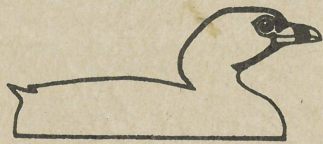


BRISTOL ORNITHOLOGY



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BRISTOL ORNITHOLOGY

THE JOURNAL OF THE BRISTOL ORNITHOLOGICAL CLUB

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Line drawings *D.E. Ladhams* and *Robin J. Prytherch*

PREFACE

In this, our second edition of *Bristol Ornithology*, we once again strive to give an account of the official meetings of the Club and, by summarising the records sent in by members for our monthly news sheet, *Bird News*, to provide an interesting permanent record of local ornithological activities during the year. All the papers in this edition are the work of members of the Club and, even if some of them do not specifically refer to the Bristol district, they are the product of the observations and research of ornithologists whose roosts are in our city and who are closely associated with all our activities.

Members will notice some change in this journal's appearance from its predecessor, *Bristol Ornithology 1*. These alterations are occasioned by our desire to try to find the most practical, convenient and attractive method of presentation, at the same time preserving the essential form of our original edition.

At the end of 1968 Ray Poulding, our first Chairman, who with great energy and enthusiasm steered the Club through its first two years of life, resigned his office, but, to our very good fortune, agreed to carry on as Editor of this journal.

CHAIRMAN	A.D. Lucas
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EDITORS	R.J. Prytherch
<i>Bird News</i> _	S.J. Moon
<i>Bristol Ornithology</i>	R.H. Poulding (assisted by a committee)



A REVIEW OF 1968

by K.D. Smith

An annual review of this nature is bound to be largely repetitive, and as this is only the second annual report of the Bristol Ornithological Club it is therefore convenient to compare this year's observations with those of 1967 (see 'Bristol Ornithology' 1) where matters of interest arise. It must be repeated that the committee has no panel to sit in judgement on the records of uncommon birds, nor has it any desire to usurp the functions of the national and county authorities, therefore last year's caveat again applies.

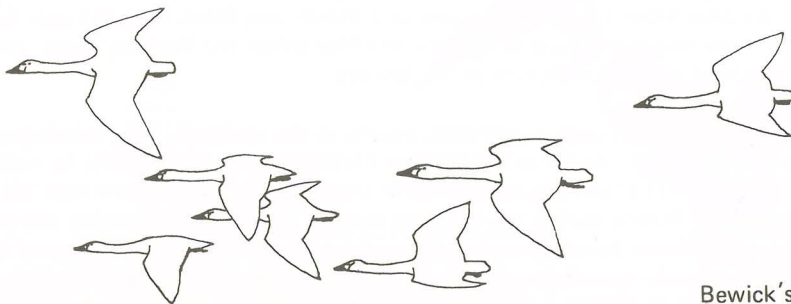
221 species were recorded in 1968, one less than in 1967 (with 205 of them occurring in both years), in the monthly bulletins of the Bristol Ornithological Club, within a radius of about thirty miles of Bristol (in Somerset and Gloucester). In this report I have used minimum estimates (indicated), instead of maximum as in 1967, when computing totals for the season of some migrant species, because underestimates are safer than overestimates within the limitations imposed by the difficulty of distinguishing between off-passage birds and new arrivals. Obvious escapes have been omitted, others when uncertainty must exist as to whether they were wild birds, escapes or of feral origin, are marked with an asterisk.

Reservoirs, often referred to collectively, means those at Barrow Gurney, Blagdon, Cheddar, Chew Valley and Durlleigh; W.T. signifies the Wildfowl Trust at Slimbridge and the New Grounds refer to the adjacent river bank and estuary.

January to March

Memories are short, and some may have forgotten that the foot-and-mouth epidemic was still rampant in January 1968, though well away from the Bristol area, and access to the country was restricted. The local weather between January and the end of March was comparatively dry with a few very brief cold spells, but snowfall was negligible.

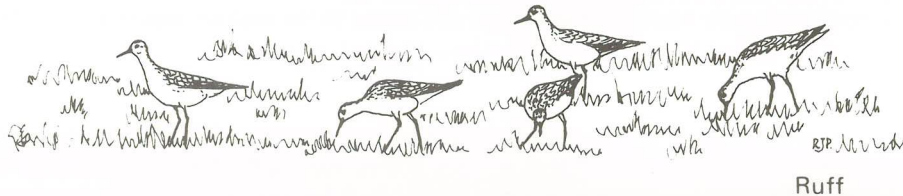
One Red-throated Diver was recorded at Durlleigh, and up to two Slavonian Grebes at Chew Valley, whilst the maximum count of 230 Great Crested Grebes at Chew Valley was higher than in the same period in 1967 (182). A Gannet, presumably stormblown, appeared at Chew Valley on 9 January, and a Bittern was present there for several weeks. The number of wintering White-fronted Geese at the New Grounds was high with a maximum of 6500 in mid-February, compared with a maximum of 4000 in 1967, and the main departure was in the first week of March; smaller gaggles were also dispersed along the Somerset coast and inland lowlands in January and February. Other geese, mostly recorded at the New Grounds, included a Barnacle, a few Brent, one Lesser White-front, up to seven Pinkfeet, and one Bean Goose. Three reports of Whooper Swans were received for mid-January (7 birds, max. 4 together, River Yeo, Chew Valley, W.T.), whilst of the total of 320 Bewick's Swans for the winter of 1967/68 at the W.T. enclosures (335 in 1966/67) the low percentage of juveniles indicated a poor breeding year in Siberia, in contrast to that of 1966. Herds were also present in the usual lowland localities in north Somerset.



Bewick's Swans
RJP

It is difficult to compress the details of duck-counts, but the numbers of the commoner species (Mallard, Teal, Wigeon, Shoveler, Pochard and Tufted Duck) which wintered on local waters did not show any great difference from those of last winter, therefore they do not call for special comment. Tufted Duck were reported once in coastal waters with five in Sand Bay on 21 January. Pintail reached a maximum of 45 in late January at Chew Valley, 4-5 Red-crested Pochards visited Cheddar Reservoir between 21 February and 11 March, Scaup were not rare in several localities between January and April (at least ten in most months), and a few remained to the second week of May. Up to nine Scoter were recorded at Sand Point in January, and several inland waters had single Long-tailed Ducks until May, presumably the remnants of the influx of autumn 1967. The quantities of Goldeneye in the south Midlands have attracted comment (1968, 'British Birds' 61:133), and local numbers were high with a minimum estimate of some 110 (excepting possible interchange between the reservoirs) on inland waters in March. The usual small numbers of Goosanders and Mergansers were noted on the reservoirs, but only two Smew.

Records indicate that a few Peregrines and Merlins occurred along the coast between Frampton and Steart up until May, but some of the later birds may have been passage-migrants. Of the commoner wintering wader species dispersed along the coast most showed only minor variation in numbers from last year (up or down a little, but January counts may have been inadequate due to the cattle disease), but high counts of Dunlin indicated up to 20,000 or more in January and February. Both Knot (max. 200 in Sand Bay in January), and Black-tailed Godwits (none in January and February, only eight in March) were apparently well below normal numbers, whilst scarcer species recorded along the coast between January and March included two Purple Sandpipers at Brea, three Little Stints in Sand Bay, and an Avocet at Steart (up to two subsequently recorded in every month of the year). Other species which wintered both along the coast and inland included Golden Plover and Lapwing in quantity, with a strong broad-front southerly cold-weather movement of the latter (and also of Woodpigeons, Stock Doves and Skylarks) in the second week of January, a minimum of 66 Ruffs in six localities in January, and ten or less of Spotted Redshanks, Greenshanks, Green Sandpipers, Common Sandpipers, Woodcock and Jack Snipe.



Ruff

Few wintering Lesser Black-backed Gulls were reported (41 on 11 February 1967); one Little Gull was seen at the New Grounds on 9 January, and another (perhaps an early passage-migrant) at Frampton on 28 March. An attempt at a partial census of Long-eared Owls in part of our area in February resulted in the discovery of one in a north Somerset forestry plantation; Short-eared Owls were scarce with only one at Berrow in January (up to seven at Steart in early 1967). Other records included up to six Water Pipits *Anthus s.spinoletta* at Chew Valley and Cheddar (last seen on 10 April), two Waxwings at Clewer on 6 March, four wintering Blackcaps at Clevedon, only one *Phylloscopus* sp., presumably a Chiffchaff, at Weston-S-Mare on 6 January, four Firecrests in various places, a Great Grey Shrike on Westhay Moor from 24 February to 2 March, one Black Redstart near Glastonbury in January, Willow Tits at Christon (two ringed in January), Ashton Hill Plantation and Westhay Moor, and a notable total of 150 Blue Tits (65 in one tree) on Clifton Downs on 22 January.

Fieldfares were abundant over a wide area, mainly in the lowlands, and Redwings were far more numerous than during the previous winter. As far as I remember Fieldfares were nothing like so numerous in the West Country thirty years ago, and it is to be wondered whether there is a connection here with the recent spread of this species into Switzerland from Austria during the breeding season. One Lapland Bunting was seen on the Yeo Estuary on 14 January, and wintering Snow Buntings were quite common (max. 12) in several coastal localities up to mid-March. Bramblings were variously reported in flocks up to 200, with some visiting bird-tables, but the numbers do not seem to have reached those of 1967 (up to 2000 at Steart in January). Small numbers of Siskins (max. 19 at

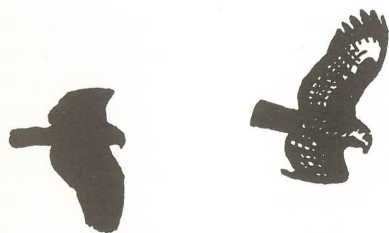
A Review of 1968

Failand), and Redpolls (max. 20 at Westhay Moor and Mere) were noted, but both were scarcer than in 1967, and Twites went unrecorded. Up to four Hawfinches were seen in one well known locality, Clifton Downs, in March, with a few others at Goblin Combe and Combe Down, Bath.

Spring migration

April and May had variable weather, with southwesterlies predominating, but also short periods of easterlies, which produced good visual movements of diurnal-migrants, for example of Swallows and Tree Pipits northeast along the Somerset coast on 15 April. Last spring some of our summer breeding visitors seemed to be a week or so late in arriving in any quantity, perhaps due to meeting adverse weather in northern Africa after their Saharan crossing, but in 1968 arrivals over the country as a whole seem to have been early (1968 'British Birds' 61:278). However our local main influxes occurred much when expected, but individuals or small parties of some species did arrive early—House Martin on 20 March, Whinchat on 26 March, four Whimbrel, a Wood Warbler and a Whitethroat on 31 March, Redstart on 2 April, Garden Warbler on 10 April, two Turtle Doves on 12 April, Hobby on 13 April, and a Swift on 16 April, with a small influx in the third week of April.

There were more migrant Black-necked Grebes on the reservoirs that last spring (three against one). Four Greylag Geese at Frampton and one at Cheddar in late April and May were presumably of feral origin. Rails included a Corncrake at Brean on 20 April, and a Spotted Crake at Chew Valley on 15 April. Records of waders included 380 Ringed Plover in Sand Bay in late May, 2-3 Little Ringed Plover at Cheddar in mid-April, up to 500 Golden Plover, mostly *C.a.altifrons*, on Tealham Moor in late March and early April, 500 Turnstone at Chittening

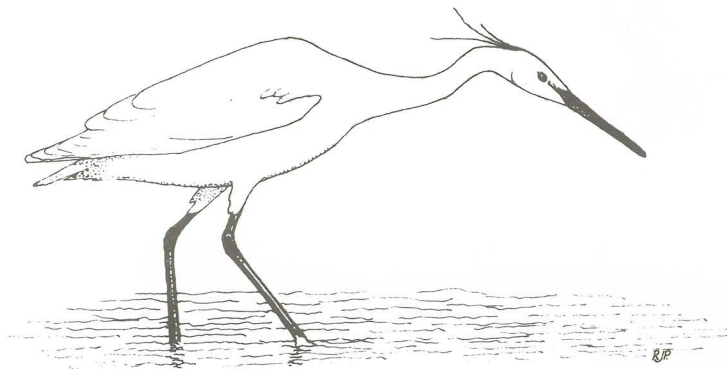


Buzzards' nuptial display

on 9 May, eight purple Sandpipers (max. 4 at Severn Beach) along the coast in April, and a Curlew Sandpiper at the New Grounds on 12 May. There was again a notable spring passage of Whimbrel both on the coast and inland, with some 600 being reported in late April and early May. Surprising numbers of Kittiwakes were recorded at Frampton after southwesterly gales, 120 on 17 March and 110 in the first week of April, in addition 40 were seen flying north-east past Sand Point on 19 May. It would be interesting to know where these gulls breed and their route after leaving the Severn? Spring tern passage was a little more noticeable than in 1967, and included 22 Black Terns between 16 April and 9 May (max. 16 at Chew Valley on 8 May), 60-70 Common/Arctic Terns (max. 23 at Steart on 27 April) from 16 April onward, with a few throughout June, and five Sandwich Terns flying northeast past Sand Point on 19 May.

Three or four Blue-headed Wagtails *Motacilla f. flava* were seen at Chew Valley on 4/5 April, and there was a notable fall of 100 Grasshopper Warblers at Brean on 19/20 April. It is well known that this species is recorded much more commonly in spring than in autumn at observatories, especially on the east coast and at Skokholm (Lack & Lack, 1966, 'British Birds' 59: 128-141). A Chiffchaff, thought to be of a "northern" form from its song, was seen near Yatton on 27 April. Pied Flycatchers were much in evidence from 15 April onward, with records of about 23 including seven in Ashton Park in early May, and even a pair investigating a nestbox at Chew Stoke on 28 May. A Black Redstart was seen at Shipham in April, and there was a trickle of Ring Ousels in the third week of April.

April 1968 was exceptional for vagrants from further south in Europe passing through the British Isles (1968, 'British Birds' 61:327), and some found their way as far west as the Bristol Channel, including a Purple Heron at Frampton on 28 April, Little Egret at Steart on 12 May, Osprey at Chew Valley on 21 April, Marsh Harrier at Steart on 28 April, and a Serin at Frampton/New Grounds on 6/7 April.



Little Egret

Resident species (selected)

No reports have been received of any special difficulties that birds may have encountered during the breeding season, such as the floods in May 1967, and as the previous winter was mild there seems no reason to believe it was not an average year. The torrential rains in early July probably came too late to have much damaging effect, except perhaps on aquatic species with late clutches.

Late breeding of Little Grebes and Great Crested Grebes was noted on the reservoirs, with young still being fed late in October, and with the latter even into early 1969 (K.E.L. Simmons). A pair of Shelduck bred at Chew Valley (eleven young), and Durleigh (nine young), whilst the numbers of ducklings in individual broods along the Somerset coast was high, but this census is carried out annually by the Bristol Naturalists' Society. Gadwall (at least six broods recorded, maximum count of 130 in late July, but down to 14 by late October), Shoveler, Pochard, and Tufted Cuck (21 broods in July) all bred successfully at Chew Valley, Garganey were present in May and June but there was no evidence of breeding. Records of Hobbies during the summer, and of Sparrowhawks throughout the year do not show any evidence of a decline since last year. Spotted Crakes were reported at Chew Valley (one on 17 July, two on 17 August), and at Catcott (one dead on 15 August), which may or may not have bred locally. Quail

were recorded from three localities in July, and one in August, but breeding was not proved. Ringed Plover bred again at Steart. Reports of Barn Owls from some 25 localities for the year (max. 10 in March), as opposed to only 13 in 1967, seem encouraging. Kingfishers and Lesser Spotted Woodpeckers (19 localities for the year, four more than in 1967) are maintaining their numbers, but Nightjars seem to be known in only four localities.

Mid-summer observations

Great Crested Grebe numbers at Chew Valley remained high, with a maximum summer count of 243 in late July. The remarkable saga of the Pied-billed Grebe continues, for it was seen and heard calling regularly at Blagdon Lake between 14 May and 5 June, before it vanished again after having escaped notice for some eight months. Still nothing is known of its whereabouts during its long periods of absenteeism, but it is reasonable to suppose that it may be largely a nocturnal feeder and spends the day asleep in the vegetation. If it does not then its elusiveness beggars belief, especially on waters which are so regularly scanned all the year.

