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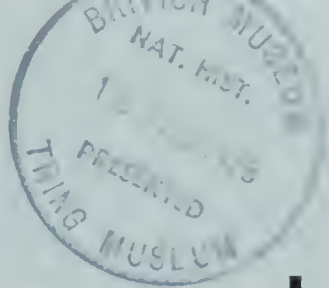
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NORFOLK Bird & Mammal Report 1972



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Norfolk Bird Report - 1972

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Editor: J. G. GOLDSMITH

Editorial Assistants: P. R. BANHAM AND P. M. C. STEVENS

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Norfolk Bird Report 1972

Editorial



Weather . . . Review of The Year . . . B.T.O. Common Birds Nest Census . . . Road Casualties . . . Unusual Nest Sites . . . Acknowledgements . . . Recording.

THE COUNCIL of the Norfolk Naturalists Trust, in co-operation with the Norfolk and Norwich Naturalists' Society, is pleased to present the annual report on the birds of Norfolk.

The weather: Main feature was the particularly cold and dull summer and early autumn. June, July, August and September all had below average temperatures; in fact June was even colder than in 1971 which was the coolest in Sprowston records.

Sunshine was much below normal during May, June, July and September. Autumn was also very dry with below average rainfall during August and September and particularly October which was the driest since 1925. December, even though it had only 17 days sunshine, was the sunniest for ten years.

Review of the Year: The 'top ten' breeding species in Norfolk in 1972 featured Bittern, Montagu's Harrier, Black-tailed Godwit, Ruff, Herring Gull (for the first time), 4,800 pairs of Sandwich terns, Golden Oriole, Bearded Tit, 3 pairs of Black Redstarts and Crossbill.

A succession of unusual migrants and vagrants provided exciting moments for the ever increasing numbers of observers. A highlight for many was the remarkable spring influx of 6 Little Egrets; more than one of these wanderers from South-east Europe made a prolonged stay. From the same region came a dozen Mediterranean Gulls.

East European autumn visitors included totals of 17 Red-breasted Flycatchers and 17 Barred Warblers. More surprising were 5 Greenish Warblers in only eight days. An unprecedented assembly of 110 Little Gulls was at sea off Holme in mid-October.

Among North European wildfowl were 51 Long-tailed Ducks off Hunstanton whilst for the first time on record a group of 10 wintered at Gorleston where just over 100 Velvet Scoters decorated the sea. Among other Scandinavian visitors were 80 Wrynecks, 220 Shorelarks and a Rustic Bunting (the second county record). Mealy Redpolls irrupted in considerable numbers.

From Asia beyond the Urals 4 Yellow-browed Warblers, a Pallas's Warbler and 8 Richard's Pipits rewarded careful searchers. The Pallas's was, in fact, the fourth occurrence at Holme.

Tundra travellers included 9 Arctic Redpolls and an autumn total of 133 Pomarine Skuas passing between Arctic Russia and the west coast of Africa.

Three North American birds provided red-letter days: Blue-winged Teal, White-rumped Sandpiper and Pectoral Sandpiper.

Globe spanners from the South Atlantic again provided entertainment for fortunate sea-watchers: Sooty Shearwaters from Tierra del Fuego and Great Shearwaters from Tristan da Cunha.

B.T.O. Common Bird Nest Census: Following drastic hedgerow removals, it was expected there would be a drastic reduction in the bird population on the Cranworth 246 acre farm plot. This failed to materialise, however; Wrens, in fact, reached an all time high.

The number of *pairs* was as follows: Mallard 5, Teal present, Kestrel present, Red-legged Partridge 13, Partridge 5, Pheasant 9, Moorhen 13, Lapwing 6, Snipe 1, Stock Dove 1, Turtle Dove 8, Cuckoo 3, Little Owl 1, Tawny Owl 1, Green Woodpecker present, Great Spotted Woodpecker 2, Skylark 26, Swallow 3, House Martin 2, Carrion Crow 2, Jackdaw 2, Great Tit 6, Blue Tit 15, Coal Tit 1, Marsh Tit 1, Willow Tit 1, Nuthatch 2, Long-tailed Tit 1, Tree Creeper 2, Wren 31, Mistle Thrush 3, Song Thrush 21, Blackbird 42, Robin 24, Sedge Warbler 2, Blackcap 4, Garden Warbler present, Whitethroat 2, Lesser Whitethroat 1, Willow Warbler 3, Chiff Chaff 2, Goldcrest 5, Spotted Flycatcher 2, Dunnock 36, Meadow Pipit present, Pied Wagtail 2, Starling 12, Greenfinch 6, Goldfinch 3, Linnet 5, Redpoll 3, Bullfinch 3, Chaffinch 31, Yellowhammer 25, Reed Bunting 3 and Tree Sparrow 21.

Road Casualties: Along a five-mile stretch of the A47 between Yarmouth and "Stracey Arms" totalled 94 birds as follows: 37 Black-headed Gulls, 7 Lapwing, 6 House Sparrows, 35 Moorhens, 5 Barn Owls, 2 Blackbirds and single Fieldfare and Mute Swan (RHH).

Unusual Nest Sites (1969-72): Pride of place must go to a tumbledown cottage and outbuildings on the edge of a Breckland wood which provided nesting sites in 1970 for 5 pairs of Blackbirds, 2 pairs of Robins, single pairs of Blue Tits and House Martin, 2 pairs of Swallows; in addition Jackdaws and Starlings had nests in the ruined chimneys and Great Tits utilised a broken water pipe. To complete this remarkable nesting list must be added Pied Wagtail, Spotted Flycatcher, Wren and Redstart.

Blue Tits reared young in a crack in the brickwork of Norwich Castle battlements. A tower crane framework at the U.E.A. residences site provided a nesting place for another pair of Blue Tits; when the crane moved back and forward along its track the parents continued feeding their young. Also enterprising was a pair of Blue Tits which raised young inside a steel side-support of a ten-ton tipping lorry in daily use at a Brooke quarry.

Wrens at Watlington nested in an old hurricane lamp in a barn. Gorleston Robins utilised the top of an up-turned broom for raising a family. Blackbirds nesting in a store building in the centre of Norwich built their nest over a fuse-box; another pair of city Blackbirds selected a chassis tool locker about to leave for Birmingham to have the tanker section fitted. Moorhens at Taverham (Deighton Hills) nested in a blackthorn plantation 1½ miles from the nearest water; the nest was built on the framework of an old Pigeon's nest.

Gorleston Swallows reared young in a nest constructed on top of a curtain pelmet. Despite noise, vibration and heat, Pied Wagtails reared young in a nest built on the engine of a Yaxham cement mixing machine in regular use.

Acknowledgements: Thanks are due to John Last for the cover drawing and to R. P. Bagnall-Oakeley and R. Harden for text illustrations; also to R. P. Bagnall-Oakeley, Dr. K. J. V. Carlson, H. A. Hems, E. E. Jackson, David and Katie Urry, Dr. R. Vaughan and W. J. Woolston for photographs; to Holme Bird Observatory/N.O.A. for access to their records; to the Norfolk Naturalists Trust Wardens; to R. H. Harrison (Breydon); to the National Trust (Blakeney Point); to the Nature Conservancy (Scolt Head and Holkham); to J. Buxton (Horsey); to the Cambridge Bird Club (particularly G. M. S. Easy); to Gt. Yarmouth Naturalists Society; to Heacham and West Norfolk Nat. Hist. Society; to D. A. Dorling for compiling the annual record cards; to Mrs. M. Dorling, J. T. Fenton, Mrs. P. A. Rix, Mrs. S. F. Seago, C. & R. Seago for valuable assistance and to all other contributors.

Belated thanks are due to Dr. Carlson and to H. A. Hems for photographs of Sand Martins and Barn Owl appearing in the 1971 Report.

Recording: Records for the 1973 Report should be sent by the end of February to Michael J. Seago, 33 Acacia Road, Thorpe St. Andrew, Norwich, NOR 71T. Contributors are requested to submit notes in the order followed in B.T.O. Guide 13 (*A Species List of British & Irish Birds*). In order to minimise the work involved, records will not normally be acknowledged. The names of all contributors will be included in the Report.

Original articles are also welcomed. They should be submitted, type-written if possible, to the Editor, who reserves the right to revise such papers for publication in accordance with current editorial policy. Proofs of all contributions will be sent to authors before publication.

New members may be assured that their observations are appreciated and are recorded on an annual card index. However, as the normal pattern of events has been well established after a lengthy series of Reports, there is more opportunity for summary and not so much need to document less unusual occurrences. Observer's initials are normally reserved for the really unusual contributions.



Reserves

Barton Broad

Norfolk Naturalists Trust

Among Barton breeding birds were single pairs of Common Tern, Pochard, Tufted, Egyptian Goose and Kingfisher. 13 pairs of Herons had a successful nesting season in Heron Carr and several pairs of Great Crested Grebes reared young. Black Terns frequented the Broad for several weeks in early summer. Also of interest were 2 Goosanders in January, 2 Marsh Harriers February 7th/8th, 2 booming Bitterns, Common Scoter September 3rd and Grey Phalarope on November 18th.

Blakeney Point

The National Trust

A breeding attempt by Sandwich Terns was unsuccessful due to bad weather and high tides. Common Terns, however, had a good season. A pair of Herring Gulls reared 3 young – the first occasion this species has nested in Norfolk. A summary of nests appears below:

Mallard	4	Herring Gull	1
Shelduck	30	Common Gull	1
Red-legged Partridge	5	Common Tern	1,700–1,900
Oystercatcher	120–130	Arctic Tern	2
Ringed Plover	180	Little Tern	200–220
Redshank	23	Blackbird	1

Breydon Water

Local Nature Reserve

A further decline in the numbers of geese wintering in the area was noted 75 White-fronted Geese on 30th January and 6 Pink-footed Geese on 29th being peak figures. A single Brent Goose stayed several weeks in company with Shelduck. Wildfowl counts included 700 Shelduck, 2,000 Wigeon, 140 Pintail, 176 Teal, 46 Goldeneye, 3 Scaup and 4 Tufted. Regular wintering herds of Mute Swans are in decline, but 142 were present 13th February; 46 Bewick's Swans appeared 30th January.

Other January visitors included Merlin, Peregrine and Hen Harrier with up to 16 Short-eared Owls on Halvergate Level. Highlights were Shorelark, Slavonian Grebe and at least 3 Glaucous Gulls on the south wall refuse tip.

February saw an estimated 1,000 Redshank with 125 Cormorants on 13th. Wildfowl included 66 Bewick's Swans, 1,500 Wigeon, 70 Pintail, 33 Pochard and single Red-breasted Merganser and Goosander. Surprises were 3 Shorelarks on 3rd and drake Red-crested Pochard on 5th. Among waders were 250 Golden Plover and 800 Knot. Over 80 Twites were on the saltings, up to 80 Snow Buntings and 5 Lapland Buntings were recorded. Hooded Crows peaked at 11 when 1,500 Great Black-backed Gulls were using the refuse tip. A Buzzard was new on 29th.

March opened with single Water Pipits on 1st and 8th; 2 more passed through on 31st, one being in breeding plumage. A Spotted Crake stayed a week from 3rd. Bewick's Swans were much in evidence: the largest herd was 92 on 5th; several

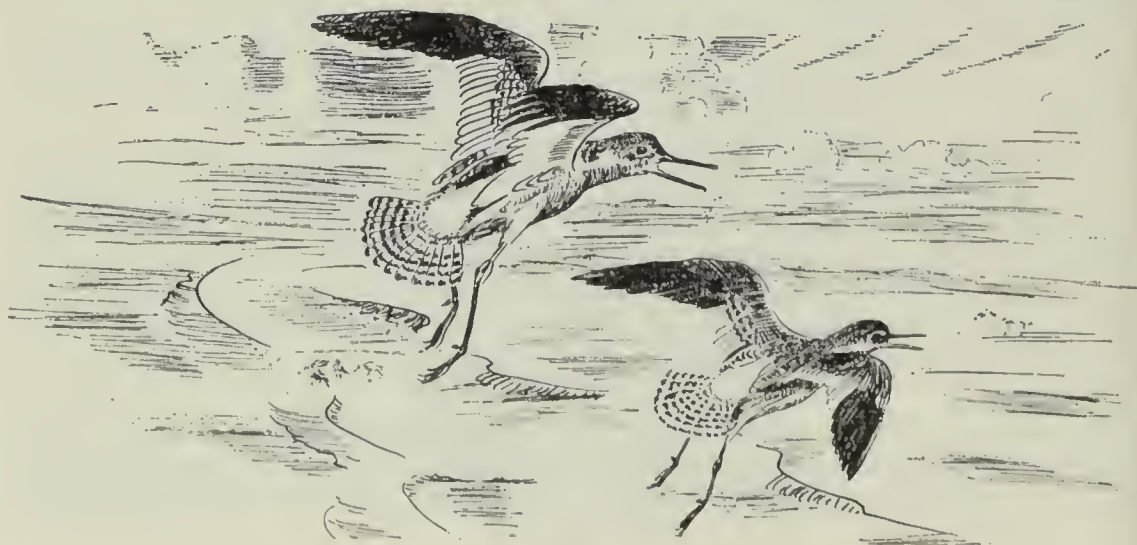
herds passed east and out to sea. Other wildfowl included 850 Wigeon, 163 Pintail, 46 Goldeneye and 53 Teal. An early Avocet appeared on 19th followed by 8 on 25th when a Garganey was new with 2 more next day. 118 Cormorants were still present, Hooded Crows increased to 18 and Twites numbered 26. Black-tailed Godwits in ones and twos appeared from 16th when up to 4 Jack Snipe remained. Other migrants included Wheatears from 22nd and Black Redstarts on 24th.

The following wildfowl remained in April: 42 Pintail, 3 Gadwall, 3 Red-breasted Mergansers and single Scaup. Whimbrel arrived on 3rd, single Avocets on 18th and 29th, 3 or 4 Spotted Redshanks and 781 Redshanks on 17th, also Curlew-Sandpiper on 30th. An obvious escape was a Chilean Flamingo on 30th and doubtless the same bird returned several times during the summer until mid-August. Black Redstarts were singing at the Yarmouth end of the estuary for several weeks. Twites remained until 13th, Snow Bunting until 11th and 11 Hooded Crows until 26th. The last day of the month provided 16 species of waders including Ruff, Common Sandpiper and Little Ringed Plover.

As expected May was exciting and 22 species of waders appeared, among them Avocet on 6th, Little Ringed Plover on 7th and Curlew-Sandpiper on 14th. Bar-tailed Godwits peaked at 45 on 7th with 4 Black-tails on 12th. Several Spotted Redshanks put in an appearance, but no Greenshank. Other waders of note included 23 Turnstones on 8th, 29 Grey Plovers on 19th and 102 Knot on 17th. Surprises were Spoonbill on 2nd, Hobby on 29th and up to 3 Red-breasted Mergansers between 7th and 10th. The month's highlight was a Little Egret on 4th which stayed four days on the adjacent marshland. 3 Wigeon were present on 19th, a drake Garganey remained all month and up to 14 Great Crested Grebes were resident. 5 Black Terns passed east on 12th with another on 19th.

June was relatively quiet apart from Spoonbill on 6th and 17th; 1-2 Avocets between 5th and 30th and Black Tern on 27th. Among wildfowl were single drake Wigeon and Garganey and 487 Shelduck in a single group on 26th when the first Whimbrel had returned. A Greenshank had arrived two days earlier.

Among breeding birds were reduced numbers of Redshank and Lapwing apparently due to activity and disturbance caused by reclamation work on parts of the adjoining marshland. Mallard had a good season and 2 pairs of Gadwall and 3 of Shoveler nested. The first brood of Shelduck appeared 6th June, but they had a poor season. Oystercatchers increased to 9 breeding pairs (including four on the north wall marshes and one on the refuse tip). Short-eared Owls bred at Wickhampton and possibly at Berney Arms; Kestrels nested as usual in derelict



marsh drainage mills. A pair of Barn Owls bred. Other nesting birds included 10 pairs of Little Grebes and for the first time a pair of Corn Buntings.

July was also quiet although one or two Spoonbills stayed two weeks from the 13th. Their visits were restricted to early morning and evening. The majority of the Shelduck departed on 15th leaving 50 juveniles and a few guardian adults. Waders included 19 Whimbrel on 21st and Curlew-Sandpiper on 22nd with up to 5 Greenshank. Little Terns began assembling at the eastern end of the estuary and 70 (including 36 birds of the year) were present on 26th. Common Terns peaked at 131 and Sandwich Terns at 21.

August saw the reappearance of 2 Spoonbills from 4th to 13th. 2 Avocets were new from 5th staying a week, and a party of 7 dropped in on 30th. A Wood Sandpiper arrived on 9th and there were 2 on 16th. Curlew began building up: 103 were present on 29th when 39 Whimbrel were on show. Wader counts included 59 Oystercatchers, 23 Bar-tailed Godwits, 10 Black-tailed Godwits, 11 Curlew-Sandpipers, 3 Spotted Redshanks, 11 Greenshanks, 16 Common Sandpipers and 1-2 Little Stints. Amongst wildfowl were 9 Wigeon and an early Pintail on 3rd. A dozen Great Crested Grebes were present including two juveniles. Also interesting were Short-eared Owl on 8th and 26th, Marsh Harrier on 16th and Kittiwake on 20th.

September highlights were Spotted Crake on 11th and Hoopoe on 12th. Also notable: Fulmar on 24th, several Black Terns on 8th/9th and Grey Wagtail on 21st. Bar-tailed Godwits peaked at 81 on 24th and up to 7 Black-tails passed through. Other waders were 17 Turnstones on 9th, up to 13 Curlew-Sandpipers and 3 Little Stints. The first Rock Pipit returned on 11th with Lapland Bunting on 19th. Cormorants peaked at 22 and an early Hen Harrier passed through on 10th.

October brought the first Jack Snipe on 2nd with Twite on 4th and Snow Bunting next day. Notable were Little Gull on 11th and 70 Grey Plover in a single group on 3rd. 65 Bar-tailed Godwits remained on 11th and a Spotted Redshank until 23rd. 9 Bearded Tits were in a dykeside on 7th and 1,036 Knots were counted on 19th. A late Curlew-Sandpiper was on the muds on 17th when 6 Scaup arrived.

November wildfowl counts included 635 Wigeon, 48 Pintail, 3 Goldeneye and 44 Scaup. 48 White-fronted Geese passed through on 6th and the first 3 Bewick's Swans appeared on 12th. The adjacent marshes at this time held over 35 Short-eared Owls mainly in the vicinity of Halvergate Fleet. Kestrels were much in evidence at Halvergate, 16 being in the air at the same time. Among waders were 6 Bar-tailed Godwits on 30th with 5 Black-tails on 19th and over 3,000 Dunlin and 600 Knot. 11 Lapland Buntings were recorded on 9th and Twites peaked at 45 on 19th.

December surprises were few, but a Dipper on the 10th was very notable. It was on a pier of Yarmouth Haven Bridge when first seen later flying up the main Breydon channel. It was considered to be either the British or Central European form showing a rufous belly. The only White-fronted Geese present were 29 on 31st. Bewick's Swans peaked at 23 and 2 Whooper Swans passed through on 24th. The same day produced an exceptional total of 116 Short-eared Owls on Breydon marshes; at one time no less than 80 were in the air together. A week later the same area produced 90 owls. Among wildfowl were 56 Scaup, 154 Pintail and 900 Wigeon. Also of interest was a Water Pipit on 9th and 13th, Stonechat on several dates and 17 Lapland Buntings on 24th. Waders were scarce, but 158 Curlew were present on 31st.

Cley Marsh

Norfolk Naturalists Trust

After an absence as a breeder for many years a pair of Pochard nested on the Marsh. Other nesting birds included Bearded Tits and a pair of Bitterns. Black-tailed Godwits returned March 10th, but there was no breeding success.

The Migration section of this Report contains details of the many migrants passing through Cley. Among 1972 highlights were Little Egrets, White Stork, Gull-billed Tern, Aquatic Warbler and Red Kite.

East Wretham Heath

Norfolk Naturalists Trust

The water levels at both Lang Mere and Ring Mere fell dramatically in the autumn; as a result fewer wildfowl put in an appearance. Noteworthy visitors included Goosander at Ring Mere and Black-necked Grebe at Lang Mere February 20th, up to 3 Bewick's Swans from November 19th and up to 40 Gadwall December 3rd and single Scaup.

Among nesting birds were Long-eared Owl (4 young reared), 2 pairs of Tufted Duck, Redstart, Nightingale (4 singing males) and Nightjar. A pair of Great Crested Grebes was unsuccessful. Crossbills were a regular feature. Up to 10 Hawfinches were resident in hornbeams until April 9th and from October 22nd. Passage migrants included Rough-legged Buzzard March 26th, Little Ringed Plover (April 3rd), Ruff (September 5th), Spotted Redshank (August 27th), Greenshank (August 13th and 29th), Whimbrel (May 7th), Green Sandpiper (September 24th), Black Tern 3 (May 8th) and Montagu's Harrier (July 10th).

Hardley Flood and Chedgrave Common

Norfolk Naturalists Trust

Among the year's highlights were Blue-winged Teal in early spring and again in November and Ferruginous Duck at the end of December. Breeding birds included 4 pairs of Common Terns and 3 pairs of Great Crested Grebes, together with Mallard, Teal, Gadwall and Shoveler; 2 Pochard's nests were found. 35 pairs of Shelduck summered and several broods of young assembled on The Flood. Bitterns and up to 25 Bearded Tits were recorded from time to time. Other notable visitors included Great Grey Shrike in January, Red-throated Diver in February/March, 5 Bewick's Swans, Pintail, Garganey from April 2nd, 4 Black Terns and 2 Wood Sandpipers in May, Spoonbill June 2nd, 2 Avocets on 11th and also Sparrowhawk, 11 Cormorants and a late Chiffchaff December 5th.

Hickling Broad

Norfolk Naturalists Trust

Marsh Harriers in ones and twos were frequent visitors throughout the year, but despite aerial display high over Swimcoots there was no nesting attempt. Winter visitors in the opening months included Hen Harriers, the usual species of wildfowl, together with Whooper and Bewick's Swans.

Ruffs returned February 28th, followed by Black-tailed Godwits March 16th and Garganey on 23rd. The first Spotted Redshank for the year was noted on April 9th, with Grey Plover May 9th and Whimbrel on 16th. Among other May visitors were Black Tern on 1st, Spoonbill on 19th and Red-backed Shrike on 28th. June was also interesting when Rush Hills attracted 3 Avocets on 12th and 5 Spoonbills on 28th.

Four booming Bitterns were recorded (at Swimcoots, Holkham Pit, Whiteslea and Rush Hills). Bearded Tits nested successfully with concentrations between Whiteslea and Deary's Flood; Swimcoots, Heigham Sounds and Rush Hills; and Bygrave Marsh. Among breeding wildfowl were Tufted and Pochard, 2 pairs each of Garganey and Shelduck and 6 pairs of Gadwall. Three pairs each of Pintail and Wigeon remained until late in the breeding season. 28 pairs of Herons nested (21 in Sounds Wood, 3 in Waggonhill Wood and 4 in McHardy's Wood), 3 pairs of Common Terns (on Rush Hills), 2 pairs of Kestrels (in Stubb's Mill and in a straw stack), one pair of Long-eared Owls (in Waggonhill Wood), 3 pairs of Barn Owls (2 of the nests were located: in the Whiteslea Lodge owl box and in a hollow tree), 2 pairs of Ringed Plovers and 3 pairs of Kingfishers. Two pairs of Little Terns summered.

Autumn waders began returning from the last week in July and by mid-October 22 species had been identified including Red-necked Phalarope August 24th. A Ring Ouzel passed through October 19th when a wintering Stonechat returned followed by Hen Harrier in November and Jack Snipe in December.

Holme Nature Reserve

Norfolk Naturalists Trust

Among breeding birds on the wader pools were 2 pairs of Ringed Plovers and a pair of Oystercatchers. A pair of Avocets stayed four days early in June. Six families of Shelduck appeared on Broadwater, but following high winds only one family survived. Short-eared Owls nested in the area.

Migratory records are fully recorded elsewhere in this Report.

Horseley Mere

John Buxton

Bitterns began booming late in February and within a month 5 were in evidence including one in a new area recently flooded. Bearded Tits were often following the reed-cutters in winter; one party was joined by a cock Stonechat. Between 25 and 30 pairs of Bearded stayed to breed. Hen Harriers – up to 4 together – were a regular feature in the autumn and winter. One evening in late March a group of 6 harriers (2 male Hen, 2 female Hen and 2 female Marsh) were observed flying slowly in each other's company before roosting in the reedbeds. Two female Marsh Harriers lingered all summer and a male put in an appearance in mid-May.

Breeding birds included 2 pairs of Oystercatchers, 50 pairs of Black-headed Gulls and single pairs of Pochard and Tufted; 2 pairs of Great Crested Grebes bred on the Mere. Nearer the sea family parties of Stonechats and Red-backed Shrikes were observed.

Martham Broad

Norfolk Naturalists Trust

Seven species of ducks wintered including a raft of over 100 Tufted and Pochard. A Bittern's nest was recorded in the adjacent Starch Grass. Marsh and Hen Harriers, Kingfishers and Water-Rails appeared from time to time. Bearded Tits nested successfully and family parties of up to 10 young were on show during the early autumn. A Spoonbill was an interesting mid-summer visitor July 25th. The alders edging part of the Broad attracted wandering parties of Redpolls, Siskins and Long-tailed Tits.

Ranworth Broad

Norfolk Naturalists Trust

Peak numbers of wildfowl assembled at Ranworth during January; on 21st a count totalled 500 Wigeon, 23 Tufted, 10 Pochard, 50 Teal and 250 Mallard. The first 2 Great Crested Grebes returned the same day. The Wigeon flock remained until the end of February.

A total of 43 pairs of Common Terns nested on the rafts; 53 young fledged. 10 pairs of Herons nested in the usual two colonies.

Roydon Common

Norfolk Naturalists Trust

Hen Harriers were again a winter feature and up to 3 (including a male) remained until March 17th; the first ring-tail returned November 20th and was later joined by a male. Carrion Crows – which frequently mobbed the harriers – were a feature and 70 roosted on the Reserve until mid-February, numbers declined to 30 by April 12th. The roost was re-occupied by 40 birds from mid-September with a peak of 100 December 10th.

