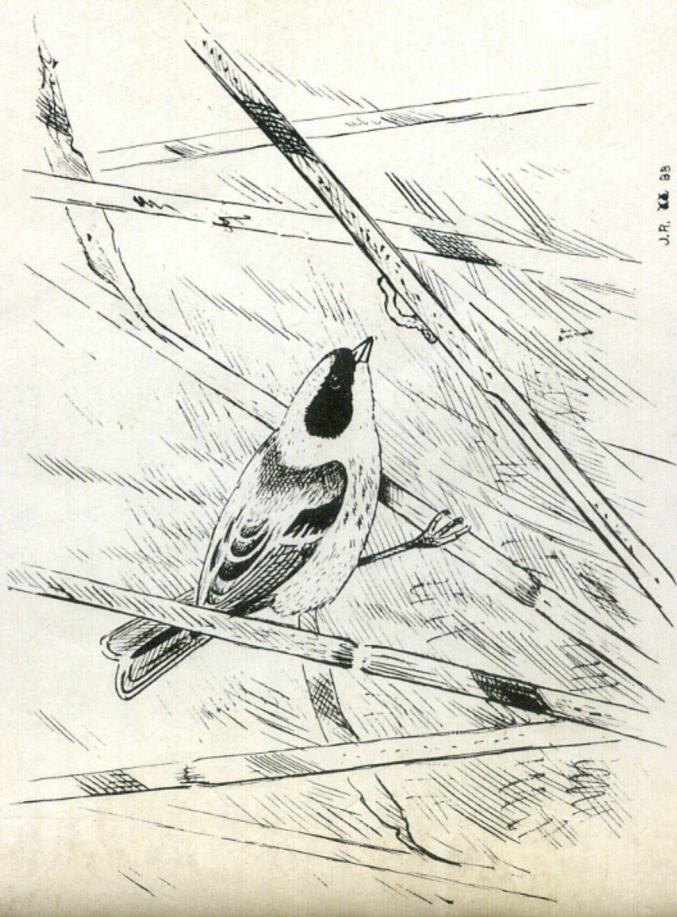


The Sussex Bird Report

No. 40 1987



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Cover drawing of Penduline Tit by John Reaney
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Reed and Sedge Warbler Survey: This 2-year survey, carried out on behalf of the BTO and organised in Sussex by A. J. Prater, was completed in 1987. Full details are given on pages 81-96 and all participants are thanked for their help.

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Text illustrations:

Richard Kemp's drawings show Little Bittern (p.16), Red-breasted Goose with Brents (p.19), Sabine's Gulls (p.40), Cuckoo (p.45), Alpine Swifts (p.47), Lapwing (p.80) and Sedge Warbler (p.96).

As we go to press we learn of the sad death of Mrs. Margaret Millner who, for a number of years, cut up and pasted the Society's records prior to their use in writing the *Sussex Bird Report*. Her hard work and dedication to this time-consuming and often arduous task will be greatly missed.

REVIEW OF 1987

by Roy Sanderson and Paul James

The first few days of January were mild, wet and windy with little of note recorded except for an adult **Ring-billed Gull** in the Cuckmere Valley on the 1st, 2 **Bitterns** over Combe Haven on the 3rd and the Chichester Harbour **Black Brant** which remained until the 7th. The development of a large anticyclone over southern England from the 10th produced a marked change to intensely cold weather. A total of 5 cm of snow fell on the 11th and the maximum daytime air temperature on this date was -4°C . More snow fell over the next few days and on the 13th the temperature fell to -13°C at East Grinstead. Bitterly cold north-east winds caused extensive drifting of the lying snow and many roads in the county were blocked.

The effect of this severe weather on birds was dramatic. An almost complete exodus of **Golden Plover**, **Lapwings** and **Redwings** from the county took place and large-scale diurnal movements of the former 2 species were noted on the 10-11th. Numbers of **Wigeon** increased dramatically and the monthly wildfowl count revealed record-breaking numbers of **Gadwall**. A count of 2013 **Coot** at Bewl Water on the 18th was the highest total ever recorded for a single site in Sussex. As in the cold spell of 1985 there were many reports of **Red-necked Grebes**, **Smew** and **Goosanders**. The former species was widely scattered along the coast and a total of 10 were recorded inland, including up to 7 at Bewl Water. **Smew** occurred at 14 localities and the largest concentrations reported were 26 at Northpoint GP and 16 at the Crumbles GP. **Goosanders** were less numerous than in 1985 but up to 28 at Arlington Reservoir was noteworthy. A major influx of **Scaup** occurred on the 17th and **Velvet Scoters** appeared in small numbers at 6 localities. A male **Ferruginous Duck** at Chichester GP on the 10th and 13th was perhaps associated with the onset of the severe weather. Grey geese were surprisingly scarce, given the harsh conditions, with just a scattering of **Whitefronts** reported and 2 parties of **Pink-fee** on the 11th. Flocks of **Brent Geese** occurred at several sites not normally frequented by the species and the **Black Brant** was relocated at Pagham on the 11th. A party of 17 **Barnacle Geese** at Waltham Brooks on this date were possibly wild birds. The regular herd of **Bewick's Swans** in the Arun Valley totalled 130 during the month and there were 5 **Whooper Swans** at Barcombe Reservoir on the 24th.

Jack Snipe were displaced by the freeze from their normal feeding areas and a scattering of **Woodcock** and 4 more **Bitterns** were reported. The discovery of a flock of up to 28 **Lapland Buntings** on Pevensy Levels generated much local interest, this being the largest party recorded in the county since 1956. This normally scarce species was also seen in smaller numbers at 3 other localities during the month. Large flocks of **Bramblings** occurred at Brooklands, Climping and Rye and there were also 300 **Skylarks**, 300 **Linnets** and 100 **Tree Sparrows** at the former site. A flock of up to 30 **Crossbills** at Easebourne from the 18th and up to 31 **Twite** at Pagham Harbour during the month were also noteworthy, but **Siskins** were very scarce. The arctic conditions took their toll on local bird populations; for example, at Pagham Harbour 83 corpses of 21 species were found. (The true numbers killed are not known as the incident was discovered several weeks after the cold spell, when bodies were decomposing and many would have disappeared.) The worst affected species were **Dunlin**, **Redshank** and **Shelduck**.

A gradual thaw set in towards the end of the month and with it coincided the appearance of an adult **Red-breasted Goose** at Pagham for 5 days from the 23rd and 2 **Waxwings** at Rye Harbour on the 24th. On the 28th an easterly flow re-established itself and many ponds and reservoirs in the county remained frozen over.

Early February was cloudy and mild but cold winds from the north-east with

followed from the 16th but these were replaced by easterly winds which persisted until the 28th when the airstream backed to the north-west. A warmer, south-westerly flow returned on the 30th.

The month opened with an inland **Arctic Skua** at Weir Wood on the 1st and 1-2 **Hoopoes** and a **Golden Oriole** at Beachy Head on the 2nd. Another **Hoopoe** was seen at Rye Harbour the same day and an **Alpine Swift** at the Crumbles. A **Woodlark** and a male **Montagu's Harrier** were recorded at Belle Tout on the 3rd and a **Black Kite** at Beachy Head and an **Osprey** at Weir Wood the following day. An exceptional influx of **Night Herons** occurred, with 2 in the Cuckmere Valley on the 4th, one remaining until the 6th, and a further 2 at Chichester GP on the 5th. The first of 6 **Serins** recorded in the county during the month appeared at Selsey Bill on the 6th and on the same date there were 3 **Temminck's Stints** at Rye Harbour. The latter species also put on a good showing, with a minimum total of 10 and possibly as many as 15 recorded at 4 localities up to the 26th.

Light easterly winds and poor visibility at sea on 9th May produced one of the very few large coastal movements of the spring with 23 **Velvet Scoters**, 17 **Avocets**, 51 **Pomarine Skuas**, 412 **'Commic' Terns**, 5 **Black Terns** and a **Puffin** recorded at Beachy Head. An **Iceland Gull** at Church Norton on this date was the only acceptable record of the species in the county in 1987. A splendid male **Little Bittern** was discovered at Chichester GP the following day and there was also a **Honey Buzzard** over Eastbourne and a **Montagu's Harrier** at Combe Haven. A **Pectoral Sandpiper** on Pevensey Levels from the 11th to the 14th was only the third spring record for the county, and an **Ashy-headed Wagtail** at this locality on the 12th was only the second ever for Sussex. Overshooting vagrants in the next few days included **Purple Herons** at St Leonards on the 12-13th and at Pett Level on the 17-19th, a **Red-rumped Swallow** at Beachy Head sporadically from the 12th to the 17th, and a **Black-winged Stilt** at Pagham Harbour briefly on the 19th, with another over South Malling on 25th. The flood of unusual birds continued with a **Bee-eater** and a singing male **Scarlet Rosefinch** at Beachy Head on the 23rd and 29th respectively, another **Night Heron** at Arlington from the 24th into June, the third **Red-rumped Swallow** of the spring at Rye Harbour on the 26th, and a **Little Egret** at Pagham Harbour on the 29th. Finally, a female **Black-eared Wheatear** at Beachy Head on 31st was a county 'first'.

June, normally a quiet month, was one of the wettest on record with cold northerly winds dominating the first three weeks. The last few days, however, were very warm and humid with winds from the south. The early part of the month contained some surprises, namely a singing male **Icterine Warbler** trapped at Rye Harbour on the 4th and a **Cory's Shearwater** which flew east at Selsey Bill on the 6th, the first June records of these species for Sussex. Also on 6th, a first-summer **Ring-billed Gull** was seen at the Crumbles. **Roseate Terns**, probably summering non-breeding birds, were recorded at Eastbourne and Rye Harbour during the month; there was a summer-plumaged adult **White-winged Black Tern** at the latter locality on the 14th and a **Gull-billed Tern** at Langney Point on the 20th. Further **Serins** were reported at Beachy Head on the 20th and 24th and a male **Red-backed Shrike** in suitable breeding habitat in Ashdown Forest on the 21st but not subsequently. The month closed with **Spoonbills** at 3 localities on the 29th.

Breeding species enjoyed mixed fortunes. Terns did well at Rye Harbour and the Newhaven **Kittiwake** colony continued to flourish. A pair of **Garganey** bred successfully at Rye Harbour and another pair summered at Waltham Brooks. Good numbers of **Quail** were heard calling, but the dates involved suggest that these were mainly failed breeders from the Continent. **Marsh Warblers** were recorded singing at 4 sites but there was no evidence of breeding. Signs of recovery in the numbers of **Sand Martins** and **Whitethroats** were particularly welcome, given their recent decline due to drought in the Sahel region of the Sahara. On the

some sleet returned on the 14th. Slightly milder air moved south on the 22nd but even then piles of ice remained on the sides of roads, a reminder of January's severe weather. The month, in contrast to January, was very quiet and little of note was recorded. A **Great Grey Shrike** in Ashdown Forest from the 8th remained into early April and there was a **Red Kite** there on the 15th, the first of 4 recorded in the county during the year. A concentration of 450 **Great Crested Grebes** between Hove and Saldean on the 18th was exceptional and at Seaford a total of 429 divers flew east during the month. The Arun Valley **Bewick's Swans** peaked at 148 on the 14th and a male **Red-crested Pochard** appeared at Rye Harbour on the 15th.

Scandinavia experienced very cold weather in early March and in Sussex the development of another anticyclone with an associated easterly flow produced a dusting of snow and temperatures around freezing until mid-month. 'Spring-like' conditions were experienced on the 14th but less than a week later there was more snow, with 30 cm in Hampshire on the 19th. Snow turned to rain on the 22nd and there was a return to mild weather and severe gales on the 27th. The month ended with sleet showers. Summer migrants were generally slow to arrive, although an extremely early **Little Ringed Plover** was recorded at Gatwick on the 7th. This was followed by a **Chiffchaff** at Selsey on the 9th and a **Wheatear** at Pagham Harbour on the 10th. A **Woodlark** flew over Bewl Water on the 15th and the first migrant **Black Redstarts** appeared on the coast on this date. Another **Red Kite** was seen at Combe Haven on the 16th. Return passage of **Brent Geese** peaked on the 21st and there were 119 divers east at Seaford the following day. A scattering of **Firecrests** appeared towards the end of the month and the first **Sand Martin** was recorded at Chichester GP on the 25th. **Willow Warbler** and **Blackcap** appeared on the 28th and a **Swallow** at Gatwick on the 29th.

Early April was cold and wet with low pressure and easterly winds dominating until the 10th. A ridge of high pressure on the 12th brought warm air up from Africa and on the 19th the temperature reached 17°C. The remainder of the month continued warm and sunny, encouraging nest-box species to commence their earliest nesting season since 1981. The month opened with a small influx of **Garganey** and a heavy passage of **Common Scoters** from the 3rd to the 5th. A **Spotted Flycatcher** at Old Lodge on the latter date was the earliest record for the county. The settled weather in mid-month led to the arrival of most of the remaining common summer migrants and also a few scarce species. A **Wryneck** was recorded at Church Norton on the 12th and a very early **Hobby** at Littlehampton the following day. On the 17th there was a **Red-rumped Swallow** at Pett Level, a **Hoopoe** at Brighton Marina, the first **Marsh Harrier** of the year, at Seaford, and a flock of 18 **Avocets** at Worthing, Rottingdean and Beachy Head. Another **Wryneck** was recorded on the 18th at Cuckmere Haven and 3 **Dotterel** on the downs near Woodingdean the following day. Two **Wood Sandpipers** at Waltham Brooks on the 20th were the first of 20 reported in the county during the spring. A **Kentish Plover** appeared at Littlehampton on the 22nd and 2 **Glossy Ibis** stayed at Pett Level for 3 days from the 25th. Also on 25th the first **Roseate Tern** of the year was recorded at Rye Harbour, where a **Dotterel** was present the following day. A **Golden Oriole** at Icklesham on the 27th was the first of 4 recorded in the county during the spring, whilst on the same date a ring-tail **Montagu's Harrier** was present at Beachy Head. The month closed with an **Osprey** at Weir Wood on the 29th-30th.

May 1987 will long be remembered for the exceptional total of unusual species that occurred in Sussex. A large area of high pressure in mid-Atlantic at the beginning of the month produced cold northerly winds which grounded overshooting vagrants. The high gradually drifted east, resulting in the return of warm southerly air for several days from the 8th. A further spell of northerlies

debit side **Barn Owls** declined still further, with only 3 breeding pairs reported, and only 1 pair of **Hobbies** was known to have bred.

July continued warm and even hot up to the 16th. A shallow low pressure area then brought rain to the county and there was flooding in some areas on the 18-19th. The last 10 days of the month were dull with scarcely any sunshine. The month opened promisingly with a female **Red-footed Falcon** near Woodingdean on the 3rd, part of a small national influx at the time, and a **Collared Pratincole** at Pagharn Harbour on the 4th. Passage of returning waders was well under way by mid-month but **Curllew Sandpipers** and **Little Stints** were very scarce. **Pectoral Sandpipers** occurred at Arundel WFT on the 18th and at Pett Level from the 24th. A generally quiet month closed with a male **Montagu's Harrier** at Rye Harbour on the 25th; a **Little Egret** at Thorney and Ferring Rife on the 26th which then moved to the Lower Cuckmere; and a **Melodious Warbler** trapped at Icklesham on the 28th, the first July record for Sussex.

Early August was cloudy with a westerly airstream persisting. The subsequent development of a ridge of high pressure produced a number of hot and sunny days, but thunderstorms developed on the 21st and then a deep rain-bearing low pressure system moved north over East Anglia and the Low Countries on the 24th. The month ended with light easterly winds.

Early August was very quiet except for a scattering of **Wood Warblers** on the coast and the **Little Egret** and **Pectoral Sandpiper** which remained from July. A **Stone Curlew** appeared briefly at Beachy Head on the 8th and there was another **Roseate Tern** at Langney Point on the 9th. The settled weather provided ideal conditions for raptor passage and the first **Osprey** and **Marsh Harrier** of the autumn were recorded on the 9th and 11th respectively. An **Ortolan Bunting** flew over Combe Haven on the 14th and a juvenile **Woodchat Shrike**, still with some downy feathers, was located at Sidlesham Ferry. The latter, the earliest autumn record for the county, remained until the following day when another **Gull-billed Tern** passed Langney Point. A **Spotted Crane** was heard calling at a coastal locality on the 14th and 22nd.

The deep depression of 24th August produced a spectacular fall of migrants on the coast of East Anglia. Probably associated with this arrival were several **Wrynecks** late in the month, an **Icterine Warbler** at Beachy Head on the 28th, and large numbers of 'northern' **Willow Warblers** at this locality on the 29-30th. Up to 3 **Spotted Crakes** were present at Arundel WFT from the 26th into September and there were up to 4 **Dotterel** at Highdole Hill from the 29th. A **Tawny Pipit** at Beachy Head on the 30th was the first of 5 recorded there in the autumn, and there was also a **Red-necked Grebe** at the Crumbles on this date.

Early September was changeable, with rain and gale-force winds on the 5th. A warm front moved east across the county the following day and the unsettled conditions continued, although rainfall was not heavy. Another gale occurred on the 12th but the 16-20th were warm and sunny. A low tracked east on the 24th, resulting in an abrupt temperature change as the wind swung north-west with heavy showers and cold nights. A large high became established on the 27th with light easterly winds persisting to the end of the month.

A **Roseate Tern** at Brighton Marina on the 3rd was possibly that present at this locality from the 21st to the 25th. Another **Little Egret** was found at West Wittering on the 4th where it remained until at least the 20th, and the only **Aquatic Warbler** of the year appeared at Combe Haven on the 7th. The next few days were fairly quiet, although seawatching produced 5 **Manx** and 3 **Sooty Shearwaters** at Worthing and a **Pomarine Skua** at Langney Point on the 12th. Another **Sooty** was recorded off Bexhill the following day. A **Corncrake** was flushed at Church Norton on the 14th and the first **Lapland Bunting** of the autumn occurred at Beachy Head on the 15th. A **Ferruginous Duck** associating with Pochar on the

Crumbles from the 16th remained into early October. The major rarity of the month, a **Wilson's Phalarope**, was found at Sidlesham Ferry on the 18th where it remained until the 26th. Further seawatching produced a **Baleartic Shearwater** and 10 **Arctic Skuas** at Worthing on the 19th and 2 more **Pomarine Skuas**, at Selsey Bill and Brighton Marina on the 20th and 21st respectively. **Tawny Pipits** were reported at Sidlesham Ferry on the latter date and at Climping on the 22nd. The first returning **Brent Geese** occurred on the 25th and a concentration of 32 **Curllew Sandpipers** at Sidlesham Ferry on the 27th was noteworthy. The month closed with an adult **Crane** at Thorney Deepes on the 27-28th.

The high pressure of late September continued to dominate the weather in early October, but the development of a deep low with an associated cold front stretching from Iberia to Scotland brought gales and torrential rain to the county on the 9th. The next few days continued unsettled. Then on the night of the 15-16th a secondary depression moving up the English Channel suddenly deepened and turned inland. As the low crossed the Midlands and out into the North Sea, winds at its centre were a mere 15 mph, but in the warm air sector to the east of the depression they reached hurricane force. The result was devastating, with several million trees blown down in Sussex alone and extensive structural damage over the whole of south-east England from Hampshire to Essex. A large high over Russia blocked low pressure over the British Isles and as a result Sussex had experienced five times its normal October rainfall by the end of the third week of the month. A ridge of high pressure on the 22nd brought dry but cool weather to the county with some fog. The remainder of the month was relatively mild, with high-altitude southerly winds bringing dust from the Sahara to some areas.

The settled start to October resulted in the appearance of a number of Siberian vagrants on the east coast and perhaps associated with these was a **Little Bunting** trapped at Littleington on the 4th. An adult **Penduline Tit** at Pett Level on this date was even more unexpected, being the first record for Sussex. The first few days of the month also produced a **Great Grey Shrike** and a **Tawny Pipit** at Pagharn Harbour on the 3rd, the former staying until the following day, and 2 **Lapland Buntings** in the Cuckmere on the 4th. A remarkable seawatch at Langney Point on the 9th produced an exceptional 160 **Sooty Shearwaters**, part of a larger movement observed at Dungeness on this date. A total of 40 **Manx Shearwaters** also occurred and there were 13 at Worthing on this date. An **Olive-backed Pipit** at Beachy Head on the 11th was another first for the county and on the same day there was a **Pallas's Warbler** and a male **Cirl Bunting** at Church Norton. A **Little Auk** picked up exhausted at Steyning on the 12th was very early.

The destructive gale of 16th October 'wrecked' many seabirds along the coast. A minimum total of 19 **Sabine's Gulls**, mainly adults, were recorded from Cuckmere Haven to Chichester Harbour, and there were c.15 **Grey Phalaropes**, including an inland bird at Bewl Water on the 17th. A **Leach's Petrel** was found dying at Maynards Green on the 16th and live birds were recorded at Brighton Marina and Church Norton on the 17th and 19th respectively. A **Storm Petrel** found exhausted in a Ferring garden on the 16th was kept overnight and released the following day. Also associated with the severe weather conditions were juvenile **Long-tailed Skuas** at Beachy Head and Selsey Bill on the 18th and 20th respectively, and movements of 24 **Manx Shearwaters** at Selsey Bill and 15 **Manx** and 2 **Cory's** at Beachy Head also on the 18th. **Little Gulls** appeared in large numbers, with peak movements of 50 west at Selsey Bill on the 17th and 36 west on the 19th.

Scarce species were not restricted to seabirds. A **Red-backed Shrike** was present at Pett from the 16th to 25th and there were late records of **Wryneck** and **Hobby** at Church Norton and Horam on the 19th and 22nd respectively. A **Darford Warbler** remained at Sidlesham Ferry for 3 days from the 24th and a

Raven was a surprising find at Combe Haven on this date. Another Pallas's Warbler appeared at Belle Tout on the 25th, and at the other end of the county there was a White-rumped Sandpiper at Sidlesham Ferry which remained until the 27th. Eclipsing all of these, however, were 3 more Penduline Tits (two adults and a first-winter) at a locality in East Sussex on 26th and 27th. The month closed with a Spotted Crake at Paghham Harbour from the 28th and a fall of Black Redstarts on the coast on the 31st.

In early November a high-pressure area over France and southern England produced dry conditions with light south-east winds and fog at night. On the 9th a low moved south-east introducing a change to unsettled westerly weather. This was followed by a period of blustery showers with gale force south-east winds. The establishment of high pressure to the south pushed the passage of fronts further north, but on the 20th a cold front moved south, bringing colder showery weather to all parts. A period of quieter weather followed as pressure rebuilt, and fog and frost were widespread from the 27th to the 29th. The month, in comparison to October, was fairly dull. At Beachy Head a Great Grey Shrike and a Lapland Bunting appeared on the 1st and a Dartford Warbler and a late Marsh Harrier on the 3rd and 6th respectively. A Dartford Warbler was also present at Littlehampton GC, and there was a female Red-crested Pochard at Newhaven Tidemills on the 3rd. A Reed Warbler at Thorney on the 8th was the latest county record, and on the 9th the Black Brant returned to winter at this site. A Great Grey Shrike in Ashdown Forest from the 14th was presumably the same bird as that present in the early part of the year. A Little Auk appeared at Church Norton on the 21st and a Red-necked Grebe at this locality from the 27th remained into 1988. On 28th the year's only Rough-legged Buzzard appeared over Horsham. Winter thrushes were very scarce during the month, probably due to the lack of cold weather, as were Redpolls and Siskins, and there were virtually no reports of Bramblings. A total of 17 Snow Buntings were recorded, including 8 on the Crumbles and an inland bird at Chantry Hill.

In December the high rebuilt to the west and then drifted northwards with increasing easterly winds as a low moved up from Spain. A cold front moved south across the British Isles on the 7th, followed by a period of settled weather with light easterly winds, clear skies and frosts at night. Milder air moving up from Biscay was blocked by the high for several days but it eventually reached Sussex on the 15th, briefly breaking up the dry settled weather. Pressure and temperatures recovered on the 18th, and southern England was mainly dry and mild over Christmas but with strong south-west winds for much of the period.

The colder weather in early December produced 5 Snew at the Crumbles on the 3rd and a scattering of 42 White-fronted Geese between the 2nd and the 15th. A Bean Goose was present with White-fronts at Weir Wood from the 10th to the 15th. Up to 18 Scaup were recorded at Rye Harbour and 9 on the Crumbles during the month. Long-tailed Ducks at Paghham Harbour and the Crumbles from the 1st and the 12th respectively remained into 1988. The regular herd of Bewick's Swans in the Arun Valley built up to 76 and there were also 10 on Lewes Brooks. Three Whooper Swans passed west over Thorney Island on the 7th. Red Kites (possibly the same) were recorded in the Cuckmere and at Heathfield on the 19th and the 21st respectively; and there were 2 Curlew Sandpipers roosting with Dunlin at West Wittering on the former date. Two more Pallas's Warblers occurred, the first at Climping on the 5-6th and the latter in Friston Forest on the 25th and 28th. The year ended with a flock of 31 White-fronts and a Pink-foot at Pett Level on the 27th.

Acknowledgement

Grateful thanks are due to Roy Sanderson who provided the detailed weather summary on which this review is based. P.J.

CLASSIFIED RECORDS FOR 1987

by P. James

This list covers all species in Categories A and C of the British Ornithologists' Union check list. Records of birds ringed have not been cross-referenced to the bird-ringing summary. The breeding count table (page 46) should be read in conjunction with the summaries for individual species in the following list. Records of national rarities have only been included if the Society has been notified of their acceptance by British Birds, at the time of going to press. Observers are reminded that all records of unusual species (see list on inside back cover) are considered by the Records Committee and only those fully authenticated will be published.

The following abbreviations are used in the Systematic List as standard practice: E, W, N, S, etc., cardinal points of the compass; GP, gravel pit(s); GC, golf course; LNR, Local Nature Reserve; NR, Nature Reserve; NNR, National Nature Reserve; Res., Reservoir; SSSI, a declared Site of Special Scientific Interest; SF, sewage farm or works; WFT, Wildfowl Trust; Hbr, Harbour; NC, no count; ha, hectares; km, kilometres. (Note that 1 sq. km = 100 ha = 247 acres.) Amberley is used to cover the whole of Amberley Wild Brooks. The reference to the latest standard account of Sussex birds is abbreviated: Shrubbs 1979 (Shrubbs, M., 1979, *The Birds of Sussex, their present status*, Phillimore, Chichester).

Although Pheasant (*Phasianus colchicus*) occurred commonly in Sussex in 1987, details have not been incorporated into the List. Records of this species are, however, still required. ESCAPES:—The usual range of escapes was recorded. Full details of these are retained in the county files and records of all species are required.

NOTE. SWANS, GEESE, DUCKS and WADERS. Readers are reminded that the tables presented for all the main species have been compiled from the monthly 'Wildfowl Counts' for the Wildfowl Trust and the 'Birds of Estuaries Enquiry' for the British Trust for Ornithology. The counts were made once per month and therefore the tables do not show the peak monthly figure but present a more meaningful coordinated count. The 'Birds of Estuaries Enquiry' counts were made on 17 Jan., 14 Feb., 14 Mar., 12 Sept., 24 Oct., 21 Nov. and 19 Dec. 1987, and 9 Jan., 20 Feb. and 19 Mar. 1988. The 'Wildfowl Counts' were made on 18 Jan., 15 Feb., 15 Mar., 15 Sept., 18 Oct., 14 Nov. and 13 Dec. 1987 and 17 Jan., 21 Feb. and 13 Mar. 1988.

1. **RED-THROATED DIVER (*Gavia stellata*):**—An unexceptional year, the approximate monthly totals, including sea passage (but see also Diver sp.), being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
50	50	29	75	6	—	—	—	—	4	16	45

In Jan. and Feb. records were generally scattered along the coast with 11 off Worthing on 3 Jan., 7 off Pett on 7th, 4 off Palace Pier, Brighton on 17th, 4 at Beachy Head and 8 past Brighton Marina on 18th, 15 at Rye Hbr on 7 Feb. and 3 at Splash Point and 5 at Cuckmere Haven on 22 Feb. being the most notable. Five were seen at Rye Hbr and 1 at Arlington Res. on 5 Mar., with 2 (1 dead) at the latter on 15th, 2 in a channel on Pevensey Levels from 19-24 Mar. and 1 at Bewl Water on 1 Apr. Birds moving E from March to early May, but mainly in April, were reported at Selsey Bill (18), Worthing (11), Splash Point (6) and Beachy Head (45). Last of the spring was one off Worthing on 9 May.

At the end of the year most records came from Worthing, with the first on 13 Oct., 10 in Nov. and 31 in Dec., including 3 E and 13 W on 19th. Elsewhere scattered singles were seen with 1 at Darwell Res. on 13 Dec. and 5 off Rye Hbr on 19th.

2. **BLACK-THROATED DIVER (*G. arctica*):**—A quiet year with few identified on spring passage and very few recorded at the end of the year, the approximate monthly totals, including sea passage (but see also Diver sp.) being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	2	4	25	21	1	—	—	—	—	1	4

Records in Jan. and Feb. came from East Head (2), Church Norton, Worthing, Brighton Marina (4), Splash Point, Beachy Head and Langney Point, none being seen on

more than one date. Fewer than usual were recorded in spring, perhaps reflecting greater caution in identifying non-summer plumaged birds in flight, but more likely related to the low number of passage divers recorded in May. After 1 at Cuckmere Haven on 14 Mar. passage birds moving E were reported up to the end of May from Selsey Bill (15), Worthing (3), Hove (1), Brighton Marina (10), Splash Point (5) and Beachy Head (14). One was present at Bewl Water from 3-19 Apr. with the last of the spring passing Brighton Marina on 5 June.

At the end of the year one was seen at Church Norton on 21 Nov., one was present at Darwell Res. on 12-13 Dec. and 3 were reported passing Worthing in late Dec.

3. **GREAT NORTHERN DIVER (*G. immer*):**—Records continue to increase, the approximate monthly totals, including sea passage (but see also Diver sp.), being:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	5	1	2	5	1	—	—	—	—	—	1	1

Two were seen in and off Chichester Hbr on 2 Jan. while one was present between Brighton Marina and Hove from 16-23rd. Singles were recorded at Normans Bay on 25th, off Church Norton on 28th and in Chichester Hbr on 7 Feb. In Mar. one flew E past Beachy Head on 1st while one at Littlehampton West Beach on 10th was initially seen sitting on the sand surrounded by Grey and Ringed Plovers before sliding into the sea and swimming off (ASC). Sea-watching in April produced reports of 1 E off Worthing on 2nd, 1 E off Beachy Head on 8th, 1 W off Selsey Bill on 9th and 1 E off Worthing on 24th, while one was seen on the sea off Church Norton on 11th. Reports of singles E off Selsey Bill on 6 May, W there on 11th and E there on 16th probably relate to the same individual and are treated as such here. At the end of the year one was seen off Church Norton on 22 Nov. and off Selsey on 25th while one flew W past Worthing on 20 Dec.

DIVER SPECIES (*Gavia* sp.):—Large movements of divers were recorded in the early part of the year, probably mostly relating to *G. stellata*. In Jan. Worthing recorded 51 E and 76 W and Brighton Marina 58 E, with 66 E at Worthing and 429 E at Splash Point in Feb. The latter included 129 E in just over 2 hours on 1st and 289 E in just under 4 hours on 22 Feb., while a further 73 were recorded E at Cuckmere Haven later that day and 68 E in an hour at Newhaven on 21st.

Coverage was well down on 1986 at most sites, Splash Point being the one exception. Passage totals at regular sea-watching sites from March to May (where *G. species* includes identified birds) were as follows, the usual caveat about proportions of unidentified birds applying:

	Coverage	<i>G. stellata</i>	<i>G. arctica</i>	<i>G. immer</i>	<i>G. species</i>
Selsey Bill	167 hrs	18	15	2	162
Worthing	231 hrs	11	3	2	129
Brighton Marina	7 hrs	—	10	—	49
Splash Point, Seaford	103 hrs	6	5	—	477
Beachy Head	53 hrs	45	14	2	198

Observers are reminded that it is often impossible to identify flying divers with certainty, especially when not in breeding plumage, and records submitted should err on the side of caution.

The monthly distribution of divers passing E is shown below, more being seen in March and April than last year but fewer in May, though the latter may relate to reduced coverage:

	March	April	May	Total
Selsey Bill	10	110	42	162
Worthing	11	88	30	129
Brighton Marina	11	20	8	39
Splash Point, Seaford	184	279	14	477
Beachy Head	21	164	13	198

Large movements were witnessed on 22 Mar. with 119 E at Splash Point and on 5 Apr. with 167 E at Splash Point and 90 E at Beachy Head. Few were recorded at the end of the year, most being off Worthing where the first was seen on 3 Oct. Peaks were 3 E and 13 W on 19 Dec. (all *stellata*) and 11 E and 4 W there on 31st.

6. **LITTLE GREBE (*Tachybaptus ruficollis*):**—Monthly maxima at the principal wintering sites were:

	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.
Chichester Hbr	28	15*	38*	—	21	33	20
Lower Cuckmere	9	6	8	4	8	26	7
Pagham Hbr	9	4	5	5	3	4	5
Rye Hbr	15	4	2	11	22	24	4

*incomplete coverage.

Elsewhere in Jan. and Feb. at least 24 were at the coast, 14 at inland waters (including 6 at Bewl Water on 1 Feb.) and 24 on the tidal reaches of the Rivers Arun, Adur and Ouse. In spring singles were still present on Southwick Canal on 4 Apr., the Lower Cuckmere Valley on 18 Apr. and New Salts Farm, Shoreham on 19 Apr.

Very few breeding season records were received but 1 pair raised 7 young at Woolbeding and 3 pairs raised 5 at Gravetye Manor after 6 early failures. Breeding was reported for the first time from Pebsham rubbish tip, where 2 pairs raised 7 young, and the canal on Waltham Brooks where 1 pair raised 2 young. At Rye 3 pairs produced 7 young; no information was received for Chichester GP. Elsewhere single birds were reported from Ebernoe and Barcombe Res. in May.

Post-breeding dispersal was first noted at the Crumbles GP on 17 Aug. and on the Lower Cuckmere on 19 Sept. Aug.-Oct. maxima at the reservoirs were: Weir Wood 4, Bewl Water 9 and Arlington 6. In Nov. and Dec., in addition to those listed above, 6 birds were reported from the coast, 21 at inland waters and 25 on the main rivers.

7. **GREAT CRESTED GREBE (*Podiceps cristatus*):**—Monthly maxima at the principal wintering sites were:

	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.
Weir Wood Res.	NC	28	52	75	51	67	60
Bewl Water	51	39	42	54	48	40	35
Darwell Res.	3	14	25	42	27	34	56
Chichester Hbr	9	3	0	10	15	14	24
Chichester GP	—	11	18	41	31	18	12
Ardingly Res.	7	9	21	18	14	15	29
Pagham Hbr	—	3	5	25	12	5	4
Barcombe Res.	8	3	—	4	20	25	32

The year started with high numbers at the coast, e.g. 55 off Brighton on 17 Jan., 20 in Rye Bay on 20 Jan. and 21 off Cuckmere Haven on 25 Jan. In Feb. numbers rose swiftly to exceptional levels with 94 in Rye Bay on 13th and 450 between Hove and Saltdean on 18th. The latter assembly had declined to 122 on 21st but there were still 60 between Beachy Head and Cuckmere Haven on 22nd and 100 at Shoreham on 24th. All parties had dispersed by 28 Feb. During this period, other interesting records were 8 off Lancing on 22 Feb. and 1-2 birds on the Ouse at Malling from 17-25 Jan., on the Adur at Cuckoo Corner on 18 Jan. and on the Arun at the Black Rabbit on 14 Feb. Few were reported from the coast in April and May but 4 were in Chichester Hbr on 13 May and 3 off Church Norton on 25 May.

In the breeding season 84 pairs were reported from 19 sites. 65 pairs are known to have nested, 21 failed completely and 44 pairs reared 85 young (1.3 young per breeding pair). Once again success at Darwell Res. and Weir Wood Res. was good; at the former site of 13 pairs present, 11 reared 26 young, whilst at Weir Wood 8 of the 20 pairs present reared 22 young. A total of 6 nests failed at the latter site. At Bewl Water of 17 pairs present, 9 nested, 3 of which were seen with 8 young. Only 3 young survived at this site. Elsewhere, 3 pairs raised 3 young at Chichester GP and 3 pairs raised 1 young at Rye Hbr.

On 23 June 2 were seen in Chichester Hbr and on 3 July 2 were on the sea off Pett. Autumn numbers at the coast were slow to build up and were low with a maximum of 23 off Church Norton on 27 Sept. declining to 15 there on 28 Oct. Inland numbers remained very high at the larger waters with record numbers at Barcombe Res. and Darwell Res. On 27 Sept. a juv. was recorded at Streete Pond, Billingshurst, a new water for the species.

8. **RED-NECKED GREBE (*P. griseogenalis*):**—Recorded in very good numbers during the early cold weather, the approximate monthly totals being:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	28	14	4	5	—	—	—	1	2	2	1	2

Two seen at Bewl Water from 13 Dec. 1986 (SxBR 39:8) were still present on 4 Jan.

while one was at Pett on 3rd. The cold weather mid-month produced many sightings, with the likelihood of much duplication. Two off Hove Lagoon on 13th were followed by singles at Newhaven from 15-21 Jan., at Worthing, River Adur and Brighton Marina (to 3 Feb.) on 16th and at East Head and Palace Pier, Brighton on 17th. On 18th 5 were seen at Bewl Water with singles at Weir Wood Res. (to 28th), Shoreham Hbr and Widewater and 2 off Worthing. One was present off Hove on 23rd and 28th, 1 at Widewater (to 25th) and 7 at Bewl Water on 24th, with 5 there on 25th, 2 remaining to 15 Mar. and 1 to 21 Apr. Also on 25th 2 were at Darwell Res., 1 at Newhaven Tidemills and 2 at Splash Point. On 7 Feb. singles were seen off Hove and at Cuckmere Haven with one N of Southeast on the R. Ouse on 9th and one on the R. Adur on 11th. One at Portslade on 14th may have been this or the Hove bird, while one was seen at Northpoint GP on 19 and 22 Feb., 1 at Church Norton and 2 off Hove on 21st and 1 at the latter on 26th. March records were the 2 long stayers at Bewl Water and singles off Worthing on 3rd and Langney Point on 6th with 1 off Roedean on 3 Apr., 1 at the Crumbles on 12th, 1 off Birling Gap on 21st, when the last Bewl Water bird was seen, and 1 off Hove on 26th.

In autumn, singles were seen at the Crumbles on 30 Aug., Church Norton on 25 and 27 Sept., Pett on 27 Sept., off Langney Point on 9 Oct. and at the Crumbles from 15-18 Oct. One was seen in Pagham Hbr regularly from 27 Nov. into 1988 while another was at Bewl Water from 13-31 Dec.

