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Norfolk Bird Report - 1983

Editor: MICHAEL J. SEAGO
County Recorders: P. R. ALLARD, D. A. DORLING & P. D. KIRBY
Editorial Assistants: P. R. ALLARD, P. R. CLARKE, G. E. DUNMORE, M. FISZER, J. B. KEMP and DR. M. P. TAYLOR

Norfolk Mammal Report - 1983

Editor: REX HANCY

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NORFOLK BIRD REPORT 1983

Editorial

The Council of the Norfolk and Norwich Naturalists Society, in association with Norfolk Ornithologists Association, is pleased to present the annual report on the birds of Norfolk.

Review of the Year: The beginning of the year was generally mild with at least 7 Blackcaps still feeding on buckthorn berries at Holme. Over 5000 Pink-footed Geese were present in the north-west of the county and 2000 Pintail in the Wash. The Night Heron at Briston, whilst likely to have been an escape, attracted visitors until nearly the end of January. Other birds of interest which remained until March included Black Brant at Cley and Red Kite at Hedenham.

February was a much colder month, remembered for the tragic wreck of hundreds of dead auks around the whole of the Norfolk coast. Large numbers of Red-throated Divers were noted by the hardy seawatchers at Paston; on the opposite side of the county Bewick's Swans reached maximum numbers at Welney. Oddities included 3 Grey Phalaropes at Cley and Dotterel at Holkham. The latter locality also produced the rarity of the winter: a Lesser White-fronted Goose, which stayed a fortnight. This bird was nearly the same size as the White-fronted Geese with which it associated; this flock in turn was often mixed with Pink-footed and Brent Geese resulting in many frustrated birdwatchers with eyestrain! Eventually most managed to see the bird.

The months of March and April saw the departure of winter and the arrival of summer visitors, but as in recent years these two months, especially April, were generally cold and wet. Nevertheless in spite of the weather migration appeared to continue uninterrupted with a very large movement of Collared Doves at Holme in early March and Quail there in mid-month. March also produced Green-winged Teal at Welney and of particular interest unusual numbers of Slavonian Grebes off the north coast. April saw Spoonbills increase at Cley to 6, a species which was present in the county through the summer. Other highlights included 4 Rough-legged Buzzards and 30 Kestrels on one day at Holme, Ferruginous Duck at Cantley, Grey Phalarope at Salthouse and Serin at Paston, together with an abnormal passage of Yellow Wagtails, often accompanied by birds of various Continental races.

May is usually a good month for the unexpected rarity in Norfolk, but 1983 exceeded everybody's hopes, resulting in the best spring migration in terms of variety of species for several years. The weather did not come upto the same expectations, it being mostly cold and wet. The first half of the month was relatively quiet, attractions being a White Stork flying over Breydon and Baird's Sandpiper at Titchwell. Presumably unsettled weather resulted in the displacement of late spring migrants later in the month. The 22nd was a real red-letter day with the arrival of a summer plumaged Spotted Sandpiper at Cley. In the early afternoon two fortunate observers had two Bee Eaters fly over their heads near Blakeney village; in the evening an adult Night Heron flew into the reed-beds at Cley to feed, attracting crowds of visitors on subsequent evenings. Further arrivals to Cley in this exciting period included Cattle Egret, Terek and Marsh Sandpipers and Red-necked Phalarope.

A number of rarities usually appear in June: a Roller in the Brecks for two days was the main attraction, closely followed by two Rose-coloured Starlings and Wilson's Phalarope. It was also a good year for the county's breeding specialities. Marsh Harriers produced an amazing total of 49 young and Montagu's Harriers were also successful. There was a total of 14 booming Bitterns and 37 pairs of Avocets. A pair of Kentish Plovers attempted to breed for the first time and Cetti's Warblers expanded their range. Hobbies are increasing in numbers as a breeding species in this country and it is hoped that they will shortly be added to the list of Norfolk's regular breeding species.

The relatively warm weather of June continued throughout July. The Wilson's Phalarope remained on the north coast, merely moving from Titchwell to Cley. The beginning of the month saw a large concentration of Cuckoos between Acle and Great Yarmouth; followed by a Little Egret which made brief visits to Strumpshaw and Breydon; a Marsh Sandpiper (the second of the year) appeared at Holme at the end of the month. The real rarity of the year was undoubtedly 'THE' tern which was found early in August with the Sandwich Terns at the end of Blakeney Point. Initially the subject of much controversy over its identification it is now generally agreed (at the time of writing) that it was a Lesser Crested Tern, although this has to be finally ratified. This bird attracted hundreds of birdwatchers over the weeks, resulting in more records than usual for Blakeney Point, including Long-tailed Skua, Sabine's Gull and Roseate Tern. The month also produced a very large movement of Arctic Terns at Paston and a lone Cory's Shearwater off Horsey. A high proportion of easterly winds also occurred, as now appears to be the norm for August, with a scattering of Icterine and Barred Warblers, together with 2/3 Greenish Warblers.

As soon as September arrived the easterly winds departed to be replaced by predominantely south-westerlies for nearly the whole period. The month was therefore generally disappointing and only compensated by some interesting seabird movements. These included a large movement of Arctic Skuas at Paston, several moderate counts of Manx and to a lesser extent Sooty Shearwaters, some impressive Gannet movements and several sitings of Leach's Petrels, mostly in relatively calm sea conditions, including 8 flying north at Horsey one morning the day after a northerly gale. A Great White Egret appeared at North Wootton in mid-month and was seen irregularly at several north coast localities until early October. Another 'second' for the county was a Marsh Warbler trapped at Sheringham also in mid-month; one wonders how many birds of this species arrive in Norfolk and remain undetected! At the end of the month and the beginning of October a brief spell of easterly winds occurred resulting in a long awaited fall of passerines. Robins and Goldcrests predominated, accompanied, however, by 2 Yellow-browed Warblers and 4 Red-breasted Flycatchers.

October, which is normally one of the best months of the year. was probably the worst in living memory apart from spectacular movements of Jays. There was a virtual absence of easterly winds and migration was below average or nearly non-existent for much of the month. Unusual waders were few and far between with only 4 Pectoral Sandpipers and 3 Red-necked Phalaropes of interest. Not until the 21st did the wind veer briefly to the north-east but this only produced a small arrival of winter visitors. Strong northerlies further to the north in the North Sea on the 28th saw small numbers of Little Auks passing Cley beach in the afternoon; these were eclipsed by unprecedented numbers the next day especially on the east and north-east coasts. Thousands of Goldcrests also arrived on the 29th and possibly by way of compensation for an otherwise uninteresting month the next day a Corncrake was seen briefly at Holme and a Pied Wheatear discovered at Weybourne.

The wheatear stayed several days at the beginning of November, but the weekend of the 5th/6th saw many disappointed birdwatchers at Weybourne caused by its departure the day before. Many travelled on to Wells to see a flock of Crossbills which had arrived towards the end of October. Good views of these birds were eventually obtained, but confusion and controversy reigned for some time until common agreement was reached that they were in fact Parrot Crossbills. The same weekend saw the sighting of a Little Bunting on Blakeney Point. The county was 'invaded' again the next weekend, the attraction being a Red-breasted Goose. The 12th was also noticeable for interesting numbers of Bewick's and Whooper Swans, Brent and Barnacle Geese and Eider, the last major movement of the autumn. The Red-breasted Goose remained at Holkham until the end of the year, the star bird among a variety of geese flocks, including 9000 Pinkfeet in the Brancaster/Docking area, which attracted considerable attention in the last few weeks of the year.

Recording: Records for the 1984 Report should be sent *by the end of January* to Michael J. Seago, 33 Acacia Road, Thorpe St. Andrew, Norwich NR7 0PP. *Late arrivals are not guaranteed inclusion in the current Report.* Contributors are requested to submit notes in the order followed in Dr. K. H. Voous's *List of Recent Holarctic Bird Species* (1977), and not in diary form which creates very time-consuming situations. In order to minimise the work involved, records will not normally be acknowledged. The names of all contributors will be included in the Report.

The County Records Committee (B. Bland, G. E. Dunmore, D. J. Holman, S. C. Joyner and J. B. Kemp) considered more records than in any previous year. Only a very small percentage was rejected, a total of 25 records submitted by 19 observers. In only 7 instances did the Committee consider the species had been totally misidentified, the other records not being adequately documented to establish beyond doubt the correct identification. The Committee would like to re-iterate the pitfalls involved in specifically identifying both Black-throated and Great Northern Divers over the sea, often at long range with no other divers in the same field of view for comparison. The identification of Sabine's Gulls and Long-tailed Skuas also gives cause for concern.

The following is a list of species and sub-species considered by the Local Records Committee: Black-throated and Great Northern Divers; Red-necked, Slavonian and Black-necked Grebes: Cory's, Great, Sooty and Balearic Shearwaters; Storm and Leach's Petrels; Purple Heron, White Stork, Ruddy Duck, Red-crested Pochard, Ferruginous Duck, Honey Buzzard, Red Kite, Montagu's Harrier, Goshawk, Buzzard and Rough-legged Buzzard; Peregrine, Spotted Crake, Corncrake, Kentish Plover, Dotterel, Temminck's Stint, Buff-breasted Sandpiper, Red-necked and Grey Phalaropes; Pomarine and Long-tailed Skuas; Mediterranean, Sabine's and Iceland Gulls; Roseate Tern, Black Guillemot, Little Auk, Hoopoe; Richard's, Tawny, Scandinavian Rock and Water Pipits; all continental races of *flava* Wagtail excluding Blue-headed, Bluethroat; Savi's, Icterine, Barred and Yellow-browed Warblers; Red-breasted Flycatcher, Northern Long-tailed Tit, Northern Tree Creeper, Golden Oriole, Raven, Serin, Scarlet Rosefinch and Ortolan Bunting. Descriptions should be submitted for these semi-rarities unless the bird or birds were seen by 3 or more observers (in which case the names of the other observers should be stated).

Records of species considered by the British Birds Rarities Committee should be submitted with full details as soon as possible after observation, preferably by the initial observer(s), and not left until the end of the year. As in previous years several

records cannot be included in this year's classified list as decisions are still awaited from the Committee.

Acknowledgements: Thanks are due to R. Tidman for obtaining photographs and also to the following photographers and artists: N. Arlott, G. M. S. Easy, Pam Haddon, H. A. Hems, J. A. W. Moyes, R. Millington and J. Reed. Among the vignettes is a further selection by the late R. A. Richardson including illustrations of waders first published in *The Atlas of Breeding Birds in Britain and Ireland.* Acknowledgement is due to Trevor Poyser for permission to include these drawings which represent Richard's final published work.

Thanks are also due to Holme Bird Observatory/Norfolk Ornithologists Association for records; to Norfolk Naturalists Trust Wardens; to the National Trust (Blakeney Point); to the Nature Conservancy Council (Scolt Head, Bure Marshes (Woodbastwick) and Hoveton Great Broad); to the R.S.P.B. (Strumpshaw, Titchwell and Snettisham); to Nar Valley Ornithological Society; to G. E. Dunmore (for liaising with British Birds Rarities Committee and acting as Secretary/Chairman of the local Records Committee); to D. J. Holman for having served on the County Records Committee since its inception; to P. R. Allard and D. A. Dorling for assistance and encouragement; to A. D. Boote, Mrs. M. Dorling, Mrs. J. Dunmore, Mrs. P. A. Rix and Mrs. S. F. Seago and to all other contributors.

The BTO in Norfolk

BTO members living in Norfolk, had an extremely full year in 1983. In addition to the Winter Atlas, which occupied both winter periods, the ten-yearly Gull Roost Census was carried out in late January. The results are given below:

	Bl.h.	Common	Bl.h/Com	Herring	G.B.B.	Her/B.B.
West						
King's Lynn	7,883	6,791	750	45	298	20
Snettisham			9,664	35	74	
Hunstanton	1,997	1,748		1,830	15	
Thornham	1,000	5,000		150	100	
Total	10,880	13,539	10,414	2,060	487	20
North						
Brancaster	6	13			7	
Wells	2,000	275				225
Blakeney	32,797	4,834		1,871	926	1,078
Total	34,803	5,122		1,871	933	1,303
East & Broads						
Hickling	40,000	346		8	84	
Ranworth	20,000	100		100	20	
Wroxham	350	35		40	270	
Filby	3,019	6		2		
Breydon	41,000	3,000		550	5,400	
Total	104,369	3,487		700	5,774	

The most interesting point to emerge from the survey was that Black-headed and Great Black-backed Gulls showed a marked increase around the coast from West to East, whilst Common and Herring Gulls were more numerous in the West. Only a single Glaucous Gull was recorded — at Lynn Point. The effect of tides and/or weather on gull roosts is clearly shown by the totals from Brancaster, a site normally holding 2-3,000 gulls.

During April and May, the Mute Swan survey was carried out and the results are reported in full on page 340. Breeding surveys of Ringed Plover, Little Ringed Plover and Wood Warbler are being undertaken in 1984. With the completion of the fieldwork for the Winter Atlas, a Winter Shorebird Count will run from mid-December 1984 to the end of January 1985. Two single species surveys are planned for 1985 — a Heronry census during the summer and a non-breeding Cormorant survey.

The results of the BTO Ringing Scheme, as they effect Norfolk, are reported on page 367. One of the other long-term monitoring programmes run by the Trust is the Waterways Bird Survey. Despite the miles of river in Norfolk, not a single stretch is covered for the WBS. Observers are simply requested to make regular walks along the same stretch of river during the breeding season, recording those species seen. Please contact either Alec Bull, Hillcrest, East Tuddenham, Dereham or Moss Taylor, 4 Heath Road, Sheringham if you would like to help with any of the above surveys or would like further details of the British Trust for Ornithology. Finally, sincere thanks to all those who helped with the fieldwork in 1983.

Mute Swan Census 1983

Alec Bull and Moss Taylor

The 1983 Mute Swan Census, carried out in April and May, was a repeat of that undertaken in 1955, 1961 and 1978. Although only five years had elapsed since the last survey, the increasing threats faced by the species had prompted the Nature Conservancy Council to recommend a national census in 1983. Organised by the British Trust for Ornithology, the census was based on 10km squares and observers were requested to record all non-breeding herds in April and all breeding and territorial pairs in April and May. The totals recorded in Norfolk in 1978 and 1983 are given in the following table:

	Breeding pairs	Territorial pairs	Total no. of pairs	Non-breeders
1978	137	57	194	675
1983	156	91	247	916
Increase	14%	60%	27%	36%

Although twice as many breeding and non-breeding swans were recorded in East Norfolk, compared with the West of the County, similar increases were noted in both halves. In particular, the number of territorial pairs showed a marked increase, almost certainly due to the late breeding season in 1983. Fewer pairs than usual had completed incubation by the end of May, when the survey officially finished, and so unless the nest was located, pairs were recorded as territorial rather than breeding.

The number of pairs (both breeding and territorial) and non-breeders in each 10km square in Norfolk in 1978 and 1983 is shown in Figure 1. In East Norfolk, peak numbers of breeding and territorial pairs were once again recorded on the Halvergate Marshes and the dykes along the Waveney valley, while the largest herds of non-breeders were along the River Waveney at Geldeston (93) and on the Acle Bridge Marshes (76). Encouraging results in Broadland, showed that after the all time low in 1978, when only 22 pairs and 72 non-breeders were recorded (compared with 40 and 383 respectively in 1961), in 1983 there were 31 pairs and 263 non-breeders.

In West Norfolk, the largest increase in pairs occurred in the Brandon and Narborough squares, with the largest herds of non-breeders on the River Ouse at King's Lynn (90) and on the Little Ouse near Brandon (72). All-white 'Polish' Mute Swan cygnets were reported from Felbrigg Lake (3 out of a brood of 5), Bawburgh GP (2 out of 6) and Titchwell (4 out of 4).

Without doubt these results have come as a great surprise, when many conservationists were predicting a dramatic fall in the swan population. Perhaps as a result of an increased awareness of the dangers of pollution and disturbance by boats (at least on the Broads), measures taken to improve the fauna and flora are helping the swans. On the evidence available from Norfolk, it would appear that despite the potential problems of lead pollution and discarded fishing line, the Mute Swan population is not declining as feared. However, it is important to realise that the work of the Swan Rescue Service has not been taken into account. Is it possible that, due to the release of rehabilitated birds collected from other parts of Britain, the swans in Norfolk have increased at the expense of populations elsewhere? This can only be answered when the national results are available. The local organisers of the survey are extremely grateful to the many observers who contributed records.

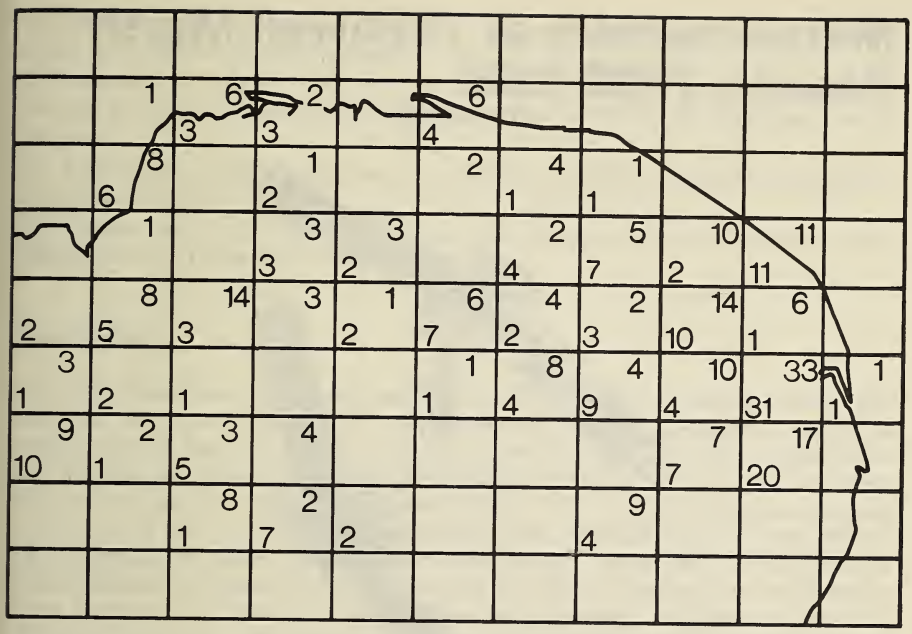
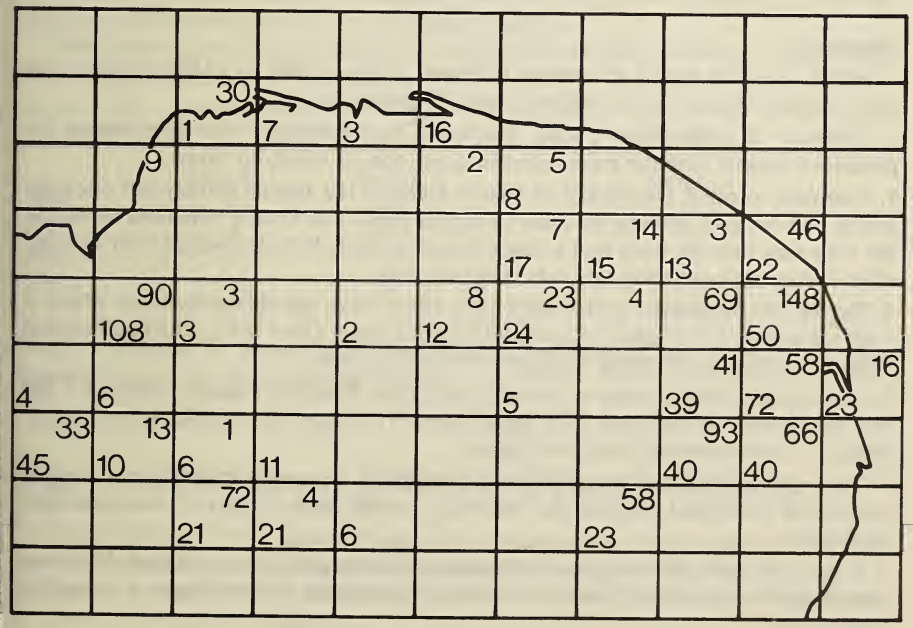


Figure 1. *Upper map shows combined totals of breeding and territorial pairs of Mute Swans in each 10km square. Lower map totals of non-breeding birds. 1978 figure in lower left corner of square, 1983 figure in upper right corner of square.*



Marsh Harriers at Titchwell Marsh Reserve (1980-1983)

Norman Sills

Summary

1. Marsh Harriers nested at or near Titchwell between 1980 and 1983. During that time the birds based on the reserve reared 29 fledged young.

2. Distance of nests from public footpaths and freedom from disturbance by predators suggest that the birds selected quiet sites in which to breed.

3. Contrary to other knowledge of Marsh Harriers the female usually left once the young had fledged, leaving the male to supply prey. The female remained behind in the only year that the male had a single brood to feed. Females helped with hunting when the males's catching rate was relatively low.

4. During the incubation phase most prey came from marshland habitats where it took the male an average of 28 minutes to catch prey. Once the young had hatched hunting became increasingly frequent over arable land.

5. The arable hunting range expanded during the breeding season, reaching 1,250 and 950 hectares in 1982 and 1983 respectively. The range was smaller when the proportion of low-growing crops was higher.

6. The male hunted mainly over areas containing low crops and features such as tracks and scrub and avoided the centres of cereal fields. Fields of peas provided most prey.

7. It took the male an average of 18 minutes to catch prey over farmland. He never hunted in the rain, which may be a factor controlling Marsh Harriers' breeding distribution.

8. The male preferentially took prey to one of his two females (the primary female) which received two-thirds of his catch.

9. The secondary females' main prey was rabbit and moorhen. The male's main prey was starling and pheasant but the relative amounts varied widely from one year to the next.

10. Total input of prey during the year equalled or slightly exceeded that found in continental studies.

11. Harriers were not observed taking reared pheasants but their presence near release pens made the poults very nervous.

Introduction

Titchwell Marsh reserve was acquired by the RSPB in 1973 but Marsh Harriers did not nest there until 1980. During the intervening years a dramatic increase in breeding Marsh Harriers occurred in Britain, probably due to the large population in the Netherlands being faced with considerable reduction in the area of reedbed polders (Day in prep). The breeding population of Marsh Harriers began to increase in Norfolk in 1975 and 64 young were reared in the county in the five years 1975 to 1979, (Seago 1976-1980). Titchwell Marsh was probably unsuitable during those five years because management work was in progress and the reedbed was subjected to tidal flooding. The birds occupied undisturbed, freshwater reedbeds elsewhere in Norfolk. By summer 1980 management work in the reedbed had ceased and, for the first time, 24 hectares of marsh were under controlled freshwater flooding. Between 1980 and 1983 ten nesting attempts produced twenty-nine young from eight successful nests (table 1), an average of 2.90 young per nest or 3.63 per successful nest. The national average number of fledged young per nest between 1980 and 1982 was similar, varying between 2.0 and 2.6 (Day in prep).

This paper reports a study of the time budgets and feeding ecology of Marsh Harriers at Titchwell from 1980 to 1983.

	male 1		*male 2*
	female 1	*female 2*	*female 3*
1980	4	2*	0
1981	4	0	5
1982	3	3*	—
1983	4	4*	—

Table 1 *Number of young Marsh Harriers fledged from adults based at Titchwell Marsh.* (* nest not on Titchwell Marsh).

Part 1: Activities of Male and Primary Female

In 1980, 1982 and 1983 a male at Titchwell was mated to a female within the reserve (primary female) and another (secondary female) outside.

Because of the availability of observers and watching points, observations were confined to the primary female.

Methods

In 1980 harriers were watched from a tree 100 metres from the nesting area but in 1982 and 1983 from an elevated hide 300 to 400 metres from the site. From the last position virtually the whole of the 26 hectare reedbed was visible, as well as 23 hectares of open water, 50 hectares of saltmarsh and 5 hectares of grazing marsh. Only 20 hectares of arable land could be seen.

Observation periods lasted for generally 2 or 3 hours but all day on some occasions using several observers. The activities of both sexes were divided into 10 categories and a record kept of each activity to the nearest minute. During the three years, observation periods totalled 269 hours, mainly in the incubation phase, the first third of the nestling phase and the post-fledging phase; and mainly in 1982 and 1983. Observations during the remaining two-thirds of the nestling phase amounted to only 17 hours because observers were watching the male over his hunting range.

Results and discussion

The bars in table 2 (solid for male, stippled for female) show the extent of ten activities during five phases from the commencement of incubation to the dispersal of juveniles from the reserve.

One point requires explanation: the second and final thirds of the nestling phase were observed in 1980 only and this happened to be the only year when the female left the reserve for long periods to hunt for prey. It might seem logical, therefore, to use 1980 data only for the post-fledging phase but in that year the female left as soon as the first young fledged and as 108 hours of observations were made in 1982/83 these have been used in the table.

Activities of female

The female spent 98% of her time on or near the nest during the *incubation phase*. She spent the remaining time feeding on prey brought in by the male (1% of her time), perching in nearby trees before returning to the nest (0.5%), collecting and carrying material to the nest (0.4%) and mobbing Carrion Crows and Canada Geese and circling overhead both less than 0.2% of her time. She was never seen to leave the reserve and was rarely more than 100 metres from the nest-site.

If humans or other Marsh Harriers went too close to the harrier's nest the adults flew a few hundred metres away and then circled high above the nest area to watch the intruders but this activity was negligible during the period of observation.

Another point on disturbance concerns the positions of the nest-sites relative to public footpaths. Between 1980 and 1983 various female Marsh Harriers built six nests in the Titchwell reedbed. No nest was within 450 metres of a public footpath and mean distances were 600 metres from a footpath to the west and 800 metres from another footpath to the east. Newton (1979) has shown that relatively high levels of disturbance reduce population densities of other large-raptor species in Europe so it seems likely that the harriers' nests at Titchwell were selected to avoid the continuous presence of visitors on the west and east boundaries of the reserve.

The female did not hunt during the incubation phase but relied on the male to provide prey.

Because of asynchronous hatching the young were in the process of hatching for much of the first third of the *nestling phase* and so during 35 hours observation the female spent 94% of her time at the nest. The amount of time she spent feeding herself remained the same but she began perching in nearby trees slightly more often.

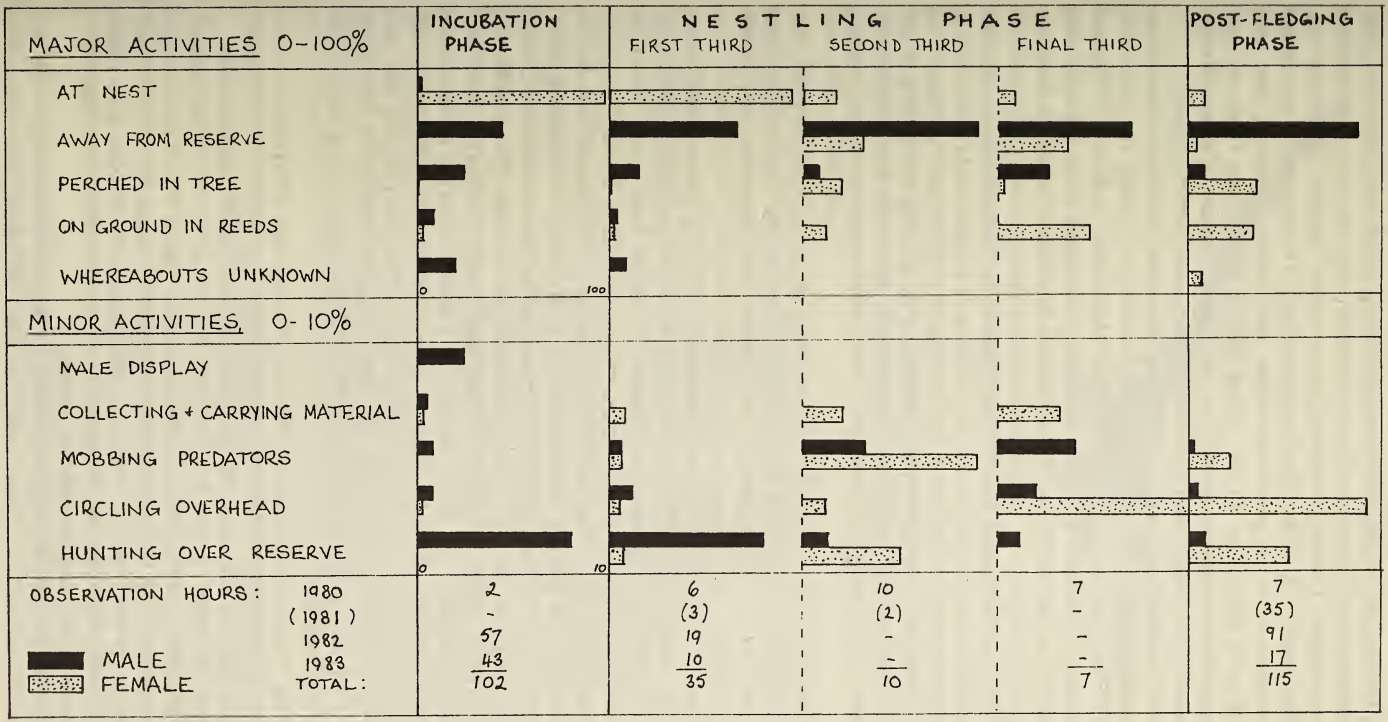


Table 2 *Average percentages of time spent in different activities by male and primary female.*

Note: Nestling phase began when prey was taken directly into the nest; prior to that the female ate well away from the nest. The post-fledging phase began when a juvenile was first seen practising flight above the reeds. The extent of each activity was calculated as an average percentage over the three years.