Among breeding birds were 2–3 pairs of Curlews, Shelduck and Nightjar; Yellow Wagtails failed to return. Also of interest was a Stonechat for seven weeks from October 21st. A total of 82 species has been recorded at this Common in three years.

Scolt Head Island

The Nature Conservancy

A record total of 4,800 pairs of Sandwich Terns summered (compared with 4,400 pairs the previous year). The first 200 arrived April 3rd, increasing to 1,000 by 21st and to 4,000 by May 1st. First eggs were laid April 28th and by June 1st there were 4,800 pairs and 3,500 nests (latter figure excludes 500 pairs whose nests failed due to predation and other causes). Final total was 4,200 successful nesting pairs. The proportion of two-egg clutches was 10% and the proportion of addled eggs between 8% and 10%. Some 200 dead chicks were found. An estimated minimum of 3,300 chicks fledged.

600 pairs of Common Terns began nesting from May 18th. Despite a high hatching success only 50 chicks reached the flying stage due largely to predation by Short-eared Owls and a Kestrel. Seventy pairs of Little Terns nested resulting in over 100 chicks fledging; a most successful year. Two pairs of Arctic Terns nested, but no young were reared; a male Kestrel took 2 chicks. 300 pairs of Black-headed Gulls nested in the ternery and 200 chicks fledged. A pair of Common Gulls laid 2 eggs which failed to hatch; 3 other pairs displayed in June.

Other breeders included 150–155 pairs of Oystercatchers, 155–160 pairs of Ringed Plovers, 30 pairs of Redshank, 2 pairs of Blackbirds and a pair of Swallows.

Stiffkey Binks

Holkham National Nature Reserve

350 pairs of Sandwich, 135 pairs of Common and 12 pairs of Little Terns, 10 pairs of Oystercatchers, 12 pairs of Ringed Plovers and 20 pairs of Black-headed Gulls all nested.

Titchwell Marsh

Norfolk Ornithologists Association

Spring passage continued until late May where there was a large passage of Turtle Doves with up to 1,000 in one day. Earlier in the month 40 Turnstones, 20 Grey Plovers and 200 Sanderling were roosting on the beach at high water. Among breeding birds were several pairs of Bearded Tits, 20 pairs of Little Terns and 5 pairs of Common Terns.

June surprises were Osprey on 3rd, Marsh Harrier on 4th and female Golden Oriole on 5th. Autumn wader passage commenced in the second week of July when the variety included Grey Plover, Whimbrel, Common and Green Sandpipers, Greenshank and Curlew-Sandpipers. Among August visitors were Corn-crake on 25th and Purple Sandpiper on 28th.

Weeting Heath

Norfolk Naturalists Trust

At least 4 pairs of Stone-Curlews nested in the enclosure, in company with the usual numbers of Wheatears and Lapwing. Kestrels bred in an old Scots pine.

Welney Wildfowl Refuge

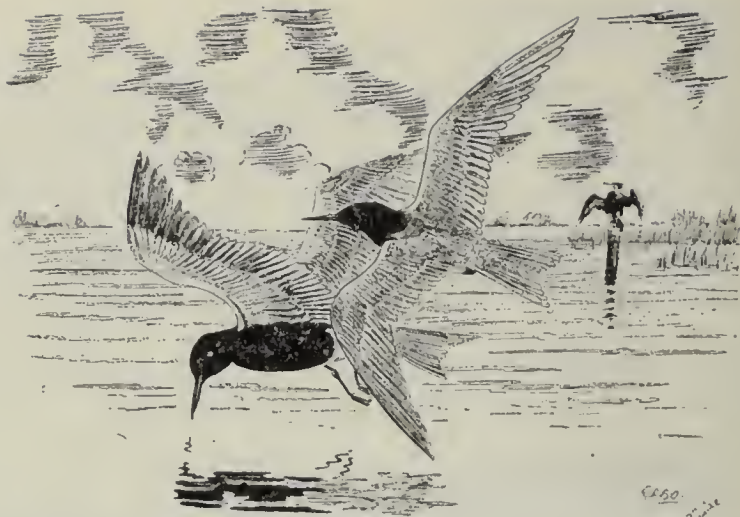
Wildfowl Trust

Despite a relatively mild winter numbers of duck during January were consistently high: a count on 15th produced 22,000 Wigeon, 2,300 Mallard, 2,000 Teal, 450 Pintail and 200 Shoveler. High water levels at this time drove the Wigeon to feed on the grass of the new screen banks, often within feet of the observation hides. The lagoon in front of the Observatory was the home of a great flock of Bewick's Swans, totalling 400 through January rising to a peak of 550 in late February and keeping at this level for a fortnight. With them were up to 31 Whooper Swans and 100 Mutes. All these swans were fed daily by the warden and became completely accustomed to his appearances with barrows of wheat. The majority of the Bewick's left rather suddenly in mid-March, but 2 stayed until mid-April.

Although Wigeon numbers dropped right away to 14,000 in February and to 9,000 in March there was a brief influx of Pintail in the latter month with 600 on the 11th, when there were also 500 Shoveler. Up to a dozen White-fronted Geese and 2 Bean Geese were identified.

The breeding season had begun well before the last 2 Bewick's departed though early broods of Mallard suffered heavy losses in the wet cold weather at the end of April. Four pairs of Black-tailed Godwits nested (2 pairs were successful rearing 3 and 2 young), as did 2 pairs of Ruffs and they and the later ducks reared their young. Among the latter were more Mallard, together with Teal, Garganey, Shoveler, Tufted and Shelduck.

The autumn build-up of ducks was fairly slow with only 2,000 Wigeon present in mid-October, with 1,600 Mallard and 400 Teal. The first Bewick's Swans arrived in early October, but increased steadily so that by mid-November there were 350. At this time too the duck numbers started to increase with 12,500 Wigeon on November 23rd. However, this figure was dwarfed at the end of the year when it was estimated that there were no less than 30,000 Wigeon on the Refuge. Other wildfowl numbers remained low with no more than 2,000 Mallard and 1,300 Teal. Pintail and Shoveler both reached 500. Bewick's Swans increased to 540 by the year end when there were also 21 Whooper Swans and up to 23 White-fronted Geese.



Migration

Cley and Salthouse

During the first few weeks of the year several thousand Wigeon frequented the Reserve; on the 2nd a Hen Harrier appeared. 15 White-fronted Geese together with 150 Golden Plovers arrived **January** 12th. 9 Shorelarks were noted on 16th and a small herd of Bewick's Swans headed west on 17th.

Up to 13 Ruffs remained in the area from the beginning of the year until the end of **February**. A small movement was noted on 29th when 8 White-fronted Geese and a single Bean Goose appeared.

In early **March** winter visitors began departing for breeding grounds and 9 Whooper Swans headed east on 6th; the 8th brought the first spring visitor: a drake Garganey. 2 White-fronted Geese and a Bean Goose on 12th were followed by the first Black-tailed Godwit on 10th with 3 more on 21st. Display began in the next few days, but there was no breeding success. The first of the passerines – a Chiffchaff, was recorded on 22nd. Wheatears arrived next day. By the month end the Ruff total was 22 and the first Sandwich Tern flew in on 31st with single Sand Martin next day.

A movement of Swallows, Yellow Wagtails and White Wagtails on **April** 3rd heralded a real start to the spring movement. More Yellow Wagtails and 18 Sandwich Terns came on 5th, Common Tern on 6th and Avocet on 7th. A Spotted Redshank was present on 9th and a Ring Ouzel next day. A late Hen Harrier was spotted on 12th, Sparrowhawk on 17th and Hoopoe over the East Bank on 20th, followed on 21st by Little Tern and Sedge Warbler and Reed Warbler on 24th. Thirty Bar-tailed Godwits and 3 Red-breasted Mergansers were present on 27th, 4 Bramblings and Marsh Harrier on 28th and Montagu's Harrier and Little Egret on 30th, the latter gracing the Reserve until 7th May.

May 1st saw the arrival of many migrants including Black Tern, Blue-headed Wagtail, Turtle Dove, a late Glaucous Gull and many Swifts. A Great Grey Shrike was late on 2nd whilst the 5th saw the return of the first Red-backed Shrike to Salthouse Heath. A few Black Terns, an Avocet and a small movement



Copyright

Added to the county list as recently as 1952, the Little Egret has become a spring vagrant from Southern Europe. In 1972 at least six visited Norfolk between April 30th and July 12th.

Dr. K. J. V. Carlson



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Dr. K. J. V. Carlson

Water-Rails are very secretive in the breeding season, except for peculiar grunting and squealing noises made in the reed-swamps. These normally shy birds often become casualties when migrating at night: electric cables, telephone wires and light-vessel lanterns all claiming victims.

of Redstarts were all recorded on 6th followed by Bluethroat, Tawny Pipit, Wryneck, Hobby, Temminck's and Little Stints, Wood Sandpiper, Little Gull and White Stork all on 7th. Ring Ouzel, Kentish Plover and Marsh Harrier were noted on 8th, the latter staying until 11th. A Kentish Plover and 2 Temminck's Stints were again noted on 13th/14th. A spotted Redshank was new on 18th, also Spoonbill (joined by a second bird on 20th - one staying until the 23rd). 3 Temminck's Stints and Short-eared Owl with another Avocet followed between 19th and 24th. Bitterns began feeding their young at this time. A Little Gull and another Black Tern were noted on 21st, Little Ringed Plover on 22nd with Montagu's Harrier on 26th. Highlight of the 28th was another Kentish Plover which stayed five days. 2 Little Egrets arrived next day and one remained to be joined by a Spoonbill.

As spring migration abated **June** produced an Osprey on 1st. The 3rd brought another Little Egret which unlike the two mentioned earlier did not show any head plumes and was presumably an immature. It remained until 12th July. Two Curlew-Sandpipers were new on 3rd, 7 Avocets on 7th were followed by 4 more on 11th; a cock Montagu's Harrier stayed between 9th and 14th. A spotted Redshank in winter plumage on 17th was followed by a magnificent black individual on 18th. A Greenshank appeared on 25th with 2 more Spotted Redshanks and a Hobby next day.

A Wood Sandpiper **July** 6th was the first of the waders to return and by the 9th Ruff, Greenshank and Whimbrel had all arrived. Wood, Green and Common Sandpipers were noted in ones and twos from 14th onwards. The first Arctic Skuas moved along the coast on 16th with 3 red Curlew-Sandpipers next day. Seven more Curlew-Sandpipers were noted on 20th and a party of 90 Shelduck headed west on 23rd. By the month end 4 Little Ringed Plovers, Little Stint and numerous Ruffs were present. A late Pochard's nest was found July 27th.

Two juvenile Montagu's Harriers passed through **August** 9th and highlights of the next day were Kentish Plover, Temminck's Stint and Little Gull. The 14th produced a good wader selection including Black-tailed Godwit, Little Ringed Plover, 2 Temminck's Stints and Spotted Redshank. A Peregrine passed through on 19th; also Purple Sandpiper. Another Temminck's Stint was found on 21st, Glaucous Gull on 24th and Purple Sandpiper next day. Towards the end of the month, Arctic, Great and Pomarine Skuas were all appearing regularly; 20 Curlew-Sandpipers were feeding in front of the main hide. Blakeney Point produced both Greenish and Barred Warblers on 27th whilst a Gull-billed Tern ranged off-shore for seven days until September 3rd. An Aquatic Warbler was found at the Coastguard lookout on 29th. The 30th brought a flurry of waders (3 Little Stints, 6 Spotted Redshanks, 2 Little Ringed Plovers and a few Curlew-Sandpipers), together with Bluethroat and Long-tailed Skua. Next day the first substantial fall of small migrants included 3 Wrynecks, Firecrests, Red-breasted Flycatcher and Bluethroat, together with 2 Icterine Warblers at the Point.

September began with Black Redstart on the Point and an Aquatic Warbler on 1st (followed by another Aquatic on 15th) and 2 Icterine Warblers on 2nd skulking in Walsey Hills when another Greenish Warbler in the Plantation at the Point. Next day a Long-tailed Skua passed close to the beach with another on 26th. Also on 3rd were 20 Little Stints, 25 to 30 Ruffs, Spotted Redshank, Green and Wood Sandpipers and over 40 Curlew-Sandpipers. A solitary Snow Bunting arrived on 6th and 14 Little Stints remained on 11th. Redwing and Fieldfares reached the Point on 13th. A Grey Phalarope stayed overnight on 12th/13th (others came on September 29th, October 21st and November 29th),

while a Pectoral Sandpiper was discovered on Carter's Pool on 14th where it remained until 20th. Red-necked Grebe was new also 20 Spotted Redshank. A Manx Shearwater on 16th was followed by another next day when a Sooty Shearwater was spotted. Lapland Buntings and 20 Snow Buntings came in on 18th with Richard's Pipit on 19th. Black Terns were present in twos and threes between 20th and 22nd and a Water Pipit was found on 23rd. The first Shorelark arrived on 28th (with 9 on October 13th), when Ring Ouzel and 2 Velvet Scoters were recorded with Jack Snipe next day.

October 2nd brought another Richard's Pipit and 5 Little Gulls; next day a Firecrest was noted and a Red-breasted Flycatcher was in the Warden's garden. An Icterine Warbler was recorded on 4th, followed by Great Grey Shrike on 6th, Black Redstart on 11th, 12 Ring Ouzels and Firecrest on 14th; also 15 Jack Snipe. A Spotted Crake, usually a most difficult bird to observe, remained on view by the Glaven Sluice for several days on 18th. A Grey Phalarope was on the sea on 22nd, Rough-legged Buzzard put in occasional appearances from 23rd, Long-tailed Duck was new on 25th, 2 Velvet Scoters on 26th, Great Shearwater on 27th and Hen Harrier from 28th. Lapland Buntings were present at this time.

As winter approached, 32 Bewick's Swans headed west on **November** 1st. Shorelarks reached a peak of 100 by the 6th and this high total remained until Christmas. 5 Waxwings were found on 20th.

December produced a wealth of wildfowl including 2,000 Wigeon. A Hen Harrier was recorded on 16th, a small party of Bewick's Swans moved west on 24th and Great Grey Shrike was found on 29th. A Bean Goose and 2 White-fronts joined the resident Canadas on 30th and the year ended with Black-throated Diver and Red Kite on 31st.

Holme

The new year began with 2 Avocets on the 1st, the first mid-winter record for this area; a Sparrowhawk also appeared. 4 Bewick Swans passed through on the 8th **January** with a further 28 flying west on the 19th. A number of interesting wintering species were recorded during the month including 19 Goldeneye, Slavonian Grebe, 2 Long-tailed Ducks, 30 Snow Buntings, Red-breasted Merganser and 20 Shore larks. Also a Green Sandpiper, another new winter record.

February produced 3 Purple Sandpipers on the 10th with Siskin present through most of the month. A Peregrine and 2 Woodcock appeared on the 27th.

March apart from the dispersal of some winter visitors, produced little in the way of new arrivals. Song Thrushes, Blackbirds, Redwings and Goldcrests continued to drift through. Notable spring arrivals included a pair of Garganey and a Wheatear on the 20th; the first Chiffchaff arrived on the 23rd when a very early Ring Ouzel was seen. The month ended with 3 more Wheatears and a Chiffchaff. 150 Golden Plover, 3 Short-eared Owls, a number of Hooded Crows and some Bearded Tits were also noted.

April as last year, was cold, wet and blustery with the result that spring migrants were scarce. 3 Velvet Scoters and a Great Grey Shrike were still present on the 1st and 12 Eiders on 3rd when the first 3 Sandwich Terns arrived. The following day 3 Ring Ouzels, 2 Chiffchaffs and a Blackcap were noted. A Black Redstart appeared on the 5th with another on the 10th. 7 Shorelarks remained from the 6th until the 12th. By the 8th the first Willow Warbler arrived, 6 Brent Geese were still present. The 9th heralded the arrival of the first Swallow, a Black-tailed Godwit and 3 Long-tailed Ducks were at sea. A Great Grey Shrike, Red-throated Diver and a Red-breasted Merganser arrived on the 10th with Firecrest,

some Tree Pipits, 20 Sandwich Terns, Grey Wagtail and Ring Ouzel. The 12th saw 4 Gannets over the sea, Yellow Wagtail and Chiffchaff. Sand-Martins appeared on the 13th when 2 Velvet Scoters were seen. A Siskin was present next day and up to 5 Swallows were noted. A Redstart was discovered on the 15th and Grasshopper Warbler on the 17th. From then on until the end of the month cold north winds held up further movements, apart from a Sparrowhawk ringed on the 21st. Greenshank arrived on the 26th, and Whimbrel on 28th as the weather began to improve, followed by the first Little and Common Terns and Sedge Warbler the next day. On the 30th the first Cuckoo was heard, Swallows passed through all day in small numbers together with the first Swifts; 3 Common Sandpipers, a few Whimbrel, 3 Goosanders and 2 female Montagu's Harriers also appeared.

The weather continued poor in **May** with strong winds between north and south-west and heavy storms; however, the 1st did produce 2 Lesser White-throats, 4 Tree Pipits, 2 Blackcaps and 6 Yellow Wagtails, together with a few House Martins and Sand Martins. Turtle Dove and Whinchat made an appearance on 2nd with an influx of 30 Willow Warblers, Redstart and Blackcap. Pied and Spotted Flycatcher and Whitethroat turned up on 6th when a Roseate Tern and Marsh Harrier were also noted, a second Marsh Harrier stayed on 9th/10th. The 7th saw the arrival of the first Reed Warbler. Small common migrants continued to arrive in parties until the month end. A Wryneck was noted on 13th, Black Redstart on 14th with Spotted Crake and Wood Warbler on 21st. The 22nd produced a great deal of excitement and within a two-hour period a Montagu's Harrier, Hobby and Rough-legged Buzzard were all observed. Another influx of small migrants on 20th produced 18 Willow Warblers, 3 Lesser Whitethroats, Whitethroat, 2 Garden Warblers, Chiffchaff, 2 Whinchats, 5 Wheatears and Spotted Flycatchers. A Little Gull appeared on 29th with 2 more on 31st. These were joined by a Little Egret which stayed until June 5th on Broad Water and along the River Hun. Late winter visitors included 4 Fieldfares on 7th and Brambling on 14th.

June was rather quiet except for 6 individual Avocets during the first week. One carried a red ring and may have been ringed at Minsmere in 1971. A Marsh Harrier was present on 2nd with 2 more on 10th, Sparrowhawk and Little Gull on 3rd and 5th with 8 Gannets on 14th. 4 Crossbills were recorded on 13th.

By **July** waders were on the move again and Little Gulls were noted between 7th and 23rd. 4 Crossbills appeared in Holme Village on 5th. Arctic Skuas and Gannets appeared frequently from 16th onwards and 2 Red-breasted Mergansers were new on 22nd. The first Curlew-Sandpiper arrived on 29th.

With both wader and sea bird movements increasing **August** also saw the beginning of the return passage of passerines. On the 12th came 6 Pied Flycatchers, 6 Willow Warblers, Wryneck and Redstart and Icterine Warbler on 13th. The first Great Skuas were also seen the same day. A Barred Warbler joined the Icterine on 14th whilst 2 Barred were present on 16th together with a Wryneck. Watching over the sea produced many Gannets on 18th accompanied by Kittiwakes, 3 Manx Shearwaters, 2 Eiders, Long-tailed Duck, many Arctic Skuas and 8 Great Skuas. Little Ringed Plover and Corncrake were notable on 21st. A Long-tailed Skua made the 23rd notable. A passage of Curlew-Sandpipers began August 25th when 55 were present, followed by 50 next day, 17 on September 1st and 40 on 6th. Further influxes of small passerines were noted up to the end of the month and throughout September including totals of 15 Pied Flycatchers, 12 Wrynecks, 30 Whinchats and 6 Barred Warblers between

September 1st and 30th; also small parties of Tree Pipits, Garden Warblers, Willow Warblers, Chiffchaff and Redstarts. An immature Ortolan Bunting was found on 31st.

Autumn movements were in full swing by **September** and an adult Mediterranean Gull passed through on 1st, a party of 30 Black-tailed Godwits were on the shore on 3rd and 2 Black Terns featured on 9th. By the 10th a steady flow of Arctic Skuas and also 22 Great Skuas had been recorded. Richard's Pipit was identified on 6th, 8th and 22nd. Bramblings began arriving from the 16th while a Red-breasted Flycatcher made the 19th interesting. A Yellow-browed Warbler was the highlight for two days from the 27th being joined by an Arctic Redpoll the second day. From the 19th winter birds began returning with daily counts of up to 10 Goldcrests, 6 Song Thrushes and Redwings. Four Snow Buntings came on 23rd. Great Northern Diver and 34 Shelduck to the west on 24th, Ring Ouzel on 29th and Great Grey Shrike on 30th were all notable.

During **October** migration continued almost unbroken to the third week, beginning with single Barred Warbler on 1st and Firecrest on 3rd. The last Whimbrel passed through on 5th. An almost unprecedented fall of Goldcrests with a peak of 200, was recorded on 12th/13th. Two Northern Great Spotted Woodpeckers also landed at this time. Woodcock on 14th was followed next day by single Puffin, 4 Shorelarks, Black Redstart, the outstanding total of 110 Little Gulls and Wryneck (which had been ringed September 25th). The main arrival of Song Thrushes, Redwings, Blackbirds, Chaffinches and Bramblings took place between 1st and 17th. A Crossbill arriving on 16th stayed three days with another on 26th. The 17th produced *the* bird of the autumn: Pallas's Warbler which delighted fortunate observers for 3 days. Summer visitors were still appearing: 2 Whinchats on 2nd, Willow Warbler and Chiffchaff between 1st and 3rd, Garden Warbler and up to 4 Redstarts remained until the 6th with 2 up to the 16th and up to 10 more Blackcaps daily until 15th and odd ones until the month end. 4 Lapland Buntings, Grey Wagtail and 26 Shorelarks were all noted on 19th. 2 Stonechats stayed for most of the month. Seawatching on 20th produced many Great and Pomarine Skuas with hundreds of Kittiwakes. The next day 8 Red-breasted Mergansers appeared. On 28th Hooded Crows peaked at 27 – the best for some years. 10 Little Gulls passed through on 30th with 6 next day.

Apart from flocks of immigrant Fieldfares and Redwings (peaking at 300 an hour) **November** 4th, the only other notable species were 5 Waxwings on 9th and one on 18th, 200 Bewick's Swans flying west on 10th, 8 Shorelarks on 12th and a Blackcap on 16th. 10 Whooper Swans were on the shore on 20th (and again on 31st). Red-necked Grebe, Eiders, Long-tailed Duck and Mergansers concluded the month, leaving **December** to yield 3 Short-eared Owls and 200 Brent Geese, Hen Harrier and 200 Golden Plovers, 16 Pink-footed Geese and 5 Whooper Swans which headed west on 20th. A very late Blackcap was ringed on 28th.

A total of 2,576 birds of 70 species was ringed by Holme Bird Observatory in 1972 (including 1,031 at Titchwell, 182 in the Hunstanton–Docking–Ingoldiscliffe areas and 63 in Old Hunstanton Golf Course bushes). The grand ringing total since 1962 is of 18,974 birds of 126 species. Among those ringed in 1972 were Woodcock, 5 Herring Gulls, 4 Cuckoos, 3 Kingfishers, 4 Great Spotted Woodpeckers, 3 Wrynecks, 60 Swallows, 45 Great, 178 Blue, 9 Willow and 6

Long-tailed Tits, 64 Wrens, 8 Bearded Tits, 93 Fieldfares, 111 Song Thrushes, 3 Ring Ouzels, 184 Blackbirds, 2 Stonechats, 67 Robins, 140 Reed and 107 Sedge Warblers, Icterine Warbler, 75 Blackcaps, 4 Barred and 32 Garden Warblers, 108 Willow Warblers, 22 Chiffchaffs, Yellow-browed and Pallas's Warbler, 195 Goldcrests, 2 Firecrests, 39 Spotted and 30 Pied Flycatchers, 90 Dunnocks, Great Grey Shrike, 350 Greenfinches, 94 Linnets, 106 Redpolls, 36 Bullfinches, Crossbill and 21 Tree Sparrows.

Snettisham Pits Wildfowl Refuge

R.S.P.B.

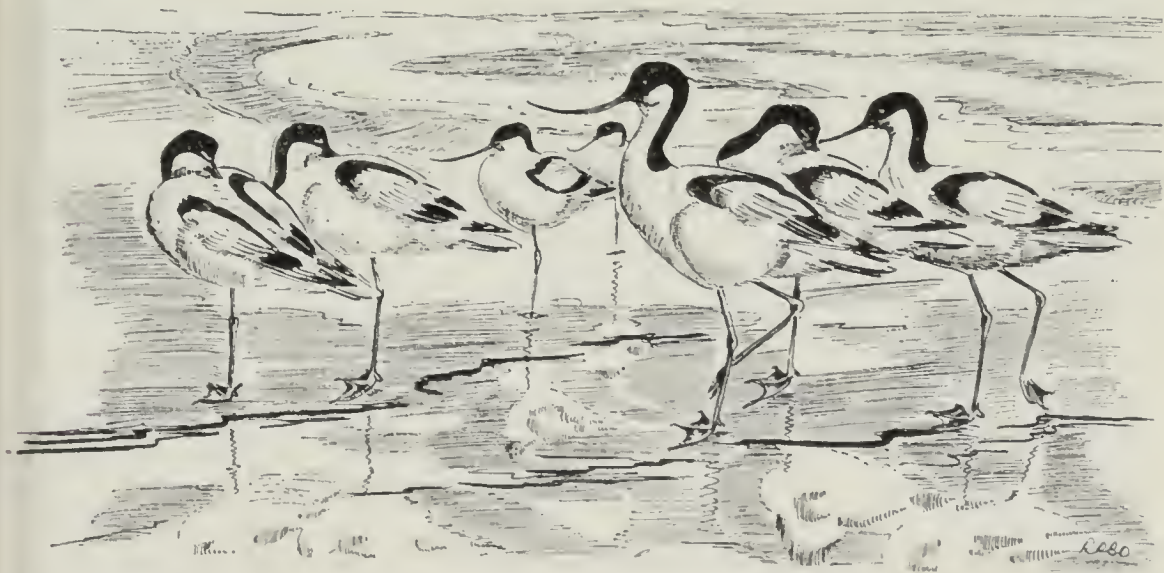
Warden: R. Berry

During **January** a total of 107 Bewick's Swans passed through the Reserve, including herds of 52 on 19th and 41 next day. A company of 40 Red-breasted Mergansers stayed six days from 26th. The 19th was interesting with 5 Smew and a Goosander. A Red-necked Grebe stayed from 5th to 8th when a Black-necked Grebe arrived being joined by a second bird on 17th. Up to 40 Snow Buntings were present all month. Pink-footed Geese peaked at 1,274 on 19th and Goldeneye at 54 on 27th.

