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Norfolk Bird & Mammal Report 1986



Norfolk Bird Report - 1986

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

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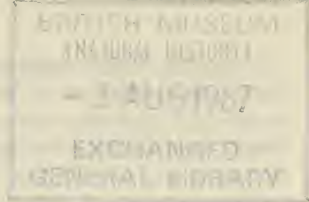
Editor: REX HANCY

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Published by THE NORFOLK & NORWICH NATURALISTS SOCIETY, Castle Museum, Norwich NR1 3JU (*Transactions* Volume 27 Part 6 August 1987) in conjunction with NORFOLK ORNITHOLOGISTS ASSOCIATION, Aslack Way, Holme-next-Sea, Hunstanton PE36 6LP.
ISBN 0375-7226

Price £2.75

NORFOLK BIRD REPORT 1986



Editorial

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

Review of the Year: **January**, although starting and finishing with cold snaps, was predominantly mild and wet. As usual wildfowl dominated the scene with co-ordinated counts producing 19,900 Pink-feet in the north and west and 12,160 Brent Geese. Over 4,700 Bewick's Swans were present on the Ouse Washes. Oddities included the Snow Goose still in the Pink-feet flocks and an adult Red-breasted Goose hiding amongst thousands of Brents at Cley and Blakeney marshes. The discovery of a party of Parrot Crossbills in pine stands at Wolferton led to hopes of further breeding, but this was not to be. The month also saw a few Waxwings, a long-staying Black-bellied Dipper and the resident Cranes in Broadland.

February was the coldest since 1963, the ground freezing to a depth of eight inches, but sunshine levels were above normal. A predictable influx of sawbills occurred, but not on the scale of the previous winter; 140 Scaup were off Heacham. In the Yare valley Bean Geese peaked at 340 and 320 Icelandic Whooper Swans were at Welney. Rough-legged Buzzards were still much in evidence from the influx of last autumn and Winterton's long-staying Siberian Stonechat remained until the 5th.

March was cooler and sunnier than usual, but also the wettest for five years. Wildfowl still provided much of the interest with a massive 34,945 Wigeon on the Ouse Washes, 70 Whooper Swans in the Hickling/Horsey area, 200 Long-tailed Ducks cavorting in the shallows off Holme/Hunstanton and the wintering Black Brant at Cley which was last seen on 13th. By mid-month spring passage was under way with Wheatears at several sites on 15th and Ring Ouzel from 27th together with the usual few Black Redstarts and Firecrests. Over 500 Icelandic Black-tailed Godwits collected at Welney and an exhausted Red Kite was rescued from a drilling rig forty miles off-shore.



It was the coldest **April** since 1956 with rainfall above average, also a quiet month for unusual migrants. A build-up of 2,000 Common Scoters off Hunstanton were probably passage migrants. A Kentish Plover was at Cley, 2 Serins and a Hoopoe at Holme and 2 Black-bellied Dippers at Letheringsett. Scattered Firecrests, Black Redstarts and Great Grey Shrikes were reported.

Though most of the expected semi-rarities passed through in **May** (including Osprey, Spoonbill, Temminck's Stint, Black Terns and Kentish Plover), the month was generally disappointing, the only real rarity being a Little Egret at West Acre and Breydon. Notable events however included a female Dartford Warbler on Blakeney Point, the first county record for nearly sixty years and the return of the male Serin to its usual garden haunts in Wells. Pectoral Sandpiper and Red-breasted Flycatcher were also recorded.



Welcome sunshine and dry conditions remained for much of **June** especially late in the month. Often a quiet time, this year it produced a remarkable catalogue of prizes. These include Great White Egret and Red-footed Falcon at Titchwell, Cory's Shearwater, Broad-billed Sandpiper and Spotted Sandpiper at Cley, Pectoral Sandpiper and three fly-past Bee-eaters at Holme, Red-necked Phalarope at Wolferton and Cley, Bluethroat at Wiveton — the only one of the year, Scarlet Rosefinch at Holkham as well as a very late Snow Bunting on Blakeney Point.

The county's importance as a haven for rare breeding birds was maintained with 43 Cetti's and 4 Savi's Warblers singing, 9 Black Redstart pairs, 2 pairs of rearguard Red-backed Shrikes, 26 Woodlarks singing, 3 pairs of Hobbies, 9 booming Bitterns and several Quail calling. Reference must also be made to the traditional terneries, Avocet colonies, Marsh and Montagu's Harriers, Black-tailed Godwits and Stone Curlews. The mass harassment of fledgling Long-eared Owls by 'birdwatchers' appears to be an increasingly popular occupation on balmy summer evenings. With ornithology now such a popular hobby there are occasions when much more self-discipline needs to be exercised.

July was warm with rainfall and sunshine near average. The remains of a White-billed Diver were found on Blakeney Point. A small influx of Nearctic waders saw a long-staying White-rumped Sandpiper at Snettisham, Buff-breasted Sandpiper visiting Holme and staying at Cley, Pectoral Sandpiper at Hickling and King's Lynn BF. In addition a White Stork appeared at Ditchingham and a female Red-footed Falcon at Winterton.

August was wet and cool with a few falls of typical species including a number of Barred Warblers together with Icterine Warblers, Wrynecks and Tawny Pipit at Weybourne. The annual Kestrel influx along the Wash seawalls reached seventy. The much publicised Sahel drought has resulted in very low Sand Martin numbers in recent years so it was pleasing to see 2,000 at Welney suggesting a reasonable breeding season. The RSPB, recognising the seriousness of the situation, is offering advice to

pit-owners in order to assist this attractive species during the nesting season. A northerly gale on 27th saw over 300 Arctic Skuas moving south off Horsey and 200 east off Cley where 2 Long-tailed Skuas also appeared while a Sabine's Gull was at Paston. The month also produced Corncrake, Red-necked Phalarope and White-winged Black Tern, but few Curlew Sandpipers.



September, one of the coldest on record, was also one of the sunniest for some years. Sea-watching was productive with over 220 Manx Shearwaters, Cory's Shearwater and 125 Sooty Shearwaters at Cley with 150 Sooty Shearwaters off Blakeney Point during strong onshore winds on 3rd. Two weeks later 2,500 Fulmars and a Cory's Shearwater were off Hunstanton while other attractions during the month included a few Balearic Shearwaters, Leach's Petrels and another Sabine's Gull. An eclipse drake King Eider off Scolt with moulting Eiders was the county's first for nearly a century. The pool adjacent to Blakeney sea-wall held a juvenile Citrine Wagtail for a few days, the second for the county. Other surprises were Spotted Crakes, Red-footed Falcon, Richard's Pipits and Ortolan Bunting. For the third year running the beginning of a sizeable influx of Yellow-browed Warblers was noted. Nowadays these minute vagrants seem to occur on almost any wind — a total of 38 were recorded during the autumn.

October commenced dry and warm, but cool, wet and unsettled weather developed later. The expected falls of Asian vagrants failed to occur, but noteworthy was a White-billed Diver on two dates off Cley/Blakeney Point. A strong westerly grebe passage took place on 26th when 33 Slavonian and 10 Red-necked Grebes flew past Blakeney Point. The sea also produced large numbers of Little Gulls and a moderate passage of Pomarine Skuas took place. Returning Brent Geese assemblies contained virtually no young: a not uncommon phenomenon amongst high Arctic breeders. Other species during the month included Cattle Egret, 4 Richards Pipits, 3 Red-breasted Flycatchers, Siberian Stonechat and a very elusive Little Bunting at Wells.

Generally **November** was mild and unsettled, cold weather not arriving until late in the month. An exceptional influx of Black-necked Grebes took place, a species rather rare in Norfolk. Northerly winds on 2nd resulted in 200 Little Auks at Cley and 234 at Paston. Several Long-eared Owls arrived in off the sea all along the east coast of Britain. Low vole populations on the continent apparently sparked off this

movement. Many of the owls weighed less than normal and were in a weak condition. Up to 15,000 Pink-feet were in the county by the 24th; several Red-crested Pochard were found — part of a national influx and a Blue-winged Teal reached Welney. Passerines included a late Red-breasted Flycatcher, Pallas's Warbler at Waxham (which was some compensation for a poor 'Siberian' autumn), 22 Shore Larks at Winterton while over 400 Snow Buntings danced above Holkham Bay.

December remained mild resulting in few Bewick's Swans on the Ouse Washes (maximum 1,390); this situation caused much unfounded speculation and accusations towards Chernobyl. In fact the swans were in still in Holland in huge numbers and the onset of cold weather in January 1987 saw record numbers on the Ouse Washes (6,100). Meanwhile, tests on captured Bewick's Swans showed only normal low levels of radiation present. The Washes also held 380 Whooper Swans with a further 64 at Hickling/Horsey. Over 19,800 Pink-feet had returned to feed on arable by-products in north and west Norfolk; 220 Bean Geese were back in the Yare Valley. A late passage of House Martins took place and Waxwings delighted hundreds of bird-watchers. The county's latest Red-backed Shrike remained at Hunstanton from late November until December 1st. Although not a vintage year (perhaps we are being spoiled by the richness of Norfolk's ornithological delights?), there were several surprises and the county undoubtedly remains number one in Britain for year-round interest (JBK).

Recording: Records for the 1987 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.* All observations should be submitted in the order followed by 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.

Field descriptions of semi-rarities as listed in the 1983 Report (page 337) should also be submitted as such records are considered by the County Records Committee (B. Bland, G. E. Dunmore, S. C. Joyner, J. B. Kemp and R. Millington) prior to publication. Records of rarities considered by British Birds Rarities Committee should be submitted with full details as soon as possible after observation and not left until the end of the year. Record forms for the submission of national rarities are available either from the Editor or from G. E. Dunmore (49 The Avenues, Norwich NR2 3QR).

Acknowledgements: Thanks are due to the following photographers and artists: N. Arlott, B. Bland, N. Borrow, P. Haddon, J. A. Hazell, R. Jones, C. R. Knights, T. Lubbock, R. Millington, P. Morris, J. A. W. Moyes, C. Park, R. Tidman and S. Young. Among the vignettes is a further selection by the late R. A. Richardson.

Thanks are also due to Cley Bird Club, Holme Bird Observatory/Norfolk Ornithologists Association, Norfolk Naturalists Trust Wardens, National Trust, Nature Conservancy Council, RSPB, Nar Valley Ornithological Society, G. E. Dunmore (for liaising with British Birds Rarities Committee and acting as Secretary/Chairman of the local Records Committee), Mrs. M. Dorling, Mrs. S. F. Seago and all other contributors.

Montagu's and Marsh Harriers in Norfolk 1982-1986

Bob Image



Montagu's harriers successfully nested in Norfolk each summer over the five-year period. All nests were in arable crops and out of a total of eleven males and eleven females, ten males and ten females reared twenty-six young. Three nests failed, one due to heavy rain during incubation in 1984, and two nests in 1986 involving the same pair. This 1986 female was possibly only a year old so breeding inexperience may have played a part in the failure of both nests.

Eight pairs were monogamous. In 1982 a male was mated to two females, both nesting successfully in winter wheat in adjacent fields. However in 1984 the reverse was the case when a female was courted by two males. This interesting and perhaps unique association came about when the crop collapsed over the first nest during heavy rain and the female deserted and left the area. As she had only been incubating for eight or nine days it was more than likely that she would nest again. Her mate remained in the area along with a second male that had arrived during the brief period of incubation. After an absence of four days the female returned and re-nested in the same field, but paired to the second male. Her eggs may have been fertilised by both males as she copulated with both, although the second male was the primary partner during the repeat nesting phase. Three young were fledged and in 1986 a breeding male identified by colour rings was one of these young. It is thought these same two males returned in 1985. Both arrived back in 1986, but only one stayed to breed.

In 1983 two pairs nested in a field of winter wheat, together with a pair of Marsh Harriers which fledged five young. One of the female Montagu's disappeared leaving four young chicks in the nest. The male continued to deliver prey to the nest, but at this age the chicks were unable to feed themselves. Accordingly to try and ensure a successful outcome a carefully controlled hand-feeding programme was commenced at the nest by wardens, using prey delivered by the male. A small wire shelter, covered in reed and straw was placed near the nest-site to give the young some cover. This they took to readily. During feeding operations it was important to avoid 'imprinting' humans on to the young. This was achieved by wearing suitable apparel to disguise the human form. Three young were eventually fledged, the male still providing them with prey thirty days after fledging. By then of course they were doing some hunting for themselves.

Nesting in farm crops is, of course, potentially hazardous due not only to bad weather, but to normal day to day farming operations. On the continent where many more pairs nest in crops, nests and young are lost each season during harvest which tends to be earlier than in Norfolk. Apart from harvesting the main farming danger is from spraying. Tractors and sprayers have to traverse the fields and some sprays — especially insecticides — are quite toxic. It is then prudent to remove the young from the nest temporarily. Although the chicks may then be safe, low-flying aircraft spraying from the air pose a collision threat to the adults. Happily due to constant wardening over the five-year period no nests or young were lost due to farming activities. Thanks must be expressed to the farmers and their staff, and landowners, for their co-operation and interest. The ability of Montagu's harrier to nest successfully, with human aid, in arable crops has been paramount in maintaining the species as a breeding bird in the county, and indeed the country as a whole.

Nesting Success of Montagu's Harriers in Norfolk 1982-1986

	1982	1983	1984	1985	1986
Breeding Males	1	3	2	2	3
Breeding Females	2	3	1	2	3
Number of Nests	2	3	2	2	4
Fledged Young	4	9	3	7	3

Marsh harriers also nested in the county in cereal crops. From a total of nine pairs, seven pairs reared twenty-six young. This included a pair in 1986 needing assistance after the male became injured. Two pairs failed in 1986: one nest containing three

chicks was possibly predated by a fox; elsewhere the female deserted the nest holding five eggs. A possible cause of desertion could have been due to an immature and inexperienced male partner losing interest and leaving the area, thereby forcing the female to leave the nest to hunt for herself.

A nest in 1982 in a field of winter barley is the first recorded arable crop nesting record for Marsh Harrier in the country. This nest, containing three nearly fledged young, was saved from probable disaster by a vigilant combine driver, who can vouch for the lightning reflexes and razor sharpness of the bird's talons! The young were removed to a nearby ditch where the parents continued to feed them. All were on the wing a few days later.

In 1986 one breeding male most unfortunately collided with overhead wires while hunting and damaged a wing. Luckily, the incident was observed by farm staff and the injured bird taken into care. Sadly it is almost certainly permanently grounded. At the time he was supplying a female and a nestful of five chicks with food, the chicks ranging in age from three to ten days old. The female soon became agitated at the male's absence and was reluctantly forced to go hunting herself. With such young chicks she was unwilling to hunt very far from the nest and would often fly only a relatively short distance, before suddenly 'panicking' and returning quickly to the nest. Observations suggested that on her own she was unable to supply the young with sufficient amounts of prey. The day after the male became injured the smallest and weakest chick disappeared. During crisis periods when food is short, if any weaklings die, they may then be fed to the remainder of the brood. Almost certainly that is what happened in this case. Some human assistance was in order. It was decided to supplement the females own inadequate amounts of prey by leaving food at the nest-site for her to feed the young. This was carefully arranged to keep disturbance to a minimum. The rest of the brood successfully fledged, still being attended by the female. During the nestling period the female continued to collect and take material to the nest, building up a platform in the process, where supplementary food was positioned. This was very convenient for the warden as it meant a fairly level and substantial area upon which to leave food. Some of the material deposited on this platform was very lengthy. The longest item was a dead sunflower plant stem, measuring four feet seven inches in length. In fact so long was it that one end protruded well above the height of the surrounding crop.

As mentioned earlier, twelve days after the male was injured in 1986 a young brood from another nest nearby mysteriously disappeared. The female from this site soon left the area, but the male remained and formed an association with the widowed female and her brood, being observed in her nest area. On at least one occasion he caught prey and passed it to her, which she took back to the nest. On a warm sunny day the couple cavorted together high in the sky for over half an hour. Later in the autumn at a communal roost, numbers of harriers were arriving, including the female and some of her young. Just before dusk this male flew in with a prey item and passed it to one of her young.

Nesting Success of Marsh Harriers in crops in Norfolk 1982-1986

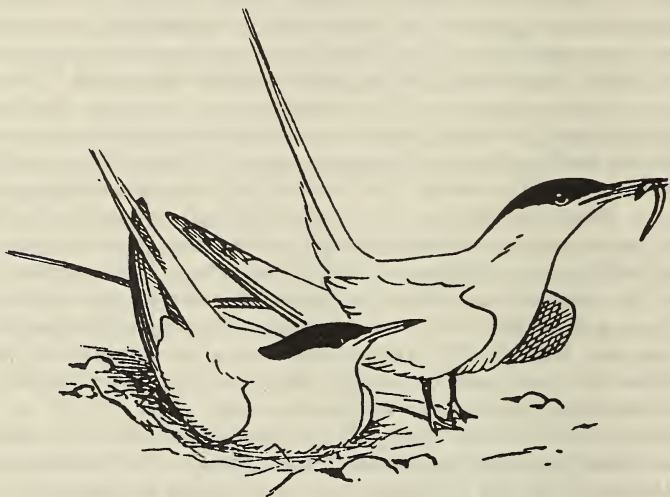
	1982	1983	1984	1985	1986
Breeding Males	1	3	1	1	3
Breeding Females	1	3	1	1	3
Number of Nests	1	3	1	1	3
Fledged Young	3	10	5	4	4

In view of the extreme rarity of Montagu's Harrier nowadays the following note by the late Jim Vincent written in 1937 makes fascinating reading. Vincent was head keeper at Hickling Broad for many years:

"Largest number of pairs of Montagu's to nest in the Hickling/Horsey district in one season was nine in 1924. After all the young hatched and could fly one could see thirty of these birds with one sweep of the field glasses. Montagu's is the most colonial of harriers; I have known four nests in a 200 yard circle. On another occasion two nests were only ten yards apart". Efforts to re-establish harriers in Broadland certainly had repercussions. Vincent remarks that "Yellow Wagtails which were so numerous that they were like marsh marigolds in certain areas completely disappeared. In 1936 it was impossible to locate a single pair in the parish of Hickling".

Breydon Water Tern Platforms

P. R. Allard



Common Terns have successfully nested during the past decade on platforms at Breydon Water Local Nature Reserve increasing from an initial 17 pairs in 1977 to over 60 pairs in 1986. A total of 452 chicks have reached the free-flying stage, a remarkable achievement considering each platform is only twelve feet square.

The history of Common Terns breeding in Broadland makes interesting reading. Henry Stevenson's *Birds of Norfolk* (1890) refers to them formerly breeding in large numbers on islands in Hickling Broad; they returned here to breed in 1953 and in 1986 up to 18 pairs were nesting on Rush Hills wader ground.

A new colonisation began in 1949 when a single pair of Common Terns bred on a derelict wherry at Ranworth Inner Broad. Over the years the colony increased to 13 pairs, but high water levels regularly washed away clutches of eggs. At the suggestion of Michael Seago a raft was constructed measuring 5 feet by 12 feet and anchored in position in the spring of 1961. Twelve pairs bred successfully that year. When first constructed the Ranworth raft was open-sided, but it was found that the young terns

took to the water far too early in life and in strong winds were quite unable to return to the raft. Nowadays each raft has sides of wood or wire-netting and no young can depart until it can flutter at least a foot above the deck. Numbers breeding at Ranworth vary considerably. Peak totals were achieved in the early 1970s: 54 pairs in 1971 and 57 pairs in 1973. Up to three rafts have been in use in any one season. Rafts have also been very successful at other reserves including Hardley Flood where up to 39 pairs have bred.

In 1985 a Breydon-type fixed platform was erected by Yarmouth RSPB members at Martham Broad where odd pairs had nested on an old shooting butt. The following year 14 pairs bred rearing a dozen young.

The Breydon project commenced in the 1976/77 winter when a 10 feet by 6 feet platform used for quay-heading repairs became stranded on the estuary. Solidly constructed, it was considered most suitable for modification as a tern raft! As spring approached and it had not been reclaimed, the raft was positioned on the estuary mud, sides installed and the base covered in shingle. Even before completion Common Terns began showing interest and it was no surprise when a clutch of three eggs appeared. The summer total was an impressive 17 nesting pairs. However, only six young reached the flying stage partly because of the parent Common Terns aggression towards straying chicks. Inevitably the modified raft was re-possessed in October. But plans were soon put into operation for replacement — either another raft or a fixed platform. During February 1978 work commenced on the latter as no raft or pontoon could be located. The construction, ten feet square, contained 13 inch high sides and a network of 36 sections each four inches in height. Beach shingle was spread in each square and the first Common Terns arrived 30th April. Four nests were occupied 17th May increasing to 19 by 4th June. The final count was 25 pairs which reared 21 young — all were ringed. In 1979 31 pairs settled in raising 33 chicks. Next year 33 pairs nested and 32 chicks were reared. The system of squares within the platform enabled each pair of terns to maintain a miniature territory and restricted wandering chicks until they were old enough to fend-off attacks from other adults. This system proved highly successful. In 1981 34 chicks were reared by 34 pairs and the following summer 40 from a capacity platform of 36 pairs.

It then became obvious that a second, larger, platform was needed and in the spring of 1983 a platform containing 49 squares was positioned close to the original one. This held 25 pairs in its first season together with 32 pairs nesting on the original, smaller, platform. Thus 57 pairs were breeding in an area scarcely larger than an average house lounge!

The night of 3rd January 1984 proved disastrous when a tidal surge bodily moved the new platform several hundred metres to the east completely wrecking the platform. Fortunately, local naturalists and wildfowlers rallied together and returned the larger platform to its original site in April. The older platform was considered beyond repair. That summer with only a single platform 44 pairs nested and 50 chicks finally took wing. In 1985 a modified platform was built containing slightly higher sides. That year 58 pairs reared 81 young on the two platforms. Success continued and a record 62 pairs raised 77 chicks in 1986. There have been two Breydon ringing recoveries from West Africa: in 1981 from Guinea and 1985 from the Ivory Coast, in addition to several local recoveries.

Breydon-type tern platforms are suitable for both inland waters and sheltered estuaries and there are many potential localities in the area. They are virtually predator-free and secure from the highest tides. Sadly our coastal nesting Common Terns have decreased alarmingly. If present trends continue there will soon be more Common Terns nesting inland than at traditional coastal sites.

Hen Harrier Winter Roost Survey

Roger Clarke



Survey observers in Norfolk have again produced a very full set of data, despite mist curtailing watches at the odd site on three of the co-ordinated dates. The survey was well supported in both Britain and the Netherlands, with up to 96 and 67 sites counted respectively. Preliminary counts were made in Spain and the north of France in preparation for fuller participation and more countries have taken the idea up in 1986/87 (including Czechoslovakia and Hungary). Resulting international data will be published in due course.

By recent standards, 1985/86 was a poor winter for Hen Harrier in Norfolk. A simple average of the 'mean number of total harriers per site counted' for the survey co-ordinated dates in Norfolk worked out at 4.33 in 1983/84 and 3.49 in 1984/85, but dropped to 2.03 in 1985/86. In England as a whole, the numbers counted in 1985/86 were more comparable to those of the previous two winters, but the proportion counted in Norfolk struggled to reach its normal minimum of 20% of the English total and then sank to 13% in February. Cambridgeshire roosts also mostly held few harriers but, by contrast, numbers at Suffolk Breckland and Lincolnshire coastal roosts were good.

Hard weather movements of both predator and prey were largely inapplicable in the mainly mild weather up to February 1986, although the roost on the Cambridgeshire end of the Ouse Washes built up through November to peak at 14 birds on 7th December and Norfolk roosts A and J saw reasonable numbers compared to the situation otherwise. The freeze throughout February (coldest since 1947) saw a one third fall in the mean number of harriers per site on the month's count and numbers were still low in mid March, despite milder conditions from the 4th. The difficulties experienced by some species during February (especially waders on the frozen mudflats of the Wash) might be thought to have given the predator an advantage; Hen Harriers are known to eat carrion on occasion, although as soon as a corpse is frozen it must be useless to them. It was remarked that there seemed to be more harriers about on the Wash in 1985/86, but few seemed to be using known Norfolk roost sites. Normal food in the mid winter months is thought to be passerines (as evidenced by preliminary results from analysis of pellets collected at site A in 1984/85). Many small birds were observed moving south in the country during the long freeze of February and this probably contributed to the drop in numbers of harriers on the north Norfolk coast at that time; one observer there commented

CO-ORDINATED COUNTS AT HEN HARRIER ROOSTS IN NORFOLK — 1985/86

Site	20.10.85		24.11.85		15.12.85		12.1.86		16.2.86		16.3.86	
	Ring-tails	Greys	Ring-tails	Greys	Ring-tails	Greys	Ring-tails	Greys	Ring-tails	Greys	Ring-tails	Greys
NORTH COAST												
A Saltmarsh/Dunes	2	1	4	2	4	5	2	3	2	0	3	0
B Saltmarsh Dunes	—	—	3	1	2	1	2	0	1	0	1	0
C Reedbed	1	0	0	0	0	0	4	1	2	2	2	0
D Reedbed	+	+	+	+	+	+	+	+	+	+	+	+
E Lowland Heath	1	0	2	2	3	1	3	1	0	0	—	—
NORTH WEST												
F Bog/Lowland Heath	0	0	M	M	1	0	2	1	—	—	2	1
G Bog/Lowland Heath	0	0	2	0	2	2	3	2	M	M	1	1
H Reedbed	—	—	1	0	1	0	1	0	1	0	0	0
BROADLAND												
I Reed/Sedge Bed	1	0	0	0	1	2	0	3	1	1	—	—
J Reed/Sedge Bed	0	2	3	2	4	2	5	2	5	2	3	2
K Reedbed	0	0	0	0	0	0	1	0	0	0	0	0
L Reedbed	—	—	0	0	—	—	—	—	1	0	0	0
M Reedbed	—	—	0	1	—	—	—	—	0	1	M	M
N Reedbed	—	—	0	0	—	—	0	0	—	—	0	0
BRECKLAND												
O Lowland Heath	—	—	0	0	—	—	0	0	—	—	0	0
P Reedbed	*	*	—	—	—	—	—	—	—	—	—	—
TOTAL	5	3	15	8	18	13	23	13	13	6	12	4

Ratio of Ringtails to each Grey
Mean No. of Total Harriers
per site counted

1.67	1.87	1.38	1.77	2.17	3.00
1.00	1.76	3.10	3.00	1.90	1.45

Key

— No count received
* Site unknown to Survey
+ Site presumed unoccupied from casual observation
M Mist/Fog prevented observation
'Ringtails' = Females of all ages and first winter males

Dates of Counts

On the exact dates 46
On the next or previous day 10
Within one week 5
Within two weeks 3
Total 64

that he recorded none of the significant flocks of Twite or buntings normally seen. Minimum temperatures recorded at Brancaster Staithe ranged from 0 to -5 and maximum from 2 to -1 that month. The harrier roosts worst hit seemed to be at the more exposed sites on saltmarsh (A and B) and lowland heath (E), as opposed to sites with more shelter or deeper cover, such as reedbeds. Reedbed site C may have acquired birds from nearby saltmarsh site A in midwinter. Snow was not too much of a problem; although temporarily heavy in late December, only patchy cover persisted through January and February. In Broadland, it was disappointing for one observer to record no birds roosting at site N after a strong roost here the previous winter. Odd birds seen in the area during the day could have been using site J.