Last year it was recorded that some waders, especially the Grey Plover, Turnstone, Dunlin, Knot, Black-tailed and Bar-tailed Godwits, summered in some numbers along the Somerset coast, but in 1968 there were many fewer. Others included a Little Ringed Plover in Sand Bay on 18 July, whilst a small scatter of Ruffs, Spotted Redshanks, Greenshanks and Green Sandpipers in June and early July may have involved oversummering birds as opposed to passage-migrants. The only passerine of note was a Crossbill at Brent Knoll on 30 July (one had also been reported in Leigh Woods on 12 May).

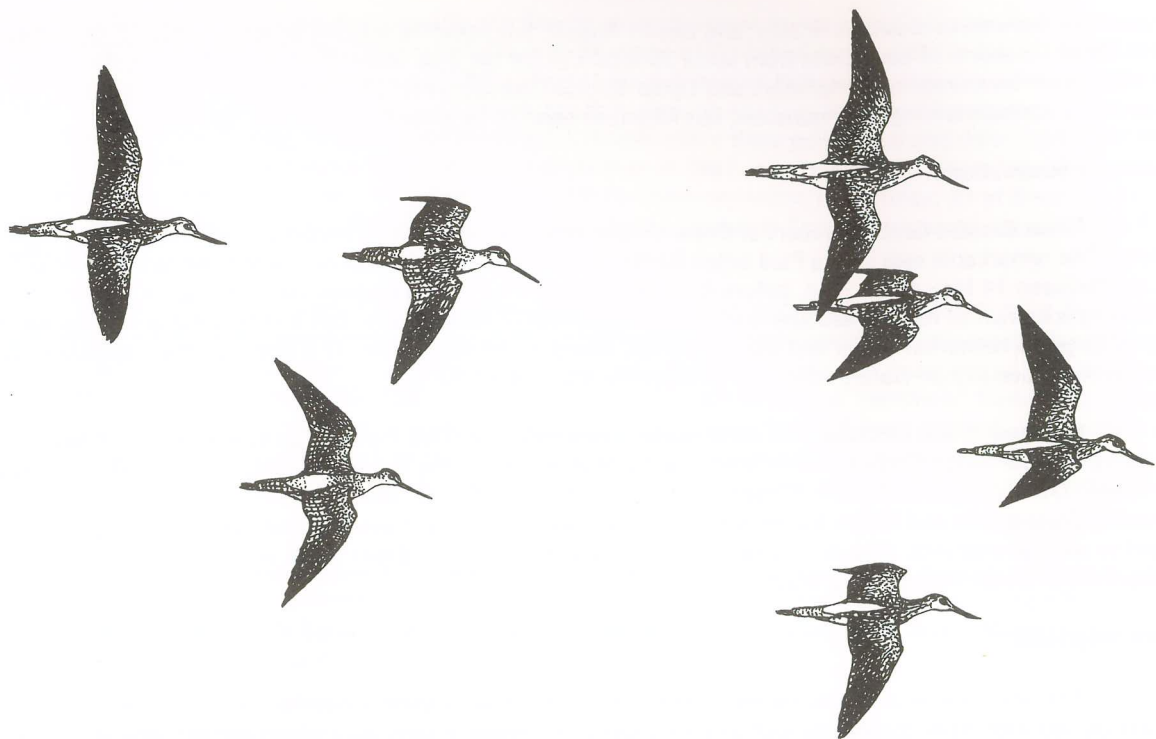
Autumn migration

The late summer and autumn were unduly wet, with much westerly weather, but some spells of easterlies, and interspersed with freak conditions such as strong southerly winds in early July which carried Saharan dust across Europe and deposited it in the form of coloured rain over parts of the British Isles. The water-level on the reservoirs was sinking in the first week of July, and the banks were becoming exposed with good prospects for the wader-season, when an almost stationary depression over southern England caused the heavens to open on the night of 10/11 July, and over five inches of rain fell in the Bristol area in 24 hours. As a result it was not until late in October that any appreciable feeding-grounds for waders again became available at Chew Valley, too late for most passage-migrants. The only consolation for reservoir-watchers, if not car-washers or gardeners, was a convenient leak in the dam-wall at Durleigh, and the enforced lowering of the water-level for repairs afforded waders an expansive mudbank.

Up to four Black-necked Grebes were reported from the reservoirs from early August to early October. A Fulmar was noted at Brean on 14 September, and southwesterly gales in the last few days of September produced eleven Gannets, seven Manx Shearwaters, eleven Storm Petrels and seven Leach's Petrels, mostly between Brean and Steart. A minimum of ten Garganey was recorded on the reservoirs up to 22 September. Uncommon raptors included a Goshawk at Sand Point on 3 September, and a Marsh Harrier recorded during a migration-watch at Worlebury on 6 October, whilst one or more Peregrines were reported along the coast from early August onward, as well as a few Merlins (and near Bath).

Garganey duck





RJP

Greenshank and Spotted Redshank

Ringed Plover peaked at about 900 in the second and fourth weeks of August (max. 2000 in the third week of August 1967), and up to 300 Turnstones were reported from Chittening from late August onward. It was a poor autumn in general for Little Stints, but a late party of 43 at the New Grounds in the first week of November, and stragglers in Sand Bay up to 24 November boosted the season's total to about 60, compared with some 300 in 1967. Only ten Curlew Sandpipers were recorded against some 50 in 1967. Black-tailed Godwits built up from 21 in mid-June to 1020 in late August in Bridgwater Bay, and declined to 200 by early October (a very similar increase and decrease in 1967). The maximum count of Bar-tailed Godwits at Steart was 120 on 11 September. Common Sandpipers were seasonally numerous with some 76 in four localities between 10 and 14 August.

A minimum estimate of the number of Ruffs between mid-July and the end of October was 81 (no apparent peak, largest numbers at the New Grounds, about 130 in the same period in 1967), of Spotted Redshanks a minimum of 120 (about half of them in September, largest numbers at the New Grounds, less than 150 in the same period in 1967), of Greenshank a minimum of 90 (about 250 in 1967), and of Green Sandpipers a minimum of 54 between 9 July and 20 October (peak passage of about 100 from mid-July to the end of the first week of August 1967). Only some five Wood Sandpipers were noted between 11 August and 7 September (less than 50 in the first two weeks of August 1967). Thus, allowing for overestimates in 1967, and underestimates in 1968, the figures suggest that the numbers of Ruffs and Spotted Redshanks were not dissimilar in the two years, that Greenshanks were much fewer in 1968, and that both Green and Wood Sandpipers were scarcer in 1968 with a somewhat later passage. But the high level of the reservoirs may well have been responsible for the lack of records, as it seems that all these species were plentiful elsewhere (1968, 'British Birds' 61:475).

Uncommon and vagrant waders included Pectoral Sandpipers at Durleigh on 15 and 26 October, Spotted Sandpiper in summer plumage at Durleigh from 27 August to 4 September, Red-necked Phalaropes at Durleigh and Steart in the last week of September, at least 13 Grey Phalaropes both inland and on the coast between 22 September and 13 October, and a Stone Curlew near Weston-super-Mare on 11 September. Very early Jack Snipe were reported at Chew Valley on 25 August and 3 September.

The now expected annual autumn influx of small gulls produced a minimum of 18 Little Gulls between mid-July and late September (max. nine at Chew Valley on 2 September), a Bonaparte's Gull at Cheddar on 28 August, and the usual few inland and coastal Kittiwakes. Passage of terns was on a lesser scale than in 1967, but still appreciable, with a minimum estimate from 23 July to 31 October of 100-150 Black Terns (about 300 in 1967), and 100-150 Common/Arctic Terns up to 19 October, with one straggler on 3 November (many more in 1967, with 284 on the reservoirs on 5/6 September after gales, but season's total not estimated). Rarities included a White-winged Black Tern at Cheddar from 27 August to 9 September, and Roseate Terns at Frampton on 28 September, and at Cheddar on 5 October, but the number of Sandwich and Little Terns barely reached double figures. A few skuas found their way up-channel, an Arctic at Avonmouth on 13 August, and more notably, nine Great Skuas along the coast (one dead at Barrow Gurney), mostly in the latter half of September.

As in 1967 I cannot attempt to analyse the many reports of the commoner autumn passerine passage-migrants in a couple of paragraphs, even if systematic data were available, but it is worth mentioning that observers on Steep Holm recorded a Water Rail, 4-5 Goldcrests, Redstart, Reed Bunting, and two Redpolls, in addition to a roost of 6000 Starlings (see Bristol Ornithology I: Review of 1967), between 25 and 29 September.

A Swallow roost in reed-beds at Chew Valley in early September was estimated at 10,000 birds. The first Water Pipits (3) were recorded at Cheddar on 31 October (28 October in 1967), and other records included four Bearded Tits at Combwich on 15 October, a few Black Redstarts in late October, and Ring Ousels, the most being four at Brean on 6 October. Uncommon passage-migrants and vagrants of southern or eastern origin were none too plentiful, in spite of the large numbers reported between August and November in many parts of the country, however those not already mentioned included a Little Egret on the River Axe on 28 August, Wryneck at Crook's Peak on 22 September, two Richard's Pipits at the mouth of the River Yeo on 20 October, with one remaining until at least 24 November (wrongly recorded as 23 November in the monthly bulletin), and another, perhaps a different bird, near Clevedon on 4 November, a Tawny Pipit at Frampton on 11/12 November, a *Hippolais* sp. at Chew Valley on 15 August, Bluethroat at Chew Valley on 22 September, and last, but not least, a Nutcracker (shot in mistake for a starling) at Athelney on 8 October.

The usual autumn movement of Turdidae, finches and buntings down the Somerset coast was recorded during October, with heavy movements of Redwings, Fieldfares (both first recorded on 6 October) and Chaffinches, and lesser numbers of Starlings, Bramblings (one early record for 2 September), Siskins, Redpolls and other species being observed during a migration-watch on 19 October. A Lapland Bunting was noted at Frampton on 22/23 September, a few Snow Buntings in the last week of October, and 50 Siskins inland at Hunstrete by 26 October.

November and December

The weather was mainly quiet and uneventful except for a cold snap in the last week of the year, with snow in the north and east of the country, but only hard frosts locally.

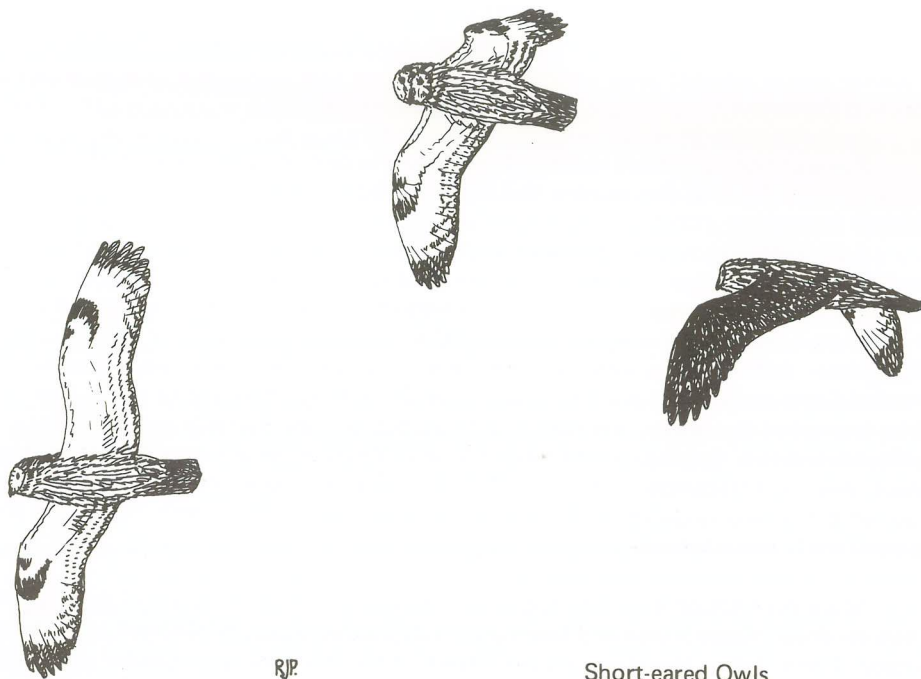
A Great Northern Diver appeared at Cheddar on 6 November, being joined by a second one on 23 December, and a Black-throated Diver was seen at Barrow Gurney on 14 December. Great Crested Grebe numbers at Chew Valley had been high throughout the year, but a remarkable surge late in the year brought the total to 510 in the last week of November, with a decline again to some 300 in late December, and one was reported on the coast at Steart in late December. A Bittern was noted at Chew Valley from early November up to the end of the year. The first White-fronted Geese appeared at the New Grounds on 27 October (three weeks earlier than in 1967), with a build-up to 3700 by the end of December; the same month produced single Barnacle and Bean Geese at the New Grounds, a Brent at Steart, and five *Greylags on the Kenn Estuary. Whooper Swans were seen at Durlough (two on 3 November), Stoke Moor (one on 1 December), and at the W.T. (up to three in late December), whilst the first Bewick's Swans were reported at the New Grounds on 20 October (9 November in 1967), with 287 by the end of the year, but with few immature birds amongst them.

Space does not permit of an account of the normal winter build-up of duck, but counts included 1400 Teal at two localities (Chew Valley and Durlough) on 22-23 December, 80 Gadwall at the New Grounds on 21 December, 6000 Wigeon (Chew Valley, New Grounds and Steart) in the last week of December, and 300 Pintail and 1200 Shov-

eler at the New Grounds in the last week of December. Less common species reported inland during the early winter included a pair of *Red-crested Pochards at Frampton, a few Scaup, a Long-tailed Duck at Durlough, a male *Ferruginous Duck at Orchardleigh and Chew Valley in late December, Goldeneye (first on 13 October, 72 on various reservoirs in the last week of December), only one Smew on 26 October, Mergansers (a few, first on 6 November), and Goosanders (first on 16 November, 25 at Chew Valley on 29 December). A few Scoters and Eiders were seen along the coast in November and December, and more unusually, a Velvet Scoter at Burnham on 22 December.

The origin of *Goshawks at Butcombe on 4 November, and at Chew Valley on 23 December seems debateable; a ringtail harrier, presumably a Hen Harrier, was seen at Steart on 17 November, and Peregrines and Merlins were noted in several inland and coastal localities late in the year. The commoner waders do not call for much comment, but counts included 15-20,000 Dunlin along the coast in November and December, probably some 1000 Knot in November, 75 Black-tailed Godwits at Steart in mid-December, and Snipe totalled 346 in two localities (Chew Valley and the Axe Estuary) on 1 December. Less common species presumably wintering included a Little Stint in Sand Bay on 10 December, quite a number of Ruff (16 in four localities in December), and only singles of Spotted Redshank, Greenshank and Green Sandpiper in December, but at least five Common Sandpipers. Unusual seabirds included a Mediterranean Gull in Woodspring Bay on 17 November, and a Great Skua at Chittening on 4 December. Short-eared Owls were more in evidence than earlier in the year, with single birds in four localities in November, and two at Steart in December.

The usual few late migrants were reported in November—a Whimbrel in Sand Bay on 10th, Sand Martin to 7th, Swallows to 11th, and Wheatears to 3rd; other passerines included at least nine Water Pipits on the reservoirs in December, a somewhat out-of-season Yellow Wagtail at Chew Valley in the last ten days of December, a few wintering Blackcaps and Chiffchaffs, scattered Black Redstarts, and two Bearded Reedlings at Frampton on 31 December. Fieldfares were abundant over a wide area in November, but the numbers fell off in December, so many were presumably passage-migrants. Redwings were also plentiful, but fewer. The coastal passage of Snow Buntings in the first three weeks of November was impressive by local standards (about 140 birds, twelve parties or individuals, max. 56 in one flock on 17 November along the Clevedon/Yeo coast), but only a few in December. Bramblings remained scarce up to the end of the year, whilst Siskins and Redpolls were reported to be fairly widespread late in the year, with up to 50 in some places.



RJP

Short-eared Owls

THE MOULTS, MIGRATIONS AND BREEDING SEASONS OF THE WHITE WAGTAIL *Motacilla alba*—A REVIEW

by G. Baggott

Introduction

The White wagtail complex (*Motacilla alba*) covers a wide range of environmental conditions, and consequently it is of interest to consider how this species responds to these pressures, in terms of variation in the timing of parts of their annual cycle. The approach of this paper is to emphasise the problem rather than to supply all the answers, which by no means are available as yet.

The Zoogeography of the White Wagtail

Vaurie (36) distinguishes thirteen subspecies of *Motacilla alba*, the White Wagtail, and these together cover the whole of northern Asia, Europe and the greater part of Africa. Recent colonists of the nominate race are even found breeding in Greenland, so that the species covers 230° longitudinally and 112° latitudinally. In addition two closely related species *Motacilla maderaspatensis* and *Motacilla grandis* are found as residents in India and Japan respectively. All subspecies of *Motacilla alba* (except *subpersonata* and *persica*) are to some degree migratory. The breeding ranges together with the wintering grounds (indicated by arrows, although the origin of the arrows has no significance) are shown in Figure 1 for the various subspecies and the related species.