In **February** a duck Smew remained until the 26th and a Black-necked Grebe until 22nd. As many as 70 Little Grebes were present and a Red-necked Grebe was detected on three days. Pink-footed Geese had declined to 543 by mid-month. Snow Buntings, surprisingly, increased to a maximum of 117 on 7th. Single Hen Harriers were recorded on 10th and 22nd.

March was exceptionally warm and 13 pairs of Ringed Plovers had established territories by the 7th; between 30 and 40 pairs of Shelduck were displaying. 18 Bewick's Swans passed through on 1st, but the month's highlight was 8 Avocets on 5th. Oiled victims included 2 Red-throated Divers and a Red-necked Grebe. Up to 104 Eiders assembled at Snettisham in the second half of the month. Early spring migrants included Chiffchaff on 18th and Wheatear on 20th.

April was consistently cold and it was not until the 30th that a large scale movement was observed: in two hours 200 Goldfinches, 53 Yellow Wagtails,



Avocets appeared at Snettisham and Breydon in March

100 Swallows and 30 Wood Pigeons passed through. The first Common Terns arrived on 10th when a Sparrowhawk was new. Spotted Redshank and Greenshank were noted on 25th with Purple Sandpiper and Ring Ouzel on 28th.

May visitors included several Montagu's Harriers, Ring Ouzels, 2 Black Terns, Purple Sandpiper on 10th and Little Gull on 13th. Later in the month came Hobby on 18th, Marsh Harrier between 25th and 27th and Spoonbill on 30th. 16 pairs of Ringed Plovers bred on the Reserve hatching 42 young. However, half this total was lost in cold, wet, conditions at the end of the month.

The first brood of 9 baby Shelducks appeared during the first week of **June**. 32 pairs of Common Terns bred rearing 29 young. Over 2,000 Lapwings passed through on 26th and by the month end some 2,000 adult Shelduck has assembled at Wolferton.

By **July** 10th almost 3,000 Shelduck were present near the Reserve. Each evening until the end of the month groups of between 30 and 200 were watched departing on moult migration. Arctic Skuas returned on 26th when 32 Eiders were roosting on the shore.

August was rather quiet apart from Arctic Skuas, Spotted Redshanks, Kingfisher, Little Ringed Plover, Marsh and Montagu's Harriers and Nightjar. Interesting waders at the month end included 6 Curlew-sandpipers, several Little Stints, a remarkable flock of 58 Greenshank and 2 early Jack Snipe.

Two Kingfishers were a daily feature during **September**, together with Nightjar on 2nd, small numbers of Curlew-sandpipers and Common Sandpipers, Wryneck on 10th and Marsh Harrier next day. The month's two highlights were Red-necked Phalarope on 24th and Hoopoe on 19th. 35 Little Grebes had returned by the end of the month when the first 2 Brent Geese appeared. Several hundred Blue Tits passed through a four-day passage in mid-September. The first 5 Fieldfares were recorded on 26th followed by Redwings on 30th.

North to north-westerly gales on **October** 20th brought hundreds of Kittiwakes and Gannets into The Wash at Wolferton; also Arctic and Great Skuas, Little Gull and Long-tailed Duck. The first 17 Bewick's Swans for the autumn arrived on 20th followed by 6 on 22nd and 23 on 23rd. Hundreds, and on occasions thousands, of Fieldfares, Redwings, Starlings, Bramblings and Chaffinches moved through the Reserve each morning. Crows were another October feature and 100 Hooded Crows were recorded. Also of interest were Ring Ouzel and Black Tern on 3rd, 9 White-fronted Geese on 10th, 12 Brents on 13th and Great Grey Shrike next day. By mid-October Scaup, Goldeneye, Tufted and Pochard had assembled, together with 50 Little Grebes and a Merganser. Great Spotted Woodpecker, 5 Siskins, and 14 Bearded Tits were also noteworthy.

A late Wheatear was noted **November** 8th, with Great Grey Shrike and 3 Waxwings on 14th and Merlin and Hen Harrier from the 27th. Shorelarks peaked at 9 and Snow Buntings at between 30 and 40. Among wildfowl 56 Bewick's and 7 Whooper Swans passed through; one of the Whoopers had spent the previous winter here. 60 Pink-footed Geese were present on 15th increasing to just over 500 by the end of the month. In addition to 100 Pochard and Tufted, 25 Goldeneye, 2 Goosanders and 3 Long-tailed Ducks put in an appearance.

During the first week of **December** 13 Bewick's Swans headed towards the Ouse Washes, up to 8 Shorelarks, 70 Snow Buntings and 88 Brent Geese were recorded. Other visitors included Velvet Scoter and 2 Hen Harriers; also 1,000 Pink-feet and 15 White-fronted Geese. At the end of the year 3 Red-throated Divers, Red-necked Grebe, 70 Little Grebes and 150 to 200 Pochard, Tufted and Goldeneye were on show.

Walsey Hills, Salthouse

Norfolk Ornithologists Association

At this Ringing Station a total of 1,260 birds of 59 species was ringed, making a grand total of 4,460 birds of 76 species since 1970. Selected recoveries appear elsewhere in this Report.

Among species ringed in 1972 were Water-Rail, 30 Snipe, 23 Dunlin, 2 Ruffs, 9 Collared Doves, 3 Kingfishers, 41 Swallows, 16 Great Tits, 108 Blue Tits, 8 Willow Tits, 8 Long-tailed Tits, 41 Wrens, 22 Bearded Tits, 37 Song Thrushes, 30 Robins, 107 Reed Warblers, 18 Sedge Warblers, Icterine Warbler, 53 Blackcaps, 2 Barred Warblers, 29 Garden Warblers, 17 Whitethroats, 55 Lesser Whitethroats, 98 Willow Warblers, 19 Chiffchaffs, 40 Goldcrests, 11 Pied Flycatchers, 110 Dunnocks, 23 Greenfinches, 67 Linnets, 38 Redpolls, 13 Bullfinches, 28 Yellowhammers and 22 Tree Sparrows.

Waxham

D. J. Frost and E. L. Williams

Waxham, situated about six miles north of Winterton, comprises an area of coastal dunes bordering on agricultural land. A narrow tract of scrub: hawthorn, oak and sycamore covering the leeward side of the dunes, is the main haunt of migrants moving through the area. The site has been irregularly worked by ringers for a number of years, but in 1972 a more concerted effort by several ringers was possible, with twice weekly visits during September/October.

Although no large-scale autumn passage was recorded (small passage recorded at most Observatories), there was a steady trickle of outgoing migrants during September. October saw the influx of large numbers of Redwing, Fieldfares and Blackbirds and an exceptionally large fall of Goldcrests during the second week. A small late passage of warblers was also recorded during this period. Autumn highlights were Wryneck, Barred Warbler and Ortolan Bunting trapped after the stormy conditions of 17th/18th September; and 2 Firecrests caught with the Goldcrest fall.

First autumn visits were made during the latter half of August when small numbers of Pied Flycatchers and Redstarts were moving through. It was a poor autumn for Phylloscopus warblers with only small numbers present during the early part of September. There was, however, a good movement of Garden Warblers and Blackcaps during the third week, by which time Pied and Spotted Flycatchers had moved out. Several small falls of Wheatears occurred through the month with smaller numbers of Whinchats and the odd Stonechat. A first year male Ortolan Bunting was trapped on 18th, with Wryneck and Barred Warbler on 19th when the first Redwing appeared. Lesser Whitethroats were more numerous than Whitethroat; a strong southerly passage of Hirundines took place throughout the month.

During October there was a small movement of warblers with Whitethroat and Lesser Whitethroat on 1st, Willow Warbler/Chiffchaff on 11th and Reed Warbler and Redstart on 14th. Blackcaps were more numerous during October than in the previous month. Two Firecrests were caught on 1st and 11th, when the first Bramblings were seen. An exceptional fall of Goldcrests occurred during the second week with over 100 ringed. A Short-eared Owl was present on 18th, when

the last Swallow passed through. A steady influx of Continental Blackbirds, Redwings and Fieldfares continued throughout the month, with large numbers feeding on hawthorn berries.

1,200 birds of 41 species were handled during the autumn with 980 ringed. The ringing totals included 2 Kingfishers, Wryneck, 43 Swallows, 27 Great Tits, 74 Blue Tits, 3 Coal Tits, 29 Wrens, 33 Song Thrushes, 35 Redwing, 147 Blackbirds, 25 Redstarts, 52 Robins, 27 Blackcaps, Barred Warbler, 33 Garden Warblers, 5 Whitethroats, 9 Lesser Whitethroats, 11 Willow Warblers, 4 Chiffchaffs, 186 Goldcrests, 2 Firecrests, 2 Spotted Flycatchers, 24 Pied Flycatchers, 81 Dunnocks, 27 Goldfinches, 9 Redpolls, 12 Bullfinches, Ortolan Bunting, 4 Reed Buntings and 7 Tree Sparrows.

Autumn Migrant Totals

	August	September	October
Willow Warbler	2	8	1
Chiffchaff		3	1
Garden Warbler	3	28	2
Blackcap	1	12	14
Lesser Whitethroat	3	5	1
Whitethroat	2	2	1
Redstart	2	22	1
Pied Flycatcher	7	17	
Swallow	3	39	
Goldcrest		25	161
Blackbird	6	20	121
Redwing		2	33

Winterton Dunes

J. G. Goldsmith

Winterton Dunes National Nature Reserve consists of 259 acres of sand dunes and scrub of considerable botanical and geographical interest. During bird migration periods it becomes quite an attractive spot for a wide variety and sometimes considerable quantities of migrants.

Most effort had previously been expended on visible migration studies at Winterton by several observers although some casual ringing had been conducted in the 1960's. In the autumn of 1971 Dr. M. P. Taylor tackled the migration with some ringing studies and has so far been rewarded with a Meadow Pipit from Portugal. This year's study, following Nature Conservancy approval, began at the end of July when efforts were made to locate the most suitable mist-netting spots in the Reserve. Actual ringing began early in September but due to a lack of bird operations ceased in early November. During this period 15 visits were made (chiefly between dawn and mid-day), up to 12 mist-nets were in use at a time and a total of 673 birds of 42 species was ringed. Only on one day (September 20th) did the catch reach treble figures and the average was 45. Only one ringed bird was controlled: a Reed Warbler which had been ringed at Walsey Hills, Cley, a fortnight earlier.

Waders were a feature of September 3rd when 3 Curlew-Sandpipers were present, with single Green and Common Sandpipers; Golden Plovers were present in the adjacent fields. The 7th produced an immature Montagu's Harrier; Redstarts and Pied Flycatchers were most numerous between then and the 20th.

During the morning of the 16th, 2 Marsh Harrier passed south before heading out to sea and a third – an adult female – was hunting the northern part of the Reserve. The 20th was peak day for most birds: 14 Continental Robins were caught, together with 13 Reed Warblers, 10 Garden Warblers, 7 Pied Flycatchers and 3 Wheatears. The best bird in the nets was an immature Barred Warbler. A Montagu's Harrier was still present on 23rd when Fieldfares and Golden Plovers were coming in off the sea. 13 "pinging" Bearded Tits passed over high northwards and a Lesser Spotted Woodpecker was new. The 27th was blustery with northerly winds and some numbers of Redwings and Fieldfares were arriving off the sea. Hen Harrier and Merlin both appeared briefly. Two interesting species were caught and ringed: both appearing in the same net – a Wood Warbler and, perhaps our rarest bird of the autumn, a juvenile Yellow-browed Warbler.

Mediterranean Gull, Jack Snipe and Firecrest were all sighted on **October 3rd**. Next day produced the first Shorelarks and Snow Buntings, also 2 Whinchats, 3 Stonechats, 2 Lesser Spotted Woodpeckers and small flocks of Fieldfares and Bramblings. Goldcrests were numerous in the bushes everywhere and a single Firecrest was heard shortly before it was caught. This was the last day Reed Warblers were caught. A Great Grey Shrike was new on 7th, together with 4 Stonechats; a dozen Bearded Tits stopped off in the reeds. An incredibly large number of Reed Buntings was about and 29 were caught. A flock of Linnets was drinking at the Toad pool, one being taken by the Shrike; 11 Meadow Pipits were caught mainly near the pool.

Redpolls were a feature of the 13th/14th with more than 50% composed of the Northern Mealy form *flammea* tending towards *hornemanni*. A roost of several hundred Tree Sparrows gathered in the scrub beside the track nightly. The 14th was the best day for catching Redwing and Blackbirds, Bramblings and Goldcrests. A single juvenile Great Spotted Woodpecker was captured as well as 3 Blackcaps and 2 Garden Warblers. The 15th was good for Bramblings whilst Marsh Harrier, Short-eared Owl and Great Grey Shrike were all sighted. Crossbill and Lapland Bunting were seen and 9 Egyptian Geese headed south. The 21st was very windy, but a sheltered position for the nets was found and 22 Tree Sparrows were caught. A Great Grey Shrike appeared on telegraph wires. The 28th was again good for Reed Buntings, 13 being caught with a further 4 Meadow Pipits which were still numerous on the Reserve, but Goldcrests had begun declining. With such a bright sunny day eyes were kept upwards and a Rough-legged Buzzard was watched circling in from the sea mobbed by 2 Great Black-backed Gulls. It headed about a mile inland before descending in a series of steps to rest in a wood. Hen Harrier and Sparrowhawk were noted on 29th.

Another Hen Harrier bathed in the Toad pool on **November 4th** attended by some 60 protesting Meadow Pipits. A single male Blackcap was recorded, but the bushes were mainly lifeless and only 2 birds were caught.

The year's ringing total included Great Spotted Woodpecker, 10 Swallows, 2 Jays, 14 Great Tits, 44 Blue Tits, 3 Willow Tits, 8 Long-tailed Tits, 25 Wrens, 5 Song Thrushes, 9 Redwing, 36 Blackbirds, 4 Wheatears, 14 Redstarts, 44 Robins, 41 Reed Warblers, 26 Blackcaps, Barred Warbler, 26 Garden Warblers, 2 White-throats, 6 Lesser Whitethroats, 13 Willow Warblers, 4 Chiffchaffs, Wood Warbler, Yellow-browed Warbler, 51 Goldcrests, Firecrest, 23 Pied Flycatchers, 36 Dunnocks, 16 Meadow Pipits, 2 Goldfinches, 20 Redpolls, 5 Bullfinches, 11 Chaffinches, 23 Bramblings, 9 Yellowhammers, 78 Reed Buntings and 43 Tree Sparrows.



Bird Ringing Report

With a further increase in the number of recoveries reported, careful selection has been necessary, and more summaries have been included. Recovery patterns for some species may already be well established, but where new ground has been broken, details have been given in full, as under Mute Swan, Bearded Tit, Robin, Redpoll and Brambling.

Detail has had to be most sacrificed for the waders. Space does not allow more than the most spectacular recoveries of Oystercatcher, Knot, Dunlin and Sanderling to be listed. In some cases recoveries are just beginning to come in from sparsely populated areas (Greenland, Iceland and Africa in particular) and the following list omits overseas recoveries that closely fit the table on page 358 of the *Norfolk Bird Report* for 1971. Apart from the Little Ringed Plover, all wader details are taken from the 1972 report of the *Wash Wader Ringing Group*.

Space allows only a brief mention of some long-lived individuals: a Thorpe Blackbird at least eleven years old when found dead; a Grey Plover shot nearly twelve years after ringing; a Dunlin controlled at the same age, and four Knot, all at least eleven years old. Several earlier recoveries are included if for one reason or another they have not previously been published.

Shag

Two pulli from the Isle of May, Fife, in June 1971, were found on Norfolk beaches in February 1972, at Holme and Hunstanton.

Heron

Usual reports came from Norfolk localities in autumn and winter. Others were from further afield, Bucks., Oxon., Yorks. One to Cheshire apparently moved without delay.

Wickhampton (pullus) 16.5.70

Sandouville, Seine, France (killed),
4.9.72

Ranworth (pullus), 7.5.72

Hyde, Cheshire (decomposed
remains), 2.8.72

Teal

Four, all shot here in winter, had come from Denmark in May, and from Sweden, Denmark and Netherlands in autumn.

Wigeon

First in the list is a breeding season recovery from Russia, 800 miles north-east of Moscow.

Snettisham, 21.2.70

Snettisham, 1.3.70

Snettisham, 22.1.72

Briston, 20.8.71

Ukhta, Komi A.S.S.R., 21.5.72

Lake Babite, Latvian A.S.S.R.,
9.10.71

North Slob, Co. Wexford, 7.10.72

Foulness, Essex, 30.1.72

Mute Swan

Heacham (adult), 8.3.70

Tönning, Schleswig-Holstein,
Germany (wires), 13.2.72

Moorhen

Wilhelmshaven, N. Germany,
22.11.70

Gt. Yarmouth, 12.10.72

Oystercatcher

Some thirty movements between the Wash and Norway are mentioned in the latest *W.W.R.G. Report*, the majority being found there between late March and July. Some were as late as October however. Others came from Denmark, Germany, Netherlands and France, with two from the Faeroe Islands in July and August 1972.

Lapwing

Wisbech S.F. (Juv.), 12.9.67

Lesparre, Gironde, France (shot),
13.3.71

Wolferton (adult), 8.11.69

Brovst, Jylland, Denmark (shot),
12.8.72

Ringed Plover

Three ringed on the Wash were controlled in Lancs. The following bird was "caught alive but killed by children protecting rice"! It is the most southerly movement so far recorded from ringing in the U.K.

Snettisham (juv.), 23.9.68

Porto Novo, Dahomey, 28.3.71

Little Ringed Plover

Near Norwich (pullus), 9.7.72

King's Lynn Beet Factory
(control), 17.8.72

Turnstone

Singles from Finland and Norway were controlled on the Wash in 1972. Another, from Snettisham, was controlled in Norway, and then caught again at Heacham. The remaining recovery is the first from the Wash to Iceland.

Snettisham, 9.3.69

Skorhagi, Kjosar, Iceland
(control), 6.8.72

Snipe

Wisbech S.F., 23.8.69

Astillero, Santander, Spain
(shot), 20.10.70

Wisbech S.F., 6.8.66

L'Aber Wrach, Finistere, France
(killed), 3.1.71

Wisbech S.F., 8.10.67

Holsworthy, Devon (shot),
Jan. 1970 or 1971

Curlew

Overseas recoveries received were: one each to Denmark and Finland, and one from Finland.

Bar-tailed Godwit

Wolferton, 29.8.72

Santander, Spain (shot), 14.10.72

Redshank

Foreign recoveries were from Denmark and Netherlands, and two from Iceland.

Snettisham, 16.2.71

Akureyri, Iceland (killed), 16.5.71

Snettisham, 3.9.67

Hafnarfjordhur, Iceland (control),
25.7.72

Knot

Overseas recoveries of Knot have poured in. Among them, 80 from Iceland, more than half of these being controlled by *W.W.R.G.* expeditions in 1971 and 1972; another 20 from Thule (77°N.), Egedesminde (69°N.), Sukkertoppen (65°N.) and Julianehab (60°N.) in Greenland, all killed. This useful total is thought to reflect greater liaison between trappers and local authorities, rather than increased hunting.

Others were reported in France, Denmark and Norway, and three in the New World.

Snettisham (adult), 27.3.71

Christchurch, Barbados, W. Indies
(shot), 16.8.71

Snettisham (adult), 19.3.72

Broughton Is., Baffin Is.,
Canada (killed), 9.6.72

Snettisham (adult), 19.2.72

Davis Strait, between Greenland
and Canada (on fishing boat),
29.5.72

Dunlin

Another steady flow of overseas recoveries, the majority from Sweden, but also from all other countries on the western seaboard of Europe, and including Iceland (1) and Morocco (2). One was dead on a North Sea oil rig. Methods of recovery tend to be "control" in Scandinavia, and "killed by man" in Southern Europe. Foreign ringed birds on the Wash were principally from Scandinavia.

Curlew Sandpiper

Wisbech S.F., 14.8.71

Yyteri, Turku ja Pori, Finland
(control), 11.8.72

Sanderling

Three from the Wash were killed in N. France during the summers of 1971/2. Norwegian-ringed birds were controlled on the Wash 19.2.72 and 28.7.72. The other foreign recoveries are given in full, and speak for themselves.

Thornham, 18.9.71

Alger, Algeria (died), 18.2.72

Snettisham, 12.8.68

1. Snettisham (control), 18.7.70
2. Ndangane Sambou, Senegal
(taken), 27.9.72

Kommetjie, Cape, S. Africa,
14.3.71

Heacham (control), 15.5.71

Ruff

Wisbech S.F., 23.8.69

Shotton, Flints (control), 6.3.71

Wisbech S.F., 23.8.69

Rieselfelder, Munster, Germany
(control), 10.8.72

Common Gull

Lompaala, Hame, Finland
(pullus), 27.6.70

Pulham St. Mary (injured, died),
23.1.71

Black Headed Gull

Summer recoveries of Norfolk winter-ringed gulls were from Norway, Sweden, Finland and Denmark; also one from Ipswich in May. Foreign ringed birds came here from Latvia and Poland, and from the Scandinavian breeding areas. One from Finland was still here in May.

Milicz, Poland, 25.5.64

Jokijarvi, Hase, Finland (pullus),
22.6.69

Buxton (adult), 31.12.67

Huutilampi, Oulu, Finland
(pullus), 28.6.69

Breydon (dead), 8.4.72

Whitlingham, Norwich (poor
condition), 13.5.72

Alborg, Jylland, Denmark
(shot at airport), 25.5.72

1. Buxton (control), 11.1.70

2. Siilinjärvi, Kuopio, Finland
(dead in musk rat trap),
3.5.72

Sandwich Tern

Breeding birds at Scolt included a small number bearing colour rings indicating that they had been reared either on the Farnes or in Aberdeenshire.

Waddensee, Netherlands (pullus),
7.6.72

Wells (dead on shore), 24.9.72

Cuckoo

Holme (juv.), 13.8.72

San Felice, near Rome, Italy
(killed), 25.9.72

Swallow

One of four nestlings from Spurn, Yorks. in July 1971 was found dead below its nest at Cromer, 70 miles away, 1.6.72.

Earlham (adult male), 2.9.68

Evreux, Eure, France (dead),
4.5.72

Leziate (juv.), 26.9.72

Dungeness, Kent (control), 5.10.72

Sand Martin

Although the inquiry into Sand Martin numbers and movements has finished, useful recoveries are still coming to light.

Cley (adult), 14.5.70

Sibculo, Overijssel, Netherlands
(control), 16.6.70

Bawburgh (juv.), 17.7.70

Montzen, Liege, Belgium
(control), 26.7.72

Bearded Tit

Details appear elsewhere in this Report of the numbers found at various sites in winter. Evidence from birds controlled at these sites suggests Minsmere and Walberswick in Suffolk as the places of origin; but there are Norfolk breeding concentrations that are not worked by ringers, and it is quite likely that these sites also provided a proportion of the winter flocks. A useful double recovery is given in full, as well as our first from the Dutch breeding stronghold. The Snettisham bird apparently wintered near its birthplace. All the following were controlled.

Snettisham (juv.), 18.5.71

King's Lynn, 24.12.72

Murston, Kent (juv.), 5.6.72

Salthouse, 31.10.72

Murston, Kent (juv.), 17.6.72

1. Salthouse, 31.10.72

2. King's Lynn, 4.3.73

Kroonspolder, Vlieland,
Netherlands, 1.9.72

King's Lynn, 23.12.72

Fieldfare

Great Plumstead (juv.), 19.11.70

Castagnaro, Verona, Italy
(killed), 24.12.71**Song Thrush**

An interesting series of data on birds passing through North Norfolk stations.

Heligoland, Germany, 17.4.70

Kroonspolder, Netherlands, 9.9.71

Waxham, 21.9.69

Salthouse, 29.4.71

Salthouse, 1.10.71

Salthouse, 2.10.71

Overstrand (dead), 21.10.70

Cley (killed by cat), Feb. 72

St. Martin sur Buneaux,

N. France (taken), 26.3.72

Viana do Castelo, Portugal

(killed), Feb. 72

Aalst, Belgium (traffic), 13.7.72

March, Cambs. (hit window),
18.2.72**Redwing**

Holme, 5.10.68

Mintlyn, 27.2.71

Campo Maior, Lisbon, Portugal
(killed), 14.2.71Olmo, Burgos, Spain (shot),
15.10.72**Ring Ouzel**

Holme, 30.4.70

Valcivieres, France, 6.10.70

Blackbird

Listed here are a Norfolk-bred bird to France and an October immigrant moving on to Wales. Other winter Blackbirds were in Finland, Denmark (3) and Netherlands in spring or summer, and in N. France in January.

Hethersett (juv.), 14.7.68

Ault, Somme, France (killed),
30.12.68

Holme, 15.10.71

Skokholm, Pembroke (control),
27.10.71**Robin**

Unreported by the finder for ten years, this bird reached further east, and further south than the area from which migrant Robins are generally known to come.

Cley, 1.10.60

Wyszomierz, Bialystock, Poland
(dead under wires), 14.10.61**Reed Warbler**

Salthouse (juv.), 13.9.72

Winterton (control), 23.9.72

Blackcap

Listed here is an East Coast migrant apparently wintering in N. France, and an interesting westerly movement across the North Sea.