The most surprising incident of the watches occurred at site G on 25th November, when a fox was chased through the nature reserve site by hounds. Mercifully the huntsmen did not follow on horseback. Despite this, two ringtails did roost on a far part of the reserve.

For those following the statistical Chi Square saga started in the 1985 Report, the odds are lengthening against the low number of grey males at site B, compared to site A, being merely due to chance. For all the pairs of co-ordinated counts to date, χ^2 is now 3.774 and p only just >0.05 . Let us explore the possible causes if it is proved <0.05 next year!

Correction to survey results in 1985 Report

Please note that 'Mean number of total harriers per site counted' on the table should have read 17.2.85 4.80 (not 5.11) and 17.3.85 3.00 (not 3.17).

Acknowledgements

The data was provided by a team of observers whose names are listed amongst Contributors to the Bird Report to help preserve the anonymity of sensitive roost locations. Their work in record low temperatures is greatly appreciated. I also thank the BTO for their continued support; the project is now an official 'Trust-aided enquiry'.

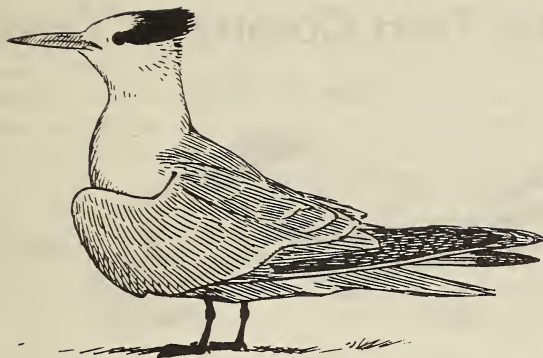
Lesser Crested Tern: New to Norfolk

S. J. M. Gantlett

On the afternoon of 9th August 1983 I was birdwatching on Blakeney Point looking for a Long-tailed Skua which had been reported in the area a few days previously. I scanned casually through a group of Sandwich Terns resting on the upper beach, and was astonished to see a large tern with a bright orange bill standing amongst them.

By sheer coincidence just 24-hours previously I had been reading the latest *British Birds* magazine (August 1983 issue) which contained a detailed article describing how an orange-billed tern in South Wales had been mis-identified as a Lesser Crested Tern when it was, in fact, a Royal Tern. The article pointed out, amongst other things, that Royal Terns could appear much smaller (and therefore much more like Lesser Crested Tern) than previously realized and depicted in the popular field guides. I was determined not to make the same mistake so I, wrongly as it turned out, announced the Blakeney bird as a Royal Tern!

I watched it for just a few minutes, obtaining reasonable views, and then hurried off to alert others. Joe Reed, the National Trust warden, kindly allowed me to use



his telephone and by evening some 40 or so birders had hastened to the site at the very tip of Blakeney Point. Fortunately the hundreds of Sandwich Tern chicks in the area had just about all fledged, so there was no problem of observers disturbing this sensitive and important breeding colony. Next morning several hundred bird-watchers arrived. Fortunately the bird didn't disappoint them, and finally it was seen in the area almost daily until 17th September.

As the bird stayed for so long it gave many observers the opportunity to study it in detail. Any doubts that I had that it might not be a Royal Tern were debated with others and, as discussions developed, we came to realize that many of the identification features in the current literature were wrong! The bird was in fact a Lesser Crested Tern, a newcomer to the British List!

I obtained the following description of the bird:

A tern very slightly larger than Sandwich Tern with a striking orange bill. At rest very similar in shape to the accompanying Sandwich Terns, and over-all just very slightly larger and heavier. In flight it was distinctly longer-winged. Bill orange with slightly paler tip, of much the same length as Sandwich but significantly thicker especially at base, dagger-like and straight. Legs blackish, much as Sandwich in length and proportion. Extensive white forehead containing only slight blackish flecking. Tiny blackish mark immediately in front of eye. Short but shaggy blackish crest normally held quite erect — distinctly more so than Sandwich, and when relaxed extending a short way only down nape. Mantle and upperwings pale grey, slightly darker than Sandwich. Tail very slightly paler grey than rest of upperparts with extreme outer edges white. Quite deep fork to tail with slightly longer streamers than Sandwich. Rump pale grey, very slightly paler again than tail. In flight upperwing showed darker grey wedge of central primaries, the outer two primaries and the inner ones being relatively pale silvery-grey. Underwing largely whitish with dusky tips to outer four primaries only. Underparts white. Normal attitude on the ground was a proud 'shoulders forward' stance displaying to Sandwich Terns, particularly to those standing about carrying sand-eels.

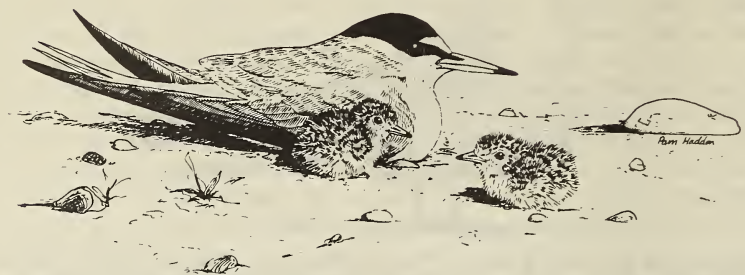
The final correct identification was certainly delayed because Lesser Crested Tern, especially the race likely to be involved in European records, is such a poorly known species and is treated misleadingly in the literature. Lesser Crested Terns occur from East Africa east to Australia with some geographical variation in appearance across their range. There is also a little-known population in coastal Libya, which apparently winters to the south and west at least as far as The Gambia in West Africa: it is these birds which are likely to be responsible for the British and European records. Interestingly, the East African Lesser Crested is now known to be rather smaller and darker than those from Libya. Since the descriptions in European field guides are based on East African birds, it is scarcely surprising that the Blakeney individual appeared rather larger and paler than expected.

The record has now been accepted by *British Birds* Rarities Committee.

Further Reading: 'The Lesser Crested Tern in the Western Mediterranean and Europe' *British Birds* 80:276-280.

The Little Tern Colony at Yarmouth

Philip Bubb (RSPB)



One of the year's greatest conservation successes was the establishment of a substantial colony of Little Terns on the North beach at Yarmouth. The colony was roped-off and wardened enabling at least 55 pairs to fledge 95 young.

The scheme commenced 30th May when 35 pairs of Little Terns were found to be nesting. This number rapidly increased to 40 pairs. Within a week (and with the approval of Great Yarmouth Borough Council) the colony had been fenced and volunteers from the local RSPB members group commenced wardening duties until I arrived as full-time warden 10th June.

The colony has only recently become established. In 1977 five pairs nested for the first time since 1945. The next attempt was by six pairs in 1982. The following summer four pairs nested and there were 17 pairs in 1984. Twenty-seven pairs fledged six young in 1985, but this limited success was only possible as the poor summer kept many people off the beach.

The beach is increasing in height because of shingle deposition. Marram grass spreads across the shingle and forms small dunes as the beach moves eastward. Highest spring tides even when backed-up by north-west winds, did not cover the nesting area. During the 1983 and 1984 seasons a pipeline was laid under the beach where the north end of the present colony has become established. This probably assisted the colony as the terns nested inside the fenced-off area of the excavations. From 1987 this pipeline will discharge industrial and sewage effluent into the sea three-quarters of a mile offshore.

Yarmouth enjoyed some of the best summer weather in Britain during 1986. For three weeks from mid-June almost every day was hot and cloudless. Between then and mid-August there were four half-days of rain and several more with light showers. A lack of heavy rain to chill eggs and young and mostly fine conditions for the adults to fish must have contributed to the high hatching and fledging rates and rapid growth of the chicks.

First eggs hatched 10th June and assuming a typical incubation period of 22 days were laid on or about 18th May. Only a few nests were visited in June; two thirds of these contained three eggs, the remainder two. Clutches laid in late June and July were of two eggs. This is typical for later nesting attempts.

First chicks flew 28th June, but the last clutches of eggs did not hatch until 25th July and these young flew 19 days later. Several pairs fledged three young.

Parents brooded newly-hatched chicks for about three days and then mostly left them unattended while they fished. If the nest was close to the fence, the chicks were moved away by the parents within hours of hatching. Other broods remained in their

original scrapes for up to three days. Each family stayed near its adopted piece of vegetation or other feature unless they were disturbed. When between five and fifteen days old many chicks were hardly ever seen because they hid in tussocks of marram — especially in bad weather or when danger threatened. When the young were nearly fledged they became more obvious, standing in the open and occasionally flapping wings. Fledging period was usually 18 to 20 days. Within two days of being capable of flight they left the nesting area for the water's edge waiting to be fed there. A week later they deserted the beach altogether.

Most of the food fed to the chicks was whitebait. Some sand eels early in the season and prawns in the evenings were also caught. Adults and later the well fledged young fished directly offshore for distances up to a mile. Quietest feeding time was mid-afternoon. Evenings were always busiest with the chicks more active than as well.

Within minutes of eggs hatching the parents began mobbing anyone near the nest when previously they had only taken wing giving alarm calls. I was only hit once, but it was very close many other times. Generally, the younger the chicks the fiercer the parents were in their defence. Early in the season a Kestrel would have over a hundred terns pursuing it, but they hardly ever actually struck it and it almost totally ignored them by mid-July. Virtually anything in or near the ternery from a Starling to a dog was mobbed. Low-flying gulls were always attacked, although they never attacked the chicks. Kittiwakes were singled out for special measures and were always mobbed even if half a mile out to sea.

A male kestrel was seen to make fourteen attempts at catching little tern chicks; nine of these were successful. Some attacks were made when the terns were distracted by people in or near the colony. If the kestrel was seen within a third of a mile of the colony it would be mobbed by up to a hundred terns. Initially it used a Sparrowhawk-like hunting technique of surprise by flying in very low over the dunes. Later it became bolder and ignored the terns, blatantly hovering over the colony and dropping on to a chick. The kestrels nested in a nearby church and their young flew 14th July. After this date the male and juvenile kestrels often hunted the dunes by the colony, but were only seen to catch juvenile Starlings and no more Little Tern chicks.

An Alsation dog caught and then dropped at least three ten-day old chicks 30th June before a well-aimed stone scared it away. Only one chick survived with an injured wing. Chicks are most vulnerable when they can only just fly and their flapping wings attract a dog's attention. One chick of this age was chased by another Alsation for well over 500 yards before it was lost in the marrams; another was killed at the water's edge by a Labrador.

Considering the popularity of Yarmouth as a holiday resort, the number of young Little Terns to reach the flying stage was indeed impressive. On the busiest days up to seventy people at any one time could be on the beach by the colony all picknicking, sunbathing, dog-walking or playing ball games. Very rarely was no-one at all anywhere near the nesting terns. The colony is only a few minutes walk for several hundred people living in houses just behind the promenade and similarly for the large static caravan park just to the north of the houses. In addition there were many day-trippers.

Marram grass is an essential feature of the beach for Little Terns on account of the chick-cover it provides. It is also rapidly spreading across the shingle and starting the succession to the dunes. In 1987 there will still be plenty of shingle for terns, but after then the possibility of 'weeding' the beach to ensure sufficient exposed shingle is pre-

sent should be considered. As at most Little Tern sites the beach formation can change with each tide. Winter storms may even destroy it, but North Yarmouth beach is likely to be suitable for Little Terns for at least several years.

White-winged Lark: A Bird New to Norfolk

Dr. J. Lines



I am, from an ornithological standpoint a creature of habit. My birding tends to confine itself to regular, usually twice weekly, visits to local patches one of which is the Sugar-beet Factory at King's Lynn. On this particularly blustery day (22nd October 1981) I had checked two of the three lagoons and was embarking on the third when I disturbed a party of ten Skylarks which are residents of the surrounding rough ground. As they took wing I casually glanced at them soon realising one bird almost resembled a Snow Bunting.

The general pallor of the bird and the strikingly white wing pattern caused this instant reaction. I then focussed field glasses on the stranger before it settled on the ground with the other Larks. I had never seen a White-winged Lark before, but I knew it could be no other species. On the ground it was easy to compare with attendant Skylarks whose size it appeared to match. However, it had a heavier, stouter bill and no crest. There was a noticeable white superciliary eye-stripe with a dark eye. The crown was a rich rufous brown fading slightly on neck and back. The primary wing-coverts were rich brown similar to the crown, the secondary coverts being less so. The scapular feathers were pale brown having dark shafts and sub-terminal patches. The chin, breast, flanks and under-tail were striking white with rufous streaking on the sides. The dark brown tail appeared somewhat shorter than in a Skylark, but had white outer tail feathers. In flight the white secondary feathers gave the striking wing pattern while the under wing-coverts could also be seen to be white.

Having identified the bird I realised it was a little known vagrant and a highly unusual occurrence. I could vaguely recall many years ago Bryan Sage telling me of a White-winged Lark in Hertfordshire in the 1950's, but could not recall any subsequent records. I knew that each Friday afternoon would see John Moyes at nearby Wisbech Sewage Farm. I consider him one of the finest of field ornithologists and mentioned my sighting to him as we counted the waders there the following day. Subsequently John found the White-winged Lark which remained at the Beet Factory until 24th October 1981.



This Dartford Warbler remained on Blakeney Point three days in May. An adult Great Crested Grebe passing breast feather to its one-day old young.





Bluethroat, a spring-time gem at Wiveton. Mediterranean Gulls are unusual inland; this bird visited the Wensum in Norwich for five days.



The record was submitted to British Birds Rarities Committee in 1982, but has only recently gained full acceptance. There are only four previous sightings: November 1869, November 1917 and August 1933 (all Sussex) and August 1955 (Herts). The White-winged Lark is found in Southern Russia and Central Asia, breeding from the lower Volga River area through Central and Northern Kazakhstan. It is found mainly in the Kirghiz Steppe, an area of dry short grass plains. The species is migratory, wintering in the Ukraine, Crimea, Caucasus, Transcaspia and Iran (*British Birds* 79: 332-335).

Mandarins in Norfolk

Moss Taylor



The status of the Mandarin in Norfolk has always been beset by the problem of escapes from wildfowl collections. It was added to the County List in 1977, along with Ruddy Duck and Ring-necked Parakeet, as a Category C species. That is one which although originally introduced to Britain, has since established a viable feral breeding population. However, it was not until 1986, that the species was added to the county list of many Norfolk birders.

At Salhouse, a pair thought to have escaped from a nearby collection, bred annually between 1965 and 1971, while a pair nested unsuccessfully at Smallburgh in 1977. During the late 1970's, the majority of sightings, of up to four birds, were in Broadland. In 1984/85, most records came from West Norfolk. However a pair did breed at Bramerton, but the outcome was unknown.

Although the owner of Park Farm, Felbrigg, recalls seeing occasional Mandarins on his small pond during the previous three or four years, it was not until November 1985 that I first saw a drake and three ducks on Felbrigg Lake, despite visiting the area regularly for several years. Between March and the end of May 1986, up to five drakes and three ducks were seen by many observers on the lake or one of several small ponds in the area. Yet it was by no means always easy to locate the birds, despite the males bright colours.

On June 23rd I watched an extremely agitated female flying amongst the trees on the west side of the lake. Proof of breeding was obtained when a female with six newly-hatched ducklings appeared on the small pond, with overhanging rhododendrons, at Park Farm. Unfortunately, three of the young disappeared within a day or two, as did the remaining ducklings before they had reached the free-flying stage.

The exact location of the nest site was unknown, although a pair had earlier shown considerable interest in a hollow tree near Park Farm pond, only to be evicted by Stock Doves. During the course of the summer, up to three pairs of Mandarins were seen together on this small pond and a total of eleven birds was probably present in the area on one date.

After the breeding season, the Mandarins dispersed and were reported from several nearby localities, but remained elusive at Felbrigg. However, by mid-December three males and five females were once again present on the lake.

It remains to be seen whether a viable breeding population will become established at Felbrigg. There seems little doubt, from the timidity of the birds, that they are genuine wild Mandarins, or at least as wild as can be found in Britain. The species should now be added to the list of birds which has bred in the wild in Norfolk.

Woodlarks in Breckland

C. G. R. Bowden & R. A. Hoblyn



The Woodlark, traditionally a heathland bird, is declining in Britain with an estimated 210-230 pairs remaining in the country by 1983. The species breeds in two areas in Suffolk: the coastal belt and the Brecks, which when combined with the Norfolk Brecks constitutes over 30% of the British population.

The Breckland population is larger than that on the coast and has now been surveyed sixteen years by R. A. Hoblyn. The results have shown a steady decline of the heathland birds (for the first time none bred on heathland in 1986) and a gradual increase in numbers on Forestry Commission clearfells (i.e. the young plantations of Thetford Forest). The reasons for this change are not clear and we are endeavouring to ascertain why clearfells are attractive to Woodlarks. Most forestry management practices are beneficial to Woodlarks, but the Forestry Commission — which has provided funding for the project — is willing to take into consideration management recommendations resulting from the enquiry.

Younger plantations, with greater bare areas are selected by Woodlarks and the age structure of Thetford Forest is such that more clearfells are being created in the 1980s than ever before. This means that potential habitat, which may be a limiting factor for the population, has increased. Although numbers have improved to 48 singing males in 1986 (26 in Norfolk) there are still many clearfells without Woodlarks. In fact the increase has not kept up with the enlargement of habitat. Full results will be published when the enquiry is completed in 1987.

The Suffolk coastal population appears to be resident, but the Breck birds 'disappear' between mid-October and February. Where they go is a mystery. All other British populations are resident and it may be that the Brecks birds join coastal flocks. As part of the study, 75 Woodlarks have been colour-ringed (mostly as nestlings) with individual combinations of three colours and a BTO ring. Observers fortunate enough to see Woodlarks are requested to check the legs carefully. Sightings of unringed birds would also be valuable and we should be grateful for any records of ringed or un-ringed Woodlarks particularly during the winter period. Positioning of the rings and the leg upon which they appear is crucial for recognition, but any colour-ringed bird is undoubtedly from the Brecks.

There are many possible wintering areas. Southern England or even southern France, Spain or Portugal are distinct possibilities. This is inevitably pure speculation, but some north European Woodlark populations migrate similar distances to Mediterranean countries. A ringing recovery or colour-ring reading may well solve the mystery! All sightings please to Chris Bowden, Research Dept. RSPB, The Lodge, Sandy SG19 2DL.

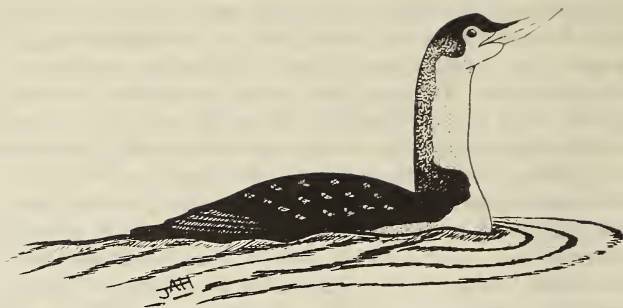
Further reading: Woodlarks in Britain 1968-1983 by H. P. Sitters (*British Birds* 79, 105-116).

White-billed Diver: A Bird New to Norfolk

J. A. Hazell

The White-billed Diver was added to the county list on 29th September 1985 when an adult in non-breeding plumage was identified off-shore near Halfway House between Cley and Blakeney Point.

Having abandoned a fruitless early morning search for a reported Lanceolated Warbler beyond Cley Coastguard lookout C. J. Hazell and I continued birding as we walked towards the Point. Nearing Halfway House we noticed three observers (including P. Whiteman) studying a small party of divers some 70 yards off the tide-line. I first looked at a summer plumaged Red-throated, then two non-breeding plumaged Black-throated. C. J. Hazell then drew my attention to another Black-throated in splendid summer dress. As I was admiring this last bird he excitedly exclaimed "Look at the large diver to its right — it has an all yellowish-white bill". All eyes quickly concentrated on this stranger. Agreement was soon reached as to identity: White-billed Diver! Within minutes over 150 observers had assembled to view the vagrant. As a result the group of divers rapidly drifted further out to sea. Suddenly all took flight, the White-billed and two of the Black-throated heading together towards us. When some 200 yards away all turned westward before finally swinging eastward and disappearing beyond the Coastguard lookout.



Description: A very large diver, dwarfing accompanying Black-throated and easily a third again their size. Seemed larger than any Great Northern in either summer or winter plumage which I have seen on more than a hundred occasions during the past sixteen years. This feature was noted on my only previous sighting of a White-billed (an adult in winter plumage in Buckie harbour 2nd April 1972) which I watched after observing 33 Great Northerns two days previously. Most obvious feature was the large bill which appeared longer than in a Great Northern. Initially it appeared all pale yellowish-white. However, on closer inspection it was translucent white towards the tip, more creamy white behind this and yellow-white towards the base especially on the lower mandible. It was very deep at the base and the bottom profile line of the lower mandible paralleled the culmen for approximately a third of its length before becoming acutely angled to the bill tip. The upper mandible was very straight in its culmen line with just a slight downward curve — barely perceptible — towards the tip. The culmen was similarly coloured as the rest of the bill except for a small darkish area locally at its base in the region of the nasal grooves which blended into the blacker feathering of the forehead. The bill was carried pointing slightly upwards (like a Red-throated) accentuating the tip-tilted shape. There was no apparent dark gape line or cutting edge as shown by pale-billed Great Northerns.

Upperparts: Fore-crown and crown dark brown; nape and hind neck a much paler brownish-grey and contrasting with the almost (except for a few pale tips to some scapulars and coverts) completely dark black-brown back and flight feathers. Strong blackish-brown patches came well round on to the lower neck and upper breast. Sides of head dirty white, completely above the eye and also along the sides of the neck. Prominent ear-covert patch similarly coloured as nape and joining hind neck. Loreal area whitish.

Underparts: Chin and front of neck very white and breast whitish. *Softparts:* Eye appeared dark and isolated in the side of the face by the dirty white area already described.

In flight the large size and slow wing-beats prompted such comments as goose-like. The bill was still carried uptilted.

A High Arctic bird, the White-billed Diver breeds above the tree-line from Murmansk and Novaya Zemlya eastward across Arctic shores of the USSR to Siberia and North America. Autumn dispersal following advancing ice begins in August/September, the western Russian birds wintering mainly off Norway. The majority of British records have been of adults. Interestingly, of the hundred recorded all but three have been since 1946. This first Norfolk occurrence is only the fifth record south of Yorkshire. J. T. R. Sharrock writes that White-billed Diver reports of late winter arrivals from January onwards in the fifteen-year period to 1972 suggest a small British population originating from a mid-winter movement across the North Sea from Norwegian gatherings. Since then increasing spring records in Shetland have led to the occasional bird summering there. This pattern suggests the late September Norfolk bird (at a time of year when observations are unusual) may well have originated in Shetland waters as opposed to an extremely early departure from the High Arctic.

Details of 1986 White-billed Diver observations appear on page 431.

Fulmar Population Changes

Clive Slater

The rapid colonisation of the coastline of Britain and Ireland by Fulmars during the past century has been well documented and Fulmars are one of the few seabirds for which a long-term population study has been made. Nevertheless, relatively little is known of the causes of changes in population numbers. In Norfolk, Fulmars have bred along coastal cliffs since 1947 and their probable origins and movements have been discussed in the 1984 NBR. The present account describes the population changes of Fulmars breeding in Norfolk as indicated by counts of nestlings during the period 1947-1985 and discusses what is known of the factors that may have influenced local changes.

Norfolk's Fulmars can be considered as two populations having colonised different habitats, ie the mainly clay, sand and shingle cliffs between Weybourne and Happisburgh and the mainly carstone, limestone and chalk cliffs at Hunstanton. These cliff areas are subject to erosion at different rates. The majority of breeding activity between Weybourne and Happisburgh has taken place in the 11km from Weybourne to Cromer and at Hunstanton the cliffs are only about 1.5km long.

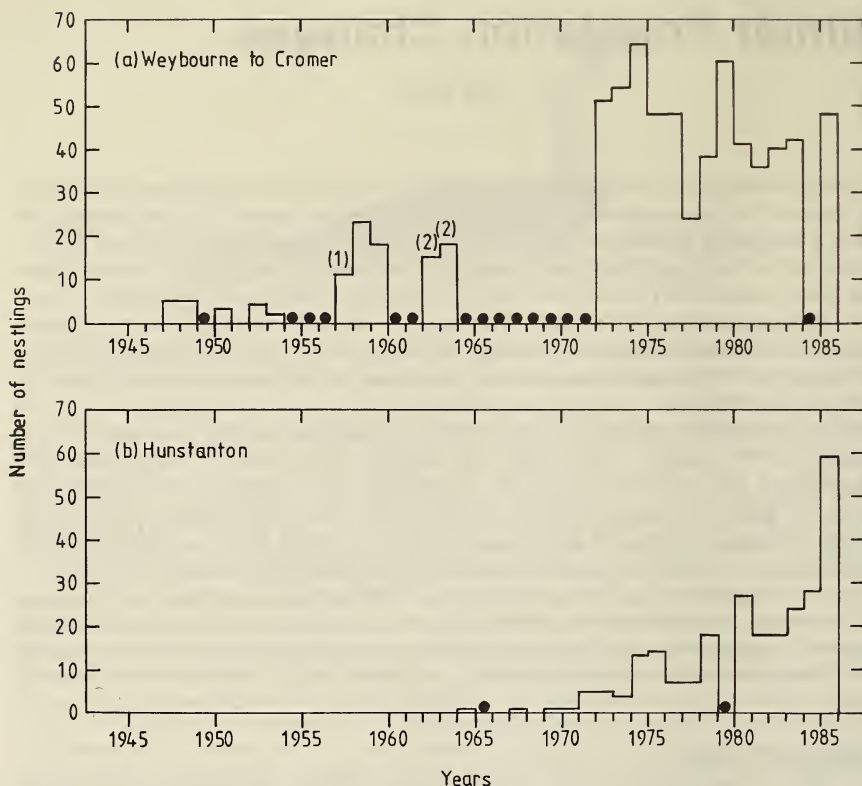
The breeding level of a Fulmar population is difficult to assess accurately, but one useful method is an annual count of nestlings. Several observers have made beach counts of nestlings over the years at both habitats and the Figure shows the results of these annual counts derived from records published in the NBR and surveys of all sites in 1985.

Population Changes

The Figure shows that although nestling counts between Weybourne and Cromer have not been made in every year, the overall trend was probably one of increase up to 1974 followed by a decline to 1985. However, marked year-to-year fluctuations have occurred (ranging from -50% to +58%) and the 1978 and 1979 increases show large deviations from the underlying trend. The average increase for this population from 1947-1985 is about 6% per annum. At Hunstanton there are only two years in which nestling numbers are not known and the overall trend is again one of increase, but with fluctuations. Successive increases between 1982 and 1985 indicate that this population is still rising and the average increase from 1964-1985 is about 21% per annum.

The first Fulmars to colonise Norfolk preferred the Weybourne to Cromer cliffs, but the relationship between this and the Hunstanton population is not clear. Comparing the nestling numbers per annum at both populations for the years 1972-1985 (excluding 1979 and 1984) shows no significant correlation suggesting that the two populations were changing independently in terms of nestling numbers over this period.

