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NORFOLK Bird & Mammal Report 1980



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Norfolk Bird Report - 1980

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NORFOLK BIRD REPORT 1980

Editorial

The Council of the Norfolk Naturalists Trust, in co-operation with the Norfolk & Norwich Naturalists Society, is pleased to present the annual report on the birds of Norfolk.

Review of the Year: The beginning of January found three Cranes remaining in the east of the County as well as a Richard's Pipit which stayed at Cley until the middle of the month. Two Ferruginous Ducks also appeared at Ranworth Broad at this time. The early months of the year produced some interesting records of seabirds with large numbers of Red-throated Divers, two Arctic Skuas and a Great Skua in January and two Pomarine Skuas in March. More unusual was a noticeable and unprecedented spring movement of Arctic and Great Skuas on 20th April during gale conditions.

The early spring produced few surprises apart from a Richard's Pipit which appeared at Winterton at the end of March, staying for over a fortnight, a Tawny Pipit at Weybourne for three days, and a Purple Heron at Heacham for two days, both in mid-April. The Cranes departed 5th April and were seen over Sheringham later in the day; amazingly these birds returned to their original location sixteen days later.

May to many Norfolk and visiting birdwatchers is undoubtedly one, if not the most, exciting month of the year and 1980 certainly exceeded many observers' expectations having regard to the large number of rare birds seen in May the previous year. Six Spoonbills appeared at How Hill early in the month and on the 15th a large movement of Black Terns took place. Unfortunately these birds passed through very quickly, but the easterly winds at the time undoubtedly resulted in the appearance of Bluethroats at Cley and Winterton and also an Ortolan Bunting at Cley. Possibly, however, May will be remembered for its waders with two Red-necked Phalaropes and a virtual avalanche of Temminck's Stints, especially at Hickling. This locality also produced the star of the month, a magnificent Black-winged Stilt which was seen by many observers. Nearby Breydon was not to be outdone and its specialist rarity, a Broad-billed Sandpiper, appeared at the end of the month as well as a Ring-necked Duck. The only rarity on the north coast was a singing Serin, present for two days at Cromer before flying off westwards.

June often produces a number of rarities in the county but in 1980 these occurred only on the first two days and again in East Norfolk, with a Red-throated Pipit at Breydon and a Caspian Tern at Hickling the following day.

Norfolk has always been an important county in a national context with regard to certain breeding birds and the year saw a noticeable increase in breeding Avocets and Savi's Warblers, together with a reversal of the previous downward trend of Woodlarks in the Brecks. Unfortunately the number of Red-backed Shrikes continued to decline and it seems likely that this species will cease to breed in East Anglia in the foreseeable future for reasons not fully understood. Also on the credit side, however, a small number of 'nocturnal' birdwatchers have revealed for the first time the true picture of breeding Long-eared Owls in the county. If such a survey were conducted nationwide it could well produce a totally different situation to that

previously thought to exist, as in Norfolk where this species was believed to be only a rare breeding bird. May and June also found a number of singing Firecrests on territory but no positive proof of breeding was obtained. A sub-adult Mediterranean Gull was present during this period at Snettisham; hopefully both these species may be added to the list of the county's breeding birds at some time in the future.

July is normally one of the least interesting months in the ornithological calendar apart from the return of waders commencing southward migration. 1980, however, saw the arrival on the same day of a Gull-billed Tern at Titchwell and a Sabine's Gull at Sheringham: both these birds stayed many days and gave a great deal of pleasure to many birdwatchers, especially as they both allowed close views.

The beginning of August saw the arrival of two White-rumped Sandpipers at Cley. Towards the end of the month again at Cley a Caspian Tern (the second of the year) appeared before a hideful of observers. This period also produced the largest skua and shearwater movements of the year but despite a scattering of coastal Wrynecks, Barred and Icterine Warblers no large falls of continental drift migrants occurred. One exciting find early in September was a Sardinian Warbler at Weybourne; this national rarity attracted many visitors during its prolonged stay but also caused a considerable amount of frustration due to its very elusive behaviour.

In recent years October have proved more rewarding than September in terms of passerine migration and the year saw some spectacular 'falls' of thrushes in association with such attractive species as Yellow-browed Warblers and Red-breasted Flycatchers. Rarities during the month included both White-rumped and Buff-breasted Sandpipers as well as a White-winged Black Tern which stayed for a fortnight in the Titchwell/Holme area. A fortunate bird-ringer found a Pallas' Warbler in his net at Waxham on the last day of the month which was joined by a second individual two days later. These two birds were also present with three Firecrests and all gave very close views, giving to many the ornithological highlight of the year. Firecrests also appeared at other coastal localities followed by the arrival, somewhat amazingly, of three very late Yellow-browed Warblers at Holkham.

November again produced the now annual build-up of Slavonian Grebes in Holkham Bay as well as some spectacular movements of Little Gulls, especially on the north-east and east coasts. The middle of the month saw the only addition to the county list, a Citrine Wagtail, not being found as would have been expected somewhere on the coast but in Welney Wildfowl Trust reserve on the Ouse Washes! By the end of 1980 374 full species had been recorded in Norfolk,

Norfolk Breeding Birds Survey: As most readers will be aware a breeding birds survey is currently being undertaken in the county on a tetrad basis (2 Km squares) under the auspices of the Norfolk & Norwich Naturalists Society. Whilst this survey is being organised by Mr. Barrie Harding any records of important breeding birds will be forwarded for possible publication in the annual bird report, unless otherwise specifically requested by the observer concerned. It must be emphasised, however, that no localities of unusual or rare breeding birds will be published and any details will only be made known to the Editor. As it is vital that such breeding birds are disturbed as little as possible, and to respect the degree of confidentiality usually requested in such instances, no other person connected with the Norfolk Bird Report (i.e. County Recorders, Editorial Assistants or members of the County Records Committee) or other members of the Breeding Birds Survey Committee will be informed of any breeding records referred to above.

Recording: Records for the 1981 Report should be sent *by the end of January* to Michael J. Seago, 33 Acacia Road, Thorpe St. Andrew, Norwich NR7 0PP. Contributors are requested to submit notes in the order followed in Dr. K. H. Voous' *List of Recent Holarctic Bird Species* (1977). In order to minimise the work involved, records will not normally be acknowledged. The names of all contributors will be included in the report.

In last year's Report it was requested that any records of rare birds 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. Unfortunately in several instances this has not taken place and regretfully this year there are more outstanding decisions on rare birds than has ever previously occurred. Special record forms are available for submission of rare birds either from the secretary of the Rarities Committee as published in *British Birds*, or from the Editor or from G. E. Dunmore (49 The Avenues, Norwich).

The County Records Committee (B. Bland, G. E. Dunmore, D. J. Holman, S. C. Joyner and J. Kemp) considered an ever growing number of descriptions of semi-rarities seen in the county. The majority of submitted records were accepted by the Committee and only in a few cases was it considered a genuine mistake in identification had been made. In other instances it was felt as the species was so rare in the county (e.g. Cirl Bunting) that the submitted details were not totally sufficient to establish beyond all doubt the correct identification. As in previous years the Committee had particular problems with flight identification of Great Northern and especially Black-throated Divers. Unless close views are obtained or birds are seen in flight with other species of diver the Committee would suggest that normally it is unwise to assign divers in such instances to one particular species.

When the Committee was established in 1975 it was requested that descriptions be submitted for semi-rarities unless the bird or birds were seen by three or more observers (in which case the names of other observers where known should be stated). This request is still very much applicable especially as it has become necessary with the ever growing number of bird-watchers, for an increasing number of time-consuming 'follow up' letters to be written requesting descriptions.

The following is the current list of species and sub-species considered by the local Records Committee: Black-throated and Great Northern Divers; Red-necked, Slavonian and Black-necked Grebes; Great, Sooty and Balearic Shearwaters; Storm and Leach's Petrels; Ruddy Shelduck, Red-crested Pochard, Ferruginous Duck, Honey Buzzard, Red Kite, Montagu's Harrier, Goshawk, Buzzard and Rough-legged Buzzard; Peregrine, Spotted Crake, Corncrake, Kentish Plover, Dotterel, Temminck's Stint, Red-necked and Grey Phalaropes; Pomarine and Long-tailed Skuas; Mediterranean, Sabine's and Iceland Gulls; Roseate Tern, Black Guillemot, Little Auk, Hoopoe, Scandinavian Rock and Water Pipits; all continental races of *flava* Wagtail excluding Blue-headed, Bluethroat; Icterine, Barred and Yellow-browed Warblers; Red-breasted Flycatcher, Northern Long-tailed Tit, Northern Tree Creeper, Golden Oriole, Raven and Ortolan Bunting.

Bird Ringing Report

ONCE more an interesting and varied selection of recoveries was reported in 1980. No less than four species: Merlin, Stone Curlew, Arctic Tern and Waxwing appear in the ringing section for the first time. Details of the first Marsh Harriers and Little Ringed Plover to be ringed outside Norfolk and found within the county are also included. Although many large birds are known to live for a considerable time, longevity is not a feature of passerines. It is therefore pleasing to note an eleven-year old Chaffinch and a ten-year old Blackbird and Dunnock. A Swift controlled in Norwich had been ringed in the same area twelve years previously.

Apart from the Wash Wader Ringing Group, the dozen or so ringers in the county who concentrate on passerines and near-passerines, ringed a total of 14,500 birds during the year. Included in this total were single Pallas's and Yellow-browed Warblers, 3 Cetti's Warblers, 6 Firecrests, 2 Red-breasted Flycatchers and single Blue-headed Wagtail and Red-backed Shrike.

As last year, I am indebted to those ringers who have sent me details of their recoveries and controls, in particular Dr Nicholas Branson, secretary of the Wash Wader Ringing Group. Once again, he has allowed me to use material published in the WWRG Report, as well as interpreting the more interesting wader movements. Copies of the 1979-80 Wash Wader Ringing Group Report may be obtained from Dr N. J. B. A. Branson, Trinity College, Cambridge, price £2 post free.

Moss Taylor

Fulmar

There have been only two previous foreign recoveries of Norfolk-ringed Fulmars, while the recovery from Norway is only the second foreign-ringed one to be found here.

Sheringham (adult) 26.6.76	De Haan Wenduine, West-Vlaanderen, Belgium (sick on beach) 8.7.80
Karmoy, Rogaland, Norway (pullus) 29.7.78	Cromer (dead) 10.10.78

Manx Shearwater

The only other recovery of a Manx Shearwater in Norfolk was from the Welsh breeding colony on Skokholm.

Rhum, Inverness (pullus) 13.9.78	Heacham (dead) 8.10.78
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Heron

An unfortunate victim of discarded fishing line.

Wickhampton (pullus) 30.5.74	near Bath Avon 6.9.80
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Teal

De Koog, Texel, Holland 18.9.78	Swaffham (shot) 1.1.80
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Mute Swan

The sedentary nature of our Mute Swans is shown by the fact that this was only the fourth recovery of one ringed outside Norfolk.

Bedford, Bedfordshire 11.7.71	Stowbridge GP, Downham Mkt. 12.4.80
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Marsh Harrier

There have been no previous recoveries of birds ringed outside the county. Perhaps the recent recolonization of Norfolk is a result of expansion from Suffolk.

- Walberswick, Suffolk (pullus) 18.7.78 Wolferton Wood, King's Lynn (dead under wires) 10.11.78
 Walberswick, Suffolk (pullus) 30.6.77 South Walsham (decomposed on fence) 23.6.79

Merlin

The first recovery of this species affecting Norfolk.

- Northumberland (pullus) 17.6.71 Feltwell, Downham Mkt. 15.10.78

Oystercatcher

The main breeding area for Oystercatchers from the Wash has been shown by ringing to be the west coast of Norway. This is the first recovery in Finland from the Wash.

- Heacham 5.7.69 Kunlinge, Aland, Finland 15.7.79

Lapwing

The first recovery involving a movement between Norfolk and Finland.

- Tyrvanto, Hame, Finland (pullus) 9.6.68 Titchwell 13.1.78

Stone Curlew

The first recovery of a Norfolk-ringed Stone Curlew.

- near Mundford (pullus) 5.7.77 Guissona, Lerida, Spain 25.10.78

Ringed Plover

The recovery given, resulted from a report of a Ringed Plover marked with a small yellow 'flag' on its leg. Observers seeing any wader so marked, colour-ringed or dye-marked are asked to send full details to Dr M. Pienkowski, Dept. of Zoology, University of Durham, South Road, Durham, DH1 3LE.

- Heacham 31.8.80 Sheringham 9.12.80

Little Ringed Plover

The first recovery from outside the county.

- Wraysbury, Berkshire (pullus) 26.5.80 Wisbech SF (control) 29.8.80

Grey Plover

Although Siberian-breeding populations are known to occur at the Wash, this is only the second British-ringed Grey Plover recovery in the USSR and much farther east than the first.

- Heacham 4.12.71 Yar Sale Yamal, USSR (66 49'N 70 50'E) 27.8.78

Knot

Note rapid movement of the second bird.

- Wolferton 10.9.79 Banc d'Arguin, Mauritania 19.1.80
 Revtangen, Rogaland, Norway 9.9.79 Wolferton (control) 10.9.79

Sanderling

The first British-ringed Sanderling to be recovered in Tunisia.

- Snettisham 28.7.76 Tunis, Tunisia 27.8.78

Ruff

- Wisbech SF 14.8.75 Carentan, Manche, France 3.1.79

Bar-tailed Godwit

Previously there have been only two breeding-season recoveries of Bar-tailed Godwits from Britain, both on the River Yenisei and only 200 km from the Arctic Ocean.

- North Wootton 23.7.78 Lar'yat, Khanty-Mans, USSR 25.5.79
 Wolferton 24.6.78 Mezen, Arkhangelsk, USSR 18.5.80

Redshank

Only the second Wash-ringed Redshank recovered in Morocco.

Wolferton 16.9.78

Safi, Morocco 1.1.80

Black-headed Gull

Recoveries included winter movements between Norfolk and Holland (5), Norway, Denmark (7), Sweden (2), Finland (4), Poland, Estonia, Latvia and USSR. Given in full is only the fourth recovery in Norway and two recoveries where the ring number was read in the field, both of which indicated different wintering areas from the time of ringing.

Salthouse (pullus) 3.7.79

Friskney, Lincs. 26.5.80

Norwich 31.12.70

Copenhagen, Denmark (field record)
23.2.80

Norwich 18.12.76

Grootevast, Groningen, Holland (field
record) 24.1.80 - 15.2.80

Norwich 12.2.78

Hut, Oslo, Norway 24.6.80

Holt 19.2.78

Lyuban, Belorussia, USSR 10.5.78

Common Gull

Sheringham 28.1.79

Watton, Humberside 7.11.80

Arctic Tern

The first recovery of this species affecting Norfolk.

Bergo, Vaasau Laani, Finland
(pullus) 15.7.67

Winterton (found exhausted, released
later) 4.5.80

Swift

The fidelity of Swifts to their breeding areas is well illustrated by this bird, which was at least thirteen years old when controlled, although still three years short of the British longevity record for the species.

Earlham (adult) 20.7.68

Earlham (controlled) 11.7.80

Sand Martin

Earlham (roost) 19.7.76

Ryarsh, Kent (control) 4.5.80

Hillington (colony) 6.7.79

Blyth, Nottingham (control at colony)
27.7.80

Stanton Harcourt GP, Oxon (colony)
14.7.79

Tottenham GP, King's Lynn (control)
13.7.80

St Osyth, Essex 23.7.80

Weybourne (control) 3.8.80

Waxwing

The first British-ringed Waxwing to be recovered in USSR.

Heacham 3.11.74

near Kirs, Kirov, USSR 27.10.77

Dunnock

Two interesting recoveries are given. The first an exceptionally old Dunnock, found freshly dead in at least its tenth year and the second, presumably a locally bred bird, as it was in juvenile plumage when ringed, moving 177 Km south to Kent. Normally regarded as a sedentary species.

Thorpe End 12.12.71

Norwich 15.2.80

Gillingham (juvenile) 23.8.80

Dungeness, Kent (control) 30.9.80

Robin

Holme 30.9.79

Balsham, Cambridgeshire 19.1.80

Holme 1.10.80

Burgerveen, Hoiland 23.10.80

Blackbird

Movements were recorded between Norfolk and Holland, Norway, Sweden (2) and Finland. Full details given include a ten year old bird and a recovery in Wales, suggesting onward movement of a continental migrant.

Little Plumstead (pullus) 20.5.71	Blofield Heath 25.8.80
Gillingham 26.10.80	Bardsey Island, Gwynedd, Wales (control) 10.11.80
Holme 27.10.80	Svortevik, Norway, 6.1.80
Lagskar, Aland, Finland 18.3.77	Downham Mkt. (control) 27.1.80

Fieldfare

Sprowston 24.1.79	Raalte, Overijssel, Holland 24.5.80
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Song Thrush

The bird recovered in the USSR was ringed at the same locality and on the same date as one recovered in Estonia in 1979 (see *NBR* 1979 p.107). Amazingly, the only other British-ringed Song Thrush to be found in either the Baltic States or Russia was also ringed in Norfolk (see *NBR* 1978 p.12)

Holme 1.10.79	Corticada, Portugal 10.1.80
Waxham 7.10.78	Volgorechensk, Kostroma, USSR 15.12.80

Sedge Warbler

Holme 26.8.80	Maidstone, Kent (control) 13.9.80
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Reed Warbler

Holme 18.8.74	Old Hunstanton (retrap) 17.7.80
Earlham 15.8.79	Guernsey, Channel Isles (control) 8.8.80
Titchwell 22.9.80	Coimbra, Beira Litoral, Portugal Autumn '80

Lesser Whitethroat

Sheringham 2.9.80	Halesworth, Suffolk (dead) 20.10.80
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Blackcap

Sheringham 10.8.79	Wanstead, London 8.10.79
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Garden Warbler

Holme 12.8.75	Gunnislake, Cornwall 22.5.80
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Chiffchaff

Presumably an example of reorientation.

Happisburgh 12.5.80	Trischen, Germany (control) 21.5.80
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Great Tit

Sheringham 15.7.80	Hunstanton (control) 22.11.80
Sutton Coldfield, Staffs (1st winter) 10.12.79	Hillington (control at nest-box) 17.5.80

Blue Tit

Happisburgh 29.9.80	Woodbridge, Suffolk (control) 19.10.80
Gillingham (pullus) 25.5.80	Waxham (control) 20.10.80

Starling

Recoveries followed the usual pattern with movements between Norfolk and the Continent, Scandinavia and Eastern Europe.

Chaffinch

The bird reported in *NBR* 1979 p.108, was retrapped again in 1980, in at least its eleventh year.