Salthouse, 15.9.70

Caistor (dead on tide line), 14.5.72

Salthouse, 20.10.71

Aulnoye-Aymeries, France (dead),
11.1.72Kornerwerderzand, Netherlands
8.10.72

Holme (control), 15 & 17.10.72

Dunnock

Holme, 15.6.66

Beccles, Suffolk (dead), 1.7.72

Meadow Pipit

This movement is typical of the species as shown by ringing.

Winterton, 12.9.71

Figueira da Foz, Beira Litoral,
Portugal, 30.1.72

Starling

Netherlands, Germany and Denmark are again represented among recoveries reported for 1972. There are others from Poland (2) and U.S.S.R. (3) including one well north of Moscow, given below. Birds from Hethersett turned up in Yorks, Derbys., Kent and Devon in subsequent winters.

Hethersett, 6.2.69

Barnstaple, Devon (dead) 31.3.70

Hethersett, 1.3.69

Vorob'yevo, Vologda, U.S.S.R.,
May 1969

Greenfinch

Mintlyn, 20.2.72

Ashover, Derbys. (car), 11.9.72

Mintlyn, 13.3.72

Newbold Vernon, Leics. (car),
30.5.72

Goldfinch

Menen, W. Flanders, Belgium,
16.2.70

Harleston, 22.6.70

Holme, 6.5.70

Fatima, Beira Litoral, Portugal,
28.12.70

Redpoll

Three juveniles from Leziate, ringed autumn 1971, were found at Blickling, Stoke Ferry and Lakenheath in May 1972. Another from Aug. 1970 was caged in Belgium 8.10.71. Recoveries from Germany are few and the movement to Wurttenburg is exceptionally far south.

Leziate, 26.7.71

Stolberg, Aachen, Germany
(control), 19.11.72

Leziate, 8.9.71

Tübingen, Sudwurttenburg,
Germany, 23.12.72

Titchwell, 19.5.72

Bridgwater, Somerset, 13.11.72

Chaffinch

Rybatchii, Kaliningrad, U.S.S.R.,
25.9.67

King's Lynn (dead), 8.2.72

Hersham, Surrey, 9.12.67

Hethersett (control), 28.12.69

Mintlyn, 6.12.69

Bjerregrav, Jutland, Denmark,
3.4.72

Brambling

The first listed is the most easterly recovery of a Brambling to date. Previous summer recoveries have come from Scandinavia, but this suggests the possibility of a Russian population regularly wintering here.

Boughton, 27.2.67

Ukhta, Komi, U.S.S.R. (63°N.,
54°E.), 17.5.70

Lindholm, Jutland, Denmark,
21.2.70

Mintlyn (control), 23.1.72

Wassenaar, Netherlands, 25.10.70

Mintlyn (control), 21.2.72

Mintlyn, 24.12.70

Lambourn, Berks. (long dead),
22.11.72

Bawsey, 10.2.71

Peplow, Salop (control), 12.2.72

Mintlyn, 5.12.71

Holsterbro, Jutland, Denmark,
16.4.72

Reed Bunting

This species has seldom been known to move far, though the existence of a passage of Scandinavian birds has been established.

Wissington (juv.), 12.7.70

Chesham, Bucks. (control), 27.12.71

Wash Wader Spectaculars

H. R. Ramsay

Hunstanton Cliffs is a vantage point for one of the most memorable sights in the bird watcher's calendar. Taking place against a backcloth of sea and sky in all their changing moods, the fly-past of waders makes an unforgettable experience. Coinciding with the spring tides around the time of the new and full moons, especially in February/March and September/October this impressive spectacle can be observed.

As the tide rises the Knots, Oystercatchers, Bar-tailed Godwits and other Wash waders leave their muddy feeding areas to the intruding sea, and flight to their roosting banks at Holme, Thornham and Titchwell where they rest until the ebb. For up to two hours before high water the cliff-top shelters at Hunstanton make ideal grandstands to watch the unfolding of the spectacle.

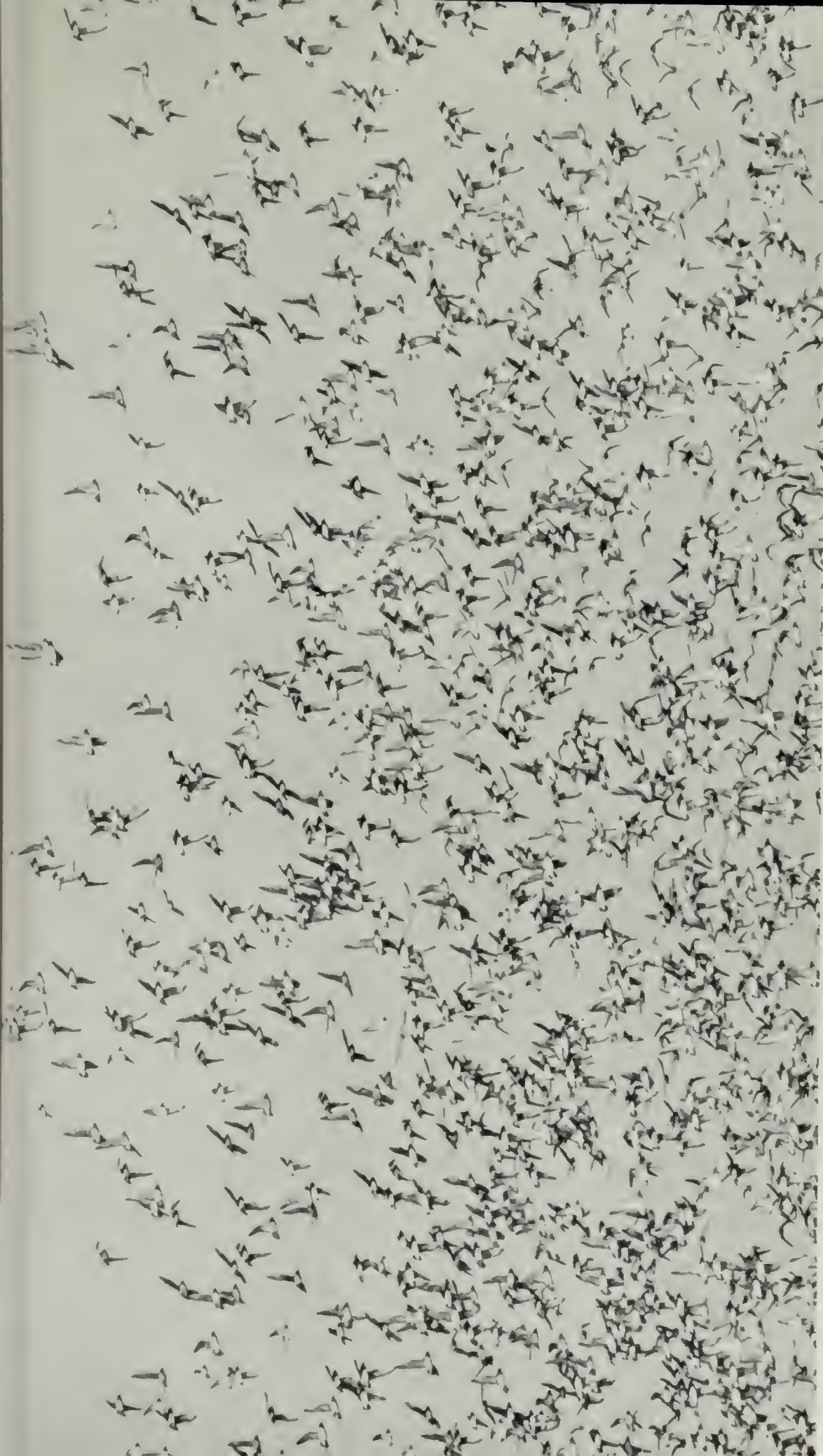
Usually the first indication that the pageant has begun are straight lines of Oystercatchers, often in v-formation, made up of varying numbers of birds, sometimes with several hundreds in one line, seemingly stretching the whole distance across the Wash. Line follows line until the pied thousands have rounded St. Edmund's Point on their way to Holme.

Knots, the most numerous waders on the Wash intersperse the Oystercatcher lines. Travelling in compact, drifting clouds with a clearly etched leading line, the entire population of perhaps more than fifty thousand may pass in only three or four packs, each containing several thousand birds. One such pack has been estimated to number in excess of ten thousand. They appear in the distance as drifting clouds of smoke, but soon each plump body can be discerned being thrust forward by the urgency of sharp wings. In such densely packed groups of such high numbers collisions seem inevitable. From numerous observations it would appear that birds do frequently touch in flight, for from nearly every pack members are suddenly projected upwards from the group, for a short time flying singly above the rest, then adjusting quickly to rejoin the pack.

Many other species of waders are likely to be seen during these tidal movements. Lines of long billed Bar-tailed Godwits, groups of Redshanks, Grey Plovers, Dunlin, Sanderling, Ringed Plovers and Turnstones are the most regular participants.

Whilst most species remain aloof according to their kind for most of the time, there is always the interest of the occasional mixture. Knots, Oystercatchers and Bar-tailed Godwits sharing the same formation, Woodpigeons and loft pigeons on the end of an Oystercatcher line, Little Stint hurrying to keep up with the Knot pack, migrating Wheatears attaching themselves to the movement. These and many more are exhilarating sidelines. A touch of drama was once added when a Merlin scythed swiftly in angled descent through a pack of Knots, scattering them in disarray. A sharp turn cut off five unfortunates, which were pursued beyond the bend of the cliffs, the outcome of the chase being denied the observer.

(continued on page 29)



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David and Katie Urry

Flights of Knot performing high-speed aerial manoeuvres provide one of the finest ornithological spectacles. The work of the Wash Wader Ringing Group indicates that the bulk of our population originates in Greenland and not in Siberia as was previously thought.



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W. J. Woolston

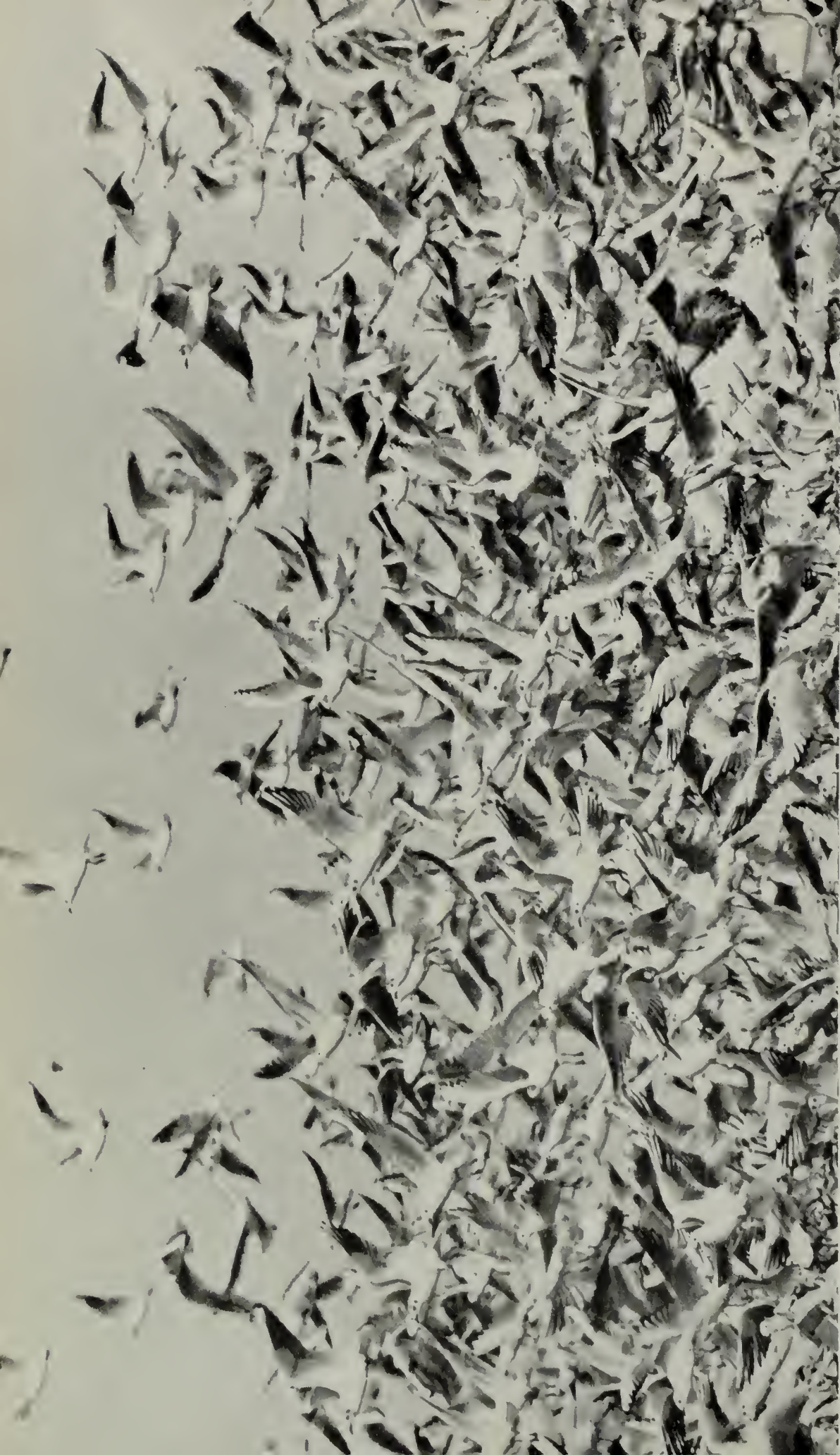
The colony of Sandwich Terns at Scott Head Island increased to a record summer total of 4,800 pairs in 1972. The majority of Sandwich Tern ringing recoveries come from the coast of West Africa with 'globe spanners' penetrating south to Cape Town and to Port Elizabeth.



Copyright

Dr. K. J. V. Carlson

Little Ringed Plovers first nested in Norfolk in 1960. Up to 13 pairs have since summered in the county. At two sites the birds share the pools, miniature beaches and shallows with breeding Ringed Plovers. A summer visitor, earliest arrival date is March 22nd, but repeat nests and second broods are frequently reported as late as mid-July.



Copyright

David and Katie Urry

Rubbish tips are a great attraction for Black-headed Gulls. Over 80 ringing recoveries indicate that the wintering population comes mainly from birds breeding in Sweden, Finland, Latvian and Estonian S.S.R. with others from Norway, Denmark, U.S.S.R., Germany, Netherlands, Belgium, Poland and Czechoslovakia.

Variations in weather bring many diversions to the normal fighting. Strong headwinds slow down the waders bringing them to sea level, where they are periodically hidden in the troughs of the waves. Following winds accelerate the speed so that flocks are out of sight within seconds. The height of the birds also varies, and whilst the flocks generally keep within viewing distance of the cliffs, high winds or fog can alter the usual pattern. On such days the flight line may be inland, but always closely following the coast. It seems that the birds never take the direct overland route in a straight line north-east, but prefer to change direction through a complete right angle as does the coast leading out of the Wash.

The spectacle of so many thousands of birds in flight has interested many casual cliff-top strollers to stop, stare and wonder. To the devoted observer the pageant never palls.

SUCCESSFUL SCAVENGERS

P. R. Allard

Refuse tips, like old-fashioned sewage farms, are highly attractive to birds, if not to some bird-watchers! The Yarmouth (Cobholm) tip is no exception. It was opened in the mid 1950's adjoining the south bank of Breydon Water in order to reinforce the existing flood protection wall which had been seriously breached in the 1953 tidal surge.

The tip has in recent years considerably increased in size and at one time there was a threat to extend it along the entire south bank to Burgh Castle. Soon after opening, Yarmouth tip began attracting thousands of gulls. The numbers present reminded observers of the heyday of the East Anglian autumn herring fishing when the wharves swarmed with gulls seeking fish. At present (summer 1973) part of Yarmouth's refuse is handled at Caister but the gulls remain, resting for long periods on the adjoining playing fields. At its winter peak thousands of Black-headed Gulls, with smaller numbers of Common Gulls, are an every-day sight waiting for the lorries to move off to collect further loads.

Great Black-backed and Herring Gulls are also part of the scene; many hundreds are often in evidence particularly during stormy weather. A few Lesser Black-backed Gulls appear, usually in early autumn. During the last few years bird observations in the Yarmouth area have greatly increased and up to four Glaucous Gulls at one time have been detected. The majority have been immatures between September and February, but fine adults have also turned up; one stayed many weeks and becoming quite tame.

Rooks and Jackdaws are abundant and there is a regular early morning/evening flight of Rooks from the extensive Mautby Rookery passing over Breydon to the tip during the summer; others come from Burgh Castle and Yarmouth (St. Nicholas churchyard) Rookeries. Up to 30 Hooded Crows are present from October to April. Kestrels are usually on view and in the evenings Short-eared Owls hunt the area.

The system of controlled tipping at Yarmouth has produced sandy areas which provide nesting sites for both Ringed Plovers and Oystercatchers. Linnets and Skylarks also breed regularly and Corn Bunting nested for the first time in 1973. The area is intersected with dykes which are heavily polluted; despite this Moorhens breed with no apparent ill-effect. After heavy rains one area provides an ideal wader habitat and among the species indentified have been Little Stint, Curlew-Sandpiper and Little Ringed Plover.

Classified notes

These notes are based on *Birds of Norfolk* (1967) where fuller details regarding status, distribution, migration and ringing recoveries may be found. Important 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. Fullers details of Wash and Fen records may be found in the *Cambridge Bird Club Report* for 1972.

The order used is that of the B.T.O. guide *A Species List of British and Irish Birds* (1971) and English names follow current practice. Observations refer to 1972, unless otherwise stated. To save space, all but the most essential initials have been omitted. Records are of *single* birds unless otherwise stated.

Great-crested Grebe: The results of a full county survey will be published in the 1973 Report.

Red-necked Grebe: Wash/North coast: Singles at Snettisham, Hunstanton, Holme, Brancaster, Wells, Blakeney Point, Cley, Salthouse and Weybourne up to April 30th and from Aug. 20th. East: Horsey Gap, April 30th. Inland: Intwood, dead, Dec. 19th.

Slavonian Grebe: Wash/North coast: Up to 6 off Hunstanton, with ones and twos at Snettisham, Heacham, Holme, Wells and Cley up to March 5th and from Oct. 15th. East: Breydon Feb. 13th.

Black-necked Grebe: Wash/North: Ones and twos, and once 6, at Snettisham, Hunstanton, Burnham Overy, Holkham Lake and Cley up to Feb. 26th and from Sept. 6th. Breck: Lang Mere Feb. 20th.

Fulmar: North: A total of 51 young was counted in Aug. on cliff ledges between Weybourne and Cromer (JM); the first birds returned Nov. 14th. Wash: Hunstanton, 22 pairs present in early April and 5 young left the ledges; 2 returned Dec. 9th.

Manx Shearwater: North: Apart from a movement totalling 50 birds off Gore Point Aug. 2nd, frequent autumn movements of up to 4 together between mid July and end of Oct. A bird of the Balearic race *mauretanicus* off Weybourne July 22nd.

Great Shearwater: North: Weybourne 2 Aug. 18th (DFM), Cley Sept. 22nd (RPB-O) and Oct. 27th (RPM).

Sooty Shearwater: North (Holme to Sheringham): Total of 20 between July 26th and Oct. 21st. East: Winterton 4 Sept. 25th.

Storm Petrel: East: Stranded birds taken to Yarmouth Oct. 10th and Dec. 11th; the latter had been caught on a gas platform 27 miles NE of Yarmouth.

Leach's Petrel: North: Cley and Holme Sept. 14th, Weybourne Oct. 21st and 4 off Yarmouth Nov. 19th.

Cormorant: East: Peak count at Breydon was 116 Feb. 14th. The same day total of 202 assembled to roost in alders edging Ranworth Inner Broad.

Shag: Coastal records between Snettisham and Weybourne with maximum of 11 off Hunstanton where 3 roosting on cliffs in Jan.-Feb. Inland: Blickling Lake Dec. 15th to 30th.

Grey Heron: The following heronries were counted:

Borders of Wash: Snettisham 19 nests. Fens: Hilgay 10, Islington 63, and Denver Sluice 17.

Breck: Didlington 9, Shadwell 7, and Narford 16.

Mid-Norfolk: Kimberley Park 18, Beetley Hall 1 and Colney 2.

Broads: McHardy's Wood 4, Heigham Sounds 21, Waggonhill Wood 3, Wickhampton 20, Buckenham 37, Strumpshaw 5, Mautby Decoy 5, Ranworth 10, Ranworth Marshes (Horning Hall) 10, Barton (Heron's Carr) 13, Wheatfen 7, Upton 3, Belaugh 1 and Wroxham 1.

North: Cley 4.

South: Billingford (Thorpe Wood) 4.

Little Egret: A remarkable spring influx of at least 6 to the county. North: Cley, one arrived April 30th staying till May 7th; another arrived May 28th and was joined by a second bird on 29th/30th; a fourth (immature) came June 2nd remaining till July 12th. Holme, immature May 28th to June 5th. East: Breydon, May 4th to 8th.

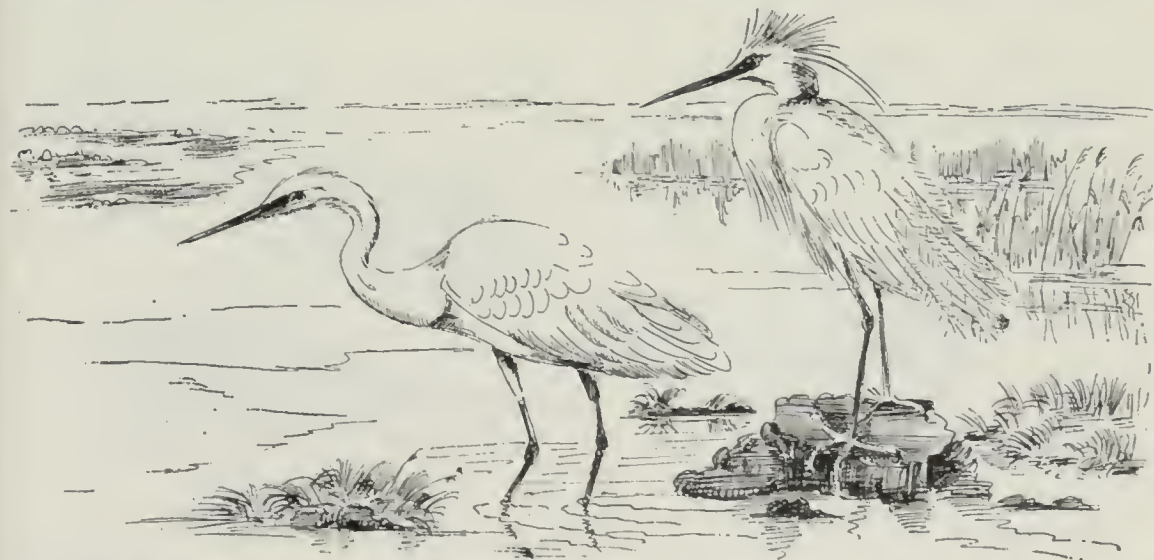
Night Heron: Broads: Black Horse Broad, adult, May 25th (csg). Central: Swanton Morely G.P., immature Sept. 25th to Nov. 12th (KE, GR, AJS *et al*).

Bittern: North: Cley, pair bred successfully. Breck: Autumn-winter records at Tottington, East Wretham, Stanford, Buckenham Tofts, Starston, Thompson and Rush Mere.

White Stork: North: Cley May 7th (JR).

Spoonbill: Wash/North/East coasts/Broads: Ones and twos at Snettisham, Cley, Martham, Horsey, Hickling, Hardley, Breydon and Yarmouth between May 2nd and Aug. 13th; in addition parties of 4 and 5 at Hickling (June 18th and 28th) and 5 heading east over Yarmouth July 25th.

Garganey: Spring arrival from March 20th and subsequently at 10 localities.



At least six Little Egrets were recorded

Blue-winged Teal: Broad: Hardley Flood, drake, Jan. 1st to March 12th and Nov. 5th to 26th (CRG *et al*).

Gadwall: Largest Breck counts include 300 at Mickle Mere Oct. 15th, 280 at Stanford on 22nd and 90 at Didlington Dec. 3rd.

Pintail: Breck: Increasing numbers (up to 16 together) at Stanford, Shadwell and Mickle Mere.

Shoveler: Breck: Counts include 53 at Mickle Mere March 25th.

Red-crested Pochard: Broad: Breydon drake Feb. 5th (MB); Wroxham, drake, mid-Nov. (*per* EAE).

Tufted Duck: Breeding records: 28 pairs bred in Brecks at 10 sites; elsewhere a minimum of 40 pairs bred at 17 sites.

Pochard: Breeding records: 5 pairs known to have bred in Brecks at 3 sites; elsewhere 13 pairs bred at 11 sites.

Ferruginous Duck: Broad: Hardley Flood drake Dec. 30th (CRG).

Goldeneye: N/E coast: Larger counts include 30 on Abraham's Bosom Wells, 70 at Berney Arms, 65 at Scolt Head; also 110 west at Cley in 2½ hours Nov. 18th.

Long-tailed Duck: Wash: Hunstanton monthly maxima as follows: Jan. 19, Feb. 30, March 12, April 6, Nov. 12 and Dec. 51.

North coast: Occasional records of up to 10 till April 9th and up to 5 from Aug. 18th.

East: Gorleston, 5 Nov. 22nd increasing to 10 between Dec. 24th and 31st.

Wash: Snettisham, 1-3 from Nov. 25th onwards.

Velvet Scoter: Wash/North coasts: Recorded March to May and July to Nov.; mostly ones, twos and threes with largest party totalling 7. East: Gorleston unusual numbers including 30 in Jan., 102 Nov. 9th, 62 on 11th and up to 20 till year end. Inland: Swanton Morley G.P. Nov. 20th to Dec. 10th.

Common Scoter: N/E coasts: Largest flights were 500 off Gorleston and 200 off Hunstanton. Broad: Barton Sept. 3rd. Fens: Saddlebow to Wiggenhall Relief Channel, 3 July 28th.

Eider: Recorded each month. Largest flocks for main localities only are given: East: Gorleston 71 Feb. 13th (42 remained March 27th). North: Scolt Head 70 Feb. 13th and Hunstanton 121 Jan. 2nd till Feb. 6th. Wash: Snettisham 87 March 15th and 104 on 20th.