The distribution of nestling numbers in six areas between Weybourne and Cromer during 1972-1985 has varied. Three areas, ie Old Hythe to Sheringham, Sheringham to West Runton and West Runton to East Runton are in decline, whereas Spallows Gap to Old Hythe and East Runton to Cromer are relatively stable overall. The latter area is the most consistently successful and has contributed an average 31% of nestlings per annum to the total population. Weybourne to Spallows Gap is always low in numbers. There is some evidence to suggest that changes in nestling numbers in these



Number of Fulmar nestlings at (a) Weybourne to Cromer and (b) Hunstanton, Norfolk 1947-1985.
 (1) Weybourne to East Runton only. (2) Sheringham to Cromer only.
 ● Numbers not known for that year.

six areas may be similar in some years. A comparison of the highest recorded year of 1974 with the lowest year of 1977 reveals that all areas were reduced in 1977 and that four areas were reduced by a factor of at least two. This raises the possibility that the factor(s) producing changes in 1977 affected the population as a whole.

The population changes described above are broadly similar to those resulting from a detailed long-term study of breeding Fulmars on the uninhabited island of Eynhallow, Orkney. Here, numbers increased from 1950 to 1970 and subsequently declined to 1977 with substantial deviations from the underlying trend occurring over several years. However, changes in nest-site numbers in different parts of the island were not found to be synchronised and the average increase in the population for 1950-1977 was only about 4% per annum.

Causes of Change

Many factors have been proposed as potentially influencing the regulation of seabird populations, but little is known of their relative importance for most species. In the case of Fulmars, it was concluded that the annual recruitment of new breeders was

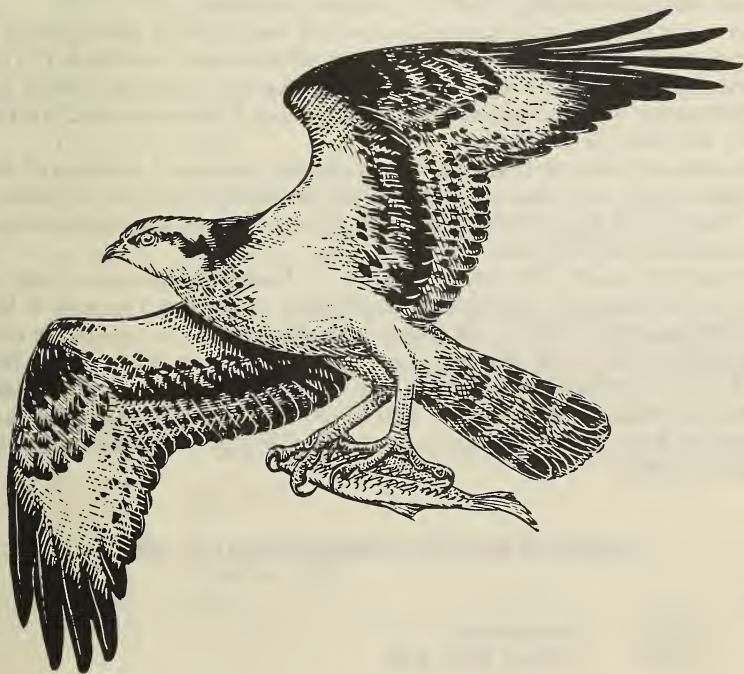
the main factor in determining changes in breeding numbers from year to year at Eynhallow. Regarding the Norfolk Fulmar population, the role of several local factors can be considered.

Norfolk's cliffs are soft and subject to erosion at different rates in different areas as cliff retreat is essentially an intermittent process. Average retreat rates are highest between Overstrand and Happisburgh and this may be one factor contributing to this area being less favoured by Fulmars. The effects of cliff falls may be to lower the availability of previous nest sites in some years although new sites may be created at the same time. It seems unlikely that the availability of nest-sites between Weybourne and Cromer differed significantly in the years 1947-1974 and 1975-1985 to account for population changes.

In an attempt to encourage breeding, ledges were cut in the cliff-face between Weybourne and Sheringham in the late 1940's. In contrast there are also records of human disturbance in these early years when eggs were stolen or stoned and some birds wounded or killed. Fortunately this did not deter the Fulmars and there are no reports of similar disturbance in recent years at this or the Hunstanton area. Adults and nestlings have been ringed over many years between Weybourne and Cromer, but whether this has had any effect on breeding is not known.

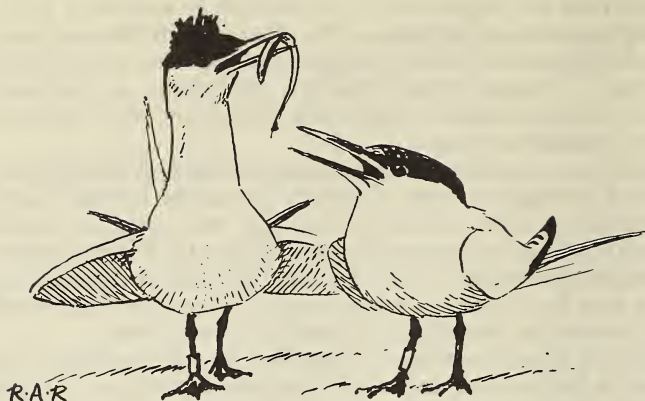
No incidents of natural predation at nest sites of eggs, nestlings or adults have been recorded at Norfolk sites and in 1985 only one nestling was found dead at the base of a cliff.

In conclusion, the limited evidence available suggests that cliff erosion, human disturbance and natural predation at nest sites are not major causes of the observed population changes in Norfolk, but the role of weather, food availability and other factors are not known. I am grateful to J. C. Marsham and H. Ramsay for allowing me to use unpublished data.



Ringling Report

Moss Taylor



1986 will be remembered by Norfolk ringers as the year in which autumn migration was virtually non-existent. At none of the coastal ringing sites were common migrants recorded in normal numbers. As an example of an early autumn migrant, only one Pied Flycatcher was ringed in the entire county. The late autumn was no better and the county ringing total for Goldcrest was a mere 27!

However, for the two county target species, the ringing totals held up, with 2,000 Greenfinches and 800 Reed Warblers. Other significant totals were Blue Tit (1,000), Blackbird (700) and Brambling (630). Amongst the less commonly ringed species were 2 Wrynecks, 14 Nightingales, Cetti's, Barred and 2 Yellow-browed Warblers, 2 Firecrests and Red-backed Shrike.

On the recovery side, there was an unprecedented number of sightings of colour-ringed Brent Geese, a colour-dyed Ruff from Senegal, Turnstone to Canada and Yellow Wagtail and Reed Warbler to North Africa. Perhaps most interesting of all was a Dunnock from Fair Isle.

As in previous years, the annual meeting of Norfolk ringers was held at the Phoenix Hotel, Dereham. In future it will take place on the first Thursday in March, commencing at about 7.00pm. All ringers operating within the county are invited.

The symbols used in the recovery section are explained in NBR 1983 p.367. As always, I am most grateful to all ringers who have submitted their ringing totals and recoveries for inclusion in this report, also to Dr. N. Branson for extracting and interpreting the Wash wader recoveries and to Bart Ebginge for details of the colour-ringed Brent Geese.

NORFOLK RECOVERIES NOTIFIED IN 1986

Fulmar:

1	9.8.86	Sheringham
xL	31.8.86	Horsey 36km ESE

Heron: The second successive year that a Scandinavian-ringed Heron has been found in West Norfolk. The bird found in Hertfordshire 15 years after being ringed was long dead. The oldest BTO-ringed Heron was recovered in it's 19th year.

l	12.5.71	Wickhampton
xL	9.5.86	Brocket Park, Hertfordshire 151km SW
l	31.5.85	Nydal, Rogaland, Norway
x	15.1.86	West Rudham 775km SSW

Mute Swan: The female of the pair that nearly halted the building of the Beccles bypass in 1980, when it nested in the middle of the bypass route.

8F	25.5.78	Alder Carr
xF	27.1.86	Beccles

White-fronted Goose: This species rarely features in the NBR — the last recovery in 1977 also coming from The Netherlands.

4M	3.12.73	Eemdijk, Netherlands
+	24.12.85	Wells 315km WNW

Brent Goose: The great value of an international colour-ringing programme is well demonstrated by this small selection of the many Dark-bellied Brent Goose recoveries reported during the year. This race breeds on the Russian tundras, from the Taymyr peninsula eastwards, migrating through the Baltic and Germany, to winter mainly in the Netherlands, south-east England and west France. The selected recoveries show the fidelity to feeding areas while on spring and autumn passage, and to a lesser extent while in England. Depending on the severity of the winter, many do not arrive in England until after mid-December. Spring departure from the Netherlands is delayed until mid-May. For details of reporting colour-ringed Brent Geese, see NBR 1985 p.266.

6F	31.3.85	Norderheverkoog-Vorland, S-Holstein, Germany
vv	26.2.86	Cley
vv	28.3.86	Norderheverkoog-Vorland, S-Holstein, Germany
5M	29.4.83	Oude Beweide Kwelder, Schiermonnikoog, Netherlands
vv	27.12.85	Banckspolder-midden, Schiermonnikoog, Netherlands
vv	15.1.86	Cley
vv	1.4.86	Hoek v/d Band bij Anjum, Netherlands
vv	26.5.86	Oude Beweide Kwelder, Schiermonnikoog, Netherlands
6M	10.12.83	polder Wassenaar/'t Vissie, Texel, Netherlands
vv	26.10.85	Roggesloot-oost, Texel
vv	14.1.86	Cley
vv	19.3.86	Zeeburg-noord, Eendrachtspolder, Texel, Netherlands
vv	26.5.86	Zeeburg-midden, Eendrachtspolder, Texel, Netherlands
6F	25.5.84	Tweede Slenk, Boschplaat, Terschelling, Netherlands
vv	7.11.85	Leigh Marsh, Essex
vv	18.3.86	Cley
vv	22.5.86	Tweede Duintjes, Boschplaat, Terschelling, Netherlands
5F	26.2.74	Salthouse
vv	26.2.86	Cley
6F	30.4.83	Foehr-Vorland-Mitte, S-Holstein, Germany
vv	27.2.86	Mundon, Essex
vv	18.3.86	Wells

Shelduck: The majority of foreign-ringed Shelduck come from Germany, this is only the second French-ringed one to be recovered in Britain.

2	24.12.76	The Somme, France
x	11.4.86	Breydon Water

Oystercatcher: The two recoveries given are of elderly birds recovered in the main breeding area for Oystercatchers from the Wash.

6	14.4.68	Snettisham
v	29.9.84	Wolferton
x	21.6.86	Hordaland, Norway
4	19.7.70	Snettisham
x	7.9.86	Sogn & Fjordane, Norway

Ringed Plover: Migrations of Ringed Plover occurring in Norfolk are still not very well understood. This bird may have been on return passage from Greenland. (Ringed Plover breeding in west Scotland are not thought to occur at the Wash, but who knows?).

4	26.8.80	Terrington
v	14.8.86	South Uist, Western Isles

Grey Plover: An example of longevity.

4	13.12.69	Heacham
x	22.2.86	Holme

Knot: These controls are a small sample of the results of an international enquiry into the spring migration of Knot. The results suggest for the first time that there is a return passage route along the north-west coast of Europe for birds of the population which is thought to breed in Greenland.

6	19.2.84	Heacham
v	22.4.86	North Friesian Islands, West Germany
6	19.2.84	Heacham
v	11.5.86	Balsfjord, Troms, Norway

Dunlin: Another example of longevity and two of the many examples of Dunlin on return passage through the Baltic.

6	13.7.75	Terrington Marsh
vB	17.4.85	Ashgill Head, Durham 275km NW
4	2.9.81	Terrington
v	14.7.86	Ottenby, Oland, Sweden
6	21.1.84	Snettisham
v	24.7.86	Vistula Mouth, Poland

Ruff: Compare the first recovery of a Ruff on autumn passage in Spain, with the more easterly one on spring passage in Italy, reported in the NBR 1983 p.370. The second recovery of a bird with yellow dye on the underparts, had been marked by a team of German ringers operating in the species wintering area in West Africa.

3F	6.9.85	Cantley
+	8.7.86	Sevilla, Spain 1806km SSW
4	25.2.85	North Senegal
vv	11.5.85	Hardley Flood

Bar-tailed Godwit: Presumably a bird on passage to the Siberian breeding area.

4	19.8.85	Terrington
v	22.4.86	North Friesian Islands, West Germany

Redshank: The first is an example of Scottish-breeding Redshank which occur at the Wash. The other is only the third British-ringed Redshank to be found in Spain, compared with six in Portugal.

6	9.2.85	Snettisham
x	27.6.86	Thurso, Highland Region
4	2.9.81	Terrington Marsh
v	11.4.85	Banaries, Huesca, Spain 1,185km S

Turnstone: An example of a bird belonging to the population breeding in Greenland/NE Canada. (The other population of Turnstone occurring in Norfolk breeds in Finland and neighbouring Baltic countries).

6	7.3.81	Heacham
v	2.6.86	Alert, Ellesmere Island, Canada

Black-headed Gull: The many foreign recoveries followed the usual pattern, full details being given of the most easterly movement reported during the year. Over 300 pulli were ringed at Cantley and these should provide some interesting recoveries in the next few years. Previously most of the Black-headed Gulls ringed in Norfolk have been caught as adults during the winter, which appear to be almost exclusively birds of the Dutch, Fenno-Scandinavian and Baltic breeding populations.

5	3.1.79	Norwich
v	6.5.85	Kingisepp, Leningrad, USSR 1,835km ENE
3	31.12.85	Norwich
x	29.3.86	Rutland Water, Leicestershire 128km W
5	10.1.82	Norwich
x	13.4.86	Great Wakering, Essex 121km SSW
1	26.5.86	Cantley
x	21.7.86	St Helens, Lancashire 300km WNW

Herring Gull: Fidelity to wintering areas has previously been demonstrated for Black-headed Gulls, but this is the first time that this has been shown for Herring Gulls in Norfolk.

8	15.1.77	Ketteringham
x	27.12.86	Eaton 5km NE
8	8.2.76	Ketteringham
x	19.1.87	Stiffkey 42km NNW

Common Tern: The second recovery provides evidence of recruitment to the Norfolk breeding colonies from outside the county.

1	20.6.86	Hardley Flood
x	17.8.86	Breydon Water 12km ENE (botulism)
1	16.6.82	Rye Meads, Hertfordshire
x	20.6.86	Hardley Flood 134km NE

Swallow: Both recoveries demonstrate a south-easterly trend as the birds begin their autumn migration.

3J	20.7.86	Blackmoorfoot, West Yorkshire
v	29.8.86	Lopham Fen 236km SE
3	7.9.86	Wingate, Durham
v	19.9.86	Cantley 206km SE

Yellow Wagtail: There have been very few Norfolk-ringed Yellow Wagtail recoveries abroad and this is the first from outside Europe.

2	22.8.81	Stow Bridge, Downham Market
x	18.3.86	Mahbes, Western Sahara 2,955km SSW

Dunnock: Ringers on the north Norfolk coast have long suspected that Continental Dunnocks move through the area in autumn and this recovery was almost certainly just such a bird.

3	17.9.84	Fair Isle, Shetland
xF	15.2.85	West Runton 755km SSE

Robin:

4	10.2.85	Stoke Holy Cross
xF	25.3.86	Bungay, Suffolk 20km SE

Blackbird: Clearly a Continental, probably Scandinavian, bird on return spring passage to its breeding area.

5M	16.3.86	Kingsworthy, Winchester, Hampshire
v	26.3.86	Sheringham 269km NE

Song Thrush: This bird may well have been part of a cold weather movement at the time of the bitter weather at the end of January/early February 1986.

4	22.10.83	Bacton
x	17.2.86	Roscrea, Tipperary, Eire 620km SW

Reed Warbler: In addition to the recoveries given, two ringed at Cantley in 1981, as breeding adults, were controlled there in 1986.

4	19.7.86	Cantley
v	9.8.86	Brabant, Belgium 292km SE
4	31.7.84	Earlham
x	14.10.86	Agadir, Morocco 2,616km SSW
3M	7.9.85	Lower Stoke, Rochester, Kent
v	13.6.86	Middle Fen, South Lopham 107km NNE

Whitethroat: Most British-bred Whitethroat recoveries have been in Portugal in autumn, comparatively few have been found in Iberia in spring.

3J	9.8.83	Sheringham
xF	15.5.85	Alcazar, Ciudad Real, Spain 1,542km SSW

Garden Warbler: There has been only one previous foreign-ringed Garden Warbler in Norfolk: from Heligoland in 1978.

3	28.8.85	Den Haan, West-Vlaanderen, Belgium
v	7.9.85	Waxham 192km NNW

Goldcrest: Onward movement of a bird ringed on passage.

3M	1.10.85	Sheringham
xF	28.12.85	Bishops Stortford, Hertfordshire 137km SSW

Long-tailed Tit:

2	2.11.83	Happisburgh
xF	18.5.86	Impington, Cambridgeshire 117km SW

Blue Tit:

6	24.3.85	Sprowston
xF	15.3.86	Gresham 34km NNW
3J	2.9.80	Sheringham
x	8.6.86	Corton, Suffolk 59km SE

Starling: Note the amazing coincidence of two Starlings ringed on the same day, in the same Lithuanian locality and recovered in west Norfolk.

3F	29.10.83	Happisburgh
x	10.1.85	Whitesands, Dyfed, Wales 478km WSW
2	21.7.85	Ventes Ragas, Silute, Lithuania, USSR
x	15.11.85	Necton 1,367km W
2	21.7.85	Ventes Ragas, Silute, Lithuania, USSR
x	27.1.86	Grimston 1,377km W
6M	10.2.85	Stoke Holy Cross
x	29.1.86	Maryport, Cumbria 395km NW

Chaffinch: Presumably a Scandinavian breeding bird, controlled at Gibraltar Point, on its return to winter quarters.

5F	17.3.85	Sheringham
v	14.9.86	Gibraltar Point, Lincolnshire 60km WNW

Greenfinch: This species, the subject of a special study by Norfolk ringers, has resulted in an increased number of recoveries. Those given suggest a southerly movement in spring and early summer, with a return movement northwards by the end of the year.

4F	14.4.84	Stoke Holy Cross
v	6.4.86	Little Gaddesden, Hertfordshire 151km WSW
6M	30.3.86	Sheringham
xF	19.4.86	Enfield, Greater London 164km SSW
2	8.2.86	Pentney
x	2.6.86	Thetford 26km SSE
6M	25.3.86	Sheringham
x	6.8.86	Bawdeswell 25km SSW
2	1.2.86	East Winch
x	6.9.86	Pulham St Mary 61km SE
6F	25.3.86	Sheringham
v	14.12.86	Windlesham, Surrey 217km SW
4M	29.12.85	East Winch
v	27.12.86	Sheringham 54km ENE
5M	12.5.86	Tangham, Woodbridge, Suffolk
v	5.11.86	Sheringham 98km N
4	8.2.86	Landguard Point, Suffolk
v	12.12.86	Sheringham 115km N
5F	21.4.86	Landguard Point, Suffolk
v	16.12.86	Sheringham 115km N

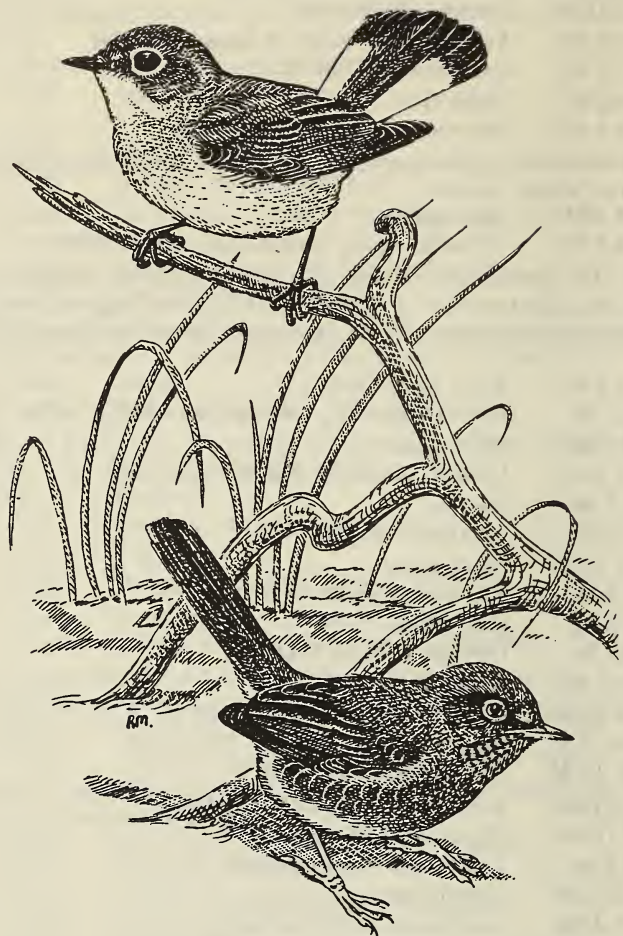
Siskin: During the first few months of 1986, exceptional numbers of Siskins visited gardens in many parts of England. No pattern of movement has yet emerged.

2	3.4.82	Swaffham Heath
x	16.3.86	Drachten, Friesland, Netherlands 371km E
5F	13.4.86	Sheringham
v	26.4.86	Swarland, Northumberland 326km NW
5M	4.2.86	Hindley, Greater Manchester
v	28.3.86	Sheringham 260km ESE

Reed Bunting:

3F	27.10.82	Farlington Marsh, Hampshire
v	27.10.85	Cantley 260km NE

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 1986. Attention is drawn to the abundance of Migration observations appearing in the quarterly bulletins of the newly formed Cley Bird Club and also featuring in NOAs 1986 Annual Report where the coastal accounts extend from The Wash to Breydon Water. In addition NARVOS Report for 1986 contains considerable detail regarding distribution in west Norfolk.

The order used is that of K. H. Voous (1977) List of Recent Holarctic Bird Species. Observations refer to 1986, 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 24th and from Aug 30th. Peak counts 140 Paston March 14th and 270 Cromer March 1st. Unusual series of summer observations including Yarmouth July 12th, Horsey June 7th, Paston June 21st, Weybourne June 2nd and Blakeney Point June 1st-8th. Inland birds at Hickling Feb 16th, Surlingham March 7th and 12th, Blickling Lake March 28th-30th, Broome GP March 19th-24th and Shingham where alighted on road Jan 25th.

Black-throated Diver: Over 100 coastal reports mainly between Cley and Hunstanton up to May 6th and from Sept 9th. Unusual June sightings at Blakeney Point on 1st and at Cley on 2nd (2 birds). Largest numbers off Cley: 4 April 6th, 5 Oct 26th and Nov 2nd-8th with 4 Nov 15th-23rd. Inland: Relief Channel Saddlebow Feb 23rd.

Great Northern Diver: Thirty-nine records received of ones and twos from North coast (Paston to Hunstanton) up to June 1st and from Sept 14th.

White-billed Diver: 1985: Watch-house Blakeney Point adult Sept 29th (CJH JAH); an addition to the County List. See page 419.

1986: Blakeney Point, one long dead at edge of ternery end July. Judged by state of moult to have died Feb possibly following oiling. Remains deposited at Norwich Castle Museum (BG MPT). Cley Coastguards immature Oct 4th for ten minutes only (DH GED MF *et al*). Cley Coastguards same or another immature Oct 17th (MJE) soon drifted westwards and later seen off Blakeney Point (GED SCJ NR AV).

Little Grebe: Winter totals include 17 Heigham Sounds Feb 10th and 37 Snettisham Pits Nov 16th. Unusual record of 7 together offshore Sheringham Nov 14th. One exhausted on Amoco Gas platform 49-18B 55 miles NE of Yarmouth brought ashore by helicopter and released into River Bure Nov 7th.

Great Crested Grebe: Coastal assemblies included total of 49 west Blakeney Point Oct 26th and 40 Hunstanton Oct 11th and Nov 20th.

Red-necked Grebe: Increased coastal records and over 200 observations with peaks in March and again in Oct/Nov including 6 Blakeney Point March 2nd, 10 west Cley Oct 26th and 8 west Nov 8th. Noted to early April and from Aug 9th with one at Holme July 20th. Inland occurrences: Breydon Nov 9th, Brundall Feb 26th, Bure at 'Stracey Arms' Feb 23rd-March 3rd, Martham Broad Feb 7th-9th and Pentney GP Oct 25th.

Slavonian Grebe: Unusual total of 33 west Blakeney Point Oct 26th during 7½ hour watch; a movement which also included 10 Red-necked and 49 Great Crested Grebes. Expected late autumn influx into Holkham Bay where first Sept 28th increasing to 3 Oct 21st and to peak of 13 on 27th; 10 remained on 15th when a Great Black-backed Gull took one and swallowed it whole. Last 2 lingered until Dec 13th.

Elsewhere up to 6 on many dates Oct/Nov between Paston and Hunstanton. Three East Coast observations: Horsey Feb 9th and Waxham Sept 28th and Oct 5th. Broad: Horsey Mere Feb 9th and Hickling Feb 9th and Nov 6th.

Black-necked Grebe: More than in previous years with an exceptional influx from late Nov when 5 west Cley Nov 21st with 3 on 29th and 7 in Blakeney Pit from end Nov increasing to 10 Dec 13th and with 7 remaining till year end. Other coastal records: Horsey Oct 19th, Paston Dec 20th, Blakeney Point Nov 23rd and Dec 7th, Holkham Nov 22nd-30th, Wells harbour 1-2 Dec 24th-28th and Holme 3 March 31st. No inland sightings.

Fulmar: Forty breeding pairs Weybourne to Sheringham. Hunstanton cliffs had 41 sites occupied Feb 28th with 29 young counted Aug 30th. First returned there Oct 20th and 50 pairs by early Dec.

Movements included 9 blue phase east at Sheringham Jan 3rd, 500 west Cley Sept



9th and an exceptional 2,500 Hunstanton Sept 16th.

Inland: Dereham April 10th, 2 Wootton Marsh May 29th, Weeting June 6th and Ringstead Downs June 8th.

Cory's Shearwater: Three records: Cley June 6th, Hunstanton Sept 3rd and Holme Sept 16th.

Sooty Shearwater: Impressive movement Sept 3rd during gale-force northerly winds with 29 west at Paston, 125 west Cley in 5½ hours and 150 west Blakeney Point. Other records included Winterton 3 Aug 25th, Horsey Sept 13th, Waxham 3 Sept 3rd, Sept 14th and Oct 26th, Paston Oct 26th, Sheringham 2 Aug 30th and 6 Sept 3rd, Salthouse 10 Sept 3rd, Cley 2 Aug 24th, 3 Sept 8th, Oct 8th and Dec 23rd, Blakeney Point Nov 1st, Holkham Sept 8th, Holme 10 between Sept 11th and 21st, Hunstanton Sept 3rd, 2 Sept 8th and Sept 16th and Snettisham 2 Aug 2nd.