Holme 29.4.70	Old Hunstanton (retrap) 4.8.80
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Brambling

Wilburton, Cambs. 16.1.80

Methwold Fen (control) 23.2.80

Greenfinch

Gillingham 22.7.79

Coombs Dale, Derbyshire 20.3.80

Linnet

Happisburgh 2.5.78

Balen, Antwerpen, Belgium (trapped and released!) 26.11.78

Redpoll

Titchwell 9.7.79

Colchester, Essex (control) 14.1.80

Reed Bunting

Titchwell 3.11.78

Methwold Fen (control) 16.3.80

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. Records for Wisbech Sewage Farm (part of which is on the Lincolnshire side of the county boundary) have been selected from the files of Cambridge Bird Club. Fuller details of Fens records may be found in the Cambridge Bird Club Report for 1980.

The order used is that of K. H. Voous (1977) List of Recent Holarctic Bird Species. Observations refer to 1980, 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: N/E coasts: Unusually large numbers Jan.-March. At Cley 230 east in 30 minutes Jan. 5th. At Sheringham peaks of 218 Jan. 2nd, 166 on 13th, 200 Feb. 2nd, 100 on 9th, 280 on March 15th, 110 on 19th, 120 on 20th — all to the east. Winterton, 130 north March 16th. Only three inland records: University Broad Norwich Jan. 20th, Martham Broad Feb. 19th, and Ant Mouth Oct. 31st.

Black-throated Diver: North: Cley March 29th, Oct. 11th and 25th, Nov. 14th (2), Sheringham Sept. 13th, Nov. 9th (2), Paston Feb. 1st, March 6th (2) and Mundesley Feb. 9th. East: Winterton Jan. 20th (3), May 10th, Oct. 18th and Dec. 23rd, Caister April 21st.

Great Northern Diver: Coastal records as follows: Snettisham Jan. 1st-10th, Hunstanton Jan. 1st, 6th and 20th, Nov. 24th and 29th, 2 Dec. 27th, Scolt Head full summer plumage June 3rd, Holme Dec. 22nd, Brancaster Sept. 29th, Dec. 13th, Titchwell Nov. 15th, 2 Nov. 24th, Dec. 30th, Holkham Nov. 4th, Wells Nov. 2nd, Cley Jan. 5th and 12th, Oct. 18th, Salhouse Jan. 27th, Sheringham March 15th and 19th, Cromer 2 Nov. 13th, Paston Feb. 14th and Nov. 10th, Winterton March 16th, Sept. 21st and Gorleston 2 Nov. 29th/30th.

Little Grebe: Breeding records in Brecks at Fowl Mere, Ring Mere, West Tofts Mere, Stanford Water, West Mere, Tottington West Mere, Brandon-Santon Downham, Gooderstone and Cockley Cley; in Broads area at Breydon (6 pairs), Strumpshaw and Muckfleet area; and in North at Templewood and Titchwell (6 pairs). Wash: Winter peaks of 66 at Snettisham Jan. and 79 in Nov.

Great Crested Grebe: Broads: Build-up at Filby noted at end of 1979 continued with 45 Jan. 1st; also 32 Nov. 7th. Wash: Peak of 67 off Snettisham July 27th.

Red-necked Grebe: N/E coasts: 36 records up to April 5th and from Sept. 4th. Mostly singles but 3 off Mundesley Feb. 9th and 4 off Titchwell Oct. 28th.

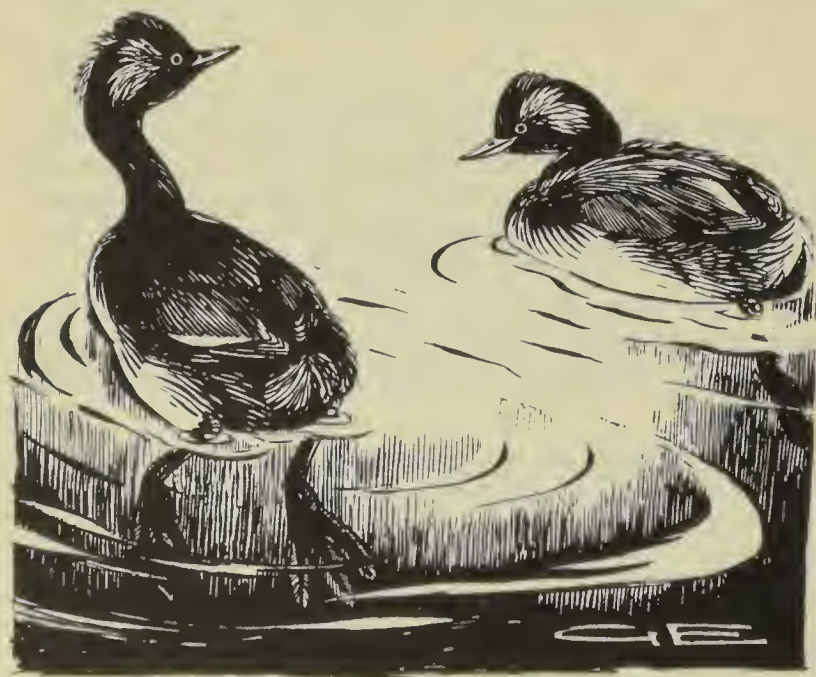
Further reading: 'Influxes into Britain and Ireland of Red-necked Grebes and other waterbirds during winter 1978/9' (*British Birds* 74, 55-81).

Slavonian Grebe: North: Hunstanton Jan. 27th, Feb. 3rd, 5th and 16th, Oct. 22nd, Holme Feb. 9th and 6 March 7th, Titchwell 2 March 30th, May 18th, Oct. 18th, 2 on 26th, 27th and Dec. 13th; Brancaster 2 Dec. 13th, 8 on 14th, Holkham/Wells up to 10 Oct. 14th to Nov. 4th., Cley Jan. 20th and Oct. 25th, Salthouse Jan. 22nd (dead), Weybourne Nov. 5th, Sheringham 6 March 1st, Paston Nov. 1st and 8th, dead on 10th. East: Waxham Nov. 9th.

Black-necked Grebe: N/E coasts: Wells Jan. 5th, Scolt Head 3 April 1st (one in breeding plumage), Winterton Aug. 23rd. Broads: Ranworth Sept. 7th; Breydon 2 April 9th and one on 20th (breeding plumage).

Fulmar: North: Total of 41 young between Weybourne and Cromer, as follows: Weybourne to Sheringham 29, Sheringham to West Runton 1, West to East Runton 2, East Runton to Cromer 9. 19 returned to breeding cliffs at Sheringham Nov. 8th. Wash: Hunstanton 27 young in Aug; 50 pairs again by end of year. Exceptional movement of 1,600 to east off Sheringham March 19th.

East: Happisburgh, one young raised. Inland (West), Hillington GP June 27th. Blue phase birds at Sheringham March 15th and 19th, Cromer April 23rd and Paston Aug. 31st.



Sooty Shearwater: North: Holme Sept. 28th, Cley Aug. 31st, Sheringham Aug. 31st, Paston 8 Aug. 23rd, 2 on 31st and 3 Oct. 11th.

East: Winterton 26 north in 4 hours Aug. 23rd, 3 on 31st and one Oct. 11th.

Manx Shearwater: N/E coasts: Impressive movement Aug. 31st when 23 off Winterton, 53 Paston, 31 Sheringham and 3 Titchwell. Other movements included 37 Sheringham July 20th, 17 on 21st, 13 Cley July 1st, 17 Holme July 2nd. Wash: Snettisham 10 Sept. 13th with 6 on 14th/15th; Terrington Marsh Sept. 15th.

A bird of the Balearic race Winterton Aug. 31st.

Storm Petrel: North: Holme 2 July 2nd; Sheringham Oct. 12th.

Leach's Petrel: North: Cley Oct. 12th, Weybourne 1-2 Oct. 11th, Paston Aug. 31st and Oct. 11th.

East: Bacton dead Oct. 18th.

Gannet: Peak movements: North: 550 east Sheringham March 19th with 500 east in two hours Oct. 16th; 450 east Paston Nov. 6th.

Cormorant: Fens: Welney peaks of 74 Jan. 23rd, 60 March 16th and 40 Nov. 20th.

Shag: N/E coasts/Wash: ones and twos in Jan. and from Sept. 13th. Broads: Hickling 2 on following dates: Jan. 2nd, April 4th and May 2nd.

Bittern: Broads: Seven regular boomers compared with 9 in 1979. North: 3 boomers and 4 known nests. An unfortunate casualty at Cley where one telegraphed Aug. 22nd.

Further reading: 'Wintering Bitterns in Britain' (*British Birds* 74, 1-10) and 'Status of Bitterns in Europe since 1976' (*British Birds* 74, 10-16).

Grey Heron: The following heronries were counted: *Borders of the Wash:* Snettisham 16. *Brecks:* Tottington 2, Diddlington 4, Sturston Carr 3, Shadwell 3. *Fens:* Islington 116 and Hilgay 43. *North:* North Elmham 3 and Cley 7. *Broads:* Hickling (Sounds Plantation) 17, and Fritton (Waveney Forest) 3. Narford and Denver not occupied.

Unusual sight of 19 in V formation in from sea and calling at Weybourne Sept. 20th; also similar party arriving from east at Holme same date.

Purple Heron: North: Cley Aug. 26th (MLP JCT). Wash: Heacham April 13th-14th (CAEK RCM).

East: Winterton May 2nd (RM). Additional 1979 record: Breydon Aug. 13th (CDRH RDH).

Spoonbill: Fewer records than in recent years. North: Cley/Salthouse May 21st-27th. Fens: Welney March 28th to early May. Broads: Breydon April 17th, How Hill 6 May 5th and Cantley Sept. 1st.

Mute Swan: North: Felbrigg Lake, pair raised 3 cygnets two of which were of Polish all-white variety.

Bewick's Swan: Recorded to Feb. 28th and from Sept. 28th. As usual largest concentration in Fens (Ouse Washes) of 2,050 in Jan. with 2,120 mid-Feb. (up to 75% at Welney) and record count of 2,995 (including 440 juveniles) mid-Dec. South-east Norfolk total of 232 Feb. 4th (141 St. Benet's Level, 30 Muck Fleet, 33 Halvergate, 5 Heigham Holmes and 23 Potter Heigham). Additional counts (probably mostly same birds listed above) include 92 Halvergate Jan. 20th and 97 Filby Broad on 24th; 65 Heigham Holmes Jan. 13th and 60 Feb. 20th; 81 Halvergate, Tunstall and Clippesby Feb. 10th.

Brecks: Up to 5 Ring Mere and 18 Fowl Mere Nov.-Dec.

February easterly exodus: 47 Strumpshaw on 10th, 70 East Tuddenham on 17th,

100 on 18th and 50 on 28th when 30 Chedgrave. North coast westerly movements included 46 passing Holme, 20 Holkham and 21 Cley Oct. 26th; 26 Titchwell Oct. 27th and 11 Brancaster Dec. 6th.

Whooper Swan: Recorded up to March 16th and from Oct. 25th. Largest number in Fens at Welney where 106 mid-Jan. and 80 at end of year.

Broads: Heigham Holmes up to 46 in Jan., 38 in Feb. and 12 March 7th.

Bean Goose: East: Up to 155 in usual area till March 1st; first 70 returned Nov. 29th increasing to 168 by Dec. 16th. North: Holkham 5-9 Jan. 19th-Feb. 18th. Wash: Welney 18 Feb. 13th-March 13th.

Pink-footed Goose: Wash (Snettisham): 3,720 in Jan., 1,350 in Feb. and last 3 April 19th. First 3 returned Oct. 25th, 970 Nov. 12th, 1,250 by 29th and 1,600 by Dec. 20th. North: Holkham 60 Jan. 19th-Feb. 18th and 55 Dec. 8th; Scolt Head 90 Nov. 20th 1979 to Jan. 19th 1980 (first wintering record).

White-fronted Goose: Broads/Yare Valley/Hickling and Horsey up to 23 Jan. and Dec. North: Holkham 90 Jan. 8th, 154 Feb. 2nd and 145 on 17th. Last March 3rd with return from Nov. 29th (7) and 84 from Dec. 8th.

Barnacle Goose: East: Yare Valley Jan. 7th-Feb. 10th. Broads: Hickling 10 Jan. 4th-9th and Potter Heigham/Horsey 11 Jan. 1st-10th.

Brent Goose: Maximum numbers at regular localities: Cley 2,400, Burnham Norton 1,200, Wells/Holkham 3,000-4,000, Scolt Head 2,000, Holme 1,700 and Snettisham 1,380.

Unusual numbers moving west at Sheringham: 1,385 Oct. 12th and at Paston: 2,475 Oct. 11th and 1,752 on 12th.

Egyptian Goose: Recorded at 14 localities. Largest numbers in Holkham Park (100 Aug.) and Flitcham (68 Dec.)

Ruddy Shelduck: East: Winterton Oct. 18th and North: Wells Oct. 25th. These observations probably relate to waterfowl collection escapes, perhaps from Germany or Holland.

Shelduck: Most impressive assemblies on Wash. At Snettisham peaks of 4,650 in Feb. and 5,154 in Nov. Between King's Lynn Point and North Wootton saltings 2,268 Aug. 1st including over 1,000 in full wing moult. Breeding records away from coast include single pairs at Aldeby, Flitcham, Stanford Water, Thompson Water, West Tofts Mere and Wolterton Lake, 2 pairs each at Lyng Easthaugh and Hoveton Great Broad, 3 pairs at Gillingham and several pairs at Wissington BF and Gunton Park.

Mandarin: Broads: Hardley May 20th.

Wigeon: Fens (Ouse Washes, Welney) 18,000 in mid-Jan. and 17,000 in Dec. East: Buckenham 5,000 in Jan. North: Cley 4,000-5,000 Oct.

Gadwall: Largest counts: Brecks: Narford 60 Jan. 20th and Stanford Water 250 in Aug. West: Hillington Park 35 Dec. 3rd. North: Gunton Park 503 Oct. 20th and Wash: Snettisham 103 in Dec. Breeding population still increasing and 12 pairs bred Strumpshaw and 7 pairs bred Titchwell.

Pintail: Wash: Snettisham peak of 548 in March and 563 in Dec. Fens: Welney 500 Jan. East: Hardley 2 pairs April 12th-May 20th with one pair till 24th. North: Cley 280 in Nov. and 250 in Dec. Unusual numbers moving west off Paston Oct. 11th when total of 206 followed by 90 west off Scolt Head next day.

Garganey: Spring arrival from April 12th (Cley) and subsequently at Breydon, Cantley, Hickling, Hardley, Holkham, Salthouse, Sheringham, Titchwell, Tottenhill



Above: Four pairs of Arctic Terns attempted breeding in north Norfolk
(Photo: Dr. M. Hill).

Below: This fearless Dotterel remained six days at Weybourne in June
(Photos: R. Tidman).





Above: A Black-winged Stilt delighted Hickling bird-watchers in late May. The first county occurrence since 1968 when one briefly visited the same locality
(Photo: Dr. K. Carlson).

Below: At least eight Sabine's Gulls were identified in 1980 including this individual which stayed two weeks at Sheringham.

(Photos: W. J. Low).



and Welney. Only breeding record from Hickling (3 young reared).

Shoveler: Brecks: Narford 100 Jan. 20th and Mickle Mere 36 March 23rd. Broads: Hoveton Great 250 in Aug./Sept.

Red-crested Pochard: Fens: Welney Feb. 14th to end of March. Central: Sparham Nov. 29th. Both suspected escapes from collections.

Pochard: Fens: Welney 4,700 in Feb. Wash: Snettisham 96 in Feb. and 85 in Dec. Brecks: Mickle Mere 50 in Nov. West: Tottenhill 48 in Feb. Broads/Brecks: Usual breeding records.

Ring-necked Duck: East: Breydon drake May 27th (AA *et al*). Additional 1979 record: drake Bayfield Lake Dec. 26th (RT).

Ferruginous Duck: Broads: Ranworth 2 Jan. 15th-17th (PRA ADB DB).

Tufted Duck: Winter counts include 200 Narford in Jan. and 157 Snettisham in Feb. Usual Brecks/Broads breeding records with 5 pairs nesting for first time in North at Titchwell.

Scaup: Largest number on Wash. At Snettisham 47 in Jan. and 89 in Dec. Usual mid-summer occurrences: drake Titchwell June 29th to July 14th, 5 Paston July 2nd and 6 drakes Breydon July 10th.

Eider: Recorded each month. Largest assemblies at main localities: Hunstanton 350, Snettisham 30 (including 14 roosting on beach July 15th), Titchwell 170 and Scolt Head 50.

Long-tailed Duck: Wash: Hunstanton/Holme monthly totals: Jan. 30, Feb. 18, March 11, April 2, Oct. 4, Nov. 5 and Dec. 26. Also one off Snettisham Oct. 12th-26th. North: Ones and twos (also groups of 4 and 7 and once 20) up to May 5th and from Aug. 31st. East: Gorleston 1-2 Nov. 3rd onwards. Horsey March 22nd. Winterton 3 Oct. 18th. Broads: Martham Jan. 13th-15th.

Common Scoter: N/E coasts: Highest estimates 60 Gorleston (Nov.), 150 Holme (March) and 300 Titchwell (May) where 400 (Oct.-Nov.) Inland: Wissington BF 3 April 26th.

Velvet Scoter: Wash/N/E coasts: Recorded each month. Apart from 30-35 off Heacham-Hunstanton Feb.-March no party exceeded 13.

Goldeneye: Maxima as follows: Wash: Snettisham 67 (March) and Hunstanton 47 (Jan.). North: Scolt Head 70 (1979-80 winter). Broads: Martham 15 (Nov.-Dec.), and Ormesby 14 (Feb.)

Smew: Records of 1-3 up to April 14th and from Nov. 28th at Hickling, Holme, Hunstanton, Martham, Morston, Paston, Snettisham, Titchwell and Welney.

Red-breasted Merganser: Wash/North coast peaks including Brancaster 38 Nov., Hunstanton 50 March and 40 Feb.-April and Nov.; and Snettisham 54 Dec. East: Winterton 22 Oct. 12th.

Goosander: Winter records at eight localities (compared with almost 50 in 1979). Maximum 16 Gunton Park in March.

Ruddy Duck: East: Lound Dec. 30th (BAC).

Honey Buzzard: North: At least one present May 20th to Aug. 9th at one locality, but no proof of breeding. Additional records at Bacton Wood Aug. 9th and Paston on 18th.

Black Kite: North: Burnham Deepdale Aug. 24th (RF, GJH).

Red Kite: North: Cley March 15th (WB), 24th (JR WB), Blakeney March 24th (ACM), Burnham Overy March 16th (SCJ) and Holme May 2nd (HBO). Brecks: Bodney Dec. 31st (GJ). East: Waxham March 16th (JRW).

Marsh Harrier: Total of 11 pairs nested rearing a total of 24 young to flying stage. Numerous coastal records and at one site 10 roosting together in late Aug. and up to 4 there till Sept. 30th.

Hen Harrier: Again recorded at many localities. Majority of observations in coastal areas, but others ranged over heaths well inland. Latest dates April 16th (Hickling), 24th (Rockland and Roydon) and 26th (Cley); also May 5th (Happisburgh). First in autumn Sept. 7th (Holme) and 13th (Snettisham).

In opening months 3 roosts in North, one in NW and 3 in Broadland with a total of 44 birds including 17 males.