Blue-winged Teal with Shovelers at Hardley Flood

Red-breasted Merganser: Largest number on the Wash with totals of 131 between Holme and Snettisham Feb. 6th and 50 between Hunstanton and Snettisham on 26th.

Goosander: Winter observations from 23 localities with peak numbers in mid-Feb. when 13 at Narborough G.P., 20 at Stradsett and 20 at Gunton Park.

Smew: Winter records at 6 sites with maximum of 5 at Snettisham.

Shelduck: An interesting series of moult migration records. On the Wash over 3000 had assembled off Snettisham on July 10th and each fine evening until the month-end groups of between 30 and 200 departed. In addition 2000 were present on Upper Middle and Bulldog Sands from July 12th.

Elsewhere two flights totalling 100 moved east at Blakeney Point July 22nd with others passing on 24th and 27th; 30 headed east off Cley July 18th with 58 east in two hours at Weybourne on 22nd. 19 flew east at Winterton July 16th and 15 east over Yarmouth June 25th.

As an indication of Wash breeding success 230 young had collected at Lynn Point at the end of June.

Egyptian Goose: Reported at Blickling, Didlington, Felbrigg, Gunton, Hillington, Holkham, Houghton, Lenwade G.P., Narborough G.P., Narford, Salhouse, Swanton Morley G.P., West Acre and West Newton.

White-fronted Goose: East: Breydon area, maximum of 75 from end of Jan. to end of Feb.; 3 returned Dec. 26th with 29 by 31st. North: Cley, peak of 31 Jan. 23rd. Holkham, present from mid-Jan. to Feb. 20th with total of 129; 70 returned by Dec. 24th. Fens: Welney, 12 in Jan. and 23 in Dec.

Bean Goose: East: Up to 67 in the usual area till March 12th; 36 returned Nov. 21st (earliest arrival date recorded) and 45 from Dec. 2nd. North/Fens: Ones and twos in Jan.-Feb.

Pink-footed Goose: East: Only a single observation: 6 near Breydon Jan. 29th. Wash: Snettisham area Jan. maximum of 1274 (19th); 60 returned Nov. 15th, increasing to 287 by 26th and over 500 by 30th with 1000 Dec. 22nd.

Brent Goose: Recorded up to April 13th and from Sept. 24th. Maximum numbers at regular localities as follows: Salhouse 195, Blakeney-Morston 1500, Wells 750, Brancaster 1000 (not including 100-125 young) and Hunstanton-Heacham 293.

Barnacle Goose: North: Holme March 31st, Sheringham 18 west Oct. 21st and Weybourne 12 Nov. 5th.

Whooper Swan: Winter records at 9 localities with largest herds at Welney where 31 in Jan.-Feb. and 21 by end of year.

Bewick's Swans: Recorded at usual localities up to March 21st and from Oct. 20th. Largest numbers on Welney Washes where 400 through Jan. reaching peak of 550 in late Feb. These birds were part of the record herd of 1280 wintering on the Ouse Washes. 540 had returned to Welney by the year end.

Elsewhere largest concentrations at Haddiscoe (97) and Halvergate-Breydon (46). Jan. movements at Snettisham totalled 107 including a herd of 52. Easterly spring exodus noted at Sheringham were 50-60 March 2nd; and at Thornham, Titchwell and Brancaster where herds of 30, 50 and 70 respectively between March 19th and 21st.

Westerly winter passage birds well documented (peak days Nov. 9th-10th); Cley 32 Nov. 1st and 14 on 18th; Hunstanton 22 south-west Nov. 19th and 12 west Dec. 30th; Snettisham 56 during Nov.; Wells 33 west Nov. 10th; West Runton 10 west Nov. 9th; Holme 200 Nov. 10th and Norwich 17 north-west Nov. 24th.

Buzzard: Ones and twos at 8 localities between March and Oct. In addition a 1971 bird near Sandringham lingered until March 12 when it was joined by a second bird and aerial display observed. Unfortunately both birds left the area soon after.

Rough-legged Buzzard: Singles at Bintree, Cley, East Wretham, Holme, Roydon Common, Sandringham, West Mere, Tottington and Winterton. Recorded up to May 22nd and from Oct. 23rd.

Sparrowhawk: Records from 51 localities, but only known to have bred at 3 sites.

Goshawk: Breck: Munford Aug. 12th (RPB-O). West: Grimston, an immature bird found dead Nov. 20th (*per* GJ) – Now in Norwich Castle Museum.

Red Kite: East: Horsey June 9th (AJL) and Acle Sept. 26th (*per* EAE). North: Wells female found dead March 23rd now in Norwich Castle Museum (CJJ); Cley Dec. 31st (EF). Central: Old Buckenham Dec. 17th (DAD, EMD). West: Gaywood March 30th (*per* PRC).

Birds of Norfolk (1967) indicates a twentieth century county total of 10 Red Kites (none was recorded between 1882 and 1957). Since publication a further 13 have been reported (including 1972 occurrences). Those appearing here in spring are considered to be Continental birds deflected west of their normal route. Autumn and winter observations are more likely to relate to wandering Welsh birds.

Honey Buzzard: North: Singles at 5 localities between May 7th and Sept. 6th.

Marsh Harrier: Broads: Hickling, Horsey and Martham, ones and twos throughout the year. Frequent coastal observations (including Wash) of singles in spring/autumn.

Hen Harrier: Recorded up to April 5th and from Oct. 15th at many coastal sites including Wash and also at Roydon Common and in Brecks. Majority of records relate to singles, but 3 together at Roydon Common and 4 at both Horsey and in the King's Lynn-Wolferton-Snettisham area.

Montagu's Harrier: North: At the site occupied in 1970 and 1971 the first bird returned April 30th and 4 young reached the flying stage. During the breeding season a total of 2 males and 3 females was present.

Elsewhere ones and twos in Fens (Wisbech S.F.), Wash (Wolferton and Snettisham), N/E coasts and in Brecks between April 30th and Sept. 23rd.

Osprey: At least 4 birds at Blakeney Point, Brancaster, Cley, Mickle Mere, Sparham and Titchwell. Extreme dates May 21st to Sept. 24th.

Hobby: Total of 13 between May 1st and Aug. 29th at 11 localities.

Peregrine: Total of 8 at 7 coastal localities.

Quail: Summer records from Binham, Blakeney, Foxley-Billingford, Swanton Morley (4 calling), Trunch and Wereham.

Golden Pheasant: Brecks: Recorded at Croxton, Grimes Graves, Santon Downham, Shadwell, Weeting Heath and West Tofts.

Spotted Crake: Singles at Breydon, Cley, Holme, Wells, Wheatfen and Wisbech S.F. up to May 21st and from Sept. 11th.

Corncrake: Birds calling at Didlington in May and at Egmere in first half of June. Migrants at Holme Aug. 21st and at Titchwell on 25th.

Oystercatcher: Breeding records of *pairs*:

East: Breydon area 9 (including 4 on north wall marshes and one on refuse tip).

Broads: Horsey 2, East Somerton one.

North: Weybourne 2, Blakeney Point 120–130, Stiffkey Binks 10, Scolt Head 150–155, and Brancaster Golf Course 3.

Inland nesting at Snoring, Thornage, Thursford and Hindringham (one pair at each locality).

Ringed Plover: Breeding records of *pairs* include:

Broads: Hickling 2.

East: Winterton to Horsey 8.

North: Blakeney Point 180, Stiffkey Binks 12, Scolt Head 160, Brancaster Golf Course 4. Inland nesting at Warham (in sugar beet field).

Wash: Snettisham 16.

Breck: West Harling one.

Fen border: Bawsey Mintlyn one and Pentney 2.

Fens: Wisbech S.F. one.

Little Ringed Plover: *Breeding:*

Central: 5 pairs present at 4 sites – all were successful.

Fen border: Total of 4 pairs at 2 sites and 8 young reared.

Passage migrants at usual localities between April 3rd (Lang Mere and Grimston) and Sept. 30th with up to 6 at Wisbech S.F. and 8 at Colney in autumn.

Kentish Plover: North: Cley, at least 4 appeared: May 7th–8th, 13th–20th and 28th to June 2nd and also Aug. 9th.

Golden Plover: Traditional wintering flocks of up to 400 at Breydon, Boughton, Cawston–Oulton, Foxley, Saxthorpe, Stoke Ferry and Swannington. Peak assembly of 2500 at Holme Oct. 24th.

Dotterel: East: Paston cliffs May 19th, Horsey 2 23rd–24th, Hempstead with Eccles May 21st.

North: Holkham 2 April 22nd and Sheringham Aug. 29th. Fens: Wisbech S.F. Aug. 31st and Sept. 29th with Golden Plovers.

Turnstone: Wash: Interesting winter observations at Hunstanton cliff-top where one regularly accepted cheese for second winter in succession and at Ouse Mouth where up to 20 roosting on buoy in fog.

Black-tailed Godwit: Breeding: Fens: Ouse Washes (complete length including Cambs.), at least 65 pairs and perhaps 90 young fledged. Amongst this impressive total were 4 pairs at Welney. North: Cley, 2 pairs present from March 10th, but no breeding success.

Passage movements include 16 at Terrington July 1st, up to 8 at Wisbech S.F. mid-July, 30 on shore at Holme Sept. 3rd and 10 at Cley Oct. 21st.

Green Sandpiper: Peak numbers at Cantley B.F. where 12 July 2nd increasing to 35 by 24th.

Wood Sandpiper: Autumn passage between July 1st and Oct. 14th, but no more than 3 together.

Common Sandpiper: Fens: Present at Wisbech S.F. between July 9th and Oct. 2nd with maximum of 64 Aug. 24th.

Spotted Redshank: Inland observations of singles at Lang Mere Aug. 27th and at Swanton Morley G.P. on 28th and on Sept. 17th. Fens: Wisbech S.F. maximum 14 Oct. 20th.

Greenshank: North: Morston, one wintered until Feb. 8th. Wash: Snettisham assembly of 58 at end of Aug.

Purple Sandpiper: North coast/Wash: Recorded each month (except June). Localities as follows: Blakeney 1, Cley 1, Heacham 7, Holme 3, Hunstanton 6, Salthouse 2, Sheringham 2, Snettisham 1, Titchwell 1, Wells 1 and Weybourne 4.

Little Stint: Fens: Autumn passage well documented at Wisbech S.F. where present between Aug. 1st and Oct. 28th with Sept. peak of 18 (on 23rd) and Oct. peak of 14 (on 3rd).

Temminck's Stint: Fens: Wisbech S.F. single bird(s) almost daily between Aug. 24th and Sept. 9th.

North: Cley, between 1 and 3 on 11 dates May 6th–24th; singles Aug. 6th–9th and 21st with 2 on 14th.

White-rumped Sandpiper: North: Cley Oct. 14th (ALB, DW). Eight previous county records.

Pectoral Sandpiper: Fens: Wisbech S.F. July 15th–23rd. North: Cley Sept. 14th–20th

Curlew Sandpiper: North: Cley area, groups of 2 and 3 June 3rd with autumn passage between July 17th and Oct. 17th (peak of 40 Sept. 3rd). East: Waxham 17 Sept. 10th.

Fens: Wisbech S.F. present between July 20th and Oct. 21st with main influxes July 26th (30) and between Aug. 31st and Sept. 11th (up to 40 daily).

Ruff: Breeding: Fens, Ouse Washes (complete length including Cambs.) only 5 Reeves apparently nested including 2 at Welney.

Usual passage records; present at Cley all year including 8 during Dec. At Wisbech S.F. autumn monthly maxima as follows: July 70, Aug. 45, Sept. 60, Oct. 90 and Nov. 25. On Ouse Washes (complete) largest numbers in early months: 110 in Jan., 106 in Feb. and 112 in March.

Avocet: An interesting mid-winter record with marked influx in early June.

East: Breydon, one March 19th with 8 on 25th, singles on 4 occasions April–May, 2 to 4 between June 5th and 16th, one on 30th, 2–3 between Aug. 5th and 13th and 7 on 30th.

Broads: Hardley 2 June 11th. Hickling 3 June 12th.

North: Cley one March 18th followed by singles in April–May with up to 7 between June 7th and 11th. Morston–Stiffkey one April 5th–10th, 2 May 10th–19th and between 24th and 28th with 5 June 10th. Holme 2 Jan 1st with 6 during the first week of June including one with a red ring probably ringed as a youngster at Minsmere in 1971.

Wash: Snettisham 8 March 5th.

Grey Phalarope: An autumn total of 11 birds.

Broads: Barton Nov. 18th.

North: Sheringham Sept. 26th/29th, Weybourne Sept. 3rd and 30th, Oct. 21st/22nd, Nov. 15th and 18th. Cley/Salthouse Sept. 12th–14th with 2 Oct. 21st/22nd. Holme Nov. 24th.

Red-necked Phalarope: Broads: Hickling Aug. 24th. North: Weybourne Aug. 6th. Wash: Snettisham Sept. 24th. Fens: Wisbech S.F. Aug. 12th with another between 16th and 24th; Tottenhill G.P. Aug. 15th to 24th.

Stone Curlew: In Brecks returned from March 19th and breeding season records from 14 localities; autumn gathering of 30 at Gooderstone.

North: 2 pairs bred successfully on a disused aerodrome. Wash border: one pair reared young.

Great Skua: East: Winterton Aug. 28th and Oct. 13th.

North: Autumn passage between July 26th and Nov. 24th with largest movements Sept. 9th (when 24 entering Wash at Holme) 17th (10 west at Weybourne) and Oct. 20th (15 east at Weybourne).

Wash: Snettisham 2 Aug. 29th and 2 Oct. 7th. Terrington Sept. 18th 20 present of whom 4 crossed over sea wall heading S.W.; still visible when 5 miles inland.

Pomarine Skua: North coast: Autumn (Aug. 13th to Nov. 24th) total of 133 birds including groups of 10, 13 and 22.

Wash: Terrington Sept. 18th.

Arctic Skua: North/East coasts: Autumn movements between July 23rd and Nov. 24th; in addition one off Sheringham June 20th. Largest groups off Weybourne (24), Cley (34), Hunstanton (40) and Holme (42).

Wash: Wolferton 6 Aug. 13th, Terrington 30 moving inland and 8 moving north Sept. 18th.

Inland: Holt-Fakenham road, one scavenging rabbit corpse Sept. 22nd.

Long-tailed Skua: North coast: Singles on eight dates between July 23rd and Sept. 26th.

Herring Gull: North: Blakeney Point a pair bred rearing 3 chicks. First county breeding record.

Common Gull: North: Blakeney Point one pair reared 2 chicks. Scolt 3 pairs displaying and one unsuccessful nest.

Glaucous Gull: North coast (especially Blakeney Point to Weybourne): Ones and twos on many dates up to March 24th and between Aug. 22nd and end of the year.

East: Yarmouth harbour noted in Jan., Oct. and Nov. Wash: Heacham Feb. 26th. Inland: Harford tip Nov. 1st.

Iceland Gull: North: Hunstanton Nov. 19th (DIR).

Mediterranean Gull: East: Yarmouth Aug. 5th to Oct. 13th (PRA) and Winterton Oct. 3rd (JGG, BWJ). North: Weybourne, at least 5 probably 7 July 28th to Oct. 15th (DFM). Blakeney Point one long dead Feb. 13th. Wells Sept. 30th (GED), Holme Sept. 1st (HBO) and Hunstanton Nov. 12th (HRR). Wash: Heacham July 23rd (PJ).

Little Gull: North/East coasts/Wash: Recorded all months except Dec. with numerous Oct.-Nov. observations. Mostly either singles or small parties up to 10, but 14 at Weybourne Aug. 13th, 26 off Gore Point Oct. 7th, 35 (only 4 adults) at Hunstanton on 28th, 23 at Weybourne Nov. 18th and remarkable assembly totalling 110 off Holme Oct. 15th.

Inland records of singles at Haddiscoe G.P., Norwich (Harford tip), Seamere and Selbrigg.

Black-headed Gull: Numbers of *pairs* at breeding sites include: North: Scolt 400 and Stiffkey Binks 20. Broad: Horsey 50 and Alderfen only 2.

Gulls following ploughs are a familiar winter feature; it would be interesting to learn if many become casualties through being trapped in furrows. 4 such victims were reported from Binham and Haveringland in 1972.

Kittiwake: Breeding attempt again made at a cliff-site in N.E. Norfolk: 3 nests but no eggs laid.

Largest weather movement noted Oct. 20th (N.W. gale) when easterly passage involving several thousands visible off West Runton. Impressive summer assembly at Scroby Sands peaked at 5100 at end of June.

Black Tern: Passage migrants at usual localities between May 1st and Oct. 7th. Largest spring parties during third week of May when 6 at Rockland and 9 at Breydon. Autumn passage on even smaller scale.

Gull-billed Tern: North: Weybourne to Blakeney Point Aug. 27th to Sept. 3rd.

Common Tern: Numbers of *pairs* at breeding sites:

Wash: Snettisham 32.

North: Scolt 600, Stiffkey Binks 135, Blakeney Point 1700-1900, Titchwell 5, Brancaster 3 and Cley (Arnold's Marsh) 9. East: Scroby Sands small colony but no figures available. Broad: Ranworth 43, Hickling 3, Ormesby 10, Barton one, Catfield Fen 2 and Hardley Flood 4. Inland: Bawburgh-Colney G.P. 3 and Swanton Morley 2.

Arctic Tern: North: Breeding *pairs*: Scolt one and Blakeney Point 2. Late date Oct. 21st (Weybourne).

Roseate Tern: North: None bred, but singles between Holme and Weybourne May 6th and Aug. 20th.



Long Eared Owls bred at two locations

Little Tern: Breeding records of *pairs* include: North: Titchwell 20, Scolt Head 70, Brancaster 7 (no young reared), Blakeney Point 200–220, Stiffkey Binks 12 and Cley 4.

East: Winterton/Horsey 90 (13 flying young) and Winterton/Hemsby 3 (no young reared).

Last dates Sept. 17th and 24th at Weybourne.

Sandwich Tern: North: Scolt, record breeding colony of 4800 pairs. Stiffkey Binks 350 pairs. Extreme dates March 31st and Oct. 21st.

Little Auk: North: Brancaster G.C. one dead Jan. 4th. Weybourne 6 singles between Oct. 14th and Nov. 24th.

Black Guillemot: North: 5 singles in Jan., April, Oct. and Nov.

Puffin: North: 1–6 on 18 dates between Sept. and Nov.; also one July 23rd.

Turtle Dove: Notable observations include up to 1000 passing Titchwell in a single day in late May and 100 at Crimplesham G.P. in June. Late dates: Cley Oct. 1st and Weybourne Nov. 11th.

Collared Dove: Largest concentrations include 140 at Downham Market silos July 28th and 100 Carrow Works Norwich end of Feb.

Monthly maxima at Broom Hill, East Runton: Jan. 58, Feb. 54, March 57, April 50, May 59, June 52, July 47, Aug. 43, Sept. 25, Oct. 26, Nov. 33 and Dec. 30 (GRC). Decline in numbers thought to be due to presence of up to 6 Magpies.

Barn Owl: Reported from 75 localities. Road casualties include 5 killed on A.47 between Yarmouth and "Stracey Arms".

Little Owl: Reported from 22 localities.

Long-eared Owl: Bred successfully at East Wretham Heath and at Hickling. Single records from Blakeney, Felthorpe, Norwich (Castle Mound), Salthouse Heath, Taverham and Wells.

Short-eared Owl: Breeding records: Single pairs at Wickhampton, Breydon, Blakeney fresh-marshes and Holme.

Wintering birds most abundant in S.E. Norfolk, particularly at Halvergate where 30 Dec. 9th and high total of 116 on 24th including 80 in air together. In North, a winter roost of 15 in Docking railway cutting.

Nightjar: Majority of records from Breck; in addition small colonies at Horsford, Salthouse and Kelling Heaths and Roydon Common.

Swift: Unusual nesting site, Hunstanton cliffs, at least one pair. October records at Reepham (18th) and Caister-on-Sea (29th).

Kingfisher: Recorded at 56 localities including a Gorleston garden pool, Quayside and Bishop Bridge Norwich and Snettisham where 2 south-west Oct. 15th.

Hoopoe: Total of 9 as follows: North: Blakeney-Cley April 18th/20th and Sept. 5th, Salthouse June 30th, and Warham Sept. 18th.

East: Ormesby Sept. 1st to 10th, Breydon on 12th and Surlingham April 8th/9th. South: Dickleburgh June 28th. Wash: Snettisham Sept. 19th.

Great Spotted Woodpecker: North (Blakeney Point, Holkham-Wells, Holme, Hunstanton and Wells). East (Winterton) and Wash (Snettisham and Heacham). Between Sept. 16th and Dec. 17th and specially during Oct. a total of 23 including 5 together at Holkham. Majority probably of Scandinavian origin.

Lesser Spotted Woodpecker: Recorded at 37 localities.

Wryneck: *Spring:* In May one at Wootton Marshes on 3rd with singles at Blakeney, Holkham, Ridlington Common, Shadwell (Breck), Wells and Weybourne between 6th and 8th.

Autumn: N/E coasts: Recorded on many dates between Aug. 1st and Oct. 17th with majority between mid-Aug. and third week of Sept. Noted at Burnham Market, Beeston Regis, Brancaster Common, Blakeney Point, Cromer, Cley, Hickling, Holme, Hunstanton, Holkham, Ludham, Mundesley, North Walsham, Sheringham, Salthouse, Thornham, Waxham, Wells, West Runton and Winterton Dunes. Difficult to estimate numbers as some made lengthy stays (one ringed at Holme Sept. 25th stayed until Oct. 15th), but minimum autumn total of 81 birds.

Wash: Snettisham Sept. 10th.

Central: Norwich (Eaton Rise) Sept. 18th.

Woodlark: Breck: Present in breeding season at 8 localities.

Shore Lark: North coast (Holme to Weybourne), monthly maxima: Jan. 72, Feb. 96, March 2, Oct. 119, Nov. 228 and Dec. 220. Largest groups at Weybourne (35 in Oct.), Scolt (70 in Nov.) and Cley (110 in Nov.).

Wash: Heacham-Snettisham up to 9 Oct. 28th to mid-Dec.

East: Yarmouth, Breydon, Winterton, Waxham and Trimingham 1-10 in Jan./Feb. and from Oct. 3rd. Extreme dates April 12th (Holme) and Sept. 28th (Cley).

Swallow: Late birds at Carrow (Norwich) Nov. 3rd, at Docking till 7th, at West Runton on 14th and at Drayton Dec. 6th. One wintering in pig sheds at Upwell was unfortunately killed by a cat Dec. 16th.

House Martin: Concentrations of nests at Wells (42 nests on quayside locum), West Rudham (76 nests on bungalow) and Gunthorpe (52 nests on disused house). Young in nest at Castle Acre Priory still being fed Oct. 17th.

November birds at Snettisham on 13th and at Upper Sheringham and Blickling on 15th.

Sand Martin: October birds at Trimingham (4th), Holkham (8th) and Snettisham (24th).

Golden Oriole: Breck borders: At the locality first described in 1970 Report pair returned May 18th; a second male present June 25th and young found July 23rd.

Passage migrants at Foxley Lodge May 22nd, Blakeney on 27th and Salthouse Heath on 31st, Titchwell June 5th and Wells July 20th.

Raven: North: Weybourne 2 west Nov. 5th (DFM). First county record since 1953.

Hooded Crow: October passage on larger scale than for many years. During the month total of 100 passed through Snettisham, with counts of up to 27 at Holme and 15 at Hunstanton in a day. At Horsey 31 assembling to roost Dec. 10th. In Brecks at Holme Hale, Little Cressingham (10) and Ickburgh (24 at a duck farm).

Jay: Helhoughton, two Keeper's gibbets containing a total of 29 freshly killed birds in mid-July gives an indication of distribution.

Dipper: North: River Stiffkey one of north European black-bellied race Oct. 18th (KS). East: Yarmouth Haven Bridge one of British/Central European race Dec. 10th (PRA).

Bearded Tit: Broads: Breeding records from Hickling, Whiteslea, Heigham Sounds, Horsey, Starchgrass, Martham and Catfield Fen.

North: Bred at Titchwell (12 young together early July) and Cley (c. 12 pairs). Interesting Oct. movements: Wells Abraham's Bosom 13 circled higher and higher before departing west at a great height Oct. 7th; Holme up to 30 during first half Oct. and Brancaster 48 south-west Oct. 3rd and 30 south-west on 6th.

East: Autumn/winter records: Burgh Castle 8 travelling high westwards Sept. 30th; Hardley Flood 25; Cantley B.F. up to 100 (57 ringed); Waveney valley at Belton 40; Haddiscoe Island 17 caught (4 carrying Suffolk rings) Jan. 8th and Winterton 13 north high over dunes Sept. 23rd.

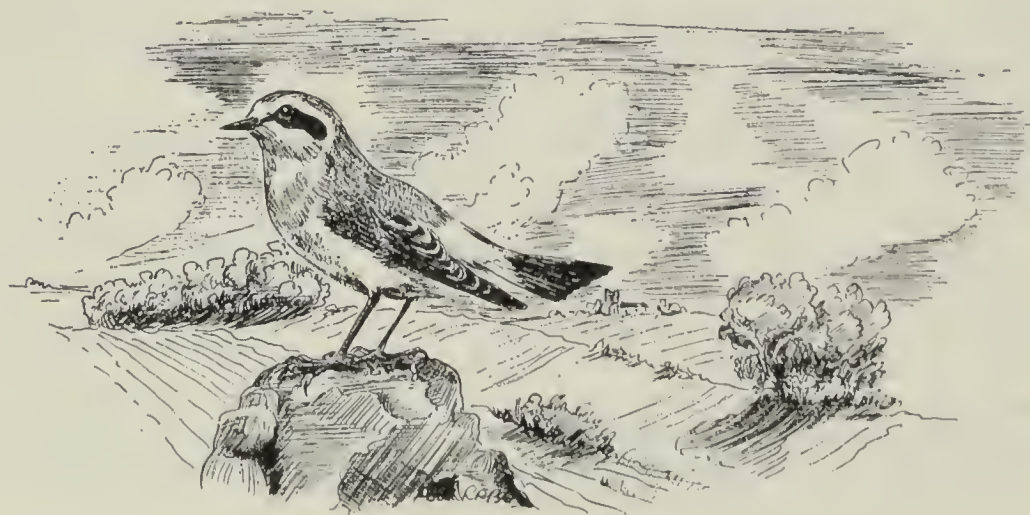
Breck: Stanford Water pair Dec. 3rd (both carrying rings).