Like its relative the Yellow Wagtail *Motacilla flava*, the White Wagtail complex is separable into subspecies on the basis of plumage variations. The adaptive significance of these different plumage patterns is unknown, but they provide a valuable tool in working out the migratory patterns of the various populations in the absence of ringing data, a point which will be returned to later.

The most westerly race of *Motacilla alba* is the Palearctic is the Pied Wagtail *M. alba yarrellii* found in the British Isles. To the east of this is found the 'alba' group (breeding males with grey mantle and rump), which consists of the nominate race breeding in Iceland, Greenland, Europe and European Russia; *subpersonata*, a resident in Morocco; *dukhunensis*, a race poorly separable from *alba* breeding in eastern Siberia from the tundra south to the Caspian; *personata* breeding to the south-east of *dukhunensis* in central Asia; *persica* a poorly differentiated race resident in Iran; *baicalensis* a form breeding in eastern central Siberia around Lake Baikal; and *ocularis* which breeds farther north than any form, and extends from the Yenesei along the tundra to the Chukotski Peninsula (190°E). This form is distinctly different from all other subspecies (except *lugens*) in having a black transocular stripe. In eastern Asia the *lugens* group is found (breeding males with black mantle and rump). This group consists of three subspecies; *lugens*, breeding in north-east Asia south of *ocularis*; *leucopsis* which breeds over most of China; and *alboides* which breeds along a strip of territory north of India, from Kashmir to Burma.

In central, east and south Africa the species is represented by the *aguimp* group, which contains two subspecies, *vidua* and *aguimp*, in which breeding males have black backs. *Vidua* is a tropical and subtropical form breeding from the Nile Valley through eastern Africa and over the whole of Africa south of the Sahara, except for the Orange and Olifants River Basins of south Africa where it is replaced by *aguimp* (18, 36).

The Annual Cycle of the Pied Wagtail

As stated above the Pied Wagtail is the most westerly race of the *Motacilla alba* complex (apart from the Icelandic and Greenland populations of the nominate race). Like its conspecifics further east it is a bird of semi-open country and is often associated with water. However, in consequence of human alteration of the habitat it has become associated with man, both breeding in buildings in rural areas and wintering in towns. This association with

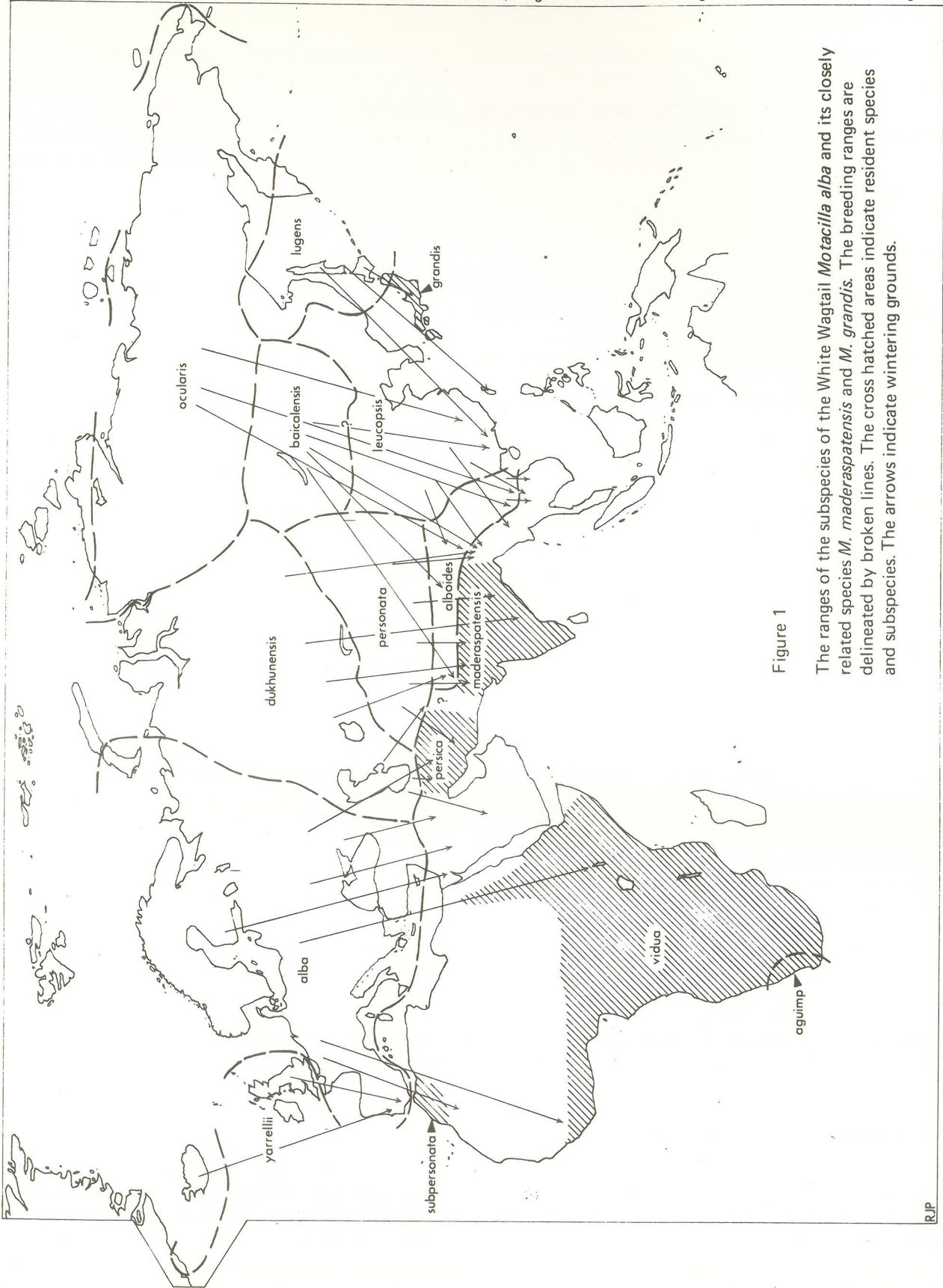


Figure 1

The ranges of the subspecies of the White Wagtail *Motacilla alba* and its closely related species *M. maderaspatensis* and *M. grandis*. The breeding ranges are delineated by broken lines. The cross hatched areas indicate resident species and subspecies. The arrows indicate wintering grounds.

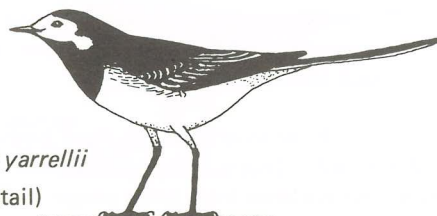
man probably has a long history as wagtails of the alba complex were observed breeding on buildings in Siberia in the late nineteenth century (40, 11).

The alba wagtail group is insectivorous, and although feeding in flocks outside the breeding season they nest solitarily. The Pied Wagtail is no exception. The first clutch of eggs is usually laid in late April (although eggs may be found early in the month) and early May, and this is followed by a second breeding attempt in June (40). Thus the population in early August contains juveniles of widely varying ages, and this spread in age of the juveniles may be particularly large if second brood replacements and third broods occur. Two broods occur regularly throughout the British Isles even into the north of Scotland; the third brood probably only occurs in a small proportion of birds in southern England.

The Pied Wagtail population of the British Isles is partially migratory, the proportion migrating in any one year being controlled by (as yet) unknown factors (5). The northernmost populations within the British Isles (N.W. Highlands, Hebrides and Orkney (10)) are truly migratory whereas wintering birds are found in southern Scotland (2) (although the numbers are rather small) to southern England. In the northern populations all age-groups take part in the movements in contrast to the southern populations in which mainly the juveniles migrate, the adults on the whole being sedentary. Also the northernmost populations tend to winter farther north (and adults farther north than juveniles) than the southern populations, the juveniles of which migrate to Iberia and even to Morocco. This is apparently the reverse of the situation found in the European White Wagtail (8). In this subspecies the northernmost populations seem to winter farthest south, overshooting the winter range of the more southerly populations. In the Pied Wagtail passage occurs mainly in March (some in February) and April in the spring, and September and October in the autumn. The precise timing depending on one's location in the British Isles (28, 2, 24, 40).

All the line drawings show adult males in breeding plumage. However, this plumage in some races of *Motacilla alba* can be very variable, especially where they interbreed.
(Drawn by Robin J. Prytherch)

Motacilla alba yarrellii
(Pied Wagtail)



In southern England (Somerset) departure of the migrating juveniles probably occurs not until late September and October. Prior to this period both adults and juveniles undergo a moult. In the adults this is a complete post-nuptial moult with the moult of the primaries taking about 76 days (10 to 11 weeks); the mean date for the start of the primary moult being July 16. However, individuals may start moulting from mid-June to mid-August and in consequence may finish from early September to late October, although the mean date of termination of the moult is September 30. Thus on average it takes 25 days for a single primary to grow to its full length, and so old primaries are shed every six days or so. The moult of the body feathers and tail feathers is near completion by the end of primary moult, but as in some other passerines studied (22) secondaries 1 to 6 (the innermost of these) continue to grow for some time after the primaries are completely renewed. The amount of secondary 'overrun' estimated from national data varies from 25 to 3 days, and in one case the secondaries finished moulting within the period of primary moult. On average, therefore, it might take an additional three weeks to complete the post-nuptial moult; although two weeks is a more probable figure as the estimates obtained above do not allow for variability in the growth rates of these secondaries. Note that this would be the maximum period of 'overrun'. Thus this factor could well increase the proportion of adults finished their post-nuptial moult in October, and in fact Witherby et al. (40) give a range of August to November.

If we accept the demonstrable fact that migration and feather growth are incompatible, then many adults do not finish their moult in southern England until well into the migration period, and this fits nicely with the conclusion drawn from ringing recoveries that these adults are mainly sedentary. Although one cannot, as yet, rule out the possibility that adults from this area might migrate (if they do so at all) later than supposed. Another notable

feature of the post-nuptial moult is the large spread in the start of the moult caused by the desynchronisation of annual cycles during the breeding season. Thus there is no discernable tendency for late moulting adults to accelerate their moult, a feature in marked contrast to the moult of the juveniles.

In the autumn in southern England (Somerset) juvenile Pied Wagtails undergo a partial moult. Such a moult is necessary as the juvenile plumage (except for wing and tail feathers) is less resilient than the final plumage. Presumably it is more economical to adopt this system, as it is more advantageous to divert protein into body growth early in life (to reduce the period in the nest) than to produce a resilient feather coat, when a less resilient one can be replaced easily at a later date. The partial moult involves the body feathers, tertials, some small feathers of the wing and a variable number of tail feathers. The post-juvenile moult lasts about 48 days (6 to 8 weeks), the median date of the onset of moult being August 2 and the median date of termination September 19. As mentioned above, prior to the post-juvenile moult the population may contain juveniles of widely differing ages, thus in August it is possible that some juveniles might be as much as three months older than others (and incidentally with a feather coat three months older), as unmoulted, newly fledged juveniles can be caught in late August. In consequence the spread of the start of the moult is so wide that at no time is the whole population of juveniles in moult, but by early October all of the population has completed the moult. This synchronisation is further illustrated by the occurrence of so-called 'arrested' moult. Birds showing 'arrested' moult are only caught late in the autumn, and none (or fewer than normal) of the tertials and tail feathers are moulted—that is fewer of the more resilient feathers are moulted—a phenomenon noted in other passerines (21). The evidence for 'arrested' moult in this species is as yet circumstantial, but birds showing these characteristics have been caught in other parts of southern England. However, this condition has not been demonstrated directly in birds of known age as yet, and it is not inconceivable that different moulting patterns might occur in more northerly populations (thus the birds caught in southern England would be migrants), but the moult of these populations is completely unknown.

'Arrested' moult apart juvenile Pied Wagtails certainly show synchronisation of their moult in the autumn; the causative factors is probably the approaching migratory period rather than food shortage as the adults continue their moult into October.

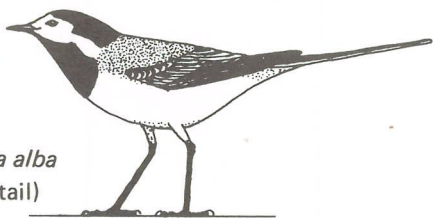
Prior to breeding in April both the first year birds and adults undergo a pre-nuptial moult from January to March (40). This is said to involve the body plumage, some small feathers of the wing, a few tail feathers and one tertial, but evidence from birds caught in Somerset in July would suggest that as many as three tertials are replaced. It is probable that an investigation of this moult will reveal far more variability in timing and pattern than has been deduced from skins. In fact this moult seems to be characteristic of the species, and is better known in some other subspecies—a point to which we will return later. There is presumably some degree of spread in the timing and duration of this moult, and must therefore in some degree influence the asynchronous annual cycles seen throughout the following summer. Thus in migrants the pre-nuptial moult is undergone whilst in the winter quarters and so must influence the timing of migration, and presumably the timing of the first breeding attempt.

Annual Cycles in other subspecies

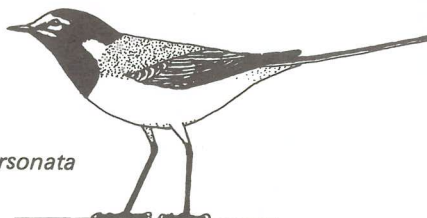
In the last section it was shown how the various features of the annual cycle of *Motacilla alba yarrellii* fit together (summary diagram in Figure 2): now the variations in these phenomena in other subspecies of *Motacilla alba* will be examined.

As breeding and moulting are energy demanding processes the ultimate factor controlling the timing of these processes is food supply. In temperate latitudes, where most wagtails of this group breed, the appearance of insect food depends on two factors, temperature and daylength. The amount of insect food available early in the year depends both upon the life-history of the insects and upon rising temperatures, whereas the amount of food collectable is dependent upon the time available for feeding, and so ultimately on daylength. Thus, in Britain, Pied Wagtails are able to form eggs and carry out breeding activities at daylengths of about 14 hours and at rather low temperatures (in the spring), and so presumably even under these conditions the food supply is adequate. In the autumn the daylength and temperatures decrease once again, making sufficient food unobtainable. Within the Palearctic temperature and daylength vary with latitude, and temperature varies with longitude also. In the northern part of the White Wagtail's range the days are long in mid-summer and the temperatures fairly high; but these condi-

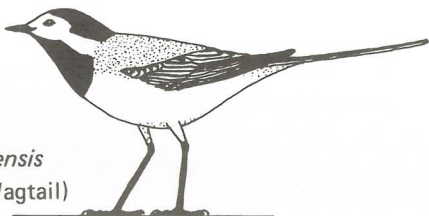
Motacilla alba alba
(White Wagtail)



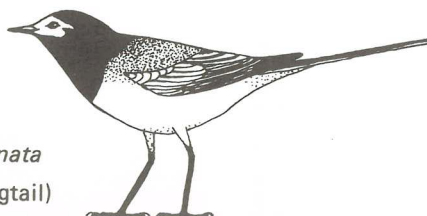
M.a. subpersonata



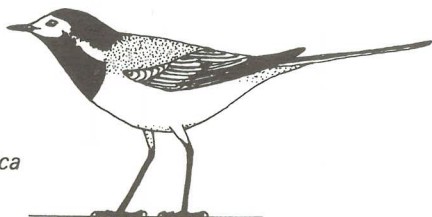
M.a. dukhunensis
(Indian White Wagtail)



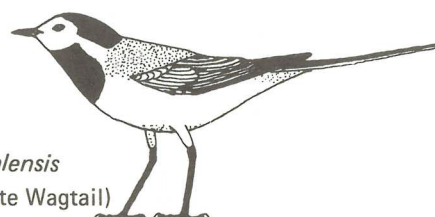
M.a. personata
(Masked Wagtail)



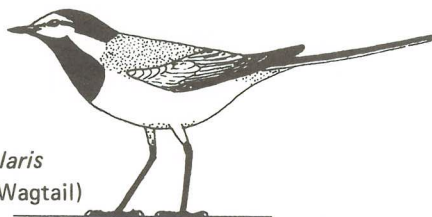
M.a. persica



M.a. baicalensis
(Swinhoe's White Wagtail)



M.a. ocularis
(Streak-eyed Wagtail)



