens are fed, or with rooks. Breeds on cliffs at Malham Cove and Gordale, just south of the area.

MAGPIE, *Pica pica*. One or two pairs bred Tarn woods 1948-50 and certainly wintered once. Since then Magpies have been exterminated round the Tarn but appear sometimes in spring.

GREAT TIT, *Parus major*. One to 4 pairs resident Tarn Woods.

BLUE TIT, *Parus caeruleus*. Usually common resident Tarn woods, but numbers breeding have varied from c. 10 pairs to only 2 pairs. Sometimes seen far from woods in autumn, along stone walls or cliffs. Spasmodic p.m.; small parties moving north across open ground 3 Oct. 1957 and over 60 in Tarn woods 4 Nov. 1959.

COAL-TIT, *Parus ater*. One to 4 pairs breed in Tarn woods and some winter.

MARSH-TIT, *Parus palustris*. At least 2 pairs resident Tarn woods; some years more, as in 1948 when it was the commonest tit.

LONG-TAILED TIT, *Aegithalos caudatus*. Flock of 30 in Tarn woods 3-8 Feb. 1957.

NUTHATCH, *Sitta europaea*. One in Tarn woods 4 May 1957 which did not stay.

TREE-CREPER, *Certhia familiaris*. One to 3 pairs breed in Tarn woods most years, but occasionally absent. Some may winter.

WREN, *Troglodytes troglodytes*. Up to 7 pairs breed in Tarn woods, and birds often seen far from trees along walls, or in rocky gills where they probably breed. A few are resident in mild winters, though most depart in autumn and all disappear in long cold spells; return in early April. Twelve on walls at Middle House 1 Nov. 1959 were presumably p.m.

DIPPER, *Cinclus cinclus*. A maximum of 7 pairs resident on upper Gordale Beck, upper Cowside Beck and its tributary Darnbrook Beck, on which it may be seen up to 1,750 ft. Occasionally visits Tarn and its outflow stream in winter (Oct. (1), Dec. (2), Jan. (1), Mar. (2)).

MISTLE-THRUSH, *Turdus viscivorus*. Absent in 1948 after the severe winter of 1947. Single singing ♂ appeared Tarn woods in each Apr. 1950-1953 but soon left. A pair bred in 1954 and since then 2-3 pairs annually. Small loose flocks July-Sept. may be local fused family groups, though 13 on 18 Aug. 1949 must have been from elsewhere; flocks disperse by Sept./Oct. One pair sometimes winters, otherwise they return Feb.

FIELDFARE, *Turdus pilaris*. P.m. Oct.-Nov., and especially Mar.-Apr. when large flocks up to 200 may assemble and linger near Tarn woods, even into May (50 on 7th, 12 on 11 May 1951). One bird 5 June 1958. Small flocks spend part of winter in the area until driven away by hard weather.

SONG-THRUSH, *Turdus ericetorum*. S.v. to Tarn woods, first arrival of singing ♂ usually 16-22 Feb. (8 times), occasionally Jan./Feb. (3 times). Marked increase in last few years, especially in 1959 when 10 birds fed on lawn at Tarn House in Apr.-May. Most depart by early Oct., with odd birds staying into Nov. Slight passage noticed some years Oct.-Nov. and Mar., with Blackbirds.

REDWING, *Turdus musicus*. Considerable p.m., Oct.-early Nov. in Tarn woods, or travelling over Fountains Fell, staying a few days only if there is a good Rowan or Yew berry crop. Less regular Mar.-early Apr. and not lingering like Fieldfares.

RING-OUZEL, *Turdus torquatus*. S.v., perhaps up to 10 pairs, especially Darnbrook Beck; pair within earshot of Tarn House in 1959. First arrivals about 18-25 Mar., small flocks are seen by end of July and most depart in Sept. (latest date 6 Oct. 1951). Slight passage noted some years.

BLACKBIRD, *Turdus merula*. A small resident population in Tarn woods, of up to 10 birds, is augmented in late Mar. by s.v.'s. Also breeds by some of the scattered farms. Common p.m. in Mar. and Oct.-Nov., presumably continental birds, and typical passage dates are 1 Oct., 8 Nov., 13 Nov. 1957; 12 and 24 Mar. 1958.

WHEATEAR, *Oenanthe oenanthe*. Common s.v., first arrivals usually 14-25 Mar., main body 4-15 Apr., and all departed by mid-Sept. Probably considerable passage but difficult to detect. The Greenland Wheatear, *Oe. oe. leucorrhoea*, also passes through in small numbers; four on summit wall of Fountains Fell on 14 Sept. 1959 were of this subspecies, as are probably the occasional October birds.

STONECHAT, *Saxicola torquata*. Two pairs above Gordale 14 Aug. 1949 and a ♂ near Tarn on 27 Oct. Another ♂ was reported from the Tarn area 15 May 1942 (Chislett, 1943).

WHINCHAT, *Saxicola rubetra*. Uncommon p.m. late Apr. to mid-May and Aug.-Sept.