Montagu's Harrier: North: Titchwell May 17th-25th and Scolt Head June 5th. Brecks: Hilborough-Fouldeu May 2nd-16th. Broads: Rockland May 30th, Strumpshaw April 23rd, May 3rd and 8th, Hickling May 30th to June 11th and July 14th. No breeding records.

Goshawk: At least one pair bred in county. Wash: Wolferton Nov. 22nd. into Dec. East: Winterton April 13th, May 4th (with jesses) and 27th may relate to same bird.

Sparrowhawk: Recorded at over 90 sites, but only two breeding records. Interesting total of 27 south at Winterton April 12th-15th; also 10 to north on 27th.

Buzzard: North: Burnham Deepdale Feb. 17th, Scolt Head April 1st, Edgefield July 6th, Sheringham 4 March 31st, singly April 5th and on several dates in June. East Broads: Breydon May 8th, Hickling March 26th and April 13th, Ormesby March 26th, Winterton March 22nd, May 10th, 17th and 18th, Fritton 3 in Jan., 2 till mid-Feb. and one summered till mid-Aug. with one in Dec.

Rough-legged Buzzard: North: Wells Oct. 14th, Salthouse Heath Oct. 16th, Barrow Common Oct. 20th and Titchwell Oct. 21st, Holkham Nov. 1st, Weybourne Nov. 2nd. East: Filby April 14th, Waxham Oct. 22nd, Winterton April 11th, 13th, May 6th, 10th (2), 13th and Oct. 18th. Broads: Hickling April 2nd, 4th, Oct. 25th, 29th and Nov. 26th.

Osprey: Singles at Blakeney, Brancaster Staithe, Cley, Hickling, Holkham, Hunstanton, Lound, Lyng Easthaugh, Sculthorpe, Strumpshaw, Snettisham, Thompson Water, Titchwell and West Acre. Recorded April 3rd to Sept. 29th.

Merlin: Recorded from over 30 localities up to May 5th and from Sept. 30th. Mainly singles, but 3-4 Roydon Common in Jan.

Hobby: Singles at Breydon, Bacton, Cley, Holme, Horsey, King's Lynn, Santon Downham, Sheringham, Strumpshaw, Smallburgh and Winterton. Recorded May 4th-Oct. 3rd.

Peregrine: North: Sheringham March 19th, Cley Sept. 15th and Titchwell Jan. 20th. Brecks: Narford Jan. 6th. Wash: Hunstanton Jan. 12th, Snettisham 2 Jan. 22nd and one April 11th, Wolferton Jan. 13th. East: Wickhampton Jan. 30th.

Quail: North: Calling Cromer May 25th-27th and Northrepps June 19th. West: Calling Pentney June 4th-July 4th.

Golden Pheasant: Recorded at Croxton, East Wretham, Hockham, Lynford, Narford, Sandringham, St. Helen's Well, Swaffham Heath, Thetford and Thompson.

Water Rail: North: Interesting record of one in from sea Weybourne Nov. 1st and landing on beach.

Spotted Crake: North: Holme Sept. 22nd and Titchwell Sept. 22nd-27th. Broads: Hickling Oct. 19th, 29th-30th and Dec. 9th-24th.

Crane: The party of 3 present at the end of 1979 was joined by a fourth bird during March. 3 remained until April 5th when at 1050 hours all climbed to a height of 2,500

to 3,000 feet and appeared over Sheringham at mid-day before circling and heading west along the ridge. All 3 returned April 21st and 2 stayed from late April until end of year.

Additional 1979 records: Strumpshaw 2 March 18th and Salthouse Broad immature Sept. 17th (RMT).

Oystercatcher: Breeding pairs: East: Singles Hardley Flood, Hickling and Langley. Wash: Snettisham 14. North: Blakeney Point 175, Scolt Head 150/160 and Wells Lodge Farm 15.

At Snettisham winter peaks of 8,350 Feb. and 10,090 Nov.

Black-winged Stilt: Broads: Hickling May 19th-30th (many observers).

Avocet: North: Cley present March 4th to Oct. 30th and 20 pairs bred. First eggs hatched May 5th and last on June 26th. Fakenham Racecourse (Pudding Norton) March 17th — after heavy rain. Titchwell: May 10th, May 11th (3), 16th, 27th (2) and July 26th. Wash: Snettisham: June 10th. East: Breydon singles on several dates Jan. 1st-April 2nd with up to 6 April 12th-June 3rd and 9 May 16th and Winterton 8 south April 13th. Broads: Hickling March 26th, April 6th-18th, May 6th-12th, June 13th (8), June 14th (9), Aug. 2nd (3), Aug. 28th-31st and Nov. 6th; Strumpshaw July 28th. Fens: Pentney April 6th and Welney pair April 12th, 26th and possibly same pair with 3 flying young July 31st-Aug. 3rd.

Stone Curlew: Brecks: Recorded from March 26th at 30 sites. North: 2 pairs at one site.

Little Ringed Plover: Recorded March 26th (Cantley) to Nov. 2nd (Holme). 23 breeding pairs at 12 localities. Early autumn counts include 9 Cantley, 6 Holme and 10 King's Lynn Beet Factory.

Kentish Plover: North: Cley April 13th and May 5th. East: Breydon April 5th/6th and May 5th/6th. Broads: Hickling Aug. 2nd.

Dotterel: North: Weybourne June 7th-12th and Cley Aug. 2nd. West: Docking 6-7 May 13th-16th. East: Happisburgh 6 May 7th and 2 June 8th-10th.

Golden Plover: Largest gatherings: Holme 1,000 (Nov.) and Welney 2,000 (April).



Grey Plover: Wash: Snettisham peak of 1,400 April and 1,123 Aug. East: Breydon highest spring count 127 May 13th.

Knot: Wash: Snettisham 35,000 in Jan. and 25,000 in Aug., Nov. and Dec.

Sanderling: Wash: Snettisham peaks of 370 in May, 845 in July/Aug. and 190 in Nov. North: Titchwell 200 in May and 150 in June. Away from coast singles at Strumpshaw May 17th and at Hickling on 25th.

Little Stint: *Spring:* North: Cley March 22nd and 29th/30th, April 4th and 11th, May 10th (2), 14th (4), 16th (12), 18th (6), June 1st, 7th (3) and 12th (4). Holme May 14th (2). Inland: Lyng Easthaugh GP May 12th (4). Broads: Hickling May 10th, 12th (6), 14th (8), 16th (11), 18th (6) and 25th (2) and June 4th and Hardley Flood May 11th (3).

Autumn: North: Cley 1-6 July 19th to Oct. 14th. Holme July 25th to Oct. 15th and Titchwell Sept. 28th (15). Broads: Hickling 1-7 July 24th to Oct. 8th, Cantley Aug. 7th (3). Fens: Wisbech SF 1-5 mid-July to mid-Oct.

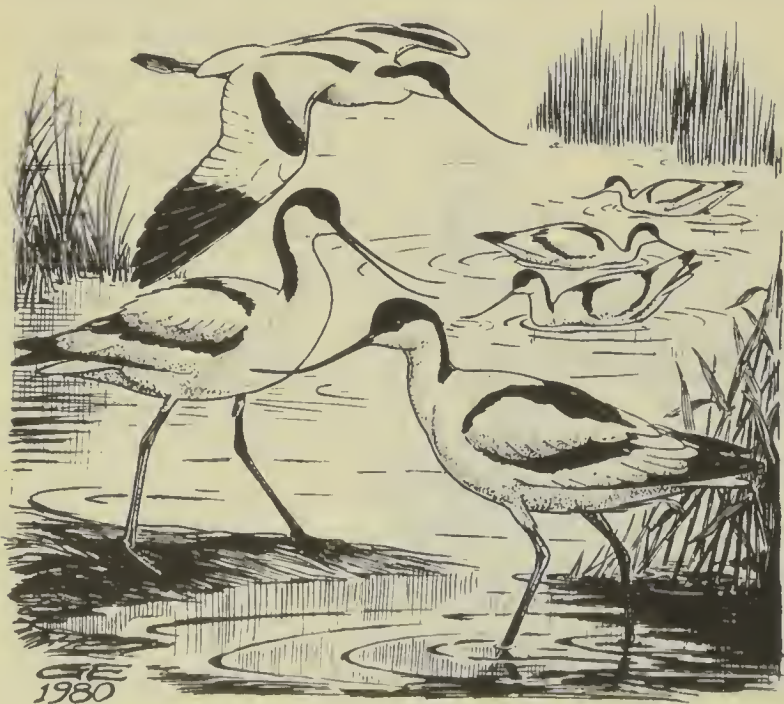
Temminck's Stint: North: Cley May 10th-14th (3), 23rd-25th (2), 26th-30th, June 4th (2), Aug. 25th and Sept. 16th. East: Breydon May 28th. Broads: Hickling May 8th (3), 10th (4), 12th-14th (7), 16th (10), 18th (9), 24th (4), 25th (3), 26th, 28th (2), Aug. 10th (3) and 20th.

White-rumped Sandpiper: North: Cley/Salthouse 2 Aug. 1st-12th, then one till 31st and Oct. 30th to Nov. 2nd (many observers). Titchwell Oct. 11th/12th (PWA NS).

Pectoral Sandpiper: North: Cley Sept. 13th-21st (many observers). Inland: Lyng Easthaugh GP Sept. 6th (BB JDG JBK NM).

Curlew Sandpiper: *Spring:* East: Breydon 2-3 May 27th-31st. North: Cley May 13th/14th (2), 16th (4), 20th (3), 22nd (3), 25th, June 4th-5th (2) and 29th. Holme May 24th-25th.

Autumn: Broads: Hickling July 30th (10), Aug. 8th (14). Inland: Lyng Easthaugh GP July 30th. North: Present from July 21st including 34 Cley, 25 Holme and 15 Titchwell. Wash: Snettisham July 26th-Sept. 1st including 23 Aug. 2nd. Fens: King's Lynn BF 1-7 July 28th to Sept. 1st; Wisbech SF 1-3 July 26th to mid-Oct.



Purple Sandpiper: Recorded Bacton Gap, Cley, Gorleston, Happisburgh, Heacham, Horsey, Hunstanton, Paston, Salthouse, Sheringham, Snettisham, Titchwell, Weybourne and Yarmouth. Totals include 8 Bacton up to Feb. 17th, 8 Happisburgh March 2nd, 10 Hunstanton Dec. 29th, 1-4 Gorleston Nov.-Dec., 6-8 Paston Nov. 21st onwards and 5 Yarmouth Jan. 1st.

Dunlin: Wash: Snettisham peak of 7,050 in Jan. and 5,910 in Sept.

Broad-billed Sandpiper: East: Breydon May 27th-30th (PRA *et al*).

Buff-breasted Sandpiper: Wash: Hunstanton cliffs car park Oct. 5th (DJG) and Salthouse Oct. 5th (DB JRM *et al*).

Ruff: Broads: Hickling 26 Jan.-Feb., 26 Aug. 31st, 52 Sept. 22nd and 24 Nov. 6th and Buckenham 30 Dec. 7th. North: Cley 100 Sept. 12th and Titchwell 40 Sept. 14th. Wash: Snettisham autumn peak 40. Fens: West Walton 25 July 19th; Welney 30 wintered and in spring 6 males and 8 females holding territory; Wisbech SF present June to Oct. with 120 Aug. 15th.

Jack Snipe: Extreme dates May 10th and Sept. 1st (both at Hickling).

Woodcock: Roding at Brettenham, Briston, Catfield, Didlington, East Tuddenham, Emily's Wood, Foulden Common, Lopham Little and Middle Fens, Roydon and Swaffham Heath.

Black-tailed Godwit: Breeding season: Fens: Welney 45 returned mid-Feb. and over 100 in early April; at least 11 pairs holding territory end of month. North: Cley pair accompanied by 2 chicks May 25th. East: Acle Marshes pair displaying April 6th.

Autumn: 205 on Wash near Lynn Aug. 2nd; Cley 22 Sept. 20th.

Bar-tailed Godwit: Wash: Snettisham peak of 4,100 in Jan. and 3,500 in Aug. Inland: Lyng Easthaugh GP 3 May 4th.

Whimbrel: Early spring date March 15th (at Horsey).

Curlew: Wash: Snettisham peak of 1,110 in Feb. and 1,600 in Aug. Brecks: At least 6 breeding pairs.

Spotted Redshank: Wintering: 2 at Cley Jan.-Feb. and one Dec. Autumn maxima Cley 27 Aug. 23rd, Hickling 15 Aug. 8th, Holme 9 Sept. 28th and Wisbech SF 11 Aug. 31st.

Redshank: Wash: Snettisham peak of 1,870 in Feb. and 3,510 in Oct.

Greenshank: In winter 2 at Thornham/Titchwell/Brancaster (a regular feature since 1974) in Jan./Feb. and one at Cley/Salthouse in Dec.. Largest parties in May: Cley 14 and Hickling 10. Autumn maxima Cantley 15, Cley 16, Scolt Head 20, Titchwell 11, Holme 20, Snettisham 55, Terrington Marsh 11 and Wisbech SF 25.

Green Sandpiper: In winter at Fincham, Grimston, Lyng Easthaugh, Marham Fen, Narborough and Pott Row. Autumn maxima: Cley 12, Flitcham 11, Holme 10, King's Lynn BF 10 and Wisbech SF 12.

Wood Sandpiper: *Spring:* 1-2 at Cley, Hardley Flood, Holme, Lyng Easthaugh, Strumpshaw and Titchwell. *Autumn:* Cley 50 July 31st, Cantley 11 Aug. 10th, Holme 10 Aug. 16th and Wisbech SF 19 Aug. 8th.

Common Sandpiper: Breeding: A pair in Fens with single young in June. Central: one nest found. Autumn passage maxima: Holme 30, King's Lynn BF 15 and Wisbech SF 30.

Turnstone: Wash: Snettisham peak of 401 in Jan. and 810 in Sept.

Red-necked Phalarope: East: Breydon May 11th. North: Cley May 14th-16th and Holme Aug. 5th-8th.

Grey Phalarope: North: Cley Nov. 30th and Titchwell Nov. 30th-Dec. 1st.

Pomarine Skua: North: Hunstanton Oct. 4th and 12th, Holme 2 Sept. 10th, 5 on 11th and 2 on 12th, Titchwell Aug. 15th, Sept. 15th, Blakeney Point Aug. 15th/16th, Cley Aug. 21st, 2 on 23rd, Sept. 3rd, 11th, 13th and 20th, Sheringham March 15th, 2 March 19th, Aug. 19th, 4 on 31st, Sept. 2nd, Oct. 16th, 5 on 17th, 18th and Nov. 18th, Cromer Nov. 12th, Paston 2 Aug. 31st, Sept. 1st, 5 Nov. 9th, and 2 on 29th. East: Bacton March 18th and Nov. 9th, Horsey Oct. 4th, Winterton Aug. 28th, Sept. 21st and Oct. 12th.

Arctic Skua: N/E coasts: Two Jan. records: Sheringham on 3rd and Cley on 5th. Unusual spring movement April 20th when 12 off Cley, 6 off Holme and 2 off Hunstanton. Most impressive movements towards end of Aug.: on 22nd 125 off Holme; on 30th 73 off Hunstanton and on 31st 35 off Paston and 40 off Sheringham. A further 80 passed Holme Sept. 11th. Late movement of 20 at Sheringham Dec. 6th.

Wash: Snettisham 46 Sept. 13th; 100 passed inland at Nene Mouth and then over Wisbech SF Sept. 14th. A unique observation.

Long-tailed Skua: North: Blakeney Point Sept. 28th (KKH), Weybourne Aug. 22nd (NRR), Sheringham Aug. 31st (KBS MPT). East: Winterton Nov. 22nd (PRA TEB). Additional 1979 record of juvenile Cley Sept. 15th (IRM, JPM).

Great Skua: N/E coasts: One winter record: Hunstanton Jan. 2nd. Interesting spring movement April 20th (see Arctic Skua) when 4 at Cley, 2 at Sheringham and 3 at Holme. Autumn records from July 10th (Titchwell) where one killed a Guillemot on 21st. Main autumn passage from late Aug. with maxima for each area: East: Winterton 12 Oct. 15th; North: Paston 13 Oct. 11th, Mundesley 8 Oct. 18th, Sheringham 21 Aug. 31st., Cley 10 Oct. 4th, Holme 31 Aug. 22nd and 20 on 23rd and Hunstanton 16 Oct. 4th.

Wash: 50 heading inland at Nene Mouth and passing over Wisbech SF Sept. 14th. A remarkable record.

Mediterranean Gull: East: Yarmouth/Gorleston Aug. 10th-15th, Sept. 10th, Oct. 31st to Nov. 29th; Breydon May 31st and Waxham Nov. 8th. Broads: Hickling April 23rd. North: Paston March 2nd, Sheringham July 7th-18th, Cley March 29th, Titchwell June 4th and Oct. 22nd. Wash: Snettisham, a sub-adult May 9th-June 13th and again June 25th-27th displayed vigorously to Black-headed Gulls and through its actions prevented 25 pairs from breeding.

Little Gull: Recorded each month, but only 3 Jan. records: Downham Market on 1st, Cley on 2nd and University Broad Norwich on 6th. At Titchwell present all summer, mainly immatures including 4 in April, 3 in May, 8 in June and 12 in July. Autumn coastal movements from Aug. to late Nov. including the following Nov. peaks: Cley 55 to east on 2nd, 23 on 3rd; Mundesley 33 on 1st; Paston 154 east on 1st, and 46 on 2nd; Winterton 52 south on 9th and Gorleston 47 south on 1st.

Additional 1979 records of one off Sheringham Dec. 19th and 4 on 22nd confirm present each month that year.

Sabine's Gull: East: Winterton Oct. 12th. North: Mundesley Nov. 9th; Sheringham July 7th-21st feeding mainly inland but also on scraps provided by bird-watchers; Cley Jan. 1st; Brancaster Staithe Sept. 28th and Holme Sept. 28th and Oct. 4th. Wash: 2 in southern sector Sept. 25th.

Black-headed Gull: Breeding totals of pairs as follows: Cantley 520, How Hill 80, Hickling 7, Blakeney Point 200, Scolt Head 280, Snettisham 250 and Wisington BF 80.

Lesser Black-backed Gull: Broads: Hickling, one pair nested unsuccessfully.



Iceland Gull: North: Salthouse Feb. 23rd and Oct. 25th; Holme March 27th.

Glaucous Gull: The familiar Blakeney to Sheringham adult present until March 8th and from Aug. 21st (17th consecutive winter); it was joined by a second adult March 2nd. Other occurrences in this area included 5 first-year birds at Sheringham Jan. 2nd. Additional records from Gorleston, Winterton, Horsey, Sea Palling, Bacton, Paston (3 March 20th), Wells/Holkham (Oct. 15th), Titchwell (adult April 18th-27th), Holme and Heacham/Hunstanton. Observed up to April 27th and from Sept. 21st. Away from coast immatures at Stracey Arms (Bure Marshes) Feb. 3rd. Buckenham Jan. 12th-27th and Gt. Witchingham Dec. 22nd.