9. **SLAVONIAN GREBE** (*P. auritus*).—Recorded in good numbers in the early part of the year, doubtless due to the cold weather. In contrast the year ended quietly, the approximate monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
38	22	23	10	—	—	—	—	—	5	14	12

The year started with up to 9 at Church Norton in early Jan. and one at Rye Hbr on 7th, but with the onset of the cold weather mid-month most records were of ones and twos seen between Brighton Marina and Goring. Inland one was present at Bewl Water from 18-24 Jan. with one at Arlington Res. from 23-25th, 2 being seen there and 1 at Darwell Res. on 25th. Eight were seen off Widewater on 28 Jan. with peaks of 10 off Church Norton on 11 Feb. and 7 on 26th. Away from Church Norton most Feb. sightings were between Brighton and Worthing, with singles at Rye Hbr on 11th and Bewl Water and Darwell Res. on 25th. In Mar. 7 were still at Church Norton on 15th, with 5 there on 21st but only 1 on 31st. Elsewhere of note, one stayed at Rye Hbr from 18-31st and 6 were in Chichester Hbr on 29th. The few seen on passage included 3 off Birling Gap on 4 Apr., 2 at Splash Point on 5th, 2 at Birling Gap on 17th and singles off Worthing and Cuckmere Haven on 23rd.

None were seen in autumn before 4 Oct. when 1 was recorded from Chichester Hbr and 2 at Church Norton. Two at the latter on 29 Oct. had risen to 6 by 10 Nov. and 9 on 30th. Singles were seen at Rye Hbr on 9 and 21 Nov., when 1 was seen at Thorney, while 2 were at Emsworth on 30th. The year ended quietly with 3 in Chichester Hbr on 5 Dec., a max. of 5-6 at Church Norton mid month, 2 off Worthing on 19th and 1 at Thorney on 23rd.

10. **BLACK-NECKED GREBE** (*P. nigricollis*).—A good year, estimated monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	2	2	5	1	—	—	—	—	—	—	2

There were several sightings along the coast during the cold weather in mid-Jan. On 11th one was seen at Cuckmere Haven with one at Worthing on 14th and singles at Newhaven (slightly oiled) and Goring on 18th. The latter flew off E and may have been that seen in the mouth of Shoreham Hbr on 19th with one off Widewater on 25th not necessarily different. One was present at Bewl Water on 28 Jan., one off Widewater on 21 Feb., while another was seen intermittently at Brighton Marina between 14 Feb.-7 Mar. with 2 reported there on 9th. Passage birds were recorded on 2 Apr. with 3 at Galley Hill and 1 at Pett, while one at the Crumbles on 25 Apr. remained to 19 May. At the end of the year single birds were seen at Pagham Hbr on 9 and 20 Dec. and at Weir Wood Res. from 21-23rd.

12. **FULMAR** (*Fulmarus glacialis*).—Observations at the main sea-watching localities were as follows:

Direction of movement	Jan-Feb.		Mar-May		June-July		Aug-Oct.		Nov.-Dec.	
	E	W	E	W	E	W	E	W	E	W
Selsey Bill	62	412	—	—	—	—	—	—	—	—
Worthing	7	1	183	266	8	51	12	66	3	4
Brighton Marina	69	12	842	101	20	14	—	—	—	—

The peak movements occurred on 13 and 25 Apr. and 23 May when there were 87 E, 80 E and 89 E at Brighton Marina. Single dark morph individuals or 'Blue Fulmars' were recorded at Birling Gap on 17 Apr. (RDME) and flying W off Selsey Bill on 16 May (BP).

Although the breeding population was surveyed, the results of this census organised by the Seabird Group are still being analysed. We hope to publish details in the 1988 SxBR.

15. **CORY'S SHEARWATER** (*Calonectris diomedea*).—One flew E off Selsey Bill on 6 June (BJ, CMJ), the first county record for that month, with 2 W off Beachy Head on 18 Oct. (DC, JFC). These bring the county total to 12, of which 9 have been seen since 1979.

17. **SOOTY SHEARWATER** (*Puffinus griseus*).—Three flew W past Worthing on 12 Sept. (JAN) with 1 W off Galley Hill on 13th (RS, SS). In 4 hours on 9 Oct. an unprecedented 160 passed W off Langney Point (RHC), part of a larger movement witnessed at Dungeness. Only 43 had been recorded in the county prior to these, averaging just under 2 per year since the early 1960s.

18. **MANX SHEARWATER** (*P. puffinus*).—Only 9 were recorded during a very poor spring for the species. Four flew E off Widewater on 11 Apr., 1 at Birling Gap on 20th, 2 E at Brighton Marina on 23 May with 1 W there on 26th and 1 E off Birling Gap on 6 June.

Autumn records were well above average, with 8 E and 10 W off Worthing in Sept. including 4 E and 2 W on 5th, 1 E and 3 W on 6th and 5 W on 12th. On 19 Sept. 3 flew W past Selsey Bill while a large movement occurred on 9 Oct. involving 40 W off Langney Point and 13 W past Worthing. Records of 6 E at Selsey Bill on 16 Oct. and 24 W there and 15 W at Beachy Head on 18th were the last of the year and coincided with the severe gales.

One E off Worthing on 19 Sept. showed the characteristics of the race *P. p. mauretanicus* (JAN).

22. **STORM PETREL** (*Hydrobates pelagicus*).—One picked up exhausted in a Ferring garden on 16 Oct. was kept overnight and released the following morning when it flew off strongly (MPH). This is the first record since 1983 for Sussex and only the 7th since 1960.

23. **LEACH'S PETREL** (*Oceanodroma leucorhoa*).—Three were recorded following the severe gales in mid Oct. One was found dying in Westfield on 16th (per PCT), while singles flew W past Brighton Marina on 17th (PJ) and off Church Norton on 19th (SRD). There have now been 10 records since 1960, six occurring between 15-22 Oct.

25. **GANNET** (*Sula bassana*).—Recorded in every month of the year. Observations at the main sea-watching localities were as follows:

Direction of movement	Jan-Feb.		Mar-May		June-July		Aug-Oct.		Nov-Dec.	
	E	W	E	W	E	W	E	W	E	W
Worthing	43	15	111	136	117	160	116	197	30	57
Brighton Marina	2	—	70	46	—	—	—	—	—	—
Seaford	—	—	48	13	—	—	—	—	—	—
Beachy Head	—	—	65	10	—	—	—	—	—	—

The peak spring movement occurred on 3 May when there were 55 E at Langney Point. In autumn there were 47 E at Worthing on 19 July and 39 E 16 W on 22 Aug. A single bird was found dead 1 mile inland at Icklesham on 15 Oct. after severe gales.

26. **CORMORANT** (*Phalacrocorax carbo*).—Monthly maxima at known nocturnal roosting sites were as follows:

	Jan.	Feb.	Mar.	Oct.	Nov.	Dec.
Adur Levels	—	17	—	—	—	—
Lewes Brooks	3	22	—	—	—	—
Pevensy Levels	—	4	8	—	2	11
South Stoke	145	137	85	—	—	—

Counts at inland reservoirs included maxima of 21 at Ardingly, 12 at Arlington, 22 at

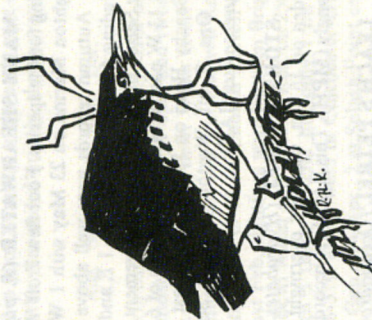
Bowl Water, 19 at Barcombe and 10 at Weir Wood. On the coast, up to 103 were seen at Chichester Hbr, 51 at Rye Hbr and 16 at Pagham Hbr. There were no reports from the breeding colony at Fairlight. All records of this species are welcome.

27. **SHAG** (*P. aristotelis*):—Another poor year. The approximate monthly totals were as follows:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	4	1	4	2	0	0	1	1	0	0	1

At Brighton Marina there were up to 3 in Jan., 4 in Feb. and singles on 31 Mar. and 17 Apr. The only other records for the first part of the year were single birds at Selsey Bill on 17 Jan., 25 and 29 Apr. and 2 May, Bexhill on 27 Jan. and Worthing on 8 Apr. and 25 May. One was recorded irregularly in the Selsey area from 10 Aug. to 16 Sept. and a single was seen at Brighton Marina on 10 Dec.

30. **BITTERN** (*Botaurus stellaris*):—At Combe Haven there were 2 E at dusk on 3 Jan. and 1 from 14th to 1 Feb. (KMJ). Elsewhere single birds were recorded at Arundel WFT from 13 Jan. to 22 Feb. (RJK, SCR *et al.*), at Weir Wood Res. from 28 Jan. to 22 Feb. (JWK *et al.*) and at Thorney from 30 Jan. to 4 Feb. (CBC *et al.*). There were no records for the latter part of the year.



32. **LITTLE BITTERN** (*Ixobrychus minutus*):—A well-watched male at Chichester GP from 10-15 May (CRJ, CL *et al.*) has been accepted by *British Birds*. This is the 11th to be seen in the county since 1964, but none were recorded between 1978-85.

33. **NIGHT HERON** (*Nycticorax nycticorax*):—An unprecedented spring influx brought 4 into the county in early May. On 4 May a 1st and 2nd year were seen at dusk at Cuckmere Haven (RAH, RBH *et al.*), the 2nd year being seen on the following two evenings. On the evening of 5th an adult and a probable adult were seen at Chichester GP (CRJ, MJ, OM). A 1st year near Arlington on 3 dates between 24 May-7 June (CBR, TMB) could well have been the Cuckmere 1st year. All these records have been accepted by *British Birds*, are the first since 1983 and bring the county total to 15.

37. **LITTLE EGRET** (*Egretta garzetta*):—One was seen in Pagham Hbr on 29 May (MJT, RBW). On 26 July sightings at Thorney Deepes in the early afternoon (CBC, MAC) and at Ferring Rife in the early evening (SWG) probably related to the same individual; one at Cuckmere Haven from 29 July to 10 Aug. (GG *et al.*) was also considered to be the Ferring/Thorney bird. One was present at West Wittering from at least 4-20 Sept. (EC, PC *et al.*). These records have been accepted by *British Birds*. Counting those in July as the same, 24 have now been recorded in Sussex and the species has been annual since 1981.

39. **HERON** (*Ardea cinerea*):—All known heronries were counted and nests certainly and probably occupied totalled 204 (177 in 1986). The counts were as follows: Fishbourne 16 (ETR), Pagham 4 (PFBu), Yapton 2 (RK), Parham 39 (AI), Henfield 21 (ABW), Fittle 26 (ABW), Knepp 15 (AS, IMS), Ardingly 2 (PB), Erridge 17 (MS-H), Priesthaves 2 (LG), Westham 2 (LG), Wartling two heronries 8 and 1 (LG), Pevensey 0 (LG), Pett Level 0

(SJRR), Leasam 48 (SJRR), Rye Hbr 1 (BJY). The Yapton and Ardingly sites are new. Pett Level is subject to disturbance and at Pevensey the favoured tree had been blown down.

Out of the breeding season the species was recorded in suitable habitat throughout the county with maxima of 45 at Thorney Deepes and 21 at Rye Hbr.

40. **PURPLE HERON** (*A. purpurea*):—1983:—An adult at St Leonards on 10 May (KMJ).

1986:—Two arrived from S at St Leonards on 26 June (KMJ).

1987:—An adult was recorded at St Leonards on 12-13 May (KMJ) and a sub-adult at Pett Level on 17-19 May (KB, SJRR *et al.*). The latter bird was seen over Rye Hbr on 18th.

42. **WHITE STORK** (*Ciconia ciconia*):—1986:—One W over Combe Haven on 8 June (KMJ).

43. **GLOSSY IBIS** (*Plegadis falcinellus*):—Two present at Pett Pools from 25-27 Apr. (TAH *et al.*) have been accepted by *British Birds*. There are now 4 records in recent times, 3 being in the last 2 years.

44. **SPOONBILL** (*Platalea leucorodia*):—Single birds were seen at Pilsley Island (RJS), Pagham Hbr (ASC, BJ, CMJ) and Shoreham (SRA, KN *et al.*) on 29 June. It is not known whether these records relate to the same individual.

46. **MUTE SWAN** (*Cygnus olor*):—In the early months the highest counts reported from the principal localities included 121 in the Arun Valley between Littlehampton and Pulborough on 14 Feb., 102 in Chichester Hbr on 14 Jan., 117 on Pevensey Levels on 11 Jan., 87 in the Brede Valley on 8 Feb., 81 on Lewes Brooks on 24 Jan., 66 at Rye on 14 Feb. and 30 on the Adur estuary on 16 Jan.

In the breeding season 23 pairs were holding territory on Pevensey Levels. At Burton Pond LNR two pairs were present for the first time in recent years; the first pair reared 5 young, the second pair, which did not nest until 9 May, reared one young. Elsewhere 14 successful pairs raised 67 young. Counts in May and June of non-breeders (and possibly early failed breeders) included 47 at Scotney Court GP, 30 in the Adur Valley, 26 in the Cuckmere Valley and 22 at Pett Pools.

On 14 Aug. 2 at Darwell Res. were the first seen there since Oct. 1984. In Oct. numbers at Chichester GP peaked at c.40, and in Chichester Hbr at 106 (including 84 at Thorney) but declined steadily thereafter. At the end of the year numbers were generally lower than usual with 54 on Lewes Brooks on 13 Dec., and 36 in the Cuckmere Valley on 21 Nov. Nevertheless in the Arun Valley there were c.120 between Arundel and Stopham on 12 Dec.

47. **BEWICK'S SWAN** (*C. columbianus*):—The year started with numbers stable at c.130 in the Arun Valley and 14 in the Ouse Valley. An influx was apparent in mid-Jan, when 14 were seen at Rye and 2 appeared inland at Stedham Sand Pit on 11 Jan., 3 flew E off Eastbourne on 15 Jan., and 5 arrived on 16 Jan. in Chichester Hbr/Thorney Deepes, where they were to stay until 28 Feb. In the Ouse Valley numbers declined from 11 in early Feb. to 6 on 28 Feb. which was the last record for the area. In contrast the numbers in the Arun Valley increased to 148 (including 11 immatures) on 14 Feb. and numbers remained at this level until 14 Mar. On 22 Feb. 10 seen at Knepp Lake may have been birds from the Arun Valley. Return movement was noted on 8 Mar. when there were 13 E at Jury's Gap and 14 at Scotney Court GP. Variable numbers from the Arun flock roosted at the Wildfowl Trust throughout Jan. and Feb., and in Mar. numbers peaked at 106 on the 13th. Thereafter numbers quickly declined with 10 there on 17 Mar. being the last seen. A single bird seen circling over Arundel on 17 May is assumed to have come from the Wildfowl Trust collection.

At the end of the year, the first were 2 at Waltham Brooks on 5 Nov. By 15 Nov. 13 had arrived in the Arun Valley and numbers built up to 76 (including 6 young) by mid-Dec., at which time 12 were roosting at the Wildfowl Trust. Elsewhere there were 2 E at Pagham Hbr on 8 Dec., 7 in Chichester Hbr on 10 Dec., and 10 (including 3 young) had taken up residence in Lewes Brooks by 13 Dec.

48. **WHOOPER SWAN** (*C. cygnus*):—The adult associating with Mute Swans on Lewes Brooks in Dec. 1986 (Sx:BR 1986) remained until 24 Jan. On 3 Jan. there was 1 E at Beachy Head and 1 W at Thorney Island (RJS). A herd of 5 (3 ad., 2 imm.) was recorded at Barcombe Res. on 24 Jan. (PDL).
The only record for the latter part of the year was 3 W at Thorney Island on 7 Nov. (CBC, RJS *et al.*)

49. **BEAN GOOSE** (*Anser fabalis*):—One at Weir Wood Res. from 10-15 Dec. (MKA, BMM, DCM *et al.*)

50. **PINK-FOOTED GOOSE** (*A. brachyrhynchus*):—In Jan. there were 7 on Pevensey Bridge Level (BDJ, PJ) and 14 NW over Eastbourne (RKH) on 11th and one with Brent Geese at Rye Hbr on 19-20th (BJY *et al.*). One was recorded at Pett Level on 27 Dec. (RCS). The regular feral bird at Bewl Water remained throughout the year.

51. **WHITE-FRONTED GOOSE** (*A. albirostris*):—Once again a small influx occurred during Jan. At Rye Hbr there were 7 N on 3rd, 9 on 10th and a further 5 on 11-12th. There were 50 W at Arlington on 11th and 6 E at Worthing the following day. In the Arun Valley, 2 were recorded at Arundel on 10th and 17th and up to 7 were present at Amberley from 18-27th. Elsewhere, there were 2 at Northpoint GP and 4 W at Small Dole on 17th, 4 at Pagham Hbr on 19th, up to 7 at Thorney on 22nd and 24th, 9 at Bewl Water on 25th and 2 in the Adur Valley on 29th. A single bird was recorded feeding with Brent Geese at Pagham Hbr on 20th and 27th. Three in the Cuckmere Valley from 24th remained until 22 Feb., when 4 were present. The only other records for the first half of the year were single birds E at Brighton Marina on 24 Apr. and off Worthing on 24-25th.
A small influx in early Dec. produced a total of about 42 birds at 7 localities between 2nd and 15th. At Pett Level there were 31 on 27th.

53. **GREYLAG GOOSE** (*A. anser*):—Monthly maxima of feral birds at the principal localities were:

	Jan.	Feb.	Mar.	June	Aug.	Sept.	Oct.	Nov.	Dec.
Arun Valley	31	14	10	11	24	34	7	36	37
Weir Wood Res.	1	1	1	—	—	—	—	9	9
Bewl Water	1	1	1	—	—	3	1	1	1
Rye Hbr	1	3	8	10	1	—	—	—	17

In Jan. and Feb. 1-2 feral birds were reported from Barcombe Res. and Widewater. More unusual were 12 W at Littlehampton on 13 Jan., 14 at Pevensey on 8 Feb. and 9 at Piddinghoe on 9 Mar. In Feb. the very tame flock at Broadbridge Heath had increased to 23 but as yet their movements rarely exceed a mile from their base water. The only record for Scotney Court GP was of 47 on 8 Mar. Single birds were reported from Brighton Marina on 17 Apr. and Darwell Res. on 19 Apr.

In the breeding season 2 pairs reared 15 young at Waltham Brooks and 4 more pairs were present at Rackham on 30 May. Elsewhere pairs or small parties were reported from Woods Mill, Gossops Green, Washington Sand Pit and the Cuckmere Valley but at none was there any evidence of breeding. At the end of the year there were 8 at Glynde on 12 Dec. and 65 on Pett Level on 13 Dec. In addition single birds were reported occasionally from coastal localities, e.g. Cuckmere Haven, Worthing and Littlehampton.

55. **CANADA GOOSE** (*Branta canadensis*):—Monthly maxima at the principal autumn and winter sites were:

	Jan.	Feb.	Mar.	Aug.	Sept.	Oct.	Nov.	Dec.
Bewl Water	699	176	184	600	1150	400	100	380
Weir Wood Res.	0	110	50	125	203	200	350	300
Amberley/Pulborough	550	205	5	—	423	400	540	300
Arundel WFT	184	19	86	—	427	146	275	500
Arlington Res.	282	3	25	107	200	71	18	86
Barcombe Res.	56	2	4	—	31	44	733	94
Chichester GP	13	54	20	200+	187	150+	130	118
Rye Hbr	130	72	150	101	184	132	141	150
Lower Cuckmere	170	226	101	—	—	—	—	—

Maxima at most sites were lower than in recent years, although substantial numbers were reported from the Lower Cuckmere Valley at both ends of the year. Elsewhere 270 and 350 were at Bewl Water on 31 May and 7 June respectively, 340 at Darwell Res. on 18 Oct., 148 at Horse Eye Level on 25 Jan., and 143 at Stedham Sand Pit on 3 Oct.

In the breeding season widely scattered throughout the county with successful breeding reported from several waters for the first time. Only 118 young were reported, including 23 at Chichester GP, 22 at Bewl Water and 17 at Ardingly Res. At Chalvington pits, where 8 pairs nested, only 6 young were seen and none survived. For those sites where sufficient information was available, overall breeding success was very low at 2.38 young per nesting pair. Fledging success was 3.22 young per successful pair.

56. **BARNACLE GOOSE** (*B. leucopsis*):—The origin of 17 at Waltham Brooks on 11 Jan. and one in Chichester Hbr with Brent Geese on 14 Feb. and 14 Mar. is uncertain. As usual there were numerous reports of feral birds associating with flocks of Canada Geese. Up to 4 were recorded at Amberley and Barcombe Res., 2 at Bewl Water and in the Cuckmere Valley and singles at Arlington Res., Chalvington, Knepp and Rye Hbr.

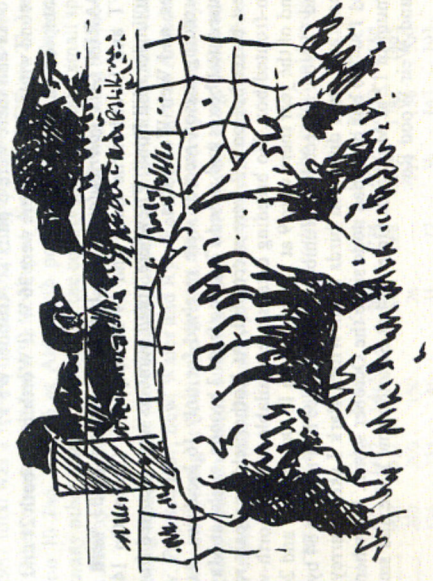
57. **BRENT GOOSE** (*B. bernicla*):—The estuary counts were:

	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
County totals	5904	12261	7467	5779	6711	10649	9566	12282	1337	
Chichester Hbr	5379	9998	7005	17	5623	5652	8244	8276	9721	1309
Pagham Hbr	424	2251	340	—	153	938	2051	1251	2551	28

The severe weather in Jan. 1987 resulted in a wider distribution of flocks than normal with birds recorded at several sites not normally used by the species. There were up to 450 in the Lower Cuckmere, 80 at Pett Level, 75 at West Kingston and 58 at Shoreham. Inland reports were of up to 67 at Coldwaltham and 9 at Bewl Water. On 14 Jan. parties of 9 and 14 flew W at the latter locality and there were 5 SE at Haywards Heath on 24th, 6 N at Firle on 25th and 100 N at Arundel on 21 Feb.

The spring passage totals at the main sea-watching localities were: Selsey Bill 556, Worthing 2098, Seaford 2316 and Beachy Head 1239. The peak movement occurred on 21 Mar. when there were 1048 E at Seaford.

Up to 21 summered in Chichester Hbr. The first returning birds were seen at this locality on 25 Sept. and at Langney Point and Pagham Hbr the following day. A total of 352 passed SW over Bewl Water/Hurst Green between 3 Oct. and 4 Nov. and there were 9 SW at East



Grinstead on 28 Nov. No large movements were recorded on the coast and the peak count at Worthing was only 235 W on 21 Oct.

Single birds of the pale-bellied race *hrota* were seen in Pagham Hbr in Jan.-Feb., at Shoreham on 18 Jan. and at West Wittering on 14 Feb. There were 2 at Pett Level on 4-5 Mar. which then moved to Rye Hbr where they remained until 16th. In the second winter period there was 1 at Pagham Hbr from 8-24 Dec., 1 at Selsey West Fields on 6 Dec. and 2 there on 20th.

Birds showing the characteristics of the race *nigricans* or Black Brant were seen at Thorney Island up to 7 Jan. and from 9 Nov. to 20 Dec. (CBC, MAC *et al.*), and at Pagham Hbr on 11 Jan. (RWW). These records, which almost certainly relate to the same individual, have been accepted by *British Birds*.

58. **RED-BREADED GOOSE** (*B. ruficollis*):—One present with Brent Geese at Pagham Hbr from 23-27 Jan. (MGWT *et al.*), has been accepted by *British Birds* and is the 3rd county record. This is the second year running the species has been seen at Pagham Hbr and the possibility of the same bird being involved must be high.

Cat. C. **EGYPTIAN GOOSE** (*Alopochen aegyptiacus*):—The regular bird in the Arun Valley was last seen in July.

61. **SHELDUCK** (*Tadorna tadorna*):—The estuary counts were:

County totals	1987					1988				
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Chichester Hbr	4280	4361	3174	210	342	1079	2541	2222	2835	1490
Pagham Hbr	2959	3772	2607	151	286	817	2235	1709	2451	1176
Rye Hbr	1048	527	437	41	55	204	276	405	314	271
Newhaven	132	22	63	18	1	20	18	66	11	27
	110	2						6		

The severe weather in mid-Jan. produced a large influx with birds recorded at several sites not normally used by the species. There were up to 136 at Northpoint GP, 123 in Seaford Bay, 53 in the Lower Cuckmere, 29 at Climping and 23 at Shoreham. At Worthing there were 95 E 647 W in Jan. including a movement of 53 E 544 W on 10-12th. A total of 14 were found dead at Pagham Hbr on 5 Feb., victims of the harsh conditions.

Small numbers were seen on spring passage in Mar.-May with counts of 243 E 175 W at Worthing, 66 E at Brighton Marina, 259 E at Seaford and 116 E at Beachy Head. The peak movements were on 5 and 22 Apr. when there were 45 E and 54 E at Seaford.

Records for the breeding season were very incomplete. At Rye Hbr 33 young were counted on 22 June but the survival of these was reported to be very poor. There were 3 pairs at Newhaven Tidemills in Apr. and single pairs bred at Pett Level, Pevensey Bridge Level and in the Lower Cuckmere. The latter pair raised 10 young. Inland, a single pair nested at Waltham Brooks and there were 5 pairs at Arundel WFT.

In the second winter period there were 36 W at Worthing on both 21 and 22 Nov. and 26 W at Littlehampton on the latter date.

63. **MANDARIN** (*Aix galericulata*):—In Jan. a maximum of 33 were reported from Arundel WFT and Swanbourne Lake and 19 at Maynards Green. On 14 Feb. 11 were present at Shillinglee Mill Pond. Elsewhere, small numbers were reported from Bewl Water, Arlington Res. and Weir Wood Res.

In the breeding season records were received for only 16 localities. At Possingworth Park 2 pairs used nest boxes and raised 17 young from 3 broods, whilst at Maynards Green 4 pairs used nest boxes but only 2 were successful. At Rotherfield one pair raised 10 young from an open-fronted box. No breeding details are available for the north-west.

At the end of the year there were 9 at Lurgashall on 18 Oct. and 21 and 24 at Shillinglee on 19 Oct. and 15 Nov. respectively. Numbers at Shillinglee had risen to 84 by 16 Dec. and it is thought that these were displaced birds from Witley Park Lakes, Surrey, which would normally hold 150-200 but have had none since the October storm. Elsewhere in Dec. there were a maximum of 12 at Maynards Green, 14 at Swanbourne Lake and small numbers at Bewl Water and Weir Wood Res.

64. **WIGEON** (*Anas penelope*):—The monthly wildfowl counts at the main localities were:

County totals	1987					1988				
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Pagham Hbr	11974	2496	1708	68	1080	1602	2427	2356	1409	924
Chichester Hbr	4528	57	30	—	91	42	104	122	87	8
Bewl Water	2485	367	354	—	562	546	562	546	523	272
Amberley	1170	308	303	19	257	370	600	391	313	281
Cuckmere Valley	1000	600	400	5	6	180	250	500	200	84
Rye Hbr	800	631	250	3	78	427	682	688	453	185
Arlington Res.	650	21	42	NC	—	1	66	19	32	—

The Jan. 1987 total was the second highest in the last 10 years, and as such was almost double the average in recent years. However, numbers had returned to near normal just prior to the wildfowl counts in mid-Feb. The Jan. influx started on the 10th when large numbers were seen W past Langney Point, 2500 were in Rye Bay and 500 were on Pett Level. On 11th 1500 flew S over Rye, numbers at Pett increased to 770 and 250+ were at Barcombe Res. At Worthing there were 270 W on 11 Jan. and then 1692 W on 16 Jan. By 18 Jan. a record 1170 were using Bewl Water and flocks on the sea off Selsey and Climping were estimated at c.4000 and c.1000 respectively. In Feb. 1191 were seen in the Cuckmere Valley on 7th and 1709 were on Pevensey Levels on 8th. During Jan. and Feb. parties of 100-200 also used the Adur and Ouse Valleys and smaller numbers were seen at many inland waters.

April records included 51 at Bewl Water on 5th, 9 and 15 at Rye on 2nd and 5th. A pair was still at Waltham Brooks on 7 May and a drake was at Barcombe Res. on 28 May. At Rye several May records included 2 drakes and a duck on 9th. A duck was also present on 7-9 June but there was no evidence of breeding.

In July a duck was seen at Bewl Water on 3rd, 8 flew into the Cuckmere Valley from the sea on 5th and a drake was at Thorney on 19th. Thereafter a general arrival started on 28 Aug. with singles at Bewl Water and Cuckmere Haven, 8 at Thorney Island and up to 11 at Rye. At the end of the year numbers were low. One at Piltown on 3 Oct. was unusual; additional counts included 653 in the Cuckmere Valley on 3 Dec. and 420 at Scotney Court GP on 27 Dec.

67. **GADWALL** (*A. strepera*):—The monthly wildfowl counts at the principal localities were:

County totals	1987					1988				
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Bewl Water	459	176	104	108	152	244	394	185	106	97
Swanbourne	149	16	11	—	—	—	128	58	19	2
Arundel WFT	28	52	40	54	46	41	23	23	34	75
Amberley	20	32	12	4	20	42	31	28	25	9
Chichester GP	12	24	4	—	—	3	36	12	8	2

The Jan. 1987 total was a record for the county, being more than double the previous highest figure. Other counts included 130 feeding at Arundel WFT on 22 Jan., 26 at the Crumbles GP on 10 Jan. and 16 at Aldsworth ponds on 11 Jan. Smaller numbers were reported from many other waters throughout the county and as usual a small spring passage was detected at Beachy Head, Brighton Marina, Seaford and Worthing between 7 Mar. and 28 Apr.

In the breeding season there were records for several sites in the Arun Valley, 2 sites in the Adur Valley, Pagham Hbr, Bewl Water and Rye. Feral birds bred at Arundel WFT and a pair was seen with one young at Waltham Brooks. Up to 12 were present at Rye Hbr during July-Sept. The first returning birds at Bewl Water were 4 on 8 Aug. followed by 19 on 22 Aug. Thereafter numbers increased steadily at all the main sites to reach another high total in mid-Dec.

69. **TEAL** (*A. crecca*):—The monthly wildfowl counts at the principal localities were:

County totals	1987					1988				
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Chichester Hbr	1473	1462	1442	207	725	1442	2450	2380	1799	418
Amberley	200	200	150	26	568	1146	1741	1465	502	216
Pagham Hbr	134	154	46	31	22	30	143	103	87	—

The Jan. 1987 count was less than half the average for recent years and remained at this

75. **SHOVELER** (*A. clypeata*):—The monthly wildfowl counts at the principal localities were:

County totals	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Amberley	110	147	94	50	64	127	205	168	70	129
Chichester Hbr	14	8	31	12	—	68	86	100+	27	31
Chichester GP	15	72	2	—	17	—	—	—	—	—
Pett Level	30	9	17	6	7	19	41	38	16	40
Arundel WFT	13	3	2	6	7	12	21	25	9	20
Pagham Hbr	21	24	20	21	14	22	21	25	9	20
	—	—	3	1	—	—	16	—	4	28

The peak count, in Feb. 1987, was still less than half the average in recent years. Other counts included 36 and 28 at the Crumbles GP on 10 Jan. and 7 Feb. respectively, 25 on Pett Level on 7 Jan., and 14 on Pevensey Levels on 8 Feb. Elsewhere records were very sparse and usually of less than 10 birds. Spring passage at the coast was noted from 3-17 Apr. with 22 E at Worthing and 16 E at Biring Gap on 3 Apr. and 15 E at the latter site on 17 Apr. A pair was at Ifield Mill Pond on 4 Apr. and 2 drakes were at Arlington Res. on 5 May. Records at possible breeding sites included a drake at Waltham Brooks on 7 May, one pair on Pevensey Levels and 2 pairs at Sidlesham on 24 May, and 2 ducks and 5 drakes at Rye Hbr, but there was no evidence of nesting at any of these sites.

July records were of a single duck at Bewl Water on 3 July and 1-2 at Pett Level on 12-19 July, one pair on Union Channel and 1-6 regularly at Rye Hbr until 30 July when 14 present. Numbers started to increase slowly in Sept. On 3 Oct. there were 28 on Thorney Deep and by 26 Oct. numbers at Waltham Brooks had reached 22. Other counts at the end of the year included 21 at Pett Level on 7 Dec., 30 off Church Norton on 20th and 35 on 25th.

76. **RED-CRESTED POCHARD** (*Netta rufina*):—Single males were recorded at Rye Hbr on 15 Feb. (PP) and at Chichester GP from 27-29 Apr. and on 5 and 12 May (BJ, CMJ, CRJ *et al.*). A female was present at Newhaven Tidemills on 3 Nov. (PJW). A pair at Swanbourne Lake from late Apr. and a male at Brooklands from 13 May were obvious escapes from their behaviour.

77. **POCHARD** (*Aythya ferina*):—The monthly wildfowl counts at the principal localities were:

County totals	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Arundel WFT	957	1065	625	365	475	549	870	789	826	328
Bewl Water	381	463	256	56	175	241	318	341	396	144
Chichester GP	211	53	49	2	30	68	65	59	74	21
Rye Hbr	98	157	68	59	84	90	153	149	117	29
Weir Wood Res.	171	119	77	6	28	40	135	106	114	61
	NC	55	40	4	20	17	70	65	15	16

The Jan. 1987 total was above average for recent years. Other January counts included 215 at Northpoint GP on 11th, 177 at the Crumbles GP on 17th, 66 at Barcombe Res. on 24th, 53 at Weir Wood Res. on 31st and 40 at Arlington Res. on 18th. Numbers increased in Feb. when other counts included 156 at Bewl Water on 1st and 131 at Barcombe Res. and 90 at the Crumbles GP on 7th. The maximum figure for Widewater was 21 from 13-22 Feb. with 13 on Broadwater on 25 Mar.

In the breeding season there were 1-2 at Bewl Water throughout May, a pair at Rye Hbr, and 2 drakes at the Crumbles on 20 June but no evidence of breeding at these sites. A pair raised 5 young at Pagham Hbr and several of the feral birds at Arundel WFT also raised young. Two at Brooklands on 20 Aug. was an early date for this site. At the Crumbles GP 40 on 27 Sept. increased to 94 on 8 Oct. and remained at this level for the rest of the year. Other counts included 32 at Weir Wood Res. on 29 Nov., 35 at Ardingly Res. and 40 at Arlington Res. in mid-Dec. At the end of the year, at Warnham Mill Pond, 42 on 22 Dec. increasing daily to 144 on 31 Dec. were quite exceptional for this water.

79. **FERRUGINOUS DUCK** (*A. nyroca*):—Single males were recorded at Chichester GP on 10 and 13 Jan. (TJE, AWB, IW, PJW) and at the Crumbles from 16 Sept. to 3 Oct. (PEB, DC, JFC *et al.*). The latter bird was possibly that seen previously at Dungeness, Kent.

level throughout Feb. and Mar. Other counts included 102 at Rye on 3 Jan., 100 at Bewl Water on 4 Jan., 110 at Arundel WFT on 7 Jan., 100 on the Adur Levels, 103 in the Lower Cuckmere, 189 on Pevensey Levels on 11 Jan., 600 at Amberley on 22 Jan., 280 at Pagham Hbr on 24 Jan. and 258 on Pevensey Levels on 8 Feb.

May and June records at possible breeding sites were restricted to Waltham Brooks, Sidlesham and Rye Hbr; on 28 June 10+ were moulting at Arundel WFT.

Later in the year there were 200 at Thorney Island on 26 Sept., 120 in the Lower Cuckmere on 31 Oct. and c.200 at Pevensey and Pett Levels on 20 Dec.

70. **MALLARD** (*A. platyrhynchos*):—The monthly wildfowl counts at the principal localities were:

County totals	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Arundel WFT	5286	2927	2196	3373	3025	3692	4724	3955	2485	1689
Rye Hbr	862	628	397	426	315	716	353	531	331	380
Chichester Hbr	460	85	193	564	235	333	227	320	194	89
Chichester Res.	248	95	42	NC	82	68	563	186	54	—
Chichester Hbr	500	532	289	NC	366	529	487	675	354	216
Bewl Water	490	337	240	NC	500	327	375	473	333	275
Pagham Hbr	462	175	173	247	284	214	284	262	207	183
Darwell Res.	373	128	55	198	152	202	456	267	78	35
Chichester GP	280	47	39	158	92	52	75	57	7	40
Alexandra Park	260	126	105	155	92	126	167	113	107	86
Angmering Decoy	94	24	17	248	220	54	—	45	—	4
Knepp Lake	188	13	12	NC	69	112	214	10	25	20

The Jan. 1987 count was well above average for recent years and the highest since 1982. Other counts received included 315 at Barcombe Res. on 11 Jan., 340 at Arlington Res. on 25 Jan., 397 at Weir Wood Res. on 31 Jan., 286 at Hampden Park on 16 Jan. and 128 on Pevensey Levels on 8 Feb.

In the breeding season c.50 pairs were estimated at Rye Hbr and Bewl Water and 43 pairs were found during a complete survey of Pevensey Levels. At Gravetye Manor 5 pairs raised 27 young.

72. **PINTAIL** (*A. acuta*):—The monthly wildfowl counts at the principal localities were:

County totals	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Chichester Hbr	471	280	282	—	48	230	347	438	174	40
Pagham Hbr	251	85	110	—	16	61	74	26	21	32
Amberley	181	150	137	—	22	148	195	286	32	2
	28	34	30	—	10	12	29	126	112	6

The Jan. 1987 total, although little more than half of the Jan. 1988 total, was nevertheless still above the average for recent years. On 17 Jan. there were 100+ SW at Camber Sands and on 8 Feb. 20 at Pevensey Levels, otherwise only small numbers were recorded at 6 localities. The last records in the spring were of a pair at Thorney Deep on 26 Apr. and a drake at Arlington Res. on 9 May. In the breeding season feral birds at Arundel WFT had 4 broods but few, if any, juveniles survived.

At Rye Hbr one was present from 14 July throughout Aug. until 30th when 3 were present, and 4 were at Thorney Deep on 28 Aug. Other counts at the end of the year included 50 and 130 at Thorney Deep on 29 Oct. and 28 Nov. respectively, 47 flying over South Stoke on 13 Dec. and 50 at Waltham Brooks on 20 Dec.

73. **GARGANEY** (*A. querquedula*):—Spring passage was heavier than in recent years. First recorded on 2 Apr. when there was a pair E at Biring Gap and one with 7 Eider off Newhaven West Pier. On 3 Apr. there were 2 E at Worthing and on 5 Apr. 6 E at Beachy Head and one at Arlington Res. Subsequently there were no records for 10 days and then further singles at Combe Haven, Newhaven Tidemills, Pett Level and Waltham Brooks. On 9 May a drake was on the sea at Seaford and on 15 May a duck at Combe Haven.

Breeding was proved at Rye Hbr where a drake was present throughout May and a duck with 4 young on 7 June. A pair was present at Waltham Brooks throughout June without evidence of breeding. During Aug. there were up to 3 at Chichester GP, singles at Pett on 3 days and 2 E at Selsey Bill on 22nd. In Sept. 1-2 were recorded at Rye Hbr on 3 dates. A duck, with Teal, at Combe Haven between 24 Oct. and 2 Nov. was the last reported.