REDSTART, *Phoenicurus phoenicurus*. S.v. to Tarn woods, where up to 10 pairs breed. A typical year was 1950 when one ♂ arrived 16 Apr. but no more until late Apr., and the majority 2-8 May; all birds and young had departed by 30 Aug. A ♀ on 13 Sept. 1952 was exceptionally late.

ROBIN, *Erithacus rubecula*. A small and variable number winter in Tarn woods (2-8 birds), presumably residents; reduced in prolonged cold spells. Usually an influx of s.v.'s in spring, which was not until late Apr. in 1956 after residents had been reduced to only one or two pairs. Departure of s.v.'s probably in Sept., suggested by a bird in open country between the Tarn and Malham village on 7 Sept. 1949.

GRASSHOPPER-WARBLE, *Locustella naevia*. May have bred in Tarn Fen in 1948, when a ♂ sang through June and July. One heard 3 May 1953 was probably p.m.

SEDGE-WARBLE, *Acrocephalus schoenobaenus*. Uncommon p.m. in May (3rd-23rd), sometimes lingering a few days, perhaps birds which fail to find mates and then move on. Probably bred on Tarn Fen in 1951.

BLACKCAP, *Sylvia atricapilla*. One or two ♂ appear Tarn woods very late in most years, 25 May-17 June, and stay for any period from a few days up to 4 weeks, singing loudly and changing territory; probably late arrivals in the country or birds wandering in search of mates. In 1959 a ♂ appeared significantly earlier on 15 May, obtained a mate and successfully bred.

GARDEN-WARBLE, *Sylvia borin*. Late ♂ appear Tarn woods at similar times to Blackcaps, though less often, and behave in similar fashion. Breeding not proved.

WHITETHROAT, *Sylvia communis*. Uncommon p.m. Tarn woods in early May (4th-12th), and a few late singing ♂ have appeared in some years (29 May-17 June) and stayed several weeks. Bred near Tarn House in 1957, possibly in 1959.

WILLOW-WARBLE, *Phylloscopus trochilus*. Common s.v. to Tarn woods, first arrivals 13-23 Apr. Also p.m. in late April.

CHIFFCHAFF, *Phylloscopus collybita*. Scarce p.m., noted 7 and 18 Apr., 29 May, 10 July and early Sept.

WOOD-WARBLE, *Phylloscopus sibilatrix*. Scarce p.m. Apr./May, singing ♂ which pass quickly on. From about 12 May to early June, one or two ♂ usually turn up Tarn woods, sing and occupy territories for periods ranging from a few days to 6 weeks; longest 22 May-2 July 1948 and 16 May-27 June 1959. No ♀ seen yet.

**GOLDCREST**, *Regulus regulus*. Since 1948 a few have been resident Tarn woods and the population is sometimes increased by s.v.'s in spring. Numbers breeding have been exceptional during last 2 years, due to influx about 14 Apr. 1958 and 27 Apr. 1959.

**SPOTTED FLYCATCHER**, *Muscicapa striata*. Regular s.v. Tarn woods, 2-5 pairs. Wide variation in dates of first arrivals; 30 May in 1949, 8 May in 1950. Uncommon p.m., including 2 on 14 Sept. 1950.

**PIED FLYCATCHER**, *Muscicapa hypoleuca*. Scarce but perhaps regular p.m. in spring, Tarn woods: 23, 24 Apr. (3), early May (1), late May (4), late June (2).

**HEDGE-SPARROW**, *Prunella modularis*. Resident in small numbers: Tarn woods 2-4 pairs, one pair usually far up Darnbrook Beck based on some old walls, and sometimes by farms. An exhausted bird fluttering at lights of Tarn House on night of 4 Apr. 1950 was presumably p.m.

**MEADOW-PIPIT**, *Anthus pratensis*. Abundant s.v., the commonest bird in summer. Begin to return about a month after skylarks, soon after middle of March (12th in 1950, 28th in 1958), main passage often Mar./Apr. and extending into May (100 on 2 May 1948). Considerable autumn passage Sept.-Oct., a little in Nov.; one on 4 Jan. 1959 and 25 on 9 Dec. were exceptional.

**TREE-PIPIT**, *Anthus trivialis*. Irregular s.v. until 1953, when felling and thinning in Tarn woods probably improved the habitat for Tree-Pipits. At end of May singing ♂ numbered 2 in 1957, 4 in 1958, 8 in 1959; breeding was proved in each year but majority arrived after mid-May and remained unmated.

**PIED WAGTAIL**, *Motacilla alba*. Frequent s.v., first arrivals usually 8-15 Mar., leaving Sept. Occasional birds winter in Malhamdale, 400-500 ft. lower. P.m. Mar.-Apr., and commonly in Sept., assembling near Tarn, a few only in Oct.

**GREY WAGTAIL**, *Motacilla cinerea*. S.v. in very small numbers, 1-2 pairs usually breeding Darnbrook or upper Cowside Becks. More frequent on larger streams just outside the area.