Gull-billed Tern: North: Titchwell July 7th-27th (many observers); also visited Scolt Head ternery where 12 Ringed Plover chicks taken. Additional 1979 record at Cley July 20th (GLW, MGW).

Caspian Tern: Broads: Hickling June 2nd (ADB). North: Cley Aug. 26th (JIM JP-S MW).

Sandwich Tern: North: Blakeney Point 2,300/2,500 nesting pairs raised 1,800 flying young; Scolt Head 1,200 pairs raised 750 flying young. First at Titchwell March 27th and last at Hunstanton Nov. 1st. East: Breydon peak in autumn 800 July 24th. Fens: 4 Wisbech SF Aug. 15th.

Roseate Tern: North: Sheringham July 12th (MPT) — the sole record.

Common Tern: Breeding pairs (young raised in brackets): East: Breydon 33 (32). Broads: Martham 1 (1), Hardley Flood 29 (35), Hoveton Great Broad 4, Ranworth 38 (60) and Hickling 16 (15). North: Blakeney Point 550/600 (50), Scolt Head 280 (10), Burnham Overy 2, Thornham Point 2, Stiffkey Binks 130, Bob Hall Sands 76, Overy Shingle Banks 2.

Wash: Snettisham 160 (17). Inland: Lyng Easthaugh GP 6 (12) and Colney GP 1 (3).

One remained at Ellingham Mill throughout the year (*per* PRA).

Arctic Tern: Extreme dates April 19th (8, Bacton) and Nov. 9th (Sheringham). Breeding: North: Blakeney Point 3 pairs (no young reared) and Scolt Head one pair (one young reared).

Little Tern: Recorded from April 14th (Holme). Breeding pairs (numbers of fledged young in brackets): East: Winterton-Horsey Gap 6 (3). Broads: Hickling 19 (5). Nor-

th: Blakeney Point 120/150 (8); Stiffkey Binks 37, Stiffkey Freshes 10/12, Bob Hall Sands 19, Wells/Holkham 14/15 (few), Scolt Head 68 (5), Brancaster 14 (4-5), Burnham Overy 29-30, Thornham 30-35, Titchwell 37.

Unusual June movements at Paston include 40 west on 1st and 60 west on 29th. Inland, Lyng Easthaugh GP April 20th, Strumpshaw June 15th and Wisbech SF 1-4 in late July.

Black Tern: An early spring passage began April 13th when 4 at Welney, 3 Burnham Overy, 4 Cley, 3 Hickling and 3 Waxham. May 9th brought 37 to Breydon with 3 at Filby and 2 at Cley increasing to 32 there on 11th. A large movement occurred May 13th-15th especially on 14th following strong overnight easterly winds. Numbers included 4 Snettisham, 32 King's Lynn BF, 4 Holme, 4 Brancaster Staithe, 30-50 Titchwell, 250 Cley, 15 Sheringham, 4 Winterton, 12 Flegg Broads, 250 Hickling at sunset after only 2 on 12th and 30 again on 16th, 2 Rockland and 4 St. Germans.

Two remained at Titchwell June 20th to July 14th where 28 on 30th. 1-2 in June/July at Hardley, Cley, Holme and Snettisham.

Small autumn passage and no party exceeded 12. Late birds at Snettisham Oct. 11th and 18th.

White-winged Black Tern: East: Happisburgh Sept. 3rd (KB). North: Holme-Titchwell Oct. 17th-31st (many observers).

Guillemot: North: Sheringham 650 to east March 19th, an unusual time of year for such a movement.

Black Guillemot: East: Winterton Feb. 9th. North: Cley Channel Jan. 1st-Feb. 13th, Sheringham Sept. 20th and Oct. 18th and Holkham (dead) Nov. 30th.

Little Auk: East: Gorleston Nov. 5th, 2 on 6th and one 29th/30th; Winterton 12 Oct. 12th. North: Paston Nov. 30th, Cromer Nov. 12th, West Runton Jan. 27th. 5 dead birds Sheringham Dec. 6th, Salthouse March 29th and Holkham Feb. 8th; Brancaster Jan. 19th and Holme March 30th (choked with fishing line).

Puffin: Only 4 observations: North: Sheringham 2 Nov. 29th, Cley Oct. 2nd and 21st and Holme Nov. 26th.

Turtle Dove: Wash: Snettisham spring passage May 9th to June 16th with 160 May 10th and 84 June 5th. Wolferton 150 Aug. 16th. North: Holme 200 west May 20th and 80 west June 15th.

Ring-necked Parakeet: Singles at Breydon, Yarmouth, Winterton, Northrepps, Brancaster Staithe, Holme, Hunstanton, Norwich and Leziate.

Barn Owl: Recorded at over 80 localities.

Little Owl: Recorded at 40 localities.

Long-eared Owl: In contrast to 1979 34 sites with young calling — all but one in West Norfolk (JBK). Only additional breeding record at Salthouse Heath. Very early immigrant Sheringham Aug. 16th. In Oct. one in off sea Paston on 12th followed by singles at Yarmouth on 15th, Sheringham on 18th and Paston Nov. 1st. Small winter roost containing 3 birds known in NW Norfolk.

Short-eared Owl: Successful breeding pair at Scolt Head; unsuccessful nests at Breydon and Titchwell. In Oct. migrants off sea at Scolt Head 12th, Sheringham 18th and Hunstanton 31st. No winter concentrations, but 5 at Halvergate Marshes March-April.

Nightjar: Total of 51 birds, mostly churring, recorded at 15 West Norfolk localities in association with Long-eared Owl survey referred to above — most records from Brecks. Other specific records from this part of county include 7 singing males at

Leziate and 5 at Sandringham/West Newton. Elsewhere noted at Salthouse Heath, Kelling Heath (up to 4 birds), Winterton and Fritton (at least 6 birds). Late individuals at Wolferton Sept. 2nd and Leziate Sept. 3rd.

Swift: First recorded Cley April 27th. Total of 4,000 moving westwards Sheringham July 30th. Only three October records, the latest at Holkham on 5th.

Kingfisher: Recorded at well over 80 localities.

Hoopoe: Only recorded in Spring as follows: Salthouse Heath April 15th/16th, Holkham (Overy dunes and Gun Hill) April 16th/17th, Strumpshaw April 16th-21st, Middleton (2) May 5th-8th, Happisburgh May 12th-15th, Titchwell May 21st and Holme May 23rd/24th.

Wryneck: In April singles at Winterton on 13th and Cley on 27th. During May apart from two at Paston on 7th singles as follows: Winterton 7th & 10th, Swafield 12th, East Ruston 11th/12th, Cley 26th, Wells/Holkham 6 dates 3rd-18th, Scolt Head 10th, Holme 12th/13th and Tittleshall (near East Bilney) 11th. In Autumn following one at Stanhoe Aug. 17th total of at least 13 coastal migrants Aug. 26th-Sept. 8th at Winterton, Horsey, Paston, Sheringham, Weybourne (maximum of 3 Sept. 6th), Blakeney Point, Wells and Holme.

Woodlark: Brecks records from at least 9 localities in breeding season, a noticeable improvement compared with two previous years. Only one record elsewhere, Winterton May 25th.

Shorelark: In the main wintering area between Weybourne and Cley up to 40 recorded (end Jan.) in first winter period with latest 13 May 4th; in second winter period recorded from Oct. 21st with up to 35 by end Nov. Elsewhere: Hopton Oct. 31st/Nov. 1st, Winterton April 29th, Wells Jan. 5th, Holkham Oct. 21st, Scolt Head Oct. 12th and 10 Oct. 30th, Titchwell 2 Feb. 4th, Thornham 2 on 4 dates Jan. 13th-Feb. 24th and 2 Dec. 7th and Holme March 16th.

Sand Martin: Breeding records include 2-300 pairs in coastal cliffs at Trimmingham and five unusual sites along R. Wensum at Norwich — four pairs nesting in pipes and one pair in a wall. October records at Cley on 11th and Norwich (2) on 29th.

Swallow: A huge roost, possibly up to 100,000 birds, at Titchwell in latter half of Sept. November records at Winterton on 16th and Wells on 18th, 20th & 21st.

House Martin: Complete albinos at Sheringham Aug. 2nd and Cromer Sept. 3rd (same individual?). Late November birds at Cromer 22nd/23rd, Sheringham 24th and Paston 27th.

Richard's Pipit: The wintering individual first seen at Cley 21st Dec. 1979 last seen Jan. 15th. The first county spring record, Winterton March 30th-April 17th (ADB GED *et al*).

Tawny Pipit: North: Weybourne April 12th-14th (MH MPL RT *et al*). Additional 1979 record: East: Winterton two Sept. 30th (PRA).

Red-throated Pipit: East: Breydon June 1st (PRA, ADB, GED).

Rock Pipit: Birds of Scandinavian race *littoralis* at Cley (6) March 22nd & Sheringham March 30th.

Water Pipit: At Hickling noted Jan. 18th, Feb. 18th, March 12th, 2 March 23rd, Oct. 23rd, Nov. 1st and 26th. At Cley 2 Jan. 6th, Jan. 15th, March 22nd, Nov. 9th and 22nd. Elsewhere: Thornham March 25th, Cantley BF March 26th, Bacton April 13th, Horsey Nov. 9th and up to 4 Strumpshaw throughout Dec. at newly constructed broad.

Yellow Wagtail: First recorded at Holme March 23rd. An Autumn roost of up to 300 birds Stow Bridge Aug. 11th-27th.

Blue-headed Wagtail: Spring records as follows: Tottenhill April 19th, Holme 2 April 30th, Strumpshaw & Costessey May 5th, Breydon May 25th, Hickling May 28th and 2 June 7th, Rockland June 1st and Potter Heigham 2 June 2nd. Two Autumn records: Stow Bridge Aug. 27th and Cley Sept. 20th/21st.

Sykes's Wagtail: A male showing the characteristics of this race at Hickling May 31st (IKD).

Grey-headed Wagtail: A total of at least 5 records in May: Strumpshaw on 5th, Cley on 16th, Riddlington on 18th and Hickling 2 24th & 28th, with one on 30th.

Citrine Wagtail: Fens: Welney within Wildfowl Trust reserve Nov. 16th/17th. (TI *et al*). The first county record of this Fair Isle speciality breeding in Siberia.

Grey Wagtail: An increased number of breeding localities received with records from R. Nar (4 pairs with young), R. Wensum (Norwich) and at the following Mills:— Fakenham, Keswick, Marlingford, Shotesham, Taverham and West Acre.

Pied Wagtail: Roosting records include 50 at Titchwell in Feb., up to 100 at East Tuddenham early Autumn and up to 600 being preyed upon by Little Owls in two heat exchangers at Bacton Gas Terminal in Nov.

Waxwing: Only one record. West: 3 Gayton Thorpe Jan. 21st.

Dipper: Central: Bawburgh Mill Nov. 17th-Dec. 3rd of British/Central European race.

Nightingale: During 1980 breeding season recorded at the under-mentioned sites. Unless otherwise stated, records are of single singing birds: Alderford Common 7, Attlebridge Hills, Bacton, Bawsey Carrs 2, Beachamwell, Beetley 3, Blackborough End 3, Bodney Village, Bodney Church, Bodney Lodge 2, Brancaster, Brandon Decoy, Brandon Stauch 3, Buckenham Tofts Mill 2, Buckenham Tofts Park 7, Caldecote, Castle Rising and White Hills Wood, Congham Gorse Moor, Costessey GP, Cranwich Hall 2, Didlington, Didlington Coldharbour, Ditchingham Broome Heath, Dunston Hall 2, East Bilney, East Walton 9, East Winch 6, Felmingham Bryants Heath 3, Felthorpe, Feltwell Common 3, Foulden Common 25, Foulden Field, Foulden Hill 4, Fundenhall Street, Gayton Brink Hill 2, Gayton Thorpe Common 8, Gayton Soigne Wood 3, Gooderstone 2, Great Cressingham 4, Gresham Hall, Gresham Rounce Covert 3, Hilborough Woods and Hollow Heath 10, Hilborough Hall 4, Hilgay Wood Hall 8, Hockham Frosts Common 2, Ickburgh 2, Leziate, Little Cressingham Maggotbox, Little Cressingham Cadogan Plantation, Lynford Long Water 2, Lyng 2, Marham Fen 7, Merton Woods 4, Mickle Mere 4, Narborough Big Wood 7, Narborough Bradmoor 16, Narborough Low Road Belt 3, Narford 8, Needham, North Elmham Great Wood 2, Old Hunstanton, Oxborough 2, Pentney Ashwood Lodge 3, Pentney Hoveringham GP 2, Postwick, Pott Row Sugar Fen 4, Ringland Lakes 5, Rockland Broad, Roydon Common 7, Salthouse Heath 6, Saxthorpe, Shropham Tuzzy Muzzy, Snettisham Common 3, Snettisham Locke Farm 2, South Acre Big Wood 4, South Lopham Fen 2, South Lopham Little and Middle Fens 3, Sparham, Stanford Church 2, Stanford Water 4, Starston Kiln, Stiffkey, Stoke Ferry Fen, Sturston Carr 4, Swaffham, Swaffham Heath 2, Swannington, Swannington Hingrave, Tacolneston, Taverham Heathwoods Nursery 3, Thetford Barnham Cross Common, Thetford Elder Hill 2, Thompson Water 6, Thorpe Great Heath, Tottington Madhouse Plantation 4, Tottington Waterhouse Plantation 6, Upton Doles, Weeting 2, Weeting Emily's Wood 3, West Acre Mink Belt 2, West Acre Wales Covert 5, West Harling Common, West Wretham Galley Hills 2, West Wretham Rush Mere, West Wretham Belt 2, Wells 2, Weybourne Camp, Weybourne Muckleborough Hill 10, Wickmere, Witton Common, Wortwell and Wretton.

The final county total was 345 singing males. The remarkable total of 25 from Foulden Common (300 acres) was recorded by C. Mead and K. Smith of B.T.O. on the night 22nd/23rd May. Greatest density in West Norfolk was to the west and south-west of Swaffham; in the East, the western approaches to Norwich were most rewarding (ALB).

Bluethroat: Males of red-spotted form at Winterton and Cley both on May 17th. No autumn records as in 1974.

Black Redstart: Breeding season: Yarmouth (Southtown) 7 singing males with 4 pairs proved breeding and unaccompanied males Weybourne April-June and Norwich May-July. Spring passage March 22nd-May 26th with maximum of 3 Happisburgh May 5th. Four isolated early autumn migrants from Aug. 18th onwards, but main return passage Oct. 11th-Nov. 10th with maximum of 3 Wells Oct. 16th.

Redstart: Breeding records received from Aylmerton, Felbrigg, Sandringham, Santon Downham and Sheringham.

Whinchat: Breeding: Pairs present at Brettenham, Bridgeham Heath (2), Frog Hill (2), Gooderstone Warren, Leziate, Stanford, Sturston Warren, Tommy's Belt and Tottington. Late October migrants at Wells 17th, Brancaster 18th, Happisburgh 20th and Titchwell 26th.

Stonechat: Breeding: Brecks: Pairs at Bridgeham Heath, Frog Hill & Grimes Graves. North: Pairs at Cley & Weybourne: East: 10 pairs Waxham-Winterton.

Wheatear: Extreme dates March 22nd (Holme) and Nov. 16th (Snettisham). Unsuccessful breeding at Snettisham but at least 2 successful pairs at Leziate.

Ring Ouzel: Late March arrivals at Cley and Weybourne on 25th and Winterton on 30th/31st. Spring passage continued until May 26th with largest concentration 17 at Caister April 30th. At Ebridge 3 birds remained from April 21st to May 12th, an unusually long period for such a passage migrant in Spring. Isolated individuals in mid-June at Saxthorpe and Winterton. Only small-scale Autumn passage of singles Sept. 23rd-Nov. 8th with exception of 15-20, with a major thrush arrival at Holkham Oct. 17th.

Fieldfare: A cinnamon-coloured bird at Attlebridge throughout January. June records from Bacton and Thurlton on 1st and Cockley Cley on 16th. August records from Pott Row on 16th, Swaffham on 18th & Cley on 28th.

Redwing: Late Spring migrants at Brancaster and Burgh Common on May 18th and Winterton on May 25th. Return passage commenced Sept. 20th (Holme).

Cetti's Warbler: Broads: In main breeding area in Yare Valley singing males at Brundall (1), Surlingham (6), near Coldham Hall (2), Wheatfen (8) and Rockland/Strumpshaw (12 — no increase on previous year). Elsewhere: singing males at Acle (Damgate) March-April, Ranworth (2) April-June, Hardley Flood April-June and Oct.-Dec. (2), Ludham (Womack Water) May and Fritton from May and again in autumn. Also 2 Cantley BF end Aug.

Savi's Warbler: North: Cley April 16th-May 9th. Broads: Strumpshaw, one pair almost certainly bred. Martham Broad 4 males in song and Horsey 2 males in song. Hickling first arrival April 11th increasing to 4-6 regular singing birds, all probably holding territory — 2 additional males arrived in June when up to 8 birds in song.

Reed Warbler: A late migrant East Runton Nov. 9th.

Icterine Warbler: One Spring record, a male in song Cley April 11th (A & JM), only the second since 1964. Total of eight autumn migrants: Cley Aug. 27th, Blakeney Point Aug. 15th & 31st, Wells Sept. 4th, Holkham a late individual Oct. 14th/15th, Titchwell Aug. 17th & 27th and Holme Aug. 24th.



Lesser Whitethroat: North: Individual of Siberian race, *blythi*, trapped Sheringham Oct. 12th and birds showing same characteristics at Wells Oct. 12th & 14th.

Sardinian Warbler: North: Weybourne Sept. 2nd to at least Oct. 5th. The second county record of this common Mediterranean species, the first occurring in 1973.

Barred Warbler: East: Gorleston Sept. 4th and California Sept. 5th. North: Weybourne Sept. 1st & 21st, Holme Aug. 25th and 3 Sept. 1st, one remaining until the 8th, and Hunstanton Sept. 1st.

Garden Warbler: Latest record, Wells Oct. 18th.

Blackcap: Reports received of at least seven wintering birds: Ingoldisthorpe Jan. 2nd, Gayton Jan. 12th and another Jan. 26th, Sheringham Jan. 29th, Gorleston Jan. 29th/30th, Wells Feb. 1st & 7th and North Walsham March 8th. Noticeable influxes of at least 50 birds at Wells/Holkham Oct. 12th & 17th. Correction to 1979 Report: Third line should read 'Gorleston Jan. 24th & Holme Feb. 17th'.

Pallas's Warbler: East: Waxham one trapped Oct. 31st (JH), remaining until Nov. 8th. Second bird present Nov. 2nd-6th.

Yellow-browed Warbler: East: Waxham Oct. 19th/20th (trapped) and Winterton Nov. 9th. North: Wells/Holkham Sept. 28th, 29th (2) & 30th, Oct. 11th/12th (2) & 13th and Nov. 8th, 9th (3) and 10th-12th.