80. **TUFTED DUCK** (*A. fuligula*):—The monthly wildfowl counts at the principal localities were:

	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
County totals	1255	1150	1169	452	629	926	1145	1306	1183	842
Arundel WFT	444	334	252	111	123	210	284	377	304	138
Bewl Water	288	126	174	36	95	178	170	271	98	96
Chichester GP	191	319	299	193	273	228	276	290	295	121
Rye Hbr	55	45	83	36	21	71	205	140	188	150
Chichester Hbr	41	71	36	—	24	21	18	10	10	23
Ardingly Res.	33	6	51	6	2	68	42	30	32	30
Barcombe Res.	67	34	31	2	6	7	53	37	43	5
Swanbourne Lake	39	13	43	2	—	32	6	9	12	77
Burton Ponds	21	21	31	35	NC	8	8	10	22	47
Weir Wood Res.	NC	27	15	2	8	46	20	20	22	26

The Jan. 1987 total was a little above average for recent years and the highest since 1983. Other counts received for Jan. included 95 at the Crumbles GP, 77 at Barcombe Res. and 33 at Pagham on 17th, 55 at Brooklands on 24th and 32 on 31 Jan. In Feb. the counts included 56 at Widewater, Lancing on 11th, 52 at Barcombe Res. on 23rd, 43 at Ardingly Res. on 21st, 35 at Darwell Res. on 15th and 30 at Brooklands. Numbers at the Crumbles GP remained steady in Feb. but had fallen to 70 by 14 Mar. A total of 51 were still present at Weir Wood Res. on 28 Mar.

Once again very few breeding data were received. At Chichester GP 8 broods totalling 27 young were counted but at Bewl Water, where 17 pairs were present, only 2 broods of 5 were seen. Another brood of 5 was recorded at Weir Wood Res. and there were many young at Rye Hbr where 22 adults were counted on the Ternery Pool on 23 June.

In the latter part of the year there were c.50 at the Crumbles GP throughout much of Sept. and Oct. rising to c.70 in Nov. and Dec. Elsewhere 75 were recorded at Ardingly Res. on 7 Nov., 35 at Gravetye Manor on 12 Dec. and 29 at Patching Pond in mid-Oct.

81. **SCAUP** (*A. marina*):—In early Jan. only 2 singles were present, at the Crumbles GP and Northpoint GP. However, a single at Shoreham on 13th, 4 at Pagham on 14th, singles at Brighton Marina and Brooklands on 15th and 7 in Chichester Hbr and one at Arlington Res. on 16th heralded a major influx on 17th comprising 120-150 in Rye Bay, 23 off East Head and 14 in Seaford Bay. Thereafter the flock at Rye split into smaller groups of 50+ off Galley Hill on 18-19 Jan. and 42 and 74 off Pett on 23rd and 26th respectively. In Seaford Bay 10 remained until 2 Feb. and there were 1-3 at Lancing, Newhaven Tidemills, Shoreham Hbr and Wick during the remainder of Jan. Numbers in Feb. were much lower but 12 were at Pagham on 17th and 8 on the sea off Brighton on 11th. One at Bewl Water on 13th was the first there since 1979. Singles were reported from the Crumbles GP, Lancing and Pagham in Mar., and 4 off Rye on 17 Apr. were the last in spring.

The first to return was a duck which arrived with an influx of Pochard at Rye Hbr on 4 July. The next was another duck at Rye on 22 Oct. which was joined by a second on 31st. Numbers there then built up to a regular 12-18 in Dec. The first at the Crumbles were 2 on 7 Nov. which then rose to 9 by the end of the year. Elsewhere the only record was of 3 at Pagham on 21 Nov.

82. **EIDER** (*Somateria mollissima*):—The approximate monthly totals and peak counts at the main localities were as follows:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
County totals*	93	96	85	53	149	3	4	7	59	21	17	31
Chichester Hbr	55	46	25	8	—	—	—	1	1	1	9	8
Langney Point	3	8	3	—	—	—	—	—	—	—	—	—
Newhaven	11	—	13	—	—	—	—	—	—	—	—	—
Rye Hbr	1	—	3	8	20	—	—	—	—	—	4	—
Selsey Bill	18	25	40	30	129	—	2	3	58	20	—	10

*these exclude birds seen migrating along the coast.

Spring movements at Selsey Bill, Worthing and Beachy Head totalled 99 E of which 8 were in Mar., 82 in Apr. and 9 in May.

Inland there was an imm. male on R. Arun at South Stoke on 21 Feb. (DIS).

86. **LONG-TAILED DUCK** (*Clangula hyemalis*):—A very poor year. In Jan. single birds were seen at Pagham Hbr and Bosham on 13th and 27th respectively. A male flew W at Worthing on 14 Feb.

In the second winter period there was one W at Worthing on 25 Nov. and single birds at Pagham Hbr and the Crumbles from 1 and 12 Dec. respectively into 1988.

87. **COMMON SCOTER** (*Melanitta nigra*):—Observations at the main sea-watching localities were as follows:

Direction of movement	Jan.-Feb.		Mar.-May		June-July		Aug.-Sept.		Oct.-Dec.	
	E	W	E	W	E	W	E	W	E	W
Selsey Bill	6	2	1581	23	41	—	47	51	—	—
Worthing	19	68	2088	63	125	12	29	61	76	119
Brighton Marina	54	100	2906	—	—	12	—	—	—	—
Seaford	16	5	3133	—	—	—	—	—	—	—
Beachy Head	—	—	3271	16	—	—	—	—	—	—

The peak movement occurred on 3-5 Apr. when there were 4150 E at the above localities. There were 350 off Langney Point on 9 Aug. Inland records were of 1 at Bewl Water on 18 Jan. and 2 on 4 Apr.

89. **VELVET SCOTER** (*M. fusca*):—The approximate monthly totals were:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
County totals	42	—	—	26	25	—	9	2	—	—	—	—

The cold spell in Jan. produced a small influx with reports of up to 15 at Rye Hbr, 10 at Worthing, 5 at Langney Point, 3 at Brighton and single birds at Hastings and Newhaven.

Spring passage occurred from 3 Apr. with birds recorded flying E as follows: Selsey Bill 10, Worthing 2, Brighton Marina 10, Seaford 5 and Beachy Head 36. The peak movement occurred on 9 May when there were 23 E at Beachy Head.

In the second half of the year there were 5 W and 4 W at Worthing on 5 and 24 Sept. respectively. The only Oct. record was 2 E at Pett on 27th. There was one W at Worthing on 19 Dec.

91. **GOLDENEYE** (*Bucephala clangula*):—The approximate monthly totals and peak counts at the main localities were as follows:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
County totals*	164	176	101	26	3	—	—	—	—	—	35	63
Bewl Water	15	18	15	6	—	—	—	—	—	—	4	4
Chichester Hbr	50	63	56	13	1	—	—	—	—	—	20	43
Crumbles	10	11	4	1	—	—	—	—	—	—	—	—
Pagham Hbr	30	13	4	1	1	—	—	—	—	—	—	1
Rye Hbr	6	12	10	3	—	—	—	—	—	—	1	4
Weir Wood Res.	1	5	6	—	—	—	—	—	—	—	—	6

*these exclude birds seen migrating along the coast.

In addition there were up to 14 on R. Adur, 8 on R. Arun, 9 on R. Ouse and 13 at Newhaven during the cold spell of Jan.-Feb. On 12 Feb. 14 were recorded at Clipping.

In Apr. up to 2 birds were regularly seen throughout the month at Waltham Brooks, one remaining until 2 May. A female at Thorney Deeps from 11-16 May was possibly the bird seen at this locality on 19 July (RJS) and at Sidlesham Ferry on 25 May.

93. **SMEW** (*Mergus albellus*):—An influx occurred on 11 Jan. following the onset of severe weather conditions. Up to late Feb. there were reports from 14 sites with maxima of 26 (6 males) at Northpoint GP, 16 (2 males) at the Crumbles GP and Bewl Water, 9 (1 male) at Thorney Deeps and 6 at both Pagham Hbr and Pett Level. As usual there was a great deal of movement about the county but some sites, namely Bewl Water, Northpoint GP, Pagham Lagoon and Thorney Deeps, were occupied throughout the period. There were still 9 at the former locality on 27 Feb. but the only Mar. records were 1-2 at Rye Hbr up to 8th with one remaining until 30th and one at Pagham Hbr on 9th.

In the latter part of the year the only records were in Dec. with 5 (1 male) at the Crumbles GP on 3rd, 2 at Bewl Water from 13th to 31st and one at Rye Hbr from 19th to 31st.

94. **RED-BREASTED MERGANSER** (*M. serrator*):—The estuary counts in Jan., Feb. and Mar. were 37, 48 and 48 respectively (cf. 43, 28 and 50 in 1986). At Worthing up to 57 were seen in Jan., 32 in Feb. and 19 in Mar.

Spring movements at Selsey Bill, Worthing and Beachy Head totalled only 201 E of which 70 were in Mar., 125 in Apr. and 6 in May. At Seaford the March-May total was 138 E. The peak movement occurred on 4 Apr. when there were 35 at the latter locality.

In Chichester Hbr there was one on 14 June and 3 on 30th.

The first returning birds were 2 at Church Norton on 27 Sept. The estuary counts for Nov. and Dec. were 94 and 76 respectively (cf. 73 and 149 in 1986).

Inland there were 7 at Weir Wood Res. on 20 Jan. and 8 from 21st to 27th. A male was recorded at Arlington Res. on 23 Jan. and there were 3 at Bewl Water on 4 Apr.

95. **GOOSANDER** (*M. merganser*):—The only records for early Jan. were a redhead at Barcombe Res. on 1st and a male there on 4th. Single birds were recorded at Bewl Water and Worthing on 10th and there were 4 at Arlington Res. and 1 at Hoos Level on 11th. An influx occurred from 14th and birds were recorded at 18 localities up to the end of Feb. The most regularly frequented locality was Arlington Res. where up to 23 were present in Jan. and 28 on 1 Feb., declining to 10 on 22nd. On the R. Arun there were 14 (7 males) on 17 Jan. with 4 still present on 11 Feb. 14 were on Pevensey Levels on 31 Jan. In Mar. there were 4 redheads at Arlington Res. on 7th, a redhead at Bewl Water on 14th, 2 (1 male) at Powdermill Res. on 15th and a redhead at Weir Wood Res. on 19th and 1 Apr.

Exceptionally a female remained at Bewl Water throughout the summer and into the autumn (PCB *et al.*). The only other county record for the summer months was a wounded bird on 22 July 1972.

In Nov. there were up to 2 (1 male) at Bewl Water where 4 (2 males) were present in mid-Dec. The only other records for the latter part of the year were a male at Chichester GP on 3 Dec., a redhead at Ardingly Res. on 12 Dec. and a male at Arlington on 31 Dec.

Cat. C. RUDDY DUCK (*Oxyura jamaicensis*):—Present throughout much of the year at Chichester GP where the maxima for Jan. and Feb. were 12 and 9 respectively. Also in Jan. and Feb. there was a pair at the Crumblies GP which stayed until early Mar. and 2 ducks at Bewl Water. Elsewhere singles were seen at Pagham on 2 dates in Feb. and on 11 Mar.

In the breeding season a pair was seen with young at Chichester GP but it is not known whether they survived to fledging. Several pairs bred at Arundel WFT but the chick mortality was very high. Elsewhere 1-2 females were seen at Bewl Water on several dates in Apr. and May.

At the end of the year there were singles at Rye Hbr on 23 Oct. and 4 Nov. and at Weir Wood Res. on 21 Nov. At Barcombe Res. 3 stayed from 14 Nov. until 28 Dec. and there were 2 at both Arlington Res. and the Crumblies GP throughout Dec.

97. **HONEY BUZZARD** (*Pernis apivorus*):—The only acceptable record was 1 N over Hampden Park, Eastbourne on 10 May (RKH).

98. **BLACK KITE** (*Milvus migrans*):—One seen at Beachy Head on 4 May (MEC, RHC *et al.*) has been accepted by *British Birds* and is the 10th county record. All have been recorded since 1970, eight being between 12 April and 5 May.

99. **RED KITE** (*M. milvus*):—Single birds were recorded over Ashdown Forest on 15 Feb. (HC, PD), Combe Haven on 16 Mar. (KMJ), Cuckmere Valley on 19 Dec. (GG) and Sandy Cross, Heathfield on 23 Dec. (HD *et al.*). The 2 Dec. sightings may possibly relate to the same individual.

103. **MARSH HARRIER** (*Circus aeruginosus*):—An excellent year with a minimum of 23 birds recorded, the highest total for 7 years. The monthly totals were:

Apr.	3	9	—	—	—	—	—	—	—	—
May	—	—	—	—	—	—	—	—	—	—
June	—	—	—	—	—	—	—	—	—	—
July	—	—	—	—	—	—	—	—	—	—
Aug.	—	—	—	—	—	—	—	—	—	—
Sept.	—	—	—	—	—	—	—	—	—	—
Oct.	—	—	—	—	—	—	—	—	—	—
Nov.	—	—	—	—	—	—	—	—	—	—
Dec.	—	—	—	—	—	—	—	—	—	—
Total	3	9	—	—	—	—	—	—	—	—

On 17 Apr. a female arrived from the sea at Seaford and the following day there were singles at Pagham Hbr and Rye Hbr. Between 3-29 May at least 9 birds were recorded along the coast.

Autumn migration commenced on 11 Aug. with an imm. that remained in the Sidlesham area until 25th. A female/imm. reported flying SW over Barcombe Res. on 14 Aug. was possibly that recorded at Cissbury on 15-16th. The main passage occurred between 29 Aug. and 20 Sept. with a minimum of 7 birds reported from coastal localities.

There were 2 late records of singles at Sidlesham and Beachy Head on 29 Oct. and 6 Nov. respectively.

104. **HEN HARRIER** (*C. cyaneus*):—An excellent year for the species with a probable total of 62 birds recorded. The largest numbers occurred in mid-Jan. reflecting the severe weather conditions at that time. The approximate monthly totals were:

Adult males	Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
	12	5	3	3	—	—	—	1
Others	24	7	3	2	1	2	4	4

The traditional wintering areas were again frequented and the vast bulk of the records can be grouped and summarised as follows:

Midhurst area. A male and a ring-tail roosting at one site on 18 Jan. A male at Ambersham Common on 21 Apr.

Chichester Harbour. Two males from 15-31 Jan. and 2 ring-tails up to 28 Feb., one remaining until 3 Mar. In autumn, single ring-tails on 25 Oct. and 5 Nov.

Selsey Peninsula. Up to 2 ring-tails frequented Pagham Hbr between 13-26 Jan. A male there on 18 Jan. was joined by a second on 21st. In autumn, single ring-tails from 21-28 Nov. and on 9 Dec. A male on 19 Dec.

Littlehampton-Worthing coastal plain. Three males and 2 ring-tails from 11-20 Jan.

Arun Valley and Downs. Two ring-tails at a regular roost on 29 Jan. Elsewhere single ring-tails were recorded on 30 Jan., 14-22 Feb., 14 Mar. and 5 Apr. A male at Sutton Down on 8 Feb.

Ouse Valley and Downs. Three different males were seen on 3 Jan., 11 Feb. and 6 Apr. and ring-tails on 10-11 Jan. and 28 Feb.

Cuckmere Valley and Beachy Head. A male on 12 Jan. and a ring-tail from 16-22 Jan. In autumn, a ring-tail on 27-28 Sept. was possibly that found dead at Cuckmere Haven on 18 Oct. A ring-tail at Lullington on 8 Dec.

Pevensey Levels. Up to 5 from 11 Jan. to 2 Feb. Single males were seen regularly from 8-18 Feb. and again on 9 Mar. A ring-tail from 6-23 Dec.

Pett Level/Rye Harbour. At Rye a ring-tail was present from 1 Jan. to 18 Mar. and it or another frequented Pett between 3-12 Jan. Up to 2 males were present at Rye from 11-31 Jan. with one from 5-18 Feb. reported at Pett on the latter date. A ring-tail at Rye in Nov. Dec.

Ashdown Forest. Single males on 3 Jan. and from 29 Mar. to 6 Apr.

In addition, there was a ring-tail at Combe Haven on 14 Jan. and ring-tails at Brighton Marina and Ditchling Beacon on 15 Jan. and 14 Mar. respectively. A migrant ring-tail arrived from the sea at Cooden Beach on 11 Apr.

105. **MONTAGU'S HARRIER** (*C. pygargus*):—There were 3 spring records on typical dates for the species. At Beachy Head there was a ring-tail on 27 Apr. (RHC) and an adult male on 3 May (DC, JFC, SK, TWP). At Combe Haven, a ring-tail in first summer plumage was recorded on 10 May (KMJ).

An adult male E at Rye Hbr on 25 July (PEB) was the earliest returning passage bird in the county for at least 15 years.

107. **GOSHAWK** (*Accipiter gentilis*):—1985:—A female at Combe Haven on 24 Feb. (KMJ).

108. **SPARROWHAWK** (*A. nisus*):—The species continues to be widely reported throughout the year. During the breeding season a total of 17 occupied territories were located but only 5 pairs were proved to have bred, raising 14 young. The average brood size of 2.8 compares favourably with that of 1.5 in 1985 suggesting a good breeding season. The available nesting data do not, however, reflect the likely true status of the species in the county, for single birds were noted at 45 other sites in April-July.

109. **BUZZARD** (*Buteo buteo*):—There continues to be a feral population centred upon Ashdown Forest. Elsewhere during Jan-Apr. a total of 9 birds were reported from 7 widely scattered localities. The only May record was of a migrant NW at Chichester GP on 5th.

In autumn a total of 12 migrants were reported from 6 coastal localities between 5 Aug. and 3 Nov. Away from the coast there were singles at 4 localities between 8 Sept. and 29 Nov. and 2 at Alickton on 21 Nov. These latter inland records probably also refer to migrants as no bird remained more than one day.

110. **ROUGH-LEGGED BUZZARD** (*B. lagopus*):—One over Horsham on 28 Nov. (PJWc).

113. **OSPREY** (*Pandion haliaetus*):—Single birds were recorded at Weir Wood Res. on 29-30 Apr. (JWK, RH *et al.*), 4 May (MB, LM) and 23 May (JESC, RP).

In autumn, an adult was seen almost daily at Weir Wood Res. from 14 Aug. to at least 3 Sept. (BMM, DCM *et al.*). An imm. was also reported there on 28 Aug. (BMS). Elsewhere, single migrants were recorded as follows: Pett Level, 9 Aug. (RHu, AJS); Beachy Head, 21 Aug. (RHC); Cuckmere Haven, 28 Aug. (PJW); Combe Haven, 6 Sept. (KMJ) and Pagham Hbr, 8 Sept. (BJ, CMJ).

115. **KESTREL** (*Falco tinnunculus*):—During the breeding season a total of 65 occupied territories were located but only 14 pairs were proved to have bred, raising 36 young. The average brood size of 2.57 is similar to that of 2.7 in 1986 and is thus, once again, well above the recent average of 2. A spot survey by FWD and SWMH in TQ12 and TQ13 revealed the presence of 20 territories and 2 partial territories, indicating a breeding density of 2 pairs per 2500 acres. This figure suggests no change in status since these 10km squares were last surveyed in 1978.

The largest autumn group reported was 14 at Long Furlong on 3 Aug. Probable migrants were recorded at Beachy Head on 7 Mar., at Worthing on 20 Apr. and 23 and 25 May and at Selsey Bill on 27 Sept.

117. **RED-FOOTED FALCON** (*F. vesperinus*):—A female was seen at Bullock Hill, Woodingdean on 3 July (RJF). This record, which is the first since 1979, has been accepted by *British Birds* and was part of a small national influx in early July. There are now 19 county records, but only 8 have been since 1961.

118. **MERLIN** (*F. columbarius*):—Recorded until 20 Apr. and from 9 Sept. The monthly totals were:

Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
9	9	6	5	7	11	10	6

In the early months, most records were of single birds on the coast at Chichester and Pagham Hbrs, Cuckmere Haven, Beachy Head, Pevensey Levels and Rye Hbr. Inland reports were from the Downs between Brighton and Eastbourne, Lewes Brooks and Waltham Brooks. The last in spring was one arriving from the sea at Hove on 20 Apr.

In autumn and early winter there were many reports of single birds hunting both coastal and downland localities. There were 2 at Thorney Island from 11-17 Oct. and 2-3 on the Selsey Peninsula from 20-27 Nov.

119. **HOBBY** (*F. subbuteo*):—First recorded on 13 Apr. at Littlehampton and last seen on 22 Oct. at Horam. These are the earliest and latest dates for the county for at least 14 years. A good year for migrants with monthly totals as follows:

Apr.	May	June	July	Aug.	Sept.	Oct.
7	17	2	3	8	22	6

During the breeding season, adults were reported from 5 suitable localities but success was proved at only one where 2 young were raised. Two traditional sites for the species were definitely untenanted.

123. **PEREGRINE** (*F. peregrinus*):—1980:—An adult male at Combe Haven on 9 Nov. (KMJ).

1987:—In the early months at least one immature and one adult were widely recorded

hunting an area embracing Beachy Head, the Cuckmere Valley, Seaford and Newhaven between 26 Jan. and 26 May. Another adult frequented the Pett Level/Rye Hbr area between 21 Apr. and 24 May. Elsewhere, single unaged birds were reported from Chichester Hbr on 22 Mar. and 28 Apr. whilst an imm. female was recorded at Lancing on 22 Apr.

During autumn an adult frequented the Beachy Head/Cuckmere area from 30 Aug. to at least 24 Dec. An imm. was also present on 25 Sept. and 17 Oct. Elsewhere single birds were reported at Pilsley Island on 15-17 Aug., Balsean on 30 Sept. and 3 Oct., Worthing on 14 Oct., Pagham Hbr on 1 Nov. and 19 Dec., West Chiltoning on 13 Nov. and Almodington on 24 Nov.

129. **RED-LEGGED PARTRIDGE** (*Alectoris rufa*):—The largest totals reported were 36 at Sidlesham, 16 at Chantconbury, 14 at Littlehampton GC and 13 at Slimfold. It should be emphasised, however, that the true status of the species in the county is now obscured by the release of Chukars (*A. chukar*) and Chukar x Red-legged hybrids for shooting purposes and that the above records should be treated with some caution.

130. **GREY PARTRIDGE** (*Perdix perdix*):—Few records were received. The largest coveys reported were 40 at Rye Hbr, 15 at Pagham and 12 at Jury's Gap. All records of the species are welcome.

131. **QUAIL** (*Coturnix coturnix*):—An excellent year with approximately 32 reported calling as follows: 1 at Lyminster 28 Apr., up to 3 at Rye Hbr 2-23 May, 1 at Newmarket Hill 9 May-5 Aug., 1 at Friston 5 June, 1 on Horse Eye Level 11 June, 1 on Waterlot Level 12 June, 1 at Firlie Beacon 21 June and 7 July, 1 at Icklesham 24-28 June with 2 on 2-3 Aug., 1 on 4 and 29 Aug., 2 at Barnham 28 June-3 July, 1 at Telscombe June-July, up to 12 Cissbury/Chantconbury 13 June-17 July, 1 at Balmer Down 10 July-early Aug., up to 2 at Plumpton 12 July-8 Aug. and 1 at Falmer Hill 30 July.

Cat. C. GOLDEN PHEASANT (*Chrysolophus pictus*):—There were no systematic counts at Kingley Vale or West Dean Woods although birds were present at the former locality all year. A single male was seen between Goodwood and Singleton on 22 Mar. (CRJ).

136. **WATER RAIL** (*Rallus aquaticus*):—Approximate monthly totals of non-breeding birds were:

	Jan.	Feb.	Mar.	Apr.	July	Aug.	Sept.	Oct.	Nov.	Dec.
Number of sites	13	8	6	6	1	3	4	7	12	11
Number of birds	69	40	37	30	1	10	27	60	83	71

During the early part of the year up to 40 were recorded at one locality but numbers elsewhere were small.

In the breeding season there were reports from 2 localities with 5 pairs at one site and at least 12 occupied territories at the other. A pair remained at a third site well into Apr. and breeding may possibly have occurred.

The first returning birds were seen at Pebsham on 22 July and at Arundel, Eridge Park and Icklesham in Aug. In Oct-Dec. up to 60 were recorded at one locality but the maximum reported elsewhere was no more than 10.

137. **SPOTTED CRAKE** (*Porzana porzana*):—1986:—An adult at one locality on 11 Mar. 1987:—Single birds were heard calling at 2 different localities on 25 June and 14 and 22 Aug. respectively. Up to 3 were seen at Arundel WFT between 26 Aug. and 29 Sept. as follows: 1 from 26 Aug. to 29 Sept., 3 on 28-29 Aug. and 2 on 30 Aug. (SJH *et al.*). One was recorded at Pagham Hbr from 28 Oct. to 1 Nov. (ADH, CH, SWMH *et al.*).

141. **CORNCRAKE** (*Crex crex*):—1986:—One at St Leonards on 1-2 Oct. (KMJ).

1987:—One at Church Norton on 14 Sept. (BJ, CMJ).

142. **MOORHEN** (*Gallinula chloropus*):—Few records were received as usual. The largest numbers recorded early in the year were 62 at Rye Hbr and 30 at Brooklands. Only 10 breeding pairs were reported, a situation which does not reflect the true status of the species in the county. In the latter part of the year the maxima recorded were 65 at Rye Hbr and 22 at Brooklands.

145. **COOT** (*Fulica atra*):—The monthly counts at the principal localities were:

	1987		1988		Mar.
	Jan.	Feb.	Mar.	Apr.	
County totals	5146	4346	2032	2956	976
Bewl Water	2013	1351	752	1152	224
Chichester GP	885	820	407	1116	173
Rye Hbr	931	1057	784	225	395
Ardingly Res.	417	324	184	55	162
Chichester Hbr	319	177	135	20	57
Arundel WFT	174	161	102	56	99
Arlington Res.	119	81	41	17	59
Pagham Hbr	114	100	101	19	70
Barcombe Res.	59	31	31	28	72
Weir Wood Res.	—	45	20	10	38
Pett Level	—	27	25	3	9

The Jan. 1987 total was above average for recent years. At Bewl Water the count increased from 1339 on 4 Jan. to 2013 on 18 Jan. The latter is the highest count ever recorded for a single site in Sussex. Other high counts included 245 at the Crumbles GP on 23 Jan. declining to 102 on 26 Mar., 142 at Brooklands on 24 Jan. declining to 63 on 10 Mar., 125 at Arlington Res. on 2 Feb. and 80 at Weir Wood Res. on 31 Jan. Other unusual numbers were 51 on the R. Adur at Cuckoos Corner on 18 Jan., 26 in Brighton Marina on 15 Jan., and c.20 in Newhaven Hbr throughout Jan. and Feb. Surprisingly numbers at Widewater failed to reach double figures.

Little information was available for the breeding season, but at Bewl Water 35 pairs were present, 13 nests found but only 7 broods seen. Later in the year there were 230 at Thorney on 28 Sept. and at the Crumbles numbers built up steadily to c.100 on 25 Oct., 145 on 2 Nov. and 131 on 14 Dec. Elsewhere there were 35 at Burton Pond on 15 Oct., 64 at Brooklands on 23 Dec., c.40 at Tilgate on 25 Dec. and 35 at Weir Wood Res. on 31 Oct.

146. **CRANE** (*Grus grus*):—An adult was present at Thorney Island on 27-28 Sept. (CBC, MAC *et al.*). This record has been accepted by *British Birds* although records from 1988 onwards will no longer be considered by them. This is the first Sept. record for the county, all recent (post 1963) records being in Apr-May or Dec-Jan.

151. **OYSTERCATCHER** (*Haematopus ostralegus*):—The estuary counts were:

	1987		1988		Mar.
	Jan.	Feb.	Mar.	Apr.	
County totals	1229	1606	1711	1276	1301
Chichester Hbr	657	842	1600	982	465
Rye Hbr	30	66	217	234	362
Pagham Hbr	191	309	400	291	368
Climping	250	220	470	274	492
Pett Level	35	139	13	2	17

Breeding records were again incomplete but 44 pairs were reported as follows: Rye Hbr 20, Pagham Hbr 10, Stakes Island 8, Eillanore 3 (1 young), East Guldeford Level 2 and Crumbles 1. The summering flock at Rye Hbr totalled 130 in June. In Chichester Hbr numbers built up from 400 on 26 July to 800 on 10 Aug. and 1200 on 8 Sept.

Inland, a total of 9 birds were recorded at Bewl Water, 3 in Jan., 2 in Feb., 2 in Mar. and 2 in Oct. In addition there were 2 at Barcombe Res. on 24 Jan., 1 at Arundel WFT on 9 Nov. and 1 at Chichester GP on 28 Nov.

152. **BLACK-WINGED STILT** (*Himantopus himantopus*):—One at Pagham Hbr on 19 May (JMW *et al.*) and one over South Malling on 25 May (AW) have been accepted by *British Birds* and are the 18th and 19th county records. All 9 records since 1961 have been in May or June.

153. **AVOCET** (*Recurvirostra avosetta*):—The monthly totals were as follows:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	3	3	9	29	40	15	3	1	1	2	1	6

In the early part of the year there were 2 wintering in Chichester Hbr. Single birds were seen at Pagham Hbr and Sidlesham Ferry on 31 Jan. and 25 Feb. respectively. Spring

passage commenced in early Mar. with 1 at Shoreham on 6th and 2 at Rye Hbr on 7th. There were 3 E at Brighton Marina on 21st. During Apr. a total of 30 E were reported from the main sea-watching localities including a flock of 18 at Worthing, Rottingdean and Beachy Head on 17th. 6 E at Seaford on 22nd were later seen at Pett Level. In May there were 2 E at Seaford on 8th and 17 E at Beachy Head the following day. The former birds had earlier been seen at Arundel WFT, an unusual inland location for the species. Other May records included up to 5 at Sidlesham Ferry, 3 at Cuckmere Haven and 3 at Pett Level. The last spring migrants were 12 at the latter locality on 19 June.

The only autumn migrant was 1 at Pett Level on 9 July. At the end of the year there were again 2 wintering in Chichester Hbr. At Pagham Hbr 4 were recorded on 8 Dec. with 1 remaining throughout the month.

154. **STONE CURLEW** (*Burhinus oedichnemus*):—One at Beachy Head on 8 Aug. (MK, NAGL) was the only record.

157. **COLLARED PRATINCOLE** (*Glareola pratincola*):—One at Pagham Hbr on 4 July (KB-T, IE, CO *et al.*) has been accepted by *British Birds*. This is only the third county record and the first since 1978. There are now records for June, July and Aug.

158. **LITTLE RINGED PLOVER** (*Charadrius dubius*):—The approximate monthly totals away from known breeding sites were:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	—	—	1	5	10	3	19	20	5	—	—	—

The first of the year was at Gatwick on 7 Mar., where 2 were present on 5 Apr. Elsewhere, singles were noted at Arundel WFT on 8th, Church Norton on 16th and Sidlesham Ferry on 23rd. In May, sightings included 2 at Pett Level on 5th, 3 at Norman's Bay on 8th and a single over Combe Haven on 13th. It appears that 7 pairs attempted breeding and up to 9 young were successfully reared. A single at Pett Level on 28 June was probably the first noted on return passage. In July widespread singles were noted, while small post-breeding groups were also seen, e.g. at Sidlesham Ferry and Chichester GP. During Aug. the 2 main sites were Sidlesham Ferry with 5 on 3rd and Pett Level with a total of up to 9, 4 of these on 19th. In Sept. singles were at Cuckmere Haven on 1st, Combe Haven on 6th and Pett Level on 1st, 12-13th and 15-17th.

159. **RINGED PLOVER** (*C. hiaticula*):—The estuary counts were:

	1987		1988		Mar.
	Jan.	Feb.	Mar.	Apr.	
County totals	179	613	283	863	217
Chichester Hbr	49	255	84	290	82
Pagham Hbr	23	210	74	182	50
R. Adur	31	66	36	186	54
Rye Hbr	4	15	55	134	40

The severe weather in mid-Jan. reduced numbers dramatically but there was a marked recovery in Feb. with the onset of less harsh conditions. Other Jan. peaks away from the main sites included 50 at Goring, 33 at Brighton Marina and 22 at Cuckmere Haven. Spring passage was poor with just 41 E recorded at Worthing in Mar-May. The peak movement was 15 on 23 May.

Breeding records were again incomplete but 71 pairs were reported as follows: Rye Hbr 40, Pagham Hbr 18, Eillanore 4, Crumbles 2, Cuckmere Haven 2 (2 young), Stakes Island 2 (1 young), Brighton Marina 1 (4 young), Bulverhythe 1 (2 young), and Peacheaven 1 (1 young). At Rye Hbr very few chicks were hatched in June due to the cold and wet conditions but breeding success was considered moderate from re-nesting attempts.

Autumn passage was heaviest in Aug. with counts of 900 and 997 at Thorney on 10th and 27th respectively, 203 on R. Adur on 24th and 100+ at Rye Hbr on 14th. The only inland record was 1 at Bewl Water on 29 Aug.

Dec. peaks away from the main sites included 101 at Goring and 21 at Littlehampton West Beach.

161. **KENTISH PLOVER** (*C. alexandrinus*):—A male at Littlehampton West Beach on 22 Apr. (ASC) was the only record.

163. **DOTTEREL** (*Eudromias morinellus*):—In Apr. there were 3 at Newmarket Hill, Brighton on 19th (NAGL *et al.*) and 1 at Rye Hbr on 26th (BJY).

During autumn, there were several sightings of juveniles at Highdole Hill, Telscombe, with 3 there on 29 Aug., 4 from 31st to 3 Sept. and 3 on 5-7 Sept. (GAS).

165. **GOLDEN PLOVER** (*Pluvialis apricaria*):—The estuary counts were:

	1987			1988		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
Chichester Hbr	1	161	93	13	712	1500
Pagham Hbr	—	64	525	51	280	308
Rye Hbr	—	—	93	—	10	7
Pevensy Levels	—	—	—	—	—	—

In early Jan. the maxima reported were 600 at Pett Level and 400 on Pevensy Levels. A large cold weather movement was noted on 10th with 1200 N at Scotney Court GP, 830 S at Upper Beeding in 2½ hours, 212 SW at Worthing in 1½ hours and 80 S in the Arun Valley. There were 100 W at Hurst Green on 11th. The species was then virtually absent from the county until 1 Feb. when numbers started to build up gradually with the onset of less harsh conditions. A small spring passage was recorded in Mar. with 27 at Pulborough Brooks and 9 at Horsham on 14th, 18 E at Bramber on 18th and 11 N at Selsey Bill on 25th. The only Apr. record was 1 at Rye Hbr on 4th and the last for the spring were 5 at Pilsey Island on 13 May.

The first returning birds were 11 at Stakes Island on 25 July and 2 at Thorney on 10 Aug. A flock of 115 was recorded at Broomhill Level on 30 Aug. Thereafter numbers were small until 1 Oct. when there were 200 at Pagham Hbr. The maxima reported for the remainder of the year were 1300 at Broomhill Level, 600 at Selsey West Fields, 450 in Chichester Hbr, 400 at Pagham Hbr and Pevensy Levels and 180 at Oving.

166. **GREY PLOVER** (*P. squatarola*):—The estuary counts were:

	1987			1988		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
County totals	1411	2177	1050	2154	2348	2802
Chichester Hbr	492	1631	349	1156	1670	1003
Pagham Hbr	775	422	566	726	472	812
Pett Level	2	—	2	—	—	65
Climping	71	93	91	11	35	45

The Jan. peaks, away from the sites listed above were 198 at Goring, 50 at Rye Hbr, 29 at Cuckmere Haven and 12 at Langney Point. Cold weather movements during the month at Worthing totalled 111 W with peaks of 63 and 24 on 11th and 13th respectively. Unusually, there were 1 E and 2 NW at Bewl Water on 14th. Spring passage was poor with birds recorded flying E as follows: Selsey Bill 127, Worthing 160, Brighton Marina 83, Seaford 5 and Beachy Head 4. The peak movement occurred on 28 Apr. when there were 72 at Selsey Bill.

In Chichester Hbr there were 300 on 13 May. Numbers built up rapidly at this site in Aug. from 115 on 10th to 284 on 14th and 1000 on 27th. At the end of the year, the maxima away from the main sites were 116 at Goring, 45 at Littlehampton West Beach, 34 at Rye Hbr and 4 at Cuckmere Haven.

169. **LAPWING** (*Vanellus vanellus*):—In early Jan. the maxima reported were 4000 at Pevensy Levels and 1000 at Pett Level. A very large cold weather movement occurred on 10th with 10000 S at Upper Beeding, 3030 SW at Worthing in 1½ hours, 2800 SW in the Arun Valley in 2 hours and smaller numbers elsewhere. There were 3000 W at Hurst Green on 11th and passage continued on a smaller scale until 14th. The species was then virtually absent from the county until early Feb. when a gradual build-up in numbers occurred.

Records for the breeding season were incomplete but 151 pairs were reported. The largest concentrations were 57 pairs on Pevensy Levels, 22 pairs at Rye Hbr and 19 pairs at Pagham Hbr. No young survived to fledging at Rye for the second year in succession but at Arundel WFT 10 pairs reared 12-15 chicks.

The first returning birds were 12 at Rye Hbr on 2 June. The largest flocks reported at the end of the year were 3000 on Hooe Level, 2500 on Pett Level, 2000 on Adur Levels and at Northpoint GP and 1000 at Sidlesham Ferry.

A leucistic individual was noted on Pevensy Bridge Level on 7 Nov.

170. **KNOT** (*Calidris canutus*):—The estuary counts were:

	1987			1988		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
County totals	223	277	98	25	102	263
Chichester Hbr	180	180	65	5	93	260
Pagham Hbr	40	90	30	20	8	2

During the cold spell in mid-Jan. there were up to 211 at Pagham Hbr, 9 at Langney Point, 2 at Rye Hbr and singles at Mensbrook Park, Littlehampton, Newhaven Tidemills and Shoreham. Spring passage was again very poor at the main seawatching localities with a total of just 105 E at Selsey Bill, Worthing and Beachy Head. The peak movement was on 10 June when there were 40 at Worthing.

The first returning birds appeared at Rye Hbr and Chichester Hbr on 11 and 25 July respectively, but numbers were very low with no more than 8 recorded at any locality away from the western harbours.

171. **SANDERLING** (*C. alba*):—The estuary counts were:

	1987			1988		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
County totals	158	154	152	81	748	263
Chichester Hbr	8	34	24	80	601	150
Rye Hbr	2	38	24	—	50	65
Climping	130	60	90	—	97	47

Few were reported away from the main sites in the early part of the year although 28 were seen at Pagham Hbr on 7 Feb., an unusual locality for the species. Spring passage at the main sea-watching localities was poor with a total of 280 E at Selsey Bill, Worthing and Beachy Head. The peak movement occurred on 9 May when there were 65, 32 and 27 at Selsey, Worthing and Brighton Marina respectively. The last recorded in the first half of the year were 11 at Rye Hbr on 15 June.

The first returning birds were reported from Rye Hbr and Chichester Hbr on 5 and 12 July respectively with 400 at the latter locality on 31st.