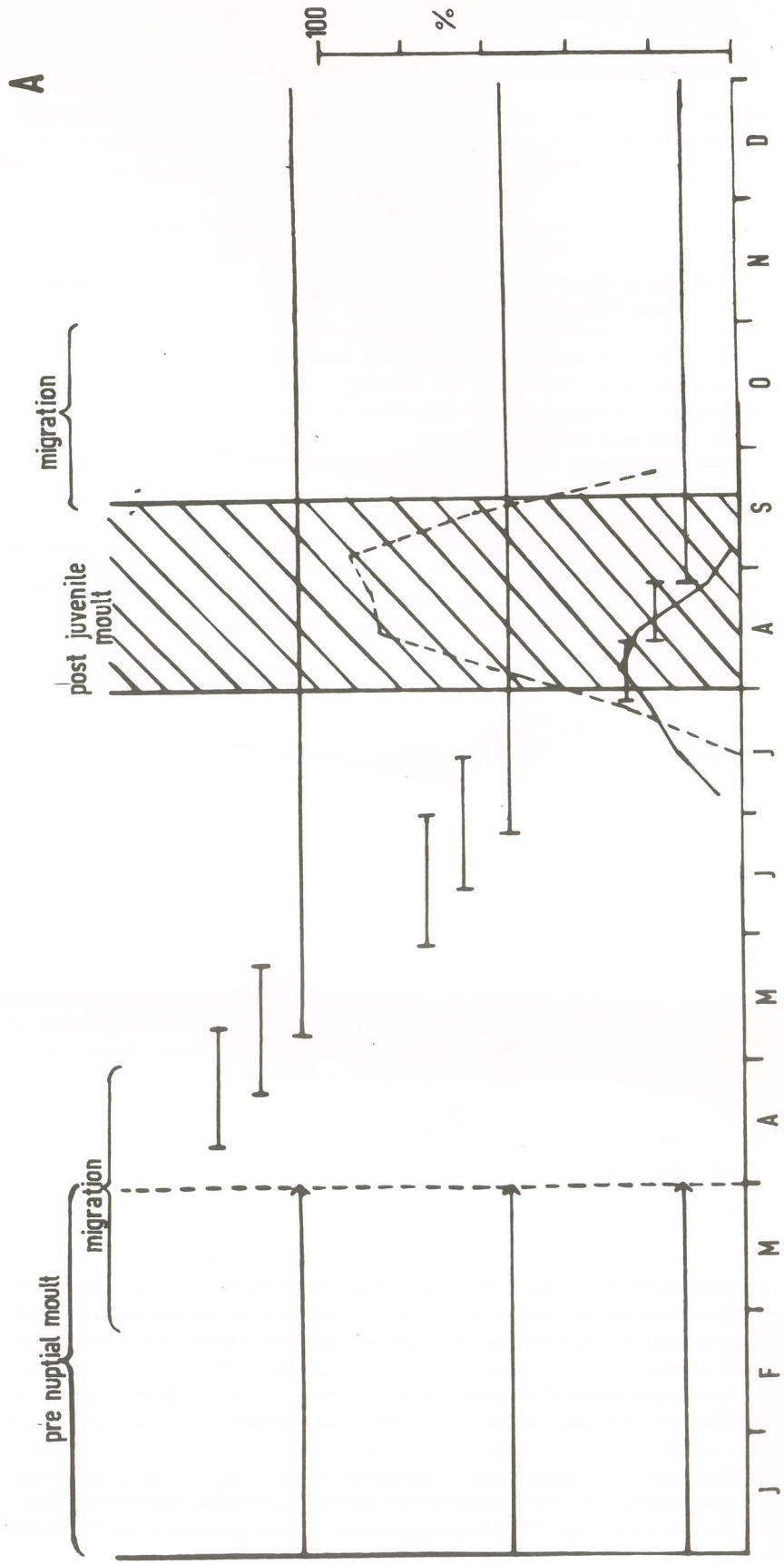
The Nominate alba group

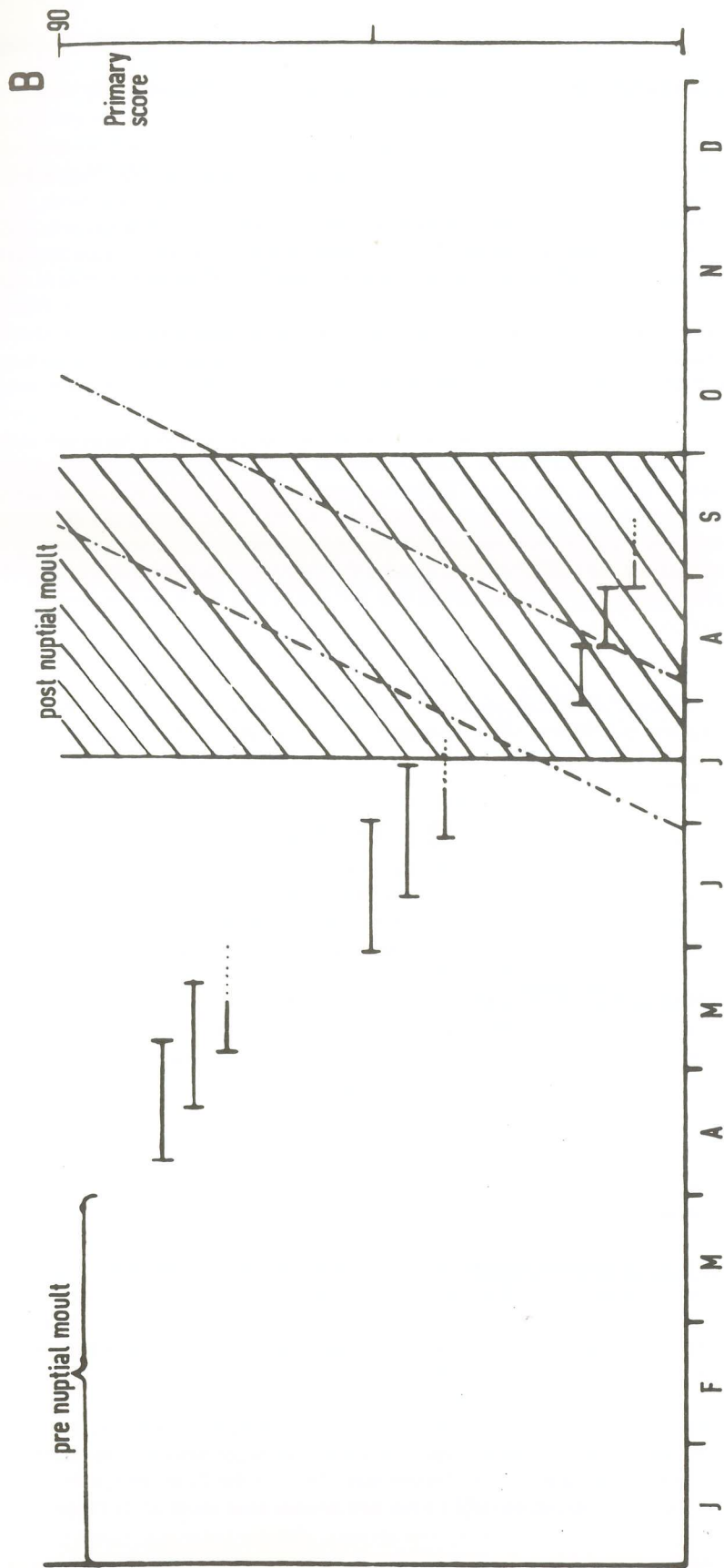
tions arrive relatively late in the year and last for a relatively short time. In lower latitudes the maximum daylength in summer decreases, but the period over which there is an adequate daylength increases. As the equator is approached these seasonal fluctuations in daylength decrease and the daylength tends towards twelve hours. In parallel with these changes the maximum mid-summer temperature increases, so that the period in which temperatures are suitable for the development of the insect prey increases. Whether migration occurs or not probably depends upon the availability of the food in the winter; the timing, however, is ultimately determined by the birds' prior activities (probably within a certain range set genetically), which again are controlled in the main by availability of food. These considerations are probably more applicable to individuals rather than to populations, however it should be possible, in a general way, to infer the degree of variation in breeding and moulting periods from migration and wintering dates; later we will see if this hope is justified. These inferences together with (fragmentary) information on breeding

Figure 2

The annual cycle of the Pied Wagtail in southern Britain. The third broods indicated occur in only a small proportion of the population.

- A. The first year of life, April to following March.
- B. Subsequent years of life, January to December.





and moulting in the various subspecies should enable the construction of annual cycles for different populations of White Wagtails.

Over most of Europe the nominate race has a very similar annual cycle to *M. alba yarrellii*. Migration takes place in September/October but the European population adopts two different general directions: birds from western Europe (west of 20°E) move south-west to Iberia, S.W. France and Africa, whereas the more easterly populations migrate south-east to Cyprus, Palestine, Egypt and the Sudan (8). The latter tendency is presumably found in birds of European Russia, so that they would tend to winter in Arabia, Iraq and Iran. This similarity between *yarrellii* and *alba* is not surprising as they are found in the same latitude. However, *alba* extends north to the tundra both in Scandinavia and in Russia. As the autumn migration in Finland is finished by the end of September (9, 13), it is not unreasonable to suppose that some modification of the annual cycle has resulted. Also as conditions for breeding are not suitable until late in the year in these high latitudes, some modification of the timing of breeding and moulting is inevitable.

The three subspecies found in these high latitudes are *alba* (in Iceland, Greenland, Scandinavia and in European Russia), *dukhunensis* and *ocularis* in western and eastern Siberia respectively. In Lapland *M. alba alba* has been found with eggs on June 24 (26), and it is unlikely that it had bred before that year, as wagtails at these latitudes are almost certainly single brooded. No information is available for *dukhunensis* on its tundra breeding grounds, although it is perhaps significant that the passage of this subspecies in Afghanistan is as late as the end of April (20), and the last individuals to leave Afghanistan and the Punjab (39, 37) are in late April, and in some parts of India not until May (38). If the populations of this subspecies overshoot, as in the nominate race, these late groups at the latitudes of about 30°N may well be the tundra populations, and consequently they would not arrive on their breeding grounds until late or mid May. Thus wagtails of the nominate race have been recorded as arriving as early as May 12 in the Petchora (66°N), although the main arrivals are stated to be from early May to early June (30). However, in Iraq the passage is in March and this may well be of birds from more southerly populations. In contrast at the southern limit of its range (south Caspian sea, 37°N) it breeds in May, the young fledging by early June (4), and here it is a partial migrant with a few birds overwintering.

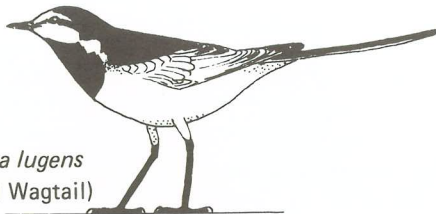
Nothing is known about the timing of the post-nuptial moult of these two subspecies in the northern parts of their range in Europe and Asia, but specimens of *M. alba alba* examined in the autumn in Iceland (B.T.O. collection) showed a near complete primary moult by early August. The post-nuptial moult must, therefore, have been completed by mid-August. Hence it is possible to fit in a post-nuptial moult at these latitudes prior to migration; however, a protracted moult through the early part of the migration would probably be disadvantageous for an island form like the Icelandic White Wagtail. It is probable that as in *yarrellii* the nominate race has a pre-nuptial moult before returning to its breeding grounds (or on its breeding grounds if it has overwintered there). This is certainly the case in *dukhunensis* as in India it is found moulting body feathers, tail feather, three tertials and small feathers of the wing prior to the spring migration (35). This is very probably the pattern of the 'spring' moult throughout the species.

M. alba dukhunen̄sis rarely exceeds 70°N, but farther east *ocularis* reaches 74°N on the Taimyr peninsula. As a nest with six eggs has been found on the Lena river in mid-June this subspecies must begin to breed very soon after arrival, as it is stated to arrive about June 4 at the Yenesei (11,36). It is certainly single brooded as it leaves this area by August 20 (11). This could conceivably leave time for a rapid moult in both adults and juveniles, but as there is no sea to cross (as in the case of *M. alba alba* in Iceland) it is possible that migration begins before the moult finishes, as Dolnik found for Chaffinches in Finland, and is completed further south. This extreme northerly form winters very far south in south-east Asia, and even to the Phillipines. It appears in Honkong as early as late August (12) and in northern Indo-China (20°–29°N), where it is plentiful, in October and leaves again in April; further north it has been noted on passage in May (Gobi [14] and south-east Tibet [16]). These migration dates seem to be consistent with the times of arrival and departure at the breeding grounds. In passing it might be noted that this subspecies also very probably has a pre-nuptial moult prior to migration (31,32).

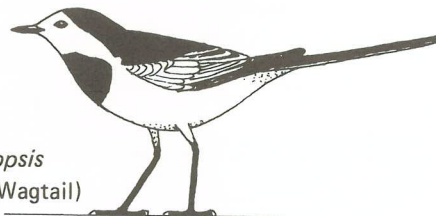
To the south of *ocularis* is found *M. alba baicalensis*, which in spite of breeding further south than *ocularis* appears to winter in approximately the same area. The autumn passage in Sikkim is in September/October (29), and nearer the breeding range in northern Mongolia the passage is in late September (14). In the Gobi the spring migration is in April and early May, thus it is possible that this subspecies might have two broods over most of its range (i.e.

starting to breed in early May), and have both the post-nuptial and the post-juvenile moults on its breeding grounds before migration: however there is little information on the breeding seasons or its moults, except that it possibly has a pre-nuptial moult in Burma before the spring migration (31). It is not even certain that all populations are truly migratory.

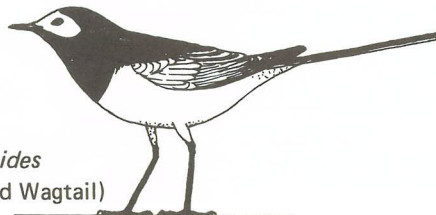
To the west and south of Lake Baikal is found *M. alba personata*, the most northerly subspecies in a complex of forms extending from the Caspian through Turkestan and Tibet to China. In the south-west corner of its range it is at least double brooded. Breeding starts in early May—a juvenile having been recorded on May 21 in Afghanistan (20)—and a second brood is reared in early June; in confirmation of this a nest with eggs has been reported in Chinese Turkestan on May 6 (17). Also in the Yarkand there is a brood in late May/early June which is presumably the second (33). A moulting adult has been taken in this area on August 20 (33) and it is stated to be in post-nuptial moult from August to November (40) in Afghanistan, so that just two broods is a possibility in this part of its range, although three broods cannot be ruled out. At the northern limit of its range it may well be truly migratory returning in late April/early May (14), but in the south a few remain in the winter (17), the rest moving to northern India (38) and Iran (14). The extended post-nuptial moult in these southern populations may be related to the fact that they are partial migrants, indeed by analogy with the Pied Wagtail the adults may be sedentary, although admittedly *personata* occurs at lower latitudes. There may well be an overshoot of migrants within this subspecies also, as the main passage times in Chinese Turkestan and the Punjab are in March, whereas in the Punjab and in other parts of India some individuals stay until late April or even May (38).



Motacilla alba lugens
(Japanese Pied Wagtail)



M.a. leucopsis
(White-faced Wagtail)



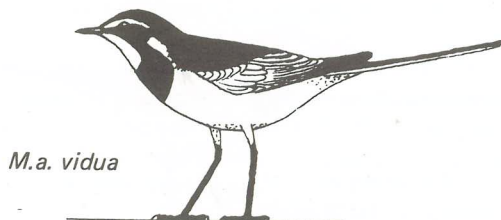
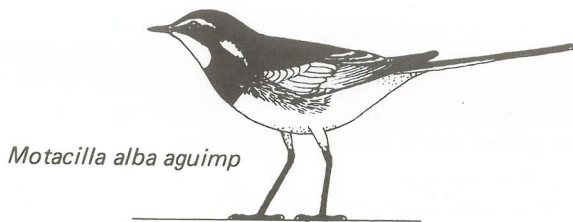
M.a. alboides
(Hodgson's Pied Wagtail)

The *lugens* group

M. alba alboides breeds to the south of *personata* along a strip of territory north of India; this form covers a wide range of longitude but extends little latitudinally. In Burma it has been found breeding in March and July (31), in Sikkim in May and July (29), and in Kashmir in May, June and July (1), a specimen with forming eggs being taken on May 11. In Ladakh the adults are first observed in mid-April, and young have been observed in late June and a hen on a nest in early July (19). Also in south Tibet it is known to breed in May and June (15). Thus the evidence would suggest that *alboides* has three broods per year throughout most of its range, although the annual cycle at the more southerly latitudes may be more complex. The only specimen in post-nuptial moult was taken on July 23 in Burma, which would appear to contradict the suggestion that there are three broods per year, however the third brood may be of infrequent occurrence or as suggested above the annual cycle of *alboides* in this region may be more complex than supposed. Indeed close study of this form in Burma would be interesting as it would illustrate the adaptations of Palearctic species to a subtropical climate. This form too is a partial migrant as birds move to India (37), northern Thailand and Vietnam (6,7), but a few wintering birds are known to remain in south Tibet and Sikkim (15, 29). It seems to be resident in Burma (31), the numbers being swelled by visitors in the winter.