Manx Shearwater: Unusual Jan record: Sheringham on 3rd. None in spring, but early June movement peaked on 5th when Blakeney Point 32 and Hunstanton 44. Small autumn movements North/East coasts Aug to first week Nov except Sept 3rd when northerly gale produced 220 off Cley.

Four Balearic race Hunstanton Sept 9th.

Storm Petrel: Snettisham Sept 5th (JL).

Leach's Petrel: Following gale-force north westerlies 15 occurrences: Paston Sept 14th; Cley 2 Sept 3rd, Sept 7th, 5 west Sept 8th, Sept 9th, Sept 14th and 23rd also Nov 2nd; Scolt Head Sept 10th and Hunstanton Nov 2nd.

Gannet: Peak movements: Hunstanton 265 Sept 14th with 120 Oct 26th when 400 east off Cley and 368 off Paston. Wolferton: 3 immatures flying inland in thick fog Oct 23rd.

Cormorant: B.T.O. survey results revealed a total of 11 roosting sites in 1985/6 winter with county totals of 512 Nov 1985, 470 Jan 1986 and 415 March 1986. Largest roosts were at Ranworth in alders (300 Nov 1985, 240 Jan and 190 March) and at Welney on power lines (65 Nov 1985, 133 Jan 1986 and 121 March 1986).

Shag: Ones, twos and threes at following localities: Blakeney Point, Cley, Drymere (killed by car), Horsey Gap, Lynn Point, Marham, Norwich (Thorpe Green), Paston, Pentney GP, Sheringham and Wells. Recorded to June 25th and from Aug 31st.

Bittern: In Broadland 4 regular boomers. North coast: 5 boomers at 4 sites. Winter records from Strumpshaw, How Hill, Flegg Broads (3), Barton Turf (dead), Sparham, Lenwade (Bridge Lake), West Acre, Pensthorpe Hall and Snettisham.

Cattle Egret: Horstead Oct 30th (TP CD) and Dilham Oct 31st to Nov 2nd (DRC). At both localities feeding in association with Highland cattle, hardly an abundant breed locally. Sixth county record.

Little Egret: West Acre May 22nd/23rd (JBK PV) and Breydon May 27th/28th (PRA SR). Additional 1985: Holme July 24th (VE). Twenty-three previous county occurrences.

Great White Egret: Titchwell June 23rd (MJK *et al.*). Fourth county record.

Grey Heron: Heronry details include Bawburgh 3 nests, Burgh Castle 2, Fleggburgh Common 2, Buckenham Carrs 9, Didlington 4, Fritton 5, Hilgay 34, Islington 79, North Elmham 9, Narford 4, Old Hunstanton 7, Potter Heigham (Heigham Sounds) 11, Ranworth 3, Sparham 16, Sturston Carr 7, Shadwell 3, Snettisham 13 and Wiveton Hall 2/3.

Additional 1985 information now available for heronries at Bawburgh (3), Quidenham (4) and Sparham (15) making a 1985 county total of 197 breeding pairs.

White Stork: Hilborough May 17th-19th (ACC) and Ditchingham Dam July 26th (KB CM).

Glossy Ibis: 1985: Horsey Mere May 15th (NCM *et al.*).

Spoonbill: Breydon May 31st, July 6th to 12th and July 20th to 24th. Hickling April 30th, May 1st/2nd, May 9th-11th and July 21st-23rd. Horsey June 5th. Cromer 6 east May 11th. Cley 1-3 May 1st-18th and 2 Aug 10th. Holkham 2 west May 13th. Titchwell up to 4 May 13th to June 2nd, July 16th-20th and Aug 16th/17th. Holme May 20th, May 30th/31st and 2 Aug 10th. Heacham May 30th.

Mute Swan: Largest flock: 150 West Lynn Dec 29th.

Bewick's Swan: Recorded to May 17th and from Oct 18th, but main return not until Christmas. Largest numbers in Fens where total Ouse Washes counts of 4,700 Jan, 2,429 Feb, 1,918 March, 558 Nov and 1,390 Dec. Poor breeding success and only 5% juveniles. Two injured birds summered at Welney.

Elsewhere winter totals (doubtless considerably duplicated as herds changed feeding grounds) included Breydon 71, Dec 31st, Burgh Castle 216 Feb 22nd, Warham 60 Nov 30th, Horsey 203 Jan 13th, 348 March 7th and 210 Dec 26th, Martham Ferry 65 Jan/Feb, Hickling 202 Jan 12th, Ludham 151 Feb 10th, Seven-mile House 240 March 1st, Clippesby 50 March 5th, Stracey Arms 204 March 6th, Halvergate 100 Feb 8th, Thrigby 135 Feb 19th, Haddiscoe 81 March 6th, Buckenham 44 Jan, Rockland Broad 60 March 3rd, Muckfleet Levels 88 March 15th, Cley 52 Nov 27th, Snettisham 111 Jan 12th, Wootton Marsh 181 Jan 22nd, Lynn Point 47 Nov 30th, Wissington BF 120 Feb 28th-March 2nd, Marham 65 March 7th and Pentney GP 82 Feb 25th.

Spring easterly exodus began Feb 26th when 46 over Yarmouth followed by Scolt Head 15 March 6th, North Walsham 57 and Buckenham 180 March 8th, Yarmouth 35 March 10th, Wereham 27 March 15th, Hunstanton 34 March 17th, Brundall 11 March 20th, Sea Mere 150 March 21st, and Chedgrave 46 March 25th.

Main autumn westerly movement began Nov 1st when 5 over West Runton followed by Norwich 14 Nov 20th, East Tuddenham 43 and Brancaster 33 Nov 27th, East Tuddenham 11 Nov 28th, Brancaster Staithe 60 Dec 8th, Yarmouth 91, Buckenham 87 and Beeston Common 23 all Dec 21st and Wymondham 61 Dec 22nd.

A bird at Horsey March 15th had been ringed in Holland Dec 14th 1985; it was observed again in East Germany eight days after leaving Horsey.

Whooper Swan: Recorded to May 7th and from Oct 18th. Largest concentrations at Welney where 314 Jan, 320 Feb, 187 April, 380 Dec; only 8% juveniles at end of

year. Spring departure from Welney is to WNW or NW in contrast to Bewick's which leave Washes in a NE or ENE direction. Injured birds summered at Welney and at West Somerton.

Elsewhere largest concentration in Hickling/Horsey area with up to 50 in Jan, 42 Feb, 70 March, 20 April, 58 Nov and 64 Dec.

A bird wearing an Icelandic collar at Heigham Sounds in Jan. At Welney a bird which wore an Icelandic collar during first-winter period returned in Dec minus the collar.

Bean Goose: Yare Valley: 274 in early Jan increasing to a peak of 340 Feb 4th with 231 in March and last on 16th; three returned Dec 6th with 16 on 7th and 32 on 10th increasing to 220 by year end.

Elsewhere Hickling 3 Jan 5th, Horsey 5 Jan 16th, Breydon 9 Nov 9th, Paston 2 Nov 9th, Morston 3 west Jan 11th, Salthouse Heath 10 in flight Jan 4th, Holkham area 8 in Jan and 3 till March 16th, Welney 7 Jan 1st increasing to 14 by 11th with 13 remaining till March 2nd feeding on arable and roosting on washes.

Pink-footed Goose: Co-ordinated dawn observations on The Wash and along the north Norfolk coast, combined with visits to feeding grounds, revealed the following estimates for the highly impressive population in NW Norfolk: 1985/6 winter: Peak of 19,900 Jan 5th 1986, 15,350 Jan 18th and 6,500 Feb 9th. 1986/7 winter: Autumn return began Oct 2nd with 2,000 Nov 4th, 15,000 Nov 24th and peak of 19,800 Dec 28th. A severe frost occurred Jan 9th 1987 quickly followed by snowfalls with drifts in the Brancaster district of 10-15 feet. As a result the Scolt roost was abandoned. Off Snettisham, however, up to 2,300 roosted until mid-March 1987.

White-fronted Goose: Largest assembly at Holkham/Wells where 326 Jan, 300 Feb, 143 March, 9 Nov and 107 Dec. In addition Breydon 37 Dec 3rd, Yare Valley 95 Jan, 200 Feb and 45 Dec, Hardley Flood 6 March 8th, Horsey 8 in Jan and 21 Nov, Cley 49 Jan, 46 Feb, 51 March 6th and 10 April 10th and Welney up to 65 Jan.

Greater Snow Goose: An adult with Pink-feet in NW Norfolk until Jan 14th (See 1985 Report).

Barnacle Goose: Breydon 15 Jan 5th and 2 March 21st, Yare Valley Jan to March and 1-5 Nov 7th onwards, Cley 8 Jan 11th, 4 Feb 22nd and 2 April 26th and Holkham 1-3 Jan to March.

Increasing numbers of feral Barnacle Geese present in Norfolk and very few of these observations thought to relate to genuine wild birds.

Brent Goose: Co-ordinated counts along the North Coast (Holme to Salthouse) produced totals of 12,160 Jan and 9,520 Dec. Recorded monthly; 600 still at Lynn Point May 9th. 1986 breeding season on Russian tundra a total failure. Largest westerly movement 3,266 off Paston Nov 2nd.

Pale-bellied *hrota* from Spitzbergen and Franz Josef Land: up to 7 together at Salthouse, Cley, Blakeney, Stiffkey, Wells, Holkham and Hunstanton up to May 3rd and from Nov 21st.

A Black Brant *nigricans* from Arctic North America/East Siberia first appearing in Dec 1985 stayed in the Cley area until March 13th; it was joined by a second bird Jan 18th. Another Dec 26th onwards.

Additional 1985 *nigricans* at Burnham Deepdale May 5th and at Thornham Nov 19th.

Red-breasted Goose: An adult in Cley/Wiveton/Blakeney area Jan 10th-14th (ETM *et al*). Third county record.

Egyptian Goose: Peak counts: 85 Fritcham, 30 Guist, 33 Pentney and 28 Lyng.

Shelduck: Wash counts: Snettisham 5,047 Jan and 3,800 Nov; Ouse Mouth to Wootton 3,000+ July onwards. Maxima at Breydon 770 Jan, 715 March and 756 April. Impressive total of 230 juveniles at Cantley BF July 23rd.

Mandarin: Felbrigg Park: A group of up to 11 present from Jan onwards. One pair bred, but the 6 ducklings failed to reach the flying stage. Eight returned to Felbrigg Dec 14th. See feature on page 417.

Elsewhere 1-3 at East Walton Common, Elsing Hall, Fritcham, Holkham Lake, Smallburgh and Snettisham.

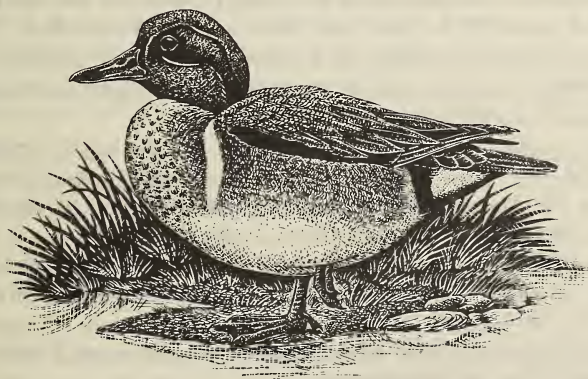


Wigeon: In Fens at Welney counts included 9,100 Jan, 9,500 Feb, 10,800 March, 6,500 Oct, 9,270 Nov and 7,300 Dec. Peak count for the complete length of Cambs/Norfolk washes was 34,945 in March.

Elsewhere: Breydon 1,300 Jan and 1,000 Feb; Rockland Broad 4,000 Feb and Buckenham 10,650 Jan, 7,000 Feb and 6,380 Dec.

Gadwall: Largest counts: Gunton Park 225 Sept 14th and 266 Oct 11th; Hardley Flood 106 Oct 31st; Narford 100 Jan 26th, 450 Nov 18th and 100 Dec 7th; and Stan-ford 300 Sept, 300 Oct and 220 Nov.

Teal: Highest counts in Fens at Welney: 1,020 March and 1,000 Oct. Wash: Snet-tisham 829 Jan.



Green-winged Teal: Single drakes at Cley March 9th to 17th and June 28th. Addi-tional 1985: Wells Nov 24th (GKG JPH AL).

Pintail: Highest totals: Breydon 217 Feb; Cley/Blakeney 350 Jan/Feb, 250 Oct and 500 Nov; Snettisham 705 Jan; Wootton Marsh 583 Feb; Ouse Mouth 310 Dec 6th; Welney 400 Oct and Narford 90 Nov.



Garganey: Spring arrival from March 8th (Kelling Quags) followed by 1-8 at Buckenham, Blakeney, Cley, Cantley, Hardley Flood, Hickling, Holkham Lake, Holme, Paston, Salhouse, Surlingham Church Marsh, Titchwell, Tottenhill GP and Welney (where present until Oct 2nd). No proof of breeding.

Blue-winged Teal: Welney immature female Nov 5th-9th (JBK *et al*).

Shoveler: Highest counts: Ranworth 360 and Welney 250 both Nov.

Red-crested Pochard: Cley Oct 10th to 27th moving to Blakeney Oct 14th and to Bayfield Oct 31st-Nov 3rd; Snettisham Feb 20th; Pentney GP Oct 9th-11th; Narford a duck Nov 2nd joined by 2 drakes Nov 16th to 23rd; Welney Nov 17th-19th.

Pochard: Largest winter assemblies at Welney: 880 Feb and 705 Dec.

Tufted Duck: Winter counts included: 270 Colney/Bawburgh Jan, 336 Hickling Nov and 400 Salhouse Broad March.

Scaup: Largest numbers: Heacham 140 Feb 22nd and 170 March 17th; Snettisham 120 Jan 30th-Feb 9th. Ones, twos and threes inland at Breydon, Brandon Creek-Denver, Colney GP, Hardley Flood, Hillington GP, Pentney GP, Rockland Broad, Ten-mile Bank village and Yarmouth (River Bure).

Eider: North coast maxima included: 97 Scolt Head mid-May where 150 summered and 50-60 Sept 7th and 100 off Hunstanton Jan. Unusual inland occurrence at Pentney GP where a pair June 4th/5th.

King Eider: Scolt Head an eclipse drake Sept 5th-15th (BB *et al*). First county record since 1890 when 2 shot off Hunstanton.

Long-tailed Duck: Most regular as usual off Hunstanton/Holme where 57 Jan, 60 Feb, 175-200 March, 80 April, 24 Oct, 5 Nov and 12 Dec. Only two East coast records: Paston March 30th and Yarmouth Nov 2nd. Summer observations at Cley, Blakeney, Scolt Head and Snettisham.

Singles inland at Martham Broad Jan 1st to April 5th, Heigham Sounds, Hickling

Broad, Horsey Mere, Holkham Lake Jan 1st to April 17th and Relief Channel at Wiggenhall St. Peter.

Common Scoter: Coastal counts: Hunstanton/Holme 2,000 Jan, 1,000 Feb-March increasing to 2,000 mid-April to early May; Heacham 250 March. Inland: Two each at Rockland Broad April 12th and Pentney GP June 24th.

Velvet Scoter: Recorded monthly except July/Aug. Largest parties: Hunstanton 27 Jan 3rd; Holme 13 March 23rd; Titchwell 20 Nov 2nd and Winterton 23 Sept 14th. Inland: River Bure near Breydon March 3rd.

Goldeneye: Peak counts: Hickling 38 Feb 11th, Paston 125 west Nov 2nd, Blakeney 60 Dec, Wells channel 150 Feb 15th, Brancaster harbour entrance 200 Feb 27th and Snettisham 62 Dec 20th.

Smew: Recorded to April 12th with an abundance of observations following the onset of severe weather during second week of Feb. During this period noted at Barton Broad, Brandon Creek, Breydon, Cantley (9), Cley, Colney GP, Denver Sluice (5), Glandford, Holme (4), Hickling (11), Horsey (4), How Hill (3), Hunstanton, Letheringsett, Ludham, Ouse Bridge, Pensthorpe GP (3), Pentney GP, Ranworth (12), Rockland Broad, Salthouse, Stracey Arms (River Bure 16), Stow Bridge (7), Surlingham, Sennowe GP (3), Sparham, Strumpshaw (8), Tottenhill GP (5), Titchwell, Ten-mile Bank, Watlington (4), Wells, Welney (3) and Wisington BF. An injured red-head summered at Sparham till June 8th.

End of year singles from Dec 3rd at Tottenhill GP and Welney.

Red-breasted Merganser: Following frost and snowy conditions in mid-Feb waters remaining open in the Fens attracted small parties including 7 Ten-mile Bank Feb 19th; 9 Denver Sluice to Ten-mile Bank Feb 23rd with 5 there March 1st; 3 Wiggenhall Feb 24th; 4 Ouse Bridge on 27th and ones and twos at Stow Bridge and Welney.

Coastal maxima: 39 Cley, 30 Blakeney, 35 Scolt Head, 20 Brancaster, 25 Titchwell, 34 Hunstanton and 20 Dersingham.

Goosander: Numbers again assembled in Fens during Feb although totals not comparable with 1985. At Denver Sluice up to 14 Feb 15th to March 1st with 26 Feb 23rd. Between Downham Market and Stowbridge up to 14 (11 drakes on occasions) between Feb 9th and March 4th. During this period up to 20 between Yarmouth and Reedham, 12 at Ranworth and 9 on Bure at Stracey Arms.

An injured drake remained at Welney April 29th to May 18th.

Ruddy Duck: Cley March 6th, Hunstanton 6 SW Oct 26th, Pentney GP Feb 11th-March 26th, Lyng Dec 29th, Rockland Broad/Strumpshaw 2 Feb 21st/22nd.

Honey Buzzard: Holme April 25th and Sandringham Aug 6th.

Black Kite: Additional 1984: Great Hockham June 1st (PG PP). Likely to be same bird as at Loddon same day (NBR 1985 p.281).

Red Kite: Poringland March 20th and Edgefield March 21st. An offshore record from Penrod 85 drilling rig 40 miles north of Blakeney where an exhausted bird brought into Yarmouth by helicopter March 15th.

Marsh Harrier: County summer total of 20 males and 23 females. 43 young reached flying stage although three nests failed. Total included three nests in cereals. Two of the males nesting at one site had been ringed in Norfolk as nestlings in 1983 and 1984. At one locality the breeding male and all three nestlings found dead — poisoning strongly suspected.

Continues increasing as a passage migrant and again an abundance of coastal records particularly between mid-May and mid-June. Early in May at least 14 in view

at principal Broadland site where small numbers winter nowadays including 4 in Jan, 3 in Feb, 5 in Nov and 6 in Dec. At main Wash early autumn roost maximum of 15 (together with 4 Montagu's Harriers) Aug 13th in standing barley.

Hen Harrier: An abundance of records, mainly coastal, to May 12th (Northrepps), 17th (Holme) and 26th (Wootton Marsh) with an early return from Aug 7th (Snettisham) and Sept 13th (Hickling).

Information available for 12 roost sites. At main Broad's locality up to 15 present in Jan, 12 in Feb, 6 in March, 10 in Nov and 16 in Dec. 1985/6 winter roosting details appear on page 410.

Montagu's Harrier: Three pairs bred in county, but only three young reared. Seven pairs bred in Britain in 1986 rearing a total of 13 young. Across the North Sea in Holland only ten breeding pairs suggesting colonisation of this country is by birds from France/Spain particularly as nests now in crops and not in reedbeds. In addition total of a dozen coastal migrants May 15th to July 11th, mostly in May.

Goshawk: One pair nested and a pair at another site in June.

Sparrowhawk: Recorded at 192 localities.

Buzzard: Ones, twos and threes at following sites: Bayfield, Blakeney Point, Brancaster, Breydon, Burnham Norton, Cley, Cockthorpe, East Ruston, Fritton, Hickling, Hilborough, Holkham, Holme, Holme Hale, Horsey, Horstead/Buxton, How Hill, Letheringsett, Ridlington, Salthouse, Scolt, Sea Palling, Sheringham, Shingham, Strumpshaw, Welney and Winterton. Majority of observations March to May when up to 6 at Winterton (April 13th). Recorded in county each month except Oct.

Rough-legged Buzzard: Following the large-scale autumn 1985 influx, many observations until mid-May (including 3 at Winterton/Horsey, 3 at Massingham Heath and 4 at Fritton all in April). Ones and twos during this period at the following additional localities: Anmer, Bayfield, Binham, Blakeney Point, Brancaster, Burgh Castle, Cley, Dersingham, Flitcham, Hickling, Holkham, Holme, Kelling, Lynn Point, Roydon, Salthouse Heath, Sandringham, Scolt Head, Wells, West Somerton and Wolferton.

Only three end of year records: Burnham Market Nov 6th, Holme Nov 13th and Scolt Head Dec 5th.

Osprey: Recorded March 29th (Cley) to Oct 15th (Breydon). April records from Hillington GP and Hunstanton. During May at Cley, Colney GP, Felbrigg, Gressenhall (this well watched individual stayed 10th to 19th also visiting Sparham, Swanton Morley, Beetley and Worthing gravel pits), Hickling, Horsey, How Hill, Holkham Park, Holme, Elsing, Lyng, Martham Broad, Narford, Scolt, Sculthorpe, Titchwell, Wells, Winterton and Wootton Marsh. Single June record (Hickling on 17th). In July at Holme on 25th, August at Horsey on 27th and Sept at Holme on 2nd.

Kestrel: Over 70 hunting sea-walls and saltings Wolferton to Lynn Point Aug 17th. 33 observed at Snettisham Aug 27th.

Red-footed Falcon: Winterton female July 10th-12th (PJH *et al*); Titchwell immature male June 26th (NS *et al*) and Clenchwarton immature male Sept 5th (DM).

Merlin: Recorded at over forty localities until May 6th (Waxham) with an early return Aug 30th (Welney). Unusual June records at Scolt Head (12th) and at Great Bircham (25th). Observations from three roosts: In Broad's 6 in Jan, 5 in Feb, 6 in March, 7 in Nov and 8 in Dec. At West Norfolk site 5 in Jan, 3 in Feb, 5 in March, 2

in Nov and one in Dec. In Fens maximum of 4 in March and 3 in Dec.

Hobby: Three pairs bred in county after probable annual breeding attempts since 1983. Continues to increase with 120 records from 51 localities (80 records from 36 localities in 1985 and 59 records in 1984). First noted April 24th (Holkham); last Oct 17th (Wells). Interesting observations included individuals pursuing Swifts at Scolt Head and Bats at Felbrigg; taking House Martins over NNT Warden's house at Cley and 2 Hobbies attacking a male Montagu's Harrier at Holkham.

Peregrine: Singles to May 31st (Titchwell) and from Sept 3rd (Breydon/Berney Arms). Recorded also at Blakeney Point, Dersingham, Holme, Sandringham, Scolt Head, Snettisham, South Lynn, Welney, Winterton and Wolferton. Most regular in the Sandringham area where singles remained between early Jan and March 22nd.



Quail: Calling at Ashill, Brancaster, East Runton (where probably bred), Flitcham, Gorleston, Potter Heigham, Holkham, Holme (at least 3), Salthouse Heath, Tibenham, Wolferton, Wootton Marsh (2), Wells and West Acre (2). A casualty at Caister Nov 28th.

Golden Pheasant: Reported at Castle Rising, Cockley Cley (9), Croxton, Drymere (12), East Wretham (8), Fritton, Gooderstone, Hockham, Holme Hale, Mundford, Sandringham (7), Santon Warren (8), Stonebridge, Thompson and Wolferton.

Water Rail: King's Lynn BF family party June is sole evidence of breeding. Migrants at Blakeney Point Oct 16th and 18th and Nov 8th.

Spotted Crane: Blakeney Quay (The Barnet) one (and at times 2) well watched birds Sept 6th-24th. Also Cley sluice Sept 27th.

Corncrake: Roydon Common Aug 15th (NB).

Crane: In Broadland 5 continuously until Aug when joined by another, all 6 remaining until year end. Doubtless members of this long-staying group provided most if not all of the following records. This applies particularly to spring-time occurrences. For example on April 30th 3 Cranes headed out to sea, returning three hours later: Salthouse, Walsey Hills, Cley, Blakeney and Wiveton all April 30th; Holme May 1st; Cley 2 May 8th; Alderfen Broad June 16th and July 3rd; Blakeney/Wiveton 2 Aug 6th/7th; Blakeney Point Nov 2nd; Welney Nov 2nd/3rd and Strumpshaw Dec 17th.

Oystercatcher: Breeding pairs reported from eight inland sites. Largest gatherings on the Wash at Snettisham where 15,000 Aug 28th.

Avocet: Cley: A further increase to 55 pairs rearing about 100 young; first chicks

hatching May 18th. Present at Cley Feb 22nd to Nov 15th. At another North coast site 3 pairs bred successfully. Titchwell: 17 pairs reared 35 + young. Holme: Three pairs reared 9 young. Hickling: An unsuccessful pair.

Reported from Breydon March 16th-Sept 20th (maximum 11), Snettisham March 18th-Dec 4th (maximum 7), Hickling (maximum 8), Lynn Point 2 March and 5 Aug, Scolt Head June 18th and Welney March 11th and May 14th.

Stone Curlew: At Weeting Heath autumn concentrations peaked at 23 Aug 20th and 25 mid-Sept. Food items recorded at this site included Vole, Young Wood-mouse and 2 Skylark chicks.

Little Ringed Plover: First arrivals from March 15th at Salthouse; no late dates. County total of 31 pairs at 25 sites, many breeding successfully. Largest autumn parties: 17 Surlingham Church Marsh July 17th and 10 Cantley BF July 23rd.

Ringed Plover: Ten inland pairs while 150 breeding pairs on Scolt Head. Spring passage of migrant *tundrae* race peaked at 207 Breydon May 17th, 40 Lynn Point April 29th and 20 Welney May 4th. Autumn flocks on Wash peaked at 1,000 Ouse Mouth Aug 20th-22nd and 480 Snettisham Sept 7th.

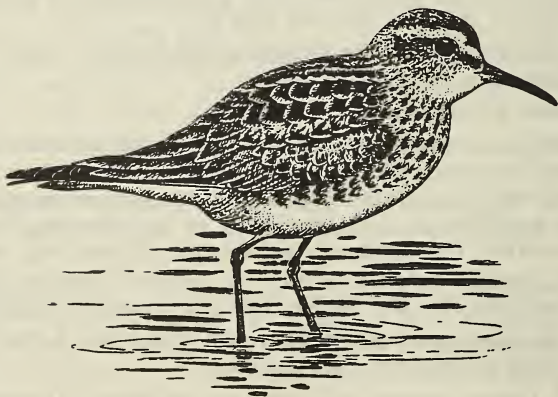
Kentish Plover: Very scarce for the second successive year. A male Cley/Salthouse April 9th-11th and a female Breydon May 12th.

Greater Sandplover: 1985: The Blakeney harbour bird remained until Aug 22nd, not 21st as stated in NBR 1985. The Blakeney Point record for Sept 2nd is correct.

Dotterel: Spring passage most evident at Thornham where migrants gathered on emerging bean fields south of the coast road. There were 14 May 11th and varying numbers daily for the following fortnight; at least 20 birds passing through. Original group contained mostly bright females, but later in the period dull males predominated. A broken-winged male picked-up here May 20th had probably flown into overhead wires; although taking mealworms it died a couple of days later.