172. **SEMPALMATED SANDPIPER** (*C. pusilla*):—1986:—One at Rye Hbr from 2-4 Aug. (BJY *et al.*) has been accepted by *British Birds* and is the first county record. As knowledge of small wader identification increases more records of this difficult species might be expected.

175. **LITTLE STINT** (*C. minuta*):—Another poor year. The approximate monthly totals were as follows:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	—	—	—	—	3	2	6	7	16	10	1	—

In spring there were at least 2 at Pevensy Bridge Levels on 10 May and 1 at Pilsey on 15th. The only June record was 2 at Pagham Hbr on 11th.

Return passage commenced with a single at Rye Hbr on 15 July, 3 at Pilsey on 27th and 2 at Pagham Hbr on 30th. In Aug. a total of 4 were recorded at Sidlesham Ferry and there were singles at Pett Pools, Pilsey and Widewater, Lancing. Numbers continued to be poor in Sept. with just 7 at Sidlesham Ferry, 3 at Pett Pools, 2 at the Crumbles and single birds at Arlington Res., Climping, Cuckmere Haven and Worthing. In Oct. there were 3 on Lewes Brooks on 14th, 2 at Sidlesham Ferry on 4th and singles there on 3rd, 17th and 27-29th and at Rye Hbr on 5-6th, Lancing on 6th and Shoreham on 12th. The only Nov. record was 1 at Sidlesham Ferry on 1st.

178. **WHITE-RUMPED SANDPIPER** (*C. fuscicollis*):—A juvenile at Sidlesham Ferry on 25-27 Oct. (DB, GCB, PJWh *et al.*) was the 8th for the county and has been accepted by *British Birds*. The last was seen at the same site in Aug. 1981.

179. **TEMMINCK'S STINT** (*C. temminckii*):—An excellent spring with a minimum of 10 recorded and possibly as many as 15. All records were in May as follows: Rye Hbr, 3 on 6th, singles on 7th, 9-10th and 20th to 22nd, 3-4 on 23rd, 3 on 24th and a single remaining until 26th (HT, BJY *et al.*); Pett Level, 2 on 8th, 1 on 10th and 3 on 13th (SJRR *et al.*); Pevensy Bridge Level, 2 on 11-12th (mo) and Sidlesham Ferry, 1 on 14-15th (BJ, CMJ, PJ, BM *et al.*). There were no autumn records.

180. **PECTORAL SANDPIPER** (*C. melanotos*):—A probable female at Pevensey Bridge Level on 11-14 May (RHC, RKH *et al.*) was only the 3rd spring record for the county. In autumn, there were singles at Arundel WFT on 18 July (SJH, SCR *et al.*) and at Pett Pools from 24 July to 4 Aug. (CB, JABG, PP *et al.*)

182. **CURLEW SANDPIPER** (*C. ferruginea*):—The approximate monthly totals were:

	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	3	9	26	56	8	—	2

None were reported until the unusual date of 2 June when 2 were seen at Pagham Hbr. One of these was still present on 6th and there were further singles at this locality on 25 June and 22 July. A small influx of adults occurred in late July with 2 at Pilsey on 29th and 2 W at Littlehampton West Beach on 30th. There were also single birds at Rye Hbr and Sidlesham Ferry on the latter date. The Aug. peak was 7 at Sidlesham Ferry on 23-26th but in Sept. few new birds were noted until after 18th. There were 6 at Cuckmere Haven on 22nd and at Sidlesham Ferry there was an increase from 4 on 19th to 9 on 24th and then 12 on 25-26th. On 27th there were 32 at this locality (ASw) which then dwindled to 7 on 28th and 4 on 29th. Two remained to 1 Oct. with 1 still present on 4th. There were 2 at Pilsey on this date and also on 11th. The only other Oct. record was one on Lewes Brooks on 28th. There were no reports for Nov. but in Dec. there was a single at Thorney Island on 12th (MJWH, KWM, EMR *et al.*) and 2 at West Wittering on 19th (RDME). The possibility that these records relate to the same individuals cannot be excluded.

183. **PURPLE SANDPIPER** (*C. maritima*):—The peak monthly counts were:

	Jan.	Feb.	Mar.	Apr.	May	Oct.	Nov.	Dec.
County totals	53	60	80	24	32	75	45	47
Glyne Gap	10	44	37	—	10	3	32	39
Newhaven	21	—	30	12	19	—	—	1
Littlehampton	5	4	2	4	1	—	3	4
Brighton Marina	6	6	8	6	2	5	5	1
Others	11	6	3	2	—	7	5	2

The numbers wintering in the early part of the year were similar to those in 1986. In May the last recorded was 1 at Littlehampton on 12th and 2 at Brighton Marina on 16th, 1 remaining until 18th.

In autumn, there were 5 at Selsey Bill on 17-18 Oct. and 2 at Lancing on 18th. The first arrivals at Glyne Gap and Brighton Marina were noted on 24th and 31st respectively. The county total for Nov. was similar to that in 1986 but the low Dec. figure was due to the absence of records from Newhaven.

184. **DUNLIN** (*C. alpina*):—The estuary counts were:

	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
County totals	13807	20104	6094	11265	14222	4903	18550	6373		
Chichester Hbr	10671	16121	4513	43	5262	8862	11634	356	15105	4495
Pagham Hbr	1251	2601	3362	1443	781	1801	1029	3235	1809	1647
Adur	982	1147	928	48	27	459	1310	1160	1560	204
Rye Hbr	700	40	92	92	17	25	10	100	20	10

The severe weather in Jan. reduced numbers dramatically, particularly in Chichester and Pagham Hbrs. Away from the main sites for the species there were maxima of 366 at Goring, 245 at Newhaven Tidemills and 62 at Cuckmere Haven. Up to 50 were recorded on Lewes Brooks during the month but the only other inland records were singles at Horsham and Bewl Water on 14th and 18th respectively and 4 at the latter locality on 25th. A total of 26 were found dead at Pagham Hbr on 5 Feb., victims of the harsh conditions.

Spring passage at the main sea-watching localities was light with a total of just 248 E at Selsey Bill, Worthing and Beachy Head in Mar-May. Returning migrants were first noted at Rye Hbr and Cuckmere Haven on 20 and 28 June respectively. In Chichester Hbr there was a rapid build-up in numbers from 500 on 17 July to 1500 on 27th.

188. **RUFF** (*Philomachus pugnax*):—The approximate monthly totals were:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
County totals	46	75	78	29	25	3	16	30	62	30	46	78
Pagham Hbr	31	73	74	12	4	—	7	24	60	30	43	10
Pett Level	3	—	—	6	3	—	6	3	—	—	—	—
Rye Hbr	3	1	—	5	4	2	3	1	1	—	—	—

Numbers were again low during the winter periods with maxima of 74 at Pagham in Mar. and 76 at Earmley on 20 Dec. The only reports from the mid-Arun Valley, normally a regular wintering site for the species, were 3 on 3 Jan. and 1 on 26 Dec.

189. **JACK SNIFE** (*Lymnocyrtus minimus*):—The minimum monthly totals were:

	Jan.	Feb.	Mar.	Oct.	Nov.	Dec.
Number of sites	15	7	5	1	6	3
Number of birds	31	17	11	3	10	4

During the early months there were up to 5 at Fishbourne, Gatwick and Glyne Gap with widespread sightings elsewhere in the cold spell in Jan. A single bird found dead at Littlehampton West Beach on 18 Jan. was probably a victim of the harsh conditions prevalent at the time.

The first returning bird was recorded at Rye Hbr on 18 Oct. with 2 there on 21st. During Nov. singles were reported from Gatwick, Pett Level and Pagham Hbr and there were 2 at both the Crumbles and Rye Hbr. Dec. records were of 2 at Pett Level and singles at East Head and Rodmell Brooks.

190. **SNIPE** (*Gallinago gallinago*):—Despite the severe weather in mid-Jan. only small numbers were reported in gardens and other unusual locations. The peak counts for the first winter period were 400 and 361 on Pevensey Levels on 3 and 11 Jan. respectively but no more than 50 were recorded elsewhere.

Breeding season records were of 3 pairs on Pevensey Levels and single birds drumming at Amberley, Combe Haven and Waltham Brooks.

In the second winter period few were reported with maxima of only 200 at Hardham, 100 on Horse Eye Level and 69 at Rye Hbr.

194. **WOODCOCK** (*Scolopax rusticola*):—The cold weather in Jan. brought sightings of 55 birds at 29 sites, several of these being in gardens. The maximum was 13 at Combe Haven. Numbers in Feb. and Mar. declined to 7 and 6 respectively.

A poorer breeding season was evident by only 60 roding birds recorded (103 in 1986). No obvious autumn passage was noted with only 1 reported in Sept. and Oct., 2 in Nov. and 7 in Dec.

195. **BLACK-TAILED GODWIT** (*Limosa limosa*):—The estuary counts were:

	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
County totals	119	190	178	553	129	457	298	353	380	778
Chichester Hbr	117	93	146	430	66	428	291	210	75	61
Pagham Hbr	2	97	32	123	63	29	7	143	305	716

Numbers were again very low in the first winter period due to the severe weather in mid-Jan. A small movement was recorded in early May with 5 at Cuckmere Haven and 8 at Pett Level on 7th, 7 E at Worthing and Brighton Marina on 9th and 2 at Arundel WFT on 15th. The summering flock at Sidlesham Ferry peaked at 54 on 6 June. Returning birds appeared at Rye Hbr on 18 June, Worthing on 30 June, Chichester Hbr on 12 July and Pett Level and Waltham Brooks on 18 July. At Thorney Island numbers built up from 104 on 29 July to 166 on 8 Aug. and 211 on 28 Sept.

Inland, there were 2 at North Stoke on 8 Mar. and 1 on 14th and 1 on Horse Eye Level on 20th.

196. **BAR-TAILED GODWIT** (*L. lapponica*):—The estuary counts were:

	1987			1988						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
County totals	985	373	52	437	214	365	420	268	716	
Chichester Hbr	21	20	45	425	214	361	458	400	251	110
Pagham Hbr	—	—	—	10	—	4	25	20	17	6

The cold weather in Jan. resulted in above average numbers away from the main sites for the species. There were up to 48 at Littlehampton West Beach, 40 at Rye Hbr and 8 at Worthing. Spring passage was again light with birds recorded flying E as follows: Selsey Bill 580, Worthing 682, Brighton Marina 778, Scaford 148 and Beachy Head 1037. The peak movements occurred on 22 Apr. when there were 768 E at Beachy Head and on 8 May when there were 753 E at Brighton Marina. Inland, 2 were reported at Waltham Brooks on 7 and 10 May.

The Chichester Hbr summering flock totalled 22 on 14 June. Numbers then rose rapidly from 96 on 17 July to 400 on 8 Aug. and 450 on 27 Aug.

198. WHIMBREL (*Numenius phaeopus*):—A wintering individual at Pagham Hbr was possibly that seen at Selsey Bill on 8 Mar. There were no other Mar. records and spring passage occurred from 8 Apr. with birds recorded flying E as follows: Selsey Bill 227, Worthing 621, Brighton Marina 965, Scaford 214 and Beachy Head 185. The peak movement occurred on 7-8 May when there were 346 E at Worthing and 848 E at Brighton Marina. Roosting birds were again recorded at Rye Hbr with 95 on 22 Apr. increasing to 255 on 25th but then declining sharply to 42 on 29th and 25 on 2 May. Other concentrations included 61 at Chidham on 26 Apr. and 98 at Pett Level on 5 May.

June records were of 1 at Climping on 1st, 15 E at Bewl Water on 7th and 1 at Rye Hbr on 27th. The peak counts in autumn were 64 at Chidham on 25 July and 25 roosting with Curlew at Rye Hbr in early Aug. In Oct. up to 3 were recorded at Pagham Hbr and there were singles at Newhaven and Chichester Hbr on 14th and 17th respectively. There were no Nov. records but wintering individuals were reported from Pagham Hbr and Thorney Island in Dec.

199. CURLEW (*N. arquata*):—The estuary counts were:

County totals	1987											
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	1988	
Chichester Hbr	786	1691	1015	1688	2247	1344	1399	3339	1875	979		
Pagham Hbr	500	834	635	1457	1831	945	1009	975	1277	432		
Pett Level	234	479	271	211	368	318	345	500	469	388		
Rye Hbr	8	356	70	12	28	28	19	1800	82	100		
Rye Hbr (night)*	10	6	36	8	19	17	1	14	2	36		
	800	NC	441	NC	NC	NC	700					

*Nocturnal roost which includes birds from Pett Level and Romney Marsh, excluded from county totals. The severe weather in Jan. reduced numbers in Chichester Hbr and at Rye Hbr. At the latter locality there were 800 at the nocturnal roost on 10th but only 408 on 26th. There was some evidence of a cold weather movement during the month with 33 NW and 26 NW at Bewl Water on 12th and 14th respectively and 22 W at Worthing on the latter date. Spring passage was light with peak movements of 19 E at Worthing on 3 Apr. and 26 E at Scaford on 5th.

There were no reports from Ashdown Forest during the breeding season but a single bird was recorded display-fighting on Pevensey Levels on 24-25 May. It was not seen subsequently.

On 19 June there were 60 W at Eastbourne and on 21st the first returning birds appeared in the Lower Cuckmere. There were 300 in Chichester Hbr on 12 July and at Broomhill Level numbers increased from 120 on 10 July to 310 on 30 Aug.

201. SPOTTED REDSHANK (*Tringa erythropus*):—The approximate monthly totals were:

County totals	1987											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chichester Hbr	14	9	1	9	8	9	7	15	15	12	2	2
Pagham Hbr	10	5	—	1	—	—	5	6	—	—	—	—
Pett Level	1	4	—	2	1	2	1	2	3	1	—	—
Rye Hbr	2	—	—	2	1	1	1	2	9	5	1	—
	1	—	—	3	1	3	—	2	1	2	—	—

During late Jan. a maximum of 8 were present at Thorney Deepes. The sole Mar. record was 1 at Pevensey Bridge Level on 9th, while in Apr. the only sighting away from the localities listed above was 1 E at Worthing on 24th. During May there was 1 in the Cuckmere on 7th and 2 on 8th and 3 at Pevensey Bridge Level on 8-9th.

A single at Rye Hbr on 15 June was the first returning bird. Other June records away

from the main sites were 2 in the Cuckmere and 1 at the Crumbles. Four at Thorney Deepes on 1 July increased to 6 by 9 Aug. During Oct., the peak count at Pett Level was 5 on 7th. There was a single bird at Rye Hbr on 28 Nov. but the remaining Nov-Dec. records were from Thorney Deepes.

202. REDSHANK (*T. totanus*):—The estuary counts were:

County totals	1987											
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	1988	
Chichester Hbr	987	1628	1233	1395	1255	2053	2000	1671	1671	1475		
Pagham Hbr	489	1052	746	813	895	1622	1609	1115	1127	997		
Pett Level	207	340	273	221	88	179	305	248	321	339		
Rye Hbr	71	31	57	203	75	67	39	46	30	68		
R. Adur	152	132	111	68	78	67	—	161	71	45		

In Jan. there was some evidence of a cold weather movement with 9 W at Selsey Bill on 11th and 18 W at Worthing on 12th. A total of 17 were found dead at Pagham Hbr on 5 Feb., victims of the Jan. freeze.

Reports for the breeding season were incomplete but at least 63 pairs were present in the county. At Rye Hbr, where 20 pairs nested, breeding success was poor due to cold and wet weather but at Arundel WFT 7 pairs raised at least 10 young to the fledging stage.

In autumn the maxima away from the sites listed above were 50 at Newhaven Tidemills in Oct., 44 at Pett Level and 23 in the Lower Cuckmere in Aug. and 8 on Lewes Brooks in Sept. At Thorney Deepes numbers built up rapidly to 2165 on 9 Aug.

The creamy individual recorded at Shoreham in 1985 and 1986 was again present up to 8 Mar. and from 5 Nov.

204. GREENSHANK (*T. nebularia*):—The approximate monthly totals were:

County totals	1987											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chichester Hbr	1	3	2	21	38	6	155	229	130	38	6	4
Pagham Hbr	1	3	2	8	22	—	130	145	83	6	3	3
Pett Level	—	—	—	—	3	1	18	24	8	3	—	—
Rye Hbr	—	—	—	4	6	2	5	22	9	2	—	—
	—	—	—	3	4	2	2	4	20	13	—	—

Wintering numbers were again typical but spring passage was heavy compared with 1986 with a peak count of 14 at Thorney Deepes on 4 May.

Numbers built up rapidly from 10 July, for example 23 at Thorney Deepes on 11th increased to 103 on 26th. In Aug. there were 124 at this locality on 9th whilst in Sept. 70 were recorded here on 26th. At Rye Hbr there were 18 on 12 Sept. and 12 on 4 Oct.

In Nov-Dec. all records but one were from the western harbours, the exception being a single in the Cuckmere on 12 Dec.

208. GREEN SANDPIPER (*T. ochropus*):—The approximate monthly totals were:

County totals	1987											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chichester Hbr	17	19	5	5	4	10	54	78	22	15	5	8
Pagham Hbr	—	—	—	—	—	—	—	—	—	—	—	—
Pett Level	—	—	—	—	—	—	—	—	—	—	—	—
Rye Hbr	—	—	—	—	—	—	—	—	—	—	—	—

In Jan-Feb. the maxima recorded were 6 at Barnhorn Level, 4 at Barcombe Res. and 3 at both Pett Level and Pevensey Bridge Level. Single birds remained at Barcombe and Gatwick into Apr. Spring passage was typically light with just 7 migrants reported up to 9 May.

The first returning bird was recorded at Pett Level on 15 June, with a further 5 at this locality up to the end of the month and singles at 4 other sites from 22nd. The July and Aug. totals for Pett Level were 13 and 23 respectively whilst elsewhere there were peaks of 11 at Rye Hbr, 8 at Thorney and 6 at both Chichester GP and Gatwick during this period. In Sept. a total of 8 was recorded at Pett and there were 6 at Chichester GP on 16th. The peak counts in Oct. were 4 at Amberley and 3 at Pett on 18th, the latter remaining until the end of the year. Elsewhere, in Nov-Dec., there were reports of single birds at 7 widely scattered localities.

209. WOOD SANDPIPER (*T. glareola*):—A good year for the species, the monthly totals being:

County totals	1987											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chichester Hbr	—	—	—	4	16	7	9	19	7	—	—	—
Pagham Hbr	—	—	—	—	—	—	—	—	—	—	—	—
Pett Level	—	—	—	—	—	—	—	—	—	—	—	—
Rye Hbr	—	—	—	—	—	—	—	—	—	—	—	—

Spring passage commenced on the early date of 20 Apr. with 2 at Waltham Brooks. In

(peak 22 on 9 May) and Beachy Head 63 (51 in 7 hours on 9 May and a flock of 12 on 23rd). A minimum of 78 birds were involved of which 6 were in Apr. and 72 in May. In addition 2 were seen off Birling Gap on 6 June.

In autumn 4 individuals were recorded: Langney Point on 13 Sept. (AW), Selsey Bill on 20th (RAI), Brighton Marina on 21st and a juv. there on 17 Oct. (NAGL).

218. **ARCTIC SKUA** (*S. parasiticus*):—Spring passage occurred from 5 Apr. with birds recorded flying E as follows: Selsey Bill 43, Worthing 29, Seaford 41 and Beachy Head 26. Analysis of the records indicates that a minimum of 73 birds was involved, of which 53 were in Apr. and 20 in May. Peak movement was noted for the early date of 19 Apr. when at least 18 were seen. A dark phase individual was recorded at Weir Wood Res. on 1 May (MKA, DWH, PASP).

Autumn passage at coastal localities involved some 61 birds between 31 July and 18 Oct. with a peak of 10 E at Worthing on 19 Sept.

219. **LONG-TAILED SKUA** (*S. longicaudus*):—There were 2 records in Oct. probably due to exceptional weather conditions. At Beachy Head a juv. flew E on 18th (DC, JFC) whilst on 20th there was a different juv. W at Selsey Bill (BJ, CMJ). This brings the county total for this century to just 10 birds.

220. **GREAT SKUA** (*S. skua*):—A poor spring passage was noted between 28 Feb. and 6 June, with totals from the main sea-watching sites as follows: Selsey Bill 3, Worthing 6, Brighton Marina 5 and Beachy Head 1. Two were observed harassing Gannets off Langney Point on 3 May. A minimum of 13 birds was probably involved.

Between 2 Aug. and 18 Oct. 23 were reported from coastal localities, and the last of the year was an individual following fishing boats off Rye on 24 Nov.

222. **MEDITERRANEAN GULL** (*Larus melanocephalus*):—Yet another good year was recorded with the multitude of observations suggesting that at least 56, and possibly as many as 67, different individuals were seen. These comprised 23 adults, 16 sub-adults and 17 first-year birds and the minimum monthly totals were:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	4	2	6	15	12	10	5	10	4	9	5	1

Recent years have produced a notable increase in observations during the spring but this year the table shows this to be less marked with more birds than usual occurring during the summer and early autumn. The pattern of occurrences is influenced by groups of up to 5 immature birds seen at both Rye Hbr and Pagham Hbr during May and June, a small influx of mainly adult and second-year birds noted in West Sussex during Aug. and a scattering of sightings following the severe winds in mid-Oct.

Although several birds remained at sites for a few days, the records suggest few stayed faithful to one place for long periods; exceptions possibly being adults seen at Newhaven intermittently throughout the year, at Pett between 12 July and 22 Sept. and in Chichester Hbr from 17 Aug. to 29 Oct. None were recorded far inland, with singles at Balsedean on 24 Feb. and at Chichester GP on both 30 Jan. and 5 Aug. being the furthest from the coast.

225. **LITTLE GULL** (*L. minutus*):—A good year with at least 352 recorded. The following table of minimum monthly totals shows most occurred in spring and autumn.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	—	—	4	59	31	10	3	4	2	227	11	1

One at Worthing on 27 Mar. and singles at both Brighton and Selsey on 28 Mar. were the first of the spring but thereafter numbers passing the coast were small as reflected in the spring sea-watching totals of 13 E at Selsey, 17 E at Worthing, 41 E at Brighton Marina, and 17 E at both Seaford and Beachy Head. The peak days were 23 Apr. with 5 E at Selsey, 35 E at Brighton and 12 E at Beachy Head and 9 May when 11 flew E at Worthing and 6 E at Seaford.

Although an immature was seen at Fishbourne on 7 June most of the summer records were from East Sussex. Two immatures occurred at Pett between 23 May and 14 Aug. but Rye 6 were present in early June, 3 of which remained throughout the month, and an immature was noted on 5 days in July.

May the principal localities were Pett Level with 3 on 3-4th, Waltham Brooks with 3 on 7th and Pevensey Bridge Level with 2 on 9th, one remaining until 14th.

A return passage bird was reported from Pagham Hbr on 23 June but all other records for the month were from Pett Level with a maximum of 3 on 30th. Autumn passage continued with reports from 4 sites in July including a total of 5-6 at Arundel WFT from 20th. In Aug. 9 were recorded at Pett Level with peaks of 3 on 12th and 27-28th. There were single birds at this locality on 1, 4 and 13 Sept. and at 3 other sites during the month. Two were recorded at Ferring Rife on 5th. A very late bird was present at Pett Level on 2 Nov.

211. **COMMON SANDPIPER** (*Actitis hypoleucos*):—The approximate monthly totals were:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	2	2	4	13	78	8	163	174	80	7	3	3

Wintering individuals were noted at Warmham Mill Pond on 30 Jan. with 2 there on 19 Mar., Thorney Deepes up to 17 Mar. and Lower Arun Valley from 16 Mar. to 20 Apr. On the latter date a migrant was seen at Ferring but it was not until the end of the month that numbers noticeably increased. Passage reached a peak in mid-May with maximum counts of 9 at Arundel WFT on 13th and 7 at Sidlesham Ferry on 15th.

The first returning birds were recorded at Arundel WFT, Cuckmere and Sidlesham Ferry in late June. Numbers built up from 10 July with peak counts of 11 at Sidlesham Ferry on 15th, 24 at Shoreham on 21st, 22 at East Guldeford Level and 16 at Rye Hbr on 25th and 17 at Thorney Island the next day. Aug. peaks included 10 at Sidlesham Ferry and 14 at Thorney on 9th, 12 at both East Guldeford Level and Rye Hbr on 14th and 11 at the Crumbles on 30th. Numbers remained high in Sept. with maxima of 28 at Rye Hbr on 12th and 17 in the Lower Ouse Valley on 30th. A rapid decline occurred in early Oct. with 1-2 in the Lower Arun Valley and 1 at Thorney Island remaining until the end of the year.

213. **TURNSTONE** (*Arenaria interpres*):—The estuary counts were:

	1987												1988											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
County totals	458	380	617	787	764	1104	666	956	?	?	?	?	833	764	1104	666	956	?	?	?	?	?	?	?
Pagham Hbr	145	175	246	353	187	205	281	331	400	?	?	?	353	187	205	281	331	400	?	?	?	?	?	?
Glyne Gap	66	128	147	420	393	300	116	70	250	?	?	?	420	393	300	116	70	250	?	?	?	?	?	?
Chichester Hbr	82	100	50	17	66	119	208	194	78	168	?	?	17	66	119	208	194	78	168	?	?	?	?	?
Norman's Bay	137	159	164	31	60	86	139	64	119	?	?	?	31	60	86	139	64	119	?	?	?	?	?	?
Pett Level	—	8	—	7	80	36	350	—	101	?	?	?	7	80	36	350	—	101	?	?	?	?	?	?

In Apr. and early May there were peaks of 260 at Pagham Hbr, 240 at Rye Hbr, 95 at Glyne Gap, 90 at Fishbourne and 60 at Pett Level. Numbers at Rye Hbr declined from 240 on 4 May to 200 on 8th, 50 on 24th and 6 on 31st. Observations at the main sea-watching localities indicated a minimum total of 100 E in Mar-May. The peak movement occurred on 24 Apr. when there were 16 at Worthing.

Summering birds at Rye Hbr totalled 13. The first returning birds appeared at this locality on 8 July and numbers then built up rapidly to 80 on 25th and 250 on 30th. Inland, there were 2 at Bewl Water on 17 Oct. after storm-force winds.

214. **WILSON'S PHALAROPE** (*Phalaropus tricolor*):—A confiding juv. moulting into first-winter plumage at Sidlesham Ferry from 18-26 Sept. (PB, OM *et al.*) entertained many admirers during its stay. It has been accepted by *British Birds*.

216. **GREY PHALAROPE** (*P. fulicarius*):—The destructive gale of 16 Oct. wrecked good numbers of these delightful waders during the following 3 days.

On 17th singles were recorded at Bewl Water (AHL), Pagham Hbr (NAC) and flying W at Ferring (MPH). One at Brighton on the same date remained until 19th (MK, PJ, NAGL *et al.*). On 18th there were 5 at Church Norton (BJ, CMJ), 2 at Widewater, Lancing (BRC, CJF, JAN), 1 at Newhaven (AW) and 3 at Langney Point (DC, JFC, AW). The following day there were still 2 in the Church Norton/Selsey area and 1 at Littlehampton West Beach (ASC).

217. **POMARINE SKUA** (*Stercorarius pomarinus*):—Easterly spring passage totals from the coast were: Selsey Bill 4, Worthing 14 (peak 9 on 8 May), Brighton Marina 5, Seaford 23

Autumn passage was concentrated in Oct. when a succession of severe gales brought, like several other seabirds, record autumn numbers to the county. Most were seen after the hurricane at coastal sites in West Sussex with peak movements at Selsey Bill of 50 W and 36 W on 17 and 19 Oct. respectively and 28 W at Worthing on 21 Oct. Despite the strong winds only 11 were seen at inland reservoirs; singles at Arlington Res. on 26 Aug., 30 Sept. and 17 Oct. with 2 there on 18 Oct.; 3 at Darwell Res. also on 18 Oct. and 3 at Bewl Water on 17 Oct. However, 6 were seen feeding on flooded fields on Lewes Brooks between 18 and 22 Oct. The last record for the year was an immature also inland, at Weir Wood Res. on 7 and 10 Dec.



226. **SABINE'S GULL (*L. sabini*)**—An amazing collection of records followed the hurricane in mid-Oct. when many observers were fortunate to view this rare species to Sussex. The sightings occurred between 16 and 21 Oct. and the detailed records suggest a minimum of 19 and possibly as many as 28 individuals were involved in the 'wreck'. Only 25 have hitherto been recorded in Sussex and this gives a perspective on the size of the influx. Many of the sightings occurred during the weekend following the storm and a summary of the records is shown below:

	16 Oct.	17 Oct.	18 Oct.	19 Oct.	20 Oct.	21 Oct.
Cuckmere	2 adults					
Seaford			1 adult			
Newhaven			1 adult			
Brighton		3 ad., 1 juv.	2 ad., 1 juv.			
Southwick			1 adult			
Lancing			2 adults			1 adult
Worthing		1 adult W	1 juv. W		1 adult	
Littlehampton			2 adults		2 adults	
Church Norton			1 adult		1 adult	
Selsey			6 adults			
Chichester Hbr			1 adult			

Most were seen at Chichester Hbr on 17 Oct. when 4 adults were off Black Point and 2 off Sandy Point in the morning and 2 adults were noted near Pilsey in the afternoon. At Brighton the records refer to 5 different birds and included a juvenile which was possibly seen later on 18 Oct. feeding off Worthing and an oiled adult which was seen sitting by Widewater, Lancing on 21 Oct.

228. **BLACK-HEADED GULL (*L. ridibundus*)**—There was no coordinated winter roost count but large gatherings were noted at inland roost sites. At Weir Wood Res. 2500 were counted on 24 Jan. and 1500 on 7 Mar., at Arlington Res. 3500 roosted on 25 Jan. and 6000 on 1 Feb. and at Bewl Water 8000 were seen on 23 Feb.

Spring coastal movements seen at Worthing were lower than usual with a total of 3573 E and a peak of 1165 E on 25 Mar. Counts at both the breeding colonies were high; at Stakes Island in Chichester Hbr the census on 11 May revealed 1519 nests containing 3780 eggs from which at least 411 chicks hatched, while the Rye colony increased further to 1050 pairs.

The first flying juvenile was seen at Rye on 10 June and away from the colonies the first returning adults were noted at Worthing on 15 June.

Apart from a 'mass westerly movement' noted at Langney Point on 18 Oct. there were no large counts in the autumn or winter: 850 on plough at Findon on 4 Aug., 1000 at Weir Wood Res. on 6 Dec. and 500 at Warnham Mill Pond on 25 Dec. were the largest counts.

Throughout the year there were several reports of pale or albino individuals and at Rye a dusky adult with uniform dark brown wings and dark sooty hood was seen on 26 May and an all-brown juvenile was being mobbed by other Black-headed Gulls between 9 and 11 July.

232. **RING-BILLED GULL (*L. delawarensis*)**—1986:—The second-winter individual present on the Crumbles in Dec. 1985 was also seen on 26 Jan. and 8 Feb. (DC, JFC). An adult was found at Weir Wood Res. on 3 Nov. (NAD).

1987:—An adult was present at Cuckmere Haven on 1 Jan. (WJMS) and a first-summer at the Crumbles on 6 June (RJF). These records have been accepted by *British Birds*, 1987 being the last year for which they will consider records of this species. Six have now been recorded in the county, all except the Crumbles bird during the winter months (Nov-Feb.).

233. **COMMON GULL (*L. canus*)**—Apart from 1000 counted at Arlington Res. on 1 Feb., all the winter and spring counts from a number of sites were less than 300. Whether this apparent decline in numbers is real or a reflection of under-recording of this common species is unclear.

During May 150 immatures roosted at Rye, declining to a minimum of 32 in July after which returning adults increased the numbers. The first autumn adult was noted in the Cuckmere on 21 June.

234. **LESSER BLACK-BACKED GULL (*L. fuscus*)**—As usual both races were recorded in small numbers throughout the year. The largest counts were in the spring with maxima of 30 at Rye on 22 Mar. and 40 at Combe Haven on 23 Mar.; at Hurst Green 55 immatures flew NW on 2 May and 20 NW on 17 May.

During June a pair held territory amongst the roof-nesting Herring Gulls in Worthing town centre but no nest was seen. Most autumn records were for Aug. when up to 40 were noted at Rye and 22 roosted in the Lower Cuckmere Valley on 8th.

235. **HERRING GULL (*L. argentatus*)**—The only noteworthy counts were a roost of over 300 immatures at Rye throughout the year, 100 non-breeding birds in Brighton Marina during the summer and 143 flying S over Brighton at dusk on 6 June.

The breeding counts suggested a small increase with 20 pairs at Rye, 7 pairs at the Cliff Quarry and on roof tops in St Leonards (2 pairs), Brighton (12 pairs) and Worthing (36 pairs). In both Brighton and Worthing they were occupying roof-top sites further from the shore than in previous years.

There was a marked rise in the numbers of the yellow-legged race *L. a. michahellis*, particularly near Chichester GP where 131 were counted on 8 Aug. As usual most of the other sightings were from the Adur Valley where the highest count was 21 on 11 Aug. The following table of minimum monthly totals returns to the familiar pattern of a summer and early autumn peak:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1	2	—	—	6	60	153	16	4	4	5

An individual showing characteristics of the race *argentatus* was at Scotney Court GP on 4 Nov. (MS-H) and an albino was seen at Beachy Head on 5 Sept. and 24 Oct.

236. **ICELAND GULL (*L. glaucooides*)**—1986:—A first-winter seen at Combe Haven on 13 Jan. (KMJ) was the only record for that year.

1987:—A first-summer at Church Norton on 9 May (GWH, WEJJ).

237. **GLAUCOUS GULL (*L. hyperboreus*)**—The records suggest at least 6 and possibly 9 individuals were seen which is the least since 1981. Three individuals remained faithful to one area for long periods, the most noteworthy being an adult which was seen between Chichester, Pagham Hbr and Selsey from 1 Jan. to 3 Mar. and again after 16 Aug. Another adult was seen at the Crumbles between 18 Jan. and 14 Mar. whilst a first-year seen there on 13 Nov. was probably the same bird seen at Eastbourne in Dec. The table of minimum monthly totals includes these:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
3	4	4	3	1	—	—	1	1	1	2	2

On 18 Oct. there were singles at Brighton, Lancing and Langney Point following storm-force winds.

247/248. **COMMON/ARCTIC TERN** (*S. hirundo/paradisaea*):—First recorded on 4 Apr. at Brighton Marina. Easterly passage totals at the main sea-watching sites were: Selsey Bill 584, Worthing 788, Brighton Marina 742, Seaford 1119 and Beachy Head 736. Analysis of these records indicates that a minimum of 1834 birds was involved, of which 627 were in Apr. and 1207 in May. Peak movements were recorded on 9 and 25 May. As with other sea-watching data in 1987, these low totals reflect a poor season of unfavourable, predominantly northerly winds.

Autumn passage at Worthing during Aug-Oct. totalled 90 E 579 W, with a peak of 389 W in 4-4 hours on 25 Aug. On the same day 242 W were recorded at Selsey Bill in 1-2 hours.

251. **LITTLE TERN** (*S. albigrons*):—First recorded on 13 Apr. at Selsey Bill. Easterly passage totals at the main sea-watching localities were: Selsey Bill 312, Worthing 310, Brighton Marina 121 and Seaford 118. Analysis of the available data indicates that a minimum of 500 birds were involved and that the peak movement occurred on 9 May.

In Chichester Hbr 3 pairs were present at one site and one young fledged, whilst at Pagham Hbr 15 pairs raised an unknown number of young. At Rye Hbr 55 pairs eventually raised at least 60 young to the flying stage inside the new electrified protection fences.

Autumn passage was typically light. The last of the year was one at Climping on 1 Oct.

253. **BLACK TERN** (*Chlidonias niger*):—First recorded on 18 Apr. at Rye Hbr. Easterly passage totals at the main sea-watching localities were: Selsey Bill 25, Worthing 5, Brighton Marina 12, Seaford 22 and Beachy Head 35. The peak movements occurred on 28 Apr. (20 E at Selsey Bill) and 25 May (30 E at Beachy Head). On the evening of 1 May there were 7 at Bewl Water. In June there were singles at Rye Hbr and Cuckmere Haven on 1st and 14th respectively, 3 at Selsey Bill on 19th and 2 at Rye Hbr on 20-21st.

In autumn a total of 78 birds were recorded from 10 July onwards. The monthly totals were July 8, Aug. 29, Sept. 34 and Oct. 7. The last of the year was 1 at Darwell Res. on 18 Oct.

254. **WHITE-WINGED BLACK TERN** (*C. leucopterus*):—An adult in summer plumage at Rye Hbr on 14 June (HT *et al.*) has been accepted by *British Birds*. Thirty-eight have been recorded in the county, but only 8 of these have been during the last 10 years.

255. **GUILLEMOT** (*Uria aalge*):—More numerous than Razorbill and reported from various coastal localities (excluding visible passage) as follows:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Dead.....	—	—	1	—	—	—	—	—	—	—	—	—
Oiled.....	2	5	1	—	—	2	—	—	—	—	—	—
Dead and oiled.....	—	—	1	—	—	—	—	—	—	—	—	—
Others.....	4	3	6	2	—	—	—	—	2	3	1	3

There were 32 W at Worthing on 19 Dec. See also Auk sp.

257. **RAZORBILL** (*Alca torda*):—Another poor year with few records received. The approximate monthly totals (excluding visible passage) were as follows:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
—	—	—	—	3	—	—	—	2	3	2	4	—

There were no reports of oiled birds. See also Auk sp.

260. **LITTLE AUK** (*Alte alle*):—1985:—One at Langney Point on 3 Nov. (PEB, LM). 1987:—An exhausted bird picked up at Steyning on 12 Oct. was taken to Arundel WFT where it died the next day (per SJH). One was seen at Church Norton on 21 Nov. (PEB, LM).

261. **PUFFIN** (*Fratercula arctica*):—An oiled bird picked up at Worthing was taken to Arundel WFT on 28 Feb. (per RJLK). It was then removed to Brent Lodge Bird Hospital.

The other sightings were a second adult at the Crumbles on 18 Jan., an adult at Hassocks on 8 Feb., at Shoreham on 12-13 Feb. and at Brighton Marina on 31 Mar., and a sub-adult E at both Seaford and Beachy Head on 5 Apr.

238. **GREAT BLACK-BACKED GULL** (*L. marinus*):—Although noted regularly at the coast most of the counts were small except for records of 160 roosting on Pilsey Sands on 19 Aug., 600 at Rye on 1 Nov., 334 in the Lower Cuckmere Valley on 7 Nov. and 192 on the R. Adur at Shoreham on 5 Dec. Few were noted at inland reservoirs — 16 at Weir Wood Res. on 7 Mar. and 15 at Darwell Res. were the highest counts.

240. **KITTIWAKE** (*Rissa tridactyla*):—During the winter the only significant movements were noted from Worthing: 75 W on 4 Jan., 354 E in a cold NE wind on 15 Jan. and 79 E on 16 Jan. Although noted at all sea-watching stations during the spring, large numbers were only seen at Brighton with movements of 110 E on 25 Apr., 103 E on 27 Apr. and 95 E on 23 May. The close proximity of a flourishing colony at Newhaven, where summer counts revealed 972 occupied nests, may partly explain why, at this season, more are seen passing Brighton Marina than other coastal sites.