In converting the nest into a platform for the growing young she spent more time (nearly 1%) collecting and bringing reeds to the nest-site and she also began hunting over the reserves reedbed. Circling overhead also increased slightly. These last four activities (totalling nearly 4% of her time compared with 1% during the incubation phase) would enable her to see predators earlier, and further from the nest, and therefore afford more protection to the young despite being away from the nest itself. Mobbing predators increased slightly but, with the exception of a possible Bittern on one occasion, the targets were passing pigeons and Carrion Crows.

Only 17 hours of observations were made during the second and final thirds of the nestling phase and they were in 1980 when the female (untypically for Titchwell) spent over 30% of her time away from the reserve. According to Brown (1976) and Cramp and Simmons (1980) this is typical behaviour, especially when the male may be unable to provide sufficient prey, although Brown describes a brood on Anglesey which, like typical situations at Titchwell, was provisioned entirely by the male throughout the entire nestling and post-fledging phases. Newton, however, gives an example of the female hunting only when the young were fledged and regards this as typical for Marsh Harriers. In 1980 there was nothing to suggest that the male could not provide sufficient prey so the female seemed to be putting the young at unnecessary risk by leaving the reserve for long periods and since her contribution amounted to only 5 prey items in 23 hours or 18% of the total during the nestling phase.

The female spent more time perching in nearby trees, standing in the reedbed, collecting material and circling overhead than during the first third of the nestling phase and, in typical years, when she remained on the reserve, the proportion of time occupied by these activities was correspondingly higher.

Mobbing predators during the latter two thirds of the nestling phase occupied 4% of the females time based on just 17 hours watching. On all 10 occasions the intruder was a Bittern. Bittern-mobbing was first noticed by casual observation when the young harriers were hatching but it became more regular halfway through the nestling phase. The Bittern had to be within about 80 metres of the harriers nest before mobbing began and, if the Bittern wandered closer to the nest, the mobbing intensified. Both harriers mobbed incessantly for 20 minutes on one occasion — despite retaliatory action from the Bittern — but eventually the intruder flew and landed over 100 metres away in reeds whereupon the mobbing ceased. During the four years there was no known instance where the presence of a Bittern deterred these harriers from taking prey to their nest, but when another pair of harriers was confronted with the same situation the incoming male quickly ate the prey he was carrying and then assisted the female in mobbing the Bittern. The Bittern was at, or within a few metres of the nest, but it was later proved that none of the five 10-day old young nor the two unhatched eggs were predated.

Bittern-mobbing was most prevalent in 1980 and 1982 (but not 1981) when the harriers nest was within 50 metres of standing water (reedbed or ditch) but virtually absent in 1983 when the nest was over 100 metres from such Bittern feeding sites.

In all four years the male remained for at least 40 days after the young fledged. The activities of the female during the *post-fledging phase* varied widely from year to year. Table 3 shows how long the female remained with the young after the first one fledged and also shows the extent to which she contributed to the total prey input.

Cramp and Simmons state that the male usually leaves soon after the young fledge and that the female alone remains with the young.

The possibility that the female helps with hunting simply when the male has two broods to feed is not supported by these results. In 1980, 1982 and 1983 the male had

six, six and eight young to feed respectively and in two of those years the female provided nothing for the young during the post-fledging phase. In 1981, however, when the male had only four young to feed, the female stayed until late August and caught over 40% of the prey.

In 1981 virtually all of the female's prey came from beyond the reserve. The fledglings hardly needed parental protection so by hunting over arable land the female could hunt more effectively (as will be shown later) and therefore contribute significantly to the total prey-catch.

In 1982 and 1983 the female remained on the reserve for the first two weeks of the post-fledging phase. In 1982 she spent 8% of her time hunting over the marsh but 60% either perching in a tree or in the reeds. In 1983, when the male had eight young to feed, she did not even attempt to catch prey but occupied herself perching in trees (51%), circling overhead (24%) and standing in the reeds (21%).

This apparently illogical behaviour may be explained as follows. Newton suggests that polygyny occurs when there is a good supply of easily available prey in habitats such as the open, tree-less areas surrounding Titchwell; as the Titchwell male was bigamous in all four years and successfully reared a higher-than-average number of young it may be assumed that there was generally an adequate supply of prey in the area. However, during the nestling and post-fledging phases, there may have been short periods when prey was less available. This would cause the males catching-rate to fall and therefore force the female to assist. Thus the data shows that when the male brought prey in at the comparatively high rate of 1.50 to 2.10 items per young per 10 hours the female failed to hunt; but when his catching rate was lower, at 0.90

	Female remained (days)	*Females prey contribution*
1980	1	nil
1981	61	41%
1982	17	17%
1983	12	nil

Table 3: *Time that female remained after young fledged and her prey contribution (% of total) during post-fledging phase.*

to 1.50 items/young/10 hours the female caught between 15% and 41% of the prey during a given phase. The exception to this was in 1980 when the female caught 18% of the prey in the early part of the nestling phase despite the male catching 2.36 items/young/10 hours.

Activities of the male

During the *incubation phase* the male divided his time more or less equally between his two females and judging from observations at Titchwell he spent 60% of his time at each nesting area perching, displaying, collecting material, circling or hunting.

An average of 7.5% of his time was spent hunting over the reserve. Assuming the same applied at the secondary females nesting site he was hunting over marshland habitat for 15% of time; considerably less than the 42% found with a bigamous male at Lauwersmeer in the Netherlands by Altenburg *et al* in 1982.

Displaying to unattached females ceased during the first third of the *nestling phase* but all the other activities remained the same except for hunting away from the reserve which increased slightly.

Noticeable changes occurred during the second and final thirds of the nestling phase: because the female spent far less time at the nest and far more time in the "protective activities" the male was away much longer. During the entire nestling phase the male was at Titchwell for an average 30% of his time, probably 20% at the secondary females site and therefore hunting over farmland for the remaining 50%, which is comparable to the Dutch study.

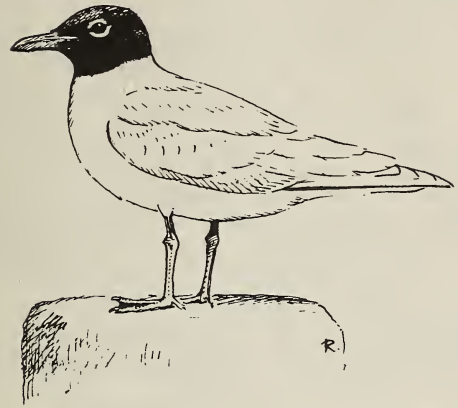
In the *post-fledging phase* he was at Titchwell for 13% of his time, an estimated 7% at the second nest and away hunting, therfore, for about 80% of his time. In three years watching over the hunting range the male was seen perching for a long time on only one occasion, so the 80% hunting time is probably realistic, but far in excess of the 5½ hours per day (35% of daylight) in the Dutch study.

So whereas the bigamous male in the Netherlands hunted for between 35% and 50% of the day over the incubation, nestling and post-fledging phases the equivalent for the bigamous male at Titchwell appeared to increase steadily from 15% to 50% to 80%. In the post-fledging phase the Titchwell male caught more prey per hour of hunting than the Dutch birds so the explanation probably lies in the fact that the Titchwell female generally contributed very little prey (whereas the Dutch females did) and possibly because the average prey-size caught by the Titchwell male was less than that in the Netherlands.

(The second Part will appear in the Norfolk Bird & Mammal Report 1984)

Yarmouth District Mediterranean Gulls

P. R. Allard



The second British example of a Mediterranean Gull shot on Breydon Water on Boxing Day 1886 may be seen to this day in Norwich Castle Museum. It was obtained quite accidentally when a wildfowler unable to extract a cartridge from his gun fired at the first bird which presented itself. The unfortunate gull made ornithological history. The next Norfolk record was over sixty years later when one appeared at Wiveton in March 1949 although one was claimed by A. H. Patterson at Breydon 16th May 1909.

Since 1952 Mediterranean Gulls have appeared most years on the north Norfolk coast, but it was 1960 before one was again identified in south-east Norfolk. Then a second year bird patrolled Winterton beach in September and early October. The first Yarmouth record at the now regular harbour entrance site was in August 1962. Since then birds, mostly adults, have appeared almost annually especially in recent years. Breydon — increasingly well watched — was visited by a first-summer individual in July 1975.

The next Breydon record was a fine adult in breeding plumage 22nd March 1978. The following year's events were quite unprecedented. Following construction of tern platforms on the estuary, a congregation of gulls often harrassed terns returning with fish. Lengthy observations revealed the presence of at least eight first-summer Mediterranean Gulls between 9th May and 26th June including five together. Also in 1979 first-summer individuals appeared in May at Yarmouth harbour entrance — a site often favoured by near-adult and adult birds.

During 1980 and 1981 Breydon was again visited by first-summer birds in May. A similar pattern was provided in 1982 with a first-summer Mediterranean 15th May and six together on 23rd. Especially interesting was the identification of a juvenile on the early date of 14th August. Juvenile and first-winter birds still appear to be uncommon, although doubtless overlooked.

In 1983 the aim was to record Mediterranean gulls locally each month. The year opened with two residents at Yarmouth harbour entrance throughout January: an adult and a second-winter bird. Both could be readily spotted at ebb tides after the discharge of sewage. These individuals were last seen 26th February. March proved difficult. Despite regular visits it was only on the 9th that a second-winter bird ap-

peared briefly at the harbour entrance. April too was troublesome despite many hours watching at Breydon and at the harbour entrance. But at mid-day on 28th after three hours watching a first-summer bird headed north at the harbour entrance. Another, or possibly the same bird, appeared on Breydon next day.

May is nowadays the peak time for first-summer individuals at Breydon. The month began well with a dark first-summer bird on 9th still showing traces of first-winter attire. Another much paler individual was found on 10th. Next day a spell of colder west to north-westerly winds prevailed and no Mediterranean Gulls were found. The 16th saw a return to warmer south to south-east winds and that evening a group of four Mediterranean Gulls was resting on the mudflats. Only one remained on 18th and this was seen to depart high to the north in late afternoon. Cooler weather returned on 19th, rapidly changing again to light southerlies by 21st when a bird with very dark head and mainly reddish bill appeared and stayed all day. Cool conditions returned on 23rd with strong north to north-easterly winds and again Mediterranean Gulls were absent. However, light south-easterlies arrived on 30th coinciding with the appearance at mid-day of a Mediterranean Gull displaying a yellow-orange bill and palish head. This soon departed to the north-west. A new arrival next day showed an orange-red bill and this was again seen 1st June. Two were together on 2nd.

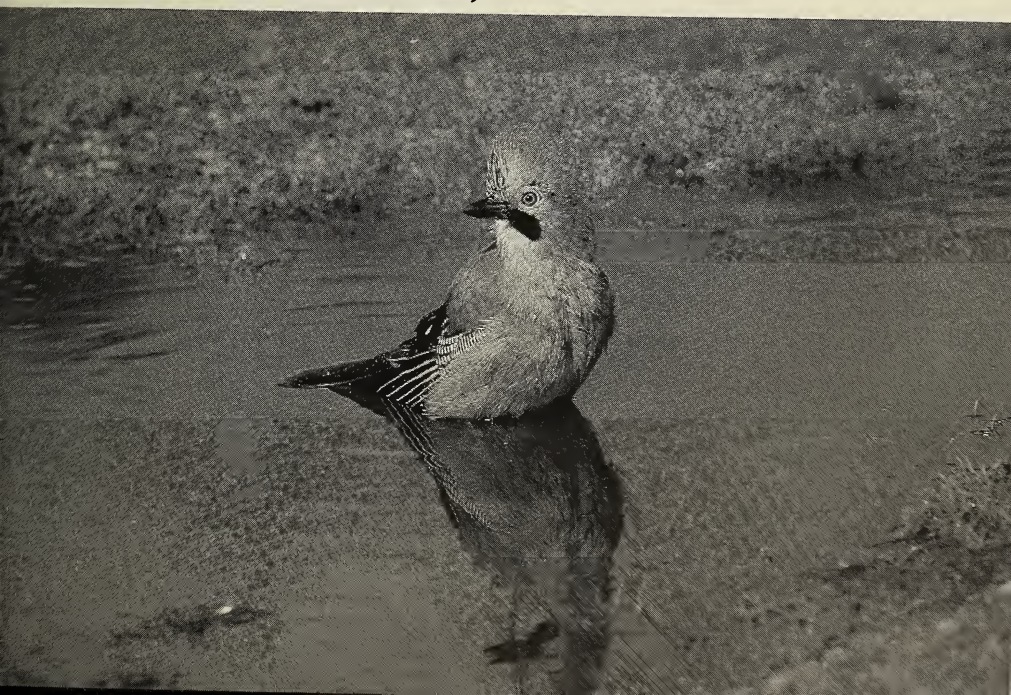
South-easterlies returned 4th June and two Mediterraneans appeared briefly on 5th one of which headed north in the afternoon. One recorded on 7th was followed by a very ragged individual the following day. Warm conditions continued and a surprise on 10th were five together including the ragged bird of the 8th. Two remained on 11th increasing to four on 12th. All had gone by 13th. Observations continued and a single appeared 21st-22nd with two more on 24th during a period of north-easterlies. All these spring-time records relate to Breydon. Two harbour-mouth visits during this period were unsuccessful. The Mediterranean Gulls at Breydon were found resting on saltings at the eastern end of the estuary. They could be readily observed from one of the hides with the aid of a telescope.

Initially it was thought the majority of sightings related to the same individuals. But by obtaining full details of head markings and bill colouring and such additional features as missing primaries or stained plumage it was appreciated that many different birds were involved. For example, between 29th April and 25th June 1983 it was considered that 26 first-summer Mediterranean Gulls passed through Breydon. Almost every arrival coincided with southerly winds. As in previous years some were watched departing to the north or north-west.

Surprisingly, July proved difficult and none was found at the harbour entrance despite increased watching. Fortunately Breydon produced a single second-summer bird on 22nd. The final estuary occurrence in 1983 was an adult — always very scarce at this locality — 4th September. At the harbour mouth, August proved interesting with several adults appearing from time to time. A first-summer individual arrived on 10th, remaining next day. Between 9th August and 26th September a total of six second-summer birds each with a small amount of black on the wing-tips passed north offshore without pausing to feed. The only first-winter specimen was a single 7th October. Two, perhaps three, adults appeared in October and could be found on most days until the end of the year. A second-winter bird accompanied them 12th November.

High-tide resting places have included grassy areas at South Denes power station and school playing fields at Gorleston. Other observers reported undoubtedly different Mediterranean Gulls including a first-winter bird at California 21st January and two second-winter ones at Yarmouth 18th February.

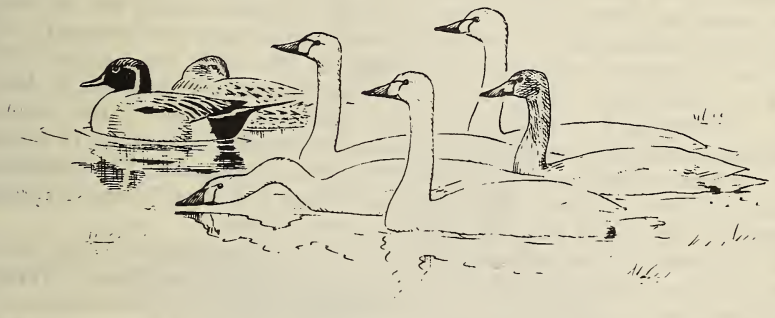
Above: **This Parrot Crossbill was among a group of eight birds which arrived in Wells pinewoods during October. A pair remained to breed successfully the following spring.** *Below:* **A delightful study of a Jay recalling the remarkable October influx.** ***(Photos: R. Tidman).***



Above: **Four Hoopoes were recorded during the year among them this individual which stayed three days at Holme.** *Below:* **Jack Snipe were recorded at two dozen localities including seven at Breydon in December.** ***(Photos: P. R. Clarke)***

1983 was a good year for Mediterranean Gulls in Norfolk. The records included first-summer birds in May on the north Norfolk coast particularly at Blakeney Point, Titchwell and Holme. Immatures can easily be overlooked and may well occur inland more frequently than the one inland occurrence recorded to date: a first-winter bird at Buckenham 7th November 1982.

Gull watching is becoming very popular. As a result of the ever increasing numbers of bird-watchers the status of the once very rare and still mysterious Mediterranean Gull in Norfolk will doubtless continue changing.



The Jay Invasion

Andrew Warren

Very few observers were unaware of the big Jay invasion which took place in October 1983, in particular those fortunate enough to live on the coast, since it was here, generally within a mile of the sea, that the main passage occurred. However, the Jays did not restrict themselves entirely to a coastal migration, as revealed by a number of records from inland localities.

The invasion took place along a broad front, stretching from Humberside to the south coast. The vast majority of birds were reported from south-west England where a flock of 1000 was observed in fields near Land's End, whilst 3000 flew west past Plymouth in parties of up to 300. Numbers reaching Norfolk were less spectacular, but just as dramatic.

The Jays originated from the Continent where there were reports of huge numbers moving westward across Poland and Scandinavia towards Britain in early autumn. Many were later seen coming in off the sea and here in Norfolk birds of the Continental race were caught and ringed at Happisburgh October 11th and 12th.

Periodic eruptions of Continental populations of Jays are not uncommon. In 1977, for example, there were reports of a large passage over Belgium during September and October and an invasion in Switzerland from late September which included 1000 passing south over the Albis September 28th and 1000 at Eggerstanden October 9th (*British Birds* 71:257). The Latvian SSR reported an autumn invasion in 1981 (when 91 were trapped) having had previous invasions in 1975 and 1977 (*British Birds* 75:271).

These eruptions are rarely experienced in Britain, but this is not the first occasion that Continental Jays have reached Norfolk. In October 1975 a flock of 14 was recorded at Titchwell, with 4 apparently in off the sea at Winterton on 12th. Yet to record such numbers as Norfolk achieved in October 1983 is quite unprecedented.

First signs of the forthcoming invasion occurred in late September when unusually large parties of Jays were recorded at several coastal localities: Snettisham had 21 on 24th with 35 heading west at Titchwell the same day, 12 were at Cawston on 25th and 11 flew west past Lynn Point on 26th. Throughout October Norfolk was inundated with Jays. There were reports of migrating birds from over forty localities. Unfortunately there were too many records to warrant individual publication. Only the more interesting observations in terms of larger numbers (usually over 30 birds) or particularly unusual sites, have been mentioned. Accordingly, on October 1st 40 flew west past Holme with 46 south at Snettisham on 9th, 100 in two groups of 50 flew north over Reedham on 10th whilst over 50 headed north over Moulton St. Mary on 12th. The 13th saw some really notable numbers: 94 west in ten minutes at Muckleborough Hill Weybourne, 134 west at Walsey Hills, 63 west in 15 minutes at Cley, 50 west at Brancaster Staithe and 55 south at Snettisham. The following day produced 74 west in 20 minutes at Holkham with an additional 70 west at Brancaster Staithe and 123 west at Titchwell including 86 in an hour.

At Winterton 87 flew south in one hour on 17th, whilst 115 came in off the sea in parties of 20 to 30 birds at Yarmouth. Similarly 40 to 50 arrived between Weybourne and Sheringham on 18th with over 100 at Stokesby and 138 at Snettisham on 19th. There were a few rather unusual Fenland records including 3 flying south at Black Horse Drove near Littleport September 23rd and 6 south-west over Ten Mile Bank October 2nd

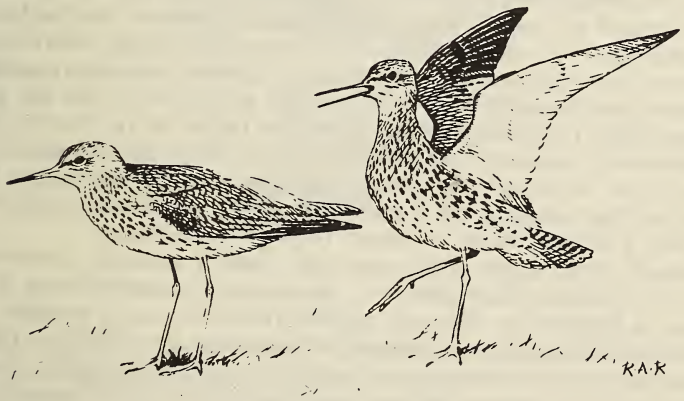
Also worthy of mention are the autumn 'totals' for the best-watched localities: 198 south past Wolferton between September 23rd and October 31st; 297 west through Titchwell September 24th to November 3rd and 293 west over Holme October 3rd to 31st. Undoubtedly some of the above mentioned records involved the same parties of Jays as they passed along the coast. During the whole period perhaps over 1500 birds migrated through Norfolk.

The following pattern of migration emerges: birds striking the Norfolk coast in the east either flew north, south or west. In fact, the majority tended to head north swinging westward along the north coast where they were joined by additional birds coming in off the sea in this area. Approaching Hunstanton, all moved south heading into The Wash where they could either cross the Fens or move into Lincolnshire. Judging by the scarcity of Fenland records the majority appear to have chosen the latter alternative.

Why did the Jays come in the first place? Reference to a summary by Berndt and Dancker (1960) on the movements of west European Jays between autumn 1947 and 1957 attributes Continental eruptions to annual fluctuations in the acorn crop. A poor crop or crop failure invariably caused an eruption. British Jays, however, do not provide any clear suggestion of eruptive behaviour. It may be that annual differences in the acorn crop are smaller in Britain (*Bird Study* 18:2). Very surprisingly, 1983 was an exception to the rule, since 90% of the British acorn crop in the south was destroyed by 'knopper galls' created by the parasitic wasp *Andricus quercus calicis*. As a result large numbers of resident Jays were on the move searching for food and swelling the numbers of Continental Jays reaching our coastline.

After leaving Norfolk the Jay flocks dispersed with birds settling in areas providing an alternative food supply (sweet chestnut for example) in sufficient quantity for them to survive the winter. Yet several remained in the county including 17 in the

Fens November 20th with others feeding on apples and beechmast in a Bedingham garden and 6 on the edges of fields in Titchwell. The birds also fed during their brief halts whilst on passage and were observed taking hawthorn berries and blackberries and searching momentarily at the edges of fields, sometimes in company with other corvids. Such was their haste to migrate, however, that they often flew off with the food item clasped firmly in their beaks to be consumed at the next stop. Finally, it is interesting to note that several other species were involved in the Jay migration. There were reports of Great and Long-tailed Tits on the move; at Titchwell Rooks, Carrion Crows, Jackdaws and Great Spotted Woodpeckers were all more noticeable than usual.



Selected Offshore Observations

Great Northern Diver: Fifteen miles NE of Brancaster April 26th; another 2 miles off Hunstanton Nov. 8th and 23rd.
Great Crested Grebe: Up to 50 off Holme/Hunstanton Nov. 8th.
Red-necked Grebe: Brancaster July 15th (5 miles north of harbour); another (2 miles north) Aug. 31st.
Slavonian Grebe: 3 off Hunstanton Nov. 8th.
Manx Shearwater: North of Brancaster harbour: 4 (15 miles north) June 16th, 5 (20 miles) June 25th, 3 (9 miles) July 1st and one (20 miles) Sept. 24th.
Scaup: Four 20 miles north of Brancaster Aug. 2nd.
Long-tailed Duck: Holme 85-90 March 2nd.
Velvet Scoter: Three miles NW of Hunstanton 18 Dec. 3rd.
Kestrel: Twelve miles north of Hunstanton Oct. 4th.
Guillemot: Arrival adults and young from July 5th. Main feeding area 8 miles north of Brancaster.
Little Auk: Twenty miles north of Brancaster Oct. 21st.
Swift: WSW 20 miles north of Brancaster Oct. 4th.

J. Brown

Little Auk Fly-Past

Moderate north-westerly winds during the morning of October 28th produced rather quiet conditions along the Norfolk coast for sea-watchers. But the unexpected was soon to follow. At 1400 hours several Little Auks appeared close inshore at Cley heading westwards. Following a change in wind direction to a northerly point a total of 49 headed west including a group of 13. Possibly many more were further out to sea, but distances were too great for accurate identification. Very surprisingly this was the beginning of an unprecedented movement of these miniature sea-birds.

At first light October 29th Little Auks were moving north above the tideline at Horsey Gap, together with groups of waders for well over an hour. During the first 60 minutes an amazing total of 219 was logged and the count covering a period of five hours watching produced 773 birds with 850 estimated. During the final hour to 1130 hours ony 69 were noted. Many were in groups of between three and seven. The largest consisted of 17 birds and there were 31 singles. Occasional birds dropped into the sea to rest, but were soon on the wing again. At Paston, observers counted 602 in seven hours from first-light heading north-west at the rate of 100 per hour, but decreasing rapidly from mid-morning; 23 was the biggest party observed. Here too Little Auks were in company with Dunlin and Knot; others passed inland with Starlings. Two hours watching from Cromer Pier produced 165 west, whilst 200 were estimated off Cley including 155 in a two-hour spell. Little Auks were also recorded off Blakeney Point and Wells; 14 passed Titchwell in 1½ hours.

Undoubtedly most Little Auks continued heading north or north-west thus avoiding NW Norfolk. Holme observers, for example, produced a total of 18 and 4 were noted at Hunstanton. The only detailed Yarmouth records available featured 79 moving north at the harbour entrance between 1100 and 1230 hours (26 was the largest group). It is unfortunate no early morning cover was available here.

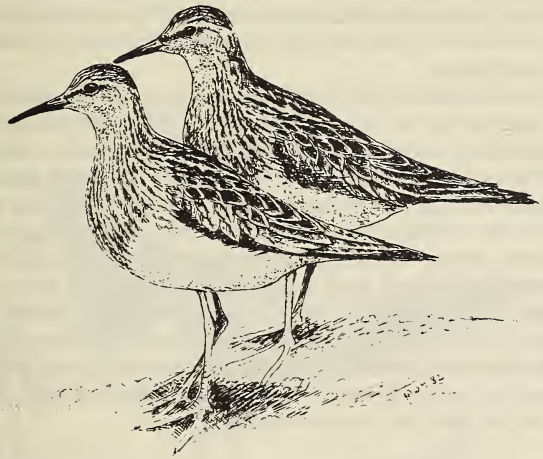
The next morning (October 30th) saw only the remnants of this remarkable movement, although observations at Paston produced 40 passing north-west, mainly singles including some caught up with Knot. Only one was noted at Horsey, 2 at Cromer, 3 at Cley and one at Wells. Elsewhere, exceptional Little Auk totals were recorded. At Spurn Point 770 were counted on 28th and a remarkable 1767 on 29th. In Suffolk, 210 were reported at Benacre on 29th.

The main reason for this major influx into the North Sea is not clear. Many observers were surprised at the numbers involved considering the wind speed and the fact that few other sea birds were involved. Late October to early November appears to be the peak time when Little Auks are travelling from High Arctic breeding grounds south-westwards into the Atlantic well north of the British Isles. The birds then appear in immense numbers in the Norwegian Sea. Weather maps covering this period reveal very strong northerly to north-westerly winds in force for this area on 27th/28th which must have swept the birds into the North Sea instead of the Atlantic. Moderate north to north-easterlies on 29th carried them further south and closer inshore.

P. R. Allard

Wisbech Sewage Farm — The End

J. A. W. Moyes



During the past thirty years Wisbech Sewage Farm maintained an international reputation for migrant waders. Its imminent closure has prompted this article. Readers will doubtless recall a succession of red-letter days at this once renowned locality. Many observations, particularly those of maritime species, are doubtless attributable to the Farm's special position: only six miles inland and beside the Nene which acts as a guiding line for many birds flying overland from The Wash.

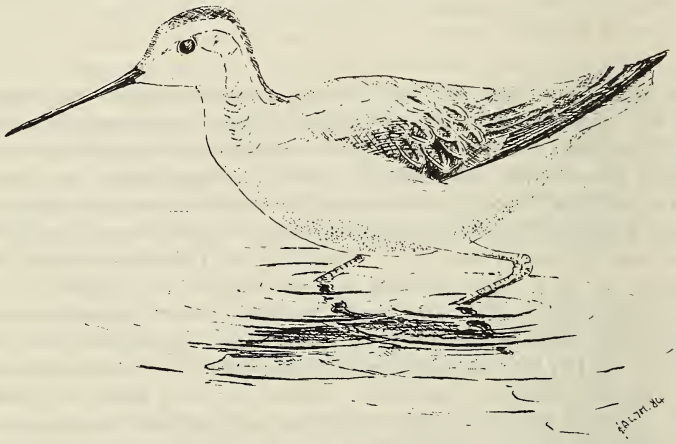
Work on construction of the site — straddling the Lincolnshire/Norfolk boundary — began in 1874. The following is a passage from Gardiner's *History of Wisbech*: "In September 1871 after much negotiation the Corporation decided to purchase from Mr. John Spikings a farm of 217 acres opposite the Foul Anchor in Tydd St. Giles for £11,000 and subsequently appointed Mr. Easton engineer of the proposed irrigation scheme of sewerage". However, there were long and tedious delays and it was not until September 1874 that work actually commenced.