Also observed at Waxham: 3 May 5th and 4 May 12th; Blakeney Point flying west May 11th; Lynn Point flying over May 13th and Ten Mile Bank 14 May 6th. Autumn birds at Blakeney Point: juvenile Aug 19th-28th; North Wootton 4 (3 juveniles) Aug 22nd and a long-staying individual at Cley from Nov 9th into 1987.

Golden Plover: A selection of some of the larger flocks reported including 900-1,000 Saham/Toney/Ashill Dec; 600 (Northern race) Tuttington April; 500 (Northern) Welney March; 800 Wereham Nov and 600 Dec; 500 Snettisham Dec; 1,500 Lynn Point Nov and 1,000 Burnham Overy April.



Grey Plover: Flocks at Snettisham peaked at 2,144 Feb 27th and 1,245 Sept 5th. Also 300 Holme July 26th and 137 Breydon Jan 26th. One or two inland birds at Welney in Jan, March, April, and May.

Knot: Largest Wash (Snettisham) counts: 41,000 Jan, 6,500 July 25th, 20,000 Aug but only 27,000 Dec. Inland records from Welney: 4 March 17th; May 19th and 2 Dec 15th.

Sanderling: Snettisham produced counts of 350 Jan, 426 Sept and 550 Dec. Also 140 Hunstanton Nov and 150 Holme in May. Inland records from Lyng Easthaugh May 11th and Welney May 2nd/4th and 2 May 13th.

Additional 1985: Cantley BF: inland record of 3 Sept 5th.

Little Stint: A scattering of spring passage birds from Cley/Salthouse 1-4 May 13th-June 12th; Titchwell 1-3 May 11th-31st; Pentney GP May 14th and King's Lynn BF June 17th.

Rather quiet autumn passage with a flurry of adults in late July. *Maximum* counts from major sites: Breydon (3), Hickling (11) from July 25th with 2 late birds Dec 3rd, Cley (11), Titchwell (20 Sept 6th) and a late bird Dec 4th-29th, Holme (5) from July 18th, Snettisham (4) from July 25th and Welney (11 July 31st).

Temminck's Stint: A good year for this species in Norfolk. Spring passage at Hardley Flood 1-2 May 22nd-24th; Hickling May 18th-June 22nd (maximum 8 May 22nd); Cantley BF June 3rd; Salthouse May 17th; Cley May 1st-28th (maximum 5 May 5th); Titchwell 2 May 2nd; Lyng Easthaugh May 11th and Welney May 4th.

Return birds at Hickling 2 Aug 17th-19th; Cley 1-2 July 1st-Aug 5th plus a late bird in Eye Field Pool Oct 6th (possibly the Blakeney Quay bird); Blakeney Quay Sept 26th-Oct 1st; Titchwell August 10th-17th and Welney Sept 4th-5th.

White-rumped Sandpiper: A well-watched adult at Snettisham Pits July 14th to Aug 14th (JEC AL *et al*).

Pectoral Sandpiper: A spring bird at Salthouse May 3rd followed by another at Holme June 19th-21st. Three autumn birds: Hickling July 25th, Cley Sept 4th-10th and King's Lynn BF July 22nd-26th.

Curlew Sandpiper: Spring birds at Breydon May 1st-3rd, Cley May 3rd-11th (maximum 4) and June 14th and Morston May 3rd.

Numbers of autumn migrants vary enormously from year to year with this species and 1986 was a great contrast to the peak year of 1985. Noted at Breydon from July 30th (4) peaking at 12 Sept 21st with first juvenile Aug 26th; Cley from July 19th peaking at 7 July 31st; Titchwell late birds Oct 22nd and Nov 16th; Holme 1-2 July 20th-31st; Snettisham from July 19th peaking at 10 July 25th; Lynn Point from July 19th with 10 Aug 11th and Welney Sept 10th. July records were of 'red' adults.

Purple Sandpiper: Extreme dates May 10th (Heacham) and Aug 22nd (Cley). Counts



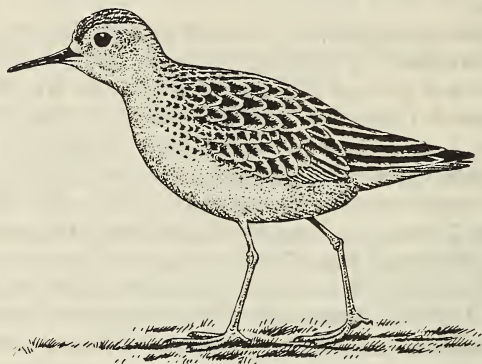
at Heacham/Hunstanton were 23 Jan 18th, 30 Feb 24th, 31 March 17th, 21 April 16th, 13 May 3rd and 25 Dec 11th. Also regular in Paston/Walcott area where counts included 12 Jan, 14 Feb, 17 March, 19 April, 6 May, 4 Oct, 14 Nov and 22 Dec.

Smaller numbers widely reported around the coast: Gorleston, Yarmouth (maximum 11), Waxham, West Runton, Sheringham, Cley, Blakeney, Holkham, Scolt Head and Titchwell.

Dunlin: A white bird with buff wings at Breydon Feb 15th. Counts on the Wash at Snettisham peaked at 3,350 (Feb) and 7,800 (Nov).

Broad-billed Sandpiper: A worn plumaged adult at Salthouse and Cley from June 28th to July 2nd (MF RL).

1973: The Cley record May 28th-31st is not now acceptable (BBRC).



Buff-breasted Sandpiper: A bird at Cley 17.00 hours July 10th appeared at Holme two hours later, but returned to Cley July 12th where it remained until Aug 9th. Frequently observed displaying at Ruff (JW DHS).

Ruff: Winter records included 50 Hickling (Dec), 41 West Somerton (Feb), 20 Wiveton (Jan) and 30 Welney (Jan).

Spring passage most evident at Hickling with 53 (March) and Welney 30 (March) and 40 (April). No evidence of breeding. Widespread on autumn passage, largest counts at Cantley 26 Aug 29th, Hickling 70 Sept 27th followed by 51 Nov 16th, Cley 92 July 31st and 130 Aug 20th, Titchwell 50 Aug 19th and Welney 130 (Oct) and 90 (Nov).

Jack Snipe: Located at 24 sites up to April 14th (Welney) and from Sept 19th (Snettisham). Mostly ones and twos though 9 Surlingham Church Marsh Nov 13th/14th.

Snipe: In the breeding season 60 'drummers' Welney — lower than usual due to May flooding; 24 'drummers' Strumpshaw and smaller numbers at 8 other sites. Largest concentrations 110 Surlingham Church Marsh (Sept) and 200 Welney (Nov/Dec).

Woodcock: Roding birds reported at over 20 sites, mostly in Brecks and Broad. Winter concentrations of 10 Horning Feb 14th, 40 Strumpshaw Jan and 25 Dec 11th, 13 Felbrigg March 1st, 6 Hickling March 2nd when 6 Burnham Norton. A few birds observed arriving in off sea Oct/Nov.

Black-tailed Godwit: A wintering flock at Snettisham reached 70 Feb 2nd. Well-marked spring passage when 25 Hickling May 4th, 61 Cley April 16th, 65 Lynn Point April 29th (Icelandic). Flooding on the Ouse Washes concentrated the Icelandic passage migrants at Welney resulting in 504 March 31st dropping to 240 April 19th.

Once again Titchwell held high numbers of autumn migrants with 93 July 15th, 144 Aug 19th and still 50 Nov 16th with 2 late birds Dec 20th. Other autumn counts included 35 Scolt Sept 7th, 18 Holme Sept/Oct and 40 Lynn Point Aug 12th.

Other reports during the year from Breydon (maximum 7), Berney Arms (8) and Hardley Flood. High flood levels at Welney in April/May resulted in only one pair rearing a single chick, though 5 pairs present.

Bar-tailed Godwit: Largest counts at Snettisham: 6,500 Feb 16th and 4,000 Nov 16th, with smaller gatherings of 400 Blakeney harbour (Aug) and 320 Brancaster harbour (Feb). Only inland occurrence was of up to 5 Welney May 2nd-5th. Out of season summer plumaged birds at Blakeney with 2 at Heacham in Dec.

Little Whimbrel: 1985: The Cley area bird remained until Sept 3rd (Sept 2nd in 1985 Report).

Whimbrel: Extreme dates were April 22nd (Wolferton) and Oct 4th (Blakeney and Holkham). Moderate spring passage, the highest counts being 15 Holkham April 23rd and 15 Breydon May 3rd. Rather stronger more widespread autumn movement when 43 Breydon July 22nd, 83 Cley Aug 5th, 33 Scolt Aug 1st and 27 Sept 7th, Holme up to 60 on 12 dates between Aug 4th and 21st, 15 Snettisham Aug 4th and 16 Lynn Point Aug 2nd.

Inland sightings from Pentney, Sandringham, Flitcham and Stowbridge in May, East Winch in Aug and Welney in April, May and Aug (20 on 2nd).

Curlew: Largest flocks reported were 300 Breydon (Feb/Nov), 750 Brancaster harbour (July) and Snettisham 2,500 (Feb) and 3,100 (Aug). No breeding records received.

Spotted Redshank: A January record from Cley with March birds at Morston and Welney. Spring passage peaked with 25 Cley May 5th but relatively few elsewhere. Autumn passage peaks were 5 Breydon (Sept), 9 Hickling (Aug), Cley 25 July 27th, 30 Aug 16th and 25 Sept 7th, 4 Snettisham (Oct), 10 Lynn Point (Aug) and 4 Welney (Aug).

Redshank: Peak Wash (Snettisham) counts: 1,500 (Feb), 1,700 (Sept) and 1,212 (Dec).

Marsh Sandpiper: 1984: The Cley bird remained to Sept 4th (Sept 2nd in 1984 NBR).

Greenshank: Wintering birds at Cley/Salthouse (Jan/Feb), Brancaster (Jan), Titchwell (Feb) and Holme (Feb).

As usual only a light spring movement with maximum 6 Breydon May 29th/30th and 9 Cley May 23rd. Widespread on return passage June 22nd to Oct 21st. Peak numbers: 23 Breydon July 20th, 17 Cley July 26th, 12 Burnham Norton July 9th, 14 Titchwell Oct 2nd, 35 Holme Aug 12th and 21 Snettisham Sept 7th.

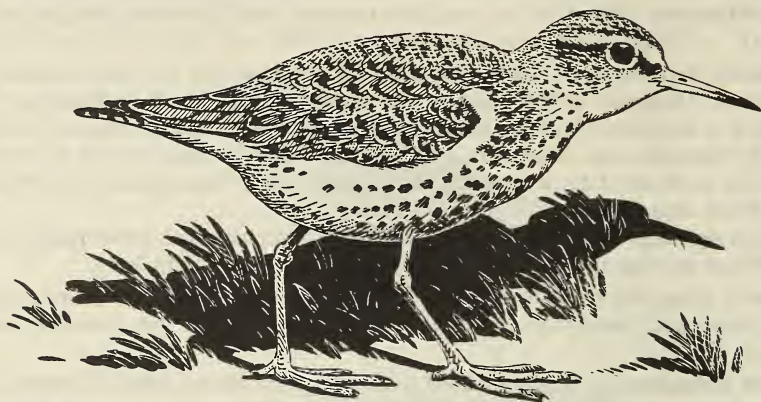
Lesser Yellowlegs: Additional 1985: Hickling June 24th-27th, the fifth county record (SEL IH).

Green Sandpiper: Winter birds (Jan, Feb and Dec) from 18 sites, mostly singles. An insignificant spring movement, but widespread on return passage from late June onwards when Cantley 10 (July), 25 (Aug) and 14 (Sept); Surlingham 9 (July) and 10 (Aug); Hickling 7 (July); Cley 11 (Aug); Holme 12 (July); Colney GP 10 (Sept); Pentney GP 7 (Aug); Tottenham GP 7 (Aug); Wisington BF 12 (July) and Welney 7 (June).

Wood Sandpiper: Spring movement noted at Cley May 14th-27th (maximum 5 on 20th). Others at Hardley Flood May 19th, Glandford May 21st/22nd and Holme May 19th-21st.

More widespread on return passage, but numbers low. Seen at Cantley Sept 6th, Surlingham Aug 16th-19th, and Sept 1st, Tunstead Sept 16th, Cley July 1st to Aug 31st (maximum 3 Aug 10th-13th), Glandford 2 Aug 16th, Holme Aug 12th-18th where a late bird Oct 8th, King's Lynn BF July 31st and Aug 8th, Tottenhill GP Aug 10th-16th and Welney June 27th/28th, July 9th, Aug 13th-23rd and Sept 4th. Exceptionally late bird at Hickling Oct 25th and Nov 3rd.

Common Sandpiper: Low numbers on spring passage. Return passage peaked in Aug when 30 Cantley BF 1st, 16 Stalham 10th, 15 How Hill 18th, 10 Glandford 16th, 12 Holme 12th, 13 Lynn Point 16th, 14 King's Lynn BF 3rd and 17 Wissington BF 5th together with a late bird there Oct 11th.

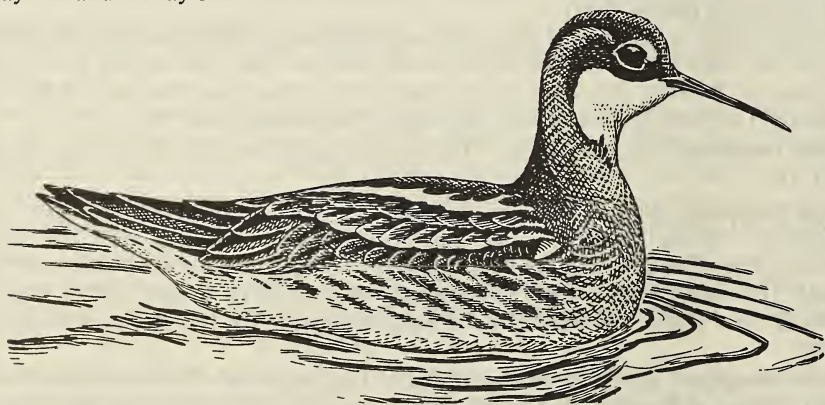


Spotted Sandpiper: A summer plumaged bird at Cley June 11th-14th (JTC *et al*).

1985: Holme juvenile/first winter Oct 7th (VE *et al*). Fifth and sixth county occurrences.

Turnstone: Largest coastal flocks: 350 Blakeney harbour Aug 20th and Snettisham 340 (Jan), 702 (Feb) and 585 (Sept).

Several inland migrants: Cantley BF Aug 29th, Colney GP Sept 5th-15th, Pentney GP May 2nd, July 23rd and Aug 9th, Tottenhill GP May 2nd and Welney 4 May 3rd, May 4th and 6 May 5th.



Red-necked Phalarope: Noted at Cley June 16th followed by a juvenile Aug 28th. Also a female at Wolferton June 7th.

Grey Phalarope: All records relate to birds moving offshore: Cley 4 west Oct 26th; Blakeney Point Jan 1st, Nov 2nd and 16th, Dec 7th and Holkham 2 west Nov 22nd.

Pomarine Skua: The big influx of late 1985 left a few January stragglers in Norfolk: Breydon Jan 4th/5th, Sheringham 3 Jan 3rd and 2 Jan 25th, Blakeney Point/Cley/Salthouse between Jan 3rd and 18th often feeding on carrion ½ mile inland, Holme 3 Jan 19th and Hunstanton Jan 17th-20th feeding on Shelduck carcase.

Autumn passage occurred Aug 8th to Dec 23rd with an obvious peak between Oct 23rd and Nov 2nd. Some of the larger movements were observed from Cley/Salthouse/Blakeney Point: 16 Oct 23rd, 19 Oct 26th and 25 Oct 27th; Hunstanton 23 Oct 23rd and 14 Oct 26th and Paston 10 Nov 1st and 8 Nov 2nd.

Monthly totals were Aug 22, Sept 11, Oct 133, Nov 32 and Dec 4.

Arctic Skua: Winter birds at Cley Dec 19th, 22nd/23rd, Scolt Jan 31st and Hunstanton Jan 4th and Dec 23rd.

Spring sightings: Cley/Blakeney Point April 11th, May 24th and 30th, June 6th and Holme April 20th and 25th.

In autumn a large movement observed during westerly gales Aug 27th when 355 flew south off Horsey in 4 hours, 160 east off Paston and 200 east off Cley. Following day total of 14 headed inland at Ouse Mouth. Further counts of 53 Hunstanton Sept 3rd and 87 Cley Sept 14th. An inland bird at Hickling Aug 3rd.



Long-tailed Skua: A spate of records from Blakeney Point/Cley/Weybourne when an adult was found Aug 9th (SCJ GED), an immature Aug 10th (AV BCF), 2 immatures — one on beach Aug 27th (JBK RGM *et al*) and an immature Sept 20th/22nd (MF RGM *et al*). Another five miles off Brancaster Sept 11th (JB).

Great Skua: Unseasonal sightings from Cley/Blakeney Point Feb 2nd and Dec 19th/23rd, Holme Dec 20th, Hunstanton 2 Dec 22nd and Snettisham Dec 29th/31st.

Only moderate autumn numbers, some of the largest passages being 20 Waxham Oct 26th, 45 Cley/Blakeney Point Sept 3rd, 39 Oct 26th and 52 Nov 1st, 44 Holme Oct 23rd and 28 Hunstanton Sept 3rd followed by 44 Oct 23rd.

Mediterranean Gull: A substantial number of records again, most regular in the east: At Breydon first summer May 12th, 15th and 23rd and July 19th. Yarmouth harbour adult from beginning of year to Feb 23rd followed by second summer April 5th, adult May 27th, first summer June 20th/21st, adult July 10th-19th, 2 adults July 20th, 3 adults July 21st, 4 adults July 23rd with 2-3 remaining until Oct 12th and a single until end of year. Also 1-2 (second winter) occasionally between Aug 28th and Oct 5th.

Cley/Blakeney Point had adults Feb 8th, June 27th, July 20th, Aug 20th-28th, Sept 20th-30th; also first winter March 16th. Longish staying first-winter individuals reported from Norwich (UEA Broad) Jan 23rd-Feb 2nd and Norwich (Riverside Road area) Feb 21st-March 10th. King's Lynn first winter Nov 30th into 1987.

A scattering of records elsewhere: Gorleston Sept 13th, Winterton first summer May 2nd, Paston adult Feb 8th, Cromer adult Feb 4th, Holkham Bay adult Nov 2nd, Titchwell May 16th, 2 (adult/first winter) Oct 5th, Heacham-Hunstanton adults Nov 4th-20th, Dec 2nd and Dec 22nd (at least 2 birds), Cantley BF adult Feb 4th/5th, Martham Broad first summer May 10th and Tunstead adult following plough Oct 10th.

A bird resembling a hybrid with Black-headed Gull at Hunstanton Jan 18th.

Little Gull: Small numbers (1-4) reported Jan/Feb from Cromer, Sheringham, Cley, Titchwell, Hunstanton and Welney.

A number of spring passage birds widely reported in late April and May when a peak of 31 adults Welney May 2nd. Small groups of immatures at several sites in mid-summer. First bird of the year arrived Horsey Aug 8th.

Remarkable autumn passage with large movements continuing late into the year. Some of the more significant sightings were from Cley/Blakeney Point where 200 feeding at sea in misty conditions Oct 17th followed by 74 Oct 20th, 70 Oct 23rd, 80 Oct 26th, 40 Nov 1st, 50 Nov 21st and 75 Nov 30. Paston 68 Oct 26th, Holme 54 Nov 1st, Hunstanton 160 Oct 26th, 50 Dec 16th and 70 Dec 22nd. Other Dec records included 2 Holme on 20th, 7 Cley on 21st and 8 Welney 22nd.

Sabine's Gull: Two fairly typical records: Immature Paston Aug 27th (RC) and adult Holme Sept 11th (NOA).

Black-headed Gull: Breeding pairs in brackets: Blakeney Point (600-800), Scolt Head (300), Snettisham (627) and Wissington BF (80).

Common Gull: Single pair bred Scolt, fledging 2 young.

Lesser Black-backed Gull: Breeding pairs at Blakeney Point (6-8) and Warham saltings (7). Count of 100 Buckenham Aug 28th when 15 Scandinavian *fuscus* present.

Herring Gull: Breeding pairs at Blakeney Point (15-20) and Warham saltings (4). Several Northern race *argentatus* (breeding between Scandinavia and the White Sea) at Heacham/Hunstanton in Dec with another North Wootton Aug 12th.

Yellow-legged birds at Hickling July 2nd, Hunstanton Sept 14th and Wereham Tip Oct 7th-9th.

Iceland Gull: Noted in first winter period at UEA Broad Earlham second-winter Jan 27th (PH), Hunstanton adult Feb 11th-23rd (HR) and Terrington St. Clement second-winter March 2nd (PC).

Second-winter period reports of first-winter Cromer Dec 26th (JRW), first-winter Cley Nov 2nd/3rd (JBK *et al*) and Dec 19th (JH) and adult Holkham Dec 27th (JBK NW).

Glaucous Gull: Many records, mostly of singles, from Breydon (Feb, Dec), Winterton (Jan, March, Sept), Paston (March), Sheringham (Jan), Blakeney Point/Cley/Salthouse — regular bird up to March 6th and from Aug 30th; also immatures (Jan-March, Nov, Dec), Wells/Holkham (Feb, Sept, Nov, Dec) and a first-winter in the Park Feb 4th-8th, Scolt Head (Jan, Sept), Titchwell (March, April, July). Heacham/Hunstanton/Holme 5 different birds Jan 1st to April 21st together with other records in Oct-Dec and King's Lynn (Feb).

Inland birds at Strumpshaw Tip Nov 12th, Colney GP Dec 26th and Wereham Tip

(Jan, June 6th, July 11th, Aug 28th-30th, Sept 13th, Oct 7th and Nov 3rd-19th).

Gulls can become very loyal to one locality. In the vicinity of Cley undoubtedly the same Glaucous appeared annually for 16 winters. Most favoured places included Blakeney Point, Cley Coastguards and Salthouse duck pond. Usually returning in late Aug, it remained until the end of March. Towards the end of its lengthy series of visits this faithful character sustained a broken leg. However, it returned for a final winter (1978/9) in north Norfolk before being posted missing. No regular replacement occupied the vacant territory until the 1982/83 winter when a new adult Glaucous arrived. Since then it has become an annual arrival despite becoming badly oiled early in Feb. (*Cley Bird Club*).

Kittiwake: Autumn gale movements of 3,000 east Sheringham Jan 3rd where 600 per hour Sept 16th; Cley 2,000 east Nov 1st in 2 hours; Hunstanton 1,000 Oct 26th and 800 Dec 22nd.

Strong westerly winds March 24th produced an inland record of 132 Tottenhill GP.

Lesser Crested Tern: Additional 1983: Blakeney Point intermittently Aug 9th-Sept 17th (SJMG JR). The same bird at Scolt Head Aug 27th and at Holme Aug 29th (*per* SJMG). An addition to the county list. See page 412.

Sandwich Tern: Extreme dates March 16th (Cromer) and Oct 20th (Cley). At Blakeney Point 1,000 pairs bred while at Scolt Head 2,550 pairs fledged 2,200 young.

Inland reports from Strumpshaw 2 May 30th and Surlingham Church Marsh 2 May 15th and 25 Sept 3rd.

Roseate Tern: Breydon/Yarmouth June 8th/9th and July 7th (PRA DM), Horsey 4 June 7th (PRA), Cley Sept 8th (JBK) and Sept 14th (RGM GED), Blakeney harbour May 18th (AV), Scolt Head June 15th — displaying with Common Terns (CC).

Common Tern: Extreme dates April 12th and Nov 11th (both Blakeney Point). County total of 744 breeding pairs, well down on 1985. Quite good fledging success recorded from tern raft/platform sites. Largest colonies at Blakeney Point (275), Scolt Head (300) and Snettisham (80). Other important sites included Breydon (63), Ranworth (30) and Hardley (28).

Arctic Tern: Extreme dates April 14th (Welney) and Nov 2nd (Blakeney Point). Only a few spring migrants, passage peaking April 20th when 8 Hunstanton and a flock of 30 Welney heading north-east. A late movement of 24 west Paston June 7th.

Only small numbers in autumn from Winterton, Paston, Cley (maximum 6 Sept 8th), Blakeney Point and Holme.

4-6 pairs bred at Blakeney Point and one pair at Scolt Head. A first-summer individual at Cley June 30th resembled the bird described in *British Birds* 79:504-506, having a very extensive white forehead.

Little Tern: County total of 458 pairs bred. At three East coast sites total of 192 flying young, due mainly to 'roping off' colonies and wardening. Inland record from Welney May 4th.

Black Tern: Extreme dates April 24th (Rockland Broad) and Oct 31st (Cley). Spring passage peaked in first week of May, largest groups being 8 Cley May 5th, 15 Titchwell May 6th, 16 Welney May 3rd with another 14 May 7th. Also reported from Hickling, Colney GP, Worthing GP, (7 May 6th), Hillington GP, Tottenhill GP, Pentney GP, Brancaster, Holme and Snettisham.

Small scattering of autumn records apart from 124 Lynn Point flying south up-river Aug 2nd (strong south-west wind) and only one bird remaining next day.

White-winged Black Tern: An adult at Cley Aug 19th moved to Felbrigg lake later in

day. At dusk it climbed in tight spirals for five minutes before heading off north-east five minutes ahead of a squall approaching from south-west (ETM CRK).



Guillemot: A bridled individual in a field at Oulton near Aylsham Jan 28th.

Razorbill: Inland: King's Lynn (river Ouse) Feb 13th, Lyng GP March 12th/13th and Strumpshaw April 11th.

Black Guillemot: Sheringham Sept 14th and Cley Aug 27th, October 9th, Oct 26th and Dec 9th.



Little Auk: North-west gales at the opening of Nov provided a sea-watching spectacular: Yarmouth 78 north Nov 2nd; Winterton 120 north Nov 2nd and 2 next day; Waxham 55 north-west Nov 2nd and 2 Nov 21st; Paston 234 west Nov 2nd; West Runton Dec 24th; Sheringham one east Jan 12th and another Nov 2nd; Weybourne Oct 15th; Salhouse on road Feb 3rd; Cley Feb 16th, 6 west Nov 1st, 200 west Nov 2nd, 20 on 3rd, singles on 4th and 15th, 8 Nov 20th, 15 Nov 21st and 2 Dec 22nd; Morston one resting on mud Nov 2nd; Blakeney Point Sept 18th; Wells Nov 2nd; Titchwell 2 Nov 2nd; Holme 51 Nov 2nd and Hunstanton Nov 2nd.

Inland: Edgefield one captured by cat Jan 6th survived and was later released at Cley.

Puffin: Twenty-five North coast offshore records April and Sept to Nov. Largest group 13, otherwise 5.

Woodpigeon: Estimated 10,000+ in Horsey/Sea Palling/Somerton area Nov 21st.

Turtle Dove: Recorded from April 19th (when recorded at East Wretham, Pentney and Shingham). Largest spring movement 950 Snettisham May 16th followed by 110 next day.

Ring-necked Parakeet: Two reports only: Catton (Norwich) and Heacham.

Barn Owl: Recorded at 157 localities.