Noted as more numerous at Rye where up to 50 were noted in late July and 40 were fishing offshore on 28 Sept. The roost in Brighton Marina reached a peak of 106 on 14 Sept. but thereafter the largest numbers were noted passing the West Sussex coast during strong onshore winds with 252 W at Worthing on 14 Oct., 77 E at Selsey on 19 Oct. and 79 E at Worthing on 13 Dec.

A badly oiled immature at Barcombe Res. on 24 Jan. was the only inland record.

242. **GULL-BILLED TERN** (*Gelochelidon nilotica*):—Singles passed Langney Point on 20 June (MEC, RHC) and 15 Aug. (DC, JFC). The first records since 1983 and only the 5th and 6th in the last 20 years, although these included the 7 at Beachy Head on 13 May 1982.

245. **SANDWICH TERN** (*Sterna sandvicensis*):—Spring passage occurred from 21 Mar., and easterly totals from the main sea-watching sites were: Selsey Bill 1145, Worthing 1644, Seaford 1392 and Beachy Head 1001. A minimum county total of 2296 was involved, of which 12 were in Mar., 1727 in Apr., and 557 in May. The low numbers generally reflect a poor sea-watching season due to unfavourable winds. Peak movement occurred on 17 Apr. with 198 E at Worthing and 337 E at Seaford.

In Chichester Hbr 22 pairs bred and at least 2 chicks hatched, whilst at Rye Hbr the new breeding colony increased to c.150 pairs and at least 50 young flew.

In autumn the species was recorded inland at Bewl Water on 5 dates in Sept., including a party of 10 on 13th, and at Ivy Lake, Chichester GP, with 3 there on 6th. There were 64 in Pagham Hbr on 15 Sept., and the last of the year was 1 E at Littlehampton on 24 Oct.

246. **ROSEATE TERN** (*S. dougallii*):—The only spring migrant was one at Rye Hbr on 25 Apr. (BJY).

A number of records in June probably relate to non-breeding summering birds: 2 off Eastbourne seaford on 1st (RHC), 1 at Rye Hbr on 8th, followed by a different individual from 14th to 29th (BJY), and 2 at Langney Point on 20th (DC, JFC).

In the autumn there was one at Langney Point on 9 Aug. (NAD) and a well-watched bird at Brighton Marina on 3 and 21-25 Sept. (RA, NAGL, TJW).

247. **COMMON TERN** (*S. hirundo*):—In Chichester Hbr 42 nests containing 106 eggs and 2 chicks were counted on 10 June. A further visit to the colony on 9 July revealed only 6 occupied nests and one fledged chick. At Rye Hbr 65 pairs reared 70+ young and on the Society's rafts at Chichester GP 15-20 pairs raised c.40 young. A pair was also present at Bewl Water during May-June.

After the Oct. storm there were 2 at Bewl Water and 2 at Darwell Res. on 18th. The last of the year was 1 at Church Norton/Selsey on 26th.

248. **ARCTIC TERN** (*S. paradisaea*):—Twelve were identified along the coast in spring and there was one at Bewl Water on 4 May.

At Rye Hbr a 'portlandica' individual was present on 18, 19 and 27 June (BJY).

One E at Beachy Head on 9 May (mo), the third consecutive year that this species has been recorded at this locality during the month.

AUK SPECIES:—Observations at the main sea-watching localities were as follows:

Direction of movement	Jan-Feb.		Mar-May		June-July		Aug-Oct.		Nov-Dec.	
	E	W	E	W	E	W	E	W	E	W
Worthing	111	144	9	3	6	18	31	96		
Seaford	—	—	29	—	—	—	—	—	—	—
Beachy Head	—	—	42	—	—	—	—	—	—	—

The peak movements occurred on 4 Jan. when there were 122 W at Worthing and on 10 Jan. when there were 74 E and 10 W at this locality.

Cat. C. RING-NECKED PARAKEET (*Psittacula krameri*):—Reports of up to 8 at Hollingbury Woods, Brighton throughout the year and up to 6 in Hove Park from 13 June to 6 Aug. possibly relate to the same birds. Other records were as follows: 1 at Chithurst in Feb., 1 at Iping Common on 8 Feb., 2 at Paghham Hbr on 8 Apr. and singles on 8 dates between 25 June and 21 Nov., 1 at Battle on 25 May, 1 at Chichester on 1 June, 1 at Icklesham on 14 June, 1 at Hurst Green on 12 July, 1 at Rye Hbr on 17 Sept. and 13 Oct. and 1 at Broadwater on 12 Oct. There was no evidence of nesting at any of these localities.

264. STOCK DOVE (*Columba oenas*):—During the early part of the year flocks of 40 or more were reported from 4 localities. The peak count was at Malling Down where up to 300 were present in Jan. At Lewes Brooks there were 158 E in 30 min. on 3 Jan. Once again few breeding records were received, the only systematic counts being 6 pairs in 280 ha at Hollingbury Woods and 4 pairs in 60 ha at West Chilmington. In the latter part of the year the largest flock reported was only 25 at Sidlesham Ferry in Dec.

265. WOOD PIGEON (*C. palumbus*):—During the early part of the year there were reports of flocks of 200 or more from 7 localities but no large movements were recorded. The only significant record for the latter part of the year was 900 at West Chilmington on 24 Nov.

266. COLLARED DOVE (*Streptopelia decaocto*):—The only large flocks reported were 60 at Icklesham on 17 Nov. and 200 at Rye Hbr on 23rd. At Selsey Bill there were 17 N from the sea on 17 Apr. and 1 N on 2 May.

267. TURTLE DOVE (*S. turtur*):—First recorded at Rye Hbr on 5 Apr. with a more general arrival noted towards the end of the month.

Counts of breeding birds in defined areas are shown on page 46.
Autumn passage was very light with no more than 30 recorded at any locality. The last for the year were singles at Icklesham and Broadwater on 10 and 14 Oct. respectively.

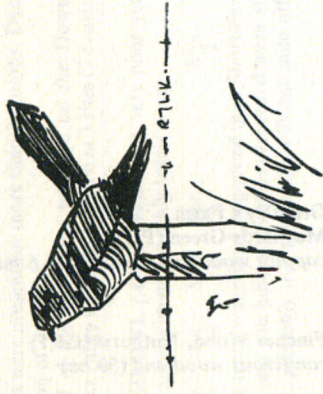
271. CUCKOO (*Cuculus canorus*):—First recorded at Fairlight on 14 Apr. and at Beachy Head on 15th with a more general arrival noted from 17th onwards. A few concentrations of 3-4 were reported and there were 6 at Thorney Island and 8 at Rye Hbr, both in May.

Only one nestling was noted, fostered by Dunnocks.
Records for late summer and autumn were mainly of singles except for 5-6 at Coombes on 14 Aug. A male was heard calling at Ditchling as late as 6 Aug. and a female of the rare rufous morph was described from the Lower Cuckmere on 8 Aug. (WJMS). The last for the year was one at Eastbourne on 20 Sept.

274. BARN OWL (*Tyto alba*):—Records are tabulated as follows:

Year	Breeding Season			Breeding Success			
	Known pairs	Probable pairs	Birds present	Total sites	Young raised	No. pairs successful	Winter birds
1986	9	11	18	38	6	3	17
1987	3	2	12	17	4	1	20

The figures make sad reading and tell their own story. In spite of continued widespread coverage, records again declined and no reports were received from 3 regularly successful



breeding sites. The incidence of winter-only sightings, covering the period late October to early March, may indicate additional or potential breeding birds which observers have, quite rightly, been reluctant to disturb in breeding season searches. One urban sighting and 2 road deaths were reported, whilst 4 birds present in Mid-Sussex and not included in the table were considered to be captive-bred releases or escapees. The solitary successful breeding site was in a new area.

279. LITTLE OWL (*Athene noctua*):—Records are tabulated as follows:

Year	Breeding Season			Breeding Success			
	Known pairs	Probable pairs	Birds present	Total sites	Young raised	No. pairs successful	Winter birds
1986	21	35	33	89	10	5	17
1987	41	14	33	88	9	6	17

Although there would appear to be a static situation with this species in that there has been no drastic decline over the last five years, albeit the number of young raised appears low. It is encouraging to receive definitive records by 1 km squares from RL for the Falmer-Lewes area which produced 10 pairs, breeding mainly in rabbit burrows, and from SJRR for Icklesham (7 pairs on 130 ha). There were also 5 pairs reported from Rye SSSI but unfortunately there were no reports of breeding success from any of these sites. A juvenile bird found near Bucks Green was tended by FWD but died later. There were only 5 urban records, unusual for this owl.

280. TAWNY OWL (*Strix aluco*):—Records are tabulated as follows:

Year	Breeding Season			Breeding Success			
	Known pairs	Probable pairs	Birds present	Total sites	Young raised	No. pairs successful	Winter birds
1986	21	29	16	66	16	7	10
1987	15	25	16	56	19	8	17

Apart from young raised, the table shows a further decline and the status of this, our commonest owl, must now be giving cause for concern. Although coverage was widespread, the number of records submitted was well down but some of the once-only reports during the breeding season might well represent probable breeders. A pair laid in a nest box but deserted before hatching, there were 3 urban records each from Brighton and Worthing and one from an unnamed District Hospital. Three pairs were present on 60 ha at West Chilmington.

281. LONG-EARED OWL (*Asio otus*):—A record year with more than twice the usual number in the first part of the year as follows:

No. of birds	Jan.	Feb.	Mar.	Apr.	May
.....	9	16	6	8	3
No. of sites	5	5	3	6	3

Systematic Counts of breeding pairs or territorial males

	Grantley's Farm, Maynards Green (PCT) (44.6 ha)	Finches Wood, Nuthurst (GET) (50 ha)	Moulsecoomb, Hollingbury Wood (MLC et al.) (280 ha)	West Chillington (FWD) (60 ha)
Turtle Dove.....	—	6	—	1
Skylark.....	1	—	4	2
Wren.....	24	14	62	—
Duncock.....	4	16	54	12
Robin.....	24	26	74	—
Blackbird.....	22	32	131	—
Song Thrush.....	3	18	19	—
Mistle Thrush.....	3	2	13	2
Lesser Whitethroat.....	1	—	5	3
Whitethroat.....	—	10	13	5
Garden Warbler.....	4	12	6	3
Blackcap.....	4	8	17	4
Chiffchaff.....	6	8	10	2
Willow Warbler.....	5	29	31	5
Goldcrest.....	—	12	—	1
Spotted Flycatcher.....	1	—	—	1
Long-tailed Tit.....	1	—	5	6
Marsh Tit.....	2	—	—	1
Blue Tit.....	16	—	64	—
Great Tit.....	14	—	30	—
Treecreeper.....	4	—	1	—
Jay.....	4	3	2	9
Magpie.....	3	5	23	9
Chaffinch.....	1	29	61	—
Linnet.....	—	2	9	—
Greenfinch.....	1	—	13	—
Bullfinch.....	3	3	2	3
Yellowhammer.....	1	15	11	10

NOTE: Grantley's Farm counts are based on Common Birds Censuses, others on techniques other than CBC. A dash does not necessarily mean the species was absent.

At least 27 birds were involved with 5 at one site and 4 at 2 others. One was found dead in Feb. and some birds were present for more than 2 months. Despite the late spring records there was no indication of breeding.

In the latter half of the year there was one on the Downs in Aug., singles at one downland and one river valley site in Nov. and 6 at 3 sites (2 coastal, 1 river valley) in Dec.

282. SHORT-EARED OWL (*A. flammeus*):—A very poor year again in contrast to the previous species. The approximate monthly totals were:

Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
19	10	13	6	2	5	9	10

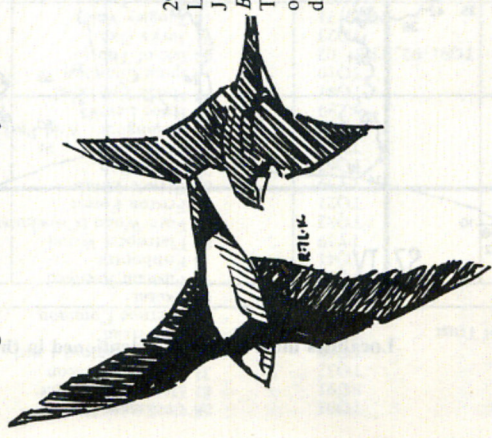
In Feb. there were more wintering Long-eared than Short-eared Owls in the county! For the third consecutive year the highest numbers recorded were at Thorney Island with 7 in Jan. A single migrant, probably this species, flew E one mile off Worthing on 21 Nov.

284. NIGHTJAR (*Caprimulgus europaeus*):—First recorded on 8 May in Ashdown Forest. Only 2 were noted on spring passage, at Rye Hbr on 23 May and Church Norton on 8 June. There was a marked decrease in breeding records with only 50 territories occupied, 29 in the West (46 in 1986) and 21 in the East (28 in 1986).

None were reported on autumn passage.

289. SWIFT (*Apus apus*):—First recorded on 17 Apr. at Selsey Bill and on 20th at Pett Level and Rye Hbr. A more general arrival was noted at the end of the month and passage continued well into May. The peak counts were 100 at Bewl Water on 4 May, 150 at Chichester GP on 11th and 101 N at Climping on 23rd.

Autumn departure began in mid-June with counts of 270 W at Goring on 19th and 300 at Cissbury on 21st. There were 500 at Plumpton on 23 July, 350 E at Belle Tout on 26th and 220 at Whitbread Hollow on 16 Aug. In Sept. a total of 15 were recorded, the last of which were singles at Pett Level, Beachy Head and Hastings on 26th, 27th and 28th respectively.



291. ALPINE SWIFT (*A. melba*):—One at Langney Point on 2 May flew off NW (DC, JFC). This record has been accepted by *British Birds* and is the 23rd for the county. Twelve of these have been since 1978, all but one in spring, with 1985 the only blank year during that period.

293. KINGFISHER (*Alcedo atthis*):—Despite the cold weather in Jan. the numbers recorded were higher than in 1986. Observations during the winter months were as follows:

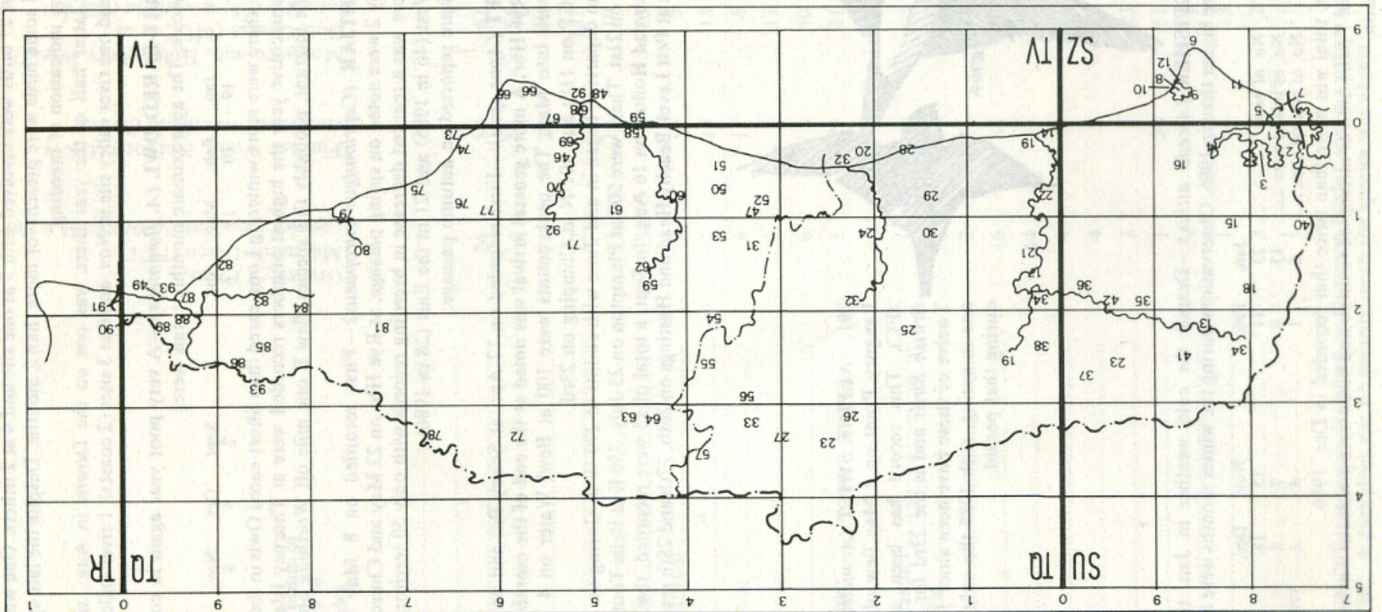
	Jan.	Feb.	Nov.	Dec.
No. of birds.....	23	11	15	18
No. of inland sites.....	13	8	7	8
No. of coastal sites.....	6	1	4	4

The Jan. total was more than twice that recorded in Dec. 1986. A total of 7 pairs bred or attempted to do so and birds were present at 9 other sites in the breeding season.

Please note that places listed above are not necessarily of public access. Map compiled and drawn by M. J. Helps

8 Pagham Harbour	TV59	8 Cuckmere Haven	TQ01	21 Amberley Wild Brooks	SU91
10 Pagham Lagoon	TQ72	81 Darwell Reservoir	SU91	35 Ambersham Common	SU91
79 Peabham	TQ31	31 Ditchling Beacon	TQ32	56 Ardingly Reservoir	TQ32
82 Pett Level and Pools	TQ91/92	89 East Guildford Level	TQ50	70 Arlington Reservoir	TQ50
76 Pevensey Levels	SZ79	7 East Head	TQ00	22 Arundel Park/Wildfowl Trust	TQ00
5 Pilsley Island	SU92	37 Ebernoe Common	TQ42/43	53 Ashcombe	TQ42/43
84 Powdermill Reservoir	TV59	68 Exceat	TQ30	51 Balsdean	TQ30
32 R. Adur	TQ70/71	79 Fisham Reedbed	TQ41	62 Barcombe Reservoir	TQ41
18 R. Arun	SU80	4 Fishbourne	TV59	65 Beachy Head	TV59
92 R. Cuckmere	TQ82	85 Flatropers Wood	TQ82	85 Beckley Woods	TQ82
59 R. Ouse	TQ71	80 Fore Wood (Crowhurst)	TQ21	24 Beeding Brooks	TQ21
93 R. Rother (East)	TV59	67 Friston Forest	TV59	66 Belle Tout	TV59
34 R. Rother (West)	TQ70	61 Glynde Levels	TQ63	78 Bewl Water	TQ63
86 Rother Levels	TQ40/41	79 Glyne Gap	TQ32	66 Birling Gap	TQ32
87 Rye Harbour LNR/SSSI	TV59	52 Hollingbury Wild Park	SZ89	11 Bracebell Bay	SZ89
26 St. Leonards Forest	TQ30	75 Hooe Level	TQ81	55 Bracebell Railway	TQ81
79 St. Leonards (on Sea)	TQ60	77 Horse Eye Level	TQ10	28 Brooklands	TQ10
91 Scotney Court Gravel Pit	TQ60	13 Iping Common	TQ91/92, TR01/02	90 Broomhill Level	TQ91/92, TR01/02
48 Seaford Head	SU82	64 Isle of Thorns	TQ23	39 Buchan Park	TQ23
6 Seisey Bill	TQ43	91 Jury's Gap	TQ70/71	79 Bulverhythe	TQ70/71
68 Seven Sisters Country Park	TQ91	15 Kingley Vale	SU91	36 Burton Mill Pond	SU91
9 Sidelsham Ferry	SU81	25 Knapp Lake	TQ91	49 Camber Sands	TQ91
48 Splash Point	TQ12	73 Langney Point	TQ30	50 Castle Hill	TQ30
47 Stanmer Park	TQ60	60 Lewes Brooks	TQ32	54 Chailly Common	TQ32
42 Stansted Forest	SU91	46 Lullington Heath	TQ50	30 Chancetisbury Ring	TQ50
2 Thorney Island	TQ40	23 Lurgashall	SU80	16 Chichester Gravel Pits	SU80
89 Union Channel (E. Guildford)	TQ10	29 Lychpole Hill	SZ79, SU70/80	1 Chichester Harbour	SZ79, SU70/80
27 Tilgate Forest	TQ02	38 Mens, The	SU70	3 Chidham	SU70
17 Waltham Brooks	TQ30	91 Midtrips	SZ89	12 Chidham Norton	SZ89
57 Weir Wood Reservoir	TQ53	52 Moulscocomb	TQ10	29 Cissbury Ring	TQ10
86 Wet Level	TQ40	72 Nap Wood	TQ00	14 Climping	TQ00
65 Whitbread Hollow	TQ30	58 Newhaven Tide Mills	TQ01	17 Coldwaltham	TQ01
20 Widewater	TQ91/92	88 Northpoint Gravel Pit	TQ60	74 Crumblers Gravel Pit	TQ60
41 Woolbeding Common	TQ33	33 Paddockhurst Park			
27 Worth Forest					

Localities most frequently mentioned in the text. See alphabetic index below.



295. **BEE-EATER** (*Merops apiaster*):—One E over Beachy Head on 25 May (DC, JFC, AQ *et al.*) has been accepted by *British Birds*. There have now been 7 records, involving 10 birds, since 1981. Five of these 7 have been on 25-26 May including 3 at Beachy Head in the last 4 years.

297. **HOPOE** (*Upupa epops*):—Eight or nine were recorded, all in spring, a slightly above-average showing. The first appeared in a garden at Woodmancote on 14-15 Apr. (HAW), and the second arrived from the S at Brighton Marina on 17 Apr. (DPD) followed by singles at Chantry Hill on 20th (DR) and Beachy Head on 25th (DC, JFC, RJF *et al.*). In May 2 sightings at Beachy Head on 2nd were thought to relate to different individuals (DC, JFC) while 1 was seen at Rye Hbr the same day (HT *et al.*), 1 in a garden at Runcton on 6th (JVS) and the last in a garden near Plaistow on 31 May (JEK).

298. **WRYNECK** (*Jynx torquilla*):—A good year with 3 recorded in spring and at least 14 in autumn. One was seen at Church Norton on 12 Apr. (WS), with one at Cuckmere Haven on 18th (JHM) and another at Bexhill on 2 May (RS, SS).

The main autumn movement occurred between 28 Aug. and 1 Sept. with one at Birling Gap on 28 Aug. (DPD, NAGL) still being present on 29th when 2 others were found at Beachy Head (MK, JPS *et al.*) and one was trapped in Whitbread Hollow (BHRS). Also on 29th singles were seen at Icklesham (SJRR) and Cuckmere Haven (WJMS). Two at Beachy Head on 31 Aug. (GG, MK *et al.*) were probably different from those above and one was reported from Hope Gap, with 2 more at Beachy Head on 1 Sept. (DC, JFC) possibly different again. On 5 Sept. singles were seen in a Beckley garden (AK) and at Whitbread Hollow (BHRS), while 1 was present at Church Norton from 9-13th (BFF, OM *et al.*). One was reported from Beachy Head on 18 Sept. (RHC) with the last of the year at the Severals on 19 Oct. (RJLK), the latest record since 1976.

300. **GREEN WOODPECKER** (*Picus viridis*):—Continues to be widespread and numerous throughout the county. Several reports from suburban gardens included some from new areas, e.g. South Lancing in Feb. and Apr. Breeding season records for large well-defined areas included 5-6 pairs along the Bluebell Railway (8 km), 6 calling in Pippingford Park (200 ha), 2 pairs at both Cattlestone Farm, West Chiltoning (60 ha) and Cissbury Ring. A family party of 5 was reported from Petworth Park, otherwise very little information was received on breeding success. Counts of this species in large well-defined areas will be most welcome.

301. **GREAT SPOTTED WOODPECKER** (*Dendrocopos major*):—Widespread and numerous throughout the county. Many reports were received of suburban and rural feeding stations being used, primarily in Oct-Apr., but also at other times of year and with young being brought for food in June and July.

Breeding season counts in large well-defined areas included 6 pairs in Pippingford Park (200 ha), 4 pairs along the Bluebell Railway (8 km), 3 pairs at Fore Wood, Crowhurst, and 3 pairs at Cattlestone Farm, West Chiltoning (60 ha). At Bewl Water one pair bred successfully in a tit box, having first enlarged the entrance hole. Other interesting records included one associating with a flock of Mistle Thrushes at Park Crescent, Brighton on 27 Aug., singles at Beachy Head on 27 Sept. and 31 Oct. and others well away from woodland at Pevensey Levels on 1 Nov. and Thorney Deeps on 21 Nov.

303. **LESSER SPOTTED WOODPECKER** (*D. minor*):—In the breeding season records were received from 23 areas with breeding proved at only 3 of these. At other times of year reported from a further 18 localities; however, this species is probably grossly under-recorded. A review of records in recent years is in preparation and should give a more accurate indication of the real distribution in the county.

310. **WOODLARK** (*Lullula arborea*):—1986:—One at Beachy Head on 2 Nov. (DC, JFC).

1987:—One flew N calling over Bewl Water on 15 Mar. (PCB, AFJC) and there was another single at Beachy Head on 3 May (GG, AW).

A pair bred at a West Sussex site where up to 6 were present the previous autumn. Song

was first heard and a pair seen on 8 Feb.; they were carrying food on 20 July but no young were found. On 9 Aug. 4 were present, 3 remaining into Oct. One was still present on 8 Nov. At a nearby site song was heard from 17 Apr., a pair seen on 5 May but not after 9th. A single bird was present at a third site in this area on 25 Oct.

311. **SKYLARK** (*Alauda arvensis*):—In the early months there were flocks of 300 at Brooklands, 220 in the Lower Adur Valley and up to 200 at Rye Hbr. Despite the severe conditions in mid-Jan. only small-scale cold weather movements were noted.

Counts of breeding birds in defined areas are shown on page 46. In autumn there were 200+ at Beachy Head on 22 Oct. but little visible passage was recorded.

313. **SAND MARTIN** (*Riparia riparia*):—First recorded on 25 Mar. at Chichester GP and on 28th at Northpoint GP, a late arrival. Spring passage was heavier than in 1986 with maximum counts of 80 at Chichester GP on 8 Apr. and 100 at Waltham Brooks on 20 Apr.

During the breeding season counts were made at 5 active colonies. Estimates of the number of pairs or occupied holes were as follows: West Heath Common 70, Washington Rock Common 45, Sandgate Park 20-25, Stedham 9 and East Guldeford Level 1.

Autumn passage was again well marked with 2000 at Camber and Rye Hbr on 25 July and 17 Aug. respectively and 1000 at the latter locality on 1 Aug. At Icklesham, where 435 were ringed during the year, there were 2000 on 8 Sept. and 500 the following day. Visible passage included movements of 150 S per hour at Paghham Hbr on 20 Aug., 500 W at Sidlesham Ferry on 23 Aug. and 300 N at Baisdean on 15 Sept. A roost at Thorney held 200 birds on 7 Sept. The last for the year were 2 at Rye Hbr on 13 Oct.

314. **SWALLOW** (*Hirundo rustica*):—First recorded on 29 Mar. at Gatwick and on 1 Apr. at Bewl Water. Although widespread by 10 Apr. numbers were generally small with peak counts for the spring of only 32 at Bewl Water on 12 Apr., 46 N at Cuckmere Haven on 20 Apr. and 54 N at Selsey Bill on 6 May.

Autumn passage was most pronounced in Sept. with peak counts of 2900 E at Worthing on 9th, 3500 W at Rye Hbr on 15th, up to 30000 E at Beachy Head and 20000 E at Rye Hbr on 16th and 10000 E at Beachy Head on 26th. Passage continued throughout Oct. and once again there was an unusual number of Nov. records with c.123 birds reported from 14 localities. The peak count for the month was 50 at West Kingston on 7th. In Dec. there were 2 E at Littlehampton West Beach on 2nd and 1 at Iford on 8th.

315. **RED-RUMPED SWALLOW** (*H. daurica*):—Singles were recorded briefly at Pett Pools on 17 Apr. (AJS) and at Rye Hbr on 26 May (ADB, SB, SBr), with another at Beachy Head on 12, 15 and 17 May (GG, DJS *et al.*). All three have been accepted by *British Birds* and were part of an exceptional spring overshoot.

There have now been 7 county records, all between 17 April and 29 May.

316. **HOUSE MARTIN** (*Delichon urbica*):—First recorded on 8 Apr. at Chichester GP and on 10th at Arundel and Barcombe Res. Spring passage was very light with a maximum of only 200 at Bewl Water on 15 May.

Breeding season reports were conflicting. At Heathfield an increase from 3 nests at one colony in 1985 to at least 10 pairs was noted whereas only 5 pairs were present at Mannings Heath (*cf.* more normal 30-50 pairs). At Maynards Green there was a further decrease with 18 first and 8 second broods (*cf.* 21 and 12 in 1986). A single pair nested on chalk cliffs between Birling Gap and Beachy Head.

Autumn passage was most pronounced in Sept. with peak counts at Beachy Head of 45000 E on 16th, 10000 E on 26th and 20000 E on 27th. There were 12000 E at Worthing in 1 hour on 28th. Passage continued throughout Oct. and in Nov. there were 21 reported from 8 localities. The last were singles at Christ's Hospital, Eastbourne and Selsey on 23rd.

317. **RICHARD'S PIPIT** (*Anthus novaeseelandiae*):—1981:—One at St. Leonards on 10 Oct. (KMJ) has been accepted by *British Birds*, though this species was removed from their list at the end of 1982.

318. **TAWNY PIPIT** (*A. campestris*):—1986:—One was recorded at Beachy Head on 13 Sept. (DC, JFC, RKH) bringing the year's total to 6.

1987:—Singles were seen at Climping on 22 Sept. (ASC), Beachy Head on 26 Sept. (DC, JFC) and Church Norton on 3 Oct. (CRJ, EMR). Also reported (by RHC) were singles at Hodcombe, Beachy Head on 30 Aug., 1 and 17 Sept. and 1 Oct. and at Sidlesham Ferry on 21 Sept. An average showing.

319. **OLIVE-BACKED PIPIT** (*A. hodgsoni*):—One at Hodcombe, Beachy Head on 11 Oct. (MEC, RHC) has been accepted by *British Birds* and is the first county record. This unobtrusive Asian forest species has been long overdue in the county and the pines at Hodcombe have always looked a likely place for one.

320. **TREE PIPIT** (*A. trivialis*):—First recorded at Church Norton on 2 and 5 Apr. and at Duddeswell on the latter date. Spring passage was very light with a total of just 29 reported up to 10 May.

A total of 88 territories were located in the breeding season including 21 in 200 ha at Pippingford Park.

In autumn 306 were reported, the maximum being 30 at Cissbury on 22 Aug. There were 4 Oct. records, the last at Sidlesham on 11th.

322. **MEADOW PIPIT** (*A. pratensis*):—The only significant flock recorded in the early part of the year was 40 at Icklesham on 7 Jan. At Selsey Bill there were 310 N on 25 Mar. and smaller numbers at Littlehampton and Worthing on 28th.

A flock of 30 at Cuckmere Haven on 5 July were unusual on this early date. The largest autumn numbers were 500 at Beachy Head on 26 Sept., with 173 at Cuckmere Haven on this date and 400 at the former locality on 1 Oct.

324a. **ROCK PIPIT** (*A. petrosus*):—The largest numbers recorded were 19 at Pagham Hbr in Dec., 15 at Rye Hbr in Nov., 11 in the Lower Cuckmere in Dec. with 9 there in Jan. and 9 at Brighton Marina in Dec.

The only breeding record was of one pair which raised 3 young at Cuckmere Haven. Singles at Northpoint GP on 3 June and at Combe Haven on 26 July were unusual.

324b. **WATER PIPIT** (*A. spinoletta*):—As in 1986 very scarce. Singles were recorded at Arundel WFT on 15 Jan. (RJLK), Fishbourne on 24 Jan. (BJ, CMJ) and Pagham Hbr on 31 Jan. (RJLK). At Combe Haven 3-4 were present in Jan. but only 1 in Feb.; there was 1 on 21 Apr. with 3 in Oct., 4 in Nov. and 6+ in Dec. (KMJ).

Observers are reminded of the need to supply descriptions of this scarce species.

325. **YELLOW WAGTAIL** (*Motacilla flava*):—On 5 Apr. there were 5 at Rye Hbr and singles at Church Norton, Littlehampton and Pett. Away from Rye Hbr only 4 more were noted up to 16th when there were 10 at Pett. There were 17 at Rye Hbr on 17th, 11 at Pett on 20th and 10 at Arlington Res. on 25th but no more than 3 elsewhere on spring passage.

The survey of Pevensey Levels revealed 119 territories and there was a big increase to 46 pairs at Rye Hbr (cf. 28 in 1986). Pairs were also present at Shoreham and Thorney Island and successful breeding occurred in the Lower Cuckmere and in the Arun Valley at Bury. Numbers in Aug. were in single figures until 28th when there were 76 W at Beachy Head. The biggest flocks during the next 4 days were 175 at Beachy Head, 102 in the Cuckmere, 100 in the Lower Ouse Valley and 70 at Climping. During the next 2 weeks there were up to 44 at Climping, 30 at Pett, 20 at Sidlesham and also Selsey. A further influx on 18-19 Sept. included 60 at Cissbury, 100 at Sidlesham, 70 at Charleston and 36 at West Hove GC. Later gatherings were small apart from 60 W at East Head on 26 Sept. A few lingered on the coast into Oct., the last 2 at Beachy Head on 22nd.

Single birds showing the characteristics of the Blue-headed race *M.f. flava* were recorded at Rye Hbr on 17 Apr. and in early May, at Pett on 20 and 27 Apr. and 5 May, at Pevensey Levels on 12 and 15 May, at Selsey on 13 May and at Beachy Head on 4 Oct. A female near Arlington from 13-20 June was paired with a male *flavissima*.

A male showing the characteristics of the Ashy-headed race *M.f. cinereocapilla* was recorded at Pevensey Bridge Level on 12 May (RJF, PJ *et al.*). This is only the second county record of this race, the last having occurred in Apr. 1968.

327. **GREY WAGTAIL** (*M. cinerea*):—Reported from 9 coastal and 15 inland sites in Jan. and Feb. The most reported at any site was 5 at Christ's Hospital SF on 17 Jan. The only evidence of spring passage came from Brighton between 4-13 Mar. Also at this time the birds at Christ's Hospital had increased to 6 prior to dispersal to breeding sites.

During the breeding season records were received from only 14 sites. Although present, no breeding took place at Woods Mill for the second year. There is a prevalent feeling that the breeding population has decreased in recent years, but there is no real evidence to support this. It is hoped that a clearer picture will emerge as a result of the field work for the New Breeding Atlas.

A fully grown young was present at Church Norton and Sidlesham on 18-20 June and by the end of Aug. there was more evidence of post-breeding dispersal inland. Coasting movements were apparent from early Sept. Detailed observations from the Climping-Littlehampton area showed peaks of 15 on 8 Sept., 12 on 22 Sept. and 18 on 4 Oct. At the end of the year records were received from 11 coastal and 12 inland localities during Nov. and Dec.

328. **PIED WAGTAIL** (*M. alba*):—Counts in Jan. included 15 at Brighton Marina, 32 at Widewater, Lancing, and 60 on filter beds at Christ's Hospital SF. On 8 Mar. there were 74 at the latter site whilst on 29th there were 22 at Thorney Island.

A small visible passage was recorded in late autumn with, for example, 69 E and 35 W at Worthing between 29 Sept. and 23 Oct. Coastal counts included 35 at Brighton Marina on 21 Nov., 38 at Widewater on 28th and 38 at Littlehampton on 3 Dec. Inland, there were 85 at Christ's Hospital SF on 12 Dec. and a flock of 147 on a Crowborough playing field on 26th.

The largest roost reported was of 80 at Shoreham in Nov.

Between 10 Apr. and 8 May about 20 birds showing the characteristics of the White Wagtail *M.a. alba* were reported, nearly all on the coast, including up to 3 on several dates at Rye Hbr. One at Pebsham on 15 Aug. and 2 in a flock of 15 at Littlehampton on 17 Sept. were considered to be of this race.

329. **WAXWING** (*Bombycilla garrulus*):—Two at Rye Hbr on 24 Jan. (PP).

331. **WREN** (*Troglodytes troglodytes*):—Counts of breeding birds in defined areas are given on page 46. In autumn there were 30 at Beachy Head on 15 Sept. and 25 on 31 Oct.

332. **DUNNOCK** (*Prunella modularis*):—Counts of breeding birds in defined areas are given on page 46.

336. **ROBIN** (*Erithacus rubecula*):—Counts of breeding birds in defined areas are given on page 46. In autumn there were 25-30 at Beachy Head on 29 Aug., 15 on 17 Sept., 100 on 4 Oct., 70 on 31 Oct. and 30 on 1 Nov. At Moulsecomb Wild Park 100 were recorded on 24 Oct. At Ashcombe Bottom autumn dispersal began early with new arrivals noted from 27 July. A total of 39 birds trapped between this date and 27 Sept. were judged on coloration and weight to be British in origin. The first apparently 'Continental' birds appeared on 29 Sept. and of 20 trapped between this date and 8 Nov., the majority appeared to be of this race (RL).

338. **NIGHTINGALE** (*Luscinia megarhynchos*):—The first of the spring was at Birling Gap on 15 Apr. but four days later 3 were singing at both Ashcombe Bottom, near Lewes, and at Lullington Heath with 2 others heard at nearby Tenantry Ground. The records suggest a more general and widespread arrival on 21 Apr.

The incomplete data received for the breeding season revealed a total of 94 singing males from 44 different tetrads in 24 of the county's 10 km squares. Of these, 62 were in West Sussex and 32 in East Sussex, and in 5 of the tetrads there were no previous records of singing birds.

In keeping with previous years most autumn records came from Whitbread Hollow, Beachy Head, where observations were logged until 31 Aug. with a maximum of 5 between 6 and 9 Aug. Elsewhere there were singles at Arundel on 24 July, at Balmer Down on 27 Aug. and finally at the Seven Sisters Country Park on 4 Sept.

342. BLACK REDSTART (*Phoenicurus ochruros*):—Good numbers were recorded in spring, while those in autumn were about average, the approximate monthly totals, excluding breeding birds, being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	4	34	32	2	—	2	4	1	41	26	8

Most of the individuals recorded overwintering in late 1986 were still present until at least the onset of the severe weather in mid-Jan. These included 3 at North Gatwick and 2 at Brighton Marina, the latter probably being the two seen sheltering from a snowstorm in Marine Parade, Brighton on 13th; sadly, singles were found dead nearby and at Pett on 15th. February records came from Eastbourne and between Hove Lagoon and Widewater (3) with one at Climping on 15 Mar. and 2 there on 16th the first migrants. Ones and twos were then widely reported along the coast into late Apr. with peaks of 7 at Beachy Head on 28 Mar. and 5 on 5 Apr. One on Falmer Hill on 23 Apr. was probably the last migrant.

A male and a tailless juvenile watched at Langney Point on 30 May were unlikely to have come far, young birds being expected to leave the nest 28-31 days after incubation begins (*Popular Handbooks*). Singing males were recorded at 4 other sites during May and June but only one pair was proved to breed, with 2 young raised.