**YELLOW WAGTAIL**, *Motacilla flava*. Frequent, sometimes common, s.v., breeding Tarn Moss, the mires and by farm meadows and pastures up to 1,500 ft. First arrivals 14-22 Apr., usually all gone by end of Aug.

**WAXWING**, *Bombycilla garrulus*. Three by Tarn House 13 Dec. 1958.

**STARLING**, *Sturnus vulgaris*. Resident, though probably exterminated in winter of early 1947. Two pairs bred at Waterhouses in 1948 and 7 birds wintered 1950; since then a gradual increase, becoming quite common by 1959. Large flocks of juveniles visit the area during haytime in July (5,000 on 9 July 1948), smaller flocks from Aug.-Oct. and again Mar.-Apr.

**HAWFINCH**, *Coccothraustes coccothraustes*. Four in Tarn woods 4-9 Aug. 1959.

**GREENFINCH**, *Chloris chloris*. S.v., 1-4 pairs mainly based on yew trees round Tarn House. Date of arrival has varied 24 Feb.-late Apr., but usually Mar.; departure Aug.-Sept. Perhaps regular p.m. in spring but only seen under foggy conditions; one at house lights and one at car lights on night of 23/24 Mar. 1950, 16 on lawn 26 Mar. 1957. Some passage in autumn, small flocks often staying several days Oct.-Nov. Party of 20 round Tarn House 13 Dec.-10 Feb. 1958/59 were w.v.'s, possibly of continental origin.

**GOLDFINCH**, *Carduelis carduelis*. Irregular w.v. for short periods of a few days, a party of 5 or 6 appearing perhaps once in most winters near Tarn, Oct.-Jan. Occasional p.m. Mar./Apr.

**REDPOLL**, *Carduelis flammea*. Spasmodic s.v. to Tarn woods and fen carr; 2-3 pairs in some years, none in others, and many in 1957-59 (up to 12 pairs). First arrival 25 Apr.

in 1958 after severe March, 5 Apr. in 1959 after a mild month. Departure mainly Sept., but confused by visiting flocks (latest 19 Oct. 1958).

**BULLFINCH**, *Pyrrhula pyrrhula*. Regular w.v. to Tarn woods in very small numbers, often only one pair, which have appeared 30 July-29 Dec. One arriving 16 Nov. 1958 stayed two months. Birds seen 4 June 1910 (Booth, 1910) and 25 May 1958 suggest occasional breeding.

**CROSSBILL**, *Loxia curvirostra*. Up to 10 in Tarn woods, 1-18 Aug. and 4-5 Sept. 1953.

**CHAFFINCH**, *Fringilla coelebs*. Abundant s.v. to Tarn woods, with marked excess of ♂. First singing ♂ appear second half Feb. (extremes 26 Jan.-1 Mar.), with further arrivals in Mar., but few ♀ until early Apr. Over 100 birds have been estimated mid-Apr., reduced to perhaps 40 by mid-May, departing Sept.-Oct. P.m. spring and autumn; also irregular w.v., a few birds staying through the colder months of Dec.-Feb. occasionally. An adult ♂ ringed at Tarn House 25 Apr. 1954 returned there in Apr. 1956 and 1957. Another ♂ ringed 11 Apr. 1954 was recovered at Settle (5 miles W.S.W.) on 21 Oct.

**BRAMBLING**, *Fringilla montifringilla*. Scarce w.v., staying only a few days; usually mid-Oct. to Nov., occasionally Dec.-Jan.

**YELLOW HAMMER**, *Emberiza citrinella*. Two flying over Great Close Mire on 21 Mar. 1954 were probably on passage. (Also noted twice in Dec. near Malham village.)

**REED-BUNTING**, *Emberiza schoeniclus*. One pair breeds Tarn Fen in most years, s.v.

**SNOW-BUNTING**, *Plectrophenax nivalis*. One by Capon Hall 21 Dec. 1957, two in same place 9 Jan. 1960, and 20 near Tarn on 26 Feb. 1960.

**HOUSE-SPARROW**, *Passer domesticus*. Exterminated on Malham Moor during winter of early 1947. One pair bred in Waterhouses 1948, 4 pairs 1949, now a common resident by all farms. Some leave in autumn.

## SUMMARY

One hundred and forty-one species have occurred in the township of Malham Moor and those parts of the township of Malham north of the Mid-Craven fault scarp, which forms a natural southern boundary; thirty-six of these have been recorded less than seven times. It is an upland area which can be very barren of bird life in the middle of a hard winter, when only thirty-four species might be present. It comes to life in February and March with the return of birds which have wintered in other parts of Britain. When the overseas migrants appear in March, April and May there is a very varied breeding population of aquatic, marsh, stream, woodland, grassland and moorland birds; seventy-five species have bred. Passage is noticeable in some species, particularly in some members of the Thrush family travelling across the Pennines. Large roosting flocks of curlew and gulls become a feature of the Tarn in late summer and autumn. Winter visitors do not usually stay long.

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