To the uninitiated the site consisted of a series of embanked fields which were periodically flooded with untreated sewage and factory effluent. It was bounded on the west by the tidal Nene and on the south-east by a row of Aspens planted prior to the First World War. Three pairs of tall pylons carrying power lines across the Nene provided a dominant landmark, visible for many miles around. Little is known of its early ornithological history. Infrequent visits were made by Cambridge Bird Club members from the mid 1940s onward, but it was not until 1955 that the true value of the Farm was realised when almost daily autumn counts were made by A. E. Vine and myself.

This increased observation fortunately coincided with a most remarkable return migration. Some observations including a flock of 40 Spotted Redshank and 100 Curlew Sandpipers (in a year notable elsewhere for small numbers of this species) are

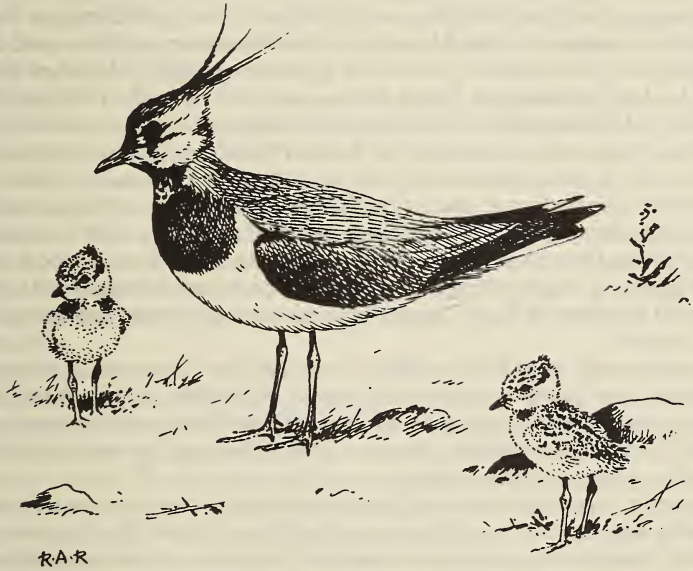
outstanding. The 1955 wader list was raised to 27 species by the concurrent visits in November of Pectoral and White-rumped Sandpiper. At this time the fields when not under flood were used to grow a variety of crops including Spinach, Mangolds, Barley, Wheat and Potatoes. Consequently, the lagoons tended to remain flooded for long periods with perhaps only one lagoon at a time suitable for feeding wader flocks during migration times. Moreover, towards the end of the 1950s with the gradual build-up of toxic chemicals in the soil and the associated decline in crop quality, farming activities ceased with the exception of abortive attempts at growing tulips by local nurserymen.

The flooding of the lagoons was now regulated by a more casual regime, with the Farm Manager sympathetic to the requirements of both birds and bird-watchers. Additional shallow floods were made available to feeding waders during peak migration periods with spectacular results. The numbers of common species and some of the scarcer migrants visiting the Farm increased dramatically. This trend was maintained throughout the 1960s which became the best period ornithologically in the hundred year history of the Farm. It has long been realised that the state of the tides in The Wash greatly influenced both numbers and variety of birds at the site. Two visits on the same day separated by only a few hours often yielded completely different lists of birds. During periods of low tide in the adjoining Nene, if birds were disturbed on the Farm by human intrusion, they moved to the inter-tidal muds at Ferry Station some two miles down river. Here they remained until the incoming tide forced a return to the Farm to resume feeding.



A large commuter population of small waders became established in most years with birds flighting in from The Wash to feed at the Farm in the mornings and out again in the late evenings, probably at times joining the large roosting flocks on the fields behind the sea walls at Terrington. Yet on some bright moonlit nights the Farm remained thronged with birds although the reasons for this behaviour are obscure (see C.B.C. Report for 1967 pages 40-41). Differences in soil texture also had a direct influence on species present. For example, up to 26 Bar-tailed Godwits at a time would only be found feeding when a particular lagoon became suitable. This field consisted of a very fine silt reminiscent of the Wash mudflats from whence these birds had come. Vegetation also had a marked influence on the numbers of certain species. In years when plant growth became rank with Persicaria and *Rumex*

dominating, the lagoons were less attractive to shore waders (including Dunlin, Curlew Sandpiper and Little Stint), but more favoured by Wood and Green Sandpipers with always the chance of a glimpse of Spotted Crake or very rarely Baillon's Crake. Some species delighted in searching the delta areas formed near outlet pipes. Ruffs, Curlew Sandpipers and Ringed Plovers were particularly fond of such areas and Turnstones became adept at flicking over pieces of hardened mud in search of prey in much the same way as they would search the tidelines on the shore.



The breeding list was not extensive, but certain species became well established. The Shelduck colony raised 200 to 300 ducklings annually and became one of the largest concentrations in East Anglia. Half a dozen Mallard nests were recorded each spring. Single nests of Tufted, Pochard, Shoveler and Gadwall were recorded in some years. The Black-headed Gull colony increased from two nests in 1957 to well over 200 pairs by the mid 1960s. About this period 2 or 3 attendant Little Gulls gave hope of nesting, especially in view of the breeding attempt on the Ouse Washes in 1975. Among waders, both Ringed Plover and Oystercatcher nested annually; Redshank and Snipe occasionally managed to raise young on the Farm. Three pairs of Avocets took up temporary residence at the northern end of the Farm in 1959. They gave hope of breeding as they mated and indulged in acts of aggression towards such potential preditors as Carrion Crows and Herons. Reed and Sedge Warblers, Reed Buntings, Corn Buntings, Whitethroats and Yellow Wagtails were all abundant breeders with Blue-headed Wagtails nesting in 1978. The Poplar belt held breeding pairs of Little Owl, Kestrel, Stock Dove and Great Spotted Woodpecker.

It was the wealth and variety of migrants which made Wisbech famous. During spring, particularly after periods of easterly winds, one might expect Kentish Plover and Temminck's Stint as well as the more regular Ruff, Wood, Green and Common Sandpipers. A Broad-billed Sandpiper was present 18th/19th May 1959. Little Stint, although very scarce in spring, could sometimes be seen during the first week in

June; a period favoured also by Avocets. Black Terns would often drop in at Wisbech en route to breeding grounds in Denmark or Holland. Ten or 20 became a usual number, but exceptionally as in May 1959 as many as 180 were gracefully feeding by picking insects from the water surface.

The period from mid-June until the second week in July, although quiet as regards migrants, often produced surprises. Up to 20 summering Spotted Redshank in full dusky breeding dress could sometimes be found at high tide. Post-breeding assemblies of Black-tailed Godwits often gathered at the Farm during this period. On one occasion 150 were counted. By mid-July a trickle of return passage migrants was the vanguard of the flood that was to follow. Green and Common Sandpipers were often first arrivals followed by adult Curlew Sandpipers still in superb chestnut-red nuptial dress. The events of 1971 make impressive reading: 34 Curlew Sandpipers arrived 31st July increasing to 100 by 3rd August and to a peak of 150 on the 7th; all were adults in breeding attire. Early Pectoral Sandpipers could sometimes be seen at this period often associating with the Curlew Sandpipers; one wonders at their origins as the two species nest as far west as the Taimyr Peninsular in arctic Siberia. Later Pectoral occurrences in the autumn way well be of birds of transatlantic origin.

By August migration through the Farm was well underway with the second week often producing the widest variety of species of the year. Green, Wood and Common Sandpipers would reach peak numbers by mid-month (as many as 31, 37 and 80 respectively) followed by Knot, Sanderling and up to 30 Turnstones during the third week of August.

Ruff totals could be as high as 200 or even 250, but the numbers of most of the larger waders was largely governed by the state of the tides in The Wash. High tide roosting groups of up to 50 or even 60 Spotted Redshank could be expected whilst flights of 20 or 30 Greenshank headed inland following the course of the Nene. Whimbrel provided a similar pattern.

The autumn migration during 1973 proved epecially memorable and included five New World waders of three different species. First arrivals 18th July included 130 Black-tailed Godwits. Five days later a total of 19 species of waders could be found. First autumn rarity was a White-rumped Sandpiper 28th July. An evening tide 15th August brought an assembly of 50 Spotted Redshanks. A Red-necked Phalarope which arrived 8th September remained until 11th October. During a ten-day period of its stay it was in company with Temminck's Stint and Pectoral Sandpiper. By mid-September 24 wader species were on show in the lagoons. A fortnight later Little Stint numbers had built up to 80.

Under suitable conditions September produced peak numbers of Dunlin, Curlew Sandpiper and Little Stint, the combined flock often totalling over 2000 birds. As many as 150 Curlew Sandpipers were present 9th September 1978. At the same time an unprecedented total of 130 Little Stints was reached. The Curlew Sandpiper count had in fact been eclipsed at the end of August 1969 when 400, mostly juveniles, were recorded.

Good numbers of Ringed Plovers could be found on the Farm on most days throughout autumn, but the Little Ringed Plover usually reached peak numbers during August; totals of 16 and 27 are on record. Golden Plover, although often abundant on surrounding arable fields, were only infrequent visitors often in the evenings for pre-roost bathing sessions. The usual maritime Grey Plover was a scarce visitor. Weed-grown lagoons were much favoured by Snipe with peak numbers of 800 on record. Jack Snipe could also be flushed from similar areas at times remaining a few days. Unique numbers of Jack Snipe appeared in autumn 1966. Between October and December counts included 40 to 43 on 21st/22nd October and 50 on 5th November. By contrast, the rare Great Snipe would stay for periods in excess of ten days. Of the remaining palearctic and holarctic waders, Temminck's Stints were regular visitors, the trilling calls usually a first indication of their presence. Red-necked Phalaropes were regular too, mostly during August and September. Grey phalarope, however, remained rare with just two observations of individuals in thirty years. Dotterel was added to the Farm list in September 1972 when one appeared among Golden Plovers. Bringing the story up to date, a Black-winged Stilt stayed a few days during April 1983.

Although not especially noted for its wealth of birds of prey, Wisbech Sewage Farm produced interesting records over the years. Marsh and Hen Harriers were regular and Montagu's Harrier could occasionally be seen in spring. Honey Buzzard, Osprey, Goshawk, Hobby and Peregrine were all recorded with Merlin a regular winter resident.

Wisbech gained a special reputation for sightings of rarities. Most bird-watchers came with the hope of seeing Nearctic waders. The least rare of these transatlantic wanderers was the Pectoral Sandpiper with a thirty-year total of nearly 50 birds. Wisbech became one of the most likely places in Britain to find them. Next in order of frequency was the White-rumped Sandpiper; since its first recorded visit in 1955 it has been recorded a further five times. A total of five Wilson's Phalaropes was recorded including two which remained for three weeks in 1967 and were readily photographed. Spotted Sandpiper and Lesser Yellowlegs totalled three each. Among other highlights were single Baird's Sandpiper (July/August 1963), Semipalmated Sandpiper (November/December 1966), Long-billed Dowitcher (September/October 1963) and Lesser Golden Plover (August 1974). A star species in the history of Wisbech Sewage Farm is the Stilt Sandpiper: an adult in part summer plumage trapped and ringed in July 1963 was only the second record for Europe. Remarkably, another Stilt Sandpiper was present in August 1965. Other rarities at various times included Spoonbill in October 1970 and April 1974, Caspian Tern in July 1982, White-winged Black Terns (several immatures in autumn) and single Gull-billed and Whiskered Terns. Glossy Ibis in May 1976 remaining three days was remarkable. Among vagrant wildfowl Ferruginous Duck and 2 Blue-winged Teal are outstanding observations.

By the late 1970s the attractiveness of the Farm to the majority of wader species began declining. Until then, after flooding and subsequent draining, the lagoons were regularly ploughed and then re-flooded keeping plant growth to a minimum and maintaining a succession of suitable lagoons. Later policy encouraged flooding favoured lagoons repeatedly over a period and abandoning others.

The remaining lagoons at this former bird-watchers' paradise are expected to disappear by the end of 1984 followed by levelling and return of John Spikings Farm to agriculture. A unique ornithological era will have ended.

Further reading: Cambridge Bird Club *Annual Reports* 1955 onwards.

The Great Auk Wreck

Chris Durdin
Asst. Regional Officer — East Anglia, R.S.P.B.

Many events in the bird world quickly become well known in birdwatching circles and in time reach the ears of a great many other naturalists. It is all too easy for us to forget that most of the dramatic ornithological happenings simply bypass the majority of the public. One that did not, however, was the extraordinary hard weather auk wreck of February 1983.

The wreck occurred all along the British east coast and to a lesser extent on the North Sea coasts of the continent. This feature looks at the Norfolk side of the story: a more detailed analysis of the causes and national statistics of the wreck appears in an article by Mrs. Lesley Underwood and Tim Stowe (from the RSPB Research Department) which has been accepted for publication in *Bird Study*.

News of the wreck broke on the morning of 11th February, and it was not long before the phone in the RSPB's East Anglian office in Norwich was busy with a string of calls from members, the public and the local papers. Years of oil pollution incidents have alerted the public to be concerned about our seabirds, and so, not unnaturally, it was often wrongly assumed initially that something unnatural had killed the birds.

Reports we have show the first dead auks being washed ashore in Norfolk on 8th and 9th February. More appeared on 10th/11th, many of these being counted over the weekend 12th/13th February. Yet more came ashore during the following week; we were aware of 1600 dead auks in Norfolk by 17th February, with counts still being received from our energetic team of Beached Bird Surveyors. The official Beached Bird Survey count for February 1983, when all Norfolk beaches were covered, was on the weekend of 26th/27th February and by that stage most of the dead birds had arrived and were counted. This is well demonstrated by the next survey on the weekend of 26th/27th March when only 492 auks were found in the whole of East Anglia. This is still higher than average for March, and no doubt some of those recorded could be attributed to the wreck, but for the purposes of the wreck statistics only counts up to 6th March are included.

Number and Species Composition

The final total for Norfolk was a staggering 6450 dead birds found, of which 5940 (92%) were auks. Surprisingly, Razorbills (2927 birds; 53.8% of total identified auks) outnumbered Guillemots (1898; 34.9%), near enough opposite to the usual proportions of these two species found during oil pollution incidents or on routine counts. Puffins (388; 7.1%) and Little Auks (231; 4.2%) were also widespread; both are normally scarce off the Norfolk coast, be it alive or dead.

The final count of dead birds beached on the east coast of Britain during February exceeded 34000, including over 31500 auks. These stretched from Kent to Orkney, with the greatest numbers in Norfolk, Lincolnshire and Humberside; about 5000 were counted in each of the last two counties. There were rather less in Suffolk, only 1976 auks. Nationally, the proportion of auks identified to species, which was most of them, show that 58% were Razorbills, 33% Guillemots, 5% Puffins and 4% Little Auks, much the same as the proportions for just Norfolk. The numbers of Razorbills, Puffins and Little Auks found dead during this wreck far exceeds, by 4-5 times,

the total numbers of these species found on systematic Beached Bird Surveys since 1971.

More dead auks were counted in Norfolk than any other county but densities were slightly higher from Cleveland to Lincolnshire where the coasts are predominantly east-facing. North Humberside was much worse with 70.1 auks per kilometre, compared with Norfolk's 40.8.

The table lists fairly precisely where the birds recorded were found. Clearly large numbers appeared on the exposed north, north-east and east Norfolk coasts, with rather less in the relatively sheltered Wash. One oddity this table throws up is that although Razorbills normally outnumbered Guillemots, that was not the case in the Wash.

All the figures quoted come from reports sent into the RSPB and should be taken as minimum figures. There were many people on the beaches during the incident not connected with the RSPB, in some cases removing corpses, and others will have been taken by predators or lost under blown sand and beach debris. For example, presumably the lack of birds between Heacham and Hunstanton can be attributed to some outside agent. We have done our best to give as accurate a picture as possible, although with an incident of this type total accuracy is impossible. We would welcome, nonetheless, any significant new information or opinions of readers.

State of Oiling

Most counters recorded the numbers of oiled auks that they found. Totalling up the stretches where this was done, and excluding all figures from where this information was not given, gives us a figure showing that 8.4% of the auks were oiled. If anything, this may overstate the oiled proportion as counters would be more likely to note the oiled birds where the numbers concerned were noticeable. Nationally, 14.7% were oiled, rather more than in Norfolk, with a much higher proportion of oiled birds in south-east England and on the Tayside/Fife coast in Scotland.

Causes of the Wreck

Where did all the birds come from, and what killed them? Weather conditions in January and February were unusually rough, even by North Sea standards. A deep depression reached the north North Sea by 5th February and a ridge of high pressure settled over the North Atlantic. The resulting gale force north-easterlies lasted about a week. Most Little Auks normally winter in the North Sea and Atlantic well north of the British Isles, and are presumably more able than most species to cope with severe weather. The great numbers of them reported in Norfolk and Suffolk, both in flocks off the coast and scattered widely inland, were another symptom of the severe weather conditions pushing birds south.

It seems, at first thought, that birds adapted to a life at sea could cope with this wintry weather. But with winds getting up to 100 mph and waves up to 40 feet high it becomes doubly difficult for the birds. Weakened by struggling in rough conditions on the surface of the sea, they would then have had trouble catching fish driven deeper by the turbulence, in effect a vicious circle leading to starvation. Many birds that die at sea no doubt usually sink without trace, but the north-easterlies also had the effect of bringing corpses and weak live birds to the coast. This wind-related appearance of dead and live auks is well known to us in the RSPB East Anglian office, as in several recent winters, usually around the end of December, a stream of oiled birds has appeared on the East Anglian coast. These have not, in recent years, been oiled as a result of a well-publicised spill like the Eleni V, but, sadly, from routine discharging and tank-cleaning by ships at sea. We believe that there are substantial

numbers of auks and other seabirds killed in this way every winter, but it is only when the wind comes from the east that the dead and dying birds reach the shore. RSPB experiments on the recovery of dead birds put in the North Sea to drift have further demonstrated this.

The weather related problems also appear to have been exacerbated by shortages of sprats. There is evidence of a reduction in sprat numbers in the North Sea from Flamborough Head northwards for unknown reasons; maybe climatic, maybe over-fishing. Conversely, an increase in sprats has been noted in the North Sea south of Flamborough, but not enough to compensate for the decrease in the north North Sea and away from the main auk wintering and breeding areas. The food supply available, particularly the size of the fish, may be a contributory factor in the high numbers of Razorbills affected, as well as the peculiar weather bringing them down from where many winter in the North Atlantic. Maybe, being smaller than Guillemots, they are more easily storm-driven. There is clearly a great deal that we just do not know.

Analysis of several corpses by Dr. Ian Keymer at the Veterinary Investigation Centre in Norwich, plus others analysed elsewhere, confirmed that the birds were emaciated. Fat reserves had been used and death from starvation would have followed. This is contrary to fears expressed by some at one stage that pollutants in the sea or contaminated fish were to blame, which were also ruled out by the widespread nature of this incident. There were also some reports that the dead birds were "well-covered", not emaciated. However, this seems to have been a very natural mistake; auks have a remarkably thick layer of feathers for insulation against heat loss at sea, so when a corpse is felt the thick plumage hides the prominent breastbone on the starved birds, giving the impression that it is plumper than it is.

An odd factor in the whole wreck story is the lack of reports of a hard-weather movement of birds ahead of the storms. Mick Fiszer in correspondence, notes that on his regular sea-watch at Bacton on the weekend before the wreck (5th/6th February), more auks were moving (169 auks flying east, 3 Little Auks only flying west, all on 6th February) than previously that winter, but numbers were by no means high and there was a surprising lack of divers, Eider, Scoter, Kittiwakes etc. Also, there were far fewer divers and seaduck involved in the wreck than one might expect. The reason for this is not clear, but it could be speculated that auks feeding well out at sea were hit by the weather more than these others, more usually found in the relatively protected coastal waters. Similarly, Guillemots are usually more common off the Norfolk coast than Razorbills, so if this reflects a general tendency for them to be nearer the coast than Razorbills then it could be another contributory factor towards their relative scarcity in the wreck.

Impact of the Wreck

What effect will the wreck have had on auk populations? In short, we do not know, but probably not a lot. Most of the birds no doubt came from colonies outside of Britain which are not monitored, but we do know from ringing recoveries that many of them were British, mainly Scottish, in origin. No significant losses in breeding cliff colonies has been observed — in some cases quite the reverse. Razorbill colonies are notoriously difficult to count, but it seems that there is a sufficient pool of non-breeding birds to fill up the spaces on the cliff ledges. It is reasonable to assume that populations can withstand the occasional natural catastrophe; more open to question is the affect of continuing losses from oil pollution, and the arguably more serious threat of over-fishing of sprats and sand eels.

The wreck was a remarkable natural calamity, but not unprecedented. For exam-

ple, in a search through the archives, Michael Bean found no fewer than 11 such events between October 1841 and October 1974. How the early wrecks compared in scale we do not know, as there used to be nothing like the current network of naturalists to record incidents in detail. Similarly, Underwood and Stowe quote several incidents abroad, including 100,000 Guillemots killed off the Alaskan coast in spring 1970, described in the literature as a "Die-off of Common Murres"! Since then, in February 1984, some 50,000 dead and dying Kittiwakes were beached on the Mediterranean coasts of France, Spain and Portugal. This underlines how the species composition of a wreck is related to the geography of the incident: in the February 1983 wreck discussed in this article, less than 1000 dead Kittiwakes were counted on the British coast, but several thousands in the Netherlands, West Germany and Sweden.

Grateful thanks are due to all who helped during the great auk wreck, in counting, collecting corpses and in supplying information in various other ways. Many of these were the regular team of RSPB Beached Bird Surveyors, who, in the winter months, walk the beaches counting dead sea-birds year in, year out. Many others, too numerous to list here, also assisted on their own initiative or at the RSPB's request. Many will have anecdotes to tell for years to come. One counter judiciously snipped one leg off each bird he found whilst surveying several miles of beach, to mark them as being counted. Shortly afterwards, missing legs on the beached birds were attributed in the press to rats! This is the lighter side of what could be described as a natural disaster, or a curious phenomenon, depending on your point of view. No doubt there will be similar wrecks in years to come, but whether any will be on the same scale as the great auk wreck of February 1983 I rather doubt.

Location of Auks Found on Norfolk Coast During Massive Wreck in February 1983

Note: Figures in the table, particularly for long stretches of beach, are often counts from different counters, added together

Location	*Little Auk*	*Razorbill*	*Guillemot*	*Puffin*	*Auk Sp.*	*Others*	*Total*
Border — Trial Bund	4	39	37	7		7	94
Bund — Ouse Mouth	4	59	66	4		23	156
Ouse Mouth — N. Wootton		7	8	1		9	25
N. Wootton — Wolferton	6	51	82	5		27	171
Wolferton — Heacham	3	38	58	2		20	121
Heacham — Hunstanton						3	3
Hunstanton — Holme	8	43	48	3		4	106
Holme — Thornham	51	142	133	15		5	346
Thornham — Brancaster	23	118	113	11		14	279
Scolt Head	25	290	177	35		38	565
Gun Hill — Wells Harbour	20	179	146	17	1	34	397
Warham Marsh — Stiffkey	1	35	25	17	220	20	318
Blakeney Point — Cley Coastguards	17	161	89	35	8	24	334
Cley — Salthouse		28	16	1			45
Salthouse — Weybourne	9	63	59	2		7	140
Weybourne — Sheringham	2	52	61	8		8	131
Sheringham — Overstrand	7	164	112	23		9	315
Overstrand — Mundesley		80	38	12		16	146
Mundesley — Bacton	15	241	123	51	1	25	456
Walcott — Sea Palling	13	242	117	27		17	416
Sea Palling — Winterton	16	478	208	72		52	826
Winterton — Great Yarmouth	6	351	160	38	266	127	948
Gorleston — Hopton	1	66	22	2		21	112
Totals	*231*	*2927*	*1898*	*388*	*496*	*510*	*6450*

'Others' comprises: 229 Kittiwakes, 38 Common Gulls, 32 Black-headed Gulls, 29 Fulmars, 27 Gulls sp, 14 Great Black-backed Gulls, 8 Herring Gulls, 6 Woodcock, 5 Redshank, 4 Red-throated Divers, 4 Eiders, 4 Common Scoter, 4 Shelduck, 3 Great Crested Grebes, 3 Little Grebes, 3 Brent Geese, 3 Mallard, 3 Oystercatchers, 2 Black-throated Divers, 2 Red-breasted Mergansers, 2 Snipe, 2 Terns sp, together with single Gannet, Cormorant, Pink-footed Goose, Wigeon, Grey Plover, Sanderling, Greenshank, Dunlin, Curlew, Lesser Black-backed Gull and Grebe sp; also 72 bird sp — probably mostly gulls.

Grey Herons in Norfolk: An Exploratory Survey

In 1983 an attempt has been made to assemble information about the breeding population of the Grey Heron in Norfolk. The following table lists the number of occupied nests at those sites which are known to have been used in the spring:

	Number of occupied nests	
East Norfolk (Broadland)		
Mautby Decoy	2	
Reedham Park Carr	3	
Fritton	3	
Fleggborough Common	1	
Hickling Sounds Wood	6	
Fishley	2	
Barton — Heron's Carr	9	
Barton — Island	2	
Barton — 'East Site'	4	
Buckenham	8	
Surlingham	4	
Ranworth	5	
Rackheath Springs	2	
Belaugh	2	
Woodbastwick	7	**Sub-total: 60**
Mid-Norfolk (Including Brecks and North Coast)		
Cley — Hall Farm	2	
Wiveton/ Blakeney	4	
Bawburgh	4	
Great Witchingham	4	
Sparham	10	
Hockham Fen	2	
Sturston Carr	7	
Shadwell	5	
Didlington	6	**Sub-total: 44**
West Norfolk (Fens and Wash)		
Snettisham	10	
Islington	84	
Hilgay	40	**Sub-total: 134**
	Grand Total: 238	

It is interesting to compare the figures above with those collected in earlier years. The first Norfolk Bird Report, published in 1953, stated that 'a count of all known heronries in Norfolk will take place in 1954'. This was done and repeated annually, the results for 1954-69 being summarised below. Not surprisingly, the greatest concentrations were in the East (Broadland) and in the West (Fens and Wash) and the figures for these two regions are listed.

Year	Number of occupied nests in Norfolk	Total for East (Broadland)	Total for West (Fens and Wash)
1954	381	143	166
1955	370	154	151
1956	334	144	132
1957	357	155	155
1958	322	160	109
1959	430	160	206
1960	376	182	132
1961	430	202	154
1962	360	202	103
1963	181	107	46
1964	220	115	70
1965	290	141	89
1966	301	139	106
1967	333	138	143
1968	338	170	103
1969	353	180	104

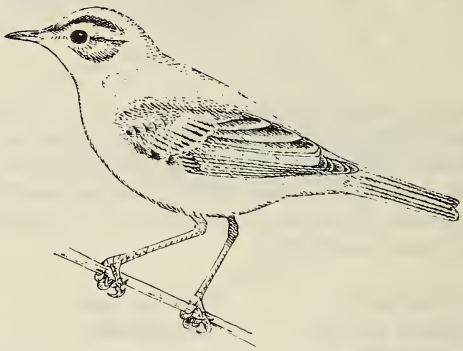
The marked fall in 1963 was associated with the extreme cold experienced in the early part of the year, severe frosts continuing from Christmas 1962 for ten long weeks. Icy conditions and frozen ground cut off food supplies and herons are very quickly affected. As the figures show, recovery took some years.

It can be seen that the number of occupied nests in 1983, 238, is much lower than the average annual figure for 1954-69, 336. It is also apparent that the present population in the West (Fens and Wash) is of the same order of size as in 1954-69 while in the East (Broadland) there has been an alarming decline, the most significant feature being the collapse, or near-collapse, of the major Broadland heronries at Wickhampton, Mautby and Buckenham. Unfortunately on this occasion the decline cannot be attributed to climatic factors.

R. Jones

Booted Warbler — an addition to the County List

S. C. Joyner



Following a night of light S.S.E winds, G. E. Dunmore and I headed for the north Norfolk coast on 18th September 1982 anticipating a fall of Continental night-migrants. We first visited Titchwell and on returning from sea-watching flushed a small pale warbler from *suaeda* bordering the western edge of the R.S.P.B. Reserve. Brief views were obtained as the bird fed in low cover. Initially we noted a warbler of Willow/Chiffchaff size with pale greyish upperparts, short wings showing a paler panel, thin off-white supercilium, uniform whitish underparts and pale pinkish bill. The bird then moved into an area between the dunes and the brackish lagoon and was lost to view. Realising we had seen something new we first thought the bird was a dull Bonelli's Warbler.

Later we returned to find the warbler had been relocated and was being watched and its identity discussed by a group of birders. After obtaining good views all agreed the visitor was a Booted Warbler. During its four-day stay it remained in the same area, frequently being observed in low cover on the banks edging the lagoon. This is the first accepted record for Norfolk and the seventeenth for Britain.

For the benefit of observers faced with the problem of identifying an unfamiliar small, pale, warbler suspected of being a Booted Warbler, I have listed the features noted on the Titchwell bird:

Hippolais warbler characteristics including short under-tail coverts giving a rather rounded body shape, relatively large broad-based bill accentuated by pale colouring, square-ended tail and rounded head with high crown. The Titchwell bird showed short wings with relatively short primary extension beyond the bunched secondaries/tertials. Flying, it revealed a different 'jizz' compared with Willow/Chiffchaff appearing dumpy with broad, rounded, wings and shortish fairly broad tail.