Single birds were seen in mid-July at Coolham and Ovingdean with one at Rye Hbr on 16 Aug. and 3 at Beachy Head on 17th, the last record from a breeding site being on 20th. In mid-Sept. one was recorded at Shoreham Hbr on two dates and one was seen at Beachy Head on 1 Oct., but none were then reported until singles at Southwater and Selsey on 19th. A small number were widely scattered along the coast during the latter part of Oct., the main movement occurring on 31 Oct.-1 Nov. with 8 at Beachy Head, 6 at Black Rock, 6 at Southwick and a further 10 at 6 other coastal localities in the eastern half of the county. Singles were recorded up to mid-Nov. with the last passage birds being at Beachy Head and Selsey Bill on 14 Nov. and at Cowfold on 15th. Two appeared to have settled in to winter at Southwick/Shoreham Hbr by the end of the month, with 4 in that area on 9 Dec., although only singles were seen subsequently. Three different individuals were recorded at Climping in Dec., one from 19th to the end of the year, while one was seen at Sidlesham Ferry on 24th.

343. REDSTART (*P. phoenicurus*):—Two early records, both on 5 Apr., at Cuckmere Haven and Darwell Res. Another 37 were noted on spring passage up to 21 May when 1 was at Goring.

Breeding season records were up from 27 in 1986 to 46 this year. The increase is mainly due to a full count at the principal location where 18 singing males were found on 2 May. At this site 2 pairs nested in boxes.

Autumn passage records totalled 223 with the maximum being 22 at Church Norton on 22 Aug. The last record for the year was a male trapped at Beachy Head on 7 Nov.

344. WHINCHAT (*Saxicola rubetra*):—A good year, the approximate monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
—	—	—	25	63	—	3	330	600	25	—	—

First recorded on 17 Apr. with singles at Thorney Island and Sidlesham Ferry. Five were seen on 18th including 2 at Cuckmere Haven, while 2 were at Sidlesham Ferry and 2 at Icklesham on 19th. Spring birds were widespread during late April and well into May. Notable arrivals occurred on 9-10 May, with 7 at Hill Barn GC, 8 at Beachy Head and 6 at St Leonards, and on 17th when 6 were recorded at Pagham Hbr, 3 at Norton, 2 by R. Adur and 1 at Target Hill, Crawley. Four were seen at Littlehampton on 20 May with the last migrants at Waltham Brooks and Hollingbury Camp on 25th.

Returning birds were recorded from 26 July, with singles at Cissbury and Beachy Head, but passage did not start in earnest until the last week of Aug. Eighteen were on East Brighton GC on 26th with 35 at Beachy Head on 27th, 15 in Cuckmere Haven on 29th and 16 at Littlehampton GC and 25 at Combe Haven on 30th. Daily coverage at Icklesham

recorded 105 in Aug. and 210 in Sept., making up approx. one-third of the county totals for those months; of these 63 were trapped. Elsewhere passage was good throughout Sept. with peaks of 47 at Climping/Littlehampton GC on 1st, 16 at Thorney on 2nd, 12 near Southeast on 14th, 20 on East Brighton GC on 18th, 25 at Beachy Head and 14 in the Cuckmere on 19th. After 12 at Beachy Head on 26th numbers soon dwindled. Most Oct. records were singles, with 3 at Cuckmere Haven on 4th and 2 at Sidlesham Ferry on 17th. 'Off passage' individuals remained for 6 days at Newmarket Hill in early Oct. and for 5 days at Rye Hbr from 18th. Last of the year were the latter, 2 at Beachy Head and 1 at Pagham Hbr on 22nd and 1 on Littlehampton GC on 24th.

345. STONECHAT (*S. torquata*):—Again a poor year with 21 reported in Jan., only 8 in Feb. and 13 in Mar. The cold spell in Jan. probably accounts for the poor showing.

A total of 19 pairs were reported during the breeding season, a slight improvement compared with the 1986 figure of 15 pairs. At Beachy Head, where 7 pairs bred, 18 nests were found. Two pairs successfully raised 3 broods each and fledging success was calculated to be 64.2% (EU). A total of 56 pulli were ringed as part of this study.

In autumn about 55 were recorded, the maximum being 10 at Beachy Head on 10 Oct. Reports for the end of the year numbered 28 in Nov. and 24 in Dec.

All records of this species are welcome.

346. WHEATEAR (*Oenanthe oenanthe*):—One at Pagham Hbr on 10 Mar. was the first spring record, followed by singles at Cuckmere Haven on 14th and at Climping and Brighton on 16th. Seven were then recorded on 21st, including 4 at Ferring, with scattered singles to the end of the month and 8 at Selsey Bill on 25th and 9 at Littlehampton GC on 28th. The largest arrival of a quiet spring occurred on 2 Apr. with 8 at Selsey Bill, 15 at Climping/Littlehampton GC and 25 at Langney Point. A smaller arrival was evident on 17-18th with 8 seen at Climping, 8 at Lychpole, 10 at Newhaven and 13 at Beachy Head. Few were then seen away from breeding areas, the last migrants being seen at Worthing on 24 May and 2 at Church Norton on 25th.

During the breeding season 10-11 pairs bred at Rye Hbr, a return to the level of the early 1980s after two poorer years. Most were in ground boxes and success was 'good' with several second broods. A pair was probably present at Langney Point and an isolated sighting of a pair was made at Rustington on 10 June.

Juveniles were recorded at Church Norton on 9 July and at Cuckmere Haven on 12th while migrants at Thorney on 25th and Hollingbury Camp and Church Norton (3) on 27th were probably of more distant origin. Return passage was noted in strength from early Aug. with 15 on East Brighton GC on 3rd and 21 between Seaford Head and Crowlink on 4th. Other peaks during the month were 43 at Thorney and 24 at Beachy Head on 8th, 45 at Beachy Head on 20th, 40 on Pebsham Tip on 24th, 21 at Hampden Park, 55 on East Brighton GC, 26 on Adur Rec. and 14 at West Wittering on 27th and 50 on Adur Rec. and 22 at Climping on 31st. After 50 at Rye Hbr on 5 Sept. few were seen before 19th when a small arrival was noted with 6 at Gatwick, 14 on Newmarket Hill and 37 scattered along the coast. Twenty-six were at Climping on 26th while 9 seen on Newmarket Hill on 1 Oct. and 11 on East Brighton GC on 4th were the last sizeable groups. Singles were seen regularly throughout Oct. with 6 at Climping on 31st, 3 remaining to 2 Nov. and 1 to 5th. A further 5 were recorded during 1-5 Nov., with late singles at Littlehampton GC on 9 Nov., 17-26 Nov. and 26-31 Dec., the latter not being present in Jan. 1988.

348. BLACK-EARED WHEATEAR (*O. hispanica*):—A female at Beachy Head on 31 May (MEC, RHC) has been accepted by *British Birds* and is the first for the county.

359. RING OUZEL (*Turdus torquatus*):—An average showing in spring was followed by the best autumn passage since 1976, the approximate monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
—	—	—	18	1	—	—	—	31	125	9	—

A very late arrival, the first record not being until 15 Apr. when 1 was seen at Cold Combes, Lewes, closely followed by 1 at Church Norton on 16th and 1 at Balsdean and 5 at Beachy Head on 17th, 1 remaining to 22nd. Other spring birds, occurring between 18-25

Apr., were seen at Climping, Newtimber Hill, Castle Hill, Kingston Hill, Lullington and the Downs above Eastbourne. One at Cold Combes on 29th was the only female recorded during the spring, the last record being of a male at Icklesham on 4 May.

In autumn 3 were seen at Newtimber Hill on 5 Sept., with 6 there on 11th; scattered ones and two were then recorded elsewhere throughout the month, with 3 at Cold Combes on 19th. Passage was widespread along the coast and Downs during Oct., though few large gatherings were reported. Peak counts were 7 at Beachy Head and 2 at Cold Combes on 1st, 6 at Cold Combes, 5 at Newtimber Hill and 4 at Cissbury on 3rd and 15 at Beachy Head and 6 at Balsdean on 4th. One trapped at Cold Combes on 3 Oct. was still present 2 weeks later when its weight had increased by 20%. Ten were seen at Cold Combes on 18 and 23 Oct., where a total of 41 were estimated to have been present during the month, and 25 at Beachy Head on 22nd. Numbers soon dwindled with just 4 at Beachy Head and 3 at Cold Combes on 27th and ones and two elsewhere to the end of the month. On 1 Nov. singles were seen at Rye Hbr, Hollingbury Camp and Church Norton with 2 at Climping, 1 of which remained to 8th, while 3 were present at Beachy Head on 5th, 1 also remaining to 8th. Last of the year was a first-year male trapped on 21 Nov. at none other than Cold Combes, where else?

360. **BLACKBIRD** (*T. merula*):—Counts of breeding birds in defined areas are given on page 46. A small autumn passage was recorded at Beachy Head (up to 70) but at Ashcombe Bottom numbers were low until late Nov. when an influx of presumed migrants occurred. A total of 90 birds were trapped at this site between 20 Nov. and 24 Dec. At Moulsecocomb Wild Park there were 114 on 14 Nov.

364. **FIELDFARE** (*T. pilaris*):—Flocks of 200 or more were reported from 3 localities in Jan., 7 in Feb. but only one in Mar. The maximum counts during the first winter period were 600 at Icklesham on 2 Jan. and 550 at this locality on 28 Feb. Although some observers reported the species absent during the cold spell of mid-Jan. there were no diurnal movements recorded at this time. The last spring birds were 23 at Ifield and 3 at Hoove Level on 19 and 22 Apr. respectively.

The first recorded in autumn were singles at Beachy Head on 16 Sept. and 4 Oct. There were few other reports for Oct. but in Nov. and Dec. there were flocks of 200 or more at 4 and 5 localities respectively. The only significant diurnal movement was 150 NW at Thorney Island on 21 Nov.

365. **SONG THRUSH** (*T. philomelos*):—Counts of breeding birds in defined areas are given on page 46. In autumn there were 15 at Beachy Head on 4 Oct., 30 on 24th and 35 on 25th. A further influx occurred on 24 Nov. when 42 were recorded in the Lower Cuckmere. At Ashcombe Bottom autumn passage was poor with only 58 birds trapped throughout the whole year, half the normal total for this site.

366. **REDWING** (*T. iliacus*):—A very poor year. The approximate monthly totals (excluding visible passage) were as follows:

Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
56	113	502	11	5	110	33	453

Many observers commented on the absence of the species in the early part of the year, particularly during the cold spell of mid-Jan. Numbers began to build up gradually from 7 Feb. with the onset of less harsh conditions but the maximum count for the month was only 65 at Icklesham on 28th. Birds were more widespread in Mar. but the only large flock reported was 150-200 at Burgess Hill on 21st. In Apr. there were singles at Chichester GP, Heathfield and Climping on 2nd, 3rd and 17th respectively and 8 at Billingshurst on 5th. The only diurnal movement noted during the early part of the year was 65 E at Chalvington on 8 Mar.

In autumn first recorded on 28 Sept. at Church Norton, with 4 at Balmer Down the following day. Numbers in Oct.-Nov. were very low but there was a small influx in early Dec. with a maximum count for the month of 200 at Hartfield on 6th.

367. **MISTLE THRUSH** (*T. viscivorus*):—Counts of breeding birds in defined areas are given on page 46.

369. **CETTIS WARBLER** (*Cettia cetti*):—A poor year with just 6 recorded and once again no sign of colonisation of the county. Despite the extreme cold, the bird first recorded on 6 Nov. 1986 (*SxBR* 1986) remained until 15 Jan. The only other record for the first winter period was one singing in the west of the county on 29 Mar.

A singing male was reported from a third locality between 4-11 July and at a previously regular site there was one from 10-12 Aug.

A single bird was recorded at Sidlesham Ferry on 25 Sept. and there was one at the locality occupied in Jan. from 22 Oct. into Dec.

373. **GRASSHOPPER WARBLER** (*Locustella naevia*):—First recorded on 17 Apr. with 2 at Beachy Head. A further 10 were noted on spring passage.

Again only 14 territories were found in the breeding season, 4 of which were on Thorney Island.

Autumn passage was heavier than in 1986 with 30 birds recorded (*cf.* 14 in 1986), the last at Combe Haven on the late date of 25 Oct.

377. **AQUATIC WARBLER** (*Acrocephalus paludicola*):—One was seen at Combe Haven on 7 Sept. (*KMJ*). A typical record of this most elusive species.

378. **SEDGE WARBLER** (*A. schoenobaenus*):—First recorded in the Lower Cuckmere and at Paghham Hbr on 12 Apr. and at Rye Hbr on 13th. The results of the Society's breeding survey are given on pages 81-96.

The peak autumn passage was at Combe Haven in Aug. with 80+ on 3rd, 400+ on 6th and 150+ on both 22nd and 24th. Only 13 were trapped at Beachy Head but 664 full-grown birds were ringed at Icklesham throughout the year.

The last recorded were singles at Beachy Head and Icklesham on 4 Oct. and 10 at Combe Haven on 5th.

381. **MARSH WARBLER** (*A. palustris*):—Singing males were recorded at 4 localities as follows: 2 from 1-21 June with occasional bursts of song into July, 1 on 6 and 15 June, 1 on 16 June and 1 on 13 July. There was no evidence of confirmed breeding and it is likely that these birds were all unpaired.

382. **REED WARBLER** (*A. scirpaceus*):—First recorded at Arundel on 19 Apr. The results of the Society's breeding survey are given on pages 81-96.

A number of observers commented on a strong autumn passage and at both Beachy Head and Shoreham more were ringed than in any autumn since 1980. At Icklesham 796 full-grown birds were trapped during the year. The largest concentrations were at Combe Haven with 100+ on 10 and 16 Aug. Late Oct. records were at Arundel WFT on 22nd and 2 at Icklesham on 25th. One at Thorney Deepes on 8 Nov. (*CBC*, *MAC*) was the latest county record by 6 days.

383. **GREAT REED WARBLER** (*A. arundinaceus*):—1980:—One on 15 Aug. (locality and observers' initials withheld at their request) has been accepted by *British Birds*.

387. **ICTERINE WARBLER** (*Hippolais icterina*):—A singing male trapped at Rye Hbr on 4 June (*BJY et al.*) was only the third spring record and the first in June. One reported from Hodcombe, Beachy Head on 28 Aug. (*RHC*) was more typical. There have now been 21 recorded in the county.

388. **MELODIUS WARBLER** (*H. polyglotta*):—A female was trapped at Icklesham on 28 July (*DJP*, *JW*). This, the 33rd to be recorded in the county, is the first for July and only the second east of Langney Point.

389. **DARTFORD WARBLER** (*Sylvia undata*):—The wintering individual present in Dec. 1986 (*SxBR* 1986) was last seen on 3 Jan. A singing male was recorded in suitable breeding habitat on 23 May but it was not reported subsequently.

In autumn single migrants were seen at Sidlesham Ferry on 24-26 Oct. (PEB, ASC, LM *et al.*), Littlehampton GC on 2 and 3 Nov. (ASC, RJLK) and Birling Gap on 3 Nov. (PEB).

397. **LESSER WHITETHROAT** (*S. curruca*):—Arrival was slightly later than usual. The first were at Ashcombe Bottom and Belle Tout on 19 Apr., with a more general trickle 24th onwards, mainly of singles except for 6 at Cissbury on 27 Apr. In a year when the other common sylvias arrived on their territories early and in good numbers, this species may have faced competition from its larger congeners. Although in Ashcombe Bottom 30 breeding adults were caught (7 of which had been ringed there in previous years), success appeared abysmal and only 3 juveniles were ringed during July compared with 58 juvenile Whitethroats. Other reports suggested lower than usual numbers. See page 46 for counts of breeding birds from defined areas.

Autumn passage was concentrated between mid-Aug. and early Sept., with 18 at Beachy Head on 15 Aug. rising to 60 on 20th and 100 on 27th, and very few after 60 on 2 Sept. At Cissbury 10 on 16 Aug. rose to 40 on 22nd and fell to 20 on 3 Sept., while after 30 there on 11 Sept. no reports of more than 3 were received from any site. The last were at Newtimber Hill and Rye on 6 Oct.

398. **WHITETHROAT** (*S. communis*):—First seen in the Lower Cuckmere on 11 Apr., then at several sites in the E from 17th and in the W from 20th. After this large-scale arrivals were reported, with 10 in the Lower Cuckmere on 21 Apr., 21 between Brighton and Lewes on 23rd, 10 on Lewes Racecourse on 26th and 12 at Cissbury on 27th, while away from the coast there were 21 singing in Verdley Wood, Fernhurst on the same date.

Several observers commented that numbers were higher than usual in the breeding season, most strikingly so at Icklesham where there were 25 territories compared with 7 in 1985, and at Chidham where there were 5 in an area normally holding 2. At Lullington Heath 23 were singing on 7 May. In Ashcombe Bottom 9 out of 22 breeding adults trapped had been ringed there in earlier years, and breeding success seemed excellent with parties of at least 20 juveniles in the first half of July. See page 46 for counts of breeding birds in defined areas.

As usual the highest numbers on autumn passage were seen at Beachy Head during Aug., with 62 on 15th, 100 on 27th and 125 on 29th, though in Whitbread Hollow the habitat is becoming increasingly unsuitable for this species and the numbers trapped are no longer a fair indication of its abundance. The 103 ringed there represented only 13% of the county total, whereas in the past the site regularly provided more than half. At Cissbury up to 40 were present during Aug., and 41 were seen at Newtimber Hill. In Sept. the highest counts were of 25 at Cissbury on 3rd and 28 at Beachy Head on 17th, while the last of 10 reported in Oct. were at West Wittering on 12th, Beachy Head on 15th, and Birling Gap on 20th.

399. **GARDEN WARBLER** (*S. borin*):—Early records came from Lancing on 13 Apr., Bewl Water on 15th and the Cuckmere on 17th. Normally the main arrival does not take place until well into May, but there was a large influx during 25-29 Apr. so that at least 33 birds were reported from 18 localities by the end of the month, including 11 singing in Verdley Wood, Fernhurst on 27th.

As usual most breeding records were away from the coast and the chalk, but numbers were high in downland scrub woodland at Ashcombe Bottom, where 20 breeding adults (suggesting a minimum of 10 pairs) were trapped, and fledglings seen as early as 14 June. See page 46 for counts of breeding birds from defined areas.

Possibly an early start to breeding led to an early departure for this single-brooded species which moults in Africa. Most sight records on the coast were between 9-30 Aug., with only about 20 birds reported in Sept. Whereas for other warblers counts of birds actually seen at Beachy Head broadly tally with the numbers estimated to be present based on ringing captures in Whitbread Hollow, for this species there is a wide discrepancy. Thus the highest counts were of only 8 on 15 Aug. and 9 on 30th, with just singles reported in Sept., yet estimates from ringing suggested peaks of 60 on 12 Aug. and 15 Sept. Inconspicuousness rather than low numbers probably explains the maximum autumn counts from other areas: 3 at Moulsecomb, 1 at Cissbury, 3 at Church Norton and 2 at Climping. In early Oct. 3 singles were reported, but by far the latest was at Hodcombe on 2 Nov.

400. **BLACKCAP** (*S. atricapilla*):—In the early months few overwintering birds were seen, with 8 in Jan., a further 4 in Feb. and one in Mar. giving the lowest total in recent years:

1980	1981	1982	1983	1984	1985	1986	1987
20	17	28	22	18	48	33	13

Unusually, 8 of the 12 sexed birds were females.

Spring arrivals were reported from 28 Mar., and by 20 Apr. singing males were numerous and widespread, though hardly any birds were seen at passage sites. Only singles were reported from Beachy Head, and 5 at Church Norton on 19 Apr. was the maximum coastal count. Counts of breeding birds in defined areas are given on page 46.

Numbers on autumn passage were at least average. At Beachy Head 150 were present as early as 29 Aug., with 200 on 10 Sept. and a peak of 600 on 15th, while 150 on 11 Oct. was by far the highest count for that month and mirrored similar numbers reported on the same date in 1984 and 1986. Maxima elsewhere during Sept. included 58 at Moulsecomb, 42 at Cissbury and 60 at Church Norton. Only 6, mainly late migrants, were reported during Nov., leaving just 3 probably overwintering birds in Dec.

403. **PALLAS'S WARBLER** (*Phylloscopus proregulus*):—1986:—Subsequent sightings of the frustratingly elusive Climping individual on 15 Nov. and 7 Dec. (PAR) have been accepted by *British Birds*.

1987:—Singles were recorded in Oct. at the Severals, Pagham Hbr on 11th (LEH, RMS) and at Beachy Head on 25th (DC, JFC, AQ *et al.*). Neither remained long, the latter probably due to the storm-damaged state of Belle Tout Wood. These were followed by singles at Climping on 5-6 Dec. (ASC, EJPS *et al.*) and at Friston Forest on 25 and 28 Dec. (GG), the latest county record. All 4 have been accepted by *British Birds*, bringing the county total to 20.

408. **WOOD WARBLER** (*P. sibilatrix*):—The first records for the year were on 20 Apr. at both Stanley and Washington Commons. Another 7 were recorded on spring passage including a very late bird at Beachy Head on 26 June.

Breeding season numbers reported were down to 13 singing males (22 in 1986).

Autumn passage totalled 17 sightings, the last being near Lewes on 4 Sept.

409. **CHIFFCHAFF** (*P. collybita*):—A total of about 32 overwintering birds were present in early Jan. but only 7 remained following the onset of the severe weather. The only Feb. records were singles at Lindfield on 5-6th and in the Lower Cuckmere on 6-8th. The first Mar. arrivals were at Selsey on 9th and at Goring and Shoreham on 14th. The species was widespread by the end of the month but the only notable concentrations reported in spring were 15 at Littlehampton West Beach and 10 at Beachy Head on 5 Apr. and 13 at Moulsecomb Wild Park on 25 Apr.

Breeding season counts from defined areas are shown on page 46. In addition there were 4-6 pairs along 8 km of the Bluebell Railway.

The totals ringed in autumn at Beachy Head, Icklesham and Plumpton were 273, 272 and 96 respectively. There were 600 at the former locality on 15 Sept. and 200 on 10th but numbers elsewhere were small with peaks of only 40 at Newtimber Hill on 6 Sept. and 38 at Icklesham on 15th. In Nov. and Dec. a total of 20 were reported from 12 localities.

Single birds showing the characteristics of one of the northern races *abietinus* or *iridis* were recorded at Littlehampton West Beach on 30 Sept. and at Selsey on 31 Oct.

410. **WILLOW WARBLER** (*P. trochilus*):—First recorded on 28 Mar. at Sidlesham Ferry and on 29th at Selsey Bill. The main arrival was in Apr. with maximum counts of 20 at Sidlesham Ferry on 5th, 70 at Beachy Head, 25 at Pagham Hbr and 12 in the Lower Cuckmere on 18th and 40 at Beachy Head and 32 at Moulsecomb Wild Park on 25th.

Counts of breeding birds in defined areas are given on page 46.

Return passage commenced about 26 July. At Beachy Head there were 500 on 24 Aug. and falls of 200-250 on 8 other dates during the month. Other notable concentrations were 120 at Plumpton on 7th and 100 at Newtimber Hill on 16th. The only significant fall in Sept. was 250 at Beachy Head on 6th. The totals ringed in autumn at Beachy Head, Icklesham, Plumpton and Shoreham sanctuary were 632, 1021, 356 and 83 respectively. The last reported were singles in the Lower Cuckmere and at East Chillington on 17 and 19 Oct.

An unusual number of birds showing the characteristics of the northern race *acredula* were recorded during the autumn. At Plumpton singles were trapped on 23 Aug. and 7 and 17 Sept. and at Beachy Head 70% of the 250 present on 29 Aug. were considered to be this race. These had all moved on by 31st but further singles were present on 6, 20 and 26 Sept.

411. **GOLDCREST** (*Regulus regulus*):—The very low numbers of 1986 continued into Jan. and Feb., with only two singles reported in each month. Spring passage near the coast was minimal, with none seen at Thorney Island, only one at Church Norton, and 5 at Littlehampton on 26 Mar. being the highest count. More were found inland, with 4 singing males at Mannings Heath during Mar. and 'birds everywhere' at East Grinstead in early Apr. Counts of breeding birds in defined areas are given on page 46.

Although hardly any breeding records were received, success must have been very high. Fledged juveniles were seen at Hassocks and Tortington at the end of July, and while there were no reports for Aug. dispersing or passage birds were numerous throughout the autumn. After 12 at Beachy Head on 17 Sept., 40 or more were present on many dates in Oct. with peaks of 150 on 14th and 22nd. Parties totalling 10-20 were seen at Brighton, Ashcombe and Climping. Numbers were high inland, with 43 at Old Lodge on 25 Oct., 30 at River's Wood near Ardingly on 28 Nov., and 25 at Wiggoholt Common on 3 Dec., with smaller numbers reported from all parts up to the end of the year.

412. **FIRECREST** (*R. ignicapillus*):—Numbers during the early part of the year were above average; those in the latter part showed a welcome increase over the last two years but were still unexceptional, the monthly totals, away from breeding areas, being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
14	5	15	45	—	—	—	—	14	28	8	—

The 4 wintering birds reported at Church Norton and Climping in Dec. 1986 (SxBR 39:52) remained into Feb. and Mar. respectively, a third being seen at Climping in mid-Jan. Elsewhere in Jan. 4-6 were reported from Burton Mill Pond on 7th, 2-3 at Ashcombe Bottom/Plumpton Plain mid month and singles at Beachy Head and Rye Hbr, while in Feb. singles were found at the Dover and at Gravetye Manor Lakes.

First migrants were 2 at Beachy Head on 22 Mar., followed by 1 at Church Norton on 24-25th and 2 at Rye Hbr on 27th. A widespread arrival was noted along the coast on 4-5 Apr., perhaps affected by weekend bias, 5 being recorded around Paghham Hbr, 3 at Climping, 2 at Ferring, 8 at Beachy Head, 2 at Icklesham and 2 at Rye Hbr. Records continued throughout Apr., mostly from along the coast, with Beachy Head being the favoured locality. Away from the coast singles were recorded at Gravetye on 11th and Castle Hill from 16-18th. The last migrant was probably that at Beachy Head on 26th.

During the breeding season one was singing near Crawley for at least 7 weeks while others were recorded on single dates at 2 other suitable sites.

Autumn passage was first noted at Beachy Head on 6-7 Sept., the species being seen there throughout the month with a peak of 3 on 25th, although only 2 were seen elsewhere: at Littlehampton GC on 7th and at Plumpton on 28th. October records were more widespread, Beachy Head still dominant with a peak of 7-8 on 3rd, but only ones and twos subsequently. Elsewhere records came from Rye Hbr, Icklesham, Castle Hill, Balsedean, Goring, Climping and Church Norton. The year ended quietly with 2 at Climping on 1 Nov., 1 at Vinehall on 2nd, 2 at Church Norton on 5th and 1 on 8th and singles at Littlehampton GC on 22nd and at Pilsey on 30th. For the first year since 1973 none were recorded in Dec.

413. **SPOTTED FLYCATCHER** (*Muscicapa striata*):—First reported at Old Lodge on 5 Apr. (PID), the earliest county record, and at Falmer on 14 Apr. (IW). There were no further sightings until 26th when there was 1 at Barns Green. The main arrival occurred after 10 May with maximum counts of 13 and 20 at Beachy Head on 10th and 16th respectively and 8 at Church Norton on 11th. Counts of breeding birds in defined areas are shown on page 46. Elsewhere 31 pairs were reported, of which 13 raised 33 young (average 2.54).

In autumn there were 4 at Church Norton and 5 at Climping on 6 Aug. Passage was heavy with maximum counts of 20 at Church Norton on 19th Aug., 45 at Cissbury on 23 Aug., 25 at Icklesham on 2 Sept., 16 at Church Norton on 7 Sept., 22 at Moulsecroomb Wild Park on 8 Sept. and 26 at Climping on 14 Sept. A total of 13 were recorded in Oct., the last at Worthing on 12th.

416. **PIED FLYCATCHER** (*Ficedula hypoleuca*):—Recorded in very good numbers in spring, though the autumn was particularly quiet, the approximate monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
—	—	—	18	7	—	2	25	17	—	—	—

First recorded on 17 Apr. when singles were seen at Sidlesham Ferry and Beachy Head, closely followed by 2 near Chichester Hbr, 4 at the Severals, 1 along Paghham North Wall, 1 on Castle Hill and 2 in East Brighton on 18th. Five were seen at the Severals on 19th while 1 was nearby at Church Norton and 1 at Beachy Head. Later in the month singles were recorded at East Pallant, Littlehampton GC and in Stanmer Park. In May singles were recorded at Church Norton and Charleston Reedbed while 5 were recorded at Beachy Head in May, including the last migrant on 16th.

Returning birds were seen at Beachy Head on 27 and 30 July and at Gossops Green on 1 Aug. During 6-9 Aug. 1 was recorded at Beachy Head, 3 at Climping and 1 at Church Norton with none then seen until singles were found at Beachy Head on 15 and 20 Aug. Most, during a poor autumn, were recorded between 22 Aug. and 9 Sept., mainly from along the coast. Records included 2 at Rye Hbr and 2 at Plumpton on 23 Aug., 7 at Beachy Head on 30th, 2 at Church Norton on 1 Sept., 2 at Hove on 7th and 2 at Plumpton on 9th. None were then seen until 20 Sept. when 2 were at Church Norton, while 2 were recorded at Plumpton on 23rd and 25th. The last of the year was at Beachy Head on 27 Sept., a very early departure and the first year since 1974 that none remained into October.

417. **BEARDED TIT** (*Parus biarmicus*):—The approximate monthly totals were as follows:

No. of sites	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
No. of birds	2	3	2	2	2	2	3	2	1	4	2	1
	17	14	8	3	4	6	9	2	4	49	31	25

At Church Norton up to 5 were recorded in Jan. and there were numerous sightings of a pair from 12 Mar. to late July. The presence of up to 4 birds from 13 June and juveniles in late July points strongly to successful breeding at this locality. Up to 5 remained at this site until 30 Oct. but there were no reports for Nov-Dec.

Elsewhere, there were 4 at another site in the W of the county on 1 July but there was no evidence of breeding. In the E 2 were recorded at a traditional locality on 14 May but they too did not breed. At this site there were up to 12 in Jan., 10 in Feb., 6 in Mar., 40 in Oct., 25 in Nov. and 25 in Dec.

Away from these principal localities, there were 2 at Arundel WFT on 3 Feb. and 1 on 13 Oct., a juv. at Littlehampton West Beach on 7 July, 3 at Pett Level on 11 Oct. and up to 6 at Rye Hbr on 7-8 Nov.

418. **LONG-TAILED TIT** (*Aegithales caudatus*):—Widely reported throughout the county with a maximum flock size of 32 and a mean of 12. Birds were noted using garden feeders, including peanut holders, at 3 sites during the winter months. Counts of breeding birds in defined areas are shown on page 46.

An individual resembling the white-headed continental race was trapped at Ashcombe Bottom on 9 May (RL).

419. **MARSH TIT** (*Parus palustris*):—Reported from 26 localities at either end of the year with a maximum of 9 together at Arundel on 24 July.

In the breeding season, the species was recorded at 5 further localities. Nest-box usage was reported at 2 sites, but only one pair was successful, rearing 7 young. Counts of breeding birds in defined areas are shown on page 46.

Birds visiting garden feeders were reported from 5 sites in the winter months.

420. **WILLOW TIT** (*P. montanus*):—In the early months reported mainly as singles or pairs from 12 localities, with a maximum of 5 at Ashcombe Bottom on 4 Apr.

During the breeding season, the species was recorded at a further 12 sites with counts of 2 pairs on 60 ha at West Chiltington and 3 pairs in 5 km at Eartham.

In autumn and winter there were reports from a further 8 localities, mostly as singles or pairs.

422. **COAL TIT** (*P. ater*):—Early in the year a flock of 12 was seen at Tortington but only singles or pairs were reported elsewhere.

Few were reported in spring and records from nest-box schemes indicated a decrease in the number of breeding pairs, although several second broods were raised.

In autumn there were 72 at Old Lodge on 25 Oct., 30+ at River's Wood on 28 Nov. and 55 in 7 km between Greatham and Wiggonholt on 3 Dec.

423. **BLUE TIT** (*P. caeruleus*):—Few reports were received of this abundant species.

Records from nest-box schemes indicated a 25% increase in the number of fledged juveniles compared with 1986. This was most likely due to a 12 day earlier commencement of egg-laying leading to larger clutch sizes and also to mild seasonal weather, ensuring good brood survival. Counts of breeding birds in defined areas are shown on page 46.

In late summer high numbers of juveniles were reported from Ashcombe Bottom. The autumn maxima were 130 at Old Lodge on 13 Sept. and 150 at Moulseccomb Wild Park on 24 Oct.

424. **GREAT TIT** (*P. major*):—Nest-box schemes indicated an increase of 30-40% in fledged young compared with 1986 (cf. Blue Tit). Counts of breeding birds in defined areas are shown on page 46.

In autumn and winter, especially after the October storm, large flocks were noted feeding on the exceptionally large beech mast crop that had been blown down. This may have far-reaching consequences for the species' survival rate in future winters.

Melanistic individuals were reported early in the year from St Leonards and Hurstpierpoint, the latter reappearing in Dec.

425. **NUTHATCH** (*Sitta europaea*):—Breeding season reports were of 5 pairs in 60 ha at West Chiltington and 7-10 pairs along 8 km of the Bluebell Railway. Single birds at Rye Hbr on 20 Jan. and at Littlehampton West Beach on 6 Aug. were unusual.

427. **TRECREPER** (*Certhia familiaris*):—Widely reported throughout the year with a number of sightings from coastal areas. Counts of breeding birds in defined areas are shown on page 46. Nests were found in 2 unusual sites, the first between a pile of bricks and a woodshed and the second between the corrugated iron sheets of a farm shed. The latter may not be so unusual as it has been in annual use since 1960.

Many observers commented on an increase in sightings after the severe gale in Oct. Single birds trapped at Cold Combes on 25 Oct. and at Ashcombe Bottom on 6 Nov. were the first and second caught at these sites since 1974.

429. **PENDULINE TIT** (*Remiz pendulinus*):—An adult was recorded at Pett Level on 4 Oct. (JMB, JVB) and 3 (2 adults and a first-winter) nearby on 26-27 Oct. The precise location of the latter birds and the names of the observers involved have been withheld at their request. These are the first county records and have been accepted by *British Birds*. Although not recorded in Britain until 1966, the species has occurred with increasing frequency in recent years. The above records bring the total for Britain and Ireland to at least 16, and more may confidently be predicted if its current range expansion on the Continent continues.

430. **GOLDEN ORIOLE** (*Oriolus oriolus*):—Four were recorded during the spring as follows: a female at Icklesham on 27 Apr. (SJRR) and males at Whitbread Hollow on 2 May (RJF, MK, JWK *et al.*), Herstmonceux Castle on 29 May (RS) and St Leonards on 18 June (KMJ), the latter a rather unusual date for a migrant. Only in 1984 have more been recorded, the 12 in that year being exceptional.

432. **RED-BACKED SHRIKE** (*Lanius collurio*):—A male singing in Ashdown Forest on 21 June could not be refound subsequently (BP, ASW *et al.*). In the autumn well-watched individuals were present at Selsey Bill from 19-22 Sept. (mo) and at Pett Level from 16-25 Oct. (BHF, DWF *et al.*). It is a sad state of affairs when three records represent an average showing.

434. **GREAT GREY SHRIKE** (*L. excubitor*):—1986:—One at Newhaven Tidemills on 17 Oct. (DPD) brings the year's total to two.

1987:—An, at times, elusive individual was seen by many at the Hollies, Ashdown Forest between 8 Feb. and 9 Apr. (PID, BMM, DCM *et al.*). In the autumn singles were present at Paghham Hbr on 3-4 Oct. (BJ, CMJ *et al.*) and at Beachy Head on 1 Nov. (DC, JFC). Presumably the same individual returned to winter at the Hollies from 14 Nov., but was not recorded after 26 Dec. (AH, RH, SBR). A slight increase over recent years.

435. **WOODCHAT SHRIKE** (*L. senator*):—A juvenile was present at Paghham Hbr on 14-15 Aug. (BJ, CMJ *et al.*). This record has been accepted by *British Birds* and is the first since one in 1983 which was also found by the above observers. Twenty-nine have now been recorded in the county, 12 since 1967.

436. **JAY** (*Garrulus glandarius*):—Breeding season counts from defined areas are shown on page 46. Presumed migrants were 1 at Beachy Head on 23 Apr. and 2 on 6 May, 1 at Thorney on 27 Apr., 2 at Kingston on 29 Apr. and 1 at Rye Hbr on 11 Oct.

437. **MAGPIE** (*Pica pica*):—The maximum count at the Moulseccomb roost was 66 on 24 Oct. (cf. 102 in 1986). The only other notable concentrations reported were 59 at Whitbread Hollow on 14 Oct., 30 at Lynchmere on 23 Jan. and up to 95 at Shoreham sanctuary in Nov. Counts of breeding birds in defined areas are shown on page 46.

438. **JACKDAW** (*Corvus monedula*):—The only notable concentrations reported were 800 SSW over Lavington Common at dusk on 16 Mar., up to 2500 at the regular roost at West Chiltington in Nov-Dec. and 500 on maize fields at Icklesham in Nov-Dec. Eggs were laid in 10 nest-boxes at Horsted Keynes and an average of 2.4 young were raised from each of the 5 successful clutches.

441. **ROOK** (*C. frugilegus*):—There were 2000 at the West Chiltington roost in Dec. and 400 feeding on maize fields at Icklesham in Nov-Dec.

442. **CARRION CROW** (*C. corone*):—The largest concentrations reported were up to 73 at Worthing and 54 at Goring.

442b. **HOODED CROW** (*C.c. cornix*):—One at Beachy Head on 11 Oct. (DC, JFC) was the only record.

443. **RAVEN** (*C. corax*):—One at Combe Haven on 24 Oct. (KMJ, SCR). The possibility of an escape or a deliberate release from captivity cannot be entirely eliminated.

444. **STARLING** (*Sturnus vulgaris*):—Roost counts were of 10000 at Seaford in Jan. and Dec., 8000 at Pevensey in Mar., up to 10000 at Rye Hbr in June-Nov. and 5000 at Thorney in Sept. The regular roost site at The Steyne, Brighton was destroyed by the severe gale of 15 Oct. which blew down many of the trees. Although some birds were reportedly killed during the storm, 8020 were counted flying in to the remains of the roost on 23 Oct.

446. **HOUSE SPARROW** (*Passer domesticus*):—The only significant record received was 300 at Newhaven Tidemills on 3 Aug.

448. **TREE SPARROW** (*P. montanus*):—During the early part of the year flocks of 10 or more were reported from 7 localities in Jan., 5 in Feb., 6 in Mar. and 3 in Apr. The largest numbers recorded were at Brooklands where up to 100 were present in Jan. and at Gatwick where there were 80 in Jan., 60 in Mar. and 15 in Apr.

Breeding season reports were of 5 pairs on Hooe Level, 3 pairs at Climping, 3 pairs in nest-boxes at West Chiltington and 1 pair at Seaford. Nesting also occurred at Rye Hbr but the number of pairs was not recorded.