To the east and north of the range of *alboides* are found the other two black-backed forms *M. alba leucopsis* and *M. alba lugens*. *Leucopsis* breeds over most of China but nothing is known of its breeding biology except that it is breeding in parts of the Gobi in July. It winters in Indo-China and is said to be plentiful in northern Thailand from mid-September to late March (6). In south-east Tibet passage is from mid-September to early October. From consideration of the migration dates and latitude two broods would seem to be probable. Comparatively little is known about *M. alba lugens*, an essentially northern form. The breeding season is unknown, but the migration dates are typical for the species, i.e. October and March.

Around the fringe of Asia there are a number of closely related subspecies or species. All of these forms are resident. In Africa there are two subspecies of *M. alba*, the first *subpersonata* is found in Morocco, and the second *vidua* over most of tropical and subtropical Africa. In India is found *Motacilla maderaspatensis* which is considered to be a separate species (35, 36) as it is sympatric with *alboides* and apparently does not interbreed. It is further distinguishable from *Motacilla alba* in that the summer and winter plumages are similar, it is a resident, it is much larger and there is no spring moult (35). *M. maderaspatensis* might well be considered to be the extreme case of adaptation to the tropical environment by this essentially temperate form. *Vidua* and some populations of *alboides* are also



The aguimp group (African Pied Wagtail)

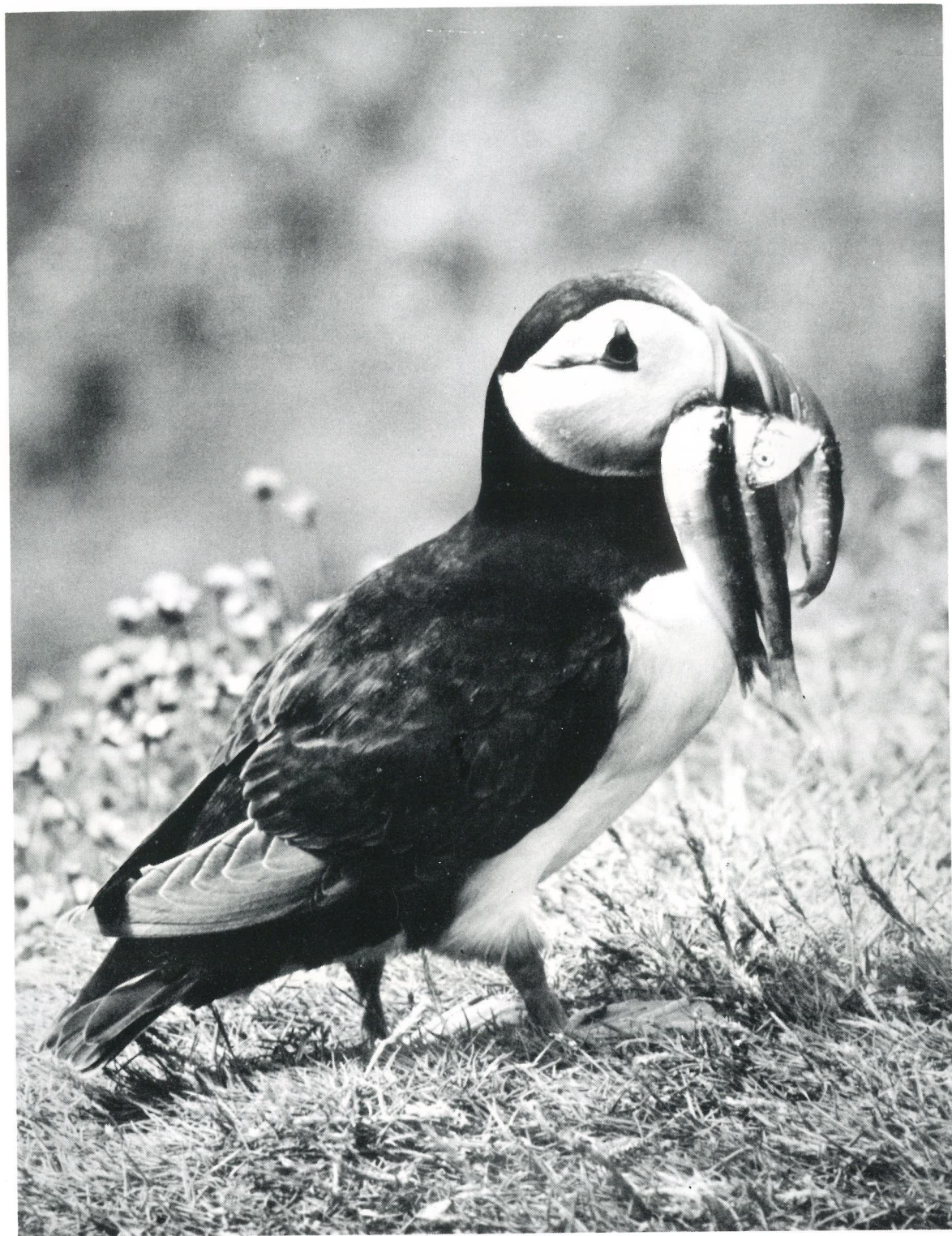


Plate 1. Puffin *Fratercula arctica* returning to nesting burrow, Skomer Island, off Pembrokeshire, July 1968 (photo: J.A. Eatough)

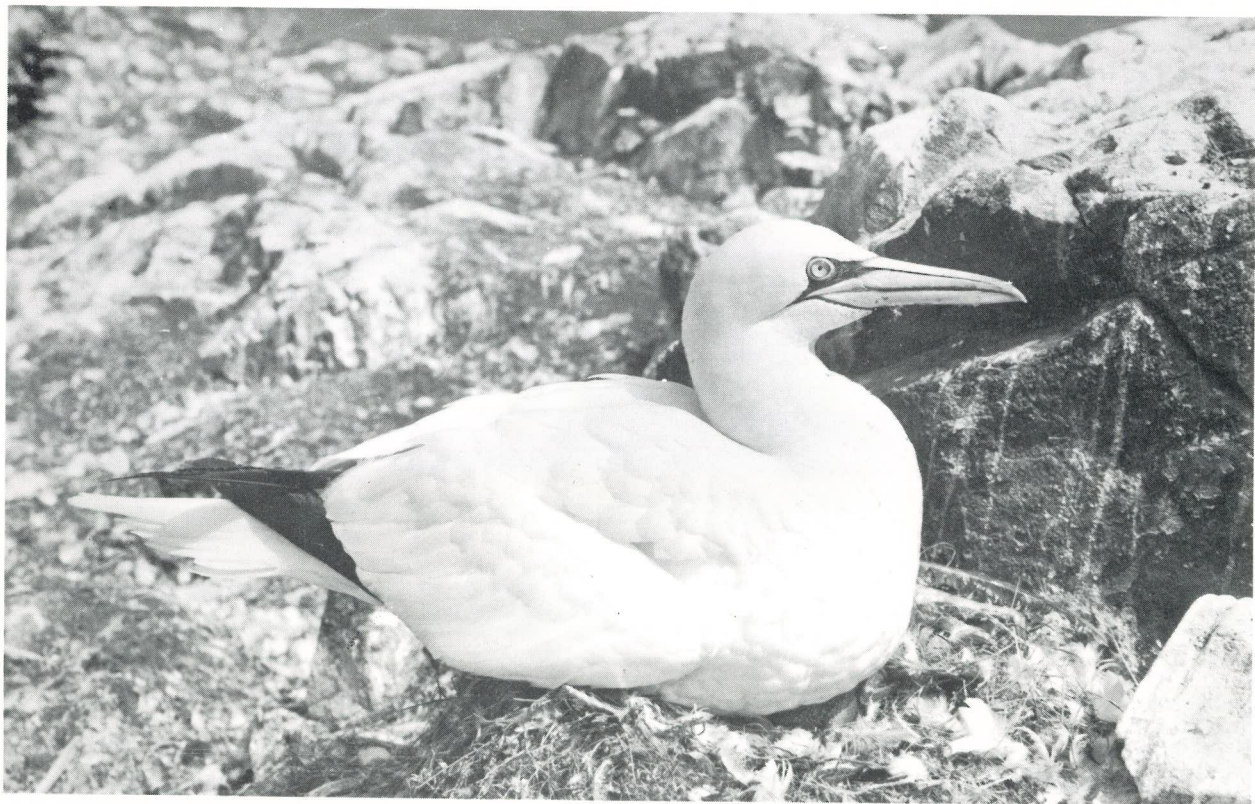


Plate 2. Above, Gannet *Sula bassana* on nest with small young, Grassholm, off Pembrokeshire, July 1968. Below, Fulmars *Fulmarus glacialis* at St. Govan's Head, south Pembrokeshire, July 1966 (photos: J.A. Eatough)





Plate 3. Redshank *Tringa totanus* on nest, Stiffkey Marsh, Norfolk, June 1967 (photo: M.R. Tibbles)

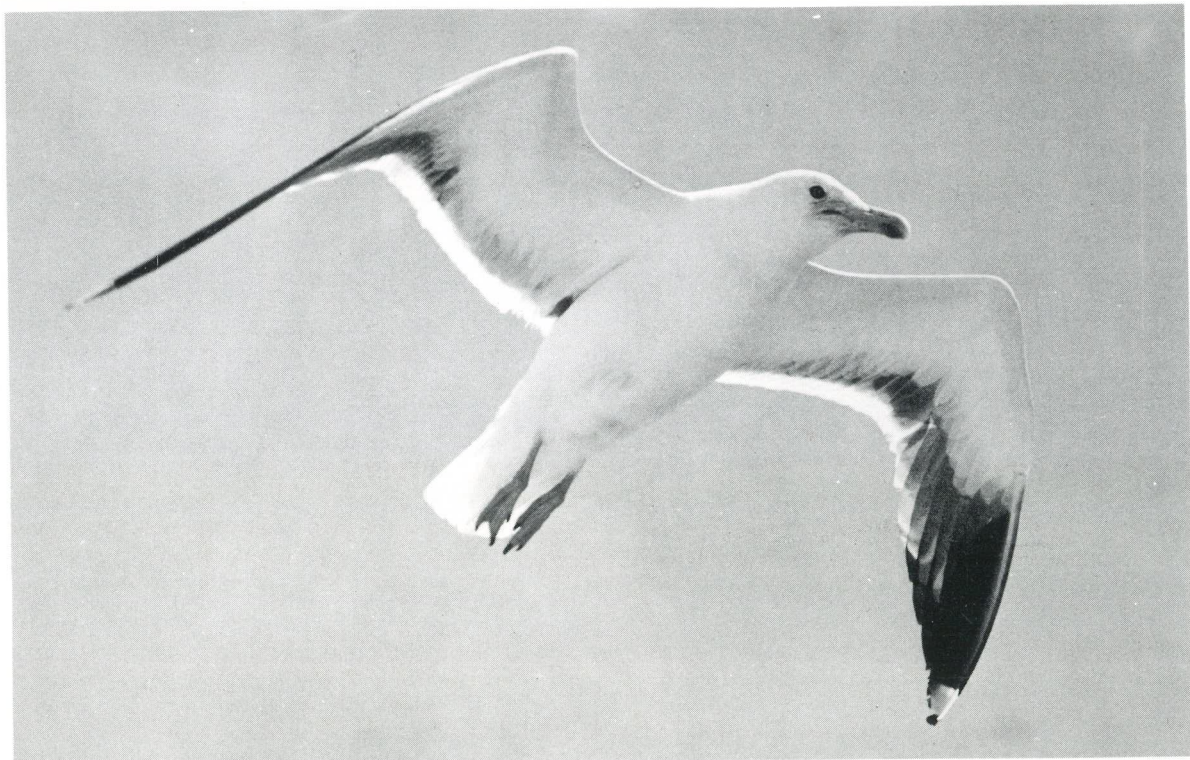
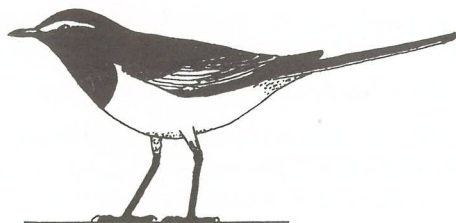
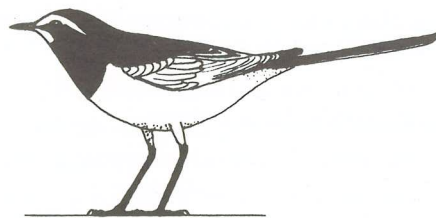


Plate 4. Above, Lesser Black-backed Gull *Larus fuscus*, Scilly Isles, May 1966. Below, Ringed Plover *Charadrius hiaticula* settling onto its nest, Gibraltar Point, Lincolnshire, June 1967 (photos: M.R. Tibbles)





Large Pied Wagtail *Motacilla maderaspatensis*



Japanese Wagtail *Motacilla grandis*

probably representatives of this trend. *Motacilla grandis*, the Japanese Wagtail, borders the eastern part of the White Wagtail complex, and this too is considered to be a separate species as in some parts of its range it is sympatric with *lugens* without interbreeding (36).

The Problem

We have seen in very general terms in the preceding sections how the different populations of White Wagtails adapt to the environment in which they live. Thus in high latitudes the environmental conditions only allow a single brood a year, and there are accompanying modifications of the moult and of the migrations; whereas in lower latitudes the numbers of broods per year increases and the timing of the moult and the migrations is similar to the more familiar Pied Wagtail. Further south still towards the equator there would seem to be a tendency towards three broods per year, as is seen in *vidua* (18); however, in these forms the environmental factors experienced are very different from those experienced by subspecies in temperate latitudes.

As is obvious any conclusions are all too often based on too few facts, and obviously the study of the northernmost and subtropical forms would be of use, and in fact the situation now as regards reliable information is little better than thirty years ago; however, in spite of these difficulties it would seem that the White Wagtail is a useful species to illustrate the adaptiveness of life-history phenomena in birds.

Acknowledgements

I would like to thank H.B. Ginn for allowing me access to the British Trust for Ornithology collection of moult cards, and to the members of the Chew Valley Ringing Station for their helpful cooperation in the Pied Wagtail moult study.

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THE PIED-BILLED GREBE AT BLAGDON LAKE, SOMERSET, IN 1968

by K.E.L. Simmons, Department of Psychology, University of Bristol

The Pied-billed Grebe *Podilymbus podiceps* was added to the British list on 22 December 1963 when H.A. Thornhill and Robin J. Prytherch saw a first-winter bird of this species at Blagdon Lake, Somerset (Prytherch 1965). Subsequent records of what was presumably the same individual were all from near-by Chew Valley Lake (see Ladhams *et al.* 1967 for documentation of occurrences in 1965-66). In 1968, however, I re-discovered the bird in its spring territory at Blagdon. This short account documents this occurrence and briefly outlines the observations made then.

On 14 May, I started a series of long watches at the nest of a pair of Great Crested Grebes *Podiceps cristatus* situated among flooded willows in a secluded bay at Blagdon Lake. Right at the beginning of observations, I heard a loud and complicated call coming from an unseen waterbird among emerging common reeds within a few yards of my parked car (which I used as a "hide" throughout this and subsequent watches). This puzzling call was quite unknown to me but, within a minute, I was lucky enough to sight the bird that had given it and was delighted to recognise the Pied-billed Grebe in full summer dress. During the next two hours, while I was getting my study of the Great Crested Grebe's nest underway, I heard and saw the Pied-billed Grebe from time to time. It became obvious that the bird was giving a definite advertising Song at fairly regular intervals and that this Song was most suitable for a detailed study—one which, incidentally, could easily be combined with the incubation watches on the larger species and which would help to relieve the tedium of that routine work.