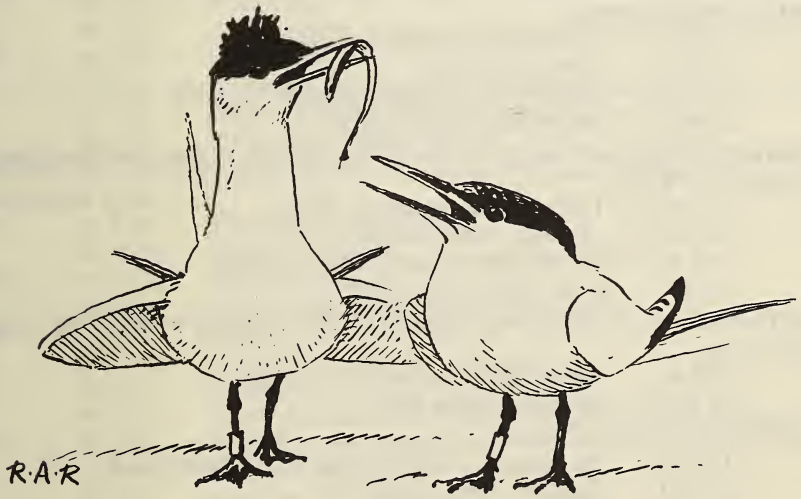
Overall paleness of plumage, lacking any green or yellow tones. The Titchwell visitor showed pale grey-brown upperparts and slightly browner wings and tail. Autumn Booted Warblers observed on Scilly have been generally less grey and more sandy brown on upperparts. Underparts were off-white with slight buff wash on lower flanks.

Rather nondescript appearance, lacking any distinctive plumage features, particularly the plain-faced appearance with only a thin off-white supercilium extending from in front of the eye to the rear of the ear-coverts and an indistinct eye-stripe only behind the eye. Three features were however noted: slightly darker brown marking above the eye, pale edges to the tertials and secondaries forming a pale panel on the closed wing, and a narrow off-white margin to the outer-tail feathers noticeable when the tail was fanned in flight.

Behaviour and habitat preference of migrants appears to be a useful guide. The Scilly birds and the Titchwell example preferred feeding slowly and quietly either in low vegetation or on the ground rather than in nearby trees and bushes.

Ringing Report

Moss Taylor



The ringing recoveries this year are presented in a different form from that used previously in the *Norfolk Bird Report*. It conforms more to the style used in other County Reports and allows greater detail to be given for the individual recoveries. Ringing details are given on the first line and recovery data on the second. The following abbreviations are used:

1 pullus (nestling or chick).
2 fully grown, year of hatching unknown.
3 hatched during calender year of ringing.
3J as 3, but showing some juvenile plumage when ringed.
4 hatched before calender year of ringing, exact year unknown.
5 hatched during previous calender year.
6 hatched before previous calender year, exact year unknown.
M male F female
v caught or trapped, released with ring.
vv ring number read in field or sight record of identifiable colour ring(s).
x found dead or killed by man.

xF found freshly dead or dying.
xL found dead (not recent).
() caught or trapped alive and not released.
? manner of recovery unknown.

During the year under review a record number of recoveries was reported which affected Norfolk. Three species: Scaup, Golden Plover and Crossbill, appear in the recovery section for the first time. Over ten thousand passerines were ringed in the County in 1983, a total which included 4 Cetti's and 9 Icterine Warbler, 3 Firecrests and a Great Grey Shrike. Three species were ringed in Norfolk for the first time: Slavonian Grebe, Leach's Petrel and Marsh Warbler. I am most grateful to the following ringers who submitted ringing totals and recovery details: S. Abbott, J. Bruhn, R. Dean, R. Gribble, A. Hale, Holme Bird Observatory, J. Houghton, A. Parr, W. Thrower, Mrs. M. Unsworth and G. Walford. Dr. N. Branson once again kindly commented on the Wash wader recoveries.

Fulmar: There have been only three previous Norfolk recoveries of Fulmar pulli ringed at Scottish colonies.

1	13.8.75	Inchkeith, Fife Region, Scotland
x	2.6.83	Holme 415km SE
1	29.7.72	Tarbat Ness, Highland Region, Scotland
x	13.4.83	Happisburgh 652km SSE

Cormorant: The first bird was found dead in Norfolk only 17 days after being ringed as a nestling in Wales.

1	11.7.83	Puffin Island, Anglesey, Wales
x	28.7.83	Ormesby Broad 387km E
1	27.6.81	St. Margarets Island, Dyfed, Wales
x	2.3.83	Lynn Point 368km ENE

Shag: The majority of ringed Shags found in Norfolk originate from the Isle of May or the Farnes.

1	21.6.81	Isle of May, Fife Region, Scotland
x	14.1.82	Stradsett 440km SSE

Heron: Note the early arrival date.

1	15.5.83	De Lopelaar, Noord-Holland, The Netherlands
x	23.7.83	Banham 300km WSW

Bewick's Swan: Four colour-ringed at Welney in February 1981 and 1982 were reported in the Netherlands in February 1983.

Grey-lag Goose: An interesting movement from a feral population.

4	29.6.82	Harrogate, North Yorkshire
x	10.9.83	Titchwell 189km SE

Brent Goose: Very few European-ringed Brent Geese have been reported in Britain.

4	19.4.77	Terschelling, The Netherlands
x	May '81	Burnham Norton 312km WSW
6M	17.4.82	Rodenas, Germany
vv	26.3.83	Cley 600km WSW

Wigeon:

3M	19.7.83	Pensthorpe, Fakenham
x	3.12.83	Ribble Marshes, Lancashire 272km WNW

Gadwall:

5M	4.1.80	Abberton R., Essex
x	17.9.83	Pentney 100km NNW
3F	21.11.79	Slimbridge, Gloucestershire
x	7.9.83	Cley 272km ENE

Pintail:

4F	5.11.82	Abberton R., Essex
x	11.2.83	Terrington Marsh 115km NNW

Tufted Duck: Prior to the commencement of the wildfowl ringing programme at Pensthorpe, very few Tufted Duck had been ringed in the County and only a single recovery can be traced. However, as a result of ringing in the autumn and winter of 1982 and 1983, Tufted Duck from Pensthorpe were reported from many localities within Norfolk, from Essex and from Lincolnshire. Birds ringed in Essex and Bedfordshire were also found in Norfolk. All the more distant recoveries are given in full, including only the fourth Czechoslovakian-ringed Tufted Duck found in Britain.

4M	23.9.83	Pensthorpe
x	26.11.83	Lough Neagh, Armagh, Northern Ireland 512km WNW
4M	18.2.83	Pensthorpe
x	6.10.83	Lochgoin, Strathclyde, Scotland 464km NW
1	28.7.80	Ceske Vrbne, Ceske Budejovice, Czechoslovakia
x	25.1.83	Billingford 1040km NW

Pochard: The recoveries show how mobile are the Pochard which visit Norfolk in autumn and winter.

4M	24.9.83	Pensthorpe, Fakenham
x	25.11.83	Cavaillon, Vaucluse, France 1045km SSE
4M	14.10.82	Pensthorpe
x	25.9.83	Oreby, Lolland, Denmark 737km ENE
5M	3.2.83	Welney
x	29.10.83	Aylesby, Humberside 119km N
4	9.2.81	Welney
x	10.1.83	Amsterdam, Noord-Holland, The Netherlands 305km E
4M	28.2.83	Peakirk, Cambridgeshire
x	7.12.83	Billingford 81km E
2F	26.12.81	Blunham, Bedfordshire
x	15.10.83	Shadwell Park, Thetford 84km ENE
4M	20.2.81	Blunham, Bedfordshire
v	3.2.83	Welney 61km NE

Scaup: Over 70 Icelandic-ringed Scaup have been recovered in Britain although this is the first in Norfolk.

4F	30.6.82	Sandvatn, Skutustadhir, Iceland
x	13.2.83	Terrington Marsh 1700km SSW

Kestrel: An unprecedented number of recoveries in one year, providing movements in all directions. Such random dispersal is characteristic of recently fledged Kestrels, well demonstrated by the nestling from Wiltshire.

1	30.6.82	Downham Market
x	4.4.83	Harwich Essex 95km SE
1	9.6.83	West Tofts
x	31.10.83	Knapwell, Cambridgeshire 61km WSW
3F	8.10.83	Spurn Point, Humberside
x	20.10.83	Great Yarmouth 153km SE

1	18.6.83	Amesbury, Wiltshire
x	25.7.83	Loddon 271km ENE
3F	26.11.82	Westleton, Suffolk
x	13.6.83	Chedgrave 32km NNW
3JM	21.10.80	Brigstock, Northamptonshire
x	13.5.83	Downham Market 63km ENE
3F	22.10.83	Gibraltar Point, Lincolnshire
x	28.10.83	Welney 61km S

Oystercatcher: An Oystercatcher flying west at Sheringham in September, with green dye on the breast, had been marked the previous month on the Moray Firth in Scotland. Very few Oystercatcher pulli ringed in Norfolk have been recovered abroad.

1	7.7.79	Babingly, King's Lynn
x	25.8.83	St. Valery, Somme, France

Ringed Plover: There has been only one previous Ringed Plover recovery from The Wash in Spain.

4	5.9.75	Snettisham
v	21.5.83	La Albufera, Mallorca, Spain 1458km S

Golden Plover: Although the majority of foreign-ringed Golden Plover are from The Netherlands, this is a first for Norfolk.

4	14.4.83	Sloten, Friesland, The Netherlands
x	15.10.83	Burnham Market 350km W

Lapwing: Some indication of the origin of our late summer/early autumn immigrants.

1	31.5.83	Vlaardingen, Zuid Holland, The Netherlands
x	31.7.83	Reedham 160km WNW

Sanderling: Although many British-ringed Sanderling have been recovered in France, North and West Africa, these are only the second in Germany and South Africa.

3	2.9.73	Snettisham
x	10.8.83	Point of Air, Clwyd, Wales 257km WNW
4	28.7.76	Snettisham
v	5.2.83	Kommetje Beach, Cape Province, South Africa 9820km S
4	18.8.73	Snettisham
x	13.9.83	Scharhorn, Neuwerk & Scharhorn, F. R. Germany 542km ENE

Ruff: This recovery demonstrates the characteristic south-westerly route taken by autumn migrants, compared with a more direct, easterly direction when returning to the northern breeding grounds in spring, unless it had over-wintered in Italy.

4M	4.8.81	Cantley
?	1.3.83	Mondragone, Caserta & Napoli, Italy 1579km SE

Bar-tailed Godwit: A bird controlled on return passage to Siberian breeding grounds.

4M	24.7.82	Terrington Marsh
v	15.5.83	Schiermonnokoog, The Netherlands 400km E

Curlew: This bird was probably on return passage to Finland, although it may possibly have been breeding in Germany.

4M	18.8.78	Terrington Marsh
v	19.4.83	Mindener Wiesen, Detmold, F. R. Germany 580km E

Spotted Redshank: Remarkably the second Spotted Redshank ringed on the same date at Terrington Marsh and recovered at the same locality in Morocco (the first having been found on 25.3.76).

5	27.7.75	Terrington Marsh
x	12.1.83	El Jadida Province, Morocco 2282km SSW

Turnstone: Two recoveries made during the breeding season, the first presumably from Greenland ringed after over-wintering on The Wash, and the second from the Finnish population which winters in Africa.

6	15.5.71	Heacham
x	13.6.83	Miotun, North Thingeyjar, Iceland 1772km NNW
6F	9.8.75	Terrington Marsh
v	6.7.83	Valassaaret, Vaasa, Finland 1689km NE

Bonxie: There have been only two previous Bonxie recoveries in Norfolk, this is the second from the colony on Foula.

1	15.7.80	Foula, Scotland
x	10.9.82	Wisbech SF 820km S

Black-headed Gull: Recoveries provided evidence of movements between Norfolk and The Netherlands, Denmark, Sweden, Finland, Poland and the Baltic States. Comparitively few German-ringed Black-headed Gulls have been found in Norfolk. Full details are also given of a multiple recovery.

1	20.7.79	Molfsee, Schleswig-Holstein, W. Germany
v	16.1.82	Downham Market
6	27.1.79	Sheringham
vv	23.4.80	Copenhagen, Sjaelland, Denmark 797km ENE
x	31.12.83	Sutton Bridge, Lincolnshire 70km W

Common Gull:

8	28.1.79	Sheringham
xL	16.7.82	Kalajoki, Oulu, Finland 1811km NE
4F	4.1.76	Snettisham
x	25.5.83	Insel Heuwiese, Rostock, German D.R. 854km ENE
8	16.2.83	Worthing, Sussex
v	22.11.83	New Costessey 229km NNE

Lesser Black-backed Gull: The third recovery of a Norwegian-ringed nestling found in Norfolk.

1	8.7.82	Songvar Fyr, Vest Agder, Norway
x	27.7.83	Breydon Water

Great Black-backed Gull: The majority of foreign-ringed birds found in Norfolk have originated from Norway. Details are given of the first from a Scottish colony and the first recoveries of Norfolk-ringed Great Black-backed Gulls.

6	25.11.76	Coltishall
x	12.2.83	Dereham 29km W
6	25.11.77	Coltishall
x	1.9.83	Traena, Nordland, Norway 1641km NNE
1	22.6.83	Switha, Orkney, Scotland
xF	12.9.83	Holme 687km SSE
1	14.7.82	Spannholmane, Rogaland, Norway
x	Sept. '83	Acle
1	4.7.74	Gjosundholmen, More og Romsdal, Norway
x	8.9.83	Heacham

Kittiwake: The first Belgian-ringed Kittiwake to be found in Britain, albeit ringed offshore!

4	3.10.77	North Sea, off Belgium
x	23.2.83	Terrington Marsh

Sandwich Tern: It would be interesting to know whether the first bird bred locally or was on passage when it died fifteen years after being ringed.

1	26.6.68	Sands of Forvie, Grampian Region, Scotland
x	9.9.83	Blakeney Quay 520km SSE
4	28.8.80	Leverton, Lincolnshire
x	14.7.83	Blakeney Point 57km E

Common Tern:

1	19.6.83	Hardley Flood
x	3.8.83	Breydon Water
1	19.6.83	Hardley Flood
x	20.11.83	Dakar, Senegal 4540km SSW

Kingfisher:

3J	11.7.82	Alder Carr, Gillingham
x	15.1.83	Lynn Point 89km WNW

Sand Martin: Included is a control of a bird ringed on spring-passage in the Channel Islands.

3	10.7.83	Haddiscoe
v	31.7.83	St. Osyth, Essex 84km SSW
4F	8.6.82	Weybourne
v	17.9.83	Sandy, Bedfordshire 134km SW
2	11.7.79	Leziate
v	18.9.79	Brazo del Este, Seville, Spain
4	30.4.82	Vale Marais, Guernsey, Channel Islands
v	11.7.82	Tottenhill GP

Swallow: British Swallows take the south-western route to and from Africa (as shown by the bird in Spain), it is therefore not surprising that there have been only three previous recoveries of British-ringed Swallows in Italy. Presumably it had become 'caught up' with birds from a more easterly population.

2	4.9.82	Stow Bridge
x	5.11.82	George District, Cape Province, South Africa
1	19.6.80	Holme
x	3.5.82	Castel Porziano, Roma, Italy
1	14.8.82	Narborough
x	27.10.82	Jerez, Cadiz, Spain
1	20.6.82	Stanford R., Leicestershire
x	28.8.82	Holme

House Martin:

4	21.5.83	Happisburgh
x	23.8.83	Ashford, Kent 192km SSW

Meadow Pipit:

2	16.9.80	Spurn Point, Humberside
x	22.4.83	Terrington 94km S

Yellow Wagtail:

2	27.8.82	Saddlebow
v	10.10.82	Isle of Grain, Kent

Pied Wagtail:

3JF	29.7.81	Weybourne
v	3.1.83	Earlham 36km S
3F	23.10.83	Waxham
v	12.11.83	Earlham 31km WSW

Robin: Recovery details are given of two October 'fall' birds — the first controlled on Fair Isle on its return journey to Scandinavia. The second ringed during the autumn of 1976, when several large 'falls' of northern European Robins occured. A recovery in Algeria, from the same autumn was given in *NBR* 1976 p.103.

3	11.10.82	Sheringham
v	16.4.83	Fair Isle, Scotland 752km NNW
3	2.10.76	Waxham
x	17.1.83	160km from Rabat, Morocco

Redstart: The first recovery in Africa of a Norfolk-ringed Redstart.

2F	2.9.81	Sheringham
xF	20.4.83	Casablanca, Morocco 2256km SSW

Song Thrush: An unusual recovery, the majority of long-distance late summer/autumn movements being in a southerly direction.

3	25.8.83	Gillingham
v	6.11.83	Bradford, West Yorkshire 268km NW

Reed Warbler:

3J	27.7.82	Weybourne
v	10.8.83	Lessingham 34km SE
3F	29.8.82	Stodmarsh, Kent
v	23.7.83	Loddon 143km N
4	1.6.83	Blythburgh, Suffolk
v	23.7.83	Loddon 25km NNW

Blackcap: The first two recoveries provide further evidence of the route taken and the wintering-area of Blackcaps bred in Norfolk (both birds were ringed while still in juvenile plumage). The third recovery is an example of an October-ringed bird, probably from a more eastern population, reorientating and wintering in Corsica.

3JF	16.7.83	Walton Common
v	17.9.83	Beachy Head, Sussex 221km S
3JM	17.8.82	Sheringham
?	7.2.83	Had Harrara, Safi, Morocco 2425km SSW
3M	12.10.82	Happisburgh
x	31.1.83	Pianotolli-Calderelo, Corsica, France 1381km SSE

Goldcrest: Three birds involved in the October 'falls' at the beginning and end of October. Note the reorientation of the bird in Belgium and the short interval between ringing and recapture of the Dutch bird.

2M	30.10.83	Happisburgh
x	5.11.83	Cambridge, Cambridgeshire 120km SW
3F	1.10.83	Bacton
v	11.10.83	De Panne, West Vlaanderen, Belgium 209km SSE
3F	25.9.83	Kroonspolders, Frisian Islands, The Netherlands
v	1.10.83	Bacton

Spotted Flycatcher: Only three Norfolk-ringed Spotted Flycatchers have previously been recovered abroad, in Morocco and Spain(2).

1	21.6.83	Hilgay
x	18.10.83	Algoz, Algarve, Portugal 1839km S

Long-tailed Tit: The autumn of 1983 was characterized by the unusual number of Long-tailed Tits reported from many sites, particularly coastal. As they tend to travel in small flocks, recoveries not infrequently involve parties of several birds controlled together.

2	10.10.82	Happisburgh
v	13.2.83	Rothamsted, Hertfordshire 174km SW
2	14.10.83	Happisburgh
x	28.10.83	Mautby 22km SSE
2	8.10.83	Tottington (6 birds)
v	20.10.83	Happisburgh 76km E
2	23.10.83	Landguard, Suffolk (7 birds)
v	30.10.83	Happisburgh 95km N

Blue Tit:

1	30.5.80	Hillington
v	3.4.82	Gibraltar Point, Lincolnshire

Great Tit: A Norfolk-ringed control in the garden of Beech Grove, the head-quarters of the British Trust for Ornithology, from where the ring was first issued.

3JM	5.8.83	Gillingham
v	31.10.83	Tring, Hertfordshire 170km WSW

Starling.

4M	24.1.82	Bray, Wicklow, Eire
v	26.3.83	Fakenham 467km E

Chaffinch: Surprisingly the first Norfolk-ringed Chaffinch to be recovered during the breeding season in Scandinavia.

2	25.10.81	Grimston Heath
x	20.5.82	Selbu, Sor-Trondelag, Norway 1400km SW

Greenfinch: Only four Dutch-ringed Greenfinches have previously been found in Britain.

2	17.10.81	Grimston Heath
v	3.1.82	Chippenham, Wiltshire
2	7.10.80	Gibraltar Point, Lincolnshire
v	25.2.82	Holme 20km SW
5M	3.3.81	Den Haan, West Vlaanderen, The Netherlands
x	1.7.83	Taverham 201km NW

Goldfinch:

5F	2.5.82	Swaffham Heath
x	15.8.83	Boston, Lincolnshire 53km NW
6M	23.4.83	Sheringham
v	11.9.83	Oostkapelle, Zeeland, The Netherlands 222km SE

Siskin: The last bird gives some indication as to the origin of at least some of our spring siskins.

2	21.2.82	Warsop, Nottinghamshire
v	3.4.82	Swaffham Heath
3J	29.5.82	Swaffham Heath
x	4.5.83	Wimborne, Dorset

4	4.4.82	Swaffham Heath
x	21.5.82	Kirn, Strathclyde, Scotland

Linnet: Large numbers of British Linnets over-winter in Spain.

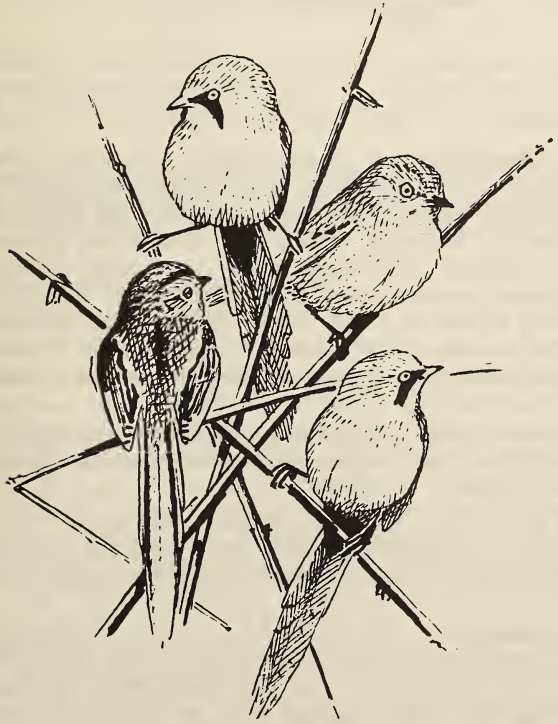
4F	18.6.81	Hardley
x	8.11.81	Arcos de la Frontera, Cadiz, Spain 1847km SSW
2	3.9.82	Holme
()	2.11.82	Bilbao, Vizcaya, Spain
4F	3.3.82	Ontigola, Madrid, Spain
v	11.5.82	Happisburgh

Redpoll:

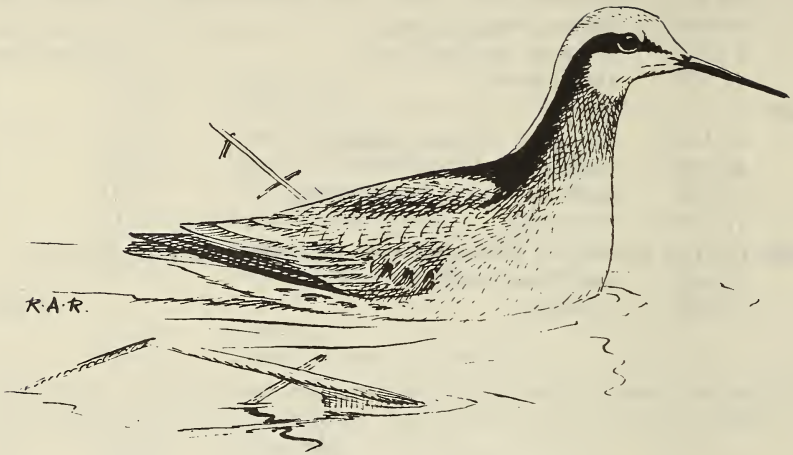
2M	28.10.81	Erbisoeul, Hainaut, Belgium
v	26.4.83	Sheringham 327km NW
2	2.4.78	Esch-sur-Alzette, Luxembourg
x	17.7.80	Watlington

Crossbill: The first recovery of a Crossbill to be included in the County Report.

2	10.6.82	Swaffham Heath
v	12.8.83	Fowlmere



Classified Notes



These notes are based on *Birds of Norfolk* (revised edition 1977) where fuller details regarding status, distribution, migration and ringing recoveries may be found. Fuller details of Fens records appear in the Cambridge Bird Club Report for 1983. Attention is also drawn to the wealth of migration observations appearing in Norfolk Ornithologists Association 1983 Annual Report. In addition to very detailed records from Holme, coastal accounts extend from Snettisham to Breydon Water.

The order used is that of K. H. Voous (1977) List of Recent Holarctic Bird Species. Observations refer to 1983, unless otherwise stated. To save space, all but the most essential initials have been omitted. Records are of single birds unless otherwise stated.

Red-throated Diver: Coastal records to May 20th and from Aug 25th. Peak counts again at Paston: 203 east Feb 20th and 150 east on 27th. Inland at Hickling Feb 12th and Narford May 15th.

Black-throated Diver: More coastal records than usual to April 29th and from Aug 29th. Of the total of 112 individuals reported 39 occurred in Oct and 27 in Feb. Largest groups included 6 Winterton March 1st and 5 Titchwell Oct 8th. No inland observations.

Great Northern Diver: Thirty coastal records as follows: Horsey Oct 29th, Paston/Mundesley Oct 1st and 2 on 18th, Sheringham March 6th, Weybourne March 19th, Salthouse Oct 24th, Cley Oct 25th, 2 on 30th and Dec 10th, Blakeney Point March 11th, Holkham Dec 19th, Scolt Head Feb 13th, 18th and March 18th, Titchwell Feb 20th, Oct 8th, Oct 12th, Nov 13th and Dec 24th, Holme April 9th and end Dec, Hunstanton Jan 19th, 2 Feb 19th, 2 Oct 26th, Nov 15th-19th, 2 Dec 19th and 1 on 20th and Lynn Point Jan 17th and March 5th.

Little Grebe: Breeding localities include Breydon (several pairs), Muck Fleet/Filby Broad (1 pair), Brandon/Santon Downham (up to 12 pairs), Massingham Heath, Hillington G.P. Narford, Leziate, Pentney and Tottenhill G.P. Notable winter totals at Holkham Lake (10 Nov) and Snettisham (25 Jan, 21 March and 75 Nov). All breeding records welcomed.

Great Crested Grebe: Notable Nov build-up on Flegg Broads including 74 on complete group on 17th and 32 on Filby Broad on 23rd. Additional non-breeding assemblies: Titchwell 25 Jan and 30 Oct, Holme 20 Jan, 100 arrived Sept 26th and 30 Oct/Nov, Hunstanton 27 April, 60 Oct and 36 Nov, Snettisham 48 Aug and 28 Sept.

Red-necked Grebe: Over 150 coastal records to May 14th (Waxham) and from Aug 12th (Cley) and 17th (Scolt Head). Mostly singles, but 5 in Holkham Bay Oct 9th and 7 off Scolt Head March 17th. Interesting summer observations at Brancaster June 8th and July 6th. In Broadland at Hickling/Heigham Sounds 1-2 Feb 25th-March 13th, 1 Dec 16th and 2 on 28th; Filby March 24th and Ormesby Dec 20th.

Slavonian Grebe: Early spring passage off Titchwell including 5 Feb 27th, 4 March 1st and 5 again on 5th/6th and 9 on 15th decreasing to 3 by 17th and then singles to 29th. Twelve small eared grebes, many paired, off Scolt Head March 18th and 5-6 on 31st almost certainly Slavonian (see Titchwell summary).

Elsewhere, over 95 coastal records to April 8th (Holme) and from Sept 5th (Holkham Bay) including a well watched bird in summer plumage at Holme/Thornham Aug 10th-Sept 2nd. Broads: Horsey Mere Feb 12th moving to Martham Feb 19th-22nd.

Black-necked Grebe: Coastal records at Cley May 15th (summer plumage), Brancaster April 4th, Scolt Head April 16th, Holme March 29th (summer plumage) and Hunstanton Feb 17th-23rd. Inland at Hickling April 1st. Remains rarest of the grebes.

Fulmar: Only breeding records received were from East Runton to Cromer (24 nests) and Hunstanton (24 young Aug 14th). Among coastal movements: 100 west Titchwell Aug 28th, 300 east Holme April 11th and 20 Snettisham April 11th and again Aug 1st.

Dead dark phase bird Scolt Head March 4th.

Cory's Shearwater: Horsey Aug 13th (PRA).

Additional 1982 record: Cley Sept 5th (NB CW).

Sooty Shearwater: More records than in 1982 (over 100 individuals). Typical movements of autumn birds moving north/west off east and north coasts during northerly winds. Extreme dates Aug 6th and Oct 24th: Winterton Sept 9th, Horsey 12 Aug 13th, Aug 28th, 4 Sept 4th, Sept 11th, 10 Sept 12th, 8 Sept 25th and Oct 21st; Waxham Oct 17th; Eccles Sept 3rd; Paston/Mundesley 10 Aug 28th, 11 Sept 3rd, 2 Sept 12th and 4 Oct 24th; Cromer Sept 5th and 2 Sept 13th; Salthouse Aug 6th, 2 Sept 3rd, 1 Sept 5th and 5 (possibly 10) Sept 6th; Cley Aug 6th, 3 Aug 28th, Aug 29th, 4 Sept 3rd, 5-6 Sept 4th and singles Sept 6th, 10th and 11th; Blakeney Point Aug 13th and 2 Aug 28th; Titchwell Oct 1st and Oct 16th; Holme 2 Oct 16th and Hunstanton 5 Sept 3rd and singles Sept 6th and 11th.