A flock of 185 at Gatwick on 23 Aug. was the largest ever recorded at this locality. Autumn passage was very light with just 12 W at Beachy Head on 20 Sept. and 7 N from the sea at Climping on 22nd. Flocks of 10 or more were reported from 2 localities in Oct., 1 in Nov. and 3 in Dec. The largest numbers recorded were at Rye Hbr where 25 were present in Oct. and 40 in Nov-Dec. and at Ashcombe Bottom and Ripe where there were 40 in Dec.

451. **CHAFFINCH** (*Fringilla coelebs*).—The totals recorded in Jan., Feb. and Mar. were 184, 408 and 154 from 3, 7 and 4 localities respectively. The largest flock noted was only 120 at East Dean in Feb.

Breeding season counts from defined areas are given on page 46.

The Oct., Nov. and Dec. totals were 200, 50 and 400 in 1, 1 and 5 flocks respectively. The peak counts were 200 at Hollingbury Woods and Ifield in Oct. and Dec. respectively.

452. **BRAMBLING** (*F. montifringilla*).—The approximate monthly totals (excluding visible passage) were:

No. of sites	Jan.	Feb.	Mar.	Apr.	Oct.	Nov.	Dec.
No. of birds	18	9	7	8	5	2	1
	236	119	12	11	8	3	1

The severe weather in mid-Jan. produced a large influx with flocks of up to 100 at Brooklands, 56 at Climping and 30 at Rye. There were 90 at Icklesham on 19 Feb. The species was reported feeding in 6 gardens in Jan., 3 in Feb., 2 in Mar. and 3 in Apr.

The first recorded in autumn was 1 at Littleington on 3 Oct. There were 24 W at Beachy Head on 22 Oct., 1 SW at Bewl Water on 25 Oct. and 3 W at Climping on 8 Nov.

453. **SERIN** (*Serinus serinus*).—1985.—One was seen at St Leonards on 2 Oct. (KMJ).

1987.—A very good spring with 8 recorded in May, at Selsey on 4th (BJ, CMJ), 10th (OM), 12th (TJE) and 24-25th (CRJ, RK *et al.*) and at Beachy Head on 22nd (RHC), 23rd (DC, JFC *et al.*), 25th (DC, JFC *et al.*) and 26th (RHC, RDME). In June singles were reported from Hodcombe, Beachy Head on 20th and 24th (RHC). The best showing since 1972.

455. **GREENFINCH** (*Carduelis chloris*).—The totals recorded in Jan., Feb. and Mar. were 777, 239 and 82 from 8, 4 and 4 localities respectively. The peak count was at Rye Hbr where 400 were present in Jan. decreasing to 90 by 20 Feb.

Counts of breeding birds in defined areas are given on page 46.

At Rye Hbr numbers increased from 200 in Sept. to 300 in Oct. up until 16th when the flock dispersed. The only other notable concentration in the latter part of the year was 50 at Thorney on 11 Oct.

456. **GOLDFINCH** (*C. carduelis*).—The totals recorded in Jan., Feb. and Mar. were 69, 114 and 297 from 6, 4 and 9 localities respectively. Spring passage was again very light and few significant breeding season reports were received.

The Sept., Oct., Nov. and Dec. totals (excluding visible passage) were 195, 326, 134 and 107 from 6, 5, 4 and 5 localities respectively. There were 1500 W and 1000 W at Beachy Head on 11 and 22 Oct. respectively and 200 E at Climping on 5 Nov.

457. **SISKIN** (*C. spinus*).—A very poor year. The approximate monthly totals (excluding visible passage) were:

No. of sites	Jan.	Feb.	Mar.	Apr.	May	Sept.	Oct.	Nov.	Dec.
No. of birds	9	14	11	4	2	3	5	8	7
	69	75	103	21	2	17	83	190	184

The only large flocks reported during the early months were 30 at Gossops Green in Jan. and 40 at Horsham in Mar.

Although single males were recorded at Verdley and Wakehurst Place on 23 May there was again no evidence of confirmed breeding.

The first autumn migrants were 4-5 at Arundel on 5 Sept. but visible passage after this date was very light with just a further 16 reported in Sept., 45 in Oct. and 9 in Nov. The only large feeding flocks in Nov-Dec. were 50 at Bewbush, Horsted Keynes and Midhurst.

The species was reported feeding on peanuts in 9 gardens in Jan-Apr. but none in Sept-Dec.

458. **LINNET** (*C. cannabina*).—The totals recorded in Jan., Feb. and Mar. were 650, 150 and 100 at 4, 2 and 1 localities respectively. The largest flock reported was 300 at Brooklands on 17-19 Jan. which then declined to 100 on 24th and 80 on 28th. There was little evidence of spring passage and the peak movement at Worthing was only 32 E on 28 Apr.

Counts of breeding birds in defined areas are given on page 46. In addition there were 32 pairs on Chailey Common.

The Aug. and Sept. totals of 260 and 513 respectively included 200 at Birling Gap on 29 Aug. and 300 at Icklesham on 8 Sept. In Oct. up to 1000 were recorded at Beachy Head and 700 at Icklesham. There were 2000 W at the former locality in 6 hours on 11 Oct. Few records were received for Nov-Dec. and the only flocks reported were 60 at The Mens on 8 Nov. and 25 at Stedham in Dec.

459. **TWITE** (*C. flavirostris*).—At Pagharn Hbr up to 31 were present in Jan., 22 in Feb., 12 on 3 Mar., 3 on 14 Mar. and 2 on 11 Apr. Elsewhere there were reports from 6 further localities as follows: R. Adur, up to 5 from 16 Jan. to 13 Feb.; R. Cuckmere, up to 5 from 17 Jan. to 7 Feb.; Rye Hbr, 17 on 17 Jan. and 12 on 15 Feb.; Newhaven Tidemills, 7 on 20 Jan.; Brooklands, 1 on 18 and 21 Jan. and Climping, 6 on 7 Feb. and 2 on 16 Mar.

In the latter half of the year there were 4 at Sidlesham Ferry from 5-24 Nov., 11 at Thorney Island on 22 Nov., singles at Pagharn Lagoon and Selsey West Fields on 24 and 27 Nov., up to 5 in the Lower Cuckmere from 28 Nov. to 31 Dec. and 1 at East Head on 21 Dec. The absence of autumn records from the Rye area was unprecedented.

460. **REDPOLL** (*C. flammea*).—Numbers were very low in the early part of the year with only 66 reported in Jan., 89 in Feb. and 33 in Mar. Spring migrants totalled only 7, of which 3 were at Beachy Head on 16 May.

During the breeding season 32 pairs/singing males were recorded.

Autumn passage was slightly better with 203 being noted in Oct. and 230 in Nov. A further 59 birds were present in Dec. Surely there are more than this in the county?

463. **CROSSBILL** (*Loxia curvirostra*).—During the early part of the year there were 10+ at West Lavington on 3 Jan., up to 30 at Easebourne from 18 Jan. to late Mar. and 2 at Wakehurst Place on 9 Mar. A single male was recorded at Lavington Common on 20 Apr.

In July there were 5 SW over Cissbury Ring on 12th and a male at Church Norton on 23rd. One at Beachy Head on 4 Aug. flew S out to sea. On 30 Nov. there were 4 at Wakehurst Place and on 11 Dec. a single flew over Arundel WFT.

467. **SCARLET ROSEFINCH** (*Carpodacus erythrinus*).—1986.—One was seen briefly at Beachy Head on 11 Oct. (DC, JFC).

1987.—A singing male was reported from Hodcombe, Beachy Head on 29 May (RHC). This is the second spring record for the county, the first being at the same locality 4 days later in 1983.

469. **BULLFINCH** (*Pyrrhula pyrrhula*).—Counts of breeding birds in defined areas are given on page 46. The only notable concentrations reported outside the breeding season were 24 at Newtimber Hill on 27 Sept. and 20 at Beachy Head on 5 Nov.

470. **HAWFINCH** (*Coccothraustes coccothraustes*).—Very few were reported, the monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2	2	2	2	2	2	2	2	2	2	2	13

Singles at Christ's Hospital and Pevensy Levels on 17 Jan. were probably associated with the cold weather at that time. Two were seen in Parham Woods on 29 Mar. and 2 at Wakehurst on 24 July. In Sept. singles were seen at Slinfold on 16th and trapped at Ashcombe Bottom on 27th. December produced most records: 7 over Ifield Church on 5th, 1 in Worthing on 7th and a maximum of 5 at storm-damaged Wakehurst Place on 10th.

493. **LAPLAND BUNTING** (*Calcaricus lapponicus*).—1986.—Singles were seen at St Leonards on 9 Mar. (KMJ), Langney Point on 20 Sept. (DC, JFC) while 1-2 were present at St Leonards between 29 Sept. and 10 Oct. (KMJ).

1987.—The severe weather in mid-Jan. brought the largest recorded flock into the county since 1956. Fifteen were found on Hooe Level, Pevensy on 17 Jan. (BDJ, PJ, MK) with a mixed flock of other buntings. Careful observation revealed 19 on 18th and at least 28 on 19th (RJJ). Twenty-five were still present on 24th but only 6 on 26th and just 2 on 2 Feb. Elsewhere, 1 was seen at Rye Hbr on 15 Jan., with 2 on 17th and 3 on 19th (BJY *et al.*) while

1 was present at Littlehampton West Beach from 18-20th (R.J.L.K., PAR) and 1 at Thorney on 19-20 Jan. (CBC).

In the autumn 1 was reported from Beachy Head on 15 Sept. and 2 flew over observers watching the Little Bunting (see below) at Litlington on 4 Oct. (MEN, AQ). Further singles were reported from Beachy Head on 1-2 Nov. (RHC), Thorney on 21 Nov. (M.J.W.H., K.W.M.), Beachy Head on 3 and 22 Dec. (RHC), Cuckmere Haven on 5 Dec. (W.J.M.S.), Rye Hbr on 18 Dec. (B.J.Y.) and finally at Langney Point on 25 Dec. (R.J.F.).

494. **SNOW BUNTING** (*Plectrophenax nivalis*):—Following the onset of the severe weather 1 was seen at Newhaven on 17 Jan., with 2 others there on 20th and 1 at Pagham Lagoon on 24th. One at Church Norton on 17 Mar. was the only other record during the first part of the year.

Autumn records were widespread, at least 3 being seen in Oct., 17 in Nov. and 4 in Dec., a welcome increase on recent years. First of the autumn was 1 at Climping on 9 Oct. followed by singles at Church Norton on 19th and St Leonards on 28th. In Nov. singles were seen at St Leonards on 2nd, East Head on 7th, Cooden Beach on 8th, with 2 at Galley Hill on 11th, 3 at Thorney on 21st and 8 at Langney Point on 22-23rd. One was flushed from a field on Chantry Hill on 29 Nov. with singles at Littlehampton West Beach from 20-26 Dec., at Langney Point on 27th and finally 2 at Firl Beacon on 29 Dec.

496. **YELLOWHAMMER** (*Emberiza cirrinella*):—The totals recorded in Jan., Feb. and Mar. were 280, 321 and 30 from 8, 4 and 1 localities respectively. The largest flocks noted were 100 at Newtimber in Jan. and 140 at Washington in Feb.

Breeding season counts from defined areas are given on page 46. In addition there were 39 pairs at Chailey Common and 10-20 pairs along 8 km of the Bluebell Railway.

The only flocks reported in the latter part of the year were 50 and 40 at West Chiltington on 12 Oct. and 4 Dec. respectively.

497. **CIRL BUNTING** (*E. cirlus*):—A male was recorded at Church Norton on 11 Oct. (P.J.K.). The first record since 1983 of a species which bred in Sussex as recently as 1982.

499. **ORTOLAN BUNTING** (*E. hortulana*):—One flew S over Combe Haven on 14 Aug. (K.M.J.). This is about the 37th to be recorded in the county, the first E of Eastbourne and the earliest in autumn by a day.

503. **LITTLE BUNTING** (*E. pusilla*):—One trapped at Litlington on 4 Oct. (DAP, TWP *et al.*) has been accepted by *British Birds*, is the fourth county record and the first since 1964. This superb species is surely overlooked in the county, the lack of winter records being particularly surprising.

506. **REED BUNTING** (*E. schoeniclus*):—In mid-Jan. there were reports of 60 on Pevensey Levels, 30 at Rye Hbr and 25 at Brooklands. A number of gardens were visited, with a maximum of 19 at Upper Beeding on 1 Feb. In a Horsham garden there were 10 throughout Apr., 2 remaining until 6 May.

A breeding survey of Pevensey Levels revealed 219 territories whilst at Rye Hbr there were at least 24 pairs.

In autumn there was a flock of 30+ at Beachy Head on 26 Sept. whilst at Nutley, Ashdown Forest there were 20 on 24 Oct., increasing to over 50 on 21 Dec.

510. **CORN BUNTING** (*Miliaria calandra*):—In Jan. there were 150 on Beeding Brooks on 11th whilst at Chyngton Farm, Cuckmere numbers peaked at 59 on 31st. At Rye Hbr over 100 were present round cattle feeders in Jan-Feb. and there were 80+ on 3 Mar. Other smaller flocks recorded included 26 in the Cuckmere on 12 Apr. and 17 feeding in sea purslane at this locality on 8 May.

Patchy breeding reports totalled about 50 singing males on the Downs, 7 at Rye Hbr, 6 at West Worthing, 5 at Thorney Island and 2 at Littlehampton.

On 15 Aug. there were 40 at Shoreham Sanctuary whilst at Chyngton Farm 10-15 were present from Aug. to Dec.

The largest roosts reported were 60 at Pagham Hbr in Feb. and Dec., 30 at Thorney Island in Nov-Dec. and 60 at Cold Combes on 5 Dec. where single figures are more usual.

RINGING IN SUSSEX IN 1987

by R. Leverton

Key to symbols and terms

	Age	Manner of recovery
1	Pullus (nestling or chick not yet flying).	x Found dead or dying.
3	Definitely hatched in current calendar year.	+ Shot or killed by man.
4	Hatched before current calendar year, but exact age unknown.	0 Trapped alive and not released.
5	Definitely hatched last calendar year.	v Controlled: caught and released by a ringer elsewhere.
6	Hatched before last calendar year, but exact age unknown.	wv Colour rings read in the field.
J	Still in juvenile plumage.	r Retrapped at same site.

♂ male ♀ female

Details were received of 28,592 birds of 120 species ringed in Sussex in 1987. Both these totals were new records, largely due to a very successful year by the recently formed Rye Bay group, whose list of 8,396 birds of 95 species contained 12 different waders, including Green and Wood Sandpipers. Although in a good autumn passage nearly 10,000 warblers were netted, only single Icterine and Melodious were of the scarcer species. A bird seldom caught in Sussex was a Hawfinch which turned up on the final round of a very quiet morning at Ashcombe. The ringer concerned, curious about the 100 lb of pressure reputedly exerted by that grotesque bill, and not having a cherry stone handy, foolishly offered the end of his little finger instead. Potentially rarest of all was a flycatcher ringed at Beachy Head which showed many of the characters of Semi-collared; numerous photographs were taken and if the relevant experts are ever prepared to commit themselves this could be a first for Britain. But there was no doubt about the Little Bunting caught in the Cuckmere valley, only the fourth Sussex record.

After three winters in a row which contained spells of severe weather, ringing totals suggested that populations of some of the more vulnerable passerines were very low, while others seemed strangely unaffected. Those well below normal included Pied and Grey Wagtails, Song Thrush, Long-tailed Tit and Coal Tit, yet Wren and Treecreeper totals were very high. Goldcrests increased almost ninefold after being decimated the previous year (1985: 284; 1986: 28; 1987: 240). There is no doubt that much more needs to be learnt about the effect of cold weather on bird populations. This is far from straightforward, and species badly hit in some winters seem quite unaffected by others in which the weather appears (to us) to be equally adverse.

Although administrative problems slowed down the flow of recoveries, and again a few ringers did not cooperate, those which follow were selected from over 200 received. Non-passerines provided some of the most interesting. As is well known, up to half the world population of the dark-bellied Brent Goose winters in south-east England including Sussex (Lack, 1986). Less widely known is that when our flocks leave Pagham and Chichester Harbours in the second half of March they go, not direct to their Siberian breeding grounds, but to spend another couple of months along the coasts of The Netherlands, Denmark and Germany, where two seen at Pagham had been colour-ringed:

Brent Goose 6♂ & 6♀ 04.05.78 Suderog, N. Frisian Isles, W. Germany
vw 25.11.87 Pagham Harbour (PB) 730km NE

These geese were at least eleven years old, and similar ages are now regularly being recorded for Canada Geese ringed in W. Sussex by Dr. A. B. Watson's team. As only a minority of the population breeds each year, and the success rate is often poor, the continued increase of this species in the county (Hughes and Watson, 1986) is partly due to such longevity in spite of shooting by wildfowling. Although

a 12-year-old Canada Goose must make tough eating, at least it is a decent-sized meal. Not so a Golden Plover: I suspect that few people are aware it is still legal to shoot them (though who would want to?). Pevensey is a regular wintering site, and one shot there had been ringed on the Continent earlier that winter:

Golden Plover
4 + 03.11.85 Slijoe, West-Vlaanderen, Belgium
18.01.86 Pevensey 179km W

This is the first movement between Belgium and Britain known to the ringing scheme, doubtless only because so few are ringed.

The Society's tern rafts at Chichester Gravel Pits are highly successful — Common Terns use them every year and succeed in fledging viable young which themselves may return to breed. This can be inferred from the finding on a raft in 1987 of a dead tern which had been ringed there as a chick six years earlier. Other seabird recoveries were dominated as usual by the 74 foreign movements of Black-headed Gulls generated by the past and present activities of the Gull Study Group. These followed the normal pattern (Newnham, 1986) but for one:

Black-headed Gull
5 ♂ 21.01.78 Oberkirch, Luzern, Switzerland
v 18.02.87 Sompting (GSG) 740km NNW

Although Switzerland seems an unlikely location for a gull, over 3000 pairs of this species breed there and others winter.

Small dark falcons dashing low over the convex slopes of the Downs in a poor winter light, over the brow of a hill or behind a belt of gorse before cold hands can focus the binoculars: Merlins give far more probable than confirmed sightings to the honest observer. Though sad that it should have been found dead, one ringed as a nestling gave a clue to a possible origin of Sussex wintering birds:

Merlin
1 ♀ 03.07.86 Migneint, Gwynedd, N. Wales
x 22.11.86 Brighton 337km SE

As for the passerine recoveries, it was basically a year of consolidation, and none the less valuable for that. The series of recoveries which gives solid evidence for an already-suspected pattern is just as important as the spectacular 'first'. Most of those which follow confirm and reinforce existing knowledge rather than break new ground.

The 1985 Ringing Report suggested that Sussex receives Pied Wagtails in autumn from northern England and Scotland, but not from closer afield. The Winter Atlas (Lack, 1986) compared with the Breeding Atlas (Sharrock, 1976) shows how these more migratory populations largely quit the north, and two more recoveries confirm that some come to Sussex:

Pied Wagtail
3 11.10.84 Shoreham by Sea (ABW)
x 05.04.87 Denholm, W. Yorks. 339km NNW
Pied Wagtail
3 12.10.86 Shoreham by Sea (ABW)
x 29.04.87 Airdrie, Strathclyde, Scotland 613km NNW

Although more ringing recoveries of Blackbirds (over 1000) connect Britain with Norway than with any other country, Sussex is too far south to receive Norwegian birds except perhaps in hard winters. This male spent at least a fortnight feeding round the filter beds of a small sewage farm in severe weather:

Blackbird
5 ♂ 20.01.85 Friars Gate, Crowborough (M&LL)
r 03.02.85 Friars Gate
x 07.05.87 Hengsrod, Vestfold, Norway 1127km NE

The only similar instance I can trace concerns a Blackbird ringed at Shoreham in December 1961 and found in Norway in summer 1963, though there have been several to or from southern Sweden. The autumn passage of Song Thrushes through Sussex, especially on the Downs, has been documented in earlier reports and by Leverton (1986), who thought that birds of Continental origin rarely

appeared before mid-October. That some do occur earlier is shown by the next recovery:

Song Thrush
3 26.09.86 Standean, Brighton (RH)
x 07.04.87 Odense, Fyn, Denmark 863km NE

As usual most of the warbler controls and recoveries concerned movements within Britain and Europe, but four were found in Africa. The furthest south was a Reed Warbler, rescued alive and released after falling into a half-full watering-can:

Reed Warbler
3 02.09.84 Litlington (Cuckmere RG)
v 23.05.87 Rufisque, Dakar, Senegal 4314km SSW

This was a very late date for a Reed Warbler still to be south of the Sahara, and one suspects it was an ailing bird. The solicitude shown to it contrasts with the fate of three other warblers reported from North Africa:

Lesser Whitethroat
3 31.07.83 Beachy Head (BHRS)
+ 20.09.86 Alexandria, Egypt 3278km SE

Only the leg and ring were found, discarded in a bird market. A Blackcap ringed at the same site not surprisingly died three days after being caught and caged:

Blackcap
3 ♀ 20.09.86 Beachy Head (BHRS)
0 10.04.87 Torodont, Morocco 2377km SSW

while a Willow Warbler became, posthumously, only the fourth with a BTO ring to be found in Algeria:

Willow Warbler
3 07.08.84 Beachy Head (BHRS)
+ 17.03.86 Bejaia, Constantine, Algeria 1601km SSE

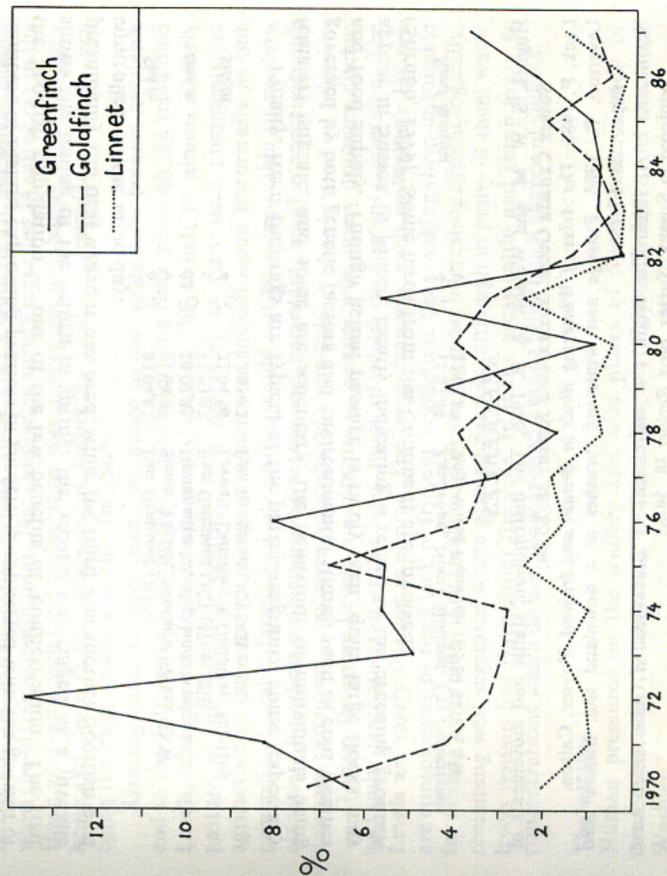


Fig. 1. Greenfinches, Goldfinches and Linnets as a percentage of the total annual catch averaged from 3 downland sites, 1970-1987. Sites are Whitbread Hollow (Beachy Head), Ashcombe (since 1974) and Shoreham Sanctuary. Total annual catch excludes tape-lured hirundines and Redpolls.

Yet this type of mortality has less effect on populations than does insidious habitat change. Nearer home, many observers have long suspected a gradual decline in the numbers of seed-eating birds on the Downs — for example, from the downland near Worthing, 'gone are the large winter flocks of Greenfinches, Linnets, Tree Sparrows and even Chaffinches' (J. A. Newnham, pers. comm.). While these flocks have always been sporadic, exploiting a particularly good food source and then moving on, the ringing totals for three of the common finches at consistently worked downland sites show a downward trend, though with some recovery in 1987 (Fig. 1). Several factors may be involved, including habitat change at the ringing sites themselves as scrub increases, but more widespread observations suggest that the trend is a general one, and probably connected with changes in agriculture. Most downland slopes have been ploughed, stubble is rarely left for more than a few days, and the increased efficiency of herbicides has reduced weeds in both crops and pastures.

The Weald may have been less affected. All the following recoveries stemmed from ringing in the East Grinstead area. Immigrant Chaffinches seem more plentiful here, even occurring in gardens:

Chaffinch 5 ♂ 31.01.87 East Grinstead (RFS)
x 21.07.87 Sjælland, Denmark 915km NE

Several movements of Siskins between north Sussex and Scotland have been given in previous reports. Three more are presented to show the strength of evidence being built up that, although some are from the Continent, the great increase in numbers of Siskins exploiting peanuts in gardens is connected with the growth of the Scottish population — one of the few benefits of 'confederation'. The first shows the timing of the return in spring, the second was ringed as a juvenile presumably still near where it was bred, while the third was another Scottish bird controlled on the same day:

Siskin 6 ♀ 02.04.87 East Grinstead (RFS)
y 11.04.87 Scone, Tayside, Scotland 629km NNW
Siskin 3J ♂ 20.07.85 Drumnadrochit, Highland, Scotland
y 12.03.87 East Grinstead (JC) 747km SSE
Siskin 4 ♂ 22.04.86 Leswalt, Dumfriesshire & Galloway, Scotland
v 12.03.87 East Grinstead (JC) 542km SE

Finally, Reed Buntings are typical of the partial migrants; some (especially females) migrate, and some are sedentary, the behaviour of individuals being governed by both genetic factors and environmental stimuli such as cold weather and food supply. Though actual passage is rarely seen, quite large flocks may appear in Sussex in March, clearly indicating a return to the breeding grounds (Shrubbs, 1979). Some birds from the Continent are involved:

Reed Bunting 4 ♀ 15.07.84 Zandvoort, Noord-Holland, The Netherlands
v 22.03.87 Weir Wood Reservoir (RFS) 343km SW

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THE ORNITHOLOGICAL STATUS OF PEVENSEY LEVELS

by S. P. Hitchings

INTRODUCTION

Pevensy Levels, East Sussex, is a 10,000 acre (c.4050 ha) wetland. In 1986 the Nature Conservancy Council (NCC) began a review of the area prior to re-notification as a Site of Special Scientific Interest (SSSI). This included the first full review of Pevensy Levels' wetland birds (Hitchings, 1987). The permission of NCC to use those data here is gratefully acknowledged.

HISTORY

Reclamation, farming and drainage

Pevensy was first known by its present name in a 10th century charter, at which time the Levels were saltmarsh and it is conjectured that at high tide the area was a lagoon (Dulley, 1966). The antiquity of the site is reflected in some of the modern names, notably amongst the many 'eye' suffixes. 'Eyes' are islands, from the Saxon 'ig', and this leads to a better understanding of the origins of the site: Manxey was originally Monks' Island, Horse Eye and Mounthey being literally the Horse Island and the Mountainous Island. These places would have been real islands when the marsh was still tidal. The Domesday survey recorded 34 saltworks in the Hooe area, although land reclamation was in progress well before 1200, probably being the cause of the saltworkings failure by 1230 — intertidal mudflats then being the chief resource of that industry.

Grazing seems to have been introduced as and when land became available and in the 14th century considerable arable farming took place on the reclaimed Levels, changes in lifestyles apparently causing the switch to almost entirely pasture in the mid-16th century. It is necessary to view such comments on agriculture in perspective: a regime which was looked upon historically as one primarily of arable farming or of grazing would not be comparable to modern activities. Flooding problems were severe and persistent, reliable and thorough drainage unknown — as were agricultural chemicals.

Today, Pevensy Levels is a mixture of pasture with many drainage ditches and quite large tracts of arable land, much of which is of recent conversion. The Levels are rarely flooded in winter. The large channels, such as Waller's Haven, are conspicuous by their lack of fringing vegetation, thus making them unsuitable for nesting waterbirds. The smaller dykes are the most interesting ornithologically, remaining well vegetated where grazing permits, although in many of them water levels remain low throughout the year. In many areas cattle and sheep graze at concentrations which do not allow ground-nesting birds much chance of success.

The wildlife

Human pressures on the wildlife and wild places of Sussex were already of consequence in the mid-19th century. Knox (1855) commented on the Reed Warbler:

'Was formerly of frequent occurrence on Pevensy Levels but since the clearing of the reed beds, has almost disappeared from that neighbourhood. The same cause has reduced its numbers at Amberley, and in most of its favourite haunts.'

Present-day biological records demonstrate, however, that Pevensey Levels still retain considerable scientific importance. The SSSI is an important botanical site, having a good community of characteristic marsh and water plants, including some rare species. The invertebrate life is also regarded highly, recent surveys showing the dragonfly populations to be of especial interest.

In the past the SOS has undertaken a variety of survey work which has included part of, and sometimes all, the Pevensey Levels SSSI. Unfortunately, detailed mapping is not available for many of these data and, particularly in the case of the coastal winter Wader and Wildfowl Counts conducted for the British Trust for Ornithology (BTO) and the Wildfowl Trust (WFT), difficulty exists in apportioning species to the Pevensey Levels SSSI. It is certain that these counts have included the coast and the nearby shingle and gravel pit complex of The Crumbles, so care has been taken to avoid confusion in this respect. J. P. McTear, for many years the local organiser of these counts, confirms that the Wader/Wildfowl Counts of Lapwing, Snipe, Golden Plover, and virtually all Wigeon, apply to the SSSI.

SURVEY METHODS

Surveys were conducted in the winter of 1986/87 and in the summer of 1987, with the help of experienced birdwatchers familiar with survey techniques.

The survey was organised by individual Levels, each visit being split amongst some 20 surveyors (the most which could be found). The Winter Surveys took place on three coordinated dates and times: 12 December 1986, 11 January 1987 and 8 February 1987. The Summer Surveys were to comprise two visits, one in May and one in June, which were not time and date coordinated as breeding birds exhibit strong territoriality, unlike winter flocks.

All observers were provided with A4 cards, printed on one side with a composite map of Pevensey Levels and on the other with details, instructions and a totals list of target species. A large scale detailed map of their particular section was supplied. This showed field boundaries, etc., and the locations of birds were to be plotted thereon.

A search was made of all known ornithological records, including the SOS records since their inauguration in the 1950s and the Wildfowl and Wader Counts for the past 10 years. The history of the site was examined to document the changing status of the area for wild birds.

RESULTS AND DISCUSSION

Few previous ornithological studies lent themselves to precise interpretation, although the site is popular with birdwatchers and there were many, although random, records of bird sightings. These provided an indication of the long-standing ornithological importance of the site. Overall, however, the history which emerged was incomplete. Such lack of evidence creates difficulties for conservationists required to substantiate beliefs that sites are of particular wildlife importance and worthy of protection.

Table 1 shows the total numbers of wetland birds present on the whole site during the three winter counts of 1986/87: the actual distribution was far from uniform. Table 2 shows the total numbers of wetland breeding pairs recorded on the individual Levels in the summer of 1987. These counts are put into context by the historical data.

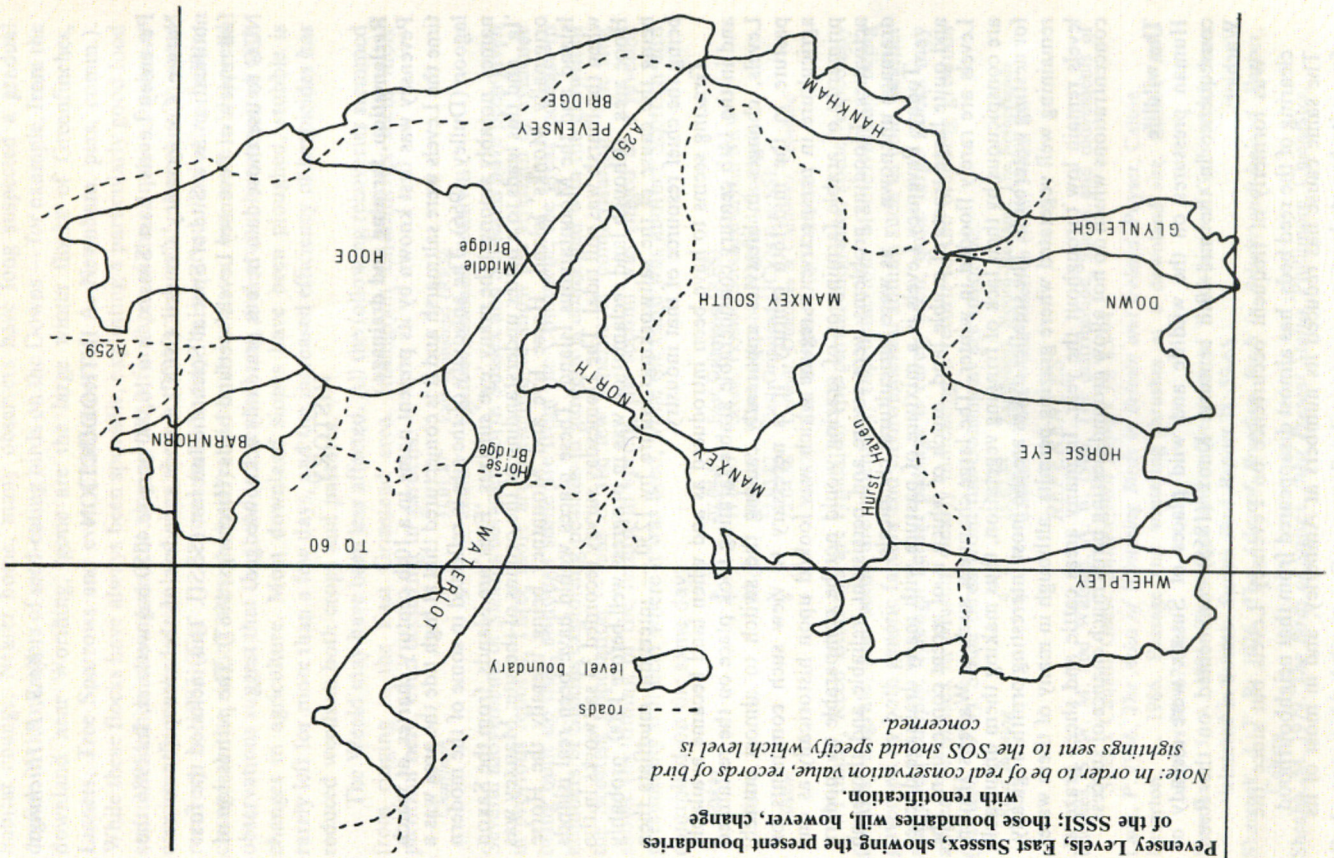


TABLE 1. NUMBERS OF BIRDS RECORDED IN EACH MONTHLY COUNT DURING WINTER 1986/87 SURVEY

Species	Dec.	Jan.	Feb.	Species	Dec.	Jan.	Feb.
Little Grebe	1	1	—	Martin	—	1	—
Cormorant	21	13	21	Water Rail	—	3	—
Grey Heron	20	7	16	Moorhen	15	12	9
Mute Swan	100	117	93	Coot	—	2	—
Pink-footed Goose	6	7	—	Ringed Plover	6	—	—
Greylag Goose	73	12	69	Golden Plover	452	—	17
Brent Goose	53	—	—	Grey Plover	—	1	—
Shelduck	—	—	—	Lapwing	3510	805	511
Wigeon	3	115	1709	Dunlin	60	—	250
Gadwall	—	—	—	Jack Snipe	1	1	—
Teal	145	189	258	Snipe	149	361	56
Mallard	42	63	128	Curlew	2	—	—
Pintail	—	—	—	Redshank	2	—	2
Shoveler	—	—	—	Green Sandpiper	2	1	9
Pochard	—	—	—	Common Sandpiper	1	—	—
Tufted Duck	—	7	4	Turnstone	25	—	3
Goldeneye	—	—	—	Kingfisher	2	2	—
Smew	—	1	3	Skylark	131	98	46
Goosander	—	1	21	Meadow Pipit	13	37	1
Hen Harrier	—	5	1	Fieldfare	134	11	213
Sparrowhawk	3	1	1	Redwing	90	14	10
Kestrel	15	14	6	Reed Bunting	10	28	33

TABLE 2. TOTALS OF WETLAND BREEDING PAIRS RECORDED ON EACH OF THE LEVELS IN SUMMER 1987

Species	Whelpley	Horse Eye	Down	Glynleigh	Hankham	Manxey South	Manxey North	Waterlot	Pevensey Bridge	Hooc	Barnhorn	Totals
Mute Swan	1	3	7	—	2	3	3	1	1	1	1	23
Canada Goose	—	—	—	—	—	2	2	—	—	—	—	4
Mallard	3	3	11	2	2	6	6	4	3	3	—	43
Tufted Duck	1	—	—	—	—	—	—	—	—	—	—	1
Moorhen	—	1	2	2	—	—	—	4	3	—	—	13
Lapwing	6	6	2	—	—	11	3	10	7	12	—	57
Snipe	—	—	—	—	—	—	1	1	1	—	—	3
Redshank	—	1	1	—	—	2	—	5	3	—	—	12
Yellow Wagtail	—	16	30	—	1	15	14	22	12	9	—	119
Sedge Warbler	7	14	20	3	—	31	11	10	12	16	—	124
Reed Warbler	18	42	85	6	11	110	34	33	29	45	—	413
Reed Bunting	11	16	36	7	14	24	28	38	26	18	1	219

Swans

Breeding

In 1976 26 pairs of Mute Swans were reported as breeding on Pevensey Levels, but few precise data are available subsequently. The 1987 survey recorded 23 pairs nesting.

Wintering

It is not possible to relate Wildfowl Count data to Pevensey Levels with certainty

but the habitat would suit winter Mute Swan flocks. The previous maximum was 160, with c.50 recorded frequently. The 1986/87 Winter Survey produced a maximum of 117 Mute Swans.

Less than 10 Bewick's Swans winter on Pevensey Levels in most years, and Whooper Swans are present only occasionally.

Geese

Wild geese are doubtless overlooked on Pevensey Levels because of the large size of the site and the infrequency of goose visits. When hard weather movements of geese occur, as they did in the winter of 1978/79, the importance of the grasslands of Pevensey Levels can be seen. Mixed flocks of up to 1100 geese were then found from early February until the middle of March.

Bean Geese have only been recorded in the past in small numbers, from 2 to 12, except in 1979 when 72 were present. Pink-footed Geese likewise are noted only in small bands of 1 to 7, except in 1963 when 60+ visited, and in 1979 when 72 were found; 7 were on Pevensey Bridge Levels in the 1986/87 survey. White-fronted Geese were more prolific, 1 to 115 being recorded in previous years, except 1979 when 1000 arrived. Greylag Geese are very infrequent, in very small parties and usually correctly considered feral. In 1979 13 probably wild birds arrived with the cold weather influx but the 6 present in the 1986/87 survey were undoubtedly feral.

Canada Geese were difficult to assess as Wildfowl Count data could have included The Crumbles gravel pits. In the winter of 1986/87 73 Canada Geese were present and the 1987 Summer Survey found 4 pairs breeding. Barnacle Geese are present occasionally, often at times distinct from grey goose arrivals. 39 were on site in 1979 and 68 in 1981.