During the rest of the first watch, and throughout subsequent watches, the time that each Song was delivered was noted so that the rate of singing could be calculated. In all, during 15 watches between 14 May and 5 June (totalling 97 hours), 959 Songs were heard—giving a mean rate of 9.8 Songs an hour (with extremes in any one watch of 16.1 and 4.3). The majority of these Songs were "routine" or "typical" ones given spontaneously. They usually consisted of three phrases or sections, the last (which was sometimes omitted)—a series of "wails" or "hoots" interspersed by gulps—apparently constituting the main advertising element of the utterance. Additionally, some Songs were "excited" ones induced by environmental incidents, such as the passing of a Carrion Crow *Corvus corone* or the Trilling of Little Grebes *Tachybaptus ruficollis*. Such Songs often consisted of just two phrases: the first a very urgent sounding "laughing" or "bubbling" series of calls (not unlike those of, respectively, the Green Woodpecker *Picus viridis* and female Cuckoo *Cuclus canorus*); the second an emphatic statement of the second section of the typical Song (and not unlike the occasional doubled calls of an animated male Cuckoo). Interestingly, the grebe sometimes did sing thus on hearing the calling of these other species. Though at times given in full at the end of excited Songs, the wailing phase of the routine Song was often truncated or omitted.

It was easy to count the notes in each section of the routine Songs and this was done for approximately 760 whole or part Songs. 58 Songs were also timed by stop-watch (until the instrument ceased to function) and 25 Songs recorded on magnetic tape, a preliminary sound-spectrograph being made of one of the latter. In addition to the work on Song itself, extensive notes were made on the form and orientation of the special posture assumed during the singing, on other calls, comfort behaviour, preening, high intensity bathing, etc., all as part of my comparative study of grebes (supported by a grant from N.E.R.C.). Also, the bird's relations with the other two species of grebe present were studied—especially with the Little Grebe which it treated as a territorial rival. All these observations will be reported on in more detail elsewhere.

It will be evident that professional work of this nature on a shy species (and on the incubating Great Crested Grebes), involving uninterrupted observations over long hours in a secluded locale, would be seriously affected if numbers of other bird-watchers came from all over the country just to view the Pied-billed Grebe. Consequently, the presence of the bird was not broadcast (though reported to the editors of *Bird News*) and observers were left to discover the bird for themselves. It was located independently on 23 May by D.E. Ladhams who carried out his own study of the Song (reported elsewhere in this issue of *Bristol Ornithology* 2). As far as is known, it was subsequently observed only by Bernard King and Robin Prytherch. It was last seen and heard on the

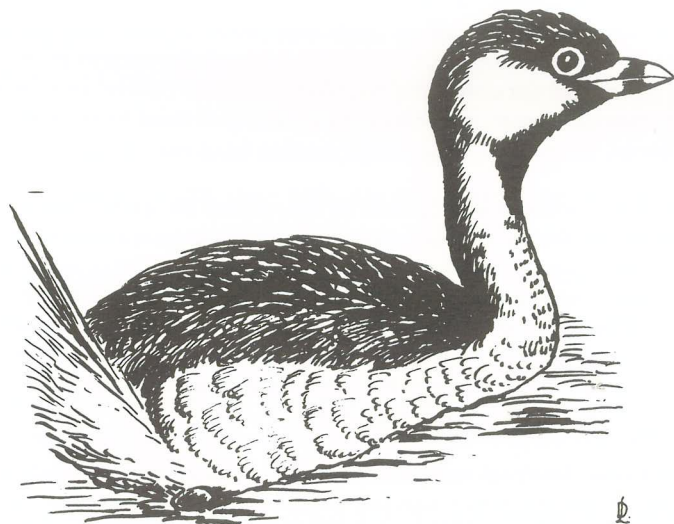
late afternoon of 5 June and had evidently gone by early morning the next day, probably leaving overnight (the period being one of the waxing moon). The rate of singing had much declined on the 5th, only 36 Songs being heard in 8 hours 20 minutes (giving the lowest hourly rate recorded—4.3 Songs) and the bird often wandered afar from its original territory. There was no sight or sound of it during an early morning watch by D.E.L. on 6 June or later the same morning and afternoon (when I watched for six hours), or on subsequent days.

Thus, the Pied-billed Grebe was present, singing loudly, in a spring territory at Blagdon Lake for some three to four weeks in 1968, up to 5 June. It seems to have settled in there between 8 and 14 May (possibly by nocturnal flight at the time of the waxing moon); certainly it was neither singing, calling or showing itself on the former date, or earlier, when I visited the area to watch my pair of Great Crested Grebes at their platform site.

The only other known records of the Pied-billed Grebe in Somerset in 1968 were from Chew Valley Lake (Herriotts End) where I heard it give a single Song on 4 July and G. Selway saw it well the next day. It is interesting to note that a Pied-billed Grebe (presumably another individual) was present on the Ouse Washes near Welney, Norfolk/Cambridge border, from 9-12 November 1968 (Sharrock & Ferguson-Lees 1969); this record has yet to be fully documented.

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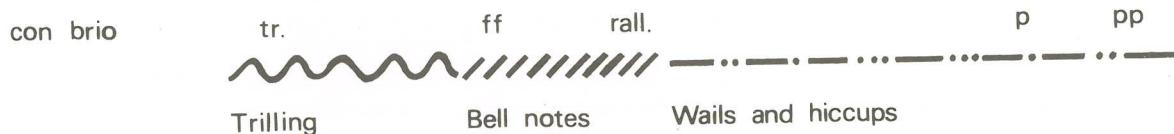
SONG OF THE PIED-BILLED GREBE

by D.E. Ladhams.

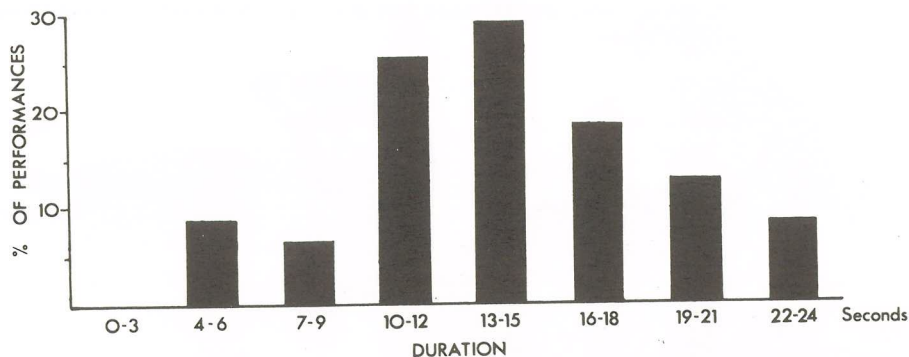
I first heard the strange Song of the Pied-billed Grebe *Podilymbus podiceps* on 23 May 1968 at Blagdon Lake, Somerset. This proceeded from the middle of an area of reeds, flag-iris and willows forming a triangle, with each side about 200 yards long. Numbers of Coots *Fulica atra*, Moorhens *Gallinula chloropus* and Great Crested Grebes *Podiceps cristatus* nest here, making a continuous background of challenging calls against which this loud Song stood out clearly. From that occasion until the morning of 5 June, when the bird was last heard, I made daily observations of its performances at various times. Assuming that this was the same individual originally discovered at Blagdon and later seen at Chew Valley, it showed itself in the open much more freely than in the past, though it was never far from cover which was much thicker than at its other locations. On one occasion, it was known to move to reeds 500 yards away but returned the same day (26 May); otherwise it confined its activities to the one quite small area.

Analysis of the Song

Notes were made of 136 Song performances, many of which were timed by stopwatch and analysed in some detail. Usually no particular activity induced the bird to sing, but sometimes this appeared to have been triggered by the passage overhead of a Cormorant *Phalacrocorax carbo* or other large bird. Each performance of the Song consists of three characteristic sections, sung in the same order every time. There is an opening phrase, a trill lasting about 2½ seconds, starting rapidly but slowing down and softening. After a slight pause there comes a very loud and clear, bell-like note repeated regularly at half-second intervals, but slightly falling in pitch; there can be up to 18 repetitions of the bell-note or as few as three, with an average of nine. This passes into the third section when a plaintive wailing note, followed by two or three hiccups, is repeated several times, the number varying from four to 13. The Song dies away almost imperceptibly on a faint wail. A typical "score" might be represented musically thus:

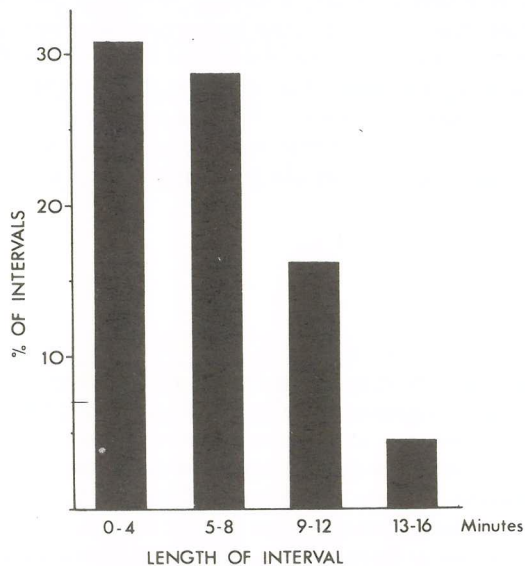


It was noticeable that a short middle section was followed by a long third section and *vice versa*, but occasionally both were given very perfunctorily, making up a short performance of, say, five seconds in all. However, the average length seemed to be about 15 seconds and the longest 25. In all, about 60 Songs were timed in detail, over the whole observation period, and the diagram shows the frequency distribution of the various timings:



The duration of the Song seemed to bear no relation to the weather or time of day. No singing was heard before sunrise or after dark, even by moonlight, although some other species of grebe certainly call at almost any hour of the day or night in the spring.

The performances were not precisely spaced out. During a session there were periods of silence lasting up to a half hour while, on occasion, nothing was heard for an hour or more when the bird was, presumably, otherwise engaged or sleeping. The great majority of pauses, over 100 of which were timed, lay between two and 10 minutes in any one singing session, as shown in the histogram (which omits periods of silence longer than 15 minutes).

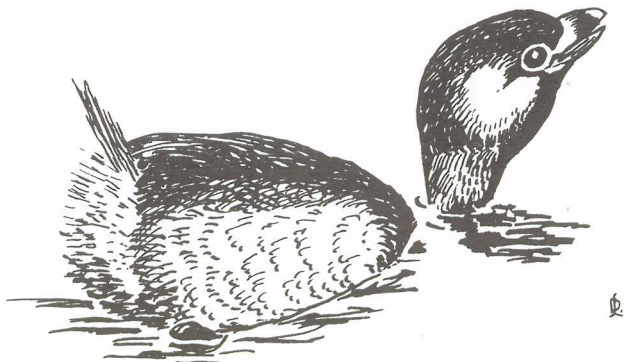


There were indications that the interval between Songs lengthened over the period, as shown in the following table:

Average interval (mins)	Four-day periods:			
	1st	2nd	3rd	4th
	4½	2½	6½	10

Posture

Before starting to sing the bird usually swam on to open water, stationed itself conspicuously, then raised its neck and depressed its breast below the water, while elevating its rear. The neck became distended from chin to breast-bone, displaying the black throat-patch. Not until then was any sound heard and the bird held this position throughout the Song, with the bill only slightly open (see sketch). Most performances could easily be heard half-a-mile away.



AGEING AND SEXING OF DUNNOCKS

by R.H. Poulding

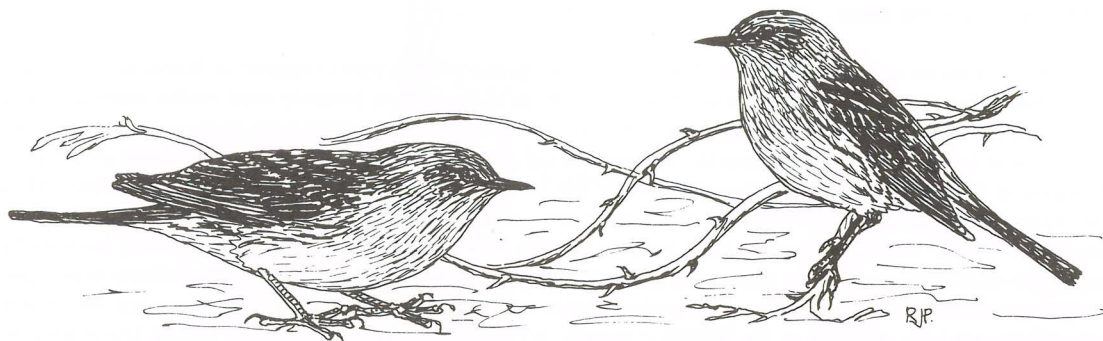
The investigation of Dunnock populations is seriously hampered by the plumage similarity of the male and female. Although there is slight sexual dimorphism in adults with the male greyer on the head, throat and breast than the female, particularly in nuptial plumage, the differences are so minimal that separation even in the hand is unreliable. To add further to the confusion the immature Dunnock replaces a distinctive juvenile plumage from July to October with a first-year plumage similar if not identical with that of an adult in fresh plumage following the post nuptial moult. In the Report of the Steep Holm Gull Research Station for 1963 I drew attention to a difference between the iris colour of the adults and that of the juvenile/first-winter birds caught on the island in the autumn and suggested that this feature could be a reliable method of separating adults and immatures. Since then further work has been carried out at several mainland localities in Somerset as well as on Steep Holm to check whether this difference was valid for less isolated populations and also to determine for how long immatures remain separable by this feature. In addition to examining iris colour, notes were made of bill and tarsal colouration, and moult. All the birds studied were examined shortly after capture by mist net or wire trap: notes of soft parts derived from dead specimens have not been included.

Separation of Adults and First-year birds

Colour of iris

The colour sequence of the iris in relation to age is a progression from dark grey of the early juvenile through greyish olive, olive, olive-brown, brown to a deep rufous brown characteristic of the adult. Although there is some variation in the timing most juveniles in partial first-winter or adult type plumage have greyish olive or olive iris but when the moult is complete the majority show an olive or olive-brown iris quite distinct from the deep brown or rufous brown of the adult. Many first-year birds retain this colour difference until the following January or February with a gradual progression to brown and rufous brown as the breeding season approached. There are two exceptions to the timing of this colour sequence:-

- (1) Juveniles from first broods (hatched in April or early May) can complete the colour progression to brown or rufous brown by the time the postjuvenile moult is completed in September. Hence these birds would be in adult tupe plumage and have an adult iris colour making them indistinguishable from adults.
- (2) Some first-summer birds have a pale brown iris often with a tinge of olive in their first breeding season. As yet there is insufficient evidence to separate similar birds as first summer, and in any case the problem is further complicated by some known adults having light brown rather than rufous brown iris colouration.



From these findings Dunnocks in adult type plumage in the autumn and winter with either a greyish olive, olive or olive-brown iris can be classified as first-year birds. The following key indicates this relationship between iris colour and age.

	Iris colour					
	Grey	Greyish-olive	Olive	Olive-brown	Brown	Rufous brown
Juvenile	—————					
First-winter		—————				-----
First-summer					=====	
Adult					=====	

Tarsus

The colour and texture of the tarsus are of no value for separating first-year birds from adults. They are to a certain extent influenced by the environment in which the Dunnocks spend the greater part of their time feeding on the ground: variations in tarsi, ranging from soft, pinkish brown to horny, stone-brown, can be found in all age groups.

Colour of bill

The bill colouration of the adult from the first breeding season is black or blackish horn extending uniformly over both maxilla (upper mandible) and mandible (lower mandible). The juvenile bill is not uniform in colour; the maxilla is predominantly dark horn (but not black) and the mandible is a lighter horn colour often with a pinkish-buff translucent appearance near the base. As the juvenile moults into the first-year or adult type plumage the maxilla darkens to a blackish horn and the mandible becomes darker from the tip towards the base. By January or early February most first-winter birds have attained the uniformly dark bill of the adult as well as the typical rufous brown iris of the adult mature bird.

Moult

Juveniles moulting into their first-winter plumage or adult type plumage do not moult the primary or secondary wing feathers but the adult during the postnuptial moult replaces all body and wing feathers. Hence in the autumn Dunnocks in adult type plumage showing bilateral moulting of primaries and/or secondaries are adults and not birds of the year.