Little Owl: Recorded at over 70 sites.

Long-eared Owl: Spring migrant: Winterton April 3rd. Breeding recorded at 4 sites.

Autumn migrants: Gorleston Nov 13th; Yarmouth 3 Nov 13th and another 2 on 15th; Waxham 2 Nov 15th; Paston Nov 2nd; Northrepps Nov 19th; Sheringham Oct 5th; Salthouse Oct 18th; Cley Nov 2nd; Stiffkey Nov 2nd; Wells Oct 13th and Brancaster GC Nov 15th. Winter roosts occupied at two Fenland sites: Welney 2-3 Dec 14th onwards and at a second locality up to 12 during Dec. Elsewhere: Hethersett 6 and Tilney St. Lawrence 4 both in last week of Dec.

At Salthouse Heath a pair reared one young to fledging. Another young was run over by a car after being disturbed from cover by unthinking birders. These owlets were harassed by hundreds of bird-watchers after discovery by their hunger calls. They would be heard as people watched the Nightjars. Harassment continued many hours after dark. One group of visiting birders was reported searching for the owlets with torches at midnight. This completely thoughtless behaviour continued for weeks only ceasing when the remaining young owl abandoned the nest-site.

Short-eared Owl: Spring concentrations at Burnham Deepdale/Burnham Norton (6 March 19th) and Horsey (10 April 19th). No breeding information. In autumn several observations of singles in off sea Oct 12th to Nov 15th, but no numbers reported apart from 15 along the sea-walls between Wolferton and King's Lynn Oct 6th.

Nightjar: Away from Brecks records of churring birds as follows: Dersingham Heath (1), Kelling Heath (3), Roydon Common (4) Salthouse Heath (4) Sandringham (1), Swaffham Heath (4), West Newton (1) and Wolferton area (3). One flushed Marsham Heath July 15th/16th.

Swift: First recorded Cley and Salthouse April 30th. 5,000/hour moving eastwards early at Paston Aug 2nd. Only two October records followed by four in November: Weybourne 4th, Caister 8th, Scatby 10th and Salthouse 12th.



Bee-eater: Three flying eastwards Holme June 29th (SB).

Hoopoe: Only one record, Holme April 25th (NOA).

Wryneck: Four spring records, all early May: Holme 1st-3rd, How Hill 2nd, Snettisham 4th/5th and Winterton 5th. A fairly widespread autumn passage Aug 7th-Sept 29th with some birds remaining in same area for many days. Largest number seen, 5 Blakeney Point Aug 29th. Inland records from Buckenham, East Wretham, New Costessey, Swannington and Thorpe St. Andrew.

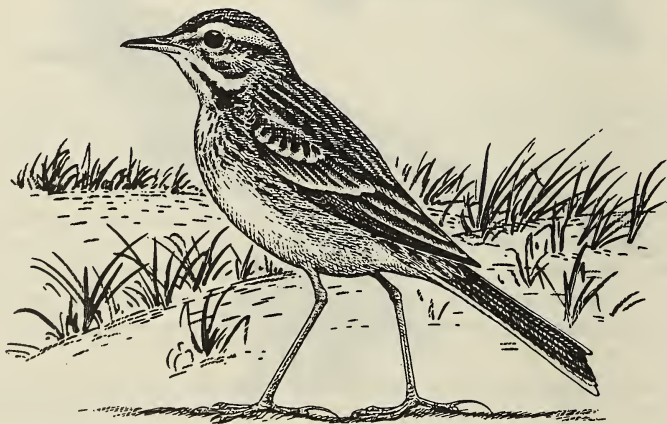


Lesser Spotted Woodpecker: During ten-year period 1977-1986 recorded at 228 localities.

White-winged Lark: Additional 1981 record. One King's Lynn BF Oct 22nd-24th (JL JAWM). An addition to the County List — see article page 416.

Woodlark: Coastal migrants in March at Winterton 8th, Cromer 11th and Paston 16th. In Norfolk Brecks total of 26 singing males, all in forestry clearings (RH).

Shore Lark: Only regularly recorded wintering on Blakeney Point where 16 Jan 1st with last 5 May 7th and again from Oct 15th with up to 21 Nov/Dec. Elsewhere Winterton Oct 11th and 18th, 22 exceptionally Nov 2nd, 2 Nov 22nd and 5 Dec 3rd;



Waxham Nov 2nd; Cley 3 Oct 15th; Holkham 2 Oct 12th; Titchwell 2 Nov 3rd/4th and Nov 16th; Thornham Point up to 5 Oct 12th-Nov 8th and Snettisham Jan 1st.

Sand Martin: Recorded between March 17th (Snettisham) and Oct 18th (Sheringham). At Paston an increase of breeding pairs from 10 in 1985 to 60. At Welney peak counts of 1,000 Aug 12th and 2,000 Aug 15th.

Swallow: Latest records: Cley Nov 27th and Sheringham Nov 29th.

House Martin: An influx of apparent migrants at various coastal localities Nov 29th with the following birds seen in December: Brancaster 2 on 1st, Brundall 4th, Paston 5th, Cley 7th and Holkham on 9th and 4 on 7th.

Richard's Pipit: Five autumn records: Weybourne Sept 30th (MPT), Blakeney Point (SCJ) and Holkham Oct 14th (AB JBK), Winterton Oct 18th (SA) and Yarmouth Oct 22nd (PRA).

Tree Pipit: A late migrant Holme Oct 13th.



Tawny Pipit: Salthouse Aug 26th (PG JMcC) and probably same bird Weybourne Aug 28th-30th (GE *et al*). Additional 1985 record: Brundall Aug 29th (BH).

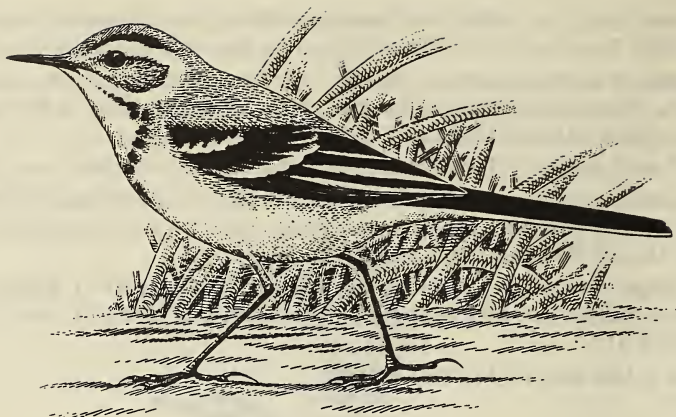
Rock Pipit: Recorded up to May 9th (Yarmouth) and from Sept 19th (Breydon). Only two records of the Scandinavian race received: Cley March 17th and 22nd.

Water Pipit: At Hickling up to 4 from beginning of year to end Feb then 6 April 11th and one May 22nd; in autumn up to 5 Oct 17th to end Nov.

Elsewhere: Breydon Feb 9th, R Bure (Yarmouth) March 3rd, Burnham Norton Feb 12th, Cantley BF 2 Jan 9th, March 24th, 3 Nov 16th and one Dec, Cley Jan 26th, March 31st-April 14th, Oct 1st and Nov 16th, Holkham Dec 6th, Holme April 12th and 21st, Nov 15th and Dec 28th, Lyng Easthaugh April 6th, Martham Broad 3 Nov 15th, Snettisham March 18th and April 13th, Strumpshaw Feb 18th, Surlingham Church Marsh 2 Jan 1st, Jan 7th and 2 Feb 3rd, Welney April 5th/6th and Winterton March 9th.

Yellow Wagtail: A large movement Cley April 24th when 400-500 on Eye Field. A late individual West Lynn Nov 14th.

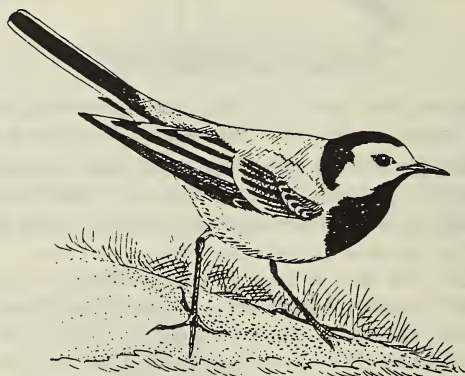
Blue-headed Wagtail: Spring records as follows: Hickling April 27th and 30th, and May 2nd and 8th, Paston May 4th, Cley 7 April 24th with up to 3 until May 2nd, Burnham Norton April 22nd and 2 May 15th, Holme May 3rd, Hunstanton April 21st and May 1st and 3rd, King's Lynn BF May 4th, Denver Sluice April 24th and Welney May 15th. In June 2 Burnham Norton 15th and singles Wootton Marsh 16th and Colney GP 30th.



Citrine Wagtail: One at Blakeney Sept 26th-29th (JG KH ETM *et al*). This juvenile was the second county record (the first at Welney in Nov 1980) and gave excellent views on the 'Spotted Crake' pool.

Grey Wagtail: Successful breeding recorded at Bawburgh Mill, Buckenham (Ickburgh) Mill, Cringleford, Gressenhall Mill, Narborough, Thetford and West Acre. Also present in breeding season at Lyng Mill, Norwich (R Wensum) and Sparham Mill.

Pied Wagtail: Roosts of 105 Wissington BF Sept 14th and 127 in reeds Cley Oct 16th.



White Wagtail: Small spring passage March 29th-May 4th.

Waxwing: A welcome increase in records compared with recent years: Brancaster Jan 26th, Brancaster Staithe Feb 14th-March 5th, East Wretham Dec 24th, Gorleston 4 Jan 20th, Feb 3rd and 3 Dec 29th/30th, Great Hockham Dec 22nd/23rd, Hempnall Jan 21st, Holkham Dec 28th, Hunstanton 2 Jan 11th-21st, King's Lynn Feb 17th, Langham Green Dec 23rd/24th, Letheringsett Dec 23rd, Long Stratton Dec 23rd, Norwich Jan 25th and March 1st-4th, Sheringham 2 Jan 19th-26th, 1-2 Feb 12th/13th, March 9th-11th, 3 Dec 25th and one Dec 27th, Titchwell Dec 24th, Watton 3 Jan 22nd and 2 Jan 25th, Wells Dec 24th, Wiveton 6 Dec 23rd increasing to 9 Dec 26th and 7 Dec 27th, and Wolferton Feb 2nd.



Black-bellied Dipper: Individuals at Bawburgh Jan 24th-March 16th, Costessey Jan 25th-Feb 9th and Shotford Bridge (R. Waveney) March 7th with two at Letheringsett April 11th-14th.

Wren: A roost of 30 occupying a House Martin's nest at Stoke Holy Cross in mid-February during severe weather.

Nightingale: One at Welney, a most unusual locality, after heavy rain July 20th. An autumn migrant, Wells Sept 6th.

Bluethroat: Only one record, typifying the generally poor spring migration: Wiveton June 1st (TL).

Black Redstart: Only one wintering record, Norwich Jan 2nd. During spring passage 3 at Colney GP April 3rd (an unusual number inland) and a maximum of 8 at Hunstanton April 16th. Single pairs bred at Cromer, Salthouse, Hunstanton, Heacham and King's Lynn, with 4 nesting pairs at Yarmouth/Gorleston where 3-4 other singing males. Autumn passage until Nov 29th with maximum of 5 Happisburgh Oct 18th.

Redstart: Breeding records include 2 pairs at Weeting and 3 pairs (one in a nest-box) at East Wretham.

Whinchat: Recorded April 26th (Hickling) to Oct 18th (Happisburgh).

Stonechat: Restricted as a breeding species to six pairs along East Coast.

Siberian Stonechat: The 1985 bird at Winterton last seen Feb 5th. Another, Blakeney Point, Oct 12th/13th (GED AV *et al*).

Wheatear: Simultaneous arrival March 15th when singles at Cley, Edingthorpe, Fleggburgh, Holme and Paston. On North coast successfully bred at Bacton and Cley. In Brecks 20 males present Weeting Heath in June. Latest record, Holme Nov 1st.

Ring Ouzel: A widespread spring passage March 27th-May 10th with records from many inland as well as coastal localities. Maxima of 5 each at Holkham Meals April 18th, Felbrigg April 19th, North Walsham April 28th, Cromer May 3rd and Ringstead Downs May 5th. Isolated records of birds at Holme end May and Sparham Pools June 1st. Autumn passage as follows: Holkham Meals Oct 5th and 2 Nov 2nd, Welney Oct 9th, Cley Oct 13th, Hickling Oct 16th and Nov 2nd-6th, Burgh Castle Oct 17th, Blakeney Point Oct 17th/18th, Winterton Oct 18th and North Heacham Nov 18th, where a female found recently killed by an airgun pellet through its neck.

Fieldfare: Latest spring record Burnham Overy May 13th. Relatively scarce in second winter period despite a large-scale movement in western part of county (Snettisham/Welney) Nov 2nd/3rd.

Mistle Thrush: Flocks of 70 at Weeting and over 100 at Santon Downham, both in August.

Redwing: Late migrants Strumpshaw May 19th (2) and June 4th and Winterton May 24th. First returning birds Sept 13th (Holkham Meals).

Cetti's Warbler: Broads total of 43+ singing males as follows: *Waveney:* Burgh Castle. *Yare:* Cantley/Buckenham 2, Rockland Broad 6, Coldham Hall, Strumpshaw 6-8, Wheatfen 2, Surlingham 3, Thorpe St. Andrew and Whitlingham. *Chet:* Hardley (Oct only). *Bure:* Filby Broad, Ranworth (March and Sept), Cockshoot, Horning Ferry and Horning Church. *Ant:* How Hill 4, Irstead Church and Barton. *Thurne:* Hickling 2, Martham Broad 2, Martham Ferry and Horsey 3. Elsewhere: Fens (Welney) Oct 8th.

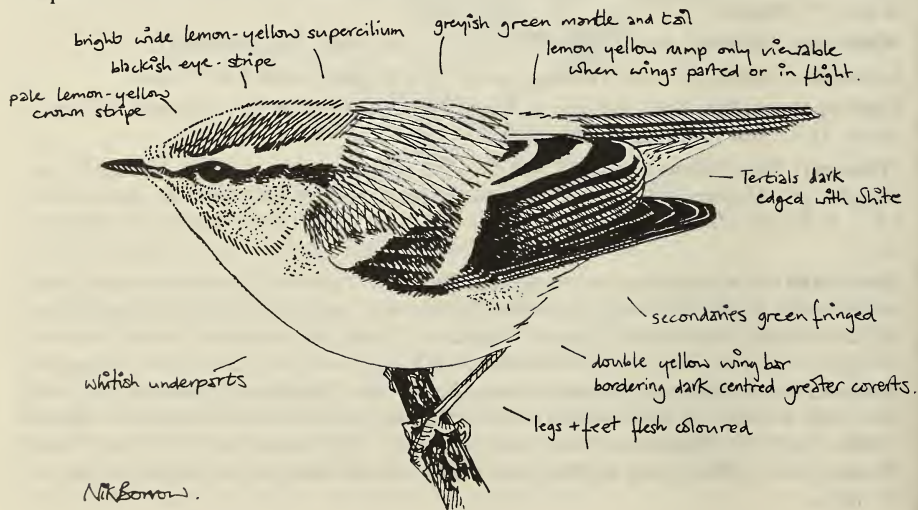
Savi's Warbler: First recorded at Hickling April 26th where 4 singing males May and early June. Elsewhere a singing male at Strumpshaw on 3 occasions mid June-mid July.

Icterine Warbler: As in 1985 only a small number of records: Blakeney Point Aug 12th and 19th, Holkham Meals Aug 18th, Cley 2 Aug 31st and one Sept 1st, and Scolt Head Sept 15th.

Additional 1985 record: Waxham Oct 1st.

Dartford Warbler: A female on Blakeney Point May 17th-19th (RM *et al*). This most unexpected arrival was the third county record, the two previous birds being noted in winter in 1905 and 1928.

Barred Warbler: A total of at least 21 autumn migrants: Waxham Aug 31st and Sept 27th, Sheringham Aug 25th, Salthouse Aug 24th-30th when joined by another, both present until Sept 4th, Cley Aug 17th and Aug 30th-Sept 13th, Blakeney Quay Oct 1st, Blakeney Point Aug 25th/26th and 30th, Morston Aug 31st, Wells (Lodge Marsh) 2 Sept 13th, Holkham Meals Aug 24th, another 27th and 2 Sept 10th, Holme Sept 5th, Old Hunstanton Sept 21st and Hunstanton GC Aug 18th-20th, 31st and Sept 19th/20th.



Garden Warbler: A late migrant Cromer Nov 3rd.

Blackcap: At Holme two overwintering birds survived until end Jan. A male at Brundall Feb 26th-March 1st. Individuals at Sheringham March 25th and Norwich March 31st were either overwintering birds or early arrivals. December records from Bradwell, Cley, Downham Market, Gressenhall, Holkham Meals (2), Salthouse and Snettisham.

Arctic Warbler: 1984 record: Holme Sept 10th (PRC CFH). Eleventh county record.

Pallas's Warbler: Waxham Nov 21st (RC *et al*).

Yellow-browed Warbler: For the third year running a large number (at least 38) of autumn migrants: Yarmouth Sept 21st and Oct 12th, Happisburgh Sept 26th, Paston Sept 25th, Sheringham Sept 26th and Oct 18th, Cley Sept 25th-28th, Blakeney Point 2 Oct 5th, Stiffkey Sept 28th, 3 Oct 5th, Oct 12th and Nov 2nd, Warham Marsh Sept 21st/22nd, Wells Town Oct 6th, Holkham Park Sept 20th/21st, Holkham Meals Sept 19th-23rd, 2 25th-28th, another 27th with 2 also west end on 26th, Oct 4th, 10 on 5th (6 east, 4 west), 9 still 8th, 4 on 12th (including one in off sea), 3 on 13th, 5 on 14th, last 2 on 15th, Burnham Norton Oct 3rd and Holme Oct 4th, 2 additional 5th and one 12th. A Holkham Meals bird set up territory in the Dell and was heard singing several days.

Further reading: Yellow-browed Warblers in Britain and Ireland 1968-1985 *British Birds* 80 pp 93-109.

Wood Warbler: None seen until May when recorded as follows (several observations included singing males): Horsey 14th, Cromer 5th, Northrepps 4th, Cley 5th/6th, 16th and 22nd-24th, Holkham Park 5th and 17th, Holkham Meals 3rd, 5th (2), 6th, 11th and 18th, Holme 5th and 13th, and Snettisham 17th. No definite records of breeding received, but singing males at the following localities: Fritton (2), Horsford, Lound Waterworks (4), Norwich Mousehold Heath (2), Norwich Lion Wood, Sheringham and Weybourne Hall. Autumn migrants at Winterton Aug 20th and Holkham Meals where 2 Aug 27th, one remaining until Sept 1st, and Sept. 14th.

Chiffchaff: In January singles at South Lynn 12th and King's Lynn BF 23rd, the latter accompanying Tree Sparrows and Bramblings. Upto 4 grey eastern birds (*tristis*) at Holkham Meals in Nov. In Dec Holme 6th, Sparham Pools and near Coltishall 21st, Cley (*abietinus*) and Wiveton (*tristis*) 28th and throughout the month one at Welney and 3 at Holkham Meals.

Willow Warbler: One of northern race Holkham Meals May 11th. Late birds at Holme Hale Oct 19th (2) and Holkham Meals Nov 2nd (2).

Firecrest: As usual more records from Holkham Meals than any other locality: March 29th-31st, April 15th (2), May 3rd-5th, May 15th, Sept 19th/20th and 27th, Oct 5th-21st with 2 14th and Dec 27th. Elsewhere: Blakeney Point April 19th and Oct 5th and 12th, Cley April 3rd with 2 on 4th, East Dereham Oct 23rd (killed by flying into a house window), East Winch Common Nov 22nd, Felbrigg April 26th, Holme 2 April 15th, April 25th and Sept 22nd, Ingoldisthorpe Dec 6th, Norwich (Lion Wood) April 25th, Quarles Nov 25th/26th, Snettisham Nov 29th, Thetford 9 dates in observer's garden Sept 15th-Nov 22nd, Thornham April 24th, Waxham May 5th-11th and Yarmouth Sept 25th.

Spotted Flycatcher: Recorded April 30th (Sheringham) to Oct 12th (Holkham Meals). 100+ at Holkham Meals Aug 17th.

Red-breasted Flycatcher: One spring record: Blakeney Point May 17th/18th, arriving two days earlier than one at same locality in 1985! In autumn Cley Sept 7th, Blakeney Point Sept 14th and Oct 12th, Holkham Meals Sept 18th/19th, Oct 5th and

12th, and an exceptionally late bird Sandringham Nov 23rd.

Pied Flycatcher: A small number of migrants early May: Yarmouth 7th/8th, Felbrigg 4th, Salthouse 5th, Holkham Meals 1st-4th and Holme 1/2 1st-4th and 16th. An autumn 'fall' of up to 100 Holkham Meals Aug 17th. Latest record: Blakeney Point Oct 18th.



Bearded Tit: Breeding noted at Burnham Norton (2 pairs), Burnham Overy (2 pairs), Cley, Hickling (36 pairs), Horsey, How Hill (6 pairs), Kings Lynn BF (3 pairs with maximum of 35 Dec 12th), Snettisham (where also 35 overhead Oct 11th and 43 south Nov 2nd), Strumpshaw (3 pairs with maximum of 30-40 Oct/Nov) and Tit-chwell.

Elsewhere: 8 Barnham Broom Fen Nov 9th-Dec 14th with 2 still there Dec 26th, all year Burgh Castle with maximum of 15, 30-40 at Holkham Meals Oct 5th and 5 Oct 15th, parties of up to 35 west several dates Oct 1st-26th at Holme with 3 west Nov 2nd, 2 Reedham March 15th, up to 15 Rockland Broad Sept-end of year, up to 5 Surlingham Church Marsh Jan-March and up to 15 also Surlingham Broad Sept-



end of year. Also exceptionally 2 over Brundall village March 28th and 2 in suaeda Blakeney Point Sept 27th.

Golden Oriole: Usual scattering of records: Grimes Graves May 17th, Holkham Meals May 17th-19th, Ridlington May 18th-20th, Cromer May 24th and Santon Downham June 22nd.

Red-backed Shrike: In Brecks 2 pairs successfully reared young and another pair present but no proof of breeding. Also a female Salthouse June 4th and a male Winterton July 4th-6th, both previous breeding sites. In autumn at Winterton Aug 30th and Sept 9th/10th, Hickling Sept 1st, Blakeney Point Sept 13th, Titchwell Aug 10th, Holme Aug 22nd/23rd, Sept 23rd, Oct 12th-18th and Nov 16th, Hunstanton Sept 26th-Oct 1st and exceptionally Nov 23rd-Dec 1st, and Snettisham Oct 5th-12th. Still retaining a precarious foothold in Breckland. Acknowledgement is due to RAH for the following summary indicating numbers of breeding pairs in Norfolk Brecks since 1974. This includes previously unpublished information:

YEAR	BREEDING SITES	PAIRS PRESENT	SUCCESSFUL PAIRS	YOUNG REARED
1974	7	8	8	23
1975	7	9	5	20
1976	9	11	9	29
1977	8	9	6	20
1978	5	6	1	1
1979	7	7	6	22
1980	5	5	3	8
1981	3	3	2	5
1982	5	5	5	19
1983	4	4	3	11
1984	3	3	2	7
1985	2	2	2	7
1986	3	3	2	6

Great Grey Shrike: In the early months of the year could only be regularly seen at Salthouse Heath where one present until April 19th. Elsewhere: Burnham Market Jan 3rd, Wayford Bridge March 6th-9th, Kelling Heath March 15th, Morston/Stiffkey April 11th and Horsey April 13th. In second winter period long staying birds at Hickling (Oct 3rd-Dec 18th) and Strumpshaw (Oct 5th-Nov 15th). Elsewhere: Burnham Overy Oct 6th-11th, Bodney Dec 28th, Cley Oct 17th, Nov 2nd and Dec 24th, Coston (near Barnham Broom) Dec 19th/20th, Hemsby Dec 20th, Holme Nov 2nd, Lyng Easthaugh Dec 21st/22nd, Rockland Dec 9th/10th, Santon Downham Nov 9th and Thetford Oct 4th.

Magpie: At least 100 at Roydon Common roost Jan 11th. At Gore Point (Holme) 21 roosting in buckthorn Feb 21st.

Carriion Crow: An estimated 700 birds Roydon Common at the roost Jan 11th with 400 there Nov 23rd.

Hooded Crow: In early months of 1986 more records received than in recent years with maxima of at least 10 Roydon Common Jan 11th and 8 Holme mid-March. At Winterton 7 flying north April 18th with a late bird there May 19th and also Caister June 4th. Only a few records of 1-2 birds Nov-Dec.



Lesser Redpoll (uppermost) with two Arctic Redpolls, differentiated by their clear white rumps, white wing-bars and paler, less streaked underparts. This vignette — one of a series — was first published in Dr. Moss Taylor's new book *The Birds of Sheringham*. The status summaries of the majority of migrants in this excellent volume are in fact appropriate to much of the north Norfolk coast.

Raven: One at Sparham June 1st (SB) and later same day at Lyng (NM). The unusual date of this record points to the likelihood of an escape, but a check of possible sources proved negative.

Brambling: Large flocks at Houghton, where 750 Jan 12th, Harpley where upto 500 in Jan, and Pentney where upto 500 in Feb decreasing to 100 by mid-April. Late migrants at Wells (East Hills) May 20th and Pentney June 5th.

Serin: A male and female at Holme April 25th, the latter also present next day. For at least the second-year running and undoubtedly the same bird, a male at Wells Town/Holkham Meals May 1st-Aug 17th.

Siskin: Flocks of at least 100 Tottenhill GP Jan 12th and 120 Thetford Dec 4th. A pair summered at Holkham Meals and a pair bred unsuccessfully at Fritton where a Jay took the young.

Twite: In first-winter period largest counts 230 Blakeney Feb 19th and 442 between Wootton and Lynn Point Feb 27th. A late departing bird Breydon April 28th-May 2nd and exceptionally 2 Blakeney Point June 7th. A very early autumn arrival Snettisham Aug 18th. In second-winter period counts of 250 Warham Oct, 450 Burnham Deepdale Nov and 250 Brancaster Dec. Inland records from Ten Mile Bank, where 8 Feb 16th and 6 Nov 26th; Hickling, where 6 Feb 20th; Surlingham Church Marsh March 30th; Black Horse Drove 20+ April 8th and Welney Oct 22nd.

Mealy Redpoll: Fairly widely distributed in early months of year with counts of 15 each at Antingham, Burnham Deepdale, Filby Broad and Winterton, 20 Salthouse Heath March 3rd and 40 Cley March 3rd-6th. Latest record Colney GP April 27th. In second-winter period only a few records: Holkham Meals Sept 27th, Norwich Nov 6th (Sweet Briar Marshes) and 2 Dec 10th (UEA) and Hickling Nov 22nd.

Arctic Redpoll: 1986: Several records awaiting decisions by *British Birds Rarities Committee*.