Wood Warbler: Breeding season records of singing males from Kelling (2), Weybourne, Snettisham (4), South Wootton and Mousehold Heath, Norwich (4). Two pairs bred at last named locality (one successfully) and one pair also bred Sheringham. Autumn migrants at Holme Sept. 3rd, Cley Sept. 7th and Winterton Sept. 21st.

Chiffchaff: Wintering birds at Narborough Jan. 1st-13th and Horsey Jan. 24th. A noticeable influx of birds of Northern races (*abietinus* and *tristis*) from Oct. 12th until early Nov. with small numbers on both east and north coasts, especially at Wells/Holkham.

Firecrest: An early migrant at Holme March 16th followed by a small number of records March 31st onwards on 1/2 birds including inland sites at Ebridge and Norwich. Up to 4 singing males at both Sheringham and Wells/Holkham during May but no evidence of breeding. Autumn passage commenced on a small scale Sept. 29th with an unprecedented influx Oct. 31st extending into mid-Nov. on east and north-east coasts with records from Yarmouth (3), Caister (3), Winterton (3), Waxham (3), Hempstead, Happisburgh (3), Paston, Trimingham and Cromer (2). Subsequently 2 inland Filby Nov. 17th.

Red-breasted Flycatcher: One Spring record = Holme, an immature male singing in pines May 27th. In Autumn singles Wells/Holkham Sept. 29th/30th, Oct. 11th-13th with an additional bird on 12th and a fourth individual Oct. 18th/19th. Also one trapped Sheringham Oct. 11th.

Pied Flycatcher: Only small-scale Spring passage with records from Cromer April 30th, Wells/Holkham (up to 3) May 1st-5th, Kelling May 10th, Titchwell May 11th, Holme May 12th and Blakeney Point May 24th.

Bearded Tit: Breeding localities (pairs where known in brackets) included: Broads: Hickling (111), Horsey (50), Martham (6), How Hill (6), Ranworth (2), Cantley BF (5), Strumpshaw (1), Belton Marshes (5) and Somerleyton (1). North: Cley (40-50), Burnham Norton (2/3), Brancaster and Titchwell (15-20). Wash: King's Lynn area (2). Records of autumn migrants away from breeding areas include 8 Weybourne Sept. 29th, 14 east Holkham Oct. 15th, 13 east Brancaster Staithe Sept. 23rd and a further 9 east Oct. 14th, 4 Snettisham Oct. 4th and 2 Oct. 17th, 28 Holme Sept. 26th and 20 in October, 20 Reedham Oct. 14th and 25 King's Lynn Beet Factory Nov. 23rd.

Willow Tit: One showing the characteristics of the southern Scandinavian race *borealis* Sandringham Nov. 23rd (MC). The first reported county record of this race.

Long-tailed Tit: One showing the characteristics of the white-headed Northern race *caudatus* Hopton Nov. 10th (BAC).

Golden Oriole: Sheringham May 21st/22nd, Titchwell May 31st, Holme June 1st, Hicking (2) June 8th, East Tuddenham June 29th and Winterton July 5th. Also breeding season records from three localities in Fens/Breck.

Red-backed Shrike: Spring migrants at Cromer May 25th and June 1st and Holme May 29th/30th. Breeding season records only from Brecks and at one North coast locality where an unmated male held territory for two weeks. A male Titchwell July 24th-27th. Autumn migrants at Winterton Sept. 1st, Cromer (2) Sept. 30th and Oct. 1st, Sheringham Sept. 2nd, Weybourne Aug. 26th-Sept. 8th with 2 Sept. 6th, Wells Oct. 5th and Thornham Oct. 12th.

Great Grey Shrike: In first winter period only regularly recorded at Strumpshaw and Roydon Common with other records from Hempton in Feb., Thetford and Bridgeham Heath in March, and a late migrant at Caister April 30th. Autumn arrival commenced Oct. 14th (Cley) with records from eight other localities in second winter period including two at Wells in early Nov.

Nutcracker: North: 1979 observation at Itteringham Sept. 23rd (AEP).

Carrion Crow: West: Traditional winter roost at Roydon Common contained 250 birds Jan. 1st.

Hooded Crow: In first winter period occasional records at a variety of localities up to May 3rd with maximum of 5 Winterton April 13th. One Sheringham June 1st. In second winter period records from Oct. 16th but only regularly noted at Roydon Common roost where maximum of 5 Nov. 8th.

Brambling: Several flocks containing hundreds of birds in various parts of Norwich in second half of December.

Serin: North: Cromer male May 24th/25th (PL *et al*).

Siskin: Breeding confirmed at Sheringham and Mundford, but singing males in summer at several other Breck localities and also at Wells/Holkham. Largest concentration 200 Langford Hall Feb. 24th.

Twite: Wintering coastal flocks included 300 at Morston, 100 at Wells, 500 at Scolt Head and 200 at Titchwell.

Mealy Redpoll: Up to 5 Wells/Holkham in January and one Swaffham Forest April 12th.

Crossbill: Successful breeding noted at Sheringham, South Runcton, Wells/Holkham and Brecks: also regularly recorded throughout year at Snettisham (Ken Hill woods). Occasional records from a variety of West Norfolk localities but only one record from East: Lound Aug. 1st.

Hawfinch: Brecks: Only regularly recorded at East Wretham where three nests found and maximum count of 151 Feb. 11th. Also records from Cockley Cley, Gooderstone, Hilborough, Methwold, Micklemere, St. Helen's Well, Santon Downham and Weeting. Elsewhere East Tuddenham Sept. 21st, Freethorpe Nov. 19th, Fritton 2 Nov. 2nd, Gasthorpe 2 May 2nd, Wells/Holkham 2 March 3rd, 2 Sept. 25th and Oct. 16th, and Weybourne June 10th and Sept. 22nd.

Lapland Bunting: In first winter period many more records than usual from numerous localities with maxima of 130 at Halvergate Jan. 27th and on the coast 25 at Cley Feb. 26th and 14 Burnham Norton Jan. 31st. Late summer-plumage males at Cley, Salthouse and Kelling on April 27th (same individual?) and Titchwell May 3rd. Return passage commenced Sept. 27th (Cley, Kelling and Titchwell). Maximum concentration in second winter period 30-40 Burnham Norton Dec. 21st.

Snow Bunting: Largest flock submitted, 200 Cley Jan. 16th. One inland record, Buckenham Dec. 2nd.

Ortolan Bunting: North: male Cley May 15th/16th. No autumn records for third successive year.

The following, not mentioned in the Classified Notes, were also recorded in 1980 (*breeding species in italics*): *Canada Goose, Mallard, Kestrel, Red-legged Partridge, Grey Partridge, Pheasant, Moorhen, Coot, Ringed Plover, Lapwing, Snipe, Common Gull, Herring Gull, Great Black-backed Gull, Kittiwake, Razorbill, Stock Dove, Woodpigeon, Collared Dove, Cuckoo, Tawny Owl, Green Woodpecker, Great Spotted Woodpecker, Lesser Spotted Woodpecker, Skylark, Tree Pipit, Meadow Pipit, Wren, Dunnock, Robin, Blackbird, Song Thrush, Mistle Thrush, Grasshopper Warbler, Sedge Warbler, Lesser Whitethroat, Whitethroat, Willow Warbler, Goldcrest, Spotted Flycatcher, Marsh Tit, Coal Tit, Blue Tit, Great Tit, Nuthatch, Treecreeper, Jay, Magpie, Jackdaw, Rook, Starling, House Sparrow, Tree Sparrow, Chaffinch, Greenfinch, Goldfinch, Linnet, Bullfinch, Yellowhammer, Reed Bunting and Corn Bunting.*

Offshore Observations

Sooty Shearwater: Six 30 miles NE of Yarmouth Aug. 31st (PRA) and one 10 miles north of Brancaster Aug. 9th (JB).

Storm Petrel: Eleven miles N of Brancaster Sept. 16th (JB).

Leach's Petrel: Thirty miles NE of Yarmouth Sept. 12th (PRA).

Grey Phalarope: Sixteen miles off Brancaster Aug. 28th (JB).

Pomarine Skua: Sixteen miles N of Brancaster Oct. 3rd (JB)

Long-tailed Skua: Adult and immature 15 miles N of Brancaster Sept. 4th (JB)

Little Gull: Twelve 12 miles N of Brancaster Oct. 13th (JB). Up to 14 Sept. 3rd to Nov. 29th 30-40 miles NE of Yarmouth (PRA).

Black Guillemot: Sixteen miles north of Brancaster Oct. 10th (JB).

Slate-coloured Junco: Leman Gas Field (Shell Bravo gas platform 49-26T) 35 miles off Happisburgh May 24th. Released Holme May 31st (DA)

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Blackcap Migration in Norfolk

TO NORFOLK, the Blackcap is a widespread and fairly common summer visitor, breeding in woodlands, Broadland carrs and even large gardens. As a passage migrant it is scarce in spring but more plentiful in autumn, while the number overwintering has increased during the last decade.

Since 1961, over two thousand have been ringed in Norfolk, the majority on the coast in late summer and autumn. Of these, over three-quarters have been trapped in the last ten years, reflecting not only an increase in ringing activity, but also a marked increase in abundance of autumn migrants. There have been 22 recoveries of Norfolk-ringed blackcaps, including ten abroad. In addition, 7 blackcaps have been controlled within the county, having been ringed in other parts of Britain as well as one ringed in Holland.

These recoveries and controls, along with other data collected in Norfolk in recent years, form the basis of this article. In addition it is described how the results from our own county fit into the already well-established pattern of migration in other parts of the Western Palearctic.

Arrival in spring

Blackcaps breeding in Britain are part of the western population which migrates on a SW — NE axis (see later). In Norfolk, the first Blackcaps are recorded at the end of March or early April, often as singing males in their breeding territories. As with many summer migrants, the females arrive a week or so later. New birds continue to arrive at their breeding areas throughout April and early May, although very few migrants are recorded at coastal sites.

There have been four spring recoveries of Blackcaps, of probable British stock, ringed in Norfolk the previous year. Three in Belgium were presumably birds preparing to make the short sea-crossing to south-eastern England, while one controlled at Beachy Head on 11th April had probably just made landfall in Britain. Another ringed at Dungeness on 1st May and controlled at Gillingham 18 days later supports this as the route by which some, if not most, of our spring Blackcap arrivals reach Norfolk.

Despite the paucity of spring passage records along the coast, two Blackcaps ringed at Cley and Blakeney Point in late spring, were recovered in the same summer at Fakenham and in Oxfordshire respectively. This suggests that at least some make landfall on the north Norfolk coast before continuing their journey westwards.

Blackcaps in summer

Relatively few Blackcaps have been ringed as breeding adults in Norfolk but, as with many summer migrants, there have been a number of controls in the same locality in subsequent years. Despite the fact that even fewer Blackcap nestlings have been ringed, one found dead in Algeria at the end of September had been ringed that summer in the nest in Mundford.

Autumn migration

The Blackcap is one of the species which shows a clear-cut migratory divide. In general terms, birds breeding in Scandinavia and to the east of 12°E, migrate in a south-easterly direction in autumn, whilst those from western Europe, including Britain, are south-west oriented.

From late July onwards, Norfolk Blackcaps move away from their breeding areas. Post-juvenile dispersal is often totally random at first and apparently in the "wrong" direction. This is well illustrated by a juvenile ringed in Gloucester in early September and controlled at Salthouse 19 days later, while one ringed in Essex in mid-month had moved due north to Titchwell after a week. Such movements, however, are probably exploratory journeys by the juveniles, information from which can be used the following summer when they return as breeding adults. Later, in common with the adults, they move towards the south-east corner of England (as shown by two recoveries in Essex later the same autumn), from where they migrate in a south to south-westerly direction towards the Pyrenees, probably overflying northern and central France.

There is also evidence that both western and eastern populations can be involved in September movements. Three Blackcaps ringed in Norfolk in September have been found the following year in East Anglia, whereas one ringed at Stiffkey in mid-month was recovered in Lebanon the following May.

By the end of September, most British Blackcaps have left the country and thereafter the majority of records refer to birds from the Continent. While small numbers of Blackcaps are a regular feature of late autumn along the Norfolk coast, larger numbers only occur with a north-easterly to south-easterly airstream, Robins and Goldcrests being the two most frequently associated "fall" species.

October recoveries give some indication of the route taken by these migrants. One ringed in Holland was controlled at Holme a week later and a Sheringham-ringed Blackcap was controlled at Titchwell two days later. As in September, both south-western and south-eastern oriented populations are involved and two Blackcaps ringed on the north Norfolk coast in October were found in France and Italy, respectively, that winter.

Blackcaps in winter

British Blackcaps winter in southern Iberia and North Africa, and from Norfolk there have been four recoveries within this area, one each in Spain and Algeria, and 2 in Morocco. Perhaps surprisingly, Blackcaps wintering in Norfolk, as in other parts of Britain, are almost certainly Continental birds. Evidence for this is that, following heavy late autumn falls, the number of Blackcaps recorded that winter is unusually high. This is believed to result from the settlement of reversed migrants, which cannot or do not reorientate, having found a suitable alternative wintering area.

In Norfolk, during the last 15 years, an average of 5 wintering Blackcaps have been recorded for each December to February period. Peaks of 17 and 13 occurred in 1975-76 and 1976-77, each of which followed record numbers of Blackcaps on the east coast of Britain in late autumn. To date there have been no winter recoveries in Norfolk of ringed Blackcaps.

Acknowledgements

I am most grateful to the British Trust for Ornithology for allowing me access to all the Blackcap recoveries in their files.

Moss Taylor

Breeding Long-Eared Owls in West Norfolk

RECORDS of breeding Long-eared Owls in Norfolk rarely exceed half-a-dozen sites in most years. This is due to the secrecy of the owls for much of the year. Winter birds are usually strictly nocturnal and breeding adults are less vocal than the Tawny Owl for example. Some flying birds in the daytime may be overlooked as Short-eared Owls (there is a strong similarity in flight) and breeding Long-eared Owls feeding young may become active prior to dusk.

A mid-summer survey in 1980 located a total of thirty-four sites with calling young, from one to three owlets per site with an average of two. Unfortunately, one nest was chopped down during forestry operations. However, the surviving owlet was hand-reared. All of the sites but one were east of a line south from King's Lynn to Downham Market and west of a line running from Burnham Market through Fakenham, Litcham, Watton and East Harling.

All sites were located by listening for the penetrating, far carrying hunger call of the owlets; roughly described as a drawn out squeak. This call is given with remarkable persistence throughout the night in June and July, the best months for discovering sites. In May some young will not yet be large and vocal while by August family groups will be splitting up and calling will cease. On still evenings this call is audible at 1.25 Km, especially by cupping one's hands to one's ears. The note is immediately distinct from the lower pitched, hoarse, disyllabic Tawny Owlet call, which has much less carrying power. Windy or rainy evenings greatly reduce one's ability to pick up calls at a distance. Though difficult to transcribe, that of a Long-eared Owl is a mournful "eeeeep" while a young Tawny Owl's call is a hoarse "chiserp".

Breeding habitat

All sites, with one possible exception, were associated with conifer plantations. These varied from solid stands of Forestry Commission trees to isolated shelter belts of varying size on arable land. All the forestry sites, however, were next to clearings reflecting the species' need for open land to hunt over, as well as hunting by sitting and watching within the canopy.

The breakdown of habitat types of the Norfolk birds is described below:

Habitat description	Number of sites
1. Small plantation, copses, scattered trees on lowland heath and breck.	3
2. Extensive blocks or fragmented areas of coniferous forest.	21
3. Small plantations, sheltered belts, hedgerows on arable farmland.	<u>10</u>
	Total <u>34</u>



Interspecific competition

While engaged in the survey a total of forty-six sites with calling Tawny Owlets was discovered although no attempt had been made to search for this species. They just happened to occur in areas where the survey was taking place.

There were definite signs that Long-eared and Tawny Owls could not co-exist. The closest together that young of both species were heard calling was about 0.5 Km. Tawny Owls dominate and have been known to kill Long-eared Owls. It is significant that a previously regular Long-eared Owl site was unoccupied in 1980 when young Tawny Owls were present. Tawny Owls, while more numerous in deciduous or mixed woodland, were also found in pure conifer stands. However, they appeared to require more mature timber than the Long-eared Owls.

Human habitation

Long-eared Owls definitely avoided human dwellings. Many excellent copses, from the human point of view, failed to hold Long-eared Owls because of the close proximity of a house. Tawny Owls however will breed in gardens.

Long-eared Owl sites on average were 0.91 Km. from the nearest dwelling with extremes of 0.3 Km. to 2.3 Km. Even in these cases the nearest dwelling was usually an isolated farmhouse. There was only one obvious exception with houses on two sides at distances of 0.4 Km. and 0.6 Km. and a town centre only 1.0 Km. distant.

Disadvantages of survey method

Two disadvantages were immediately obvious.

1. The number of young present cannot be positively assessed. Under-recording of young is probable at some sites where the odd owlet in the brood is not calling.
2. The actual nest site cannot be pinpointed for accurate site description. Young Long-eared Owls soon move away from the nest. Speedy development of the wing feathers enables them to fly when the rest of their body is still downy.

Another possibility for the unwary is to over-record the number of sites. The far carrying call may be heard by a listener standing anywhere in a circle with a diameter of 2.5 Km. When one is moving around forestry areas at night it is possible to re-enter this circle and think one has a fresh site. To avoid this, a map should be carried and sites marked, so that one can judge one's later positions in relation to the sites.

Advantages of survey method

1. Only one visit necessary to establish successful breeding.
2. No disturbance to breeding birds at crucial egg-laying/incubation period.
3. Ease of locating sites. At no other time of year can Long-eared Owls be found so readily without methodically trudging through woodland looking for pellets and roosting sites.

General Discussion

Strangely enough only one site could be found in a 2 Km. wide band either side of the A 11, despite much of the area looking ideal. A railway line also runs along this band and it is speculated that the combined noise of the railway and all-night traffic on this major trunk road is too much for the Long-eared Owls. The single site in this band was 1.0 Km. from the A 11. A limited amount of traffic is certainly not objected to because at one site young Long-eared Owls moved into roadside ivied oaks, within yards of traffic, the birds being lit up by passing cars. This was a minor road however.

No doubt quite a number of sites have been overlooked. A further survey in June/July 1981 should hopefully produce a more accurate picture.

Observers finding Long-eared Owl sites in West Norfolk in 1981 are asked to forward Ordnance Survey reference number, number of young calling, and brief habitat description. No sites will be published, merely included in a total as in this article.

Briefly as a guide, one should look at conifer plantations and shelter belts, away from dwellings and Tawny Owls, during June and July. These night-time jaunts will be full of interest and reveal other species as well: Little Owls, Woodcock, Stone-Curlews, Nightjars and Grasshopper Warblers.

Finally, I should like to thank N. Williams and P. Feakes for help in locating sites in 1980.

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King's Lynn.

Moulting Shelducks on the Wash

THE RECENT discovery of Shelduck in wing moult on the Forth Estuary and the sighting of a large autumn flock on the Dee raised the possibility that the moulting habit was becoming more frequent on British estuaries. With a further rise in moulting numbers on the Forth, from 800 in 1977 to over 2,500 in 1979, it seemed unlikely that the Forth alone should share with Bridgewater Bay the exclusive feature of a proven moult flock.