Wash: Snettisham 14 mid-Oct. and 10 Dec. 24th.

Fens: Near King's Lynn total of 90 (60 caught and ringed including one Dutch and some British banded birds) Dec. 24th. Wisington B.F. 6 Dec. 26th.

Fieldfare: Late spring birds at Holkham on 14th, Tunstead on 15th, Cranworth on 19th, Wickhampton on 25th and Blakeney on 28th. Apart from one over Walsey Hills Cley July 16th next observation Aug. 29th when one at Blakeney Point followed by others at Weybourne and Holkham on 3rd, Blakeney Point and Holme on 13th, Hunstanton on 15th and Foxley on 16th.

Redwing: First autumn birds at Cley (3) Aug. 31st and at Wells Sept. 4th.



Ring Ouzel: Coastal records between March 31st (Snettisham) and Oct. 19th (Hickling and Holme) and 31st (Beeston Regis). No party exceeded 6 apart from group of 12 at Cley.

Wheatear: Extreme dates March 17th (Weeting) and Nov. 8th (Snettisham) and Heacham (Nov. 11th).

Stonechat: *Breeding:* North: Weybourne a pair raised 3 broods.

East: Winterton-Horsey 3 pairs.

A bird showing the characteristics of the Siberian race *maura* at Cley in May and Dec.

Whinchat: Breck: 7 pairs bred in Sturston-Stanford area. Late birds at Hunstanton G.C. Oct. 28th/29th.

Black Redstart: *Breeding:* Yarmouth 3 pairs bred successfully and 3 additional singing males located (PRA *et al*). Norwich (Duke Street area) pair from May 15th, male observed carrying nesting material and in song till July 5th. Hellesdon Mill a pair unsuccessful.

Migrants: Total of 43 spring/autumn birds between March 21st and Nov. 23rd including inland records at Mulbarton and R.A.F. Swanton Morley. A male remained at Brancaster golf clubhouse from Nov. 6th until Dec. 23rd.

Bluethroat: North: Cley May 7th and Warham on 10th. Cley Aug. 27th to Sept. 3rd.

Aquatic Warbler: East: Waxham Aug. 26th (RJG).

North: Cley Aug. 29th (RM,MPT) and Sept 1st and 15th (FAW).

Icterine Warbler: North: Total of 12 at Blakeney Point, Cley, Holkham, Holme, Sidestrand and Wells between Aug. 13th and Oct. 4th.

East: Yarmouth Oct. 15th.

Blackcap: January records from North Pickenham, Holt and Thorpe St. Andrew. November from Wiveton and Winterton (4th), Holme (16th) Caistor St. Edmunds (20th) and Wells (26th). Dec. from Holme (28th).

Barred Warbler: North: Total of 15 at Blakeney, Blakeney Point, Cley, Holme, Hunstanton G.C., Quarles, Sheringham and Wells-Holkham between Aug. 14th and Oct. 1st.

East: Waxham Sept. 19th and Winterton on 20th.

An immature caught and ringed at Sheringham was re-trapped there 3 days later; and indication of the leisurely speed of autumn migrants. Another, which remained at Hunstanton 6 days fed on the same bryony clump as 1971 bird.

Greenish Warbler: North: An unprecedented concentration of 5 in just 8 days: Blakeney Point Aug. 27th/28th (SCJ, PFT, DIMW *et al*); a different bird Sept. 1st-3rd (SJB, SCJ, RT *et al*), Wells Sept. 1st-3rd (SCJ, CJM-G, HPM); a different bird Sept. 2nd (SCJ); Holkham West Wood on 3rd (DIMW).

Chiffchaff: Arrival from March 22nd at Surlingham and Ormesby. Wintering birds during Dec. at Hardley Flood (5th), North Elmham, Cley (17th) and Bawsey till year end (ringed on 26th).

Wood Warbler: Spring arrival from May 7th and breeding season records from 11 localities.

Passage migrants at Winterton, Holkham and Wells between Aug. 25th and Sept. 27th.

Yellow-browed Warbler: North: Holme, Sept. 27th/28th. Wells/Holkham 1-2 between Sept. 27th and Oct. 23rd. East: Winterton Sept. 27th. Simultaneous arrival followed several days N.E. wind.

Pallas's Warbler: North: Holme Oct. 17th to 19th (HBO). Caught and ringed.

Firecrest: *Spring:* Holme April 10th (ringed), Wells on 11th and Brinton May 1st.

Autumn: Total of 26 at Blakeney Point, Cley, Happisburgh, Holkham/Wells, Holme, Paston, Stiffkey, Trimmingham, Waxham, Winterton and Yarmouth between Aug. 31st and Oct. 28th.

Further reading: "The colonisation of England by the Firecrest" (*British Birds*, 66 pp. 159-166).

Spotted Flycatcher: Very late bird at Old Catton Nov. 4th (GPH).

Pied Flycatcher: Customary very small spring passage including one inland at Mousehold Heath May 10th. Late autumn birds lingered at Yarmouth till Oct. 14th and at Wells till 17th.

Red-breasted Flycatcher: A single spring occurrence: Brancaster May 7th (RK). Autumn total of 17 at Wells-Holkham, Holme, Blakeney Point, Blakeney, Cley and Yarmouth between Aug. 30th and Oct. 23rd.

Richard's Pipit: Autumn total of 8 at Cley, Holme, Sheringham and Wells between Sept. 6th and Oct. 21st.

Tawny Pipit: North: Cley May 7th (MPT).

Water Pipit: Most favoured locality is Cantley B.F. which attracted up to 7 between early Jan. and March 21st. March and Dec. occurrences at Breydon; in autumn ones and twos at Cley, Weybourne, Sheringham and Winterton from Sept. 13th.

Grey Wagtail: Nested at 4 sites. Passage/wintering birds at 39 localities.

Blue-headed Wagtail: (*M.f. flava*): Spring birds at Ormesby, Salthouse, Weybourne and Cley from April 22nd.

Waxwing: Between Jan. 1st and Feb. 23rd total of 22 at Blakeney, East Rudham, Hales, Loddon, Mulbarton and Wroxham.

During Nov. (8th to 25th) total of 89-99 at following localities. No party exceeded 8 apart from 30-40 at Heacham: Acle, Cley, Felmingham, Foulsham, Gaywood, Gorleston, Heacham, Holme, Hunstanton, King's Lynn, Mulbarton Snettisham, Taverham, Wells and Wroxham.

Great Grey Shrike: Singles recorded at the following localities up to May 2nd and from Sept. 30th; also late birds in May at Kelling (14th), Brancaster (29th) and Weybourne (19th till June 13th):

Acle	Holt	Snettisham
Beeston Regis	How Hill	Sparham
Beetley	Hunstanton	Stiffkey
Binham	Kelling	Thetford
Brancaster	Langham	Thornham
Buxton	Little Snoring	Threxton
Chedgrave Common	Morston	Wells
Cley	Mousehold Heath	West Acre
Dereham	Muckleborough Hill	West Newton
Didlington	Narborough	Weybourne
Grimston	Roydon Common	Whitlingham
Guestwick	Salthouse Heath	Winterton
Hardley	Santon Downham	Wiveton
Hickling	Sheringham	Yarmouth
Holme	Stanford Water	

Woodchat Shrike: Additional 1971 record: North: Holkham Sept. 18th (BB, RC, JF).

Red-backed Shrike: *Breeding season distribution:* North 6 pairs at 5 sites. East: 3 pairs at one site. Breck: 9 pairs at 7 sites. County total 18 pairs.

Migrants: Singles at Hunstanton Sept. 10th and at Beeston Regis Oct. 4th (late).



Hawfinch: 1971/2 locality summary:

Arminghall	Foulden	Shadwell
Blakeney	Foxley	Saint Helen's Well
Brooke	Hargham	South Raynham
Caistor St. Edmunds	Holkham	Stanford
Cley	Horning	Swaffham
Cranwich	Horsey	Walsey Hills
Dereham	Kirby Bedon	Watton
Didlington	Letton Park	Wells
Earsham	Methwold	West Runton
East Wretham	Norwich	
Felbrigg	Thompson	

In 1971 largest parties at East Wretham totalled 23 and a pair bred; only other breeding report came from Hargham where colony of 5 pairs. In 1972 largest group at Cranwich (30 in Jan. and 20 in Dec.) feeding in yews.

Goldfinch: Thorpe St. Andrew: A roost in evergreen oaks and hollies first occupied Dec. 25th reached a peak of 500 by mid-Jan. 1973; still 250 present Feb. 18th 1973 (GEW). According to *Finches* (1972) roosting in this country is usually of 10-20 birds but up to several hundreds on continent.

Siskin: Garden bird tables visited at Caister on Sea, Cromer, Dereham, Elmham, Norwich and Sprowston.

Redpoll: An exceptional irruption of Mealy Redpolls took place from Oct. 7th onwards and a total of 96 ringed at Wiveton between Oct. 14th and Dec. 19th (MPT). At Winterton Oct. 13th/14th 50% of redpolls present considered Mealy. Small parties recorded at Sandringham and Holme.

Arctic Redpoll: North: Wiveton singles trapped Oct. 24th, Nov. 14th and Dec. 19th (MPT). Sight records at Holme Sept. 27th/28th, Holkham (2), Oct. 13th-15th and Wells (2) on 18th.

East: Winterton Oct. 29th.

Crossbill: In Brecks widely distributed in small numbers. August coastal records at Dersingham (1st) and Sheringham (19th), but majority of records in second half of Oct. including up to 14 together at Wells, male in sugar beet at Waxham on 8th, singles on 6 dates at Holme and 6 at Ludham 17th-18th.

Brambling: Peak numbers present Nov.-Dec. including 300 at Sandringham, 300 at County Hall Norwich and 1500 feeding on seed kale at Sharrington.

Ortolan Bunting: East: Waxham ringed Sept. 18th (DF). North: Holme Aug. 31st (HBO).

Rustic Bunting: North: Wells immature male Oct. 17th to 22nd (scJ *et al*). Second county record.

Lapland Bunting: North coast: Up to 30 together at usual haunts from Sept. 20th onwards. East: Paston 1-8 Oct. 7th to Nov. 21st; Winterton Oct. 13th and Breydon/Halvergate peak of 17 Dec. 24th.

Snow Bunting: Wash/North/East coasts: Extreme dates April 3rd and Sept. 6th. Winter maxima include Breydon/Lower Bure 60, Cley/Salthouse 220, Scolt 30, Holme 40 and Snettisham 117.

The following, not mentioned in the Classified Notes, were also recorded in 1972 (*breeding species in italics*): Black-throated Diver, Great Northern Diver, Red-throated Diver, *Little Grebe*, Gannet, *Mallard*, *Teal*, Wigeon, Scaup, Ruddy Shelduck, *Canada Goose*, *Mute Swan*, Merlin, *Kestrel*, *Red-legged Partridge*, *Partridge*, *Pheasant*, *Water Rail*, *Moorhen*, *Coot*, *Lapwing*, Grey Plover, *Snipe*, Jack Snipe, *Woodcock*, *Curlew*, Whimbrel, Bar-tailed Godwit, *Redshank*, Knot, Dunlin, Sanderling, Great Black-backed Gull, Lesser Black-backed Gull, Razorbill, Guillemot, *Stock Dove*, *Wood Pigeon*, *Cuckoo*, Tawny Owl, *Green Woodpecker*, *Skylark*, *Carrion Crow*, *Rook*, *Jackdaw*, *Magpie*, *Great Tit*, *Blue Tit*, *Coal Tit*, *Marsh Tit*, *Willow Tit*, *Long-tailed Tit*, *Nuthatch*, *Treecreeper*, *Wren*, *Mistle Thrush*, *Song Thrush*, *Blackbird*, *Redstart*, *Nightingale*, *Robin*, *Grasshopper Warbler*, *Reed Warbler*, *Sedge Warbler*, *Garden Warbler*, *Whitethroat*, *Lesser Whitethroat*, *Willow Warbler*, *Goldcrest*, *Dunnock*, *Meadow Pipit*, *Tree Pipit*, *Rock Pipit*, *Pied Wagtail*, *White Wagtail*, *Yellow Wagtail*, *Starling*, *Greenfinch*, *Linnet*, *Twite*, *Bullfinch*, *Chaffinch*, *Corn Bunting*, *Yellowhammer*, *Reed Bunting*, *House Sparrow* and *Tree Sparrow*.

Above: Pied Flycatchers are often abundant along the Norfolk coast in autumn following drift migration from the Continent. Late birds continue passing through during October – latest being on 30th (1959) with a straggler on November 17th (1957). Spring passage is on a small scale; April 16th (1961) being the earliest.

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Below Left: Red-breasted Flycatchers appeared in 1972 at Yarmouth, Cley, Blakeney Point, Wells, Holkham, Brancaster and Holme. The European breeding range is very similar to that of the Barred Warbler and expanding slowly westwards. Nesting was first proved in the Netherlands in 1967. In autumn the species migrates east through Iran and Afghanistan to winter mainly in western India. Reverse migration, especially of juveniles under the influence of central European anticyclones, is held to explain occurrences in western Europe in autumn.

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Below Right: A north European Black-bellied Dipper was discovered along the river Stiffkey in October. More unusual was a bird of the British/central European race on a pier of Yarmouth Haven Bridge in December.

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The Sparrowhawk has become one of the rarest breeding birds in Norfolk. It nests late when fledgling song birds are plentiful. The hen regularly takes prey more than twice her weight, such as Woodpigeons.



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Short-eared Owls nested in 1972 at Wickhampton, Halvergate, Holme and Blakeney fresh-marshes. Remarkable numbers were attracted to Halvergate marshes during December. A peak of 116 birds was recorded on 24th including 80 in the air together. During an irruption in the 1964/5 winter up to 80 Short-eared Owls assembled at Halvergate roosting in a ruined cottage and in an abandoned orchard.

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E. E. Jackson
The derelict marsh drainage mills still standing on Halvergate Level provided observation points for watching White-fronted Geese once there in their hundreds. Today, these winter visitors from the Siberian tundra are almost a memory.

HALVERGATE WITHOUT WILDFOWL

R. H. Harrison

Stretching westwards from the north bank of Breydon Water lies a vast area of marshland constituting in many ways some of the loneliest land in the whole of Norfolk. These "fresh marshes" are divided into groups, or "levels". The largest is Halvergate Level bordering either side of the Halvergate Fleet which is the main drainage dyke.

My association with this area goes back to the late 1920's and I made many wildfowling trips when thousands of acres were flooded. Five drainage mills were spaced out along the length of Halvergate Fleet. They could cope with average rainfall, but during calm spells – when the mills were idle – the water would soon build up in the network of smaller dykes before overflowing on to the marshes. To prevent severe flooding along the Fleet there were two protective banks, one known as the "Summer Wall" and 15 to 20 yards further back was the higher "Winter Wall". The land between these banks was referred to as "rond" and this would flood along the complete length of the Fleet each winter. This miniature Ouse Washes was a paradise for wildfowl, particularly for great companies of Wigeon and for thousands of White-fronted and Pink-footed Geese then regularly wintering here.

The Pink-feet were frequently seen on Halvergate marshes, but these were always more attractive to the White-fronts. The Pink-feet normally favoured the marshes adjoining the lower Bure. However, it was not unusual to find both species feeding together. In some winters both species of geese were present in about equal numbers, but over a period of some 40 years, the White-fronts usually outnumbered the Pink-feet. Maximum numbers were reached between 1938 and 1946, in spite of the war-time network of tubular steel barriers erected on the marshes to prevent an airborne invasion. These barriers had no adverse effect on the geese and I learned of no bird coming to grief by striking them.

Peak numbers of wintering White-fronts were attained in the 1938/9 winter: on 5th December 1938 some 3,000 passed over Breydon heading for Halvergate. War-time restrictions made it impossible to obtain regular winter estimates of numbers between 1939 and 1945, but in 1946 over 5,000 geese were wintering here: 2,000 White-fronts and 3,000 Pink-feet. The following year saw an exceptional weather movement of White-fronts – presumably from North Germany and the Netherlands. One morning towards the end of January 1947 (only a few days before Arctic weather conditions commenced in Britain) skein after skein of White-fronts came into the marshes from Scroby Sands at first light. This arrival occupied almost an hour, the geese appearing to completely cover two marshes. A conservative estimate was of between 3,500 and 4,000 birds.

A more recent abnormal passage movement was recorded on 25th January 1964 when a total of over 4,000 White-fronts headed westward across Halvergate Level. That winter the peak number of local birds was only 320 (*Norfolk Bird Report* 1964, p. 198). Annual counts since the 1945/6 winter are given in *Birds of Norfolk* (1967).

The first autumn arrivals of White-fronts were expected in the second week of October (3 early birds were shot at Breydon 30th September 1939), but the main flocks seldom arrived before December. In the 1949/50 winter which was very

mild none put in an appearance until 21st January. By the second week in March all would have departed unless the winter had been exceptionally severe. In 1956, for example, some lingered until 16th March and in 1963 until the 23rd.

Record numbers of Pink-feet were obtained in 1943 and in 1946; on both occasions 3,000 were estimated. In 1943, the peak total was recorded on 26th December when the birds were feeding on Mautby/Runham marshes. The first autumn Pink-feet arrived during the latter part of September; earliest date being 25th September 1955. First arrivals seldom stayed any length of time and there was then a gap until late October when the main flights arrived (in 1936, for example, 1,000 Pink-feet reached the lower Bure marshes on 30th October).

After feeding on the lonely levels both the Pink-feet and White-fronts flighted to Scroby Sands to roost. During spells of fog and storms, however, the birds avoided heading out to sea and in these conditions they resorted to Breydon estuary. Normally diurnal feeders, at times of full moon the Pink-feet in particular favoured feeding at night.

Halvergate was always the most important level for White-fronts, but the flocks frequently divided and for days or even weeks skeins of these long distance travellers from Northern Russia frequented the extensive levels at Wickhampton, St. Benet's Abbey, Norton, Thurlton, Buckenham, Claxton, Langley and Haddiscoe Island.

After 1947 Halvergate began declining as a wildfowl resort. The introduction of electric pumping stations resulted in the old drainage windmills falling into decay. Each succeeding winter saw less and less flooding. The Wigeon were the first to feel the effects of this modern drainage and their numbers quickly declined; today they have vanished from Halvergate. The departure of the geese was more gradual. From 1947 to 1957 the numbers fluctuated between a few hundred and 1,500 birds, according to the severity of the winter. Pink-feet were the first to forsake the area, but White-fronts continued arriving, although in declining numbers. The 1972/3 winter brought the smallest number on record since 1928 and less than 50 were present.

Two full decades of modern drainage have completely changed the character of these marshes and with fewer cattle, hundreds of acres have been reclaimed and put to arable purposes, chiefly for wheat. Despite these great changes, there still remain many acres in the more remote parts of the great level which have scarcely altered since they were first drained for grazing. These still attract a variety of birds.

During the winter Halvergate is much favoured by Short-eared Owls. Numbers vary according to the quantity of Voles, but it would be an exceptional winter if one could not see at least half a dozen of these "marsh owls". 1964/5 was an outstanding winter when as many as 100 were present. Many of these Short-eared Owls occupied a derelict marshman's house and its wild garden as a day-time roost. One or two pairs of Short-eared Owls usually breed on these marshes; the first nest was recorded in 1936.

It has been interesting to note the changing status of marshland birds: Lapwing and Redshank are still present in large winter flocks, but both have sadly declined as breeders. Golden Plover were present in great numbers each winter until the 1940's. Then they left. Within the last five or six years, however, they have again become abundant and flocks of up to 300 have become a feature of the reclaimed marshes sown with winter wheat.

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HOLME BIRD OBSERVATORY
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B. W. JARVIS
M. J. JENNER
G. JESSUP
C. JOHNSON
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Norfolk Mammal Report 1972

Editorial

We are pleased to present to members the 19th annual report on Norfolk Mammals.

In order to observe mammals a great deal of skill and patience is required, as unlike birds the subject are seldom so conspicuous. In consequence there appear to be fewer mammal watching enthusiasts, a great pity in view of the potential for discovering something original about distribution, behaviour or habitat requirements; all within the scope of any observer. Having said this, it is encouraging to report an increase in the number of observers and records received for 1972.

Morris Gosling has kindly written an article on the Coypu in East Anglia which illustrates the amount of work being carried out on this animal and also revives the Naturalist's Society custom of recording lectures given at meetings for future reference. Like Coypu which were originally imported for fur-farming and subsequently became naturalised, so other non-indigenous mammals could do the same. During August a Civet escaped at Claxton, as have several Chipmunks, while a number of Soudias were rumoured to be at large. Given favourable conditions these animals could theoretically breed and start feral colonies, so perhaps such records are worthy of note for historical reference.

Small mammals and bats will require much more attention in the near future if we are to improve the distribution maps for over a dozen species. For the larger mammals it is apparent that Norfolk has a low population of both Badger and Otter. The former need the sympathy of owners of woodland and otters would benefit from land owners in the river valleys offering protection along their rivers.

On page 67 is a report received from the Master of the Eastern Counties Otterhounds. We would like to emphasise that the views expressed are not necessarily those of the Editor, the Norfolk Naturalist's Trust or the Norfolk & Norwich Naturalist's Society.

The mammalian road casualty figures for the stretch of A47 between Yarmouth and the "Stracey Arms" for 1972 were as follows: 123 Brown Rat, 41 Rabbit, 32 Hare, 5 Hedgehog, 3 Stoat, 2 Coypu, 1 Weasel and 1 Ferret.

Finally, our grateful thanks are extended to John Last for the vignettes and to Dennis Avon, Tony Tilford and Paul Richards for the photographs: to the Ministry of Agriculture, Fisheries and Food and Seals Research Unit for all their help: to Annette Chatten, Judy Murray and Norma Watt for typing the report and to all the contributors, without whom this report would not be possible.

Please send your 1973 Mammal notes **by the end of February 1974** to John Goldsmith, Castle Museum, Norwich, NOR 65B.

THE COYPU IN EAST ANGLIA



by L. M. GOSLING, *Coypu Research Laboratory,*
Ministry of Agriculture, Fisheries and Food

COYPUUS (*Myocastor coypus* Molina) are semi-aquatic hystricomorph rodents indigenous to South America. Adult males in England may exceed 7 kg. in weight although few reach this size because of intense trapping. Heavily pregnant females weigh up to 10 kg. but without embryos they usually weigh about a kilo lighter than males. In South America the species ranges from Uruguay in the East, to Bolivia in the North-West and down to Southern Chile through Argentina in the West. Several sub-species have been described but the species is in need of taxonomic revision and the various forms might be better regarded as races. The form now feral in East Anglia most closely resembles *M.c. bonariensis* mixed stock; there has been extensive selective breeding of captive coypus as described by Kinsel (1958) in his entertaining book on coypu husbandry.

The dense underfur of coypus has been widely used commercially and was particularly valuable as a fashion fur in the 1920's. Fur farming started in Argentina at this time and shortly afterwards breeding stock was exported to various parts of the world. As a result of escapes and in some countries deliberate releases, feral coypus are now present in North America, England, Europe, Russia, the Middle East and Africa. Their success can perhaps be attributed to the considerable similarities of aquatic and semi-aquatic plant communities throughout this range. Ironically while coypus flourish in novel habitats, throughout much of their native range in South America they are in danger of extinction, largely because of poaching (Barlow 1969).

The first coypu fur farms in England were established in about 1929. Eventually there were about fifty, most of which were in the southern and south-eastern counties where plentiful natural water supplies were available (Laurie,

1946). After a brief heyday the farms were all discontinued at the start of the war in 1939. Some animals were probably released at this time but in any case numerous escapes had already occurred and by the early 1940's there were small feral populations in Norfolk and Buckinghamshire. The colony in Buckinghamshire persisted up to about 1954 (Norris, 1967) and then disappeared. In spite of trapping organised by the War Agricultural Executive Committee in 1943 and 1944 wild populations persisted in Norfolk and soon expanded into Suffolk. Numbers probably increased slowly at first but coypus were commonly seen up to 1946. The population then received a set-back in the severe winter of 1946/47. Again there was a slow increase at first but by the mid-fifties it was obvious that there was a considerable and expanding population. Damage to dyke banks and river walls (Cotton, 1963) to agricultural crops and to our indigenous flora led to the realisation that coypus represented a threat both in economic terms and through disruption of the existing balance within marshland

FIG.1. AVERAGE MONTHLY COYPU CATCH, FROM 1966 - 1972.

The vertical bars (2 standard deviations) are measures of variation in the monthly catch each year.



plant communities. Following representations by farmers, drainage boards, river authorities and naturalists the coypu was recognised as a pest and in 1962 was added to the list of species included in the Destructive Imported Animals Act. By this time coypus numbered about 200,000 (Norris, 1967) and were rapidly expanding their range (Davis, 1963). Government support was given to organisations that were attempting to control coypus and finally the Ministry of Agriculture, Fisheries and Food organised a campaign with the objectives of drastically reducing numbers and confining the survivors to the Norfolk Broads and other marshland areas where it was thought that coypus would be impossible to exterminate completely. The campaign ran from 1962 to late 1965 and succeeded in its aims. A complicating effect, however, was the heavy mortality caused by the severe winter of 1962/63 which killed 80 to 90% of the population (Norris, 1967). The campaign trapping undoubtedly had its major effect in reducing the hardy individuals that survived the winter. At the end of the campaign the control of coypus became the responsibility of a consortium which was supported by contributions from Drainage Boards, the River Authority and a 50% Government grant. With administrative changes the consortium, now known as "Coypu Control", has continued operations up to the present. In the field it consists of an experienced team of trappers which varied between five and seven men up to the end of 1972. In 1973 the number of trappers has been increased in response to the recent population increase which will be discussed in this paper.