1985: *British Birds Rarities Committee* have accepted the following records at Holkham Meals: one Feb 18th-March 10th (RHA TTC SJMG *et al*); at least 3 more Feb 20th-24th (JBK *et al*); possibly 6-7 in total Jan 19th-April 7th (BB JBK *et al*).

1984: One Titchwell Nov 12th (JBK).

Crossbill: In Brecks maximum count 40 Thetford Warren May 16th. Also regularly

seen Sandringham in first half of year with maximum of 23 Jan 26th. Only rarely recorded Holkham Meals where largest count 12 July 6th. Elsewhere: Fritton April 30th, Sheringham 2 June 17th and Aug 23rd, Glandford 11 July 13th, Holme April 21st, 15 July 1st and 17 West Oct 12th, and Snettisham small parties April 13th and July 17th.

1985: At Thetford 4 birds killed during year flying into house windows.

Parrot Crossbill: At Wolferton present in varying numbers daily Jan 18th-26th with maximum of 3 males and 3 females (DF *et al*). Again returned to Holkham Meals where 3 Jan 26th, 2 Jan 28th, varying numbers March 2nd-18th with peak of 12 (3 males) on 9th and 2 again May 4th; no evidence of breeding.

Scarlet Rosefinch: A singing male Holkham Meals June 7th (MC). Despite the breeding spread of this species in Northern Europe it remains a particularly rare species in Norfolk. This is only the seventh record, the last being in 1981.



Hawfinch: Only regularly seen throughout most of year at a locality in TF 70 where up to 20 in March and breeding also noted. At Holkham Park only odd birds irregularly present in first-winter period. At East Wretham, a site previously regularly visited by this species, virtually unrecorded during the year. Elsewhere occasional records of 1-2 birds from Attlebridge, Cley, Drymere, Felbrigg, Glandford, Great Hockham, Holme, Ingoldisthorpe, Massingham Heath, Narborough, Northrepps, Ringland, Santon Downham, Santon Warren, Scratby, Thetford, Weeting, Wereham, West Acre and Weybourne.

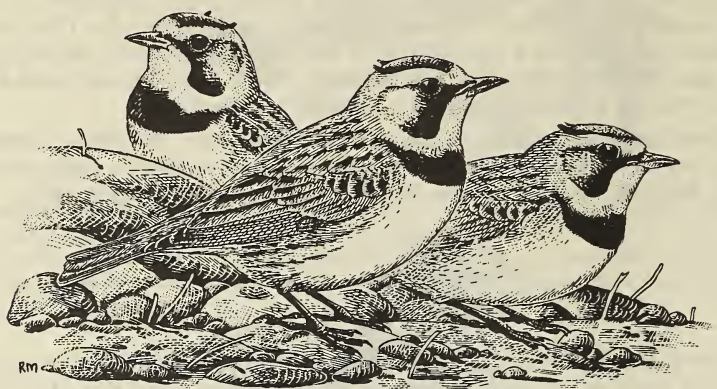
Lapland Bunting: As in recent years largest numbers at Burnham Norton, where peaks in the two winter periods of 60 Feb 15th and 38 Dec 13th. In period Jan-March small numbers also seen at Breydon, Kelling, Salthouse/Cley (where up to 30 end Feb), Titchwell and Snettisham. First seen in autumn Sept 13th at Horsey, with subsequent records from many East and North coast localities (including 19 Cley Nov 15th); also at Snettisham-Wolferton. At Breydon up to 15 in Nov and peak of 35 Dec 14th. Other inland records include one Colney GP Sept 20th, 7 over Filby Broad Oct 13th and 1-2 Buckenham and Cantley in Nov.

Snow Bunting: During winter months largest flock present at Holkham where peak count 410 Nov 29th. Flocks of 1-200 birds also seen at Salthouse, Cley, Blakeney Point, Scolt Head and Holme. An immature male Blakeney Point June 7th/8th. Inland singles at Welney Jan 27th, Strumpshaw Nov 6th and Hassingham Nov 18th, with 2 Buckenham Nov 15th.

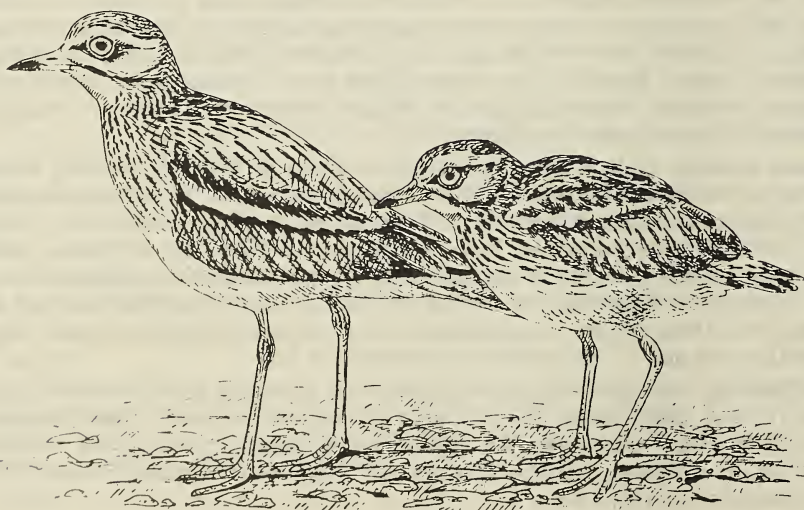
Ortolan: Singles at Burnham Overy dunes Sept 13th (AB) and Weybourne Sept 21st (CL).

Additional 1985 record: male Salthouse May 6th (EMS).

Little Bunting: Holkham Meals Oct 11th to 17th (VJH FAW) and Nov 2nd (PB JMcM). Probably different individuals.



The following, not mentioned in the Classified Notes, were recorded in 1986 (breeding species in *italics*): Canada Goose, Mallard, Red-legged Partridge, Grey Partridge, Pheasant, Moorhen, Coot, Lapwing, Great Black-backed Gull, Stock Dove, Collared Dove, Cuckoo, Tawny Owl, Kingfisher, Green Woodpecker, Great Spotted Woodpecker, Skylark, Meadow Pipit, Dunnock, Robin, Blackbird, Song Thrush, Grasshopper Warbler, Sedge Warbler, Reed Warbler, Lesser Whitethroat, Whitethroat, Goldcrest, Long-tailed Tit, Marsh Tit, Willow Tit, Coal Tit, Blue Tit, Great Tit, Nuthatch, Treecreeper, Jay, Jackdaw, Rook, Starling, House Sparrow, Tree Sparrow, Chaffinch, Greenfinch, Goldfinch, Linnet, Bullfinch, Yellowhammer, Reed Bunting and Corn Bunting.

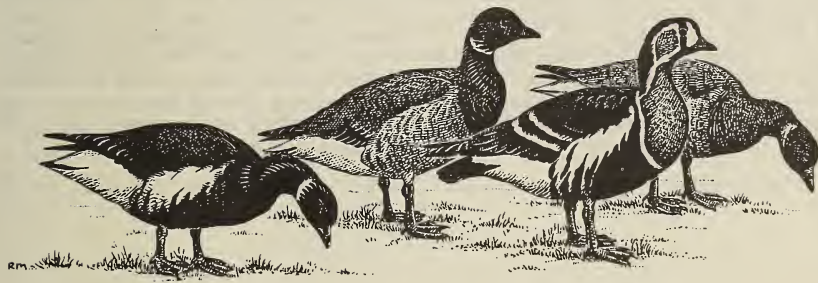


CONTRIBUTORS TO THE BIRD REPORT

S. ABBOTT
R. H. ABERDEIR
MRS. S. M. ACKLAND
P. R. ALLARD
G. A. ALLPORT
R. ANDREWS
C. APPLETON
J. R. APPLETON
P. W. ATKINSON
M. AUSDEN
T. BAKER
T. R. BARKER
A. BANWELL
M. J. BARRETT
P. BAWDEN
A. E. V. BELLARS
N. BETTS
S. BETTS
D. BINGHAM
B. BISHOP
I. BLACK
M. BLACKBURN
M. J. BLAIR
B. BLAND
A. BLOOMFIELD
A. D. BOOTE
J. BOOTE
N. BOSTOCK
T. E. BOULTON
G. S. BOWEN
MRS. M. A. BREWSTER
I. BRITTAIN
D. BROWN
J. BROWN
K. BROWN
D. BRYANT
P. BUBB
D. W. BUCKINGHAM
S. T. BUCKTON
A. L. BULL & MRS. R. BULL
B. W. BURCHAM
J. F. BUTCHER
J. J. BUXTON
LORD BUXTON
C. CAMPBELL
H. CARMICHAEL
P. CARR
A. CARRINGTON
P. CAWLEY
R. CHAPMAN
J. CHARMAN
T. CLARK
M. CLARKE
P. R. CLARKE
R. G. CLARKE
P. CLEMENT
Cley Bird Club
M. COATES
R. COBBOLD
M. COCKER

DR. D. B. COLLINGE
J. T. CORCORAN
E. CORLETT
J. E. CORLETT
D. R. COWBURN
R. CRONK
C. J. CROSS
E. CROSS
R. J. CRUISE
L. DAGLEY
M. C. DICKIE
A. F. DOBSON
P. J. DOLTON
C. DONNER
D. A. DORLING
MISS E. DORLING
G. E. DUNMORE
C. J. DURDIN
K. A. DUTTON
K. R. DYE
A. EARDLEY
A. C. EASTON
G. M. S. EASY
J. C. EATON
S. EAVES
THE LATE DR. E. A. ELLIS
F. M. ELLIS
T. H. ELLIS
G. ETHERINGTON
B. EVANS
L. G. R. EVANS
V. EVE
T. W. FAIRLESS
MRS. C. M. A. FARROW
F. J. L. FARROW
J. T. FENTON
R. FILBY
M. FISZER
B. FORRESTER
D. FOSTER
MRS. O. FOWLER
R. A. FOYSTER
E. FRANCIS
R. FRANCIS
M. FURLOW
MRS. J. E. GAFFNEY
S. J. M. GANTLETT
DR. J. D. GEESON
MRS. J. E. GEESON
N. GIBBONS
D. J. GIRLING
T. M. GIRLING
MR. & MRS. P. A. GLUTH
P. GOODEN
A. GOODEY
G. K. GORDON
C. GOSLING
A. S. GRACE
M. R. GRACE
I. GREEN

P. GREGORY
J. GUEST
DR. R. HADMAN
A. S. HALL
VEN. A. M. HANDLEY
V. J. HANLON
B. HARDING
A. HARRIS
E. J. HARRIS
S. P. HARRIS
K. HARRISON
J. P. HARTLEY
N. HARVEY
I. HAYNES
C. J. HAZELL
J. A. HAZELL
P. HEATH
D. HENSHILWOOD
D. HERRIEVEN
P. HIGSON
R. A. HOBLYN
D. HOLMAN
Holme Bird Observatory
D. HOLMES
G. HORSLEY
C. HOLT
T. HOWES
A. W. HUMPHREY
C. J. HUXTABLE
A. ILLINGWORTH
R. IMAGE
B. W. JARVIS
C. JENNINGS
G. JESSUP
K. JOHNS
I. G. JOHNSON
S. C. JOYNER
G. JUDD
S. JUDD
G. I. KELLY
L. KELLY
F. D. KELSEY
J. B. KEMP
S. W. KENNEDY
DR. & MRS. I. F. KEYMER
MRS. B. KIGHTLEY
C. KIGHTLEY
R. S. KIGHTLEY
P. D. KIRBY
C. A. E. KIRTLAND
DR. P. G. KITCHENER
C. R. KNIGHTS
C. D. KNOTT
J. LAMBOURNE
R. LAND
C. LANSDALL
T. LARWOOD
A. J. LAST
J. M. LAST
D. LESTER



CONTRIBUTORS TO THE BIRD REPORT (continued)

A. LEWIS
DR. J. LINES
S. E. LINSSELL
A. LIVINGSTONE
T. LUBBOCK
R. LUDFORD
R. MABEY
B. J. MADDEN
J. D. MAGEE
J. MAKEPEACE
W. MAKINS
R. C. MANSFIELD
O. MARKS
C. MARTIN
R. MARTINS
D. MAYES
N. MAXWELL
J. MAYHEW
DR. P. A. McANULTY
J. McCALLUM
R. C. McINTYRE
S. C. McINTYRE
N. MEARS
MR. & MRS. J. S. MIGHELL
J. MILLAR
R. MILLINGTON
R. MONTEITH
N. MOODY
B. MOORE
D. R. MOORE
J. L. MOORE
N. C. MOORES
J. MORLEY
P. MORRIS
J. A. W. MOYES
E. T. MYERS
Nar Valley Ornithological Society
National Trust
Nature Conservancy Council
R. NEALE
J. NEGAL
R. NELSON
M. NEWTON

Norfolk Ornithologists Assn
Norfolk Young Naturalists
Norwich Group YOC
G. NUNN
M. O'BRIEN
D. J. ODELL
D. PALMER
P. PARKER
DR. M. PETCH
R. PHILBY
S. PLANT
C. M. POOLE
DR. W. G. PORTEOUS
A. J. PRATER
R. PRESTON
I. PUCKRIN
P. PURCHASE
D. J. RADFORD
J. L. RAINCOCK
M. RAINS
H. RAMSAY
M. READ
J. REED
D. REVETT
J. REVETT
D. RILEY
D. I. RICHMOND
MRS. R. M. RICHMOND
N. ROGERS
DR. N. R. ROGERS
S. ROOKE
S. ROPER
R.S.P.B.
A. T. M. RUCK
D. H. SADLER
B. SAGE
K. SAUL
M. J. SAUNT
C. SAYER
M. J. SEAGO
MRS. S. F. SEAGO
K. W. SELF
N. SELF

B. C. SHELDON
K. B. SHEPHERD
J. C. B. SHUTES
N. SILLS
I. J. SIMPER
M. SMITH
R. A. SPAIN
R. STARLING
DR. E. M. STEELE
P. G. F. STEELE
A. J. STONES
MRS. B. STOREY
L. C. STREET
MRS. B. STUBBINGS
D. TALKS
DR. M. TAYLOR
M. E. TAYLOR
Thetford Natural History Society
R. TIDMAN
W. THROWER
MRS. B. M. E. UNSWORTH
P. VARNEY
A. E. VINE
A. VITTERY
S. VOTIER
M. WADDINGHAM
G. WANT
F. A. WARDMAN
G. WARRILOW
A. WATERMAN
R. WEBB
A. WESTON
I. WHITE
S. WHITEFORD
J. R. WHITELEGG
J. WIGHTMAN
Wildfowl Trust
N. WILLIAMS
J. R. WILLIAMSON
J. LILLIS
F. A. WISEMAN
M. WOOD
R. WYATT

Photographs: Great Crested Grebe (*C. R. Knights*); Dartford Warbler and Spoonbill (*S. Young*); Little Tern (*R. Jones*); Bluethroat (*T. Lubbock*); Mediterranean Gull (*P. Morris*) and Waxwing, Fox, Common Seals and Leverets (*R. Tidman*).

Line drawings: 417 Mandarins and 435 Wigeon (*N. Arlott*); 453 Waxwings and 458 Lesser and Arctic Redpolls (*B. Bland*); 454 Pallas' Warbler (*N. Borrow*); 410 Hen Harriers (*M. Elliot*); 414 Little Tern (*P. Haddon*); 420 White-billed Diver (*J. A. Hazell*); 464 Red Deer, 466 Coypu, 467 Rabbits, 470 Roe Deer and 471 Foxes (*J. Last*); 401 Firecrest, 402 Serin, 403 Sooty Shearwater, 413 Lesser Crested Tern, 418 Woodlark, 423 Osprey, 430 Red-breasted Flycatcher and Dartford Warbler, 435 Green-winged Teal, 436 Red-crested Pochards, 439 Quail, 440 White-rumped Sandpiper, 441 Broad-billed Sandpiper, 442 Buff-breasted Sandpiper, 444 Spotted Sandpiper and Red-necked Phalarope, 445 Juvenile Long-tailed Skua, 448 White-winged Black Tern and Little Auks, 449 Wryneck, 450 Lesser Spotted Woodpeckers and Richard's Pipit, 451 Tawny Pipit, 452 Citrine Wagtail and White Wagtail, 456 Red-backed Shrikes, 459 Hawfinch, 460 Shore Larks and Stone Curlews, 461 Red-breasted Goose and 465 Great Sperrn Whale and Snow Buntings (*R. Millington*); 416 White-winged Lark (*J. A. W. Moyes*), 456 Bearded Tits (*C. Park*) and 405 Male Montagu's Harrier mobbing female Marsh Harrier, 408 Common Terns, 424 Sandwich Terns and 432 Little Egret (*the late R. A. Richardson*).

NORFOLK MAMMAL REPORT 1986

Editorial

The editor is pleased to present the 31st Norfolk Mammal Report.

The dead male sperm whale washed up on the north coast of Norfolk must be the mammal of the year. Although it can hardly be described as a resident Norfolk species, being dead and beached it was easily identifiable so is added to the modest list of previous records. John Goldsmith has been delving into the archives and presents his findings in a separate article.

We are particularly pleased to welcome Dr. Diana Bell, School of Biological Sciences, University of East Anglia, to these pages. Her paper on the rabbit is the main feature of this edition. Dr. Bell has studied Lagomorphs world-wide and published on their social structure and behaviour.

Much interesting work in natural history is going on in the University of East Anglia. In addition to the research, work projects and data-collecting expeditions to other parts of the globe originate there. Unless we have a specialist interest it is all too easy to be unaware of what is happening on this our own doorstep. Surely local naturalists must aim to forge stronger links with the appropriate schools of study. Both sides have much to offer each other.

It may be that we do look at that doorstep but concentrate our attention on one small corner and fail to see the whole let alone what lies beyond. A wider world stretches out not just in space but in time past and time future. What we are and what we have with us here now relate to all of these dimensions. These thoughts are stimulated by the subject of our feature article, the European rabbit, *Oryctolagus cuniculus*. Part of the scene at home and in the field since childhood, we all assume we know what there is to know about the species. We have watched them, tended them, shot and eaten them, loved and cursed them. Yet how much do we really understand their lives and how do they relate to the other species not found here? How indeed did this one species come to establish itself in this and other countries and bring about the singularly tangled web of relationships we weave around it?

The rise and demise of another mammal introduced by man for his own purposes, the Coypu, *Myocastor coypus*, has been chronicled in successive reports, largely through the pen of Dr. Morris Gosling of the Coypu Investigation Centre. He brings us up to date on the situation within the appropriate section of the classified notes. We hope to be able to publish a fuller, separate feature in a later edition.

Now that it is on the verge of extinction here, there are inevitable expressions of regret. A mammal gained, a mammal lost and the story compressed into a tiny fleck in the eye of time. It is a foreshortened example of our influence on all species. Not a mammal in Norfolk is unaffected by pressures we apply deliberately or just by chance. It does of course happen that we change certain habitats to the advantage of some.



Lifting our eyes from our notebooks we realise that the pressures on our county are magnifying yearly at an increasing rate and will bring about disastrous changes unless checked. All the more reason for us to record acceptable data so that collectively we may present informed arguments rather than baseless speculations and surmisings. Much of what we consider the best of Norfolk is linked with its wildlife and as recorders we have a definite role to play in the struggle to safeguard its future. We deal not in abstract concepts but in the lives of fellow creatures.

Our thanks go to all of our contributors. We mention here Dr. Diana Bell and John Goldsmith for their articles and Dr. Morris Gosling for his report on coypu. Percy Trett gave considerable help with marine mammals and Rex Whitta, Wildlife Ranger, described the mammal life in Thetford Forest. Thanks are also due to John Last for further delightful vignettes and to Roger Tidman for superb illustrations. A full list of contributors appears at the end of the report. It may be that names have inadvertently been omitted. This did occur last year and we do apologise. No name is deliberately withheld and we are grateful for even the smallest scrap of information. Time and postage unfortunately do not allow us to send individual replies and thanks.

It would be appreciated if contributors could send in data for the 1987 report *by the end of January 1988*. Later information is added to the card system right up until the time of compiling the classified notes, but it does help a busy editor to sort it all out if it is on his desk early in the year.

It is also very helpful if all notes on a species are listed together so that they can be transferred to the species card. Contributions on more than one species should if possible follow the order of the classified list. Exact locations, by full descriptions or better still by Grid Reference numbers are invaluable for compiling the distribution maps.

We continue our series of distribution maps and this year cover three vole species. We emphasise these are indications of recorded locations and may not be the full story. We hope and expect our mammal recorders will do their best to fill in the gaps and bring us up to date so that more accurate versions can be published later.

The address to send contributions is: Rex Hancy, 124 Fakenham Road, Taverham, Norwich NR8 6QH. The telephone number for 'hot' news and queries is Norwich 860042. The ever-helpful John Goldsmith can be contacted at Norwich Castle Museum, Natural History Department, on Norwich 611277 ext. 286 to answer queries on all vertebrate species.



Spoonbills again graced coastal reserves including this adult at Titchwell. Remarkably, 55 pairs of Little Terns fledged 96 young at Yarmouth.





Close-up views of Common Seal herds is one of the highlights when visiting Blakeney Point. Enchanting Leverets; are they decreasing?



The Great Sperm Whale

John Goldsmith



Over the weekend of 29th/30th November 1986, what was unquestionably the biggest mammal find of the year appeared between the tides in Holkham Bay. A Great Sperm Whale (*Physeter macrocephalus*), the first in Norfolk for over two centuries was washed ashore already dead — rather than stranded alive and, following its announcement on the 'twitchers' C.B. radios, and appearing in the *Eastern Daily Press*, was visited, prodded, poked, and even clambered over by many hundreds of sightseers. The view from the dune top on the afternoon of 1st December reminded me of a human ant-trail leading to a dark sugar lump on the foreshore nearly a mile out, and each returning with cameras full of pictures.

Local records for this species go back to the early seventeenth century with a reference in the churchwarden's accounts for St. Nicholas' Church, Great Yarmouth, when eight shillings was paid for the painting of a chair known as the 'Devil's Seat' fashioned from the basal portion of a sperm whale skull. Thomas Browne recorded others in June 1626 — a stranding at Hunstanton; 1646 at Holme-next-Sea or Hunstanton one or more cast ashore, and one at Wells with "not far off, eight or nine, cast ashore and two had young ones after they were forsaken by the water". In May 1652 a Mr. Arthur Bacon wrote to Sir Thomas Browne about a sperm whale cast ashore at Yarmouth. The February of 1753 produced an incursion of a dozen along the east coast including two near King's Lynn.

The world distribution of sperm whales includes most oceans north and south of the equator within the 40° meridian where schools of 15-25 females, and young, are the norm. In historical times groups of a hundred or more could be encountered. One optimistic estimate was of a world population of half a million animals, but in 1963 alone the world 'catch' was over 30,000. The oldest males roam alone for the greatest part of the year regularly straying into northerly waters. I believe that our Wells animal had wandered into the North Sea after a more northerly excursion and then found insufficient food in our colder, muddy waters.

The Wells specimen was a male and measured just over 16 metres in length from the blunt snout on its enormous head to the fork in its tail, and had an estimated weight of 50 tons. The general body colour was a dark steely grey, but around the

head were pale lines and blotches. The former are said to be the result of injuries inflicted by the suckers of squid as they try to escape from the mouth of this creature, which consumes up to a ton of food per day. The normal diet consists of cephalopods (cuttlefish, squid and octopus) but jellyfish, lobsters, small sharks and a wide variety of fish have been taken from stomachs, along with accidental items like boots, buckets, plastic bags and quantities of sand.

The diving ability of these whales is phenomenal. They have become entangled in submarine cables at 1,000 metres deep and one was tracked to 2,250 metres. The old time whalers rule of thumb was that for every foot of whale it will breathe once at the surface and spend one minute submerged, so in life our leviathan could have submerged for 50 minutes or more at a time.

The 46 or so teeth of the sperm whale in the lower jaw close into corresponding sockets in the upper jaw. It is these teeth that salty sailors practised 'scrimshaw' on during long voyages, incising sailing ships and saucy sirens in black onto the off-white enamel of the tooth. Pictures in books of Jonah's Whale, Moby Dick, and sperm whales proper, always illustrate a seemingly puny lower jaw for an animal of this size. It was therefore a surprise to me to see just how small the jaw full of teeth was — in relation to the creature as a whole.

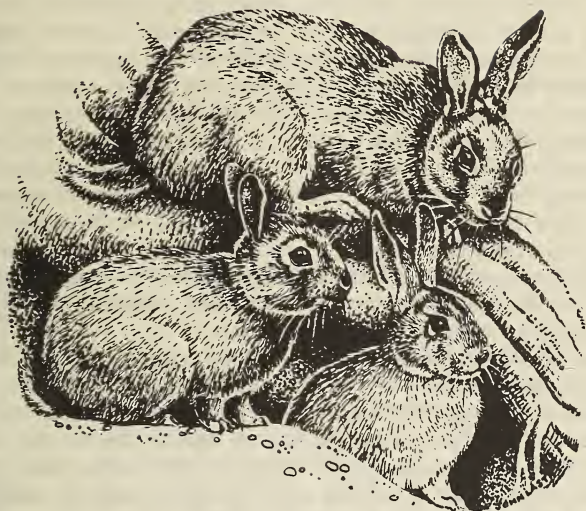
District Councils are obliged to solve any menace to the public's health — including disposing of dead whales and dolphins on the beach. Disposal of this monster was to be no mean task, but was accomplished over several days by the ever cheerful J. R. Baxter who runs a knackers yard near King's Lynn. Mechanical diggers and a fleet of skips ferried the unfortunate beast in pieces to be processed into oil and fertiliser — all except the skull, which being too heavy to move, was buried where it was on the beach. Odd fragments of broken teeth and other remains will undoubtedly turn up in the years to come.

At a time when cars, classrooms and offices are often adorned with 'Save the Whale' stickers, it seems sad to see the loss of even one of these impressive beasts in our county. The cessation of cetacean slaughter *now* is really the only way to ensure the global survival of the large whales. Local naturalist Thomas Southwell in his book *'Seals and Whales of the British Seas'* published in 1881 expressed concern over the large numbers killed and the "fearful amount of suffering". How little we as a race have evolved away from the caveman image in our attitude to animals in the past century!



The European Rabbit

Dr. Diana Bell



Three species of rabbits and hares occur in Britain, *Oryctolagus cuniculus*, the European hare and *Lepus timidus* the Mountain hare. Many people are surprised to learn that the family Leporidae to which these familiar species belong contains another 41 species of rabbits and hares which occur in a variety of habitats around the world.

These species are distributed across 10 genera and the features of 7 of these are sufficiently different for them to merit classification in a genus of their own (Table 1). The main differences between the true hares and jackrabbits (in the genus *Lepus*) and other rabbits are associated with the ways in which they avoid predation. Hares and jackrabbits use their long limbs to try to outrun predators while the generally smaller and shorter limbed rabbits seek cover in dense surface vegetation or in underground burrows. Hares also produce more precocial, fur covered young which disperse from a surface nest 2-4 days after birth while rabbits tend to give birth to less well-developed young after a shorter gestation. Certain features appear to be common to all leporids however. All those species studied so far for example, appear to suckle their young with highly nutritious milk for only one brief period of under five minutes once every twenty four hours.