Manx Shearwater: Most records relate to Aug/Sept. Largest movements: Sept 3rd (74 east Paston, 20 at Holme); Sept 5th (26 south at Horsey, 30 at Holme and 28 Hunstanton); Sept 10th (50 east at Cley) and Sept 11th (29 east at Mundesley, 60 off Holme and 113 at Hunstanton).

One inland in Fens at Three Holes, Upwell, Sept 10th (released next day when a single flying down River Ouse and out to sea).

Balearic race birds off Paston Aug 28th, Cley and Hunstanton Sept 3rd.

Storm Petrel: Yarmouth Sept 3rd following westerly gales. Caister Heliport Nov 4th rescued from Amoco 49/27B Gas Platform 35 mile NE of Yarmouth and released next day at Waxham.

Leach's Petrel: Horsey, exceptional total of 8 north Sept 25th during light northerly winds but accompanied by heavy swell (PRA ADB); Salthouse Oct 22nd; Cley at least 3 Sept 3rd and singles Oct 1st, 19th and 21st; Blakeney Point dead Sept 7th; Hunstanton 3 to NE Sept 11th and 4 NE on 12th.

Inland: Narborough Dec 6th released same day at Lynn Point.

Gannet: Impressive Sept movements especially on 3rd (680 east at Paston and 390 east at Cley) and 11th (400 at Holme, 200 Hunstanton and 1,000 at Snettisham). Also Nov 12th (204 east at Paston).

Inland: Hilgay Fen adult dead April 20th.

Cormorant: Largest roost at Ranworth where 300-350 at beginning of year. At Lynn Point regular dawn flight up River Ouse included 37 in Jan, 31 in Feb, 40 in March, 38 in Sept and 34 in Nov. Away from coast, maximum of 65 at Welney power cable roost Feb 14th. Twenty-one in Jan and 17 in Feb at Narford roost and 15 in Feb, 16 in Oct and 19 in Nov at Colney/Bawburgh G.P.

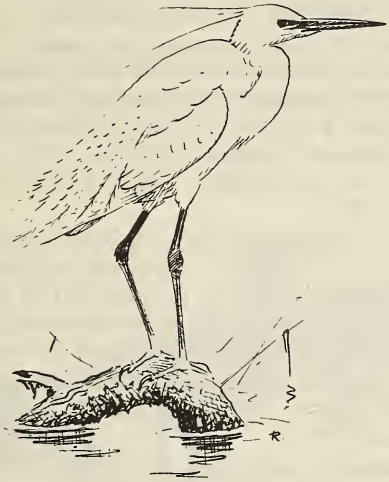
Shag: Recorded all months except Jan and June. Most relate to Sept onwards and usually after strong winds. Peak totals: Horsey 4 Oct 22nd, Waxham 3 Oct 21st, Cley 5 Oct 29th, Brancaster/Scolt Head 7 March 27th and 14 April 1st, Wells 3 Dec 11th, Titchwell 4 Oct 8th and 8 on 21st; Hunstanton 3 Feb 2nd, 3 Sept 12th and 10 Oct 22nd and Snettisham 3 in late Oct.

Broads: Hickling 2 March 9th and one in July.

Bittern: In Broadland 8 regular boomers compared with only 5 in 1982. On north coast 6 boomers at 4 sites compared with 5 boomers in 1982. Winter records at Burnham Norton, Holkham (Feb 22nd dead), Strumpshaw, Hardley Flood, Filby, Caister (Dec 23rd dead on beach), West Acre and Hillington.

Night Heron: Briston, the 1982 adult remained till Jan 25th. Cley an adult May 22nd to June 1st (RE *et al*).

Cattle Egret: Cley/Salthouse adult May 28th (PJH PVH). Fifth county record.



Little Egret: Strumpshaw July 21st (CJH) and later same day at Breydon (PRA).

Great White Egret: North Wootton Sept 14th (PB), Titchwell Oct 2nd (REJ PAJP) and Wells Oct 6th (ARJ) and 7th (AB) all doubtless relate to same individual. Second county record.

Grey Heron: See feature on page 364.

White Stork: Breydon May 7th (DM).

Spoonbill: Breydon 1 March 19th-24th and 2 June 5th. Horsey 1 in May. Hickling 2 April 13th and singles June 4th, 14th and 18th, Sheringham 2 west June 12th. Cley/Salthouse present April 5th to Sept 6th with up to 6 April, 3 May/June, 4 July then singles. Titchwell present April 22nd to Sept 10th with maximum of 4 April, 5 May, 4 June, 4 July, 4 Aug and 3 Sept. Snettisham 1-2 April 14th and 24th.

Bewick's Swan: Recorded to May 7th and from Oct 21st. As usual largest concentrations at Welney where 1,636 Jan, 1678 Feb, 39 March, 1,181 Nov, and 1,001 Dec; 4 injured birds summered.

Elsewhere impressive winter totals include: Geldestone 42 Feb 25th, Horsey 40 Dec 15th, Martham 66 March 16th and 54 Dec 3rd, Halvergate/Lower Bure 154 Feb 1st and 96 Dec 15th, Haddiscoe 91 March 3rd, Muckfleet Marsh 41 Dec 9th and Snettisham/Wolferton 30 Jan-Feb and 46 Nov 12th.

Easterly exodus: Breydon 23 Jan 29th and 36 March 15th, Winterton 34 March 18th, Paston 20 Feb 27th, Titchwell 31 March 3rd, Costessey 205 Feb 28th, Downham Market 65 March 5th and Massingham Heath 41 March 10th.

Autumn westerly movements: Winterton 12 Nov 12th and 7 on 13th, Hickling 39 Nov 13th, Waxham 3 Oct 25th, Paston 16 Nov 9th and 22 on 12th, West Runton 6 Nov 3rd, Kelling Heath 32 Dec 15th, Stiffkey 17 Nov 5th and 60 Nov 12th, Wells 68 Nov 12th, Brancaster Staithe 7 Nov 3rd and 15 on 10th, Titchwell 19 Nov 3rd and 4 on 4th and Holme 16 Nov 6th, 17 on 11th and 22 on 12th.

Whooper Swan: Recorded to May 18th and from Oct 17th. Impressive herds at Welney where 170 Jan, 147 Feb, 37 March, 107 Nov and 83 Dec.

Elsewhere largest groups: Hickling/Martham/Potter Heigham area 33 Jan, 32 Feb, 36 March, 11 Nov and 48 Dec; Snettisham/Wolferton area 30 Nov.

Westerly movements in Nov: Yarmouth 29 on 12th, West Runton 4 on 24th, Stiffkey 53 on 12th and Wells 4 on 5th and 20 on 12th.

Bean Goose: Yare Valley 175 Jan 8th increasing to a peak of 197 on 24th and remaining till Feb 23rd with 114 on 24th and 11 till March 1st; 2 returned Oct 26th increasing to 55 by Nov 21st, 162 on 28th and 176 by year end. Elsewhere: Horsey Oct 22nd, Paston 3 west Nov 12th and 4 west on 13th, Cley 3 Feb 9th, Holkham 13 Jan, 2 Feb and 1 March 23rd, Brancaster/Docking 1-9 to Jan 25th, Castle Rising Jan 24th, Hardley Flood up to 5 Jan 1st to March 13th and 2 from Dec 11th to 31st and Welney 3 Jan and 2 Feb 20th.

Pink-footed Goose: Very impressive numbers in NW Norfolk. In Snettisham area 5,400 mid-Jan, 2,950 Feb, 3,110 March, 17 April with last 4 on 15th; 51 returned Oct 28th increasing to 3,040 by Nov 19th and to 5,900 by Dec 4th.

In Brancaster/Docking area up to 5,000 in Jan remaining in reduced numbers till mid-Feb with 1,500 Dec 5th and 9,000 by end of year. In Fens 66 Welney Dec 19th.

White-fronted Goose: Largest assembly at Holkham where 225 Jan, 176 Feb, 160 March, 27 Nov and 130 Dec. In Yare Valley 112 Jan and 110 till Feb 22nd when departed high to SE.

Lesser White-fronted Goose: An adult with the Holkham White-fronted Feb 21st to March 8th (JBK *et al*). None has appeared in the once favoured Yare Valley since 1971.

Barnacle Goose: Snettisham up to 12 with Brents till March 15th, Holme 4, Wells 4 east, Blakeney Point 4 east, Paston 6 east and Yarmouth 34 south all on Nov 12th. Also Welney 2 Dec 19th.

It seems clear that individuals from each of the three breeding populations of Barnacle Geese occasionally arrive in Norfolk, each under differing circumstances regarding weather, time of year or associated species.

The Spitzbergen population normally migrates west across the northern North Sea en route to their Solway wintering grounds. Northerly gales in Oct/Nov may displace some southwards on to the Norfolk coast, where they sometimes join the migrating hordes of Brents, leading to the belief that they belong to the Russian population. Proof of their ancestry comes from a colour-ringed bird observed at Wells one October. It had been ringed on Solway the previous winter and been seen the following May on a Norwegian spring staging area prior to leaping off for Spitzbergen.

The Russian population normally winters on the near Continent especially Holland. Its arrival here normally coincides with severe weather in mid or late winter. An increase in other species from the same wintering areas will often be noticed simultaneously (e.g. Smew, Goosander, Bean Goose and Pale-bellied Brent). The Brents will have come from the discrete Spitzbergen population which winters in Denmark, and not the Greenland population which winters in Ireland.

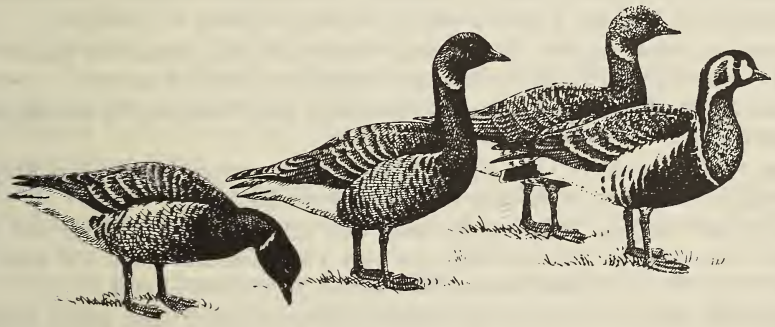
One or two Barnacles normally accompany the huge Pink-foot skeins feeding inland on sugar-beet tops or winter wheat. These have almost certainly arrived from Greenland where both species breed.

Attention should also be drawn to the regular occurrence of small parties of Barnacle Geese in May, almost always dismissed as escapes. No doubt some are, but the regular pattern of events suggests that some may well be disoriented migrants, possibly of Dutch origin. The others could, of course, be free-flying birds from Wildfowl Trust centres, showing a spring migratory urge. (JBK).

Brent Goose: Recorded each month (300 still at Wolferton May 25th). Maximum numbers at main localities: Breydon 65, Cley 3,000, Blakeney 6,500, Holkham/ Wells 3,800, Scolt Head 4,000, Burnham Overy 3,000, Burnham Norton 3,300, Holme 1,700, Hunstanton 450, Lynn Point 1,200 and Snettisham 2,300.

Pale-bellied *hrota* at Cley Jan 1st, March 13th-26th and Oct 21st/22nd. A Black Brant *nigricans* first seen 1982 remained at Cley until March 13th and one appeared again Dec 21st-31st.

Autumn movements: Yarmouth 6,000 south Nov 11th and 2,085 south on 12th. Paston 1,976 west Oct 21st, 1,033 west Oct 29th and 2,258 west in 1½ hours Nov 11th. Unusual Yare Valley records of 6 Jan 7th and 11 Nov 28th.



Red-breasted Goose: Stiffkey, a first-winter bird Nov 10th (JDM MMM), remaining in the Holkham/Holme area, usually in company with Brents, till the year end. Second county record.

Egyptian Goose: Some peak counts include: Holkham Park 65 Aug; Hillington 80 Jan and Narford 42 Oct.

Ruddy Shelduck: Sheringham 4 west Oct 14th (MPT). Considered to be escapes from captivity. This species has long been common in waterfowl collections and since 1969 has bred ferally in Holland and NW Germany (see *British Birds* "Ruddy Shelduck in Britain 1965-1979 Vol. 75: 446-455).

Shelduck: On Wash at Snettisham 5,000 Jan, 5,650 Feb, peak of 7,470 March 11th, 4,860 July, 2,500 Aug and 3,135 Sept. 2,000 off King's Lynn near Pandora Sand Aug 8th and 1,350 out of a flock of 1,500 off Snettisham Aug 10th all considered flightless.

Breydon peak of 1,063 June 24th prior to moult migration departure.

Wigeon: Highest estimates: Yare Valley 4,500 Jan, 3,000 Feb and 4,000 Dec. Cley 3,000 Oct. Welney 9,450 Jan, 8,510 Feb, 5,345 March, 4,805 Oct, 11,040 Nov and 6,610 Dec.

Gadwall: Largest counts in Brecks: at Stanford Water 400 Oct and at Narford 200 Jan. Elsewhere How Hill 198 Nov, Martham Broad 102 Feb, Titchwell 180 Sept and Snettisham 184 Feb and 150 Dec.

Teal: Highest counts: Welney 1,440 Feb, 1,150 March and 1,355 Sept; Titchwell 1,100 Sept, 1,500 Oct and 1,100 Nov/Dec.

Green-winged Teak: Single drake at Welney March 19th (DR).

Pintail: Largest totals: Breydon 104 Feb; Snettisham 1,300 Jan; Lynn Point to Wolferton 2,000 Jan, 660 Feb and 400 Dec and Welney 635 Oct.

Garganey: Spring arrival from March 13th (Horsey) followed by 1-5 at Breydon, Waxham, Cantley, Hickling, Strumpshaw, Ranworth, Salthouse, Cley, Wiveton, Holkham, Titchwell, Holme, Snettisham, Wolferton, Welney and Swanton Morley. Breeding confirmed only at Cley.

Shoveler: Highest counts: Ranworth 150 Feb, Welney 225 Dec and Methwold Fen 160 Nov.

Red-crested Pochard: Single drakes at Wheatacre (TWF) and Welney (DR) both Oct 25th.

Pochard: Largest assemblies (Jan/Feb): Stanford Water 300, Narford 220, Tottenhill 150, Welney 760 and Hickling 104. Broadland breeding records from Rockland, Strumpshaw, Cantley, Filby, Ormesby, Rollesby and Hickling.

Ferruginous Duck: Hardley Flood, drake April 17th-29th apparently paired with duck Pochard (JCE PC GED); Cantley, drake Nove 20th (PRA).

Tufted Duck: Winter counts include Tottenhill 300, Narford 200 and Stanford Water 200.

Scaup: Highest count 16 Lynn Point Jan/Feb. Mid-summer records from Breydon July 4th (2) and Aug 7th (4); also Paston June 5th (2).

Eider: Peak numbers: Yarmouth 82 south Nov 12th, Horsey 118 north Nov 12th, Paston 256 west Nov 12th and 202 west Nov 13th, Blakeney Point 130 west Nov 12th, Holme 70 April, Hunstanton 250 Dec and Snettisham 61 July.

Long-tailed Duck: As usual most regular off Hunstanton/Holme where monthly peak totals as follows: 21 Jan, 120 Feb, 80 March, 50 April, 7 Oct, 47 Nov and 40 Dec. At Brancaster 60-70 during March. Elsewhere up to 10 between Heacham and Salthouse including 2 at Snettisham till May 30th and one on Arnold's Marsh Cley till June 20th. Also 2 at Horsey Nov 13th and 3 off Paston same day.

Interesting record of a duck inland at Hardley Flood Dec 20th.

Common Scoter: Inshore counts: Hunstanton/Holme 200 Jan/Feb and 450 March; Brancaster 500 March.

Surf Scoter: Additional 1982: Cley a drake Sept 18th (PK).

Velvet Scoter: Recorded monthly (except June and Aug). Largest parties at Hunstanton 15 Dec 9th, Holkham Gap 25 Oct 30th, Blakeney Harbour 10 July 10th and Paston 9 Nov 12th. Fens: Denver Sluice Jan 21st/22nd.

Goldeneye: Peak counts: Horsey 21 Oct, Paston 50 west Oct 29th, Holme 30 March, Hunstanton 40 Feb and Snettisham 50 March.

Smew: Recorded to April 8th and from Nov 13th including 4 at Hickling. Otherwise ones and twos at Tottenhill, Holme, Titchwell, Wells, Cley and Paston.

Red-breasted Merganser: Large numbers: Snettisham 46 April, and 52 Nov, Hunstanton 25 March and 20 Oct, Holme 80 March and 30 Nov, Titchwell 26 March and Brancaster 60 Nov.

Goosander: Winter records at 11 sites including 6 at Shadwell Jan 9th. 9 at Antingham Feb 23rd and 5 at Didlington Dec 11th.

Ruddy Duck: Horsey 2 Feb 12th and at Hickling next day, Holme 5 on sea Dec 11th, Snettisham May 1st and Narford Jan 23rd.

Honey Buzzard: Two birds present at usual site mid-summer, but no evidence of breeding. Elsewhere Holme April 23rd-24th and Horsey in off sea May 8th.

Red Kite: Hedenham, present to first week in March (since early Dec 1982). Burnham Norton/Holkham Park/Wells and Langham Dec 22nd to 26th.

Marsh Harrier: County total of 39 adults in summer and 49 young reached flying stage. Up to 28, and maybe as many as 32, roosting on arable at one coastal site in early Sept. Four wintered in Horsey/Hickling area.

Hen Harrier: Recorded at over 50 mainly coastal localities up to May 31st (Holme). Additional late records include Happisburgh May 10th, Holme and Titchwell on 14th and Horsey to 22nd (female carrying nesting material into reeds on 19th). First in autumn Oct 4th (East Winch). Largest totals outside roosts: 8 at Sandringham Warren Jan 2nd and Feb 6th and up to 6 at Roydon in both winter periods.

Roosting sites included: Horsey Jan 9, Strumpshaw Jan 8, March 4 and Nov 4, Kelling Jan 6, Feb 6, March 4-5 and Dec 4, Scolt Head Jan 10, Feb 10, March 7, April 7, Oct 3, Nov 13-14 and Dec 10, Titchwell Jan 7, Feb 7, March 6, April 4, Oct 2, Nov 7 and Dec 3 and Dersingham Jan 6.

Montagu's Harrier: Bred successfully in county for second year running. Thirty-seven records — many more than usual — between April 22nd (Holme) and Sept 1st (near Welney and unfortunately found shot). Majority recorded during May at coastal/Broads localities.

Goshawk: Recorded at Narford Jan 22nd, Santon Warren March 5th, Winterton April 4th and 8th, Holkham Oct 14th, Hickling Dec 11th and Great Hockham Dec 16th.

Sparrowhawk: Recorded at over a hundred localities, but only two pairs known to have definitely bred. Total includes breeding-season records at 9 sites. No notable spring movements reported.

Although usually regarded as a woodland bird one or two individuals regularly hunted the saltings at Lynn Point and Wolferton.

Buzzard: Total of 19 at Bacton, Barrow Common, Blakeney Point, Brancaster, Felbrigg, Fritton, Holkham, Holt Hall, Horsey, Horsford, Paston, Ranworth and Westacre. All singles except 2 at Fritton March 9th. Recorded Jan, March-May, Aug/Sept and Dec.

Rough-legged Buzzard: Present up to May 7th (Paston) and from Nov 1st (Hillington). Singles at Brancaster, Burnham Norton, Flitcham, Fritton, Hickling, Hillington, Holkham, Horsey, Martham, North Walsham, Ormesby, Paston, Scolt Head, Snettisham, Titchwell, Wayford Bridge, Waxham, Winterton and Wroxham. Two at Holme March 31st and 4 April 16th.

Osprey: Twenty-one between April 5th and Oct 4th. Localities included Barnham Common. Brancaster Staithe, Buxton Heath, Cley, Crostwick, Dilham, Fowl Mere, Hickling, Holkham, Holme, Lound, Salthouse, Sheringham, Strumpshaw, Titchwell, Walsey Hills and Wells. All singles. The Lound bird lingered almost 4 weeks from Aug 30th.

Kestrel: Interesting total of 30 passed west at Holme April 16th. Autumn build-up along saltings and sea-walls Lynn Point to Wolferton peaked at 30 Aug 15th.

Red-footed Falcon: The May 1981 Bacton bird remained until June 3rd.

Merlin: Noted at over 40 localities including 7 records in May, the latest at Horsey (13th) and Ringstead (14th). First in autumn Caister Sept 16th. All singles except 2 at Holkham, Roydon and Titchwell.

Hobby: Thirty-three recorded. Extreme dates April 19th (Snettisham) and Sept 23rd (Frog Hill, Sturston). All singles apart from 2 Lynn Point May 21st. One stayed at East Winch a month from last week in June.

Peregrine: Total of eight: Welney March 19th, Titchwell Sept 9th, Snettisham Sept 16th and Dec 5th, Scolt Head Oct 15th, Weybourne Nov 5th, Holkham/Burnham Nov 26th onwards, Wolferton Dec 5th and Blakeney Point Dec 28th.

Quail: Wired casualty at Carbrooke. Calling at Cley, East Tuddenham, Holme, Massingham Heath (up to 3), Salthouse, Snettisham, Ten Mile Bank near Welney, Titchwell (3-4), Welney and Wolferton. At Holme one in dunes on early date of March 16th.

Golden Pheasant: Recorded from Croxton, East Wretham, Grime's Graves, Hockham Belt (15 together), Mundford, Narford, Sandringham, Thompson Common, Weeting and Wolferton.

Spotted Crake: Holme April 17th, Cley Aug 4th/5th with 2 on 6th, Titchwell Aug 29th to Sept 18th and Salthouse Dec 10th.

Corncrake: Holme Dunes, Oct 30th (HBO).

Coot: Paston, unusual record of 9 on sea Oct 21st.

Crane: In Broadland up to 4 throughout year and a fifth bird appeared from early Aug. In addition single Cromer (TW) and later Cley (BB MF) May 14th; undoubtedly one of the Broads group birds.

Waders: Damp grasslands are disappearing at an alarming rate due to drainage and agricultural changes. Special attention is therefore drawn to "The Status and Distribution of waders breeding on wet lowland grasslands in England and Wales" *(Bird Study Vol. 30, Part 3 pp 177-192).*

Oystercatcher: Blakeney Point 140-160 pairs. Inland pairs at Babingley, Downham Market, Gayton Thorpe, Hardley, Hillington, Pentney, Saddlebow, Sculthorpe, Stow Bridge, Thorpland, Welney (6 pairs) and West Raynham.

Peak Wash counts of 12,000 Jan, 10,993 Sept and 10,875 Nov.

Avocet: Breydon: Recorded regularly between March 26th and Nov 19th with peak monthly counts of 7 March, 10 April, 4 May and 1-2 several dates till Nov except for Aug/Sept.

Hickling: Up to 5 April 6th-Nov 3rd. One pair reared 3 young; one of the breeding adults had been ringed as a juvenile at Minsmere in 1971.

Cley: Extreme dates Feb 25th and Dec 23rd. About 30 pairs reared 55-60 young. Earliest hatchings May 22nd. A Coot ate one clutch in mid-May.

Holme: Two pairs reared one chick. Eleven birds plus residents June 19th.

Wash: Four pairs reared a minimum of 7 young.

Recorded in varying numbers on passage at Winterton, Horsey, Paston, Sheringham, Titchwell, Lynn Point and an impressive 16 at Welney March 27th coinciding with a large movement over Eastern England.

Stone Curlew: Twenty pairs reported breeding from 4 sites. No details from other sites. Additional records mostly of singles from Weybourne April 23rd, Wells April 6th and Snettisham beach May 2nd.

Little Ringed Plover: Extreme dates March 16th (Thorpe St. Andrew) and Oct 5th (Cantley). At least 28 pairs held territory though success again generally unknown. Peak autumn counts of 15 King's Lynn B.F. July 27th and 20 Holme till Aug 24th.

Ringed Plover: Inland pairs at Colney, Hillington G.P., King's Lynn B.F., Leziate, Pentney G.P., Tottenhill G.P., Wisbech S.F. and Welney. Spring passage of dark Arctic race peaking at 270 Breydon May 7th with a second peak of 228 May 29th. Also 40 Lynn Point May 30th. Wash counts of 240 in Aug/Sept at Snettisham.

Kentish Plover: A pair made two unsuccessful breeding attempts. Spring: 1-2 birds at Cley May 4th-31st. Single at Titchwell May 16th and 31st. Male at Breydon June 2nd and female on 3rd/4th. Autumn: Single Hickling July 21st-28th and a female Blakeney Point Aug 10th-30th.

Dotterel: A remarkable record of a bird at Holkham Feb 12th (ASG). Spring passage commenced with an early party of 8 Hempstead April 30th followed by a single Horsey May 8th and a maximum of 10 Ringstead May 8th-16th, possibly more birds involved as individuals arrived and departed. In Autumn one Blakeney Point Aug 26th to Sept 2nd.

Golden Plover: Largest flocks included 500 Pulham St. Mary Jan 26th, 950 Welney March 14th, 1,000 Holme Hale April 1st, 500 Scoulton-Hingham April 2nd, 690 Wolferton Sept and 1,300 Wolferton Nov, 750 Weston Longville Nov 26th. Many of the spring birds in full 'northern' plumage.

A rather early return of autumn migrants with first at Wootton July 4th and several soon afterwards.

Grey Plover: Largest counts from Holme 600 Aug 11th and Snettisham-Wolferton where 400 April/May, 2,323 Sept and 700 Dec. Mid-summer flocks at Lynn Point: 252 June 13th and 200 June 25th all in winter plumage — presumably one-year old immatures.

Lapwing: A leucistic individual at Scarning Fen from Oct 17th till end of year.

Knot: Maximum counts were 18,000 Holme Aug 11th and 50,000 Snettisham Nov 21st.

Sanderling: Major counts from NW Norfolk stronghold: Titchwell 110 Aug/Sept, Holme 300 March, 300 May, 200 Aug and Snettisham 414 May, 917 Aug and 140 Dec.

Little Stint: Only a light spring passage from the following sites:

Hickling: Singles March 18th, April 9th and 13th.

Cley/Salthouse: Single March 15th followed by singles on 4 dates in April and 6 dates in May though 3 birds May 5th.

Burnham Overy Staithe: Single May 22nd.

Titchwell: 1-2 May 7th to June 6th.

As usual a widespread protracted passage during autumn between July 25th and Nov 24th (both Titchwell). Peak numbers around mid-Sept when 25 Cley and 15 Wisbech S.F. on 16th and 73 Titchwell on 19th; still 55 at Titchwell early Oct.

Temminck's Stint: Spring passage mainly observed at Cley/Salthouse where singles May 7th to June 2nd with 2 birds on most dates May 8th-20th. Singles also reported from Hickling May 20th, Holme May 1st, a displaying bird at Snettisham May 14th and Welney May 11th.

A light early autumn passage of singles Cley July 9th, 10th, 19th and 21st; Holme July 12th-14th and Wisbech S.F. Aug 2nd. Additional 1982: Wisbech S.F. 2 Aug 10th.

Baird's Sandpiper: Titchwell May 13th to 18th, the first spring occurrence for the county (KJ NS).

Pectoral Sandpiper: Cantley: Single Oct 5th/6th (PRA).

Salthouse/Cley: Single Oct 2nd-18th with 2 from at least the 11th (RIA AWS *et al*).

Titchwell: Singles Sept 25th (DJW) and Oct 1st (MWF). Wisbech S.F. 2 July 22nd-27th.

Additional 1982: Wisbech S.F. 2 present Sept 4th-8th and at least 3 between 10th and 13th (JAWM).

Curlew Sandpiper: A light spring passage of singles Breydon May 8th, Cley May 3rd, 14th, 15th, 18th, 28th and 29th and Holme May 2nd. Returning adults from July 14th (Breydon), numbers mostly small but 34 Wolferton July 26th. Later rather small numbers of juveniles in most areas. Largest group at Titchwell where peak of 35 Oct 3rd and last bird Oct 30th.

Purple Sandpiper: Extreme dates May 7th (Hunstanton) and July 15th (Sheringham); also a few August records from Salthouse 12th, Blakeney Point 6th and 8th and Snettisham 10th and 11th. During winter reported from following areas (peak numbers in brackets): Yarmouth (5), Bacton (5), Paston (7), Hunstanton (21) and Heacham (15). Also a scattering of records, mostly singles, during Sept/Oct from many other sites.

Dunlin: Major Wash counts at Snettisham/Wolferton were 6,500 Jan and 8,734 July 28th.

Ruff: Quite a few winter records with 18 Acle Jan 10th, 33 Hickling Feb 27th and 65 Welney Dec 19th being the largest counts. A poor spring passage on north coast but exceptional numbers at Hickling peaking at 100 March 11th and still 64 April 14th.

Widespread in autumn, large concentrations being 31 Surlingham Sept 16th, 36 Hickling Nov 9th, 52 Horsey Nov 26th, 100 Cley Oct 20th, 43 Titchwell Sept, 33 Snettisham Sept 14th and 26 Welney Sept 19th.