Sexing of Dunnocks in the hand

From a series of measurements of wing, bill and tarsus of Dunnocks trapped in Somerset, no reliable statistical evidence has been found to separate the sexes. In dead specimens (mainly road traffic deaths) the largest and heaviest are usually males, whilst the smallest are frequently females but apart from these extremes the sexes overlap in size and weight to a marked degree. As mentioned previously there is some sexual dimorphism particularly noticeable in the Spring after the brownish tips to the feathers of head, throat and breast have worn off during the winter to reveal in some males a brighter and deeper grey plumage. This is more apparent at a distance in the field when a pair is seen together than on close scrutiny in the hand. Like most passerines breeding females have an extensive brood patch and during the egg-laying periods a large, dilated cloaca. Males lack a definite brood patch and in breeding conditions show a bulbous distended cloaca without dilatation. Of course these are well known differences which are only of value in the breeding season—a rapid and reliable method of sexing Dunnocks in the hand at all seasons has not been uncovered so far from the data collected in Somerset.

NOTES

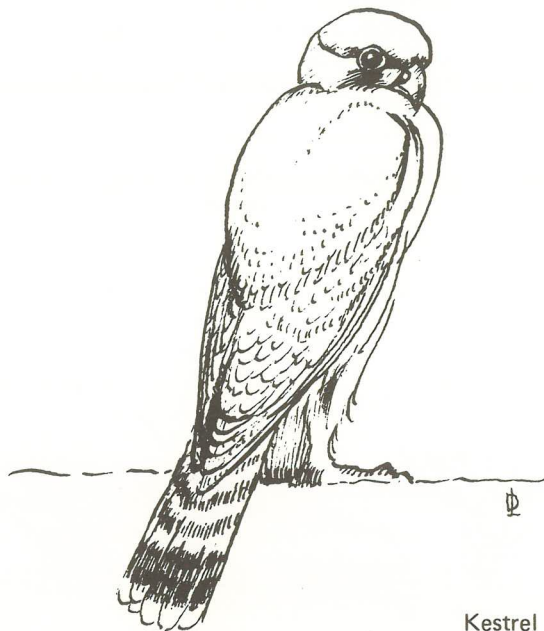
Birds of the Frome Valley, Bristol, 1968

I have spent many hours studying the birds of the valley of the River Frome. The study area was from the village of Frenchay, just outside the City boundary to St. Pauls in the centre of the City. From Frenchay through Vassalls Park (Oldbury Court Estate) to Eastville Park Lake the habitat is semi-rural with the river valley well wooded, but below Eastville the river flows through built-up areas. The wooded stretch of the valley within the City boundary is over two miles long. It contains an unusually large variety of bird species for an area so accessible to the public who have the free run of a series of parks and riverside walks.

Over 60 species were recorded in the study area in 1968 and estimates were made of the breeding population of many species. It is hoped that a complete list of the species recorded in the area in recent years will be compiled and published in a future issue of *Bristol Ornithology*. Any recent observations by members will be greatly appreciated.

The following short list is of some of the more interesting and unusual species noted in the valley during 1968.

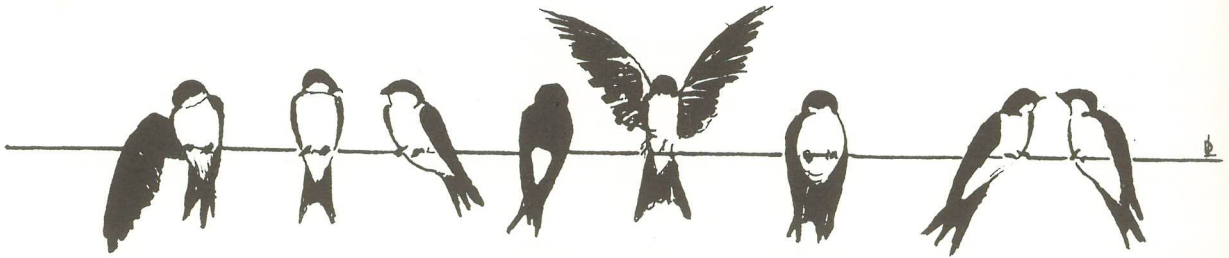
Gadwall	Single male, Eastville Park Lake, April 21st and 22nd.
Chiloe Wigeon	Pair, same place, also on April 21st and 22nd.
Mandarin Duck	Single male; Eastville Park Lake, Jan. 2nd and 3rd. (First recorded there in 1966).
Buzzard	One overhead, Purdown area and Stoke Park, Dec. 27th.
Kestrel	Probably bred at Stapleton: Family party of five seen in adjacent Stoke Park in August.
Kingfisher	Pair bred river bank, April-May; four along river at end of the year.
Lesser Spotted Woodpecker	Pair bred in a damaged poplar in an orchard at Stapleton but it was not determined whether young were reared. Also, one heard drumming farther up stream at Vassalls Park in April and a male was seen in Stoke Park not far from the river valley on Dec. 28th.



Kestrel

Sand Martin	Single pair nested in a pipe over the river at St. Werburghs.
Nuthatch	At least one pair bred at Vassalls Park.
Dipper	One at Snuff Mills, Aug.-Sept. Two same place at end of Oct. to end of year. One of them showed characteristics of the Black-bellied Dipper (a race of the Dipper occurring in other parts of Europe) in that it had very dark underparts, although its upperparts were quite similar to the other 'normal' bird.
Brambling	Two feeding under beeches, Vassalls Park, April 12th.

B.L. Kington



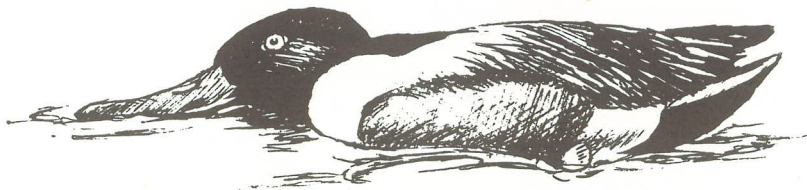
House Martins

Communal Feeding by Shovelers

As is well known, Shovelers occasionally gather in parties to feed by the usual method of dabbling the water surface whilst twisting and turning in tightly packed groups with individuals almost touching each other. This gathering is generally reported as occurring in estuaries, but it takes place in winter on Chew Valley Lake and Blagdon Lake. In the winter of 1967-8 it occurred almost daily in an area at the north end of Chew Valley near the dam. From October 1967 to January 1968 rafts formed in this way, mainly in the early morning, and dispersing after a few hours, but reforming sometimes before sunset. Prolonged rough weather prevented assembly, but not a short storm or frost.

In October from 50 to 70 collected (50% males); in November up to 165 (60%-70% males); in December numbers ranged erratically from 45 to 180 (again 50% males); in January the highest number was reached, 343 (over 70% males); but at the end of that month the gatherings ceased.

A raft might be up to half-a-mile long, made up of different sized groups each slowly spinning and drifting. Single birds, continually dabbling would move from one group to another, or start waltzing separately until joined by others. The sexes were not segregated, and very little display by males was noticed and then only in late



Shoveler drake

January. Usually single birds or pairs started turning clockwise and this persisted as others joined the group. But if two larger parties intermixed they might turn in either direction, so that at any one moment large groups could be seen turning either way, whilst nearly all the small ones (less than five birds) moved clockwise. It was noticed that the raft of Shoveler usually included two or three Teal, Pochard, Mallard and even Shelduck, and on one occasion four immature Herring Gulls joined in. But when a Cormorant started fishing and appeared suddenly among them after each dive, there was considerable panic. This congregating at Chew Valley or Blagdon did not take place in the winter of 1968-9.

The reason for this communal behaviour is not quite clear, though the vigorous shoulder-to-shoulder paddling and turning must stir up the food particles near the surface. On the other hand small flocks will shovel the surface whilst keeping the usual spacing of several feet between birds, with no attempt at waltzing.

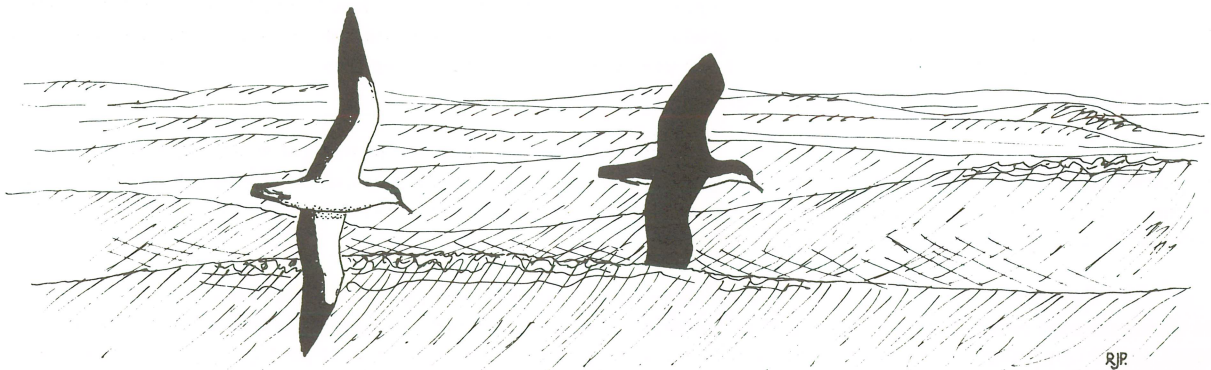
D.E. Ladhams

The Recovery of Ringed Manx Shearwaters on the Pembrokeshire Coast

For several years I have been paying two or three visits a year to the Pembrokeshire Coast National Park for the purpose of bird watching and filming. On each visit special attention has been paid to examining the strand-line in various bays for the washed-up remains of sea-birds. My visits to this part of Wales have usually included at least one each September, when it was usual to find numbers of Manx Shearwaters dead, sometimes in considerable numbers as in 1967 when sever storms coincided with the fledging of a large proportion of the young birds bred on Skokholm and Skomer. As the young birds are deserted by the parents at about the 60th day and remain in the nest hole for a further 11-15 days without food, the effect of a period of severe storms at the time the young birds leave the nest can be well appreciated.

In September 1967 along several miles of coast about 150 dead Manx Shearwaters were found of which 14 birds (about 9%) were ringed. (This figure represented at that time about 24% of the local recoveries). Of these recovered Manx Shearwaters most were found within 3-16 days of being ringed (average 10 days) and all were ringed on Skokholm as nestlings.

Unfortunately, in September 1968 I was unable to make a comparable survey in more favourable climatic conditions due to illness. However, a visit paid in the previous July was of considerable interest in that two Shearwaters were found with rings (the first ringed ones I had found in this month and the first ones ringed as adults). Of these one was ringed in May 1961 and must have been at least 8 years old. The other was ringed in July 1956 and re-ringed in March 1963 and was thus at least 13 years old. An interesting coincidence is that a Bristol ringer was credited with having ringed this bird.

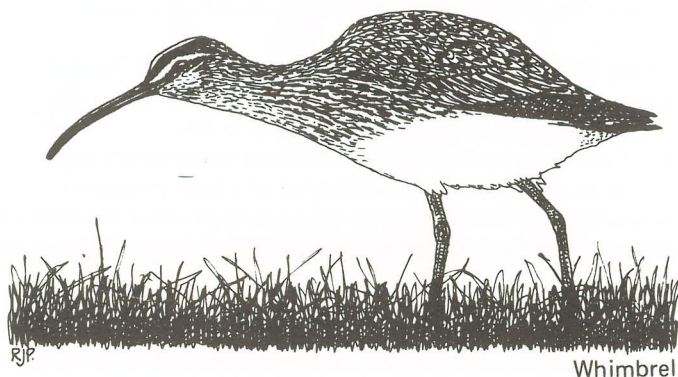


Manx Shearwaters

An important point concerning the finding of these dead birds is that sometimes all that consists of the remains is an inside-out skin, with the legs and feet inside and sometimes minus head and wings, with only the body feather tracks showing. Sometimes this skin is under-lain by a thick subcutaneous layer of fat which melts in the hot sun and runs over the pebbles like melted butter. Examining skins of this type is somewhat messy, but a considerable number of rings has been found by turning these skins right way out. A small proportion of the bodies were oiled to a greater or lesser extent, but whether this oiling was post mortem or not is impossible to say.

Other ringed birds found during this work have included Gannet (Grassholm), Lesser Black-backed Gull (Skomer) and Roseate Tern (Wexford).

J.A. Eatough



Whimbrel

Waders at Severnside

Although industry has come to Severnside, S. Glos., migrating waders continue to frequent for roosting, the narrow strip of meadow bordering the Severn which has so far escaped development. Until a few years ago it was an isolated strip of river bank separated from the surrounding farmland by the railway line from Avonmouth to Severn Beach but now a new road overlooks the meadow and the farms have been replaced by large industries and factories. The part favoured most by roosting waders at high tide is a stretch about half a mile long and about 200 yards wide and is composed of three zones—rough grass, closely cropped turf and finally the spartina bordering the mud. Cattle graze the grass in summer but at other times of the year the ground is waterlogged as it is frequently inundated by high spring tides.

Ringed Plover, Turnstone, Curlew, Redshank and Dunlin are the commonest waders but occasionally other species appear in small numbers—the occasional Knot, a few Little Stint or Curlew Sandpipers, and a party of Sanderling in breeding plumage. Also noted resting on the meadow have been Oystercatcher, Grey Plover, Whimbrel, Black-tailed and Bar-tailed Godwits, and a Greenshank.

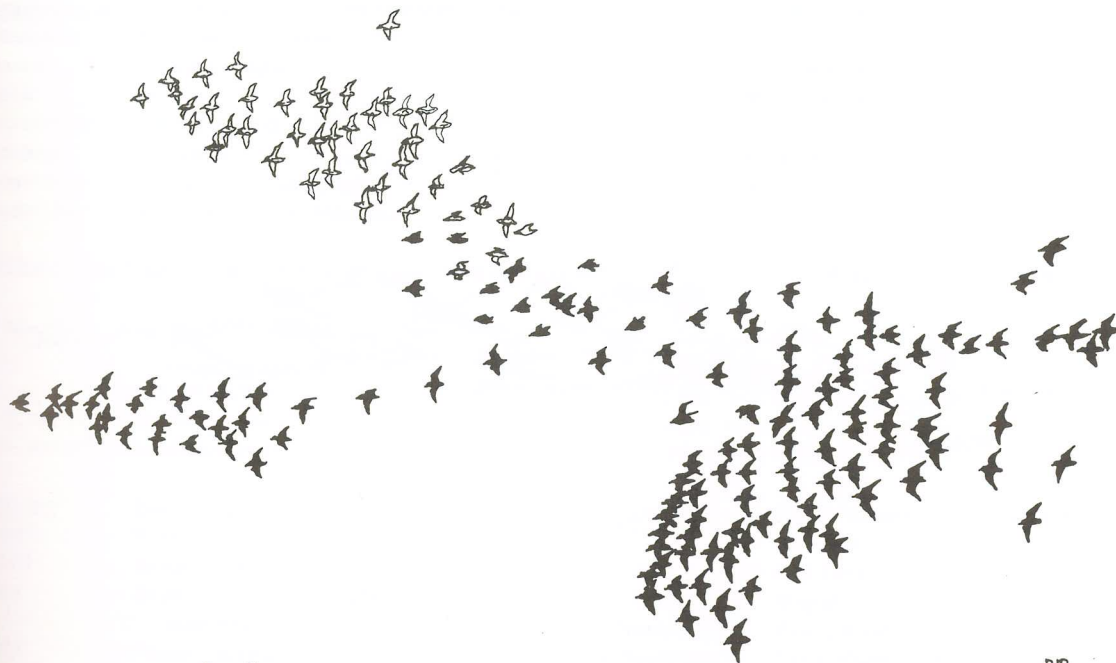
Turnstones are to be found there throughout the year but the greatest numbers occur in April and May on the spring passage when numbers in early May reach 500. Numbers increase in August to 250 after the breeding season and this number can be seen on most days until the end of October. The first passage migrants in August are in summer plumage but by the end of September most are in winter dress. About 100 winter in the area most of which feed on the shingle and mud banks off Severn Beach and the pebble shore extending to New Passage.

The winter population of Dunlin is of the order of 2,000 and the same number can be seen at the time of the spring passage in March but there is a marked decrease during April and May. Ringed Plover frequently seen in mixed parties with Dunlin occur in much smaller numbers, the highest total in 1968 being 300 in August on the autumn passage. Occasionally 500 have been recorded in August with September and October counts down to 250 and 150 respectively. Less than 50 appear to winter and there is no marked increase in the spring.