Information compiled from a 1981 checklist of reported status in the wild (Table 2) shows that 5 of these 44 species have been designated as 'endangered' by international conservation bodies, and another 2 species are listed as 'rare' (the Chinese Yarkand hare and the Tehuantepec jackrabbit from southern Mexico). The status of 14/44 (32%) is unknown, while 23/44 are described as 'locally common'. Few of these population estimates appear to be based on sound quantitative evidence however, and it could well be that the number of rare/endangered rabbit and hare species is in reality somewhat higher. The large percentage of species in the 'unknown' status category reflects the fact that our scientific knowledge of leporids remains surprisingly fragmentary. We know a great deal about the five or so species

of economic importance to man as pests or game animals (eg the European rabbit and the Eastern Cottontail, *Sylvilagus floridanus*) but the majority of rabbits and hares remain to be studied in detail.

To reinforce the point that very few of these leporids enjoy the widespread distribution of the European rabbit let us focus for a moment on the contrasting plight of the 5 species officially listed as 'endangered'. Each of these species is associated with a rather specialised habitat and in all 5 cases the destruction of these specialised habitats by man appears to have been the major reason for their decline in numbers. Large areas of the mountain forest habitat of the Sumatran rabbit were removed to plant coffee earlier this century for example and this deforestation has recently been accelerated by a programme to resettle massive numbers of immigrants from neighbouring Java. Indeed it is possible that this, the only striped leporid, is already extinct since the last positive sighting was in 1922. In the case of the Bushman hare from S Africa its specialised riverine scrub habitat has been removed to facilitate irrigation of adjacent crops whilst large scale logging of the tropical forests on two of the Japanese Amami Islands appears to have been primarily responsible for the demise of the endemic Amami rabbit, *Pentalagus*.

Our recent survey of the Mexican volcano rabbit suggests that the distribution of this species is now restricted to a total area of only 280sq km of zacaton (bunchgrass) habitat occurring at between 3,000-4,000m on two volcanic sierras close to Mexico City. Here the two most important agents of habitat destruction appear to be overgrazing by cattle and sheep and forest fires but other factors such as encroaching agriculture and property developments and the exploitation of zacaton for roof thatch and brush making have also taken their toll.

The tall thatch grassland habitat of *Caprolagus*, the hispid hare which was previously distributed in a broad tract across the northern Indian sub-continent has been similarly cleared for agriculture and human settlements. It now persists in only a few scattered patches in Wildlife Reserves, National Parks across that area. All seven surviving populations of hispids remain at risk because of the management policies of cutting and burning these grasslands during the dry season. These practices have dire consequences for the smaller, less mobile species like hispids which are dependent upon the cover provided by these dense, tall grasslands.

In contrast to the apparently specialised habitat requirements of these endangered species, the opportunistic European rabbit has been able to colonize a variety of habitats ranging from arid deserts to sub-alpine valleys. The species is thought to have evolved on the Iberian peninsula but its deliberate introduction to various islands and continents by nineteenth century empire-builders has resulted in the extensive world-wide distribution we see today.

The European rabbit was first introduced into Britain in the 1100s but population numbers did not start to increase substantially until the agrarian changes in the eighteenth and nineteenth centuries. The advent of myxomatosis in the early 1950s is estimated to have killed 99% of what was by then a major agricultural pest. Residents of East Anglia will be fully aware of the dramatic increase in rabbit numbers in recent years as the species has developed increasing immunity to the myxoma virus. 1985 surveys by MAFF found rabbits in 90% of the sites inspected in England and Wales and put the estimated costs of rabbit damage to agricultural crops at around £100 million per annum and suggested that these could easily rise to £250-400 million in the near future.

To understand why the European rabbit evolved its prolific breeding capacity (females in our free-living study colony at the University of East Anglia for example,

Table 1: Family: LEPORIDAE — the rabbits and hares

Table 2: Summary table of reported status in the wild state

Genus	hares and jackrabbits	No. of species	Genus	Locally common	unknown	Endangered/ rare	total
<i>Lepus</i>	hares and jackrabbits	21(?)					
<i>Sylvilagus</i>	American cottontail rabbits	13	<i>Lepus</i>	11	8	2	21(?)
<i>Pronolagus</i>	red rockhares (Africa)	3	<i>Sylvilagus</i>	10	3	—	13
<i>Oryctolagus</i>	European rabbit	1	<i>Pronolagus</i>	—	3	—	3
<i>Poelagus</i>	Bunyoro rabbit (Africa)	1	<i>Oryctolagus</i>	1	—	—	1
<i>Caprolagus</i>	Hispid hare/rabbit	1*	<i>Poelagus</i>	1	—	—	1
<i>Bunolagus</i>	Bushman hare	1*	<i>Caprolagus</i>	—	—	1	1
<i>Nesolagus</i>	Sumatran hare/rabbit	1*	<i>Bunolagus</i>	—	—	1	1
<i>Pentolagus</i>	Amami rabbit	1*	<i>Nesolagus</i>	—	—	1	1
<i>Romerolagus</i>	Volcano rabbit	1*	<i>Pentolagus</i>	—	—	1	1
			<i>Romerolagus</i>	—	—	1	1
*Endangered				23	14	7	44

Compiled from checklist presented in 'Proceedings of the World Lagomorph Conference, Guelph (1981)' Ed. K. Myers & D. C. McInnes, University of Guelph.

produce an average of 10-15 young each per annum) one needs to consider the selection pressures operating in its ancestral home on the Iberian peninsular where recent studies have shown that it is preyed upon by some 38 species of mammalian and avian predator. Its high reproductive potential can thus be viewed as a consequence of strong predation pressures; by introducing it to countries like Britain and Australia where these predators are absent this potential goes unchecked populations of pest-scale are inevitable.

These negative effects of rabbit grazing on agricultural crops must be balanced against the very positive role that the species plays in helping to maintain natural grasslands and lowland heaths such as those found in the Breckland. Close grazing by rabbits is required to maintain open areas of species rich sward in which so many of our rarer plant and insect species flourish. Intensive grazing and soil disturbance by rabbits is similarly required to produce optimal heathland breeding habitat for that characteristic bird of the Breckland the stone curlew. A reduction in rabbit density results in the loss of this vegetational diversity due to the rapid invasion of scrub and rank grasses. Changes of this kind were observed throughout the country following the crash in rabbit populations when myxomatosis first arrived in Britain.

Alternative methods to myxomatosis are currently being sought in an effort to control rabbit damage to agricultural crops. Ideally these alternative control techniques should not only be species-specific but also site-specific if we wish to avoid yet further impoverishment of those habitats where rabbits are the crucial 'managers'.



Classified Notes



INSECTIVORES

It is quite usual now to receive accounts of Hedgehogs (*Erinaceus europaeus*) appearing in every month of the year. A much travelled family consortium of recorders who make regular day and night-time journeys across the county omitted only December but this gap was filled by the many reports of young hedgehogs still turning up for food in gardens. Month by month recordings are generally agreed that July was the peak month for sightings along the roads. Perhaps this is also peak time for family feeding but it also coincides with long hours of daylight. Down in Breckland G. J. found that road casualties were not at their worst till August had passed.

Our Gorleston recorder reports few in that area and at the other end of the county, none were noted in Snettisham. These are probably unusual records for there seems to be little fear for the hedgehog's future.

There was a definite shift of the seasons to later in the year. The mild autumn meant very many late broods and almost as many telephone queries on looking after end-of-season underweight young. Many of these youngsters managed to build up quite rapidly due to the emergency aid provided. The hedgehog has become the mammal equivalent of the blue-tit when it comes to supplementary feeding in the garden!

Magpies are becoming a nuisance in many ways and not to be encouraged. In Attleborough they were seen to take young hedgehogs. A less natural hazard is the litter left about the countryside and suburbs. Much of it can be very dangerous. We hear of hedgehogs trapping their heads in opened cans and in Thorpe St. Andrew one was trapped in a tangle of nylon. It was rescued from its restrictions but died later. The deliberate dumping of rubbish is reprehensible for more than aesthetic reasons.

The Mole, *Talpa europaea*, continues as prolific as ever, so much so that it is generally ignored until it causes an eruption in the seedbed or lawn. A. B. on a bird census at Cranworth heard a series of explosive shrieks. A good five yards away the ground heaved where two moles were engaged in an underground altercation. This is a known phenomenon but few are privileged to witness it.

Twice as many records of Common shrews *Sorex araneus* as Pygmy shrews *Sorex minutus* were taken from contributors' notes but a clearer breakdown came from G. J. who had four times the number of the one as against the other. Habitat requirements play their part and are reflected in the figures but both are well-recorded species and almost always feature in owl pellet analysis. The habit of our cats to catch them for sport rather than food also boosts the records. This latter method can lead to complications. Cat-loving mammal recorders in Hempsall and Woodton both report shrews in the kitchen!

The future for these two must be reasonably healthy but the Water shrew *Neomys fodiens* seems to be more restricted in its range. We received reports from Surlingham, Corpusty, Little Barningham and Aylsham. This is a very restricted list from a large county with so many waterways. The presence or otherwise of water shrews must be a fair indication of the quality of the water to sustain a flourishing flora which in turn supports the invertebrate life on which the shrews will feed. While not at the apex of the food pyramid, the water shrew is well up the layers and needs a plentiful supply of food species to sustain it.

CHIROPTERA

The efforts put into publicising the plight of these small mammals has had some effect. Harassed householders gave our bat experts no time to rest last summer so the cloak of fear and mystery shrouding the bats has had at least one small corner lifted. Even many who still regard bats with a high degree of caution and suspicion are careful not to cause them actual harm. Sadly, the householder himself may be the unwitting accessory to the use of some noxious substance that can do tremendous damage. The case against the use of some of these brews has yet to be put forcibly enough to commerce and industry.

It is the upsurge of interest fostered by the pro-bat propaganda that has brought in so many records. The great majority are naturally of the Pipistrelle *Pipistrellus pipistrellus*. This is our most abundant species and the one found so regularly in houses so is the species most likely to benefit by the growing good will. The danger is that the public's eyes and efforts are drawn in this one direction so they overlook the possibly graver problems for other, less house-dependent species whose habitat continues to be destroyed.

The Long-eared bat *Plecotus auritus* continues to be found in Thetford Forest. Other reports came in from Blakeney Point, Hunworth, Corpusty, Shingham, Gayton Thorpe and Flitcham.

Noctule bats *Nyctalus noctula* are easier to pick out because of their size. Old colonies continue to be recorded. Reports were from Surlingham, Rockland, Brundall, Old Costessey, Barnham Broome, East Tuddenham, Burgh Common, Cockley Cley, Shingham and Flitcham.

Other bats need special expertise. Most records are from surveys of roosts. Even so we have very little information coming in. A Natterer's bat *Myotis nattereri* in the East Tuddenham ice-house is reported again. It is a site regularly inspected at the appropriate time of year. (A. B.)

The Serotine colony *Eptesicus serotinus* at Ormesby appears to be holding its own.

Daubenton's bat *Myotis daubentoni* was notable for its near absence from the record card until a late report came in. This described a winter roost in Mid-Norfolk where the numbers have multiplied ten times in six years. On the face of it this is very good news indeed but the contributor believes this is more likely to be the result of being ousted from other hibernacula. This is a good example of the difficulty of assessing the present let alone the future for these species.

LAGOMORPHA

A sudden increase in the Hare *Lepus capensis* population was noted in Attleborough where our informant found adults unafraid enough to visit the lawn on quiet summer evenings.

This more positive prospect is reflected in accounts from other parts of Norfolk. The general increase in Breckland outside the forest matches the situation inside where there has never been a falling off. No doubt the cessation of hare shoots in many districts has helped the recovery.

None were seen in Snettisham itself but a slight increase was noted in an area within a ten mile radius of that centre. This has been a notably deficient district for some time.

In spite of this generally more optimistic account, J. G. saw fewer hares in 1986 than in 1985. Her notebook picks out a very small part of SW Norfolk as the top hare sector of the county.

P. T. also expresses disquiet over the numbers in Ormesby and the surrounding area. He has marked and studied hares there for many years and has come to expect the population to go through a cyclic rise and fall. The expected rise is now long overdue so we must hope for better things next year.

Two accounts of hares being pursued by hen-harriers have been received. One described an adult hare avoiding the predator that was not about serious business but the other gives a detailed description of the bird taking and consuming a leveret.

A stranger story from Sea Palling tells of a hare chased from the sand dunes by a dog. It ran straight into the sea where it drowned a few yards off shore.

The Rabbit *Oryctolagus cuniculus* continues to prove the species' remarkable power of recovery in spite of the ravages and multiplying strains of myxamatoxis. Active and vigilant control keeps them in reasonable balance but cannot be relaxed.

Myxamatoxis peaked in autumn but continued into the severest of weather conditions. At Broome a sufferer was killed to save it further distress but the ground proved too hard to dispose of the body.

Up to three black rabbits were reported to G. J. by up to six people all within three miles of Black Rabbit Warren! A very pale sandy coloured specimen was seen on Weavers Way, Aylsham, on June 26th.

RODENTIA

Red squirrels *Sciurus vulgaris* still present themselves to the fortunate few in Thetford Forest. The population is widely scattered but provides the best hope we have for the survival of the species in Norfolk. Recent sightings in Snettisham and Felbrigg Park confirm a short list of other locations but this is within the context of only five contributors mentioning red squirrels and one of them states that it is no longer seen at Emneth!

"You name the location and they are there", can refer only to the Grey Squirrel *Sciurus carolinensis*. There are obvious corners of the county where the habitat is entirely unsuitable and open stretches of arable land where they are unlikely to be found, but generally speaking it is a fair comment. It is an animal with the ability to take full advantage of the typical suburban landscape we love to create and moreover puts itself in a position where it is likely to be noticed.

"Our population is vast", we are told by a contributor who loves to watch them. The other side of the coin is referred to in a Breckland report that cites trees being damaged and many were seen to sit predaciously on bird boxes. Destruction in Stratton Strawless is added to the indictment.

There are compensations. "... a-top a very twiggy briar, eating hips. Looked beautiful in sunlight." We all set our own price we are prepared to pay for the presence of these graceful newcomers.

"Six at a time feeding on beech-mast by the roadside on a quiet morning."

The developing interest in small mammals is stimulated and aided by the improving quality of popular literature on the subject. More observers are able to make positive identifications. The 'short tailed field mouse' has gone and the cards on Bank vole *Clethrionomys glareolus* and Short-tailed field vole *Microtus agrestis* are filled with a much healthier list of observations.

Changes in land use have a profound effect upon local populations. The editor's

Vole Species in Norfolk

5km square distribution maps based on information received from contributors to the Mammal Report, 1974 to 1986.



a) Bank vole
Clethrionomys glareolus



b) Short-tailed vole
Microtus agrestis



c) Water vole
Arvicola terrestris

garden has not produced a field vole for many seasons and the till then ever-present bank vole did not feature last year. G. J. also found fewer bank voles in Breckland. M. A. B. saw more bank voles than field voles in her Saxthorpe garden. Owl pellets produce a substantial quantity of records and cat catches bring in more valuable evidence of otherwise unrecorded populations. A good example is from Edgefield Green. Live animals are sometimes found. The Bank vole running over the road at Blicking is the best example this year of that.

The continuing slight increase of reported Water vole *Arvicola terrestris* sightings that has been going on now for several years must confirm their improved status. It is not reasonable to expect them to regain their position before the decline seen during earlier years of the report. So much depends on the condition of the water and the quality and abundance of the associated vegetation. Many sites are listed from Breckland and plenty of holes are found along the Bure in Corpusty. There they can be seen from time to time in the centre of the village. That the proximity of humans does not deter them from going about their business is further demonstrated by the repeated sightings under the bridge over the Yare at the University of East Anglia. At East Tuddenham one was watched for some time as it chewed off a reed some three feet tall. Having completed its task it hauled it off to a landing stage where it could eat in peace.

We hope the map published on the distribution of this species will stimulate contributors to sit quietly by the river bank to confirm the presence in further localities of this easily observed and attractive mammal.

The Wood mouse *Apodemus sylvaticus* is by far the commonest of our mice, proving able to adapt to changing conditions. Cats frequently bring dead and sometimes living evidence of their presence to the house. Many more make the deliberate move into buildings during autumn to take advantage of the shelter we provide. The keen-eye can sometimes see them scurrying out of hiding to pick up scraps of food during daylight hours at picnic sites and in gardens of public houses. The ability to make use of what man inadvertently offers without becoming dependent on these artificial aids is the mark of the successful mammal in the modern world.

If this is true of the Wood mouse, what can be said about the Yellow-necked mouse, *Apodemus flavicollis*, such a close relative? We have our brief flurries of excitement and then this grander version of our common wood mouse disappears again. Not one was reported for the year 1986 so it remains one of our rarest mammals. We have always recognised the fact that we are slightly beyond the recognised northern limit of its range but no satisfactory reason for this has so far been produced.

The Harvest mouse *Micromys minutus* also continues to intrigue. The main areas are certainly Breckland and that section of north Norfolk centred upon Corpusty and Saxthorpe. Sightings, nests and owl pellets confirm their presence in both areas with more than one contributor sending records in each case. Others were found at Surlingham and at Hempnall, where that regular contributor, the cat, brought them home. One was found in an owl pellet at Drymere during the first days of January 1987 so it can be counted as a 1986 living mouse!

We have believed that more careful observation and examination of standing grasses in winter would reveal their presence in other districts but it begins to look as if their distribution is really becoming very patchy indeed. We may publish maps next year for the mice to stimulate another, closer, look.

"It may seem incredible but I saw only three all year", says G. J. Not so incredible when one looks at the record card for the House mouse *Mus musculus* for the past

few years. It is interesting to note that in the 30 years residence here the editor has found only one at this address whilst recording large numbers of wood mice in the garden and outbuildings.

The House mouse is very much more dependent on the artificial conditions we produce. When the unthreshed stacks of corn were built each autumn this mouse multiplied to an amazing degree. Storage methods for threshed grain in those days also helped to keep the numbers up.

One House mouse did live up to its name on an even grander scale. It was found in Reepham Town Hall.

The Brown rat *Rattus norvegicus* is highly adaptive and can multiply very quickly but on the other hand steps are usually taken very quickly to reduce the population or even eliminate it so it is very difficult to assess its true status. The record card is full of references but many of them say that fewer have been seen. It is true that fewer roadside corpses have been reported for the year. Only one contributor listed the rat as very common. While modern conditions prevail it is most unlikely that we will see the rat 'armies' witnessed by generations gone by.

The Black rat *Rattus rattus* has not been recorded in Norfolk for many years.

The Coypu *Myocastor coypus* card wears a very neglected air. There is a handful of references but the big question is will next years card be completely blank? Dr. Morris Gosling gives us his usual up-to-date summary of the situation:

1986 was the sixth year of the current campaign against coypus. In spite of intense trapping (about 205,400 trap nights by Coypu Control trappers) only 174 coypus were caught. 143 (82%) of these were trapped by Coypu Control trappers and the remainder were killed by other people, mainly landowners or gamekeepers. These low numbers suggest that the population has been greatly reduced by the trapping effort over the last six years and this has been confirmed in detailed field surveys by Ministry of Agriculture, Fisheries and Food research staff. Just how many animals remain is difficult to estimate but reconstructions of the population by the Coypu Research Laboratory suggest that there were less than 20 adult females by the end of 1986. To put this in context, the same technique gave an estimate of almost 3,000 adult females in April 1981 when the campaign started.

In spite of these figures it is still far from certain that coypus can be eradicated. Captures in 1986 were thinly spread over the whole of the known range so that trappers must continue to search and trap over a very wide area. Conversely, eradication does now seem possible and there is a precedent for the removal of an introduced semi-aquatic rodent. Muskrats, *Ondatra zibethicus*, which like coypus cause serious environmental damage, were established in several areas of the British Isles before being completely removed by trapping in the 1930s. It goes without saying that the world status of a species should be considered before any local attempt to eradicate an introduced, pest, population; fortunately, both coypus and muskrats are still abundant in their native ranges.

CARNIVORA

Foxes *Vulpes vulpes* were seen regularly along the A47 by a night-time traveller. Similar reports came in from Breckland and Thetford Forest. In the latter the population seems to be in reasonable balance and does its share in keeping the rabbit under control.

Another tale of a night-time encounter comes from the Marsham to Reepham

road. A pair of shining eyes picked out by the car's headlights did not immediately disappear into the hedge as usual but seemed to wander rather aimlessly. Our contributor slowed as did the driver of a car coming in the opposite direction. Both of them had a very clear view of a very confused fox cub, roughly half grown. It was brought quickly to its senses by a parental bark from the adjacent field and ran through a gateway to rejoin the family.

A would-be cook in Welbourne left a hare he was preparing on the kitchen sink while he moved away into another room. He went back when he heard a saucepan rattle — just in time to see a fox drag the hare through the open window and make off with it.

The Badger *Meles meles* hangs on its central stronghold and in the north-west outpost but we are unlikely to see any major resettlement of other districts. There have been some signs of activity in Thetford Forest but nothing really positive. The badger found dead at Pentney inflated the card by being mentioned by three contributors.

North Norfolk references may point to a wandering badger on the move.

One of the most exciting reports of the year concerned the two badgers fighting within the boundaries of a housing estate in Dersingham.

A great deal of effort continues to be devoted to the Otter *Lutra lutra*. Reproductions and augmentations of low populations produce some hopeful signs, but apart from these positive reports from the Otter Trust there is little encouragement from other areas where the otter was once well represented. There are still Norfolk waters capable of supporting them and we must all be prepared to do all we can to prevent further reduction of habitat and the species.

Stoats *Mustela erminea* and Weasels *Mustela nivalis* once again fill their respective record cards. One reference suggests a greater number of weasels which suggests a plentiful supply of prey species where they were noted. His note goes on to describe a weasel striving mightily to drag a rabbit! It can be assumed that where cover and food exist these two carnivores are present.

On Feb 22nd two stoats in ermine were seen hunting a line along the edge of a wood near North Creak. At the other end of the year it can be assumed another ermine was by Breydon although it was not seen until the early days of January 1987.

The north coast reserves can be troubled in some bird-nesting seasons by stoats and in 1986 protective measures had to be taken again on Scolt Head Island.

Further along the coast we read of the extravagant display put on by a stoat on the metal-topped bridge at Holme. It is described as behaving like 'a demented ballet-dancer'. Three juveniles had the excess energy required but less finesse and movement control and 'rolled over each other like puppies'.

The American Mink *Mustela vison* still waits in the wings as a shadowy, threatening presence but it has not yet leaped to centre stage as once feared. We know it is there but it has made little impact on the Norfolk scene. Evidence this year is entirely anecdotal and no written reports have been received.

CETACEA

The Dolphin Look-out scheme may encourage more observers to send in cetacean records. We have tried for many years to enlist the aid of coastal bird-watchers with a modest degree of success. The poor overall returns surely reflects the numbers of cetaceans there to be seen rather than the indifference of the watchers. Naturalists

who have lived by the coast for many years generally agree that far fewer are seen than a generation or so ago.

The Common Porpoise *Phocoena phocoena* did once live up to its title. During the year under review they were seen off Cley in spring and autumn. On Oct 18th one was watched for $\frac{3}{4}$ hour as it fed in an area where flocks of gulls and gannets also concentrated their attentions. Scolt Head Island and Hunstanton also produced some few records and in early February a dead porpoise was found on the shore at Gorleston.

The mammal of the year, the Sperm whale *Physeter macrocephalus*, was also washed ashore but at Holkham. John Goldsmith deals with this unusual record elsewhere in the report.

PINNIPEDIA

Occasional up-river forays by seals were noted in Breydon and as far beyond as the Berney Arms.

The colony of Grey seals *Halichoerus grypus* turned up again at Scroby to repeat their misfortunes of previous years. Some females dropped pups there at low tide to have them washed away when the waters rose. Others came ashore to pup but all the youngsters perished or had to be put down. 19 were known to P. T.

Common seals *Phoca vitulina* formed a small group to haul out north of Winterton. Pups were produced there and because of their advantage in being able to take to the water immediately, some of these Common seal pups escaped the beach visitors, human and animal. At least 18 were known to have been there. Out of this total, 6 were later found dead. Most had been bitten by dogs. Whether or not they were weak specimens to begin with and so unable to move off quickly enough is not known. What is known is that this has become a regularly occurring distressful event to be chronicled by our coastal mammal recorders.

ARTIODACTYLA

Red deer *Cervus elephus* were found in scattered localities included in an arc covering the county from the south-west and the whole of the north. The herd in Thetford Forest maintains its numbers, albeit at a lower level than when at its peak, and the quality is reported to be good.

A small group of Fallow deer *Dama dama* have moved up from the southern part of the forest where they have habitually been found into the central area round Santon Downham. Other small herds hang on in the west Norfolk forest and in the Wensum Forest to the north-west of Norwich.

“Wherever you go, you’ll find them”, says R. W. about the Roe deer *Capreolus capreolus*. He refers to the Thetford Forest where he believes the roe have spread into many more sections though are contained more or less within it. Parts of Wensum Forest have also seen a continuing build-up of this species which is clearly one of our most successful reintroductions.

The collar-marking scheme is still operating to check movements and reports of sightings can be sent directly to the Forestry Commission Office at Santon Downham.

Chinese Water deer *Hydropotes inermis* appeared on several occasions on the Strumpshaw R.S.P.B. reserve. Although very few reports have been received from

other East-Norfolk sites these observations were not entirely unexpected. More surprising was the news of the partly eviscerated female, dead probably for 4 or 5 days, found along the Weavers' Way near Aylsham on Jan 26th.

"Shy creatures, people don't realise they may be there." Both parts of this statement about the Muntjac *Muntiacus reevesi* are true but nonetheless more and more people are seeing them. The numbers in Thetford Forest continue to rise but any damage they cause is at a low and acceptable level.

Most reports are from the forest area and Breckland but other localities include Attleborough, Cley, Stratton Strawless, North Elmham and further sites in West Norfolk.

This late addition to our mammal list does seem to be here to stay.

CONTRIBUTORS TO THE MAMMAL REPORT

P. R. ALLARD
DR. R. BAKER
M. BARRETT
J. BARNARD
M. BEAN
MISS P. BENNINGTON
M. BLACKBURN
G. BLAMEY
MRS. M. A. BREWSTER
A. AND MRS. T. BOOTE
MRS. V. BUCKENHAM
A. AND MRS. R. BULL
J. F. BUTCHER
P. CAMBRIDGE
J. CHAMBERS
MRS. M. R. CLARKE
P. COBB
R. COBBOLD
D. COKER
DR. D. B. COLLINGE
J. COOPER
D. AND MRS. R. COOPER
D. COTT
Corpusy Primary School
E. CROSS
C. DACK
J. A. DAWSON
K. DOBSON
P. J. DOLTON
K. DYE
Y. DUTTON
O. ECOTT
THE LATE DR. E. A. ELLIS
R. AND MRS. L. EVANS
Eastern Counties Newspapers
Limited
MRS. S. FAIRHEAD
F. AND MRS. C. FARROW
MRS. J. FARROW
MRS. I. FARROW
MRS. H. FINCHAM

MRS. M. FISHER
MRS. J. E. GAFFNEY
MISS J. H. GARNIER
G. L. GARNER
G. GARROD
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