In 1977 about 900 Shelduck were present on 1st September near the mouth of the Ouse. The loose flock included 150 juveniles (first summer) and over 700 second

summer or older individuals capable of flight. One small additional party of 12 which was approached by boat contained 5 flightless birds in full wing moult and although the date raised the possibility of earlier moulting by the larger flock it did not preclude (i) an early immigration from other British sites or overseas where moult could have been completed by mid August or perhaps (ii) a late stopover on the outward journey to the Heligoland Bight.

On 1st August 1980, I counted 2,270 Shelduck on the east Wash between the Ouse mouth and North Wootton saltings. By Ouse mouth there were 114 juveniles and 950 second-year and older birds in loose flocks which included 23 flightless adults, perhaps around the number expected as nurses for the ducklings. An additional tightly packed flock of about 1,300 birds off North Wootton saltings was mainly comprised of moulting adults with a maximum of 150 capable of flight. The absence of primaries in many, visible both at rest and when wing exercising, confirmed that this was a moult flock closely resembling that on the Forth in appearance and habits. A follow-up visit on 4th August yielded a count of 1,040 flightless birds at the same site off North Wootton (Bulldog Sand): this was perhaps a more accurate count owing to better views in calmer weather. The largest most closely observed group, containing 580 birds, showed equal proportions of birds with half-grown, quarter grown and nil primary feathers and less than 20 full-winged Shelduck, presumably about to drop their feathers. Evidently the moult was well advanced, the early date suggesting second-summer and failed breeding birds formed the bulk of the flock as is apparently the case on the Forth.

There have been frequent reports of Shelduck leaving the Wash on their moult migration and during late July 1980 parties of 5-20 could be seen moving to N and NE in the evening. Once the moult flock on the Wash had been confirmed I kept watch at Snettisham Beach from 19.00 to 20.45 on the clear evening of 5th August. Five parties, totalling 65 birds took off from the general area used by the moult flocks and moved overland to NE on a following wind. Clearly in spite of the establishment of a moult flock, 1,000-1,500 strong, many birds using the east Wash continue to pass on to the Knechtsand for moulting.

The close correspondence between the autumn population on the Forth and the numbers proven to be in moult suggests that total counts can provide simple if rough guides to the size of the moult population: strict comparability should not be expected however because of the differences in juveniles and passage numbers. The marked rise in the Shelduck population index in 1975/1976 was followed by a progressive rise in Bridgewater Bay and Forth populations and what was probably the establishment of the east Wash moult flock in 1977. To explain the subsequent fluctuations however, especially at Bridgewater Bay, a more detailed investigation is required.

It would be surprising if the only two large estuaries I have examined in detail were also the only ones to hold new moulting flocks. The Dee, Mersey and Essex/Thames and other estuaries also hold substantial winter flocks indicating very favourable conditions for Shelduck and remain in parts sufficiently undisturbed to provide the necessary security. Investigation of such sites especially in early August could demonstrate that moulting on the Forth and the Wash reflects a wider tendency for at least some Shelduck age classes to choose sites in Britain rather than the Knechtsand (Heligoland Bight) for their annual moult.

D. M. Bryant

Communal Roosting by Hen Harriers

IN RECENT years communal roosting by wintering Hen Harriers has become a regular feature on the north Norfolk coast and the following observations are at two of these roosts during the 1979/80 and 1980/81 winters.

The roosts lie some 7 Km. apart and as it is likely that they are chosen for their isolation and inaccessibility, I refer to them as sites A and B throughout.

Site A is in a freshwater reedbed, the birds utilising flattened areas and roosting on raised platforms. The site is bordered to the south by farmland and to the east and west by fresh and saltwater marshes.

Site B is to the east and lies in the middle of an extensive saltmarsh. The site itself is on slightly higher ground fringed by *Suaeda* bushes, the birds roosting amongst Sea Couch grass.

The first birds usually arrive at the wintering grounds by late September/early October and some at least use the roosts from the outset. It is likely that these could include passage birds but by late October the roosts have reached their maximum wintering numbers. These have ranged from 6 at site A to 5 at site B, with an increase in numbers during the late winter/early spring period. This will be discussed later.

During the daytime some birds are observed hunting in the roost site area, especially at site B where it is suspected that all the birds spend each day in the vicinity of the roost. At site A however, judging from the direction of incoming birds in the evening, it is clear that the majority hunt inland, on occasions being seen up to 12 Km. from the roost. Fields of sugarbeet are especially favoured.

In the evening the birds arrive at the roost up to 1 hour 30 minutes before sunset, during which time they can be seen hunting (to date no prey has been seen to have been taken, though they have been seen to arrive with a full crop). The Harriers usually arrive singly or paired (male and female, two males or two females), these groupings being noted over a period of nights suggesting that the same hunting grounds are used by both. It is interesting to note that birds have been seen heading in the direction of site A (some 5 Km. away) 20 minutes before and 5 minutes after sunset, passing within 2 Km. of site B.

On occasions aerial activity may be seen, especially in a gusty wind, and at other times the birds assemble on the ground some distance from the roost before finally settling up to 45 minutes before to 20 minutes after sunset. At both sites they roost some distance apart, particularly at site B where the distance between some birds is approximately 350 metres, while at site A, although they show a greater tendency to settle in close proximity to one another, two main groups have existed up to 500 metres apart. It was noted that the birds from site B moved to roost in sand dunes 1 Km. away for a period of nights at a time coinciding with high tides in the evening.

Brief skirmishes with Carrion Crows are commonplace, their paths crossing as both go to roost. Other birds including Short-eared Owls and Marsh Harriers also cause concern. One spring evening a group of 3 female and a male Hen Harrier soared with a female Marsh Harrier, mobbing it and uttering loud "keke-keke-keke" calls as it dropped into the roost. Surprisingly, the Hen Harriers followed, settling close by to roost.

By February, with lengthening days, increased aerial activity is noted prior to roosting, with males and females engaging in bouts of soaring and chasing. For most of the winter males are not tolerated, the females chasing them off. At this time, however, both settle close to each other in the roost.

During late winter and early spring there were increases in the number of birds roosting, mainly at site A and more noticeable in the winter of 1979/80 when ringtails outnumbered males by 5 to 1. Most of the ringtails were considered to be females (juvenile males were only positively identified twice). From February onwards the roost increased to 4 males and 6 ringtails, the males all being second-year birds (distinct brown mantles showing). This increase has been noted again last winter (1980/81), the roost consisting of 2 males and 4/5 ringtails for much of the winter, but in March it contained 4 males and 4/5 ringtails with an interesting note of 2 males and a female roosting very close to each other and some distance from the main group on 25th February.

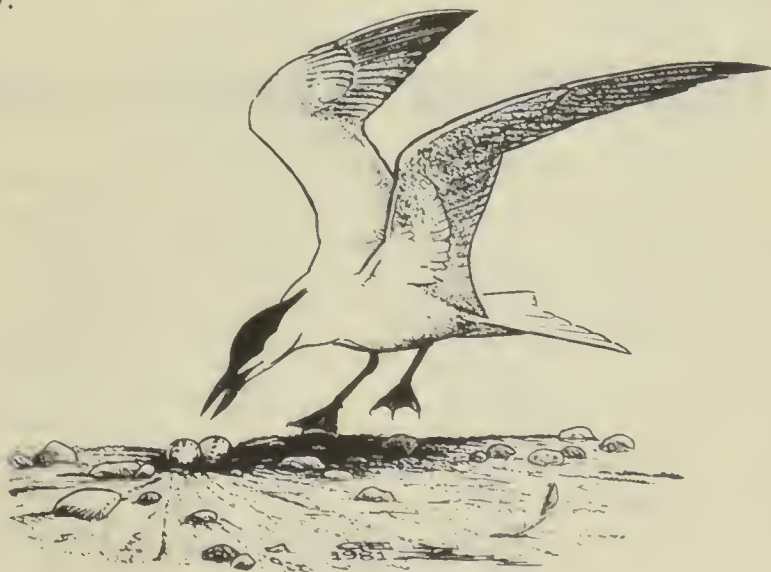
These increases being mainly additional males would seem to support the view (expressed by Donald Watson in *The Hen Harrier*) of a westerly movement of males from the Low Countries in January/February. Some spring records doubtless include birds passing out of the country and back to breeding grounds.

The roosts are deserted by early to mid April, but odd birds stay until early May and 2 females were soaring over site B on 4th May 1980.

John Brown.

The Titchwell Gull-billed Tern

ALMOST without exception Norfolk observations of Gull-billed Terns relate to individuals moving rapidly off-shore. Up to and including 1979 a county total of 42 has been recorded, the majority most probably from Denmark — the nearest breeding colony.



Bryan Bland identified a Gull-billed tern in the Titchwell tern colony on 7th July 1980 and this bird obligingly remained in the area for three weeks. During this unusually lengthy stay it was watched by scores of observers, providing an opportunity to record feeding habits.

Both Little and Common Terns were very aggressive towards the Gull-billed when it approached their nests and chicks. On the 8th it was seen to pick up a small Little Tern chick, but soon dropped it when driven off by the adults. On another occasion it seized a sitting adult Little Tern by the bill flying off with it dangling below. This was the only occasion it was observed harrasing an adult tern. However, during the early part of its stay the Gull-billed regularly seized Little Tern chicks. On the 9th a visitor reported it had injured a chick, but as far as is known this was an isolated incident. When dropped the chicks scampered off apparently none the worse for the experience. The Gull-billed was also noted picking up a dead chick on the edge of the colony and walking with it to the tide-line. Here it was washed only to be discarded. There was no evidence of killing any chicks.

The Gull-billed also had a taste for eggs and was first seen taking an egg from the tide-line on the 8th (a week earlier high tides had washed out several clutches of terns' eggs). Next day it walked up to a Common Tern's nest, seized and ate an egg. By mid-July the Gull-billed had changed its diet and began feeding on fish discarded by Little Tern chicks. Perhaps the adults were providing food too large to be swallowed.

The Gull-billed was content to take unwanted fish and was not observed chasing adult terns when they were feeding chicks. On no occasion was it seen fishing. Towards the end of its stay this rarity became more elusive, often heading towards Scolt Head where food supplies were doubtless more abundant.

The majority of Little and Common Terns had fledged and left Titchwell by late July and the Gull-billed was last recorded on 27th.

Colin Wells
(RSPB Assistant Warden)

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THE NORFOLK MAMMAL REPORT 1980

Editorial

The Editor is pleased to present the 25th Norfolk Mammal Report. On these numerically significant occasions it is customary to look backwards and forwards in time and, quite by chance, a number of events fall into these categories.

During the course of the year it was a great pleasure for the Editor to meet F. J. Taylor-Page who was doing so much a quarter-century ago to stimulate the study of mammals in Norfolk. He was editor or joint editor of the Report for many of its early editions which were typed out and issued as duplicated pages. For some years now he has lived and worked in the Lake District and it was inspiring to meet at first hand the infectious and instructive enthusiasm for all aspects of Natural History described by friends still living in Norwich.

The highlight of the year must surely be the isolation of the elusive virus responsible for the infamous "Red squirrel disease". We have appealed for several years now for carcasses of red squirrels or better still news of animals obviously infected. Dr. Ian Keymer worked to isolate the causative agent with no success until this year when the scheme he devised to transfer tissue with the utmost speed to an electron microscope proved itself. Mr. D. Neal's report of an infected animal at Blickling was acted upon immediately and in spite of the considerable journey involved the virus could still be found. Dr. Keymer needs more material to work upon and would appreciate reports of suspected cases. In order to save as much time as possible, please contact him directly at the Veterinary Investigation Centre, Norwich, Tel: 46278. We hope to include a proper account of this work in a future edition of the Report.

Looking to the future, it has been encouraging to meet so many enthusiastic and observant youngsters during the year. Many boys and girls have taken part in quite intensive activities organised by our organisations, Trust and Society. Others plough their lonely furrows while the most fortunate are those with parents who support and assist. Our youngest contributor, nine years old at that time, is Miss Jane Brewster who tells of the very well concealed Harvest Mouse nest she discovered in Aldborough. That knowledgeable group, the Young Ornithologists' Club (Norwich) now collect and send in mammal notes. One of their adult leaders, Mike Wood, brings us round full cycle by reminding us of some notes on Norfolk Mammals contributed by Frank Norgate to Mason's "History of Norfolk", 1884. The rarities then were the Polecat and the Marten though both were mentioned. The Otter was described as "Common in most of our Broads and large pools and in most of the streams. Five were killed by one man in the Wensum river at Sparham in the spring of 1882". What high proportion of our total otter population will five be in the spring of 1982? Other references to these notes will be made in the Classified Notes.

Our main article is by A. E. Vine. His article on Badgers in Norfolk printed in the 1970 Report is the standard reference paper on the subject. Now, a decade on, he brings us up to date. It is obvious that the collection of information means the expenditure of time, energy and resources but it often happens that an intensive study of

this nature becomes linked with the championing of the species concerned. This is a suitable opportunity to acknowledge Tony's invaluable work on behalf of this Norfolk mammal that needs its dedicated advocates.

The Editor thanks contributors for their submissions, great or small and regrets not being able to send personal acknowledgements to them all, but does emphasise that every scrap of information is worthwhile and is filed and retained at the Castle Museum where it will provide source material for naturalists and students of the future. The quantity of contributions is increasing and demonstrates a growing interest in mammals.

Grateful thanks go to certain specialists for their help: Dr. I. F. Keymer, Veterinary Investigation Centre, Dr. L. M. Gosling, Coypu Research Laboratories, Rex Whitta, Wildlife Ranger, Forestry Commission District Office, Santon Downham, Percy Trett for his help with North Sea mammals and John Goldsmith at the Castle Museum, Norwich. John will continue to answer queries on all vertebrates directed to him at the Museum. His telephone number is Norwich 611277 ext. 287.

Please send notes for the 1981 Report as early as possible in the new year, preferably by the end of January 1982. They should be addressed to R. C. Hancy, 124 Fakenham Road, Taverham, Norwich, NR8 6QH. If you wish to discuss any observation on mammals please ring the Editor on Norwich 860042.



Norfolk Badgers 1971-1981

THE TOTAL numbers of occupied badger setts in Norfolk during the 1971-1981 decade have remained very stable, fluctuating between 25 and 35 in any one year. In one area in particular, following successful reintroductions, good reoccupation of former setts was followed by a spread to several completely new sites. In the north-west the success story at Ringstead has been well publicised, while in the south-west came confirmation of an isolated sett that had become established before 1971. Another introduction attempt was initially successful, but unfortunately came to an abrupt halt due to gassing. There have also been losses from various causes.

FENLAND

West of the Ouse the old sites have been rechecked at intervals but never found to be re-occupied. Very surprisingly, in March 1978 a dead badger was found at Hay Green, Terrington and there were reports of a pair having originally been seen. This is only a few miles from the original setts, finally thought to have finished with their being gassed in 1970, leading to the hope that they might have survived somewhere in the area. Although searches of likely areas and enquiries proved fruitless, there is always a chance that just such a refuge might still be discovered. The body was taken to the Ministry of Agriculture laboratories in Cambridge and confirmed to be free from any T.B. infection, as has been the case with all others examined from eastern England.

March 1978 may have been for some reason a time of exploration for west Norfolk badgers, for there were one or two other reports of wandering animals in the same few weeks. In an equally unlikely Fenland locality, one (a female) was killed by a car on the road alongside the River Ouse just south of the railway Ouse Bridge between Denver Sluice and Ten Mile Bank. Enquiries in the district led to the discovery that a year or two previously one had been seen on the same quiet riverside road between Littleport and Ten Mile Bank. One was seen crossing the A1101 between Three Holes and Lakes End, near Welney, in February 1980.

A 1968 report of one trapped, and taken to Great Witchingham, at another Fenland locality was given subsequent support by the realisation, since 1971, that a sett had become established nearby, probably in the late 1960s. The keeper on this estate has allowed them to remain at their original site, but discouraged the establishment of subsidiary setts. A number of snared animals have been released in the Forestry woodlands in the Weeting area. It seems likely that a completely new sett in Suffolk established in 1980/81 was from animals spreading from this sett.

GREENSAND BELT

This has been the main area of expansion in Norfolk during the decade. The sad loss of a whole population of badgers from two areas in March-April 1968 due to their scavenging on dead Woodpigeons which had themselves been killed by consuming dieldrin-dressed spring drilled corn was described in the 1971 survey. After three years during which every sett in the district remained dormant, a total of 8 badgers was reintroduced to the main sett by the writer over a two year period, 1971-1972. Six of these came from the north Midlands, one from Berkshire (retrieved by a keeper from a snare) and one which had been in captivity in east Norfolk as a cub, having apparently been obtained when roadworks cut into a sett somewhere between Norwich and Fakenham.

In 1974 another was due to be released here, but had other ideas. It had been injured by a car on a road in the Lincolnshire Fens at Cowbit (again no setts now known thereabouts), cared for by the R.S.P.C.A. and their vet, and kept in custody in the Spalding Police dog compound until the morning on which it was due to be released, when it was found to have gnawed its way through the steel netting and escaped!

A further animal from near Ipswich had also been knocked down by a car and cared for by the R.S.P.C.A., their vet having set a broken leg, and this was successfully introduced into an adjacent sett to the main one, making 9 in all, in May 1979.

After one or two periods of absence initially, usually following the release of only single animals, the main sett became permanently occupied and enlarged in size. Unfortunately as the Forestry Commission pines have grown up, it has tended to become more cut-off from feeding areas outside, so the sett may be becoming less suitable.

Following the successful reintroduction here, the badgers eventually, after 5 years, started to spread out to other sites. In 1978 cubs were raised in a very small sett in the side of a deep ditch in a new locality, but the family vacated the site when stubble burning took place on the field above. Since then foxes have used it, but on other than very brief visits badgers have not been back.

In the same year news came in of one being shot in mistake for a fox near to a group of setts which had not been used since 1966. Investigation showed that first one and then three in the group of 5 long disused setts had become active again. They have since continued to use only one main sett in this group, but there has recently been considerable disturbance due to tree felling and scrub clearance and there may be plans for ditches to be cut through the area.

Later in 1978 another brand new sett was discovered in an area where they had never been known before. Foxes had been causing trouble on a chicken farm and as a result their suspected earth in a hedge bank was being dug into in order to destroy the family. When it was opened up and a badger sow and cubs were revealed the landowner immediately ordered his men to fill it in and leave them undisturbed. Fortunately, despite the intrusion, the badgers remained, digging out a fresh entrance, and there are signs of other setts appearing in the vicinity. In fact the further remarkable tenacity of this pair was shown by their remaining about a year later, even though the bank and hedge were bulldozed away, completely exposing the entrances.

In 1979 an old Forestry Commission sett some distance from the original main sett was recolonised and very considerably enlarged and a further, new, very small sett opened up in a rabbit warren at another nearby site. Unfortunately both of these have ceased to be occupied more recently.