Jack Snipe: Extreme dates May 2nd (Pentney) and Sept 13th (Cley). Reported from 24 sites, mostly singles but 6 Lower Bure Oct 9th, 7 Breydon Dec 27th and 4 Titchwell March 28th and again Nov 20th.

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Snipe: Only breeding survey received concerns 113 'drummers' Welney area May 18th. Westerly visible migration observed at Holme with totals of 250 Sept 18th and 120 Oct 30th. At Hunstanton 297 flew west Oct 10th. Concentrations at Titchwell of 100 March, 240 Aug and 210 Sept.

Woodcock: The few details received show a wide spread of roding birds in county. Immigrants in Oct/Nov observed along coast as usual.

Black-tailed Godwit: Welney: 6 pairs summered but no evidence of breeding success. Wash: Maximum spring count 14 April 16th and return passage peak of 54 July 17th. Last Dec 23rd. Titchwell: Autumn peak of 25 in Aug. Cley: Spring peak of 24 April 22nd and autumn peak of 80 July 24th. Also at Breydon, Hickling (maximum 18 April), Claxton, Brancaster Staithe, Holme (maximum 13 July) and Heacham (19 south April 17th).

Bar-tailed Godwit: Largest totals from Wash where 6,000 Feb, 4,900 Aug and 4,317 Nov.

Whimbrel: March records of 1 Sheringham 8th and 11 Breydon 26th. General arrival from April 9th (Cley), April 17th (Titchwell) with largest numbers between 19th and 23rd when 23 Breydon, 50 Holkham, 42 Halvergate and 30 Scolt. Concentrations in May of 35 Breydon 9th and 30 Cley 7th.

Peak autumn counts of 27 Breydon July 15th, 58 Morston Aug 3rd, 29 Holkham Aug 12th, 25 Brancaster Staithe Aug 19th, 60 Holme Aug 2nd-10th and 34 Snettisham Aug 10th. Last record from Holme (2) Oct 8th.

Curlew: Peak Wash counts of 1,350 July, 1,014 Aug and 1,002 Oct. The only potential breeding reports received come from Roydon, Sandringham and East Walton.

Spotted Redshank: Winter records from Titchwell (Jan) and Cley (Dec). Spring passage birds at Breydon (3), Hickling (5), Cley (15), Titchwell and Lynn Point (5). Mid-summer records merging with autumn passage; first juvenile of year Breydon Aug 6th. Largest gatherings include 10 Hickling Sept 6th; 20 Cley several dates June 21st to Aug 25th with peak of 50 Aug 5th; 19 Titchwell Aug 16th and 70 Wolferton July 12th.

Redshank: Largest counts on Wash where 1,660 July, 2,236 Sept and 1,919 Oct.

Marsh Sandpiper: The fourth and fifth county records when a summer adult at Cley May 30th (DAD *et al*) and a transitional plumaged adult at Holme July 29th to Aug 6th (GFH *et al*).

Greenshank: Winter records as usual from both Titchwell and Cley. A very light spring passage commencing mid-April. Pronounced autumn passage with peak counts of 24 Breydon July 22nd, 29 Cley Sept 9th, 53 Titchwell Sept 24th, 22 Holme July 25th as well as 25 Aug 17th and 26 Aug 29th same site and 21 Snettisham July 14th. An inland flock of 11 Hillington G.P. Sept 10th.

Green Sandpiper: Wintering birds at Hickling, Lower Bure Marshes, Winterton, Blackboro' End, Pott Row and Marham Fen. As usual a light spring passage with birds mostly singles at Titchwell, Strumpshaw, Thorpe St. Andrew, Swanton Morley G.P., Necton, Sandringham, Holme Hale, King's Lynn B.F., Ashwicken, Tottenhill G.P. and Pentney G.P.

Many autumn records, major counts including 10 Colney/Bawburgh, 8 Surlingham, 15 Cantley, 17 Holme, 8 Lynn Point and 10 Wisbech S.F.

Wood Sandpiper: Only a few spring migrants, but some early records. All reports given: Titchwell 2 April 16th, West Runton 2 April 23rd, Cley May 2nd, Breydon May 7th and Horsey May 22nd.

Small scale autumn passage between July 17th (Cley) and Nov 20th (Cantley), the latest county date. Recorded at the following sites with peak counts in brackets: Buckenham (1), Cantley (4), Fritton (1), Hickling (1), Cley (2), Titchwell (3), Holme (1), Snettisham (1), Wolferton (2), Lynn Point (2), Tottenhill G.P. (1), Pentney G.P. (1) and Wisbech S.F. (1) where a late bird Oct 8th.

Terek Sandpiper: The fifth for the county at Cley May 23rd to 29th (SJMG NB).

Common Sandpiper: Winter observations from Cantley, Horsey and Cley while some Nov records from Paston, Lynn Point and Swanton Morley G.P. First spring migrant April 18th (Lynn Point), numbers rather small. Peak autumn counts were Hardley (13), Cantley (9), Filby (8), Salthouse (9), Titchwell (24), Holme (40), Snettisham (11), Lynn Point (20 in tight flock), King's Lynn B.F. (14), Hillington G.P. (8). Peak passage from late July to mid-Aug.

Spotted Sandpiper: A full summer-plumage bird at Cley May 22nd/23rd was the second spring bird for the Reserve (RHD PJH).

Turnstone: Largest flocks at Snettisham: 500 March 3rd and 712 Aug 12th. Inland records of 8 Welney April 23rd and 3 Colney/Bawburgh G.P. May 1st.

Wilson's Phalarope: A summer-plumaged female at Titchwell June 25th to July 2nd (SJMG RM) moved to Cley July 3rd to 17th (ARJ DHS), where it began moulting into winter plumage.

Red-necked Phalarope: A poor spring passage with only one record from Cley May 28th/29th. The three autumn records were all later than average for this species: Cley Oct 2nd-11th, Lynn Point Oct 14th and Hickling Oct 17th to 26th.

Grey Phalarope: Three in Cley area Feb 6th rather unusual and obviously affected by the same weather conditions that produced the auk 'wreck'. A spring record from Salthouse April 12th and autumn birds at Scolt Head Sept 25th and Yarmouth harbour entrance Oct 11th.

Pomarine Skua: An excellent year for this species which was recorded between Aug 4th and Dec 4th along most of the Norfolk coast. Peak passage is later than the other smaller skuas as shown by a monthly breakdown of the total: Aug 20, Sept 36, Oct 106, Nov 15 and Dec 1.

Largest numbers were reported from the Wash (Holme to Lynn Point) 79, Cley to Blakeney Point 34, Bacton to Paston 21 and Winterton to Horsey 23. The biggest single movement occurred Oct 28th/29th prior to the Little Auk influx, with over 40 entering the Wash at Hunstanton on first date.

Arctic Skua: Regularly observed in all coastal areas from July 10th to Dec 10th. Some large movements occurred during strong northerly or north-westerly winds. Selected sample counts as follows: Horsey 146 Sept 3rd, 30 Sept 5th, 106 Sept 11th and 27 Oct 17th. Paston 48 Aug 28th, 315 Sept 3rd and 42 Sept 11th. Sheringham 36 Aug 28th, 109 Sept 3rd, 35 Sept 11th and 40 Sept 12th. Cley/Blakeney Point 35 Aug 24th, 31 Aug 28th, 112 Sept 3rd, 38 Sept 4th, 54 Sept 5th and 75 Sept 11th. Hunstanton 95 Sept 3rd, 90 Sept 5th, 127 Sept 6th, 127 Sept 11th, 35 Oct 17th and 24 Oct 28th. Lynn Point 41 Aug 28th, 30 Sept 5th and 36 Sept 12th.

Other notable counts include 40 Titchwell Aug 13th, 80 Holme and 50 Snettisham Sept 11th.

An inland report of one along the A1067 Fakenham to Norwich road near Foulsham Aug 26th. Another observation of a bird chasing a Lapwing over the fields at Cley Aug 6th.

Long-tailed Skua: An adult in the Cley/Blakeney Point area Aug 4th to 28th was joined by an immature (both together) Aug 6th. Other records from Holme adults Aug 13th and Sept 11th, Holkham Bay Aug 20th, Lynn Point juvenile Sept 5th and adult Sept 11th and Mundesley Sept 6th.

Great Skua: A number of records early in year: Hunstanton Jan 18th and 4 Jan 19th, Holme Jan 16th and Titchwell Jan 18th and Feb 11th. Late birds were at Salthouse Dec 4th and at Hunstanton and Cley (8) Dec 10th.

Large numbers occurred in autumn during northerly or north-westerly gales. Sample counts include: Horsey 126 Sept 11th; Waxham 36 Oct 17th; Sheringham 50 Sept 12th; Cley/Blakeney Point 50 Sept 11th; Holme 80 Sept 11th; Hunstanton 57 Sept 6th, 114 Sept 11th and 36 Oct 28th; Snettisham 25 Sept 11th and Lynn Point 21 Sept 12th. A freshly dead one Breydon Oct 27th. Odd individuals seen attacking and killing Shelduck.

Mediterranean Gull: A big increase in records with East Norfolk remaining the stronghold. The mass of reports makes it difficult to assess accurately the number of birds involved:

Breydon: At least 26 (all first summer) birds passed through between April 29th and June 25th with other records of (second summer) July 22nd and (adult) Sept 4th.

Yarmouth: Adults Jan/Feb; Aug 9th, 10th and 19th; Sept 4th; Oct 8th, 23rd and 26th; Nov 1st (2), 2nd and 12th; Dec 1st (2), 4th and 18th. Second winter: Jan/Feb; March 27th; Aug 9th, 21st and 24th; Sept 24th and 26th; Oct 16th; Nov 12th and 17th and Dec 4th. First winter: April 28th; Aug 10th/11th and Oct 7th.

Caister: (adult) March 16th; Hemsby (first winter) Jan 21st; Paston (first summer) May 8th, July 28th/29th; Cromer (second winter) Jan 19th to Feb 27th often alongside the A148; Sheringham (first summer) Aug 9th; Cley (first summer) May 21st, (adult) Aug 16th, (first winter) Oct 8th; Blakeney Point (juveniles) Aug 27th (2), Aug 28th, 29th, 30th, Sept 1st and 8th; Titchwell (first summer) May 30th to June 8th, June 26th, (adult) Sept 25th; Scolt Head (adult) Aug 17th, 21st and (juvenile) Aug 29th and 31st; Holme (first summer) May 14th to 29th and (second summer) Sept 25th; Hunstanton (adult) Oct 28th; Lynn Point (second winter) Aug 20th.

Franklin's Gull: 1976 West Runton. This record has been withdrawn by observers.

Little Gull: Unprecedented numbers in the first quarter of the year associated with severe weather which caused the auk "wreck". Monthly totals of 142 Jan, 102 Feb and 39 March, most along the north coast.

A light spring passage with small numbers reported from Horsey, Hickling, Cley, Titchwell where up to 23 birds summered, Holme and Snettisham. First juveniles Aug 7th at Blakeney Point followed by an unexceptional autumn passage. Largest counts: 31 Waxham Oct 19th, 87 Horsey Oct 24th and 37 Hunstanton Oct 28th. Small numbers into Dec.

Sabine's Gull: Holme single adults Aug 2nd and Oct 29th, Scolt Head Aug 13th, adult on the beach at Blakeney Point Aug 24th and Hunstanton adult Sept 6th.

Black-headed Gull: Breeding pairs at following sites: How Hill 80, Blakeney Point 7-800, Stiffkey Binks 280, Scolt Head 150, Snettisham 670 and Wisbech S.F. 10.

For B.T.O. Gull roost survey see page 339. Up to 17,000 flighting up River Ouse at dawn Oct.

Common Gull: Unsuccessful breeding attempts at Blakeney Point and Scolt Head. For B.T.O. Gull roost survey see page 339. Up to 4,900 flying up River Ouse dawn Jan.

Lesser Black-backed Gull: Eight pairs bred Blakeney Point and one unsuccessful pair Scolt Head. Pair summered Titchwell.

Herring Gull: Fifteen pairs bred Blakeney Point. Yellow-legged birds at Hunstanton Jan 20th and at Paston July 26th and Sept 25th.

Iceland Gull: An increase in records on previous years: Breydon (adult) March 27th, Paston (adult) March 26th and Mundesley (adult) March 26th — all possibly the same individual. Cley (immature) March 20th and (juvenile) Nov 7th. Holme (second year) April 15th. Lynn Point (juvenile) Jan 30th and an inland bird at Beetley Tip Nov 29th.

Glaucous Gull: Widespread in both winters with the Wash (Lynn Point to Holme) providing most records. Late dates at Lynn Point June 13th and 25th. First return bird at Cley Aug 28th. Snettisham: Spring records from March 13th into May; 3 April 14th. Lynn Point: At least 3 birds first winter period and up to 5 different birds

second winter period using dawn and dusk flight line along River Ouse. Hunstanton: Regular records up to March 15th, at least 5 birds involved. Holme: Regular, with up to 3 March 29th-31st and April 15th. Possibly some inter-mingling with Hunstanton. Cley/Blakeney Point: An adult regularly observed both winter periods with 2 Jan 17th and Oct 28th. Also recorded Breydon, Yarmouth, Horsey, Waxham, Walcott, Paston, Mundesley, Cromer, Titchwell and Blackboro' End Tip.

Lesser Crested Tern: The first county record (with Sandwich Terns) at Blakeney Point Aug 9th to Sept 17th with sightings also at Morston Aug 21st, Scolt Head Aug 27th and Holme Aug 29th. Subject to official acceptance.

Sandwich Tern: First recorded at Scolt Head March 9th with last at Cley Nov 15th. Scolt Head, 500 pairs bred with total of 450 young fledged. Blakeney Point, 3,200-3,400 pairs bred and 2,000 young fledged. A peak of 238 gathered at Breydon July 22nd. Migrating birds heard moving high inland at Lynn Point evening Sept 23rd.

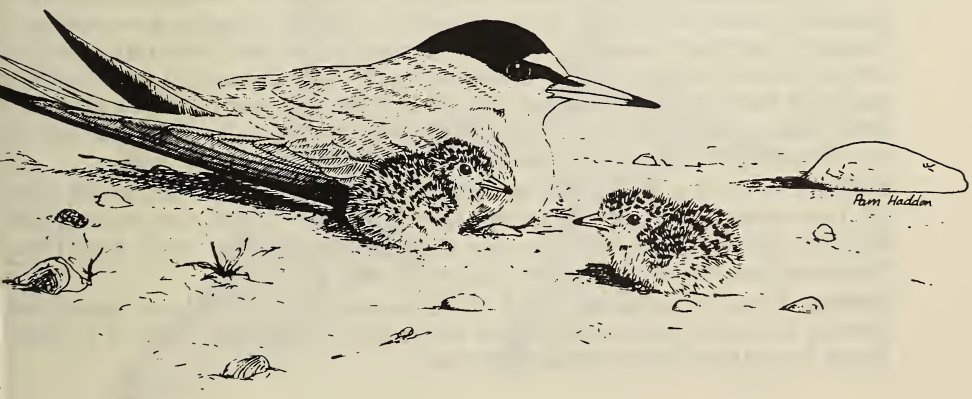
Roseate Tern: A slight increase in records: Breydon June 25th to July 2nd (PRA). Paston Aug 6th (RC MF). Blakeney Point Aug 26th/27th and Sept 2nd (SB GPC MF), Cley a juvenile Sept 3rd (SB JDG JEG) — this may be the first county record of a juvenile since breeding ceased in the mid 1940s.

Common Tern: Extreme dates April 14th (Ranworth and Snettisham) and Oct 28th (Wells). A county total of 882 pairs bred with main colonies at Blakeney Point (270), Scolt Head (161), Titchwell (115), Bob Hall Sands (100+) and Snettisham (78).

In addition bred at Breydon (58), Hardley Flood (24), Hickling (14), How Hill (1), Martham (2), Ranworth (32), Hoveton Great Broad (11), Ormesby (5), Colney/Bawburgh G.P. (3), Cley (8) and Wisbech S.F. (1).

Arctic Tern: Spring passage light and noted at Lynn Point (5) April 19th, (6) May 1st and (4) May 2nd; Holme (2) May 29th and 1 June 18th; Titchwell (2) April 24th; Paston (7) May 2nd and Breydon May 5th, 7th, (3) 23rd and 1 29th.

A pair fledged 2 young at Scolt Head and 2 pairs bred Blakeney Point. An unprecedented early autumn passage to west during NW-NE winds in first week of Aug when 73 Cley Aug 1st and 415 Paston Aug 6th, mostly adults in both cases. Up to 20 remained in Cley/Blakeney Point area for a further week. Otherwise a more typical passage of 1-10 from Breydon, Titchwell, Snettisham and Lynn Point, usually juveniles. Last Oct 29th (Titchwell).



Little Tern: Extreme dates April 13th (Blakeney Point) and Sept 24th (Cley, Holme and Hunstanton) followed by a straggler Oct 5th (Blakeney Point). Concentrations in July of 100 Snettisham 14th, 80 Lynn Point 26th and 44 Hickling. Breeding pairs down on 1982: Caister 3, Winterton 6, Blakeney Point 75, Stiffkey 40, Stiffkey Freshes 5, Bob Hall Sands 4, Wells 40, Scolt 68 increasing to 110 as birds moved from disturbed areas of Brancaster (28), Titchwell 38, Thornham 25, and Hickling 6. Variable success from colony to colony. A county total of about 350 pairs.

Black Tern: Spring passage from April 19th (Lynn Point). Reported from Rockland, Hickling, Horsey, Cley/Salthouse, Titchwell, Holme and Lynn Point. Numbers mostly small with passage peaking during first week of May. A mid-summer record of 6 first-summer birds Lynn Point June 25th.

Very light autumn passage noted at Yarmouth, Hickling, Horsey, Cley/Salthouse /Blakeney Point, Titchwell, Holme, Hunstanton and Lynn Point. Extremely late dates from Titchwell Nov 11th and Holme Nov 12th — perhaps the same bird.

Guillemot: Feb inland records of live birds: Denver sluice 14th, Flitcham ('bridled' form) 8th and Strumpshaw 12th.

Black Guillemot: Holkham Feb 12th (dead), Blakeney Jan 1st-16th, Cley Feb 8th, March 5th/6th, 16th and Nov 15th, Sheringham March 15th, West Runton Oct 23rd and Mundesley/Paston Sept 11th.

Little Auk: During February a "wreck" occurred along the Norfolk coast. This was a natural disaster caused by a combination of food shortage and prolonged N.E. gales. Deprived of food and battered by gales the unfortunate birds were doomed to die. An account appears on page 360.

The following summary is restricted to live birds: Gorleston Feb 14th, Yarmouth 2 Jan 19th and Feb 15th. Horsey Feb 12th. Happisburgh Feb 13th. Paston 3 Feb 6th, 9 Feb 12th, Feb 16th. Mundesley 2 Feb 12th. Cromer Feb 7th, 4 Feb 8th and 6 Feb 14th. Sheringham Feb 15th. Cley/Salthouse 15 Feb 6th, 3 Feb 7th, 33 Feb 8th, 2 Feb 9th, 42 Feb 11th, 2 Feb 12th, 3 Feb 13th, 6 Feb 14th, 2 Feb 15th, Feb 22nd. Blakeney Point 50 Feb 11th. Wells Feb 8th. Holkham 4 Feb 12th, Feb 13th. Titchwell 23 records Feb 6th-28th. Hunstanton Jan 20th, Feb 6th, 8 Feb 8th, Feb 9th, 6 Feb 11th and 6 Feb 12th.

Inland live Feb wrecks: Erpingham Lodge 8th, Harpley Common 4th, Itteringham 6th, Marham 15th, Pott Row 11th, Pentney G.P. 7th, Saham Hills 9th, Stibbard and Welney.

A very impressive movement which took place at the end of October is featured on page 354. Unlike the "wreck" at the beginning of 1983 no casualties were reported: Horsey 773 north in 5 hours Oct 29th, Oct 30th and 4 Nov 16th; Paston 602 west Oct 29th in 7 hours, 40 west Oct 30th; Mundesley 8 Oct 30th; Cromer 165 west Oct 29th and 2 Oct 30th; Cley/Salthouse Oct 12th, 49 Oct 28th, 155 west Oct 29th and 12 Oct 30th; Blakeney Point 150 west Oct 29th and 2 Nov 12th; Wells Oct 30th; Titchwell 16 Oct 29th; Holme 7 Oct 29th; Hunstanton 4 Oct 29th.

Puffin: Live birds at Winterton Feb 13th (2), Horsey Oct 29th, Waxham Feb 12th (2), Paston Feb 12th (2), Mundesley Feb 12th (2), Cromer Feb 9th, Cley Feb 7th, Feb 8th (10), Feb 12th, May 29th, Oct 19th, Oct 22nd and Oct 28th, Wells April 15th, Holkham Sept 5th and Hunstanton March 2nd and 4th.

Collared Dove: At Holme high total of 350 attracted by discarded corn March 5th (part of a massive westerly movement March 5th-7th including 1,000 in 2 days). King's Lynn Docks 200 April and 300 Nov.

Turtle Dove: Earliest Horsey April 16th. During May following westerly movements recorded at Holme: 50 on 7th, 150 on 10th, 250 on 14th and 10 on 22nd; also 40 west June 4th. Norwich, a late bird Oct 19th.

Ring-necked Parakeet: Singles at Yarmouth, Sheringham and Brancaster.

Cuckoo: A remarkable gathering of 300 along Acle New Road July 5th (HC).

Barn Owl: Recorded at well over 100 localities.

Little Owl: Recorded at 60 localities, but only confirmed breeding at 6 sites.

Long-eared Owl: Partial breeding season survey in West Norfolk and calling young located at 12 sites. Only one breeding pair reported in North.

Autumn migrants: Caister Oct 3rd, Winterton Oct 22nd, Waxham Nov 12th, Paston Nov 12th (2), Weybourne Nov 4th, Salthouse Nov 12th, Wells Aug 27th and Nov 12th and Holme Oct 29th and Nov 12th.

At a small N.W. Norfolk roost 3 in first and 6 in second winter periods.

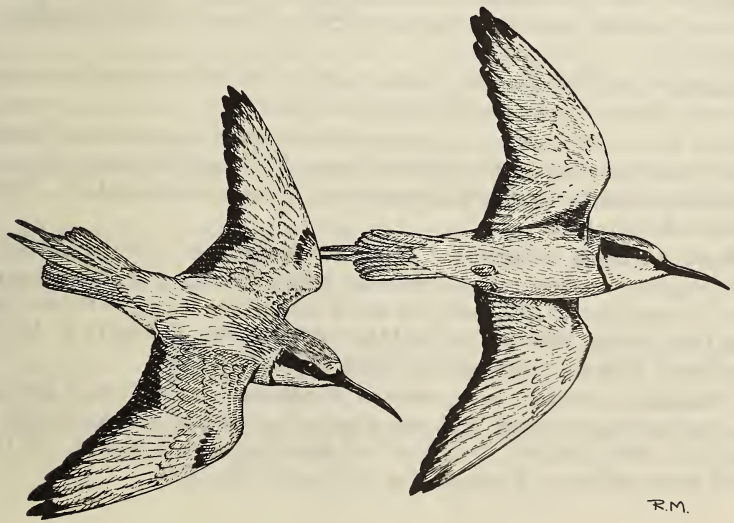
Short-eared Owl: Only concentrations: Burnham Norton 8 and Halvergate 8. Migrants in from sea: Cley Oct 30th and Nov 8th, Paston Nov 11th/12th, Waxham Oct 25th and 30th, Winterton Oct 21st (3), Horsey Nov 12th (2) and Yarmouth Oct 29th. No certain breeding success.

Nightjar: In West Norfolk noted at Drymere, Leziate, Mintlyn Wood, North Pickenham Warren, Roydon Common, Sandringham Warren, Swaffham Heath, West Newton and Wolferton. Brecks remain main stronghold. Elsewhere still present at Fritton, Winterton, Kelling Heath, Weybourne and Salthouse Heath with a pair at Swannington.

Swift: First recorded Cley April 19th. October records from Holme on 3rd, Norwich on 11th, Salthouse on 15th and Cley on 16th. A very late bird over Norwich Nov 7th.

Kingfisher: One in from sea between Cley and Blakeney Point Sept 2nd (a local bird or a migrant?).

Bee Eater: Two flying eastwards near Blakeney village May 22nd (SCJ NW). First county record since 1976.



Roller: One in a forest clearing West Toft, Brecks June 11th/12th (EJC WDC *et al*). First county record since 1976.

Hoopoe: Singles at Holkham May 10th/11th, Holme May 15th-17th, Saham Hills June 23rd/24th and Terrington Marsh Aug 14th.

Wryneck: Four spring records, all in May: Yarmouth 1st, Horsey 4th, Weybourne 5th and Holme 7th. In autumn small-scale fall of migrants Aug 24th onwards with some birds remaining until early Sept; records from Yarmouth (2), Weybourne, Salthouse, Cley (2), Blakeney Point (3), Wells/Holkham (2), Scolt Head, Holme and Lynn Point. A smaller number of subsequent records in Sept: Winterton and Holme 10th, How Hill (dead) 11th, Norwich 17th-19th, Hunstanton G.C. 17th-24th and Yarmouth, Blakeney Point, Morston and Wells (2) 29th/30th.

Woodlark: Still locally common in parts of Brecks, especially in recently stocked conifer plantations. Elsewhere a pair at a suitable breeding site in May and singles at Binham Feb 10th and west at Holme Oct 14th.

Shore Lark: In recent years the number wintering along the North Norfolk coast appears to have noticeably declined. Recorded up to April 6th and from Sept 29th between Weybourne and Blakeney Point, the only records of more than ten birds being 23 Blakeney Point Jan 8th and 29 there Dec 10th. Also regularly recorded at Holme where 2 Oct 12th and 4 from 22nd with 13 by Nov 12th and 11 until end of year. Elsewhere 3 Sheringham March 29th, Horsey Oct 6th, Wells Oct 15th, Brancaster Nov 2nd, 3 Holkham Nov 6th and 3 Titchwell same date with one Dec 29th.

Sand Martin: Late birds still present Keswick (several) Oct 25th, Cantley Oct 26th and Holme Nov 5th.

Swallow: Records from Castle Acre, Sheringham/Weybourne and Strumpshaw Nov 1st-5th with a very late individual Horsey Dec 3rd.

House Martin: An albino Titchwell Sept 10th. Two still present at Bawburgh Nov 6th. Late migrants at Holme Nov 5th and Dec 3rd.

Richard's Pipit: Typical autumn records as follows: Hunstanton G.C. Sept 24th (GED SCJ), Horsey Sept 24th and same, or another, Oct 2nd-4th (PRA AB), Blakeney Point Sept 25th (SCJ), Burnham Deepdale Oct 27th-29th (JB), West Runton Nov 1st-5th with a second bird on 3rd (MPL JW *et al*) and Sheringham G.C. Nov 5th (JPM).

Red-throated Pipit: 1976: Blakeney Point Aug 28th (SCJ NW). Recently accepted by British Birds Rarities Committee after reconsideration.

Rock Pipit: Birds of Scandinavian race specifically identified at Breydon March 6th and April 3rd, Cley 2 March 7th, Titchwell 2 March 13th and Burnham Norton April 7th. Recorded inland at Cantley B.F. and also at Colney/Bawburgh G.P., where one Nov 18th and Dec 11th.

Water Pipit: Regularly recorded at Cantley B.F. (maximum 7 in Feb and 6 in Nov) and Hickling (maximum 6 in Jan) during the winter months. Elsewhere Buckenham Jan 8th, Strumpshaw up to 3 early Jan and 4 April 10th, Martham Broad Feb 20th and Dec 18th, Horsey March 5th, Cley March 6th and 14th, Colney G.P. April 14th, Breydon April 23rd and Titchwell Nov 20th with 2 Nov 28th.

Yellow Wagtail: An above-average number of migrants, particularly in flocks, mid-April — early May on north and east coasts; for example on April 24th 42 on Cromer G.C. with total of 170 to west in 3 hours and 101 at Horsey. Up to 66 at Titchwell roost mid-Aug. A late bird at Weybourne Nov 6th.

Blue-headed Wagtail: More spring records than normal (well over 30 birds), usually with flocks of typical Yellow Wagtails, with maximum of 6 Horsey April 16th and 6 Cromer 23rd. A male successfully reared fledglings at Holme July 5th-20th, there being no sign of a female. One Wells Aug 20th.

Grey-headed Wagtail: Males showing the characteristics of this race identified as follows: Winterton April 21st, Horsey May 8th and 19th, Cley April 21st/22nd, May 29th and Aug 27th, Brancaster May 30th, Titchwell Oct 2nd-14th and Holme May 16th.

Ashy-headed Wagtail: Males showing the characteristics of this race at Horsey April 26th and 30th (different individuals) and Cley also April 30th. Three in one year is unprecedented, there being only seven previous records.

Black-headed Wagtail: A male showing the characteristics of this race at Cley July 23rd-Aug 11th. The fourth county record of this race, the first since 1973.

Grey Wagtail: Successful breeding noted at Bawburgh (2 pairs), Foulden, Ickburgh, Marlingford, Narborough and Tuttington. Also present in breeding season at Didlington, Gressenhall, Honingham, Keswick, Narford, Norwich (R. Wensum) and Stoke Holy Cross Mill. Several records of coasting migrants in October.