For the first four years after the campaign the size of the population, as indicated by the numbers killed in control operations, showed a progressive decline (Fig. 1). In 1970, however, about the same number were caught as in the preceding year and by 1971 it was clear that the population was in the early stages of a period of rapid growth. This was confirmed by the large kill of 1972. At the time of writing, in July 1973, there have already been more coypus killed than in 1972 although this is partly due to an increase in the number of trappers.

In spite of the increase in population size there has not yet been a significant expansion in range (Fig. 2). It should be emphasised that the population which is present in 1973 is still very small compared to that of the early 1960's. Presumably range expansion would occur if numbers were allowed to reach the levels of the late fifties; at that time coypus were spreading outwards into surrounding counties, probably in response to high population density in Norfolk and Suffolk.

The post-campaign population is the subject of a current investigation at the Coypu Research Laboratory in Norwich. The project is planned as an integrated study of its ecology, social organisation and dynamics; a major aim of the work is to explain the fluctuations in numbers which have occurred over the past eight years and to predict future trends.

Trapping is undoubtedly the major source of mortality for adult Coypus and there is little doubt that it was the principal cause of the population decline in the late '60's. In recent years it is clear that there have been changes which resulted in recruitment exceeding deaths from trapping. In the present paper I will briefly describe some preliminary results which have suggested the hypothesis that the population increase from 1970 to 1972 was caused by improved reproductive success and juvenile survivorship and that these factors are closely linked with climatic variation and the resultant variation in food availability.

FIG. 2 (i) COYPU DISTRIBUTION IN EAST ANGLIA 1969

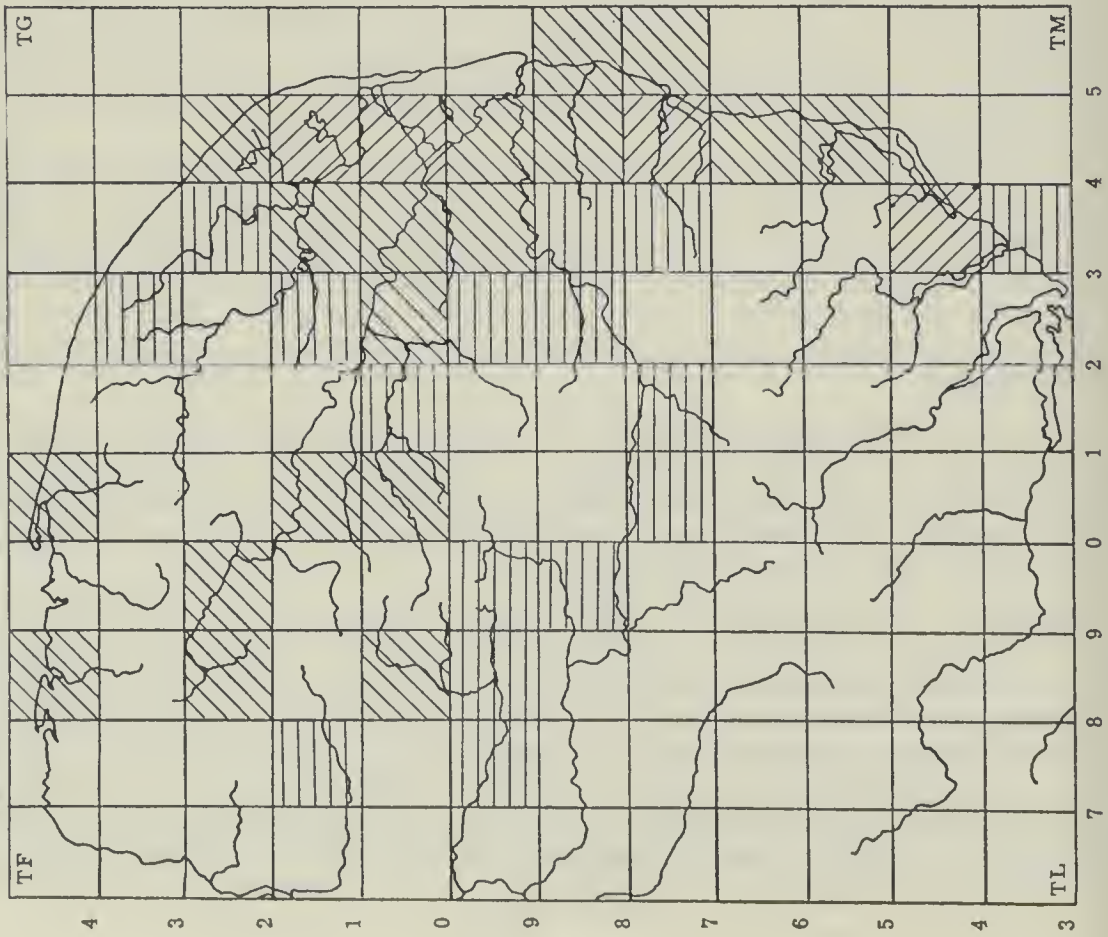
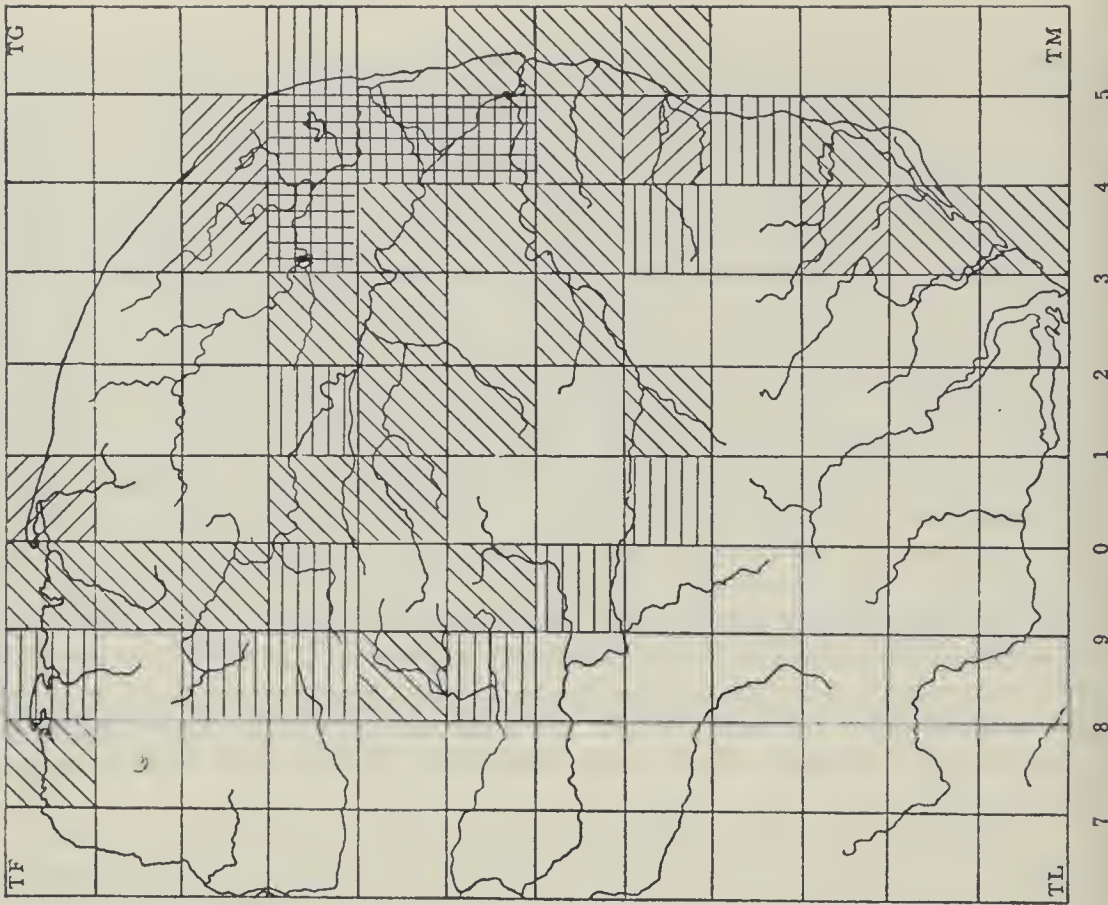


FIG. 2 (ii) COYPU DISTRIBUTION IN EAST ANGLIA 1972



Feeding ecology

Coypus are almost entirely herbivorous although they sometimes eat freshwater mussels. Ellis (1963) has published an account of the plants eaten by coypus in Norfolk but apart from this little information is available on feeding habits. In the present study we are examining feeding in some detail within a 7 ha. enclosure which includes Calthorpe Broad. The enclosure contains a self-perpetuating population of about 20 to 30 coypus. Each month evidence of coypu feeding is recorded during a series of randomised transects. From these data monthly estimates are obtained of the frequency of feeding of different plant species and also of feeding on different parts of each plant. These results are checked from brief monthly inspections of a number of sites in the wild. The results gathered to date have demonstrated a complex but ordered pattern of utilisation throughout the year. Coypus feed selectively from a broad range of plants and also select particular parts, such as the leaf blade or fruit in particular seasons.

A few examples of seasonal feeding are presented in Fig. 3. Fig. 3 (i) shows the frequency of feeding on the basal meristem of the tufted sedge (*Carex elata* All.). Each shoot is bitten off at or just below ground level and the pale succulent base eaten; the remainder of the shoot is discarded. *C. elata* is utilised only in the spring but within a month or two the majority of the young plants are destroyed. In spite of this *C. elata* continues to be very abundant at Calthorpe because the replacement shoots are not utilised after about May and grow to maturity. In the spring coypus appear to feed on a wide range of young sprouting plants. This type of feeding is difficult to detect in the field because the entire plant is often consumed but it should be revealed by microscopic examination of faecal samples and of the stomach content of animals killed during control operations; these analyses are currently in progress.

In the summer there is a change to a more selective feeding pattern. At a study site on grazing marshes near Reedham, coypus concentrate on the bases of the Great Pond Sedge (*Carex riparia* Curt.) and the Burr-reed (*Sparganium erectum* L.). In 1971 these plants were utilised sequentially but in 1972 only *S. erectum* was eaten. It seems that these species are alternative food sources during the summer. Selection might depend on individual preferences or on undetected variation in nutritional content from year to year. The wild coypu population, as opposed to the captive group at Calthorpe suffers heavy mortality from trapping which could result in a more varied pattern of feeding. Rats are known to learn food preferences from their parents and in a situation where parents are often killed before this information is transmitted, the population would presumably feed in a more diverse fashion; the same phenomenon might apply to the coypu.

In the late summer and autumn coypus transfer their attention to mature seeds of various types. An example of the utilisation of the Yellow Water Lily

Key to maps on page 52 (numbers killed)



1 - 10



11 - 100



101 - 200

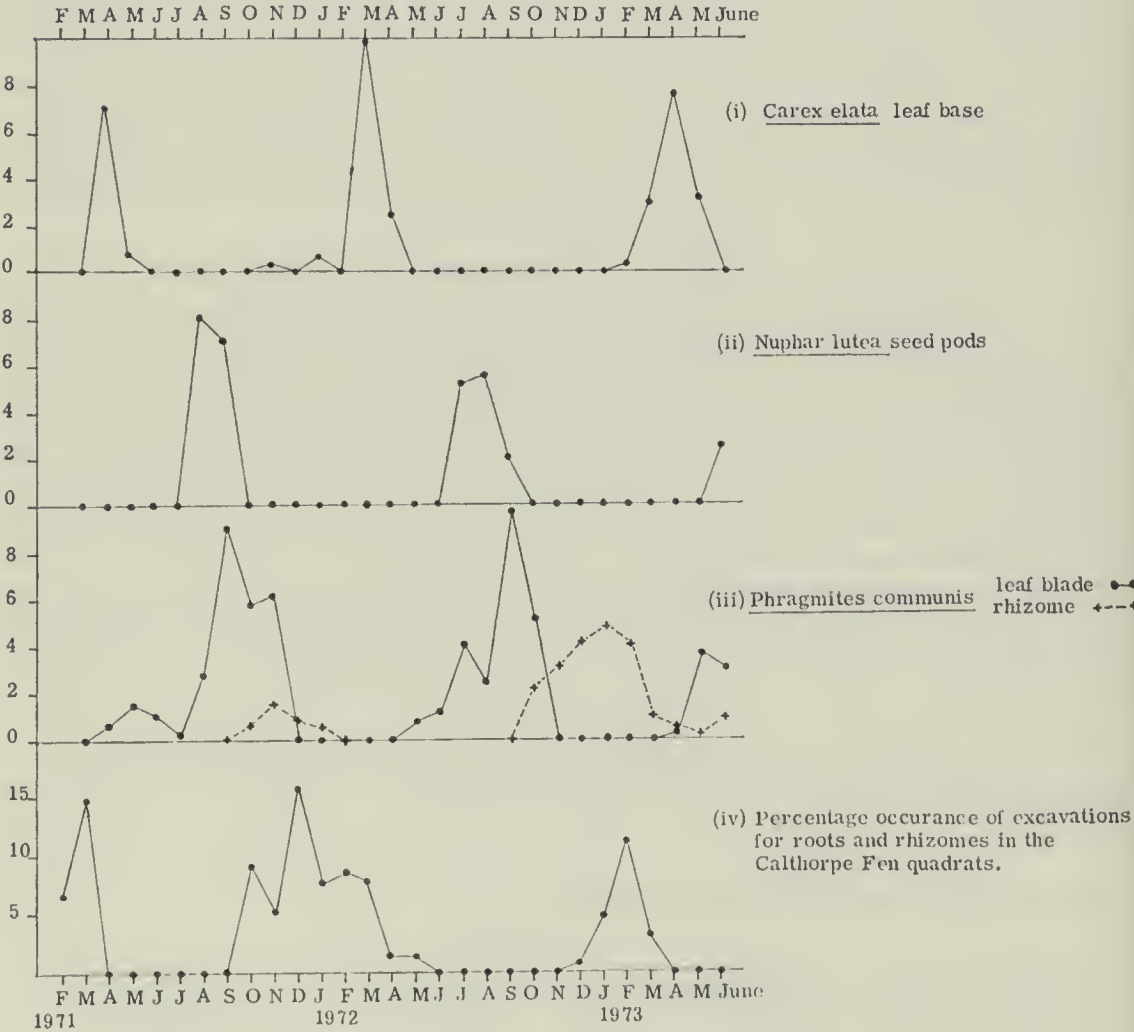


200+

(*Nuphar lutea* L.Sm.) fruits at Calthorpe is shown in Fig. 3 (ii). The well defined pattern of feeding on the lily pods simply reflects availability: coypus start to feed on the pods shortly after they appear and within two months completely remove all those present. In spite of this *N. lutea* continues to flourish in the small broad at Calthorpe probably because coypus do not consume each fruit entirely and because of vegetative propagation. The leaf blades of the reed (*Phragmites communis* Trin.) are also eaten most frequently during the late summer and autumn (Fig. 3 (iii)). This timing might be related to the slow growth of the species but leaves are certainly available from about April onwards so that this pattern cannot be explained simply in terms of availability. In contrast the leaf blades of Reed-grass (*Phalaris arundinacea* L.) are utilised in

FIG. 3. EXAMPLES OF SEASONAL VARIATION IN COYPU FEEDING

In nos. (i) - (iii) the vertical scale indicates the number of quadrats in which feeding is confirmed as a % of the total quadrats examined.



spring and then avoided for the rest of the year. Chemical analysis of these foods are at present being carried out in an attempt to explain these selection patterns.

From the onset of winter onwards coypus excavate the roots and rhizomes of various herbs and these items certainly form the major winter food source. The frequency of excavations in the fen ecotype at Calthorpe are shown in Fig. 3 (iv). The graph of *P. communis* utilisation (Fig. 3 (iii)) also includes a curve showing feeding on the rhizome which chemical analysis has shown to be a rich carbohydrate source in winter. As is the case during all phases of their feeding cycle coypus are highly selective between species. The rhizomes of the Lesser Reedmace (*Typha angustifolia* L.) are clearly preferred at Calthorpe but it has survived, albeit in low numbers, because not all plants are located by coypus in the dense fen habitat and because coypus seldom destroy more than a small part of their extensive rhizome system. In other parts of their range coypus select the rhizomes of the Great Water Dock (*Rumex hydrolapathum* Huds.) and Cowbane (*Circuta virosa* L.). Ellis (1965) has recorded severe reduction in the occurrence of these plants as a direct result of coypu feeding.

A significant aspect of the winter feeding pattern is its variation between winters of different severity. This is partly shown in Fig. 3 (iv) where it is clear that there were fewer excavations in the exceptionally mild winter of 1972/1973 than in the preceding winter (which was also mild, but less so). The reason for this was observably that coypus were utilising the false spring growth, which occurred as early as December in 1972. In other words a spring feeding pattern was superimposed on the normal winter pattern and as a result coypus were considerably fatter in the winter of 1972/1973 than in 1971/1972 (see Fig. 4 and Section 3).

Short grasses appear to be the only items of the coypu diet that are utilised throughout the year although, as might be expected, there is considerable variation in the amount eaten at different times. In the spring there is a dramatic increase in the amount of grazing although pasture is not so extensively grazed as in the winter. Instead coypus intensively graze small areas which are thus maintained as a short and highly productive sward. Grazing intensity remains at high values until July and August when the amount eaten declines. This reduction in utilisation appears to be correlated with the normal mid-year drop in grassland productivity. After August the amount eaten increases again, possibly in response to increased pasture productivity in the late summer. From October grazing declines to the minimum values of January and February when grass has very poor nutritional qualities.

An unfortunate result of the diversity of the coypu feeding strategy is that it allows the utilisation of a wide range of agricultural crops at a number of growth stages. Thus cereals are grazed in the spring and the mature seed heads eaten in the late summer. Various root crops and brassicas are also damaged, particularly in the winter. The most important agricultural damage is to sugar beet which is often eaten in the early summer; small family groups of coypus can devastate several hectares of young beet within a week or two. The aerial shoots are bitten off and discarded and exposed roots gnawed down to ground level. The plant is killed and the loss to agriculture is thus not the weight actually eaten but the weight that the root would have attained by the end of the growing season. Coypus eat about 25% of their body weight each day. If it is assumed that 10%

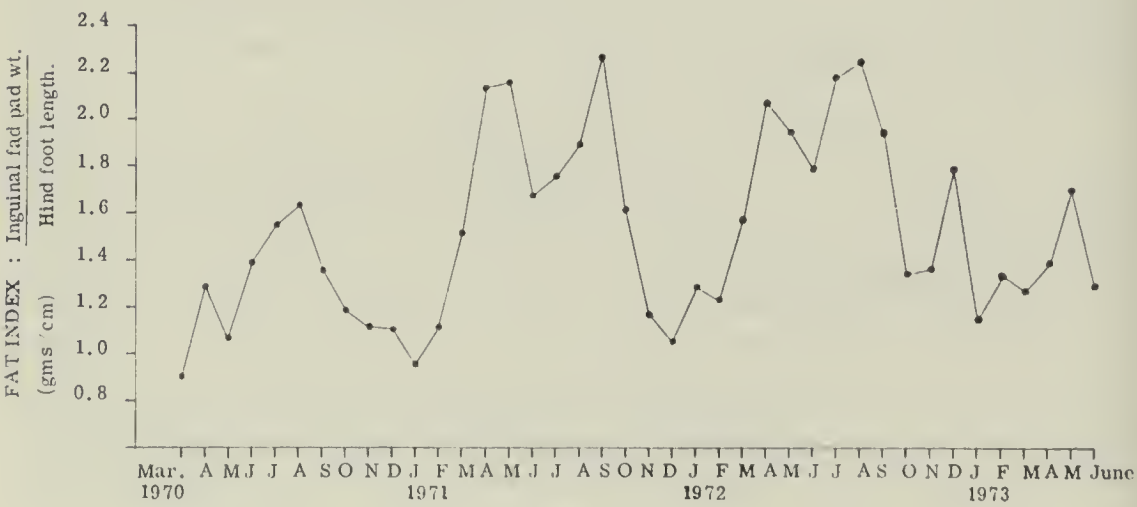
of the coypu diet consists of agricultural crops and that sugar beet is half of the crop part of the diet, then a population of 200,000 (the number estimated to be present in the early 1960's by Norris, 1967) would eat about 2,000 tonnes per year and destroy about 115,000 tonnes.

Variation in condition

Each month 45 coypus are dissected in order to obtain information about seasonal variation in condition and reproductive performance. Condition is assessed partly from the weights of certain fat pads which are divided by hind foot length to give an index corrected for differences in body size. Considerable variation occurs in these indices but in the case of adult females this is largely attributable to variation in the pregnancy stage: females become progressively fatter after about the sixth week of pregnancy and in the week or two preceding parturition have enormous fat deposits throughout the body. Males on the other hand show variation (Fig. 4) which seems to be more simply correlated with variation in climate and food availability. They are usually thin in January and February and then rapidly lay down fat as spring commences. After high fat values in April and May there is a decline in June. Males become fatter in July and remain in good condition until October when values start to decline to the low January values. Animals that are kept in captivity with a constant food supply remain fat throughout the year.

When female fat index values are plotted against those of males from the preceding month there is a reasonable correlation. Since high fat values in the case of females indicates late pregnancy rather than a particular season it seems possible that females are able to reach late pregnancy at times shortly after those at which males get fat in direct response to an improved food supply. This suggestion is preliminary but it does seem likely that there is a relationship between climate and food availability and the number of females reaching late pregnancy.

FIG. 4. SEASONAL VARIATION IN ADULT MALE CONDITION



As can be seen in Fig. 4 there is great variation between years in the male condition cycle. The most consistent variation was the progressively better condition during successive winters. Lowest fat index values were recorded in the winter of 1969/1970 which was of average severity. The mean temperatures of the three winters that followed were progressively higher and males were progressively fatter. This change was probably related to the increase in availability of food during milder winters and to reduction in energy expenditure needed to maintain body temperature. Spring patterns were more erratic but in general they fall into two groups: in the cold springs of 1970 and 1973, when plant growth was delayed, condition improved only slowly. These differences were reflected in the following summers: in 1970 males remained thin for the rest of the year while in 1971 and 1972 they became very fat.

Variation in reproductive success and juvenile survivorship.

Female coypus mature on average at about five months and then breed continuously. There is however considerable variation in the success of pregnancies between different seasons and different years which will be described below. The gestation period is about 132 days and 1 to 13 young are conceived with an average of almost six. Some embryos are resorbed at various stages of pregnancy and the mean litter size at birth is close to five. In addition to partial litter resorption some litters are entirely resorbed and some abort; Newson (1966) has suggested that the proportions of these losses are 28% and 27% respectively. In our current studies we have confirmed that the total litter loss is about 60%. There is, however, variation in the extent of this loss between females of different ages: those over six months of age at conception typically lose 60% of their litters but those under six months old lose about 80%.

Most females conceive again within a few weeks of parturition so that variation in conception frequency is probably not an important determinant of reproductive success under different environmental conditions; the great majority of adult females are pregnant at any time of the year. However, there is variation in the age at which females become mature: in the winter maturity is reached at about seven months of age and in the summer at three months. One might thus expect a higher proportion of breeding females in the summer and thus a higher conception rate in the summer population.

The main factors that influence the number of young born are probably the frequency of resorption, abortion and variation in embryo number. All show seasonal variation: in the winter more resorptions and abortions occur than in the summer. The fact that males are thin at this time suggests that in the winter the population as a whole suffers a nutritional deficit and that increased embryo loss is a response by females to these conditions. This argument is strengthened by a small peak of resorptions in June when males rapidly lose fat. It seems possible that there is some link between the increasing fat levels of females during gestation and the success or failure of the pregnancy. It might be that females resorb or abort when they fail to reach a fat level typical of a particular stage of gestation. If this is the case then it could indicate a reproductive strategy in which females were pregnant for most of the time and in which the pregnancy

was terminated when environmental conditions were poor. Young would thus be produced closer in time to the good conditions that allowed the pregnancy to continue than would be the case if good conditions at conception dictated the timing of parturition. In the English climate, however, large numbers of young are produced in the early winter as a direct result of the good conditions in the autumn and this appears to be a major disadvantage for the population. In general, however, abortion and resorption can be interpreted as mechanisms of a successful reproductive strategy which fails to some degree because of the close proximity of the optimum conditions of autumn and the poor conditions of winter in the English climatic cycle.

The overall loss of litters including loss from abortion and total resorption can be estimated by counting the numbers of litters that survive to successive stages of gestation. Following the precedent of Newson (1966) four week classes are used and the difference between the number in the first and in the last class is an approximation of the total loss for any period. In 1970 the total loss was 64%, in 1971, 57% and in 1972, 38%. This trend conforms with what might be predicted from a hypothesis relating improved food supply with higher reproductive success.

Variation in embryo number also contributes to seasonal and yearly differences in reproductive success. In the period from August 1962 to August 1964, with winters of average severity, mean litter size declined during the winter to a minimum of 5.0 for conceptions in April and then rose to a maximum of 6.8 for those in July (Newson, 1966). This seasonal variation did not occur from 1970 to 1972. Instead litter size remained quite constant with an average of 6.4, that is, at around the summer value of the earlier study.

Juveniles are suckled to about six or seven weeks of age and during this period the massive fat reserves of the females are rapidly depleted. The young start to eat adult food a few days after birth and by two or three weeks are eating quite large amounts. In the summer food is easily obtained and as a result few young die from malnutrition. In the winter, however, coypus are largely dependent on excavated roots and rhizomes. It would probably be difficult for a juvenile to excavate in frozen ground and as a consequence juveniles are thinner, on average, and many probably die from the combined effects of cold and starvation. It might thus be expected that larger numbers of juveniles would survive in milder winters. Some evidence that this is the case has been obtained by comparing the numbers of young in successive age classes in each of the last three years on the assumption that change from one class to the next reflects mortality. In fact the change is only valid as an index because large numbers of very young coypus die from natural causes and the youngest age class is thus underrepresented. The classes used were 0 to 10 weeks and 10 to 20 weeks. In 1970 the percentage change in numbers from the first to the second class was -28% , in 1971 -8% and in 1972 $+4\%$. These data indicate a progressive increase in survival which would inevitably lead to proportionally higher recruitment to the breeding population. The improved survivorship was probably a result of the absence of prolonged periods with frozen ground, to "spring" growth in the winter of 1971/1972 and also to the better feeding conditions during the summers of 1971 and 1972 in contrast to the poor summer of 1970. All these factors would result in an improved food supply for suckling females and in increasing amounts of available food for weaning juveniles.