In the same year another new sett was started in the district, badgers taking over a fox earth in the edge of a wood, where they have continued to prosper. Unfortunately spoil heaps from holes dug in the side of the ditch bordering the wood obstructed the flow of water. The writer then laboriously dug this out and inserted some lengths of concrete pipes, so that fresh soil fell onto them but allowed the water to flow unimpeded within the pipes. This would have been successful but for the fact that the badgers still continue to excavate further holes along the ditch. Another worry has arisen with this sett as poisoned worms are inserted into mole runs in order to kill the abundant mole population on adjacent fields. As the badgers were digging into the mole runs the effects could be disastrous, but so far they have survived and no dead animals have been found.

The expansion of this group of badgers continued with a further new sett in 1980 — also taking over an old fox earth in the edge of a wood with an adjacent ditch. Before the presence of this sett was known, a road casualty on the nearby A47 was reported. It might be added that at least 5 road casualties have been reported in the vicinity of the original main sett.

Slightly further east, in the chalk — sand region 6 animals of north Midlands stock were introduced commencing in 1970. It was these original introductions that lead to arrangements for the 1971-72 reintroductions described previously. Here after using an initial small sett in the release wood they made 3 separate setts in conifer woodland. One of these was well used until 1973, when 2 dead cubs which had been gassed were discovered lying near the entrance. All the setts had been gassed by the keeper's assistant in anti-fox operations and this led to the end of the colony. One was killed on the A47 in 1972. About 2 miles away another sett in an isolated pit was occupied for a few months in 1980-81. A pregnant sow badger which had actually dug out a very small sett was snared at the southern end of the greensand belt and released in a wood 4 miles from this pit just at this time. Perhaps one of the original group of 3 might be reoccupied as fresh tracks have been seen in their vicinity.

The only greensand sett known to be occupied at the time of the 1971 paper mysteriously smelt strongly of diesel in that same year and was no longer in use. However in 1974 they were found to be back and may have survived at another still undiscovered location during that period. Unfortunately by the end of 1977 the sett was again vacant.

In 1978, the year when several wanderers away from regular areas were found, a few miles from here a pair enlarged a rabbit burrow on a rough piece of bracken and elder-covered land for a few weeks, but did not remain. There was also a road casualty at Little Massingham in March, 1980.

Away to the north at Ringstead, through the efforts of Lord Melchett making several introductions of captive badgers from Philip Wayre's Great Witchingham Norfolk Wildlife Park, starting in 1974, a sett was eventually established on his estate in a dry pit. In 1979 they successfully reared young — one of which is shown on Lord Melchett's photograph. In 1976 one was seen 4 miles away at Snettisham, perhaps one of the original introductions that had wandered. However they have also dug out a second sett on the estate and it is pleasing to think that the future is reasonably hopeful for the species in this completely new area.

CENTRAL NORFOLK

This is still the main stronghold for the county. First, however, must be mentioned the rather more isolated sett to the south-west of the main group. Although a long established sett, this became empty in about 1975, possibly because of some earth moving disturbance nearby. Two miles away a badger was seen crossing a by-road early one morning, perhaps to an undiscovered sett.

Moving on to the main concentration, information was given of the regular occupation of one sett since prior to 1971, which may be in an artificial fox earth, although I have been unable to make a visit. This was not included in the 1971 paper although reference to animals seen at this locality was made at that time.

Next a large sett in a Forestry Commission pine plantation has suffered mixed fortunes due to interference. It was certainly in use into 1974 and may have been in partial occupation in 1975, 1977 and perhaps at other periods. Two miles away a pit-hole sett has remained in constant use under the watchful eye of a favourable management. In this vicinity there have been one or two other setts used at various periods. A nearby parish has setts in at least two places. At one of these in the edge of a wood occupation continues although earth stopping still occurs and a nearby wood may be used sometimes. The other has one main sett in a bank and subsidiary setts in an artificial earth and in other woodland; they have not been checked lately but are believed to be satisfactory.

A sett on a common in the next village appears not to have been in use for some years, but in 1979 a completely new sett was found in a railway cutting — from which some of the spoil almost reaches the track.

The most important group of setts in Norfolk has continued to prosper. The main concentration in woodland now consists of 8 occupied and 5 disused setts — all separate from each other. Thus whereas there had been 12-14 setts in all by 1971, the total now stands at 22 setts (13 occupied) including some newly started but later disused.

The attractions of this locality have been (i) a sympathetic landowner and freedom from disturbance; (ii) old deciduous woodland providing both cover for the setts and good feeding grounds; (iii) marshy water meadows — equally important for feeding grounds — alongside a stream; (iv) a large acreage of grassland providing valuable feeding areas, for sheep farming and (v) an easily dug loamy sand.

In 1980 the estate was taken over by the adjacent landowner, who already had a sett in a small wood on his farm and has seen other signs of them around his house. Although there is a proposal to convert some of the woodland to arable, the only other significant change in farming practice is that sheep will no longer be kept and the whole farm will become arable, but there is still some grassland in the area. However it remains to be seen whether the large reduction in grassland will have a long-term effect on the numbers of badgers.

The strongest reason for the generally low numbers of badgers in East Anglia compared with the rest of the country seems likely to be connected with the predominance of arable farming and resultant lack of grassland from which their single most important food item — earthworms — is most readily obtained.

Nearby a small sett in a belt of trees appears to have continued in use, but little is known about it. In 1973-74 two miles north of here a badger took over an artificial fox earth, but it is not known what developed from this. At about the same time came reports of reoccupation at the important 1950s-1960s group of setts in Forestry

Commission woodland and adjacent heathland, but these could not be substantiated; most of the heathland was ploughed up at this time in any case, while the pine forest had grown towards maturity and looked less suitable than in the young preferred stage.

Further towards Norwich a good sett on Forestry Commission land had started by 1975 and in that same year about a mile to the east a badger was disturbed by the Hunt from an artificial fox earth and three small setts were discovered nearby. Two of these were in an open field and were later taken over by foxes. In fact slurry was dumped down them to discourage their use. The other main sett, only one hole, and the artificial also ceased to be used.

Within 1½ miles of the Forestry sett there was certainly evidence of two further setts during the mid 1970s — one in a valley pine wood, near where a badger was found dead in a snare and another killed on a road and the other in a narrow belt of trees to the south. Not far from this a badger was seen crossing a road near to two different fox earths and it seems likely that there may be other setts in the district. A further small sett in a wood about 4 miles to the east has also continued to be occupied. An animal was also reported from woodland behind gardens in a Wensum valley suburban village.

Some miles to the north of this district a sett was established in 1971 at the edge of an extensive woodland nature reserve, but regrettably ceased to exist in 1974 when it was gassed by employees of the adjacent farm when eradicating rabbits.

In the same area of wooded country two more setts for which information came in during 1978 were in regular use during the 1960s, but a check in 1978 indicated they probably ceased to be occupied by the mid 1970s.

NORTH NORFOLK

Nearer the coast in 1973 a landowner introduced two sow badgers into a long disused sett which he surrounded by wire netting, with the information that they would be sure to attract all the boar badgers from miles around. Unfortunately the sows did the seeking — one went through the wire netting immediately and the other had gone by the following day. As some expense had been involved the owner felt unwilling to try the experiment again.

The situation on the Cromer ridge is far from satisfactory and it is highly likely that no badgers have survived in this district. In one Forestry Commission area, which held an occupied and two empty setts in 1971, a recent visit showed these setts were long disused — at least by 1976. Timber extraction might perhaps have been a contributory factor. A neighbouring area of woodland where there was certainly one sett in 1971 — from which the boar was snared and the pregnant sow run over — now has the site covered by a rubbish tip, while there is no evidence of another site higher up in the hills having been used in the last 10 years. The district once supported a reasonable population of badgers but no reports have come in in recent years of any occurrences.

For the area between the Cromer ridge and Norwich almost no fresh information has become available either. At one locality badgers were said to have been seen out in a field and a sett to have been found, which was later destroyed, in a hedgebank. However a visit to the site in 1978 did not reveal anything very convincing.



Black Tern autumn passage was on a small scale; no party exceeding 12 birds. Late individuals appeared at Snettisham October 11th and 18th.
(Photos: P. Munsterman).





These Badger photographs by Lord Melchett show his successful family group. In the lower, the two adults are approaching the sett while the cub is climbing away up the slope to the left. The upper photograph shows the cub diving into the main entrance to the sett.



EAST OF NORWICH

The pleasing news from here is that one sett in a shallow pit which ceased to be occupied in 1970 was in fact reoccupied in 1974. In view of their absence for nearly 4 years there must evidently be an unrecorded sett in the vicinity as this is unlikely to have been recolonised from mid Norfolk. At another village where there had been a sett many years ago, but nothing had been recorded in the intermediate years, a small sett at the bottom of a large garden was used from 1976 to 1978, while there may have been occupation at some periods on some heathland under pine trees in the same village. A possible Broadland report (Norf. Report for 1975) only revealed rather large rabbit holes. Lastly the isolated sett in the far south east appears to have become inactive by the mid 1970s, but no recent visit has been made to check on the current position.

SOME ASPECTS OF THE DECADE

The status of the badger in mid-Norfolk, its stronghold in the county, has remained broadly similar, with 1 or 2 losses but also a strengthening of its position with several new setts and some new developments in the country to the east. Conversely the Cromer ridge has probably lost all of its badgers — although it would be good to learn that they are still active in the district. It still survives in east Norfolk and there may be one or two unlocated setts. On the other hand, in the west it has regained much of its former range and colonised new ground.

Introductions have been made at 4 localities during the period:—

1. 1970-72. West Norfolk. 6 animals. Initially quite successful with 4 separate setts opened up, of which one was in regular use, but all gassed in 1973.
2. 1971-72. West Norfolk. 8 animals and a 9th later. Became firmly established in the old sett into which they were introduced. Between 1977 and 1980 spread out to a total of 9 other places within a 5 mile radius, 5 of which were completely new. Currently 5 of these setts are active.
3. 1973. North near Cromer ridge. 2 animals introduced into long disused sett but departed immediately.
4. 1974-76. Ringstead. 5 animals introduced into old rabbit holes in pit, which they developed into a sett and by 1980 had started at another site nearby. In 1980 two more from Kent were introduced at a different site, but departed immediately.

It seems highly likely that most of west Norfolk would now be lacking in badgers if these introductions had not been made and the trouble and expense involved would appear to be well justified in returning a worthy and attractive member of our fauna to a part of its range from which it had been lost due largely to the action of man.

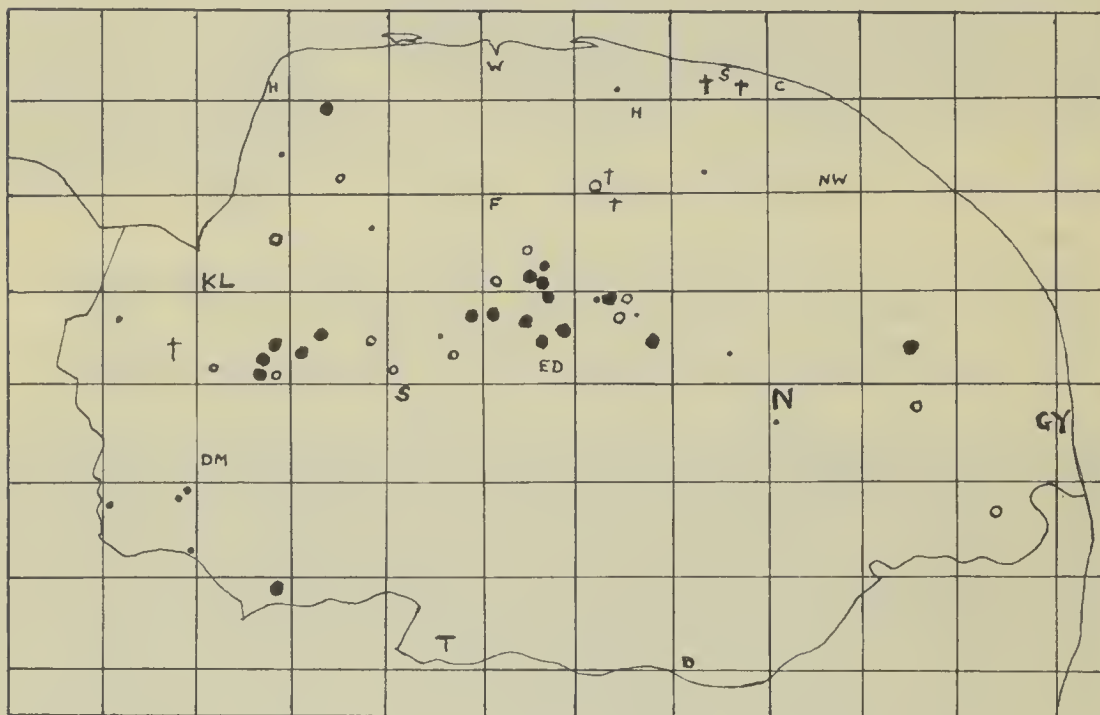
Turning to the causes for change, in most cases the reasons are not known and may be just a natural decision to abandon a site — it is not at all unusual for badgers to vacate a sett for some months, only to return at a later date. However there were two known gassing incidents during the decade, one for rabbits and the other said to be for foxes. In two cases the badgers were deliberately evicted, once with diesel and the other with an unknown noxious substance. Four other departures were all due to accidental causes — fire (including stubble burning), earth moving and forestry work.

Concerning individual animals, the highest number of cases was of 15 road casualties, but this must be incomplete and is in any case far lower than for most other counties. Two animals shot and two killed by snares were reported, but there were 4 known cases of their being safely extracted and released, although there must have been more incidents than this.

Despite there still being a limited number of places where the badger is regarded as vermin, it is very encouraging to know that on most estates it is now more than welcome. Landowners and keepers show a much greater interest in having them on their estates and many have been extremely helpful in providing information to assist in compiling this account, as have many other correspondents too numerous to list.

Acknowledgement for providing the badgers used in the introduction attempts is also due to:—

- a) Sam Oates for 12 from the North Midlands,
- b) Philip Wayre's Norfolk Wildlife Park for 7 home-bred animals,
- c) a Kent source for a pair,
- d) friends in Berkshire for one,
- e) the R.S.P.C.A. and friends in Ipswich for another,
- f) the R.S.P.C.A. for the Spalding one that got away.



Distribution of Badgers in Norfolk, 1971-1981

Key to map

Setts less than 500 yards apart are shown under one symbol.

The initial letters of main towns are shown, and also the 10 Km. grid squares.

- sett or group of setts occupied in 1981.
- sett or group of setts used since 1971 but not occupied in 1981.
- † former setts or groups of setts completely disused by early 1970s.
- individual records away from setts.

NUMBERS OF BADGER SETTS IN NORFOLK

	Disused 1981	Active 1981
Recorded in 1971 Paper: 123		
Disused pre 1971 and remained so	89	—
Occupied pre 1971 but disused then, later restarted		
a) and still in use	—	4
b) but disused again	5	—
Occupied in 1971 and still in use	—	13
Occupied in 1971 but since disused	12	—
 Newly recorded for 1981 paper: 37		
Disused pre 1971 and remained so	5	—
Occupied pre 1971 and still in use	—	2
Started after 1971 and still in use	—	13
Started after 1971 but since disused	17	—
	<hr/>	<hr/>
Total recorded to date: 160	128	32
	<hr/>	<hr/>

Classified Notes

INSECTIVORA

The eccentric behaviour and omnivorous feeding habits of the Hedgehog (*Erinaceus europaeus*) are both exemplified by the East Tuddenham youngster that continued feeding whilst being carried indoors and then out again all the while balanced on the dog's supper dish. If we may speak in human terms, this rugged attitude to life surely helps to maintain the good numbers observed. Our travelling reporter from Swaffham, Mrs. J. E. Gaffney counted 198 road casualties between 28th February and the 16th December, more than twice the number found during 1979. A regular traveller along the B1149 between Holt and Norwich Airport counted 45. This particular contributor was in Taverham Hall grounds on the evening of the 15th December with the temperature between 1 and 2 degrees Centigrade when he saw a hedgehog foraging in the grass. Earlier in the year he was shown a courgette taken from a field at Old Buckenham which had mysterious teeth marks. A rabbit was suspected but later the farmer himself caught the culprit in the act — a hedgehog.

The easiest mammal to record so far as localities are concerned is the Mole (*Talpa europaea*). So easy that in fact it is frequently overlooked! Some of our contributors provide a thoroughly prepared list based on Ordnance Survey references and the west of the county is very well covered. The most interesting systematic survey in the eastern half was carried out by Mr. E. Daniels as a mammalian extra to a botanical survey in East Norfolk churchyards. His list would fill a substantial part of the report if printed in full. It is worth saying that apart from those that are tidied with an excess of enthusiasm our churchyards are rich areas for students in many branches of Natural History and many sets of mammal notes include such references.

By publishing date the time of greatest aggravation to gardeners by moles will be over but moles may well be present, making use of established tunnels. If a hill is flattened by forcing soil downwards it often re-erupts due to the activity of the same or another mole. It is sometimes possible to effect a compromise solution by levelling the heap. We do not know whether a peaceful solution was the outcome when a Saxthorpe gardener sat on his bench for a rest and a mole came to the surface between his feet.

A Common Shrew (*Sorex araneus*) caught in a Longworth trap at Daffy Green and held in a transparent bag showed its indifference by making a substantial breakfast of meal-worms. Many contributors speak of large numbers killed by cats, including the one that defiantly bit the cat on the nose before succumbing. Large proportions of the total catch from live trappings are also reported so it appears that 1980 was a peak year for this species. The one seen eating bread and Ryvita at Holme in the company of rodents may not be typical nor do we expect Pygmy Shrew (*Sorex minutus*) to be a connoisseur of cheese. However, more than one report speaks of it being found in traps baited with cheese including mummified remains recovered from a trap in an Edgefield attic. The shrew had presumably climbed to the attic by the honeysuckle on the outside wall to a height of some 30 feet but it is clear that no extra aid is really required because at East Tuddenham one was seen running up and down the wall surface itself. An albino specimen was found at Wissonsett in September.

Nine localities for Water Shrew (*Neomys fodiens*) were received. The one from Royden was an unusual species to be listed as a road casualty. Another was found dead on the river bank at Feltwell, but at Lolly Moor, Gillingham and Holme observers were able to watch these delightful creatures in action.

CHIROPTERA

Records of bats are slowly being accumulated by more contributors attempting to note these difficult mammals and by the systematic searches made by John Goldsmith from Norwich and by Dick Jones from his King's Lynn museum base.