The Redshank reaches peak numbers from July to September with the highest count of 370 on 1 September in 1968. In winter about 100 can be counted but these decrease from March onwards as the breeding season approaches. Similarly the Curlew population falls during the spring from a winter total of about 60 to less than five in May. This species starts to increase in June (presumably birds returning from the breeding haunts in Wales) and reaches peak numbers of 150 in July and August. The following table gives the maximum monthly counts of the commoner waders recorded at Severnside during 1968:-

	Ringed Plover	Turnstone	Curlew	Redshank	Dunlin
Jan	40	100	35	100	2000
Feb.	nil	100	nil	100	2000
Mar.	nil	25	50	10	2000
April	70	220	30	nil	170
May	30	500	4	1	300
June	20	10	55	6	15
July	20	50	150	200	20
Aug.	300	300	100	200	200
Sept.	100	150	100	370	100
Oct.	100	250	60	100	1500
Nov.	8	20	60	100	2000
Dec.	nil	1	50	100	2000

N.T. Lacy



Dunlin

RJP.

Salmonellosis in a Black-headed Gull found at Avonmouth

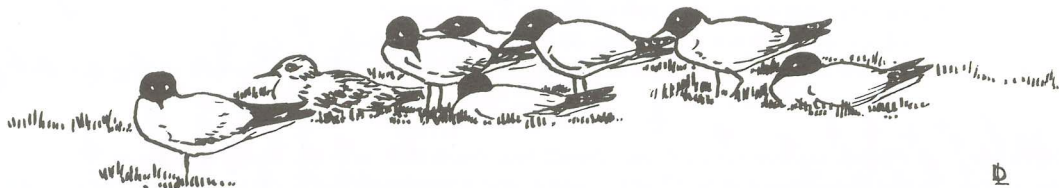
On 1st December 1968 N. Lacy found near the Harbour Master's Office at Avonmouth docks a dead first-year Black-headed Gull bearing a Finnish ring, and as there was no evidence of injury sent the gull for examination. Subsequent ringing information from Finland showed that it had been ringed as a *pullus* at a colony near Helsinki on 1st June six months previously.

The gull at post-mortem proved to be a female, very emaciated and weighing 205g. The internal organs particularly the spleen, liver and air-sacs were dotted with small abscesses 2-3 mm in diameter and yellowish in colour. Sections for microscopy prepared from these lesions showed small inflammatory lesions filled with Gram-negative bacilli. Swabs taken from the spleen gave a pure growth of *Salmonella typhimurium* which was later typed by the Enteric Reference Laboratory as phage type U165. Death was due to a diffuse infection or septicaemia caused by *S. typhimurium* entering the blood stream probably by way of the gut.

The *Salmonella* groups of organisms contains many hundreds of different types and sub-types, many of which are responsible for 'food poisoning' in humans. Their distribution is widespread and can be isolated from many different environments such as sewers, tidal mudflats, animal fertilisers and foodstuffs chiefly meat products and eggs. Perhaps the most well known are the ones causing enteric or typhoid fevers (*S. typhi* and *S. paratyphi*), and in birds *S. gallinarum* and *S. pullorum* causing fowl typhoid and pullorum disease respectively. Fortunately neither are common in wild birds but some types of salmonella give rise to outbreaks in gulls and other waterfowl particularly in Europe where these types of organisms are more prevalent than in Britain. *S. typhimurium* is a common infection amongst poultry but in wild birds produces mainly isolated cases in a variety of species. Oddly enough in this country outbreaks have been reported in Greenfinches and House Sparrows but no major epidemics in gulls have occurred. In the West Country *S. typhimurium* has not been reported as an infection in gulls previously in spite of the large gull population associated with a major industrial city and examination of many gull corpses. The phage type of the particular strain isolated from the Finnish Black-headed Gull is an unusual variety in Britain.

I am indebted to N. Lacy for allowing me to examine the gull and to M.J. Bywater for the bacteriological studies.

R.H. Poulding



Black-headed Gulls

CLUB ACTIVITIES, 1968

This was the second full year of Club meetings, and followed the pattern agreed on originally. The programme drawn up by the General Committee was occasionally modified by circumstances, and to meet members' suggestions. Ideas and proposals are not often received from Club members, but are always welcome. Membership at the end of the year was about 150, the intake of new members more than keeping pace with resignations of those leaving the district.

Publications

Bird News has appeared monthly and is regarded as a focus of information about Club activities and reports of sightings. Up-to-date national news and comments on publications and surveys are now included; quite a number of volunteers help the Editors, Robin Prytherch and Stephen Moon, who took over from Michael Kendall during the year. To collate the ever increasing information sent in by members and to abstract from other publications is very time absorbing but is considered to result in a unique and valuable bulletin. As planned, *Bristol Ornithology 1* No. 1 was published in the middle of the year as an annual report, to include articles and notes of original work by Club members. Favourable comments were received on its high standard, which it is hoped to maintain in future years.

Indoor Meetings

The monthly meetings continued during the early part of the year at Pembroke Hall, Pembroke Road, but as predicted the accommodation proved insufficient. Succeeding meetings, as part of the winter programme, were held mainly at Colston House, which is part of the Colston Hall management. A meeting place which is the right size, accessible and reasonably quiet, with facilities for speakers and members, whilst offering a club atmosphere, seems to be an unattainable ideal, but the Committee believe this is being approached at present at the Club's new venue—St. Mary Redcliffe and Temple School. The 1968 programme was as follows:

25 January	Bird watching around the Mediterranean	P.J. Hayman
25 February	Members' Evening	
21 March	Soaring Flight	C.J. Pennycuik
25 April	Swans	M.A. Ogilvie
26 September	Film Evening	
24 October	Falconry	P. Glazier
21 November	Birds of the Galapagos	M.P. Harris
19 December	Annual General Meeting	

In addition, two Film Shows were arranged in conjunction with the R.S.P.B. on 1 March and 6 December.

Field Meetings

Owing to restrictions in access to the countryside during the foot and mouth outbreak of the winter of 1967-8, no field meetings were arranged until the beginning of February, when meetings in the field took place each month, some rather unconventional, including one at Cap Gris Nez, Northern France. The programme included:-

4 February	Berrow Marsh	11 August	Bristol Channel (by steamer, for seabirds)
24 March	Portland	20-22 September	Cap Gris Nez
20 April	Brean Down	6 & 19 October	Migration Watch (coastal)
18 May	Bristol Channel (by steamer, for seabirds)	24 November	Exe Estuary
14 July	Poole Harbour	15 December	Tally Hunt (7 teams)
15 July	Flat Holm		

Field Studies

The study of Buntings in the area continued, also the survey of "small predators" in support of the Nature Conservancy's project. As in other years, a number of members have again taken part in the winter counts of wildfowl at the Somerset reservoirs, and in the survey of breeding and summering wildfowl, both organised by the Wildfowl Trust, Slimbridge. This year was also the first in a long term B.T.O. project to compile an Atlas of Breeding Birds based on 10 Km. squares. Most of Somerset has been covered partially, and the Atlas will continue to take shape over succeeding years, with the continuing support of Club members, and other organisations.

D.E. Ladhams
Hon. Secretary

BRISTOL ORNITHOLOGY 1*Errata and Pagination*

Several errors regretably occurred during the final production stages of *Bristol Ornithology 1*. Many of these were minor and self explanatory.

Unfortunately the page numbers were omitted by the printer (these should have been added at the very last moment before printing). It was intended that the page numbers should read from 1 (Contents page) to 48. *Bristol Ornithology 2* starts with page 49 (i.e. the second part of Volume 1).

On page 25 the fourth line of the last paragraph (Relation between the chicks and precocious behaviour) should read "..... family (1967) one of the male's young persistently chased the female's when it came near,"

As indicated in the Preface, the Crossword on page 45 should have been on an unnumbered removeable page. However, it became 'part of the book' and a separate sheet had to be inserted so that those who wished could send in the completed crossword.

ALTERATIONS TO LIST OF MEMBERS

(Between 1st February 1968 and 15th June 1969)

New Members

Bank, S.	16 Percival Road, Bristol 8.
Bennett, P.H.	12 Severn Way, Keynsham, Bristol.
Boyd, J.M.	8 Clyde Park, Bristol 6.
Britton, A.M.	180c, Cheltenham Road, Bristol 6.
Buffery, D.	64 Woodstock Road, Bristol BS6 7ER.
Burton, J.	Natural History Unit, B.B.C., Whiteladies Road, Bristol BS8 2LR.
Childs, D.J.	Rusty Hinges, Church Lane, East Harptree, Bristol.
Coates, J.T.	11 Cowper Road, Bristol 6.
Codrington, A.R.	31 Glen Drive, Bristol 9.
Coe, E.H.S.	'Burrow', 33 Grange Road, Saltford, Bristol BS18 3AH.

Collar, N.	10 The Dell, Bristol 9.
Corp, N.	15 Withey Close East, Bristol 9.
Corp, P.W.	23 Parsonage Road, Long Ashton, Bristol.
Crowdson, N.	13 Meadway Avenue, Nailsea, Bristol.
Cuthbert, C.	"The Windings", Theberton, Leiston, Suffolk.
Dale, A.	"Ikona", Le Friquet, Catel, Guernsey, C.I.
Daws, A.	3 Mount View, Beacon Hill, Bath, Somerset.
Edwards, R.C.	17 Donald Road, Uplands, Bristol BS13 7DG.
Gill, A.	44 Pulteney Street, Bath, Somerset.
Goddard, A.	18 Combe Park, Weston, Bath, Somerset.
Hamlyn, Miss M.	"Rosslyn", Middle Lane, Dundry, Bristol.
Hargraves, R.A.	6 Pembroke Road, Shirehampton, Bristol.
Haynes, Miss B.	27 High Street, Wick, Gloucestershire.
Heckles, Miss A.	5 Princes Buildings, Bristol 8.
Hill, A.	66 Maple Road, Horfield, Bristol 7.
Holley, A.D.F.	The Saltings, South Esplanade, Burnham-on-Sea, Somerset.
Hollowell, Mrs. A.	The City Museum, Queens Road, Bristol 8.
Lucas, Mrs.	60 St. Johns Road, Bristol 8.
Lucas, K.	60 St. Johns Road, Bristol 8.
Martin, S.	34 Chandag Road, Keynsham, Bristol.
Maitland, G.	62 Sandling Avenue, Bristol BS7 0HT.
Mitchell, Miss M.M.	Litfield House, Clifton Down, Bristol 8.
Parsons, Mrs. P.K.	7 Church Street, Crewkerne, Somerset.
Perry, L.R.	11 Riverleaze, Sea Mills, Bristol 9.
Pitman, Miss M.A.	Park House, Station Road, Keynsham, Bristol.
Poulding, S.	66 Egerton Road, Bishopston, Bristol 7.
Rake, Miss B.A.	69 Providence Lane, Long Ashton, Bristol.
Rossetti, J.	120 Cromwell Road, St. Andrews, Bristol 6.
Rowat, Miss B.	27 High Street, Wick, Gloucestershire.
Saville, Miss V.	1 Penavon, Clifton Down, Bristol 8.
Shepperson, S.	130 Bradley Road, Trowbridge, Wilts.
Steer, R.	20 Briarwood, Westbury-on-Trym, Bristol.
Sterne, F.R.	9 Charlecombe Way, Bath, Somerset.
Taylor, J.E.	Rowallan, Weston Park, Bath, Somerset.
Taylor, L.G.	29 Birchall Road, Redland, Bristol 6.
Thackery, Miss I.	58 Clifford Gardens, Shirehampton, Bristol BS11 0EE.
Tovey, Mrs. J.	Tockington Manor, Bristol.
Weber, Mrs. M.H.	28 Parrys Close, Bristol 9.
Wilson, B.S.	4 Amberley Close, Downend, Bristol.
Winn, Mrs. G.A.	148 Falcondale Road, Westbury-on-Trym, Bristol.
Wrigley, S.K.	30 Lime Road, Hanham, Bristol.
Young, A.	Hillside Cottage, Chew Stoke, Bristol.
Yourdale, G.	16 Dean Avenue, Thornbury, Bristol BS12 1JJ.

Change of Address

Baggott, G.	15 Waverley Road, Bristol 6.
Cottle, D.A.	4 Eaton Close, Stockwood, Bristol 4.
Fox, K.L.	Plot 45, Queens Road, Churchmeade, Nailsea, Bristol.
Gibson, T.	3 Henry Street, Ripley, Derbyshire.
Goodwin, P.J.	"Forest Hill", Convent Lane, South Woodchester, Stroud, Gloucestershire.
Lovell, Mrs. R.	Whispering Pines, North Hill, Downside, Brockley Combe, Bristol.
Poulding, R.H.	39 Howard Road, Westbury Park, Bristol BS6 7US.
Poulding, Mrs. J.M.	39 Howard Road, Westbury Park, Bristol BS6 7US.
Scott, C.S.	12 Roughwood Close, Watford, Herts.
Slade, B.E.	Plot 84, Church House Road, Little Court, Berrow, Somerset.
Thearle, Mrs. P.	Garden Flat, 17 St. Pauls Road, Clifton, Bristol 8.
Tibbles, M.R.	Vanellus Cottage, Sutton Wick, Bishop Sutton, Bristol BS18 4XR.
Webb, Dr. N.R.	Nature Conservancy, Furzebrook Research Station, Wareham, Dorset, BH2D 5A5.

It is with great regret that we have to record the death, earlier this year, of T.P. Walsh.

We have received letters of resignation from:

Mr. & Mrs. Shields-Schibild
M.C. Harrison

SOLUTION
OF BROC
CROSSWORD
No. 1.

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11	R	A	I	L			12	D	E	S	E	R	T	L	A	R	K					
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20	F	U	21	L	L	W	I	N	G	E	D				22	C	I	R	L			
	I		U		B										23	M		S				A
24	N	A	N	D	I			25	I	N	T	H	E	H	O	S	T					
	C		D		L																	E
26	H	E	U	G	L	I	N	S	C	O	U	R	S	E	R							

BRISTOL ORNITHOLOGICAL CLUB

INCOME AND EXPENDITURE ACCOUNT FOR YEAR TO 30 NOVEMBER, 1968.

RECEIPTS	£	s	d	£	s	d
Balance brought forward from 1967				40	11	9
Subscriptions				144	0	0
Christmas Raffle				8	12	0
Christmas Cards—profit on sales				7	13	3
RSPB/Br OC film show, Colston Hall, Sept. 1967						
—receipts £253. 13. 5						
costs 165. 19. 3				87	14	2
				288	11	2

EXPENDITURE

<i>Indoor Meetings</i>						
Hire of rooms	33	6	0			
Speakers' expenses	21	5	0			
Hire of film (Sept. 1967)	5	5	0			
Miscellaneous expenses		10	0	60	6	0
<i>Production and distribution of Bird News</i>						
Editor's expenses	23	15	0			
Stationery	18	9	4			
Printing of folder £7. 16. 6						
—less sale of folder 10. 6	7	6	0			
Typing	4	7	6	53	17	10
<i>Bristol Ornithology I</i>						
Printing	85	0	0			
Miscellaneous expenses	14	8	8	99	8	8
<i>Miscellaneous expenses</i>						
Officers' expenses— Chairman 2. 15. 2						
Secretary 3. 18. 10						
Treasurer 2. 9. 2	9	3	2			
Stationery	6	0	0			
Hire of room for Committee meeting	1	2	6			
'Winter' programme card	9	18	6			
Loss on Steep Holm Trip, July 1968	2	16	0			
BTO Atlas Project expenses		10	6			
Cheque book		5	0	29	15	8
				243	8	2
Cash in hand and at Bank				45	3	0
				£288	11	2

Rosemary Lovell
Honorary Treasurer

T.B. Silcocks
Honorary Auditor

CHEW BREW

by Ardea insomnia

The most irritable bird at Litton
Is an adult female Little Bitton
Every other *A. Minuta*
Declines to migrate north of Ceuta,
Can you hitton some eggs she can sitton?

If ever you go to Barrow
Plant a vegetable marrow,
If you spit out some pipse
In a total eclipse,
You may hit a somnolent sparrow.

An eminent ringer at Chew
Tried to sleep in the fishermen's lew,
A Baillon's Crake
Kept him awake,
But the Rare Men declare it's not trew.

A grebe that was strangely I/Queued
Fed a vest and some pants to her brueued,
K.E.L.S.
Minus his dress,
Wrote his 5th Ph.D. in the nueued.

At Cheddar my daughter Cinerea,
After a dose of diphtherea,
Got up eurleigh
And flew to Durleigh,
But returned with a touch of malerea.

I intend to fly west to the Wexford Slob,
For all the best herons compare it with gob,
(tho' I'm partial to Chard
with it's flavour of lard),
I'm not at my best and fed up with my job,
And moving my nest will cost only ten bob.

ADDENDUM

Well, since the first verse was writt,
Life has improved for that Bitt,
A deranged Bearded Reedling
Succumbed to her needling,
And now there are Tit-bitts at Litt.

K.D.S.