Pied Wagtail: At the regular roost at Bacton maximum of 500 in February. A recently discovered roost at Scarning Fen near Dereham produced maximum monthly counts of 325 July, 350 Aug, 430 Sept, 200 Oct, 310 Nov and 60 Dec.

White Wagtail: Largest spring concentration 10 Waxham April 23rd.

Waxwing: Only one record, Norwich Jan 27th (PJH). The last major invasion of this species was as long ago as 1975.

Dipper: A bird of the British/Central European race at Bawburgh mid-August to end of year. A bird of the Northern race (Black-bellied) normally seen in the county at Hardley Flood Oct 1st.

Bluethroat: Singles at Holme May 18th (HBO) and Horsey June 25th (RP). The last autumn record was in 1978.

Black Redstart: Wintering birds at Sheringham Feb 15th and 23rd and Happisburgh Feb 16th. Widespread spring passage March 17th-May 22nd with maximum of 7 Paston April 16th. Successful breeding noted at Cromer, King's Lynn (a new locality) and Yarmouth (8 singing males — 5 pairs successful). Very few autumn records received: Winterton Sept 25th, Titchwell Sept 29th/30th, Nov 3rd and 12th and Holme Sept 17th, Oct 1st, 2 Oct 23rd and Oct 24th.

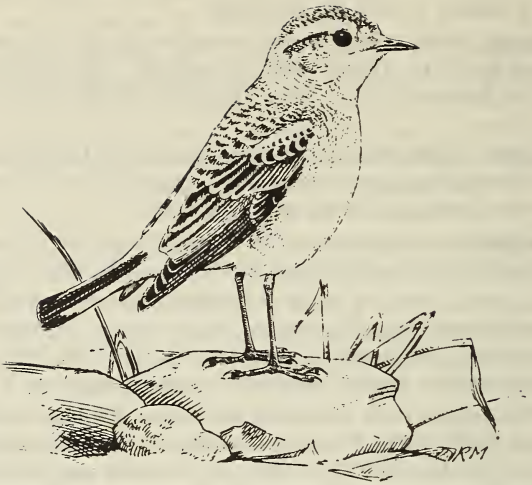
Redstart: A late migrant at Holme Nov 11th.

Whinchat: Only one successful breeding record received, pair at Bodney Warren in Brecks. Also male at Fowlmere in June. A very late migrant at Rackheath Nov 28th.

Stonechat: Breeding: Five pairs at Winterton, two pairs at Caister and one pair at Weybourne. A male at Salthouse June 4th had a largely white crown. Migrants/wintering birds include up to 6 at Cley in March and 4 at Holme in October.

Wheatear: Earliest record, Salthouse March 10th, with several other migrants by 13th including 4 at Holme. Breeding records include single pairs at Bacton and Weybourne and 36 pairs at Weeting Heath.

Pied Wheatear: A female along Weybourne Cliffs Oct 30th-Nov 4th. The second county record, the first in May, 1978.



Ring Ouzel: A fairly concentrated spring passage April 8th-May 2nd (with maxima of 8 Snettisham April 13th and 9 Horsey April 17th) with subsequent singles at Waxham May 7th and Holme May 15th & 23rd/24th. Smaller scale autumn passage Sept 9th-Oct 2nd with maximum 5 Blakeney Point Sept 30th.

Fieldfare: Latest spring records, Castle Acre and Cromer May 7th. A sick bird, possibly the same recorded in May, caught at Castle Acre June 15th. Following one Holkham July 30th many records of 1-5 birds from Aug 7th throughout the rest of the month at a variety of localities.

Redwing: A late spring migrant Paston May 8th. An injured bird at Titchwell July 24th.

Mistle Thrush: Two large groups reported: 100 Hockwold July 21st and 150 Stanford Aug 12th.

Cetti's Warbler: This species appears to be further expanding its range. Number of singing males as follows: Waveney — Burgh St. Peter; Chet — Hardley Flood (3); Yare — Buckenham Carr (2), Cantley B.F., Hassingham, Rockland Broad (3), Strumpshaw (15), Surlingham (6) and Brundall; Bure — Ranworth marshes (2) and South Walsham (Fleet Dyke); Ant — How Hill (3), Sutton and Dilham; Thurne — Hickling (3), Horsey Mere and Martham Broad. Also Ormesby Broad.

Grasshopper Warbler: One ringed at Sheringham Sept 19th. Rarely recorded on autumn migration in the county.

Savi's Warbler: In contrast to Cetti's Warbler this species shows no sign of expanding its range. Total of 7 singing males: Hickling (3), Horsey (2), Martham (April only) and Strumpshaw (May only). First recorded at Hickling April 14th.

Marsh Warbler: A first-winter bird ringed at Sheringham Sept 13th (MPT). Only the second county record, the first in October 1923.

Reed Warbler: Early return of breeding birds, Hickling and Horsey April 21st. Several birds singing in dry habitat in rape fields June/July at Lynn Point; another bird singing in dry conifer plantation Massingham Heath July 8th. A late migrant Blakeney Point Nov 12th.

Booted Warbler: 1982: Titchwell Sept 18th-21st (GED SCJ *et al*). The first county record of this Russian species. See article on page 366.

Icterine Warbler: Coastal migrants as follows: Waxham (trapped) Aug 10th, Weybourne Aug 30th and Sept 17th/18th, Salthouse Aug 25th, Cley Aug 29th, Blakeney Point Aug 26th with 2 Aug 27th, Wells/Holkham Aug 21st and 2 Aug 26th, one until 31st, Holme Aug 21st and 30th/31st and Hunstanton G.C. Sept 25th.

Barred Warbler: An average number of autumn migrants: Weybourne Sept 22nd, Cley Sept 25th, Wells 2 Aug 26th one remaining until 29th, Scolt Head Aug 27th, Holme Aug 27th-Sept 17th, 2 Sept 18th with one until 22nd, and Hunstanton G.C. Aug 27th.

Blackcap: In first winter period 7 birds present at Holme during January (feeding on sea buckthorn berries and insects) and 5 during February, one found dead on Feb 21st. Also a regular visitor to bird table at Newton Flotman Jan 13th-March 3rd with isolated records from Burnham Thorpe, Cley, Cromer, Reepham and Thetford (2) during this period. December records from Strumpshaw and Thorpe St. Andrew (in Editor's garden!).

Greenish Warbler: Horsey Aug 10th (PRA), Waxham Aug 11th/12th (SJMG *et al*) (probably two different birds) and Wells Aug 25th-27th (SJMG *et al*). First records since 1977.

Yellow-browed Warbler: Only three records: Wells Sept 27th-29th, Sheringham Oct 2nd and Holme village Oct 20th.

Wood Warbler: First recorded at Kelling on the early date of April 10th. Spring coastal migrants Wells April 24th, Holkham April 25th, Titchwell April 27th & 30th and Holme April 23rd & 30th and May 7th. Singing males also late April at Costessey, Dilham and Hargham. In May/June singing males at Aylmerton (at least 10), Felbrigg, Fritton (2), Horsford (3), Sandringham, West Runton and Wolferton. Also bred successfully at Leziate. Autumn migrants at Wells Aug 11th, Paston Aug 14th, Yarmouth Aug 17th and Holme Aug 18th and Sept 27th.

Chiffchaff: In first-winter period records from Salthouse Jan 26th (2) and Feb 6th & 20th and Rockland Broad Jan 30th-Feb 5th. First arrival of spring migrants Holme March 7th and Salthouse next day. Usual scattering of northern/eastern races Oct/early Nov. December records from Rockland 1st, Martham Ferry 3rd and Cley 28th.

Willow Warbler: Birds showing characteristics of northern race *acredula* ringed at Sheringham April 23rd and May 31st. One showing similar characteristics Wells Aug 14th.

Goldcrest: A large fall end of October: on 29th 5 singly flew in off sea at Cley and several hundred on Blakeney Point; on 30th peak of 350 at Holme.

Firecrest: Singles Holme March 5th-20th followed by widespread spring passage (over 44 birds) March 28th-May 8th with maxima of 3 Holkham April 5th and 5 Blakeney Point April 17th; inland records from Fritton and Narford. Smaller-scale autumn passage: Yarmouth Sept 23rd then in two distinct periods Sept 29th-Oct 6th (maxima 3 Wells/Holkham Oct 1st and Horsey Oct 4th) and Oct 29th-Nov 13th.

Spotted Flycatcher: A very early arrival at Dereham April 16th.

Red-breasted Flycatcher: Four typical autumn records all within the same period: Wells Sept 30th-Oct 3rd with 2 on 2nd, Waxham Oct 2nd-4th and Yarmouth Oct 2nd-3rd.

Pied Flycatcher: At least 25 spring migrants April 20th-May 8th at a variety of localities (including inland records from Bergh Apton, Mileham, Norwich and Swanton Novers) with maximum of 4 Holme April 28th. Only small numbers seen on autumn passage (mainly August and early October) including one inland Costessey Aug 9th. A very late bird ringed Waxham Nov 10th.

Bearded Tit: Breeding sites included Berry Hall, Breydon (one pair), Burnham Norton, Hickling/Heigham Sounds, Horsey (30 pairs), King's Lynn B.F. (3 pairs), Ranworth, Sutton Broad and Titchwell. Away from breeding areas pair Barnham Broom Jan 23rd-Feb 13th, two Reed Fen (Brecks) Oct 21st-Nov 16th and 5 west along Blakeney Point Oct 22nd, the only record received relating to autumn coastal movements. At Strumpshaw 100 in Jan/Feb but only 6 in December. At King's Lynn B.F. 45 in Jan and 55 in Dec.

Long-tailed Tit: Passage birds noted Snettisham Oct 5th-Nov 10th with up to 25 birds on 11 dates.

Blue Tit: One flew in off sea Gorleston Oct 30th. At Snettisham passage birds late Sept to mid-Dec with 20 Sept 23rd and 22 Dec 4th.

Golden Oriole: Spring migrants as follows: Horsey/Waxham April 24th (one probably two males), Horsey May 7th/8th (male) and 12th (female), Hickling May 7th and June 5th, Potter Heigham May 8th, Cley May 31st, Titchwell May 7th and 20th and Welney May 1st. Also immature male Titchwell July 4th.

Red-backed Shrike: Four spring migrants: Weybourne and Holme May 18th, Titchwell May 20th and Hemsby May 29th. Only four pairs in Norfolk Brecks; also one successful pair in West Norfolk which reared 3 young. Autumn passage: Weybourne Aug 29th-Sept 4th and Sept 10th, Blakeney Point Aug 8th, Morston Sept 25th-27th with 2 on 29th, Stiffkey Sept 25th, Wells/Holkham Aug 25th-30th with 2 on 26th and Sept 7th, Holme 3 Aug 27th-Sept 9th, one until 16th then new arrival Sept 29th, and Hunstanton G.C. Aug 27th.

Great Grey Shrike: In first winter period Holme Feb 7th, Thornham Ling Feb 22nd, Grime's Graves March-April 9th, Pentney March 17th, Horsey April 9th and Snettisham where recorded on 3 dates in Jan, 2 dates in April and 4 dates in May until 15th. During summer months singles at Kelling Quags June 7th/8th and Winterton June 13th-July 16th, possibly the same bird. The Winterton bird considered to be one of the southern races.

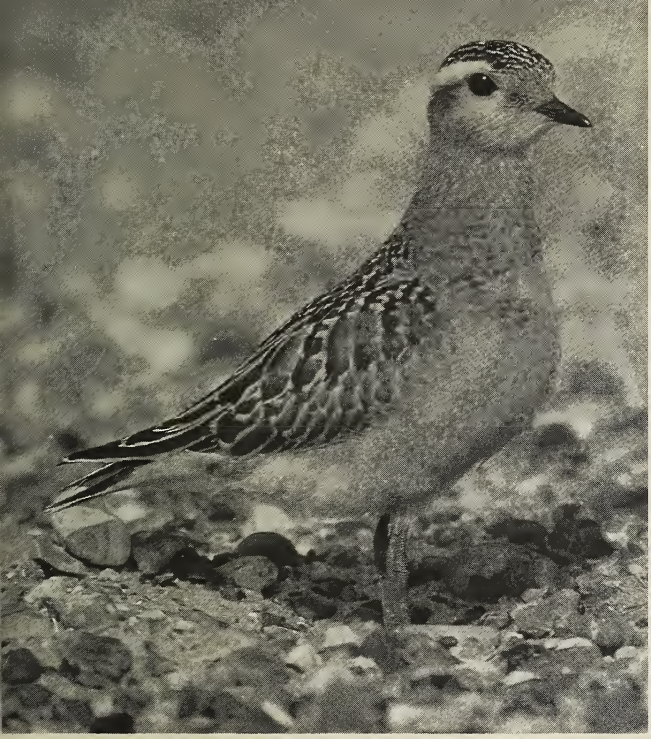
Autumn arrival Sept 29th-Oct 2nd with birds at Winterton, Happisburgh, Weybourne, Cley and Holme. Subsequently records from Barnham Common Oct 21st, Bawburgh Oct 19th, Hickling Oct 5th until end of year, Holme Oct 23rd-30th and Nov 4th & 12th, Horning Dec 23rd, Potter Heigham Nov 13th, Smallburgh Dec 31st and Wells Oct 15th-27th.

Jay: See separate article (page 351).

Magpie: A roosting flock of 39 Roydon Common Nov 27th. At Holme total of 47 in area end November.

Rook: A large concentration of 5-10,000 at Thieve's Bridge, Tottenhill Feb 5th.

Carrion Crow: 200 at the Roydon Common roost Feb 23rd.



Above: **Attracted by reports of a Lesser Crested Tern many observers headed for Blakeney Point during August and September. As a result many interesting migrants were recorded including this Dotterel and Long-tailed Skua.** *(Photos: J. Reed).* *Below:* **Between 10th November and the end of the year this first-winter Red-breasted Goose provided pleasure to countless birders. The second county record, it associated at various times with Brent, Pink-footed and White-fronted Geese in north Norfolk.** *(Photo: H. A. Hems).*

A Noctule Bat emerges at dusk from an artificial roost-site at How Hill Farm, Ludham. The box was sited 23 feet high in an Ash Tree. ***(Photos: P. Boardman).***

Hooded Crow: Continues to remain scarce. Records up to June 12th and from Oct 25th, but mainly singles. Most regularly recorded Horsey/Winterton area, where maxima of 5 Feb 12th and 4 Nov 20th, and at the Roydon Common roost.

Starling: An unusual mid-summer movement of 10,000 to west Paston June 26th.

Rose-coloured Starling: Adults at Holme June 3rd (HBO) and Hickling June 12th (RAL).

Brambling: Latest spring record, Gorleston May 17th. Largest concentration reported, 370 near Hilgay Nov 20th.

Serin: Paston April 23rd (MF). This species has now been recorded annually in the county since 1975.

Siskin: Largest flocks reported in Stanford Battle Area where 150 Jan and 100 Dec.

Twite: Recorded up to April 23rd (Holme) and from Oct 4th (Winterton). Peak numbers of 250 Titchwell Jan/Feb, 4-500 Blakeney Point March, 200 Holme Oct, 700 Scolt Head Nov and 300 Wells Nov.

Mealy Redpoll: Only one record received, 4 with other Redpolls Filby Jan 27th.

Crossbill: Regularly recorded in Brecks (where maximum of 29 Croxton July 15th), Sandringham/Wolferton/West Newton area and Wells/Holkham. Elsewhere one over Norwich Jan 9th, up to 26 at Skeyton Woods in March (not specifically identified — either this or subsequent species) and pair with two juveniles Fritton June 19th.

Parrot Crossbill: At Wells 5 Oct 25th, then 8 Oct 27th-Nov 8th, then 3/4 until end of year. Additional 1982 record: first-winter male at Wells/Holkham Oct 16th (DCSD CJM-G). First county records since 1966.

Hawfinch: Only regularly at East Wretham (where 6 pairs bred and maximum winter count of 49) and Holkham Park (maximum of 8 March 6th). At Sheringham an adult feeding young July 3rd-4th. Isolated records of 1-3 birds from Alderford, Castle Acre, East Walton, Holme, Kelling, Kirstead, Northwold, Norwich (Mousehold Heath), Pentney, West Acre and Wiveton Hall.

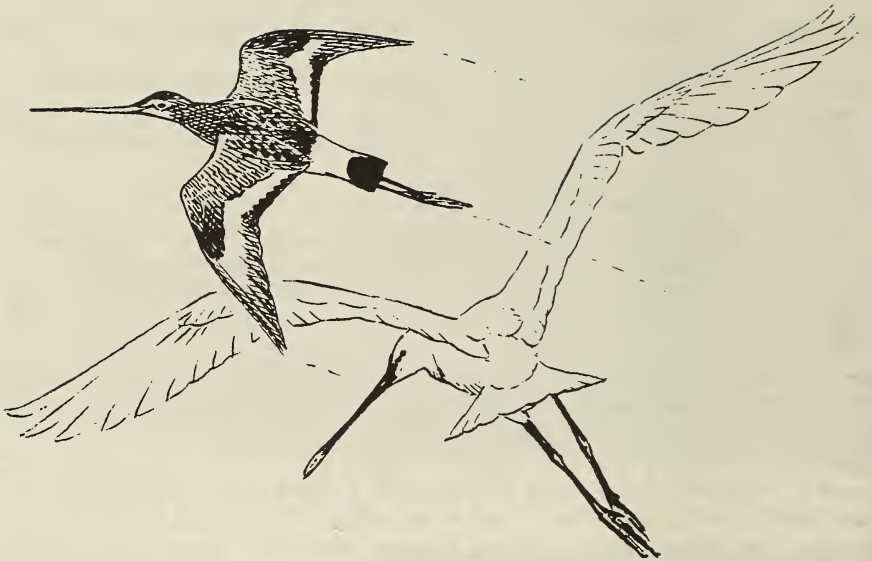
Lapland Bunting: Regularly at Burnham Norton in winter months with maxima of 12 March 6th and 50 Dec 7th. Elsewhere in early months of the year: Titchwell Jan 15th and 27th, 2 Wells Jan 25th, 3 Holme Jan 27th, Halvergate Feb 4th and Blakeney Point April 17th. In second winter period occasional records from Sept 30th at a variety of coastal localities with maximum of up to 10 Holme in December. Also one inland at Fritton Oct 16th.

Snow Bunting: A late migrant Breydon May 20th-25th and another Titchwell May 30th. First autumn record Cley Sept 17th. Flocks of 200 at Cley/Salthouse and Holme in November.

Ortolan Bunting: Three spring and two autumn records: Horsey May 4th/5th, Holme May 6th with a second bird May 6th-9th, Blakeney Point Aug 20th and Cley Sept 24th. The most in one year since 1976.

Little Bunting: Immature Blakeney Point Nov 6th (SCJ NW). Recorded for third year running.

Corn Bunting: Flocks of 71 Lynn Point Jan 25th and 60 Dec 5th, 40 Brancaster April 4th, 56 Wootton Marsh April 16th and 50 Holme in December. At a roost at Titchwell up to 90 in March and 70 in December.



The following, not mentioned in the Classified Notes, were recorded in 1983 *(breeding species in italics)*: *Mute Swan, Canada Goose, Mallard, Red-legged Partridge, Grey Partridge, Pheasant,* Water Rail, *Moorhen,* Great Black-backed Gull, Kittiwake, Razorbill, *Stock Dove, Woodpigeon, Tawny Owl, Green Woodpecker, Great Spotted Woodpecker, Lesser Spotted Woodpecker, Skylark, Tree Pipit, Meadow Pipit, Wren, Dunnock, Robin, Nightingale, Blackbird, Song Thrush, Sedge Warbler, Lesser Whitethroat, Whitethroat, Garden Warbler, Marsh Tit, Willow Tit, Coal Tit, Great Tit, Nuthatch, Treecreeper, Jackdaw, House Sparrow, Tree Sparrow, Chaffinch, Greenfinch, Goldfinch, Linnet, Redpoll, Bullfinch, Yellowhammer* and *Reed Bunting.*

CONTRIBUTORS TO THE BIRD REPORT

S. ABBOTT
P. R. ALLARD
R. I. ALLISON
R. ANDREWS
C. APPLETON
J. APPLETON
J. K. ARCHER
W. ARTHURTON
P. W. ATKINSON
M. F. B. BAKER
D. BAKEWELL
S. BANKS
P. BANWELL
E. A. BARBER
T. R. BARKER
A. BENSON
S. BETTS
B. BISHOP
W. F. BISHOP
M. BLACKBURN
M. BLAIR
MRS. M. BLAMEY
A. BLOOMFIELD
E. BOOSEY
A. D. BOOTE
N. BORROW
N. BOSTOCK
G. S. BOWEN
T. E. BOULTON
MRS. M. A. BREWSTER
J. V. BRIGHTEN
J. BROWN
D. BUCKINGHAM
A. L. BULL
R. M. BULL
DR. I. BURROWS
MRS. K. J. BURROWS
J. BUXTON
W. D. CAMPBELL
H. CARMICHAEL
P. CARR
G. P. CATLEY
P. CAWLEY
A. CHAMBERLIN
P. R. CLARKE
R. COBBOLD
K. E. COCKRILL
M. COLMAN
E. F. CROSBY
C. J. CROSS
E. J. CROSS
G. CROSSLEY
J. CROSTHWAITE
D. C. S. DAVIES
R. H. DAVIES
I. K. DAWSON
J. DOBSON
D. A. DORLING
O. G. DOUGLAS
G. E. DUNMORE
C. J. DURDIN
M. J. EARP
J. C. EATON
H. EDWARDS
R. EDWARDS
E. A. ELLIS
L. G. R. EVANS
T. W. FAIRLESS
MRS. C. FARROW
F. FARROW
M. FISZER
MRS. O. FOWLER
R. A. FOYSTER
M. W. FREER
MRS. J. E. GAFFNEY
S. J. M. GANTLETT
J. D. GEESON
MRS. J. E. GEESON
C. J. GIBBINS
N. GIBBONS
R. W. GIBLING
H. C. GILL
A. J. GLUTH
P. A. GLUTH
P. J. GOTHAM
A. S. GRACE
B. J. GREGORY
P. A. GREGORY
D. HALL
VEN. A. M. HANDLEY
P. D. HANLEY
B. HARDING
S. HARDY
C. B. HARMER
M. A. HARRIS
S. HARRIS
D. HERRIEVEN
MR. & MRS. D. J. HEWITT
G. F. HIBBERD
A. P. W. HILL
J. HIRST
D. J. HOLMAN
Holme Bird Observatory
P. HOPKINS
J. HOUGHTON
MISS. A. H. HUGHES
A. W. HUMPHREY
C. J. HUXTABLE
R. JEFFRIES
A. R. JENKINS
G. JESSUP
K. JOHNS
B. JONES
M. JONES
R. JONES
R. E. JONES
S. C. JOYNER
P. KEARNEY
G. I. KELLY
F. D. KELSEY
J. B. KEMP
M. KEMP
DR. I. F. KEYMER
P. D. KIRBY
M. D. KINGSWELL
C. A. E. KIRTLAND
DR. P. G. KITCHENER
C. R. KNIGHTS
A. G. LACK
R. A. LAND
J. M. LAST
M. P. LEE
P. LEE
R. LESLIE
D. LESTER
DR. J. LINES
S. LINSELL
A. LIVINGSTONE
L. LYCETT
C. J. MACKENZIE-GRIEVE
J. D. MAGEE
J. MAKEPEACE
J. P. MARTIN
J. R. MARTIN
P. MASON
D. MAYES
J. McCALLUM
C. C. McGUIGAN
MR. & MRS. R. C. MCINTYRE
D. N. MCMASTER
A. MIGHELL
J. S. MIGHELL
MRS. J. S. MIGHELL
J. MILLER
R. MILLINGTON
B. MOORE
D. R. MOORE
T. MORTON
J. A. W. MOYES
H. MURLAND
E. T. MYERS
Nar Valley Ornithological Society
National Trust
Nature Conservancy Council
DEACONESS M. NEWTON
G. C. NICHOLLS
Norfolk Ornithologists Association
Norfolk Young Naturalists
M. O'BRIEN
D. J. ODELL
J. M. O'SULLIVAN
N. W. OWENS
MRS. J. PARFITT
A. D. PARROTT
J. PARRY
MRS. M. PARRY
F. PIGG
P. A. J. PRATLEY
CAPT. B. J. PRATT
R. PRESTON
I. PUCKRIN
J. L. RAINCOCK
M. H. RAINS
H. RAMSAY
P. RAUNSLEY
E. M. RAYNER
J. REED
D. REVETT
A. RHODES
F. P. T. REYNOLDS
D. I. RICHMOND
MRS. R. M. RICHMOND
G. R. ROBINSON
E. V. ROGERS
J. ROWE
R.S.P.B.
F. J. RUSSELL
W. RUTHERFORD
D. SADLER
B. SAGE
K. G. SAUL
S. SCANLON
M. J. SEAGO
B. SHAW-BROWN
R. SHEPHEARD
J. C. B. SHUTES
A. SILLETT
N. SILLS
I. J. SIMPER
E. G. SKOYLES
M. SMITH
R. H. SMITH
T. D. SMITH
R. A. SPAIN
Stanford Training Area Bird Group
K. STEDMAN
P. STEELE
A. D. STOCKER
DR. M. P. TAYLOR
R. TAYLOR
Thetford Natural History Society
M. TICKNER
C. E. TITMAN
D. TUTT
U.E.A. Bird Group
Mrs. B. M. E. UNSWORTH
P. VARNEY
A. E. VINE
R. WALKER
F. A. WARDMAN
A. WARREN
D. J. WEAVER
G. WEBB
D. C. WEGE
J. E. M. WELSBY
G. C. WHITE
I. WHITE
J. R. WHITELEGG
Wildfowl Trust
C. WILKINS
N. WILLIAMS
M. J. WOOD
T. WRIGHT
MRS. P. WYLAM
P. YESCU
Y.O.C. (Norwich Group)

THE NORFOLK MAMMAL REPORT 1983

Editorial

The Editor is pleased to present the 28th Norfolk Mammal Report.

This year we include a number of short articles illustrating aspects of mammal study in Norfolk as well as the usual Classified list. Further contributions of this nature will be most welcome. We had expected to include a further instalment of the Red and Grey Squirrel story written by Dr. Jonathan Reynolds. Unfortunately it is not possible to collate the material and send it to him in time. We hope to bring the account up to date in a future edition of the Report.

Peter Boardman's success in providing a semi-artificial roosting box for Noctule bats in the large garden of his Norfolk farm has been mentioned in our notes from time to time, but it is good to have the full account set out for us. His was one of the earliest attempts in Norfolk to make a bat-box and is still one of the most successful. The article is illustrated with his own excellent photograph.

Anne Brewster has studied the natural history of her district in increasing detail as the years have gone by and has given invaluable support to this publication. In recent years she has been aided by the keen eyes and enthusiasm of her daughter, Jane. The record of their determination to assess the true status of the Harvest Mouse in their district shows how a species may go unrecorded unless someone is prepared to look and look again. In their case the lid of the treasure chest was opened. Could this happen in other parts of Norfolk if prolonged and detailed searches were made?

George Jessup's records of Breckland wildlife go back over a long period as his note shows. His articles, talks and tours give much pleasure and open many eyes to the delights of that special place. The value of prolonged observation and retention of notes is well demonstrated.

Reg Evans also possesses the spirit of inquiry that leaves no stone unturned — always carefully replaced, of course! His note on finding the remains of such a large number of shrew corpses in a situation with such difficult access illustrates the truth that applies to all our articles that so many of our observations lead on to even more unanswered questions, leading to further research.

In addition to the above, we have to thank our specialist contributors, Dr. L. M. Gosling, Coypu Investigation Centre, Rex Whitta, Chief Forest Ranger of Thetford Forest, Percy Trett, who is so informative on sea mammals. The ever-helpful John Goldsmith has again checked these pages and given support all through the year. John Last contributes yet more of his delightful sketches.

Our regular reporters have been backed up this year by a significant contribution from listeners to our local broadcasting station. Another seam has been opened in the mine of information. We thank them, and B.B.C. Radio Norfolk for bringing in this new group of enthusiasts.

All our contributors are thanked for their information, however great or small. Please remember every scrap helps fill in the scene. If a name has been omitted from the list we do apologise for our error. It is impossible to acknowledge every submission and our gratitude must be expressed in this rather inadequate way.

Please send notes for the 1984 Report as early as possible and preferably by the end of January 1984. They should be addressed to R. C. Hancy, 124 Fakenham Road, Taverham, Norwich, NR8 6QH. If you wish to make direct contact please ring Norwich 860042. John Goldsmith is pleased to answer queries on all vertebrates directed to him at the Castle Museum (Norwich 611277, ext. 287).

The Ludham Noctules

Peter Boardman

My interest in Noctules started twenty years ago when I first heard noises coming from a hole high up in an Ash tree on my Ludham farm. At first I thought they were young birds, but after a time I realised that they must be bats.

Dr. Paul Racey at the London Zoo heard of my colony and telephoned to ask if I would mind them catching some Noctules for their 'battery', where they had been successfully breeding them. My thoughts were at that time more on poultry, so it was some moments before I realised what he was talking about!

The zoo were so keen to add to their breeding stock that they arrived the next evening and caught 14 — two females and twelve males. Roosts are not too easy to locate so they had previously spent whole evenings with nets over a rubbish tip just to catch a single bat.