Ducks

Breeding

Although Wigeon are not known to nest in Sussex, they occasionally summer, as did a male at Horse Eye Level in 1973 and a pair near Middle Bridge in 1982. Teal have only bred very occasionally on Pevensey Levels. The only duck species having an established breeding population on Pevensey Levels is the Mallard; in 1976 a full survey of Pevensey Levels recorded 64 pairs present. In this survey, 1987, 43 pairs were noted. Both Tufted Duck and Garganey have occasionally been recorded at Pevensey Levels as breeding birds, Tufted Duck being present on Whelpley Level during 1987.

Wintering

In general, duck counts for Pevensey are low, partly because grazing duck amongst rough pasture are notoriously difficult to see. The visibility aspect can be epitomised by the flock of 1100 Wigeon recorded during February 1987. These were concentrated in one wet depression on Down Level, being invisible until close approach was made and unsuspected by counters on adjacent levels. Additionally, almost all Wigeon recorded for the Wildfowl Counts are known to have been seen on Waller's Haven, where 800 occurred in 1984/85. The only other winters with counts over 300 were the present survey and 1979, when 1410 birds were noted in the early freeze.

The generally low numbers probably reflect the fact that Waller's Haven is a steep-sided channel offering little or no feeding to grazing duck. Flocks on Waller's Haven would use the water as a refuge and, as it is likely that disturbance-free periods predominate, the majority of Wigeon would be expected on the

grasslands. The winter Wigeon peak in the 1986/87 survey was in February when numbers rose to 1709.

SOS records for Teal are more frequent than for Wigeon. There were 250 in 1949 and scattered accounts of similar numbers through until the present day. 258 Teal were present on the site in February 1987.

Mallard, although undoubtedly the most regular winter duck, has the least recorded about it: with the inevitable exclusion of Wildfowl Count data, very little else is known. This survey recorded a maximum of 128 Mallard.

1986/87 was an exceptionally mild winter initially in Sussex, and the effect of this on wildfowl numbers can be seen by comparing early figures with those found after hard weather set in. The December survey totals of these three duck species were Wigeon 3, Teal 145 and Mallard 42. In January the situation was similar but with Wigeon rising to 115, Teal to 189 and Mallard to 63. Freezing weather had, however, a dramatic effect upon wildfowl numbers by February when Wigeon reached 1709, Teal 258 and Mallard 128.

Waders

Three breeding waders are involved: Snipe, Redshank and Lapwing. In winter, Golden Plover join the population, while Redshanks leave it for more estuarine habitats. A variety of smaller waders occur in limited numbers, most noticeable being Green Sandpiper of which 6 were associating on Barnhorn Level in February.

Golden Plover

Pevensey Levels is one of the three major Sussex sites for Golden Plover (Shrubbs, 1979): these waders are typical of wet grasslands. The Golden Plover records shown in Table 3 are significant in a national context, as in 4 out of the last 10 winters for which data are available the maxima counted exceed the level of National Importance (2000).

TABLE 3. MAXIMUM RECORDED WINTER NUMBERS OF GOLDEN PLOVER, SNIPE AND LAPWING ON PEVENSEY LEVELS, 1972/73 TO 1986/87

	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1979/80
Golden Plover.....	800	750	850	850	5300	2100	2700
Snipe.....	2000	400	650	350	5000	2300	580
Lapwing.....	15300	5000	10000	12000	15000	8500	26000
	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87
Golden Plover.....	1000	1200	1200	1025	2500	200	452
Snipe.....	1260	1000	750	600	1500	300	361
Lapwing.....	2700	6000	20000*	8000	16000	6000	4000

No data are available for winter 1978/79.
*Observer regards as minimum, 40,000 as possible maximum.

Snipe — breeding

Walpole-Bond (1938) stated that approximately 100 pairs of Snipe were breeding on each of the major Sussex levels, and from this Shrubbs (1979) estimated the total county population of the time was some 500 pairs. By 1965-67 the Sussex summer Snipe population was estimated at 100 pairs, 21 of which were found on Pevensey Levels in a survey encompassing approximately five-eighths of the site (Shrubbs, 1968). It was estimated that 25 pairs were the likely 1965 total. In 1976, R. F. Porter's full survey of Pevensey Levels showed 27 pairs breeding, but in

1980-81 this figure had apparently been reduced to 3 pairs (Mitchell, 1982), although the survey was unmapped and may have covered a lesser area. The 1981 Sussex population was 86 pairs, a decline of 14% since the mid-1960s and an apparent cumulative reduction of at least 83% in the past 50 years.

The 1987 survey showed only 3 pairs present on the whole site. Although evening visits were not made (drumming by Snipe is a good method of surveying and best in the evening), many observers noted rock-hard conditions prevailing without suitable marshy habitat for Snipe.

Snipe — wintering

Pevensey Levels are well known as a favoured wintering ground of Snipe: Table 3 summarises their status. The qualifying level for National Importance of a species is normally 1% of the British population but no figure is set for Snipe as insufficient data are available.

Snipe numbers on Pevensey Levels may well be underestimated as there are great difficulties in assessing these unobtrusive waders. In practice it is usually impossible to count wintering Snipe without flushing them field by field.

The winter surveyors observed a total of 361 Snipe in January 1987. R. D. M. Edgar, who recorded 118 Snipe on part of Down Level, commented that probably only one in four Snipe were seen. If deception of this degree occurred over the whole of Pevensey Levels, a corrected figure for January 1987 (361 in the Table) would be in the region of 1450 Snipe.

Redshank — breeding

In 1938 Walpole-Bond estimated that c.100 pairs of Redshank could be found on each of the three largest Sussex levels (one of which would have been Pevensey). Only 10 pairs were found on Pevensey in the 1965 survey, which covered approximately five-eighths of this site (Shrubbs, 1968): it was estimated in 1965 that 18 pairs were likely to be present on the whole of Pevensey Levels. In 1972, 19 pairs of Redshank were reported as breeding at Pevensey, and R. F. Porter's 1976 full survey produced 29 pairs. 9 pairs were recorded in 1980-81 (Mitchell, 1982) in a survey which may have excluded parts of the site. The 1987 Summer Survey produced 12 pairs — an 88% reduction over the past 50 years (remarkably similar to the decline in the similarly wetland-dependent Snipe) and a 59% reduction since the last full survey 11 years ago.

Breeding Redshank are dependent upon a high water table (Cramp and Simmons, 1982). The decline of the species as a breeding bird here would appear to result from the greatly intensified drainage of Pevensey Levels. The 4 pairs of Redshank breeding in close proximity on north-west Waterlot Level did so in an area where ditches were full of water in May and the ground boggy.

Lapwing — breeding

Lapwing are perhaps more sensitive to high stocking rates than site dampness. In a survey of Lapwing breeding habitat (Shrubbs, 1985), the highest nesting densities in Sussex were found on the old grasslands of the Selsey peninsula, where stocking rates were about 30% of the county average. No data from Pevensey Levels were available to be included in that survey, although in 1972 86 pairs were recorded. In the 1987 survey, a minimum of 57 pairs of Lapwing bred.

At the time of the 1984 Habitat Survey, the Sussex breeding population of Lapwing was estimated at 400-500 pairs (Prater, *in litt.*) and Lapwing are not known to have reversed their decline. Pevensey Levels must therefore hold at least 11% of the Sussex breeding population.

Lapwing — wintering

Lapwing have been well documented on Pevensey Levels through the surveys of the winter Wader Counts. The annual peak figures for Lapwing are shown in Table 3. The level of National Importance is the regular occurrence of 10,000+ birds. *The average annual maximum for Lapwing on Pevensey Levels (excluding 1978/79 for which no data are available) is 11,035 and thus the site is of National Importance for this species.*

Passerines

The passerine species commonly associated with Pevensey Levels are **Yellow Wagtail**, **Sedge Warbler**, **Reed Warbler** — all summer migrants — and **Reed Bunting**, a partial migrant.

Yellow Wagtail

The 1965-66 SOS survey extrapolated a Pevensey Levels population of c.70 pairs, which compared unfavourably with a 1949 breeding population of 100, although it was estimated that a general decline had halved Yellow Wagtail breeding numbers in the mid-1950s (Shrubbs, 1968). In 1972, however, 127 pairs were present (McTear, *in litt.*) and a further survey in 1976 found 165 pairs. In the 1980-81 SOS survey only 54 pairs were noted but coverage appears to have been only partial. *This 1987 survey found 119 pairs breeding*, which should be regarded as a minimum because of access difficulties. Yellow Wagtails were commonly found at the juncture of arable and steep, vegetated dyke banks, sometimes being more common here than in areas of pasture, presumably finding an advantage for nest protection in the absence of grazing animals.

In the most recent survey of Sussex Yellow Wagtails a county figure of 432 pairs was declared (Mitchell, 1982). If the Pevensey Levels figure of 1980-81 was only partial (as is probably the case) and a population of 100 pairs is assumed, *Pevensey Levels would appear to have held c.20% of the Sussex breeding population of this species*. There is no indication of any overall change in the status of this bird.

Sedge and Reed Warblers

Information from the present survey of Pevensey Levels was supplied for the SOS investigation into these species during 1986-87 and is discussed elsewhere in this Bird Report (Prater, 1988). The comprehensive review in that paper draws upon many of the Pevensey findings and readers are referred there for details.

Historically, little is recorded of either species on Pevensey Levels. *In 1987 124 pairs of Sedge Warblers and 413 pairs of Reed Warblers were recorded breeding on Pevensey Levels*, which represents c.15% of the county totals and makes this the most important single site for both these species in Sussex.

It is of particular concern that this excellent population of Sedge and Reed Warblers is completely dependent upon the ditch systems of Pevensey Levels retaining suitable habitat. Canalisation of major channels such as Waller's Haven has removed most of the *Phragmites* and hawthorn/bramble assemblages necessary to Sedge and Reed Warblers. Other ditch flora is already subject to slow change from the by-products of arable farming. In most cases the warblers were only common where ditch vegetation was ungrazed.

Reed Bunting — breeding

Little historical information is available for this species. Its choice of habitat in the breeding season is less exclusive than that of either Reed or Sedge Warbler but it remains a bird of wetland areas, nesting generally near ground level amongst

vegetation. In 1976 262 pairs were recorded on Pevensey Levels and *in the 1987 survey 219 pairs were located*.

Reed Bunting — wintering

Reed Buntings are partial migrants, the majority of British breeding birds moving south, with some emigrating in late autumn, whilst European immigrants arrive to winter here. Reed Buntings in winter normally occupy a slightly different habitat from that of their breeding period. Typically, the birds frequent farmlands around wetland areas (although they may also be found further afield) and forage in nearby gardens and farms (Hudson, 1918; Yarell, 1843). Thus, during the winter survey very few Reed Buntings were recorded out on the Levels of Pevensey, *33 birds being the maximum during the survey*.

SUMMARY

Pevensey Levels SSSI is an important site within Sussex for its breeding and wintering populations of wetland birds. The site is of National Importance for wintering Lapwing and holds a minimum of 11% of the Sussex breeding population. Pevensey Levels used to be one of the top Sussex sites for breeding Redshank and Snipe, but numbers on these Levels have been reduced by drainage and land-use changes in the past 50 years by 88% and 97% respectively. High numbers of wintering Snipe are recorded on the Levels and Golden Plover have reached levels of National Importance in four out of the last ten years for which data are available. In periods of hard weather the site holds large numbers of Wigeon. It is felt that both duck and waders have been under-recorded because of the difficulties of surveying this site.

Pevensey Levels have exceptional importance in Sussex for their populations of breeding wetland passerines, holding more Reed and Sedge Warblers than any other Sussex site (each forming c.15% of the Sussex total) and c.20% of the county Yellow Wagtail population.

It was noted that many of the land-use changes appeared to have taken place recently, and concern was expressed that they had affected the wetland habitat adversely by excessive drainage (causing drying out), intensive grazing (removing nesting cover) and conversion to cereal farming. A further indirect problem exists in that contamination from agricultural chemicals could affect the ditch flora and fauna adversely in the future.

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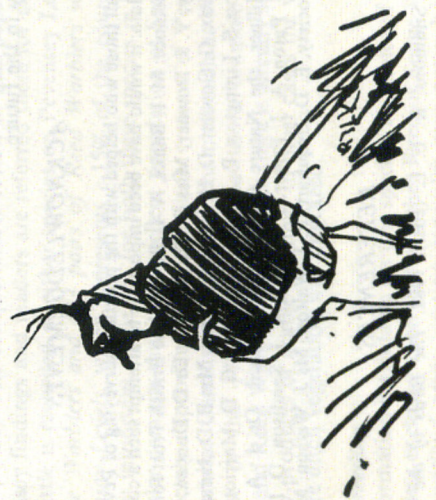
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Appendix: Common and scientific names of species discussed in the text

Mute Swan	<i>Cygnus olor</i>	Garganey	<i>A. querquedula</i>
Bewick's Swan	<i>C. bewickii</i>	Tufted Duck	<i>Aythya fuligula</i>
Whooper Swan	<i>C. cygnus</i>	Golden Plover	<i>Pluvialis aprincaria</i>
Bean Goose	<i>Anser fabalis</i>	Lapwing	<i>Vanellus vanellus</i>
Pink-footed Goose	<i>A. brachyrhynchus</i>	Snipe	<i>Gallinago gallinago</i>
White-fronted Goose	<i>A. albifrons</i>	Redshank	<i>Tringa totanus</i>
Greylag Goose	<i>A. anser</i>	Green Sandpiper	<i>T. ochropus</i>
Canada Goose	<i>Brania canadensis</i>	Yellow Wagtail	<i>Motacilla flava flavissima</i>
Barnacle Goose	<i>B. leucopsis</i>	Sedge Warbler	<i>Acrocephalus schoenobaenus</i>
Wigeon	<i>Anas penelope</i>	Reed Warbler	<i>A. scirpaceus</i>
Teal	<i>A. crecca</i>	Reed Bunting	<i>Emberiza schoeniclus</i>
Mallard	<i>A. platyrhynchos</i>		

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THE BREEDING POPULATION OF REED AND SEDGE WARBLERS IN SUSSEX

by A. J. Prater

INTRODUCTION

Few passerine birds are closely associated during the breeding season with lowland wet meadow systems and wetlands in Britain. Only four are typically found in these habitats in Sussex: they are Sedge Warbler *Acrocephalus schoenobaenus*, Reed Warbler *A. scirpaceus*, Yellow Wagtail *Motacilla flava* and Reed Bunting *Emberiza schoeniclus*. Of these the Yellow Wagtail feeds in open fields and nests on dyke banks; the other three depend on dense waterside vegetation, particularly where the Common Reed *Phragmites australis* abounds. Counts of meadow species such as Yellow Wagtail, Snipe *Gallinago gallinago* and Redshank *Tringa totanus* have been made in Sussex: the last two have shown alarming decreases during the last two decades, while numbers of the first have apparently fluctuated considerably (Mitchell, 1982). The cause of the decline of Redshank and Snipe is generally held to be changes in farming patterns and especially the concomitant improvement of drainage.

These changing factors also affect marginal dyke vegetation through, for example, inputs of agricultural chemicals to dykes and clearance of dykes to speed water run-off. In order to investigate the impact of such pressures, the Sussex Ornithological Society carried out a detailed mapping survey of breeding Reed and Sedge Warblers throughout the county in 1986 and 1987. The results were then compared with a survey in West Sussex in 1974 and 1975 by G. C. Evans (the results of which are deposited with the SOS), surveys of some sites carried out in the mid-1970s for the British Trust for Ornithology's Ornithological Sites Register, and a Common Birds Census (CBC) undertaken by the author on grazing marsh in the upper Adur Levels from 1980 to 1986.

METHODS

The survey was based on the number of territories of each species. These were mapped on a 1:10,000 base which was supplied to observers; more detailed maps were used for the special Pevensey Levels survey. At either scale almost all of the dykes are marked and thus accurate mapping was possible. In order to aid interpretation the linear reed-beds were also indicated on the maps. Observers were asked to walk alongside each dyke on the levels, wherever practicable, and to record those which were surveyed: this provided a check of the exact area covered.

Fieldwork was carried out by a team of volunteers from the SOS between 30 April and 7 July in each year, most of the information being gathered in 1986. Two visits were requested for linear habitats and small reed-beds; at least three were requested for larger reed-beds. Few large reed-beds are found in Sussex and thus the known difficulties of censusing Reed Warblers in this habitat (Bell *et al.*, 1968) did not pose a significant problem to the estimation of county populations. Linear reed-beds on the levels varied in width but were relatively narrow (less than 3-4 metres), and it was found that an observer walking along the bank past a territory was usually able to elicit a response from the birds, particularly if the technique of 'pishing' was used. This noise stimulated birds to sing or call in alarm. Most observers made two visits, although a few were able to make only one visit. The

major complex of Pevensey Levels was covered in 1987 when a comprehensive survey of all wetland species was undertaken (Hitchings, 1987). The Reed and Sedge Warbler territories in this survey were obtained by a similar methodology to the SOS survey and the detailed information was made available to the Society.

In order to determine the accuracy of a single visit to estimate population levels in the predominantly linear habitat, the results from the 7 years of the CBC on the upper Adur Levels were examined. The boundaries of all territories of Reed and Sedge Warblers were determined by the BTO using a standardised method. For each visit, normally undertaken in the morning or evening, the percentage of permanent territories set up that season where an adult (nearly always a singing male) was recorded was calculated. This was compared with the date of the visit and seasonal changes in detectability were obtained.

The results of this survey are stored in the SOS archives.

RESULTS

Detectability of birds

Figures 1 and 2 present the information from the upper Adur Levels CBC; the habitat here is typical of the levels in Sussex. No attempt has been made to examine the influence of weather on the detectability of territorial Reed and Sedge Warblers, but visits were not made in very strong winds, in heavy rain, or on hot afternoons. There was a very wide range of detectability for both species throughout the season, but each showed a different pattern. Sedge Warblers arrived suddenly in the first week of May when often 80-90% of the season's territories were revealed, usually by the singing male, in a single visit. There was a sharp decrease in detectability through May to early June. Between mid-June and early July birds were again much in evidence, but only about 50-70% of the season's territories were detected. Reed Warblers, on the other hand, arrived later and numbers built up steadily from the first week of May to the first week of June:

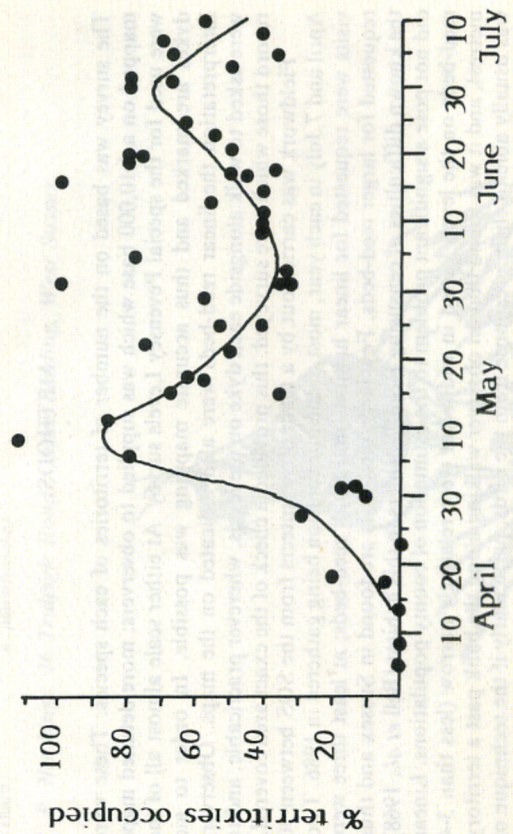


Fig. 1. Proportion of season's Sedge Warbler territories detected by a single visit on the Adur Levels, 1980-86. Line fitted by eye.

then 65-85% of the season's territories held a detectable bird and this remained the case until observations ceased on 9 July.

It was not possible to assess the accuracy of two or more counts, as made by most observers, since they were made more-or-less randomly through the season. However, as a single visit is likely to detect on average only about 60% of that season's territorial Sedge Warblers and about 75% of Reed Warblers, two visits should increase the accuracy of the census considerably (see the section on 'Overall distribution in Sussex').

TABLE 1. THE NUMBER OF TERRITORIAL REED AND SEDGE WARBLERS IN WEST SUSSEX

Site	Reed	Sedge	Site	Reed	Sedge
Thorney Deeps	68	34	Sompting Brooks	29	17
Fishbourne	15	1	Nyewood Brickworks	1	—
Chichester Harbour, other	5	6	Cooks Pond, Milland	2	—
Chichester Canal	51	6	Sandgate Park	3	—
Chichester GPs	35	10	Burton Pond	32	—
Selsey West Fields	4	2	Warnham Mill Pond	4	2
Pagham Harbour LNR	98	49	Knepp Lake	12	3
Pagham-Ford Levels	1	—	Bolney Mill Pond	1	—
Arun Valley, A27 north	236	72	Pond Lye	3	—
Arun Valley, A27 south	143	34	Patching Pond	3	1
Littlehampton-Worthing	35	3	Northbrook Farm	1	1
Adur Valley, Bramber N.	112	21			
Adur Valley, Bramber S.	52	36			
Total pairs	946	298			

Population counts — West Sussex

Table 1 presents the totals of territorial Reed and Sedge Warblers in each of the wetland sub-divisions of West Sussex. The totals revealed were 946 pairs of Reed and 298 pairs of Sedge Warblers. The importance of the major valleys and the Chichester Plain area is clear. However, the distribution of birds is very patchy, even within the important Arun and Adur Valleys. For example, within the Arun Valley only 32 territorial Reed Warblers (8.4% of the total) were located north of

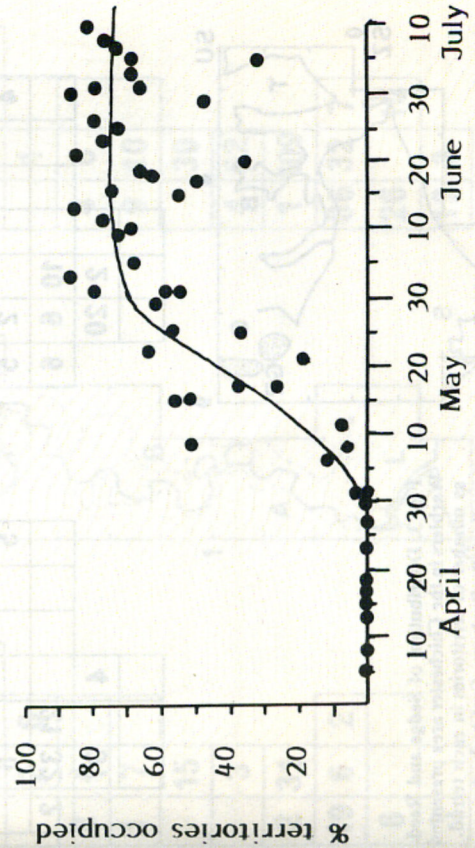


Fig. 2. Proportion of season's Reed Warbler territories detected by a single visit on the Adur Levels, 1980-86. Line fitted by eye.

Houghton Bridge, an area of approximately 14 square kilometres forming about one-third of the whole valley. Undoubtedly the virtual absence of emergent plants by the dykes is the main reason. This is due principally to the twin damaging operations of excessive dyke clearance to enhance drainage and the relatively intensive grazing of cattle. In the Adur Valley a similar paucity of Reed Warblers occurs between Upper Beeding and Old Erringham Farm, particularly on the west side of the river, due to almost total conversion from grazing meadows to intensive cereal production. Here just 3 pairs of Reed Warblers remain. Attention should be drawn to thriving colonies of this species at Burton Pond and Knepp Lake, both well to the north of the large concentrations in the county. Further comments on the detailed distribution of the two species are given below for the three main areas — Chichester Plain, the Arun Valley and the Adur Valley.

Chichester Plain

Table 1 and Figure 3 show the numbers of Reed and Sedge Warblers in the main sections and by tetrad (2×2 km square) in the area from Pagham Harbour LNR and Chichester gravel pits west to the county boundary. Totals of 276 pairs of Reed Warblers and 108 pairs of Sedge Warblers were located, approximately 30% and 36% respectively of the totals of each species in West Sussex. Three sites are of outstanding importance: they are Pagham Harbour LNR, Thorney Deep and Chichester Canal. The first of these is well protected through reserve status (West Sussex County Council) and the first two by SSSI notification, but Chichester Canal, with over 5% of West Sussex's Reed Warblers, remains threatened by

Sedge Warbler

7	8	1	4
3	16	2	7
1	1	2	1
4			2
		10	6
		2	20

Reed Warbler

26	19	15	17
10	13	1	23
		13	34
	5		6
			21
		4	32
			2
			37

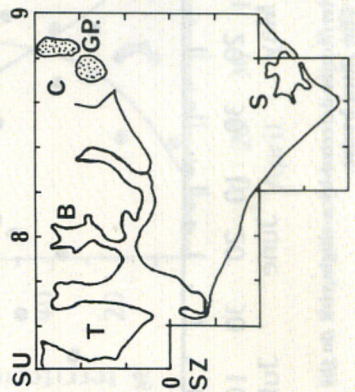


Fig. 3. Distribution of Sedge and Reed Warblers in the Chichester area presented as number of territories in each tetrad. Key: B=Bosham, C=Chichester, GP=gravel pits, S=Sidlesham, T=Thorney.

unnecessary dredging to open up very limited additional navigation. Of special value here is the section from Donnington to the A286. Although most Reed Warblers are found in reed-beds, many of the 35 pairs at Chichester gravel pits are associated with dense willow and sallow thickets.

Arun Valley

This valley, as can be seen from Table 1 and Figure 4, is the stronghold of Reed Warblers in West Sussex. A total of 379 pairs were found along with 106 pairs of Sedge Warblers. It is invidious to try to identify small sections which are of special value, as the whole of the levels from North Stoke south to Ford contain reed-beds alongside dykes which support breeding Reed and Sedge Warblers. The largest numbers were naturally at the Arundel Wildfowl Trust (65 pairs of Reed and 22 pairs of Sedge Warblers) where by far the largest reed-bed in the valley has been developed: this tetrad with 109 pairs of Reed Warblers was the 'best' in Sussex. Many pairs were in the reed fringe along the banks of the River Arun mainly to the north of this site. South of Arundel the river banks are unsuitable and here they are in dykes among winter cereal crops as well as grassland.

As mentioned previously, the large areas of Amberley Wildbrooks and Pulborough Brooks support very few warblers; indeed, apart from a few Reed Warblers immediately by Amberley Castle, there was not a single pair of this species on these two areas, though small numbers of Sedge Warblers have managed to hang on, no doubt due to their ability to occupy a much wider range of habitats.

It is worth noting that the coastal levels to the east of the Arun Valley between Lyminster and Angmering still hold 35 pairs of Reed Warblers even though many farm ditches are now unsuitable. This is in great contrast to the levels to the west where just a single territorial Reed Warbler was located.

Sedge Warbler

	2	6	
2	4		
1	7		
	15		
	3		
2	31		
19	6	2	
6			
3			

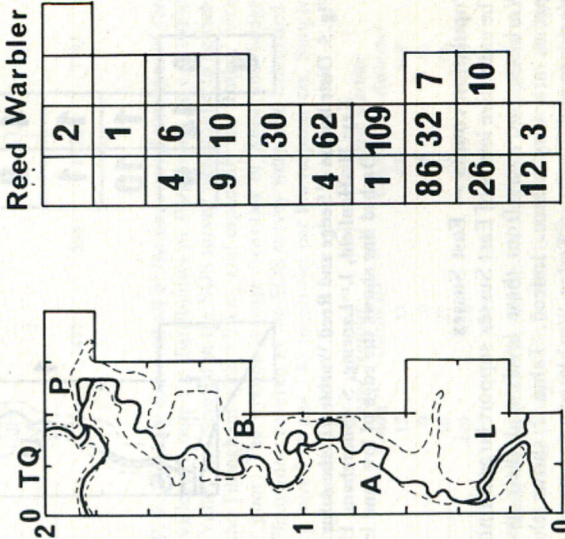


Fig. 4. Distribution of Sedge and Reed Warblers in the Arun Valley. Key: A=Arundel, B=Burpham, L=Littlehampton, P=Pulborough. Dashed line shows the edge of low land in the valley.

Adur Valley and Sompting Brooks

A total of 164 pairs of Reed and 57 pairs of Sedge Warblers were found in the Adur Valley, in addition to 29 and 17 pairs respectively which are holding on in Sompting Brooks despite being surrounded by industry and housing; see Table 1 and Figure 5 for details. The population is split into two sections. The majority of the Reed Warblers are on the upper Adur Levels between Upper Beeding and Small Dole. Here there are extensive areas of hay still grown but only a small amount of spring and early summer grazing by cattle and a few horses. As a result the reed has a chance to grow and the dykes can be attractive. The main factor affecting numbers is the activity of the Southern Water Authority in clearing marginal vegetation from dykes on an annual cycle. The other concentration is from Old Erringham Farm south to New Salts Farm, including the periphery of Shoreham Airport. Here there is a particularly high ratio of Sedge Warblers to Reed Warblers. None of the *Acrocephalus* warblers in the Adur Valley are in areas protected by nature reserves and only a very few are in the Adur Estuary SSSI.

Sedge Warbler

			3			
		4	2			
		4	8			
		1	1			
		1	10			
9	14	9				
8						

Reed Warbler

			1			
		3	16			
		16	11			
		40	25			
		9	22			
		12	14	7		
		17				

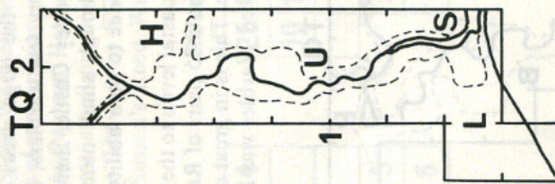


Fig. 5. Distribution of Sedge and Reed Warblers in the Adur Valley and Sompting Brooks. Key: H=Henfield, L=Lancing, S=Shoreham, U=Upper Beeding. Dashed line shows the edge of low land in the valley.

Population counts — East Sussex

The extensive levels of East Sussex support large numbers of both Sedge and Reed Warblers, but away from these levels and their associated river valleys, both species are very scarce. Indeed, Table 2 shows that only 9 territorial Reed Warblers and 2 pairs of Sedge Warblers were located away from the river valleys and levels. This table shows that totals of 477 pairs of Sedge and 1532 pairs of Reed Warblers were reported. Pevensey Levels was the most important site.

Due to the very extensive areas involved and the limited number of observers in parts of the far east of the county, four levels were incompletely covered. These were the Eastbourne Levels, the Rother Levels and the valleys of the Rivers Brede and Tillingham. An attempt has been made to estimate the population levels if cover had been complete. To do this the percentage of the area counted was calculated and it was assumed that the density of breeding birds in the uncounted section was the same as in the counted part. It is considered probable that the more suitable habitat was covered in these areas and thus the estimated totals are too high. Further work is needed here to overcome the uncertainties.*

Figures 6, 7 and 8 show the detailed distribution by tetrads of the two species in the Ouse Valley, Pevensey Levels and the Rye area respectively. Comments on these areas are made below, along with more information on Sedge and Reed Warblers in the Cuckmere Valley and in Combe Haven.

TABLE 2. THE NUMBER OF TERRITORIAL SEDGE AND REED WARBLERS IN EAST SUSSEX

Cover	Sedge Warbler		Reed Warbler	
	Count	Estimate	Count	Estimate
Ouse Valley.....	101		248	
Cuckmere Valley.....	22		42	
Eastbourne Levels.....	9	18	18	36
Pevensey Levels.....	124		413	
Combe Haven.....	50		185	
Pett Level/Pannel Sewer.....	62		160	
Rye Harbour LNR.....	22		87	
Brede Valley.....	12	19	88	137
Tillingham Valley.....	—	—	18	72
Rother Levels.....	16	59	51	189
East Guldeford Level.....	26		136	
Broomhill Level/Midrips.....	31		77	
St. George's Retreat.....	—	4	—	3
Herstmonceux Castle.....	—	—	—	—
Broadwater, Ashburnham.....	2		1	
Eridge Park.....	—		—	
Totals.....	477	536	1532	1791

*During January to April 1988 P. F. Bonham surveyed all of the uncovered stretches of the Rother, Brede and Tillingham valleys to map the distribution of *Phragmites* on a 1:10000 scale. Those parts of the Brede Valley not covered in the SOS survey were found to be rich in reedy dykes, with 11.2 km; the Tillingham with 3.0 km, and especially the Rother with 6.05 km, were disappointingly poor. The overall average densities of Reed and Sedge Warbler territories per km of *Phragmites* covered in the SOS survey were also calculated. Over 30 sq. km in this area, they were 9.05 and 1.88 territories per km respectively. Simple multiplication gives the following results (cf. Table 2):

	Sedge Warbler		Reed Warbler	
	Count	Estimate	Count	Estimate
Brede Valley.....	12	33	88	189
Tillingham Valley.....	0	6	18	45
Rother Levels.....	16	27	51	106
Rest of E. Sussex.....	449	458	1375	1393
Totals.....	477	524	1532	1733

The only assumption is that the linear density of birds per km of reed was the same in the uncovered areas as in the covered areas, though this is clearly unsatisfactory for Sedge Warblers with their wider range of habitats. On this new basis, the estimated county totals (Table 3) would be lower, 2678 Reed and 822 Sedge; to allow for detectability these could rise to about 2850 and 980. These lower figures are probably closer to the true populations.

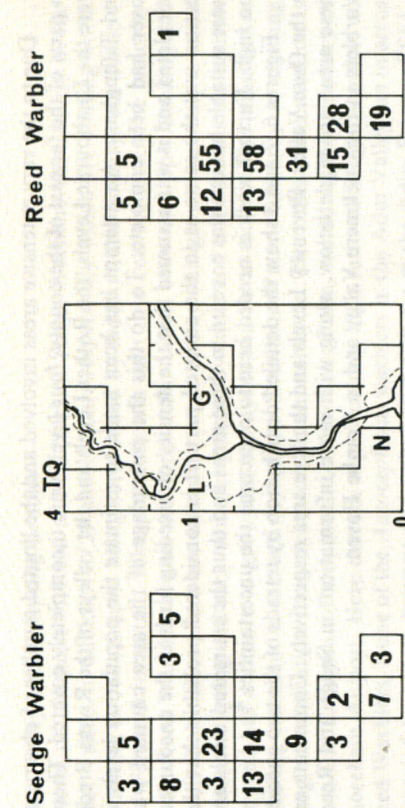


Fig. 6. Distribution of Sedge and Reed Warblers in the Ouse Valley. Key: G=Glynde, L=Lewes, N=Newhaven. Dashed line shows the edge of low land in the valley.

Ouse Valley

The vast majority of Reed and Sedge Warblers in the Ouse Valley are found south of Lewes on the levels: in this valley there are just 16% of Sedge Warblers and 6% of Reed Warblers north of Lewes and none were located north of Barcombe. From the Lewes Brooks right down to Newhaven Tidemills both species were commonly found, with some dense concentrations alongside the railway line and on cut-off meanders of the now canalised river. The only area where there was an absence of birds was on the levels immediately around and to the north of Rodmell; the reasons are not immediately apparent, since some of the ditches appear suitable. Only small numbers, mainly of Sedge Warblers, were found on the Glynde Levels.

Cuckmere Valley

The bulk of the 22 pairs of Sedge and 42 pairs of Reed Warblers in the Cuckmere Valley are found in small wet areas just off the regularly maintained river. All birds were located between Exceat Bridge and Arlington Reservoir. Most Reed Warblers (28: 67%) were between Alfriston and Arlington Reservoir but Sedge Warblers were spread throughout the valley. Five pairs of Reed Warblers bred in Charleston reed-bed, where the SOS has embarked upon management to maintain and improve the area for them.

Eastbourne Levels

Only part of the Willingdon Level was covered and it was not possible to cover Mounthey Level. As a result the figures presented in Table 2 should be used with great caution.

Pevensey Levels

Hitchings (1987, 1988) provided details of Sedge and Reed Warbler distribution on Pevensey Levels. The totals of 124 and 413 pairs respectively show that these levels are of great importance. The individual levels which support the largest absolute numbers of the two species are, in order of importance, Manxey South (141), Down Level (105), Hooe Level (61) and Horse-eye Level (56). Figure 7 shows the distribution by tetrad mapping.

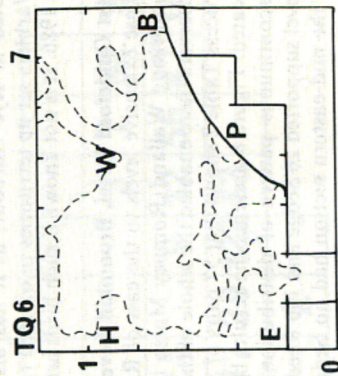
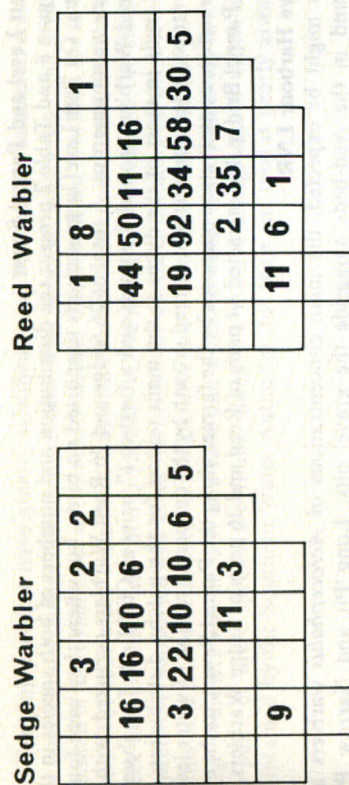


Fig. 7. Distribution of Sedge and Reed Warblers on Pevensey and Eastbourne Levels. Key: B=Bexhill, E=Eastbourne, H=Hailsham, P=Pevensey, W=Warthing. Dashed line shows the edge of low land on the levels.

Combe Haven

Although this is a small valley, it supports an extremely high population of Sedge and Reed Warblers. This is due to the productive reed-beds within the Filsham LNR: here there were 35 pairs of Sedge and 133 pairs of Reed Warblers. This makes it one of the most important sites in the county for these species. Many migrant *Acrocephalus* warblers also use this area.

Brede, Tillingham and Rother Levels

The levels beside these three long rivers were not covered completely and as a result estimates have been made of total populations from extrapolation from areas counted. Table 2 presents the basis for these calculations. In the Brede Valley all of the area west of Icklesham was counted, but the levels to the south of the railway between Icklesham and Winchelsea were not covered, nor were parts of the levels between Winchelsea and Rye. While much of this uncounted area had been converted to intensive winter cereal and rape production, there are areas with good linear reed-beds. Only a small part, all in the east, of the Tillingham Valley was covered and thus the extrapolation must be very tentative. Perhaps the most unfortunate gap in the survey was on the Rother Levels. The county boundary runs along the river; the only areas counted were the south Wittersham Level and small stretches near Newenden and Bodiam. It is known that other areas suitable for *Acrocephalus* warblers exist alongside the 11 km of the River Rother, and Table 2 presents the estimate for these levels (see also the footnote on page 87).

removed on a too frequent rotation. The future of Reed and Sedge Warblers here, as on other levels in the county, is inextricably bound up with land-use patterns.

Overall distribution in Sussex

The details of distribution have been set out above. Figure 