Population increase and control measures

It thus seems likely that reproductive success and juvenile survivorship have both increased in response to a succession of mild winters and highly productive summers in 1971 and 1972. These factors have caused the increase in population size which is reflected in the increased numbers killed. If we assume that the numbers killed are a true indication of population size, and this is partially confirmed by similar increase in the number of infestations reported, then we can calculate the rate of increase of the population. This increase has been exponential and can be described by the equation:

$$\log y = \log a + 0.019x$$

where "y" is the number of Coypu at a point in time t^2 , "a" is the measured number of Coypu at a previous time t^1 , and "x" is the number of months from t^1 to t^2 .

This equation shows that given a population of coypus of between 8,000 and 11,000 in late 1972 (which was estimated to be the position) an increase of about 7,000 animals could be expected by the end of 1973 unless trapping efforts could be intensified. Accordingly, early in the year the decision was taken by local organisations and by the Ministry of Agriculture, Fisheries and Food to step up their financial contributions to "Coypu Control" and extra trappers have now been deployed. The intention is to review the position in April 1974 when it is hoped that the coypu population will have been reduced to a level that will allow a return to a small, permanent force of trappers. The size of this force will obviously depend on how many coypus are then at large, but it may have to be bigger than the five to seven men employed until recently.

ACKNOWLEDGEMENTS

I would like to thank Monica Wright and Ron Pimm who helped to collect the information presented here and Bob Spode who drew the graphs and maps. I am also grateful to R. A. Davis and Dr. E. W. Bentley who criticised the manuscript and to the trappers of Coypu Control for the supply of coypus.

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Classified notes

INSECTIVORA

Hedgehog (*Erinaceus europaeus*)

Reports received indicate a further increase, which is supported by the numbers seen on gamekeeper's gibbets, the most being 78 in the Brettenham district. A fairly mild autumn, perhaps coupled with the increasing habit of leaving food out, encouraged activity to the end of November but perhaps not as late as last year. An interesting series of Hedgehog deaths was recorded over about 14 miles of road between Hickling and Gt. Yarmouth during the year, showing a July peak.

JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
0	0	2	1	8	9	16	6	3	0	0	0

Mole (*Talpa europaea*)

In common with many other small mammals there are indications of an increase over the 1971 population. One line of corpses counted near Salthouse Heath contained between three and four hundred individuals.

A white specimen was caught near Raveningham during July near to where a litter of white moles was found in 1970.

Common Shrew (*Sorex araneus*)

There were many records of this species during the year throughout the county. A trapping programme conducted at Hoveton Great Broad showed this to be the most abundant mammal present with 45% of the captures being this species. The customary autumn deaths due to old age were noted, particularly in the first half of October.

Pigmy Shrew (*Sorex minutus*)

The usual ratio of Pigmy to Common Shrew in Barn Owl pellets of 1:11 was recorded at several places, except at Beeston St. Lawrence where numbers were equal. Parishes where this species was recorded included Upper Sheringham, Foxley, Heacham, Fleggburgh, Cromer, Wayford and Dilham.

Water Shrew (*Neomys fodiens*)

More records were received than for some years. Two were seen hunting along the edge of the Bure in April at Cawston and Little London; one was found dead during Sept. at Holkham Lake, and three were caught in Longworths at Hoveton. Barn Owl pellets collected in July at Beeston St. Lawrence, Coltishall, Dilham and Wayford all contained the remains of one or more.



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D. Avon and T. Tilford

This male Long-eared Bat was flying inside Norwich Castle on the evening of March 9th, having emerged from hibernation early in the mild spring. It was released outside after being photographed.



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D. Avon and T. Tilford

The alarming spread of American Grey Squirrels in Norfolk during 1970/1 seems to have slowed down, if not actually stopped due no doubt to control pressures. Although a fascinating animal, the extinction of the native Red Squirrel would doubtless follow if it became widely established.



CHIROPTERA

Pipistrelle (*Pipistrellus pipistrellus*)

Numerous Pipistrelle records demonstrate how common this species is. The period for general emergence was the third week in March, although a "small cloud" of bats, possibly this species, was at Little Melton on the 9th.

Several large "maternity colonies" were reported again, the largest being more than 352 at Rollesby. When these were captured for examination on July 5th, 98% had already given birth. At Easton on a June evening, a Pipistrelle appeared to be carrying a young one clinging to its underside while rather clumsily flying at head height along a road.

There were many Oct. sightings, and the last recorded one was in the afternoon of Dec. 14th at Thorpe Hamlet School.

Long-eared Bat (*Plecotus auritus*)

Over a dozen records received. This included six roosting in a hollow acacia at Greshams School; one roosting at Whitlingham April 12th at a roost first mentioned in the 1964 Report; one picked up dead at Snettisham Sept. 26th and one flying around *inside* the Castle Museum, Norwich. on March 9th.

Daubenton's Bat (*Myotis daubentoni*)

Early in the year up to seven were still hibernating in the Attlebridge roost while several were again in the Brinton ice-house.

Work continued on re-opening the Daubenton Chalk Caves roost at Eaton and on Aug. 4th a Norfolk Young Naturalists' work-party broke through. Clearance work was soon completed and a padlocked iron grille was erected to control human access. The effort was rewarded with two Daubentons in the chalk pit on Dec. 4th, one of which successfully hibernated through the whole winter in one of the two caves. (See the *Bull. Geol. Soc. Norfolk* No. 24, 3-14, for an article on the Eaton Caves.) By Nov. 12th only one had re-occupied the Attlebridge roost.

Natterer's Bat (*Myotis natterei*)

Seven localities were noted. Early in the year hibernating animals were found at Attlebridge (3), Easton (1), Weybourne (2) and Brinton (several), and one was squashed on the road at Swanton Morley, March 21st.

Noctule Bat (*Nyctalus noctua*)

Eleven parishes were named in this year's records. An early one, on April 18th, was found in a Framingham Earl bedroom, while a very late one was seen at Swanton Morley on Oct. 31st. The summer roosts at Stoke Holy Cross and Ludham were occupied again, first by Starlings, then by bats. The peak count at Ludham reached 63 on May 22nd.

Roe Deer doe was photographed browsing on grass in the Thetford area. There are the most numerous deer and appear to be increasing and expanding their range in Norfolk.

Eight

P. Richards

RODENTIA

Bank Vole (*Clethrionomys glareolus*)

Only two records of any significance were received, which is unlikely to give a fair representation of the status and distribution of this species. In a series of trappings with Longworth small mammal traps at Hoveton Great Broad during August and September, mainly in "carr", no Bank Voles were recorded, although Wood Mice were; frequently the two species co-exist.

Short-tailed Field Vole (*Microtus agrestis*)

Again the records for this species were fewer than usual, and the predicted build-up in numbers had only occurred in the Breydon Marshes area by the year's end when numbers of Short-eared Owls arrived to feed on them. Two animals were caught in the Longworths set at Hoveton Great Broad in the reed-bed areas which are surrounded by water and "carr". On the north coast in August nests of 3 and 5 were found at Burnham Market, in a garden refuse heap, and at Cley in an old, and partly flooded, Black-headed Gulls nest.

Water Vole (*Arvicola amphibius*)

The impression gained from the records submitted is that this vole was plentiful, particularly in the Corpusty area where observations revealed that about 80% were black in colouration. A single black animal was also reported at Wynd's Bridge, in the Fens. Another dark specimen was captured on May 16th, in a North Walsham garden, after eating a quantity of roots from a much valued broccoli crop.

Wood Mouse (*Apodemus sylvaticus*)

This was the most widely reported species of small mammal. Eleven were caught in the "carr" at Hoveton Great Broad, in August–September; 6 were caught at Stockton at the same time, while at the Blakeney Point Ternery 9 were caught in July at a hoard of seeds. At Taverham the ratio of Wood Mice to Voles, trapping and captures by the cat combined, was about 8:1.

A subjective assessment of status at present is of a static population although a Corpusty observer considered that numbers had dropped and crocus corms were not eaten during the winter months this year.

Harvest Mouse (*Micromys minutus*)

Reported from several localities named in previous reports, including one caught by a cat at Caistor St. Edmunds on July 22nd. They are probably more widely distributed than is generally supposed, so it is hoped as many records as possible will be forwarded to help complete our picture of its distribution. The 10 kilometre square distribution based on the records from the past 20 years is:

West: 50, 62, 64, 69, 70, 72, 74, 78, 80, 81, 84, 90.

East: 02, 03, 04, 07, 10, 11, 12, 13, 20, 21, 22, 29, 30, 31, 32, 33, 39, 40, 42, 49.

House Mouse (*Mus musculus*)

The population appears to have decreased once again judging by all accounts. Observers at Foxley and Corpusty particularly comment on this and it is wondered if an increase in the following species is correlated in any way.

Brown Rat (*Rattus norvegicus*)

The Brown Rat is still all too common throughout the county. Interesting reports included an observation of them feeding on spawning Common Toads at Brinton, while they also accounted for "over 500" eggs on the Blakeney Point ternery. The presence of some numbers in areas of saltmarsh and remote marsh- and occasionally makes one wonder exactly what they find to feed on. A feeding observation of one on a riverside "rond" near Reedham in December eating reed rhizomes serves to show how adaptable the species is.

Several white examples were recorded in December in North Creake, Burnham Norton and Burnham Market.

Coypu (*Myocastor coypus*)

With a succession of mild winters the Coypu is on the increase again. Over 100 were trapped at 4 sites, Hickling, Wickhampton, Halvergate and Haddiscoe. Peak kills were in March and November when over 800 were accounted for. The total East Anglian figure for the year came to 3,252. An article on this remarkable increase appears on pages 49-59.

Red Squirrel (*Sciurus vulgaris*)

There is little change from the general population trend in 1971. The Breckland population was a little depleted, though the North Norfolk animals seem to have suffered little from the "red squirrel disease" and the Wells pine woods hold a thriving colony. In the Suffolk Brecks two 1,000 hectare blocks of forest have been set aside by the Forestry Commission specifically for the conservation of the Red Squirrel.

The first recorded young of the year were born during the first week of March at Horsford and by early May two females regularly visiting an Ashwellthorpe garden were thought to have young in the vicinity.

Grey Squirrel (*Sciurus carolinensis*)

The Grey Squirrel advance during 1972 was far less dramatic than in the previous two years. Although numbers have increased in some of the already established areas there were few new areas occupied. This is no doubt due in part to the control pressures applied - for instance over 70 were on one breckland gibbet.

One was shot at East Winch, May 26th (TF 61), and another was caught in an unbaited Coypu trap alongside a dyke at Wheatfen Broad on Dec. 20th.

All possible sightings are still required so as to document their inevitable spread in this county.

LAGOMORPHA

Rabbit (*Oryctolagus cuniculus*)

As in 1971 the increase in numbers appears to have continued and this has no doubt been assisted by a series of mild winters and the apparently increasing resistance to myxomatosis.

On June 9th in a Mulbarton garden an intriguing observation was made concerning a young rabbit which was playing with four Magpies. Equally interesting was a record of breeding in January received from Ranworth.

Hare (*Lepus europaeus*)

From Breydon and North Norfolk come reports of an increase, which is supported by game records. However, other observers consider there was a continued decline with only 10 pairs on 1,000 acres at Sparham, so the trend for the county is not uniform.

An increase appears to have occurred at Blakeney Point where they were thought to have been feeding on Sea Holly during May.

CETACEA

Porpoise (*Phocoena phocoena*)

There were 6 spring and 7 autumn sightings of Porpoises this year. A school was watched at Hunstanton travelling out of the Wash on March 23rd, and a single in the Wash, April 2nd. A further two were observed off Hunstanton on April 9th apparently feeding in a small area, rather than heading in any particular direction. Another single was in the Wash on May 24th and a dead one washed up on East Hills, Wells, on the 31st with a further one in the Wash on June 6th.

The autumn records included a large school at Cley September 8th; 3 eastwards at Weybourne on the 15th, and a dead one on Sheringham beach later in the month. Another dead one appeared on October 27th this time at Winterton, and 2 days later another single was spotted in the Wash, while November 5th produced one east at Cley and another east at Salthouse.

Pilot Whale (*Globicephala melaena*)

A group of eight or more cetaceans over 20 feet long were seen at Cley on August 20th and considered to be this species (TQG).

Common Dolphin (*Delphinus delphis*)

A skull, probably of this species, found on Holkham beach in December (RPB-O).

CARNIVORA

Fox (*Vulpes vulpes*)

A further slight increase seems to be apparent in the county again this year with slightly more reports than in previous years. It was not uncommon for observers to see odd individuals during the hours of daylight, especially in the months of January to April and again in December, as well as sightings in car headlights. Several people enjoyed tracking foxes in the limited amount of snow we had early in the year, while even more people came to realise that you can actually smell where a fox has been!

A distribution map is being prepared for next year's report so all sightings are still wanted, as are any dead vixens to enable an embryo count to be made.

Badger (*Meles meles*)

The general picture seems to have changed very little since the 1970 report was produced (AEV). There are still only about a dozen occupied setts known in the county. Two were seen in different parts of mid-Norfolk crossing roads after dark in February and September, while reports of singles seen just to the north and to the south-west of Norwich suggests there are still undiscovered setts in these areas. One north Norfolk and one west Norfolk sett was said to have been extended a little, and a sett was apparently uncovered during road-works to the west of Norwich. Plainly insufficient encouragement has been given to our Badgers to provoke an increase.

Mink (*Mustela vison*)

No definite records of this animal were sent in during 1972, so we have cause to be grateful that this animal is not colonising Norfolk as it is some other counties. In the Journal of Zoology (167, 463, August 1972), Drs. M. G. Day and I. Linn reported on a survey of Mink food in England and Wales and found that $\frac{1}{3}$ of the food was birds and $\frac{1}{3}$ mammals, and the remainder was fish, insects and reptiles. The Rabbit was the most important mammal food, with Rats and Water Vole also important. They concluded that Mink had found a vacant ecological feeding niche in Britain and posed no real threat to native British species, though they might be competing with Otters for food.

Ferret (*Putorius furio*)

Three were reported, almost certainly recent escapes. At Framingham Earl on January 3rd one was seen in car headlights; at East Carlton on April 11th a very dark coloured specimen was found dead, tangled in garden nylon netting, and one dead on the "Acle Straights".

Common Seal (*Phoca vitulina*)

Once again the main seal interest was centred on the Wash. Hunting took place again in July under Home Office licence and 380 pups, were taken, although not without the by now customary airing of views in the local press. There was a certain amount of disturbance in the southern Wash by parties involved with the Wash Feasibility Study, but when construction starts it should only affect a small part of the seal population. If long-term plans for more of the Wash to be reclaimed are put into operation, then obviously more will lose their breeding areas.

The total number of pups born in the Wash in 1972 was estimated at 1,200, by the tagging method described in last year's report. This is some 700 less than in 1971 and represents a 37% reduction in numbers born, but the Seals Research Unit does not consider this to represent a significant decline in the total population. The first pups of the year were seen on June 29th.

An interesting series of counts were made on Seal Sand in the Wash throughout the whole year. Numbers peaked 200 on April 9th when an estimate was made by searchlight (DLO).

Recoveries of seal pups tagged in the Wash have come from Lowestoft, Thorpe Ness, Felixstowe and Maldon to the south and Spurn Point, Withernsea, Bridlington, Flamborough Head, Hartlepool and North Berwick to the north. Overseas recoveries have come from Ostend, Dunkirk and Wester Schelde.

Other interesting reports from the Wash area, both in June, included one on the River Ouse as far up as Eau Brink, Tilney and another at King's Lynn eating Mallard ducklings.

At Blakeney Point regular counts were made from May–August (prc). These included a high of 220 in two distinct herds on May 7th, and showed that at least 12 pups were born there. This herd seems fairly "tame" and on August 14th a man was seen swimming with them and eventually "hauled out" himself, only a few feet away from the nearest.

On Scroby Sands there is still a thriving colony, numbers being about the same as last year with a small number of pups born in the last week of June and beginning of July.

Inland records came from Oulton Broad and in the Wensum in Norwich, both at Christmas time.

Grey Seal (*Halichoerus grypus*)

Scroby Sands is the main haunt of Grey Seals on this east coast with over 100 frequently seen, and more than 20 pups were born there in December and January. These seals breed some weeks later than those occurring further north in the British Isles.

One tagged at Scroby on December 17th, weighing 48 lbs., was alive and healthy at Bacton on January 8th where it was returned to the sea to continue its "jaunts" (PGT).

Although the small colony is still present in the Wash, no pups were reported in this area.

Otter (*Lutra lutra*)

Information received was rather more than last year, possibly due to an increasing awareness of the threat to this animal.

In 1971 the report of activity on the Babingley in TF 63 should read TF 62. This year's report is again presented on a 10 kilometre square basis:

- WEST 74. Signs of activity on the Broadwater in Aug.
84. Tracks found on Scolt Head Island in March.
88. Signs of activity on the Little Ouse where the Forestry Commission have given this animal full protection.
89. Several sightings, including cubs in this area where some measure of protection has recently been given.
92. Seen regularly on this stretch of the Wensum (RPB-O).
94. "Seals" in the mud of coastal salt pans where shore crabs had been eaten.
98. Present on the Little Ouse at Shadwell Park where Otter hunters met in August.
- EAST 00. One heard "whistling" in a reed bed in the area (RPB-O).
01. Seen during the autumn and more than one pair thought to be present.
03. "Spraints", "seals" and the remains of a Pike, beside Brinton Lake.
04. Present on the Cley Marshes Reserve.
10. One killed on the road at Colney in November.
11. "Spraints" and fish remains especially noticeable on this part of the Wensum in the autumn. A road casualty at Drayton on Oct. 29th (SLHB).
13. Said to be present in this square.
17. "Spraint" recorded in Jan. on the Waveney near Diss.
42. At Hickling signs were noted at three places during the year. At Horsey there were fewer signs than in previous years, due, it is thought, to an increase in broads traffic.
49. A May sighting was made in this square.

This list of observations speaks for itself. Nowhere in the county do Otters occur as frequently as they did even ten years ago. A more formal Otter survey has now been launched (see last year's Report) and observers with about one day per month to spare are needed to assist.

After last year's mention of the Otter hunters Mr. S. L. H. Babbage, Master and Huntsman of the Eastern Counties Otterhounds, has requested us to print the following report:



"The Eastern Counties Otterhounds drew water systems in Norfolk on 14 days during April to September 1972 and found 8 Otters with no blank days. Otters were hunted for up to two hours and the hounds were then drawn off to avoid a kill, especially with bitch otters. Only one was accounted for – an old dog Otter going back in condition.

This was in line with the policy operative since 1969, following the interim report of the Otter Survey sponsored by the Mammal Society. In order to help the increase of otters the Masters of Otterhounds Association accepted the recommendations of the British Field Sports Society for the modification (or in some cases, cessation) of hunting in certain areas. The policy we then accepted remains in force and we have continued to co-operate in the survey. A report on the last three years was sent in, for the Mammal Society's further report in 1973.¹

We also co-operate with the Nature Conservancy Experimental Station at Monkswood and one liver was sent there for analysis of residual pesticides. It appears that in East Anglia these are at a safe level in relation to breeding.²

The wishes of landowners and other interests are respected.³

It is *my* view that otters are on the increase. We found otters on the Rivers Bure, Stiffkey, Waveney, Wissey, Ant and Thet. Having lived in the area for many years and taking into account the vast water shed of the Broads and coupled with observations of the work of otters in this, an area largely not drawn by our hounds, I would estimate that the number of otters in Norfolk may well be in the region of 150."⁴

Editor's comments:

- ¹ We gather that preliminary analysis by the Mammal Society shows there has been no observed recovery of the species in south and eastern England. The report with its recommendations is still awaited.
- ² It is not possible to assess general levels from a single liver.
- ³ We accept that under Mr. Babbage more care has been taken to obtain permission to hunt property, though land ownership patterns are very complex and can cause difficulties.
- ⁴ Our estimate of the total Norfolk population is considerably below 150.

Stoat (*Mustela erminea*)

More reports than last year and considered to be frequent in most areas. Up to 29 were seen on a single gamekeeper's gibbet, though most reports of this nature recorded smaller numbers. One was recorded in the Scolt Head Island ternery in June and July, but only fed on Rabbits, although its tracks were found within inches of Common Terns nests.

Three white stoats were caught near Great Snoring and a single was seen in Jan. on Fleggburgh Marshes.

Weasel (*Mustela nivalis*)

There were over 60 individual sightings reported this year and although reported as common, one observer considered numbers had dropped in mid-Norfolk.

Two especially interesting sightings were made. On March 31st between Cockthorpe and Binham one approached along the road very close to the cycling observer. The animal darted into the hedge at the last minute, dropping the mouse it was carrying, which lay still for about a minute before it got up and ran off into the hedgerow opposite. Norwich City Hall steps was the most unlikely venue for another Weasel which was spotted on Aug. 10th.

ARTIODACTYLA

Red Deer (*Cervus elephas*)

The total Norfolk population has changed little since 1970 when it stood at little over 100.

Several "wallows" which are used particularly during the rut were located, and one group of 15 hinds and a stag were seen at Bridgham Heath on Dec. 3rd.

Away from the usual areas a young stag and four hinds were watched grazing at Cranworth, April 21st, and one was seen on a Stoke Ferry farm, June 10th. Sub-fossil, broken antlers came from Titchwell beach and a dyke near Hickling Broad.

Fallow Deer (*Dama dama*)

Wild herds of Fallow Deer exist at only two places in Norfolk, but herds are maintained at Great Witchingham, Melton Constable, Holkham and Houghton. At the latter park on April 11th at least 45 white animals were visible from the public road.

In the Horsford area it was considered that there were two groups of about 10, chiefly dark in colour. One young animal was nearly stepped on in this area in the spring before it bounded away. The scattered animals in the King's Lynn area were detected more from their slots than from sightings, although one pale coloured buck and three does were seen at Castle Rising.

Roe Deer (*Capreolus capreolus*)

Numerous sightings throughout the Breckland area, while sightings at Castle Rising and West Newton again indicates the presence of Roe in the west. A very marked figure of 8 rutting ring was seen at Mundford.

The most outstanding record of the year concerns a partly albino Roe doe kid injured by a vehicle on Aug. 4th, on the Thetford Chase. The animal's haunches, back legs, shoulders and head except for one ear were white; its saddle was the normal colour. This is apparently the first occurrence of a Skewbald Roe in this area (RW).

Muntjac Deer (*Muntiacus reevesi*)

Only four records of this elusive species.

On about April 14th a slightly injured one 18 inches high turned up on a farm at Wisbech in the Fens. At Castle Rising, characteristic slots were found; at Hillington on Oct. 6th one was seen in car headlights (RPB-O) and at Hedenham later in the month another was flushed in a wood (EAE).

Chinese Water Deer (*Hydropotes inermis*)

Partly as a result of an appeal for information on Chinese Water Deer in the local press in early 1973, we now have an improved knowledge of this species. Reports of more than a dozen individuals were received.

The Broadland parishes of Hoveton, Woodbastwick, Ranworth, Ludham, Catfield, Stalham, Hickling and Potter Heigham all have some and probably originated from animals which escaped from Horning and Stalham. A Fawn was seen at Ranworth and one was said to have been found dead in a Coypu trap near Catfield. An immature male knocked down and killed at Hoveton March 22nd weighted 8.4 kg. and had some unfortunate "mange" in its coat giving it a "shorn appearance" over much of the body.

Near Thorpe Market numerous tracks were found in December (RPB-O) and at Cley on the evening of May 1st, one emerged from a reedy ditch and was watched for five minutes. On the eastern end of Scolt Head Island tracks of three were found on June 1st amongst the dunes and leading down to the beach to disappear under the rising water (CRP). A report of "three young Red Deer" on Titchwell Marsh in mid-June were surely the same animals.

All sightings of small deer are wanted.

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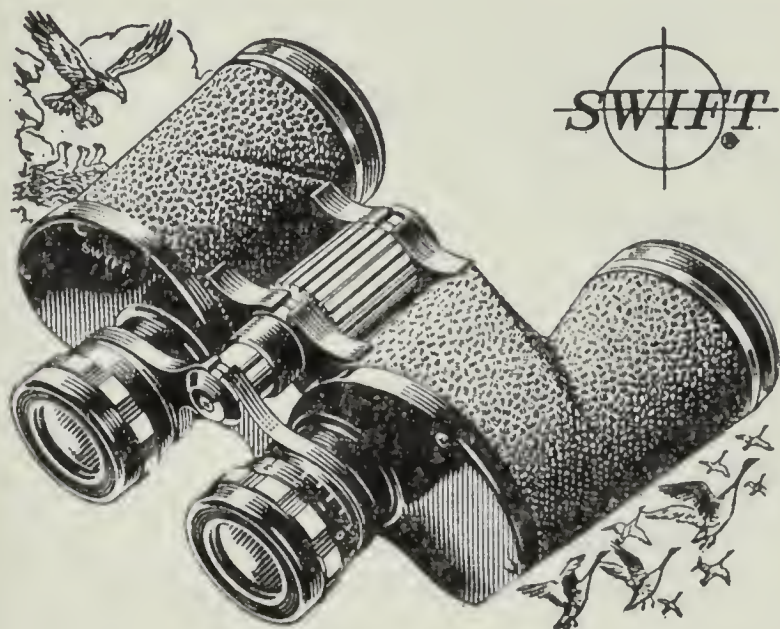
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Norfolk Naturalists Trust Properties

Date Acquired		Acreage		Status*
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1926	Cley Marshes	435	Gift	S.S.S.I.†
1937	Duchess's Pightle, Burnham Overby..	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	400	Purchased, Gift & Agreement	S.S.S.I.
1971	Salthouse Marshes	200	Agreement	S.S.S.I.
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and 1969				
1945	" "	500	Leased	N.N.R.
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1952	" "			S.S.S.I.
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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 agreement with the Nature Conservancy, 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. " Site of Special Scientific Interest

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

Registered Office of the Trust: 72 Cathedral Close, Norwich, NOR 16P
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Details of membership will be sent on request.