In the spring of 1973 a severe gale unfortunately blew the tree down and the opportunity was taken to examine the size of the aperture and take samples to search through for ectoparasites. In conversation it was decided that it would be interesting to place an artificial box on a neighbouring tree made from a branch which would give a similar dimension to the roost.

I made the new box by hollowing out a branch from the fallen Ash with a chainsaw giving inside diameter of 8½ ins. by 15 ins. I drilled a 2¼ ins. entrance hole just below the top and placed a sloping oak plank with an overhang to direct the rain away and on the bottom a softwood plank was used. The box was erected on May 11th 1973 and on the next Ash to the fallen one. It was placed 23 feet high where no branches obstructed the entrance and facing westwards across the Ant marshes.

Starlings soon took over the box, nested and had their young. It was not until August 1st that I first heard Noctules in the box about a month after the Starlings had flown. The box has been used annually since by both Starlings and Noctules. This was the first recorded instance of Noctules using an artificial box in Britain although they were known to have been found in boxes in East European block state forests, and have since used boxes elsewhere in Britain.

The box was first cleaned out in 1977 as it was three-quarters full of layers of Starling nests and bat droppings. It was cleaned again in January 1984 when it was found to be almost full to the top which could easily explain the low numbers in residence during 1983. An examination of the invertebrates living in the box has proved most interesting. Large numbers of false scorpions (*Toxichernes panzeri*), bat bugs (*Cimex pipistrelli*) and a few bat ticks (*Argus* sp.) and first East Anglian records of two rare flies associated with bats, present as larvae. Seven uncommon species of small beetle were present, along with such 'household pest' species as Silverfish and Brown House Moth.

Early in their period of occupancy the Noctules emerge over a period of 30 minutes, but towards the autumn they come out as quickly as they can, sometimes two appearing at the same time. They lose height when dropping from the exit hole to gain speed before climbing away to fly with Swifts and Swallows high in the sky on summer and autumn evenings. Within a very short time they have disappeared from sight and only twice have I known one to return to the roost within a short time of leaving.

They seem to use the roost for a period of a month or two every year and then leave. Only rarely do they appear twice during a year. It would be interesting to know what means off communication they have because the roost can be empty one day and have 30 in it the next. They may stay for a month then all depart the same night and not come back until the following year.

Noctules have used holes and cracks in trunks and branches of other Ash trees in the immediate area, and there have been two holes in Alder trees used in an adjacent area. The most ever counted out of a crack in a branch one evening was over sixty.

In my garden I have put up two other bat boxes. One is constructed of thick planks of wood, the other is a re-used natural hole in an Alder trunk which was blown down. Starlings regularly use these, but the Noctules do not. This year I want to move them as they both face north. They were originally placed in this direction because during hot sunny weather they usually left the original box which was in full sun during the late afternoon and evening.

The table shows the numbers of bats counted leaving the box since it was first erected. The peak number was 53 in 1977. Counts are fairly accurate but since Broadland 'midges' at sunrise and sunset can be very bad this can distract one from concentrating on the exit hole for forty-five minutes or more!

Year	Noctules Recorded Between	Maximum counted and date(s)
1973	Aug 1st and Oct 7th	48 Sept 3rd
1974	Aug 2nd — Aug 27th	41 Aug 27th
1975	June 8th — Aug 1st	41 June 17th
1976	June 15th — July 10th	32 June 20th
1977	June 7th — July 3rd	53 June 7th
1978	June 15th — July 10th	40 July 10th
1979	June 17th	34 June 17th
1980	June 29th — July 22nd	35 July 1st
1981	July 1st — Aug 18th	37 July 5th, 12th, Aug 18th
1982	July 13th — Sept 16th	17 July 19th
1983	Aug 22nd — Aug 24th	4 Aug 22nd, 24th

Harvest Mice Nesting Sites

Anne and Jane Brewster

The presence of Harvest Mice in the Saxthorpe and Corpusty area was established in 1976 when remains were found in Barn Owl pellets. The owl concerned roosted in an old farm building and regularly regurgitated its pellets there, as is customary for these birds, so the initial collection was easy. Harvest Mice skulls are very small and fragile so careful examination is necessary to ensure the significant remains are not damaged or overlooked. During the same period, 1975/6, a farm-worker reported seeing Harvest Mice when he was moving bales of straw some half-mile from the building above.

In subsequent years a small number of nests were found and a picture of a tiny population in a few scattered sites began to emerge. Other villages in the area added to the total — Itteringham, Wickmere, Thurning and Aldborough. In the latter village the nests were discovered in Common reed, Cocksfoot grass and other tufted grass at the side of the stream and ditches on a wet meadow.

Nests are very difficult to find during Summer when all the vegetation is green and the nest itself blends in with dense surrounding materials. In late Autumn and Winter when much of this has died down, the nests, built on groups of stronger stems, hold together firmly. Although the grass may have been flattened by rain and other causes, tufts can be lifted and the nests clearly seen still attached to the stems. Occasionally the nest lying underneath flat vegetation has completely lost its shape but can still be distinguished.

At Itteringham a nest was found on a fieldhedge next to a maize crop, again on grass.

Common reed is much more difficult to check in Winter as the leaves matt together on the ground. The only one found in this way was in Aldborough in mid-summer when the mice were watched for about 15 minutes.

With this background experience and inspired by finding nests in the stems of Cocksfoot grass on an overgrown meadow near the River Bure during early winter 1983/4, we were determined to examine as many sites in the area as possible during the best observation period for finding summer nests. Boggy, but not wet, areas with Meadow sweet, Wild angelica, Great hairy willow-herb have been walked over and nests found on the ground where they have fallen with the dying vegetation. Grass growing amongst the rushes has also been used and with this extra support nests have been found intact. Grassy areas, wet and dry, including the rank herbage at the side of streams and on verges, has also been checked and most of the nests have been found on Cocksfoot grass. This grass seems to play an important part in the survival of these small mammals in this area.

Fifty-five possible sites (including ones at Aldborough, Wickmere, Itteringham and Thurning) were checked during the Winter and Spring period before the materials became unrecognisable. Summer nests were found on 41 of these sites. It is now apparent that the Harvest Mouse is much more common in this area than was previously believed. There must be many suitable sites throughout Norfolk which could, with careful and systematic observation, reveal the presence of these small mammals. More records are needed to build up a truer distribution picture.

Road Casualty Figures

George Jessup

In 1955 a record of road casualties was kept from April 1st to Sept. 30th. A similar record was made in 1983 and then extended to the end of the year. In 1955 most of the recording was made along the same stretch of road, because, apart from holidays, I travelled the same road morning and evening 5 days a week. The 1983 records were from many different roads. Therefore one cannot come to a definite conclusion by comparing the same lists.

	April 1st 1955 to Sept. 30th	April 1st 1983 to Sept. 30th	Jan. 1st 1983 to Dec. 31st
Hedgehog	68	81	89
Rat	39	5	11
Stoat	3	9	17
Weasel	0	12	15
Hare	42	2	3
Mole	31	12	16
Rabbit	9	62	103
Red Squirrel	1	0	0
Grey Squirrel	0	32	41
Fox	0	1	1
Coypu	0	1	2

In 1955 myxomatosis was at its height and would account for so few rabbits and stoats being seen dead on the roads. Hares then were very numerous in the Breckland which is reflected in the number of their casualties that year. At that time we were also free of the grey squirrel and since then I expect road traffic has at least doubled.

A Tale of Twelve Shrews

Reg Evans

A female spider *Pholcus phalangioides* produced a batch of eggs in a loosely woven cacoon. In due course the spiderlings emerged and lived with their parent in the glass container until she died. Somewhat late in the year these were released out of doors, by removing the lid from the container. A large wooden box was placed over the glass jar to provide some protection from the weather and to stimulate a 'ceiling' condition which *Pholcus* enjoys. Small spider prey would enter underneath the large box and it was hoped the spiderlings would take up residence there. However they either dispersed or died.

On examination the glass jar was found to contain the bodies of twelve common shrews in various stages of decomposition. The jar measured 8'' x 5'' x 3½'' and having fallen in, escape would not be possible. Perhaps the first shrew climbed the inside of the box and arrived on the edge of the jar. Attracted by the spiderlings it fell in. Subsequently its companions may have been attracted by the carrion.

This unfortunate incident, unexpected in this case, is continually repeated in the countryside in discarded bottles.

Classified Notes

INSECTIVORA

One of the best recorded mammals of the year, the Hedgehog, (*Erinaceus europaeus*), was seen in every month of the year, though small late young in December and emaciated adults foraging early in the year are not likely survivors.

Hedgehogs and gardens now go together and with so many householders feeding them, chances of success are greatly enhanced. Cat and dog dishes are regularly cleaned out. Their omnivorous appetite is demonstrated by the one seen eating a dead mouse. Another seen to tussle with a live blackbird did not endear the species to that particular reporter. More loveable was the one that developed a preference for fruit cake.

Persistent late-night knocking at the door — and nobody there! The elderly householder bravely investigated and found a small December hedgehog. It was given a substantial supper before going on its way. An equally worrying early-morning intruder in Norwich gave himself away by clattering milk bottles as he prowled round the street doors. Residents lay in wait and found another hedgehog licking the empties. A more natural diet was possessed by the Caister hedgehog who overturned the pots of water put out for birds to find the slugs and worms collecting underneath.

A warning from Dereham tells of the hedgehog rescued from entangling fruit netting. A finger was pricked by a spine. The result was a painful swelling. The doctors were most intrigued but it was less of a delight for the fruit grower. The infection came from material picked up by the spines rather than anything contained therein.

On Blakeney Point suspicious footprints were found by a predated gadwell nest. Later an adult was found washed up on the tideline. It was presumed to have been caught out when trying to swim to the main tern colonies. To reach the Point the animal would either have had to walk four miles from Cley or cross the harbour by swimming or riding on driftwood.

The Common Shrew (*Sorex araneus*) was far more widely reported than its smaller relative, the Pigmy Shrew (*Sorex minutus*). The most amusing story comes from Hempnall where a live speciman was presented by a cat to its owner. Unfortunately it was early morning and in the bedroom. A chase round the room rather like a bedroom farce ensued before the shrew was released outside.

Only two references for the Water Shrew (*Neomys fodiens*) came in for the year. Even though this species is not easy to find it must be considered a casualty to loss and deterioration of habitat. Clear running water rich in aquatic life is becoming quite rare.

Not so the Mole, (*Talpa europaea*), which finds modern times much to its liking. Some observers are beginning to find the recording of mole-hills without number rather tedious. The movement of moles as determined by extremes of weather can be rewarding study and gave added interest during the long dry summer. Moles on roads featured in several reports. Emergence from a roadside bank onto the hard surface with the added confusion of massive vibration swamping a system designed to pick up sensitive waves would seem to be too traumatic. It is remarkable how so many manage to survive and return underground.

CHIROPTERA

With their own group devoted to their welfare, bats should in theory be highly documented. When you add the fact that the law appears to protect them from all vicissitudes at the hand of man, the news should be wholly good. A site regularly checked in North Norfolk exemplifies the true state of affairs. The Daubenton's (*Myotis daubentoni*) and Natterer's (*Myotis nattereri*) bats were 'less than normal'. Here we have figures to define 'normal', but what is normal for most of our colonies? We have few points of reference and a whole local population can be lost without a scrap of documentary evidence to back up the bare verbal statement. Those monitoring national populations describe a catastrophic decline associated in any way with human habitations and we are convinced Norfolk is not exceptional.

Noctules (*Nyctalus noctula*) were reported from Norwich, Attlebridge, Surlingham, Rockland, East Tuddenham, Cley and Costessey. Those at Costessey were reported by two independent observers by phone, within minutes of each other — an excellent confirmation. They were seen flying until Oct. 8th.

Pipistrelles were more widely reported, often when the summer colonies of females conflicted with intentions in insulating and timber preservation in roof spaces. Pipistrelles (*Pipistrellus pipistrellus*) were found roosting in cavity walls after the operatives had left one of their injection holes unplugged. A moment of cheer for bat-lovers!

LAGOMORPHA

There seem to be almost as many views on Rabbit (*Oryctolagus cuniculus*) numbers as there are reporters. Unless a record is kept over a wide area no one person can assess the situation from a sample locality. The same applies with myxomatosis. Careful observers have found very little in some districts but in others the rabbits have been almost cleared. The disease was seen during most months, from January onwards. Domestic pets in the Sprowston area fell victim in late summer.

Close examination of a chalk face showed that a rabbit had been eating the chalk or at least grinding its teeth there. A rabbit shot near Walsingham suffered from deformed incisors that curled inside the mouth and measured 32 mm across the arc.

Black rabbits were seen in the Waveney Valley and Sculthorpe but Hilborough and Buxton Heath turned up ginger and mahogany individuals.

A Walsingham harvester noted that although rabbits were known to be in fields of corn they did not erupt from the diminishing stands as in the days of reaper and binder. He deduced they were crouching in the deeper furrows and allowing the higher set blades of the combine-harvester to ride over them.

It could equally truthfully be said of the Brown Hare (*Lepus capensis*) that it just depends where you are when assessing numbers. Some fruitless excursions were made during Mad March Hare time just to see their displays. On the other hand quite large numbers were found in other districts. The hare crossing point mentioned in the previous report was again the focal point for a significant number of road casualties. The accident black-spot phenomenon for Hedgehogs has been well recorded. It may be worth while looking at other species in this way.

An observer living in a hare depleted area was delighted when he visited Cranworth in June and saw four. He describes them as 'processing in line ahead'. A hopeful note to end the remarks on this species — J. E. G. reports 78 live sightings against 34 in 1982 and 39 in 1981.

RODENTIA

Recording the Red Squirrel (*Sciurus vulgaris*) has now reduced itself to cross-checking references of the sightings of remnant populations. Only nine contributors list the species. It is still most important to send word of any animal suspected of suffering from the Red Squirrel disease but any live animal could well be notified so that follow-up observations may hopefully be made. Reports were from Santon Downham, Barningham, North Creake, South Wooton, Edgefield, Haveringland, Sandringham, Horsford, Felthorpe, Sloley, Wells and Holkham. It can be seen how some of these group themselves.

The Grey Squirrel (*Sciurus carolinensis*) is now so numerous and widespread that sightings are so commonplace in some districts they go unrecorded. J. E. G. found 37 in 1981, 23 in 1982 and 71 in 1983. The study now increasingly concerned with the effect of their presence. Depradations in gardens are widely reported. Gaps are soon cut through protective netting over fruit. Roof spaces afford no protection to stored produce. Even roof trusses and electric wiring have been attacked by chisel-sharp teeth. Sapling trees are tipped and full-grown giants have bark stripped from smaller branches.

The boldness of this adaptable newcomer always produces a crop of anecdotes. The centre of Norwich on a busy shopping day is far short of a mammal-watchers delight but there a Grey Squirrel held up the traffic to cross the road and entered a shoe shop. The chaos and consternation was hardly lessened by a pair of chasing humans waving a box. All three finally disappeared down a nearby alley. Please continue to provide as much information as possible to help with our continuing monitoring.

Bank Voles (*Clethrionomys glareolus*) were abundant in Saxthorpe though few were recorded elsewhere. Small rodents are unseen and often unrecognised so it is difficult to compile an accurate report. Seen they were in Taverham where they ate the tops of young cabbage plants. A visitor was invited to demonstrate his prowess with a shotgun. The result was a blasted cabbage and a vole ambling away to safety.

Thanks to domestic cats the Short-tailed Field Vole (*Microtus agrestis*) was much more widely reported. Our feline friend from Hempnall allowed one to escape under the fridge in February. Later that day another cat persuaded it out again. It seems likely that some cats develop a special skill in vole catching. At Edgefield a cat hunts in all weathers and seasons but is most successful in winter, presumably when the vegetation is lower. The technique is to survey the hunting ground from a vantage point such as a fence post.

Water Voles (*Arvicola amphibius*) were confirmed from several known sites and a few more added. Monitoring the presence and population fluctuations of a species is a most important part of our studies so return visits for this purpose are well worth making. The Water Vole is particularly suited for this. With care, it can be approached and observed more easily than many species.

Wood Mice (*Apodemus sylvaticus*) were widespread. However, sitting comfortably in a live-trap on Blakeney Point is one thing, being found dead in a tractor clutch in central Norfolk is quite another. A surprised tractor driver at Wickmere felt one running over his shoulder. The mouse had probably been making a meal of some of the grain trapped in the cabin cladding. The Hempnall cat suffered the indignity of a mouse brought in eating its meat for three weeks. The diet was supplemented with wall-paper paste. Honour was restored when the cats eventually caught it.

Looking back it appears that 1983 was an exceptional year for the Yellow-necked Mouse (*Apodemus flavicollis*). A query came in from the South-east of the county in

October but not until December were two trapped at Rainthorpe Hall. During the next two months there definite trappings at Great Moulton and at Surlingham where E.A.E. had two in his house. Several further unconfirmed but very probable reports came in from SE Norfolk. It does leave the question — Was this an exceptionally good year or are these mice extending their range?

In addition to those mentioned in our article, Harvest Mice (*Micromys minutus*) were reported from Holme, Hempnall and East Tuddenham, where it was found sheltering in a hay shed. Hopefully contributors will now be inspired and instructed in the art of seeking them out.

The House Mouse (*Mus musculus*) has never been fully recorded in Norfolk and impressions have to serve. These suggest that this mouse is less numerous in many districts. This year reports came from Corpusty, Wiggenhall St. Mary, King's Lynn, Middleton, Wereham and East Tuddenham, where it was plentiful.

Numerous sightings and road casualties suggest the Brown Rat (*Rattus norvegicus*) was particularly abundant in the year. Its ability to take advantage of favourable conditions was seen at some Norwich allotments where a spectacular build up brought rats out to ravage potato crops. A rubbish dump was suspected to be the cause of the trouble. Stories demonstrating the rat does not always have its own way describe how rats have entered domestic rabbit hutches and found an irate nursing doe too much to handle and have been killed by the protective mother.

Dr. L. M. Gosling reports on the Coypu (*Myocastor coypus*):
About 7,200 coypus were killed in 1983, mostly in the counties of Norfolk and Suffolk but with small numbers in Essex, Cambridgeshire, and Lincolnshire. 90% of the animals killed were caught by the 25 Coypu Control trappers who achieved a trapping effort of about 228,000 trap nights. With further work by Ministry of Agriculture, Fisheries and Food staff and by Anglian Water Authority, the total effort was over 237,000 trap nights. This high control intensity is having the intended objective of reducing the live population. This can be seen in an approximate fashion from the reduction in numbers killed: in spite of a progressively increasing trapping effort, the numbers in 1983 were 22% less than in 1982 and 48% less than in 1981. Provisional estimates of the live population also show a decline with the numbers of adult females (the most important sector of the population) falling from about 3,000 at the start of 1981 to under 2,000 at the end of 1983.

The main problem for the current operation against coypus is an increase in numbers to the west of the population's range in the area around Ely. A considerable effort has been made in trapping this area by Coypu Control and Anglian Water Authority staff but it is too early to tell whether it has been sufficient to reverse the trend. Apart from this development, the distribution of coypus appears to have changed rather little: small numbers extend south to the estuary of the River Blackwater in Essex but most continue to be caught in the wetlands of east Norfolk and Suffolk.

CARNIVORA

The Fox (*Vulpes vulpes*) continues to be plentiful and is controlled over much of the county. We were saddened in May to hear that at least one vixen had been caught in an illegal gin trap and had to be killed after days of suffering. It is likely that the youngster killed in a combine harvester fell victim to its own inexperience. The resilience of the species is remarkable in view of the numbers killed by various

methods each year. Taking the county as a whole the population seems capable of replenishing itself, aided by the fact that it is a wide-ranging animal. It is interesting to speculate on how present stocks would compare if the species were allowed to be self-regulating.

The Badger (*Meles meles*) is much more dependent on the good offices of sympathetic landowners. It is good to learn that a further introduction was made during 1983 in a different part of the N. W. Norfolk estate where they had previously been so successful. More good news came from Breckland where a new sett was recorded. We do not usually hear of badgers in Norfolk gardens but during the winter of 1983/4 one mid-Norfolk family had a regular caller and even managed a photograph.

The third member of our larger carnivorous trio, the Otter (*Lutra lutra*) was mentioned only three times in the wild. The far greater part of the data card for the year is taken up with press reports on the work of the Otter Trust. We can only hope that their work will be successful in retaining the species on our county list.

The most widely reported carnivore was the Stoat (*Mustela erminea*), listed in 50 places. An 'almost' white specimen was found in the Oulton area. Three rabbits were seen attacking a stoat on Weeting Heath.

Weasels (*Mustela nivalis*) were also much in evidence. An albino was seen in Pulham Market. The most spectacular incident involving a weasel come from Dr. R. Baker:

'A Weasel, full grown with an effervescent white throat ran out from the scrub at Keswick Hall onto the cut lawn in a frenzy of movement. It ran, it bounded high into the air, it dug for no purpose and then scampered off again in a widening circle. More bounds then a sudden dart up the trunk of a young tree, a pause three feet off the ground and a rapid fall back onto the lawn. More running, bounding and digging. This activity continued for ten minutes before the beast ran off into the scrub. Although the day was warm we were still in late January and the reason for this apparent playfulness remains a mystery'.

The carnivore most in our minds during the year was the American Mink (*Mustela vison*). It is not likely that the mass release mentioned last year made any more impact than the routine escapes into the wild that have obviously been taking place over a much larger period of time. The focus of attention was the middle reach of the Waveney. Possible sightings came in from other parts of the county. The best view was had by a party of canoists on the Waveney. Forced to pause by a fallen tree they were confronted by a female mink who carried her young, one at a time, to what she considered a safer place. Having moved the family, she made a final return for a dead eel. The camera, as it usually is on these unique occasions, was at the bottom of the canoe, carefully wrapped.

CETACEA

The Pilot Whale (*Globicephala melaena*) stranded in Holkham Bay and slowly decomposing was the easiest mammal to observe in 1983. As only two contributors mention it, perhaps it illustrates how the obvious can be overlooked. The Common Porpoise (*Phocoena phocoena*) was well represented being seen off Winterton, Mundesley, Bacton, Cley, Blakeney Point and Scolt Head. Bird watchers, please continue to look out for sea mammals.

PINNIPEDIA

Both Grey Seals and Common Seals are making more frequent appearances in the Yare as far as Reedham. Their inquisitive faces staring back from the river surface can give rise to all sorts of fanciful surmises for an inexperienced observer. Scroby Sands are still low which meant that the Grey Seal (*Halichoerus grypus*) cows had another disaster year when the young were due in the Autumn. Most aborted out at sea. 5 pups were found deserted on the beach near Yarmouth. Most of the Grey Seals travelled round the coast to Winterton but were put off by the construction of the sea wall. It is assumed thay carried on to Morston. The Common Seal (*Phoca vitulina*) is an established feature of the Norfolk summer scene from The Wash all the way round to Scroby Sands wherever there are sand-banks on which they can haul out. They had an average successful year.

ARTIODACTYLA

As the century progresses and forestry schemes mature, so deer find more cover. Red Deer (*Cervus elaphus*) have been seen in many sectors of North Norfolk in addition to the sites we normally associate with them. Reports of even suspect sighting would be appreciated as these may link with other references. Our other native, the Roe Deer (*Capreolus capreolus*) seems to have been increasing in numbers and extending its range into further parts of the county, especially in North Norfolk. A casualty was found as far north as Roughton, 3 miles from the North Sea. Two frightened Roe ran into a house in Drayton after narrowly escaping a road accident. Trapped inside, they were even more frightened and caused some damage before help arrived. Normally deer travel quite unnoticed and it is rare for them to be involved in such spectacular and mutually alarming incidents.

So many of this years deer records are from the Northern half of the county. It is doubly pleasing to report the small herd of Fallow Deer (*Dama dama*) close to Norwich is still maintaining itself to disprove our doubts and fears expressed previously.

Chinese Water Deer (*Hydropotes inermis*) at How Hill must be overcoming their shyness. Apart from this area the species has not been conspicuous though there is no need to doubt its stability.

One couple who regularly visit certain parts of Thetford Forest regard the Muntjac (*Muntiacus reevesi*) as our most numerous deer. They may well be making a generalisation from observations in a specific area which happens to be heavily stocked but it is certain that this tiny deer finds Norfolk very much to its liking and continues to increase.

CONTRIBUTORS TO THE MAMMAL REPORT

P. R. Allard
E. Anderson
W. Baker
Dr. R. Baker
S. Baker
E. A. Barber
Mrs. G. Banthorpe
Miss P. Bennington
Mrs. Benton
Mrs. G. Beckett
C. J. Betts
J. Biggs
Mrs. Binns
P. Boardman
A. Bradshaw
Miss N. Brooks
Mrs. M. A. Brewster
Miss J. Brewster
A. and Mrs. R. Bull
J. Butcher
R. Carver
P. Cambridge
J. Chambers
S. Clay
D. E. Clodd
C. Clarke
R. Cobbold
D. Coker
Mrs. D. Cooke
Mrs. R. Cooper
S. A. Cross
Mrs. P. Culley
Revd. R. W. E. Currie
C. Dack
E. T. Daniels
Mrs. A. Doy
K. Dye
Mrs. M. Eden
Eastern Counties Newspapers Limited
Dr. E. A. Ellis
Mrs. B. Evans
R. and Mrs. L. Evans
Mrs. D. Fairhead
F. Farrow
Mrs. N. Fiddy
Mrs. O. Fowler
S. Freestone
Mrs. J. E. Gaffney
Dr. J. and Mrs. B. Gale
Miss J. Garnier
G. Garrard
J. and Mrs. J. Geeson
J. Goldsmith
R. Graves
Mrs. J. Gergory
Mrs. D. Hadman
Mrs. C. Haines
R. and Mrs. R. Hancy
The Venerable A. M. Handley
J. Hampshire
M. A. Harris
Mrs. H. Haverson
I. Harper
R. Harvey
Mrs. P. Hogg
R. Humby
Dr. A. Irwin
R. Jackson
J. Jenner
E. Jermany
Mrs. J. and Miss D. Jermany
R. Jermy
G. Jessup
R. E. Jones
G. I. Kelly
Dr. I. F. and Mrs. J. Keymer
J. Kemp
Mrs. Kett
C. Knights
R. Knights
P. Lambley
F. Last
P. D. Lee
I. and Mrs. M. Mackay
F. and Mrs. A. Manning
J. F. Mayhew
Mrs. M. Marney
P. McMahon
J. G. Manners
M. Metcalfe
B. Moore
Miss T. Murray
Mrs. J. Nagle
C. Neale
J. A. Newbould
Deaconess M. Newton
Norfolk Ornithologists Assoc.
Mrs. P. Page
R. Parfitt
E. and Mrs. E. Parnell
D. Pashley
B. Peck
J. Pelling
Mrs. M. Pitcher
R, P. and E. Pols
K. Potter
P. Pratley
C. Price
C. D. Raby
Mrs. J. Reeve
F. P. J. Reynolds
D. I. and Mrs. R. M. Richmond
Mrs. V. Roberts
H. Roffey
B. and Mrs. J. Robinson
Miss D. Robinson
Mr. Roe
A. Rogers
J. Rogers
T. Rogers
A. Sanford
D. Serter
M. J. Seago
J. Shorten
P. Simmons
I. J. Simper
Mrs. G. Sillis
M. Smith
Mrs. C. Solomons
R. B. Spaul
E. Stevenson
Mrs. J. Swann
Mrs. H. Tooley
Percy Trett
Peter Trett
Mrs. C. Tungate
A. E. Vine
Miss R. Walby
Miss C. Watson
N. Waters
K. and Mrs. L. Walton
G. Webb
Dr. G. D. Watts
R. Whitta
F. Whitmore
Young Ornithologists Club (Norwich Branch)

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Secretary:
Dr. R. E. Baker
25 Southern Reach
Mulbarton
Norwich NR14 8BU.

Publications:
April: Transactions
August: Bird & Mammal Report
Quarterly newsletter 'Natterjack'.

Membership Secretary:
Miss J. Wakefield
'Goldcrest', Post Office Lane
Saxthorpe
Norwich NR11 7BL.

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Address: Norfolk Ornithologists Association (Office), Aslack Way, Holme next Sea, Hunstanton, Norfolk, PE36 6LP.

Line-drawings: 342, 345 & 348 Marsh Harrier (*N. Arlott*); Front cover: Migrating Jays (*G. M. S. Easy*); 391 Little Tern (*Pam Haddon*); 403 Roe Deer, 405 Hare and End cover: Harvest Mice (*J. Last*); 366 Booted Warbler; 378 Cattle Egret, 381 Red-breasted Goose, 388 Marsh Sandpiper, 393 Bee-eaters and 396 Pied Wheatear (*R. Millington*); 355 Pectoral Sandpiper and 356 Wilson's Phalarope (*J. A. W. Moyes*); 349 Mediterranean Gull, 351 Bewick's Swan and Pintail, 353 Redshank, 357 Lapwing, 358 Oystercatcher, 364 Curlew, 365 Woodcock, 367 Sandwich Tern, 375 Bearded Tit, 376 Wilson's Phalarope, 379 Little Egret, 384 Stone Curlew, 386 Black-tailed Godwit, 387 Snipe and 400 Spoonbill (*the late R. A. Richardson*).

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