A Whiskered Bat (*Myotis mystacinus*) was found at Grimes Graves in February, after several unrecorded years. Daubenton's Bat (*Myotis daubentoni*) is found regularly in winter roosts in small numbers. This year a large colony was found in a tunnel in the Stanford Training Area and another small colony of males in a hollow tree in Thetford Forest. Barbastelle (*Barbastella barbastellus*) records for the county come from thirteen confirmed 10 Km. squares, 4 of these being pre-1950 and one being added during 1980. This was the individual that was killed by a car at Stanhoe. There is no recent evidence of the colony that was once known to exist at Calthorpe. The driver of the car mentioned above had the added misfortune to hit and kill a Long-eared Bat (*Plectotus auritus*). This species appears to be in more danger of this type of accident and as in previous years we have heard of individuals being killed by cats. More fortunate Long-eared bats were found in Horsey church and at Letheringsett where they were disturbed by a timber merchant.

Pipistrelles (*Pipistrellus pipistrellus*) are the most frequently recorded bats. The first of the year was on 2nd January when one was flying round a cottage at Seething at 7.30 p.m. The Taverham maternity colony caused some consternation when a few members accidentally found their way through from a cavity wall into the lounge of a private house. After some hasty repairs to the coving, both householders and bats

were happy. It should be mentioned that the repairs mentioned were not necessary because of any actual damage done by the bats.

One was found dying during August in the centre of King's Lynn. When the carcase was analysed it was found to be heavily contaminated with D.D.T. Later enquiries suggested that it had been roosting where a wasps' nest had been destroyed by this long-lasting chemical over ten years previously.

LAGOMORPHA

The Rabbit (*Oryctolagus cuniculis*) seems to be gradually winning its own battle with myxomatosis. Although the disease continues to take a heavy toll in many districts the population has built up in others, particularly in parts of Breckland, to almost pre-myxomatosis levels. This is reported by two contributors who have been active in this part of Norfolk for many years. In the afforested sectors, active control measures have kept numbers to what is described as "a reasonable level".

The ability of the rabbit to take advantage of available space is seen in the larger litters and longer breeding season of post-myxomatosis colonies. On January 31st, two dead young between two and three weeks old were found in Houghton Park. The breeding season begins as early as this in favourable weather conditions and, in addition, a few does will always produce some out-of-season litters. The effects of myxomatosis were seen all over the county mainly from June onwards but one observer who saw live rabbits on no less than 344 occasions during the year encountered diseased individuals from March 25th through to December 16th. A count of "53 pairs of ears" at a warren at Cley on April 3rd was up to 96 pairs when the count was repeated on May 1st. The most startled rabbit may have been the one chased by a squirrel at Fritton Decoy. It continued to run well after the squirrel had returned to the trees.

While not all contributors agree on the decline in the Brown Hare (*Lepus capensis*) most of the 20 who sent notes on this species indicate fewer individuals seen. One compares live sightings as follows: 1978 — 77, 1979 — 45, 1980 — 28. Road casualties 1978 — 15, 1979 — 16, 1980 — 13.

The all-cream specimen seen at Hockham a year or so ago seems to have produced one or two all-cream offspring as on two occasions two of this colour were seen together.

In January 1981, strictly outside our year, many hares that had been found dead were submitted for post-mortem examination. In spite of the unusual circumstance no common factor could then be found and they seemed to have died from various causes. Perhaps further work will provide an answer.

RODENTIA

If the number of entries on the record cards were the only criterion we would have a rise in Red squirrels (*Sciurus vulgaris*) to report. In fact the sight of a Red Squirrel is now a significant event in all but a handful of localities while the Grey Squirrel (*Sciurus carolinensis*) is seen even more frequently than before and continues to increase its range. An example is Wolferton where the once frequent red was not seen in 1980 by Dr. C. P. Petch but where the grey is now common. A newspaper article encouraged reports from many new contributors. Most spoke of singles but we know that where reds are present in Thetford Forest there was no significant decline. Sadly

there are very few other areas where the population is likely to be maintained. The rabbit chaser at Fritton has already been mentioned. Another at Alby Hill came to drink at the bird bath. Two were seen at Seething airfield running unaccountably in a very straight line across country. A sighting was made in Thorpe Woods after a gap of a year and a half in the spring but has not been repeated since.

A Grey squirrel was suspected of taking swallow's eggs at Holme Observatory. In contrast, four were living up to their more charming image when they were watched by a member of the Y.O.C. as they played tag in Ipswich Road, Norwich just after Christmas. Perhaps the one on the B.B.C. doorstep was seeking more favourable publicity. Attempts at controlling numbers on one mid-Norfolk estate has resulted in over 1,000 being killed in three years with no obvious diminution of numbers.

Live traps set on a farm at Daffy Green, Dereham over several weekends produced large numbers of Bank Voles (*Clethrionomys glareolus*) including two in one trap. 21 other sites were reported, some live sightings, some caught by cats and others found in owl pellets. A trapping exercise on the Stanford Training Area caught 23 against 5 Short-tailed field voles (*Microtus agrestis*). On the other hand figures from owl pellets at Tottington and Buckenham were 7 to 23 and 10 to 61. Short-tailed field voles were the chief recorded prey of that well-documented cat from East Tuddenham and two Burmese at Edgefield found them much to their fancy and obviously freely available. The Burmese have their catches of birds and mammals listed inside the kitchen door, a quick and efficient method of recording.

Water Voles (*Arvicola terrestris*) were increasing at Holme Marsh and were seen in fair numbers at East Tuddenham. Breckland rivers are reasonably well stocked and six were seen in one day by a visitor to Cley. Reports have come in from all over the rest of the county but only Crostwick, Hickling and Reedham represent that vast Broadland area of potential Water vole country.

The Wood Mouse (*Apodemus sylvaticus*) can be found in most districts partly no doubt due to their ability to adapt and tackle different foods. We have heard of candles, crocuses and carbolic soap being consumed but the tables were turned when an *Eastern Daily Press* reader saw a mouse being swallowed by a chicken. Some hens will take mice very readily and a nest of young discovered under a coop that is being moved will attract a few fowl with an eye to the main chance. It was pleasing to hear that the Fornsett St. Peter colony of Yellow-necked mice (*Apodemus flavicollis*) is still going strong. They were visiting the kitchen draining board to eat the soap! Another was caught by a cat at Broome, confirming their continuing presence in the Waveney valley.

The House Mouse (*Mus musculus*) is numerous in more restricted areas. Coincidence plays strange tricks. This year so many small mammals have been seen running up and down walls and the House Mouse was one of them. A normal wall has many gripping surfaces for small feet and body weight is very low so running up must be comparatively easy but running down again must surely be quite difficult for any creature on a vertical plane. Many come into buildings during the winter and a House Mouse at Mulbarton set up house in a piece of foil behind the cooker. In another situation the foil in a drawer was actually eaten. Numerous House Mice were seen in a garden at Attlebridge and in the same garden a Harvest Mouse (*Micromys minutus*) was caught by a cat. Harvest Mice do not turn up very often in live traps. When available, owl pellets provide a much better indication. 15 were found in pellets from Buckenham. The other method is to look for nests and these were seen for instance at Holme and at Aldborough by the observant young lady mentioned in the Editorial.

The Brown Rat (*Rattus norvegicus*) is a most under-recorded mammal and its life-style and cycle is so tied up with our own that it is difficult to disentangle the true story. Mrs. Gaffney's road casualty list was slightly down on previous years but another keen contributor from central Norfolk described 1980 as a "plague" year. The Barn Owl at Panxworth did its best. Pellet analysis discovered a very high percentage of rat skulls. One successful strike at a rat is worth several mice or voles to the owl.

The Coypu (*Myocastor coypus*) killed on the drive of Keswick Hall College of Education may have been martyred by its thirst for knowledge. For a more serious analysis of the situation to spring 1981 we are again indebted to Dr. L. M. Gosling of the Coypu Research Laboratory.

He says "Coypu numbers were higher in 1980 than in 1979 because the intervening winter was mild and the trapper force too small to prevent an increase under these conditions. Adult females remained in good condition through the winter and over 40% littered between March and May giving a good start to the year's breeding. The number of adults rose from 4,900 in October 1979 to 6,600 in the same month in 1980. Nearly 9,800 coypus were killed in control operations during 1980 (mainly in Norfolk and Suffolk) and about 7,100 of these were adults.

"1980 also saw the start of an intensified campaign against coypus. The operation did not start officially until April 1981 but, in practise, recruitment of new trappers started in the autumn of 1980. The new force consists of 24 trappers with 3 foremen and a manager. As a result of their efforts the numbers killed per month rose to over one thousand at the end of the year and research suggests that the live population is declining.

"Cage-trapping is the sole technique used in the new campaign and the trappers are instructed to release all 'non-target' captures unharmed; the only exceptions are brown rats, mink and rabbits which, like coypus, are shot when the traps are inspected each day. The release of non-target species, which include otters, water voles and many species of birds, is a vital aspect of the operation because, with an annual trapping effort of over 200,000 trap nights in coming years, the impact on wildlife might otherwise be considerable."

CETACEA

Norgate described the Common Porpoise (*Phocoena phocoena*) as frequent but that may well have been in comparison with other cetacea in which case the description still applies in so far as four individuals were recorded during the year. One was washed up on the beach at Titchwell in June, one between Holme and Hunstanton in the spring, another was decomposing at Winterton during August and finally one was sighted swimming off Cley in October. One other cetacean, a White-beaked Dolphin (*Lagenorhynchus albirostris*) was found dead at Holme in May.

CARNIVORA

Some comments in the "Eastern Evening News" describe the coincidence of two factors at the time of the appearance of the Fox (*Vulpes vulpes*) on Breydon Marshes in increasing numbers. They were the catastrophic decline of the rabbit elsewhere due to myxomatosis and the establishment of the coypu. R.H.H. raises interesting questions on the results of coypu trapping on the one hand and rabbit resistance to myxomatosis on the other. Taking the county as a whole there is contradictory evidence

from contributors. Of three reports from Breckland, one says it is not as common as twenty years ago, another about the same, while the S.T.A. Headquarters Staff describe the fox as very common. It must be admitted that the last source would not be able to make comparative judgements. A typical former stronghold was Swannington Upgate Common with lots of fox signs. There is now ever increasing human activity including horse riding but no sign of foxes. It is assumed they have been driven deeper into the woods. A fox was checked in its stalking of a domestic cat in Brundall and it was guessed that a number of cats that had disappeared in the village in the same week had been its prey.

Two 19th century notes need no further comment:

“Fox — Common, but imported and preserved for hunting”.

“Badger — A few have been killed in the county in my time, but they were probably some which had been imported to make earths for foxes.”

The present status of the Badger (*Meles meles*) is dealt with elsewhere. One example of the way it turns up in odd places from time to time was the early morning surprise for the milkman in Thorpe, Norwich, when he saw one crossing a lawn.

Norgate's note on the Otter (*Lutra lutra*) has already been quoted. Breeding did occur last year and with the change in attitude we have seen in recent years towards this creature it is possible that we will be able to share parts of our county with it. How refreshing to hear of the trout farmer who is pleased to see his visiting otters!



On the other hand we have heard of enthusiasts who have broken through the roof of a holt when seeking to record its presence. Contributors should note that reports are placed in the archives but no sites are published.

Sightings and observations suggest that the Stoat (*Mustela erminea*) may have been at a post-myxomatosis peak during the year. A number in full or half-ermine were seen, the majority in Breckland. A vivid account of a stoat killing a rabbit that had lost all its powers of escape comes from Barford. Another at Corpusty was watched for some time as it ran up and down the corner of a wall disturbing nesting swifts. A fight between a stoat and a rat was seen at Reedham by a local boy. Two weeks later a dead stoat was found with obvious evidence of being bitten in the throat. There was no witness to this encounter so we can only speculate as to the identity of the victor.

Norgate's note on the Weasel (*Mustela nivalis*) could be repeated with equal truth today — "Abundant, and extremely useful in destroying mice, but sadly persecuted." Counts of stoats and weasel often include large numbers displayed on gibbets. Numbers vary from year to year and in different parts of the county and this fluctuation is more marked with weasels than with stoats. The relative abundance of mice and voles is critical. A weasel near Watton had the misfortune to be caught by the neck between two forking stems of Sallow while the other weasel that had been chasing continued to attack from the rear. Its luck turned when a human rescuer chased away the aggressor and released the victim, after taking its photograph.

The most difficult carnivore to assess is the American Mink (*Mustela vison*). We know of its presence in the county in relatively small numbers, but very few are actually seen. One was observed at Titchwell in September and on the other side of the county at Wheatacre by a Coypu Control trapper. Coypu control accounted for another at Gillingham. There were further reports from the Waveney valley, though strictly speaking on the Suffolk side.

PINNIPEDIA

The condition of Scroby Sands is of prime importance for our seals. During the summer breeding season of the Common Seal (*Phoca vitulina*) the bank was sufficiently stable to allow the seals to proceed about their business but not inviting enough to encourage too much human disturbance. In consequence they had a reasonably good season. Individuals noted on the sands were later picked out at Morston, Blakeney and in The Wash.

The Grey Seal (*Halichoerus grypus*) had another unfortunate season. The bulls established territories on Scroby but as the cows began to arrive the sands washed away. Some cows pupped on the mainland beaches, some quite close to astonished beach fisherman. The pups were deserted. Other cows aborted at sea. Meanwhile the bulls were setting up alternative territories on beaches and after human activity died down in the evenings the cows began to arrive. However, it was soon made very clear that the seals had to contend not only with natural hazards but gun-happy humans as well. Patrols had to be set up to protect them. Sadly, a number of severely wounded seals had to be destroyed. Holland proved a safer refuge for many.

ARTIODACTYLA

When Norgate compiled his notes a century ago he could have had no idea that today we would have such a diversity of species as well as numbers of cervidae. The occasional escapee from a deer park was seen but not regarded as a truly wild animal. In 1980 Red Deer (*Cervus elaphus*) were seen in many localities, sometimes in groups of up to five animals. The lone stag on Mousehold Heath, Norwich, startled several walkers until it came to an untimely end. It was remarkable how quickly all traces of its presence were removed! The major herd in Thetford Forest is stable and there is every hope for its future well-being. One important factor is the development of the forest itself as the more mature stands allow denser cover to grow underneath.

Colour-coded collaring of Roe deer (*Capreolus capreolus*) continues in the forest each year and a picture of roe deer movement is gradually being built up. Please make a note of the colours and banding of any collars seen and report directly to the Wildlife Ranger, Santon Downham, giving as precise a location as possible. Harassment by illegally unleashed dogs has been mentioned in previous reports. Another very serious hazard for the deer is the motor-car which has killed quite a high percentage of the colour-coded individuals.

The number of Muntjac (*Muntiacus reevesi*) continues to rise though their preference for dense cover makes them difficult to find. The male is slightly larger than the female and his height is given as up to 48 cm. at the withers so they have no difficulty in slipping away unobserved.

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Norfolk Naturalists Trust

Properties

Date Acquired				Acreage		Status*
On the Coast						
1926	Cley Marshes	...	...	435	Gift	S.S.S.I.†
1937	Duchess's Pightle, Burnham Overy	...	...	1	Gift	---
1937	Great and Little Eye, Salthouse	...	...	10	Purchased	S.S.S.I.
1945	East End of Scolt Island	...	...	76	Purchased	N.N.R.
1955	The Eye, Salthouse	...	...	21	Purchased	S.S.S.I.
1965	Holme Dunes	...	...	440	Purchased, Gift & Agreement	S.S.S.I.
1980	Salthouse Marshes	...	...	100	Lease & Purchase	S.S.S.I.
Broadland						
1928 and 1974	Starch Grass (Martham)	...	...	4	Purchased & Gift	S.S.S.I.
1930	Alderfen Broad	...	...	72	Purchased	S.S.S.I.
1945 and 1969	Hickling Broad	...	...	861	Purchased	N.N.R.
1945	Hickling Broad	...	...	500	Leased	N.N.R.
1945	Barton Broad	...	...	355	Half Gift &	S.S.S.I.
1952	Barton Broad	...	...		Half Purchased	S.S.S.I.
1948	Surlingham Broad	...	...	253	Purchased	S.S.S.I.
1949	Ranworth & Cockshoot Broads	...	...	144	Gift	N.N.R.
1964	Firs Marsh, Burgh St. Peter	...	...	3	Leased	---
1971	Martham Broad	...	...	103	Leased	S.S.S.I.
1972	Hardley Flood	...	...	90	Leased	---
1972	Chedgrave Common	...	...	10	Leased	---
1974	Barton Marshes	...	...	10¼	Gift	---
1979	Upton Fen	...	...	120	Purchased	S.S.S.I.
Breckland						
1938	East Wretham Heath	...	...	362	Purchased & Gift	S.S.S.I.
1942	Weeting Heath	...	...	343	Gift	N.N.R.
1949	Thetford Heath	...	...	250	Gift	N.N.R.

Norfolk Naturalists Trust Properties cont'd.

Other Areas							
1957	Thursford Woods	...	...	...	25	Gift	---
1960	Hethel Old Thorn	...	...	...	1/8	Gift	---
1961	Scarning Fen	...	...	...	11	Gift	S.S.S.I.
1962	Hockham Fen (Cranberry Rough)	...	...	...	20	Purchased	S.S.S.I.
1963	Roydon Common	...	...	...	140	Purchased	S.S.S.I.
1966	Stoke Ferry Fen	...	...	...	25	Agreement	S.S.S.I.
1968	Lenwade Water	...	...	...	37	Agreement	---
1968	Dickleburgh Pightle	...	...	...	1	Agreement	---
1972	Smallburgh Fen	...	...	...	19	Leased	S.S.S.I.
1972	Ringstead Downs	...	...	...	26	Agreement	S.S.S.I.
1973	East Winch Common	...	...	...	80	Gift	S.S.S.I.
1974	Sparham Pools	...	...	...	30	Agreement	---
1975	Pope's Drift	...	...	...	8	Agreement	---
1975	Wayland Wood	...	...	...	80	Purchased	S.S.S.I.
1977	Hockering Wood	...	...	...	229	Agreement	S.S.S.I.
1978	Syderstone Common	...	...	...	60	Leased	
1978	Lolly Moor	...	...	...	6	Purchased	
1980	Booton Common	...	...	...	19	Agreement	S.S.S.I.
1981	Thompson Common	...	...	...	164	Purchased	S.S.S.I.

* * *

In addition, the Trust shares with the National Trust in the management of the coastal reserve at Blakeney Point (1,335 acres), and it manages Arnold's Marsh, Cley (29 acres) on behalf of the National Trust.

By arrangement with the Nature Conservancy Council, Scolt Head Island, Ranworth Broad, Hickling Broad and the Breckland Heaths now form part of the National Nature Reserves.

* * *

*Status: N.N.R. denotes National Nature Reserve
S.S.S.I. denotes Site of Special Scientific Interest

† In 1966 Cley Reserve was established as a Bird Sanctuary under the Protection of Birds Act, 1954.

THE NORFOLK NATURALISTS TRUST

Bird Watching

Excellent bird watching facilities are available from 1st April to 31st October at Hickling Broad National Nature Reserve, Cley Marshes Bird Sanctuary, Holme Dunes Nature Reserve (self-contained flat available all year) and Broadland Conservation Centre, Ranworth. Reduced rates for members, party bookings and extended periods.

For full particulars kindly forward stamped addressed envelope to **N.N.T., 72 The Close, Norwich, Norfolk NR1 4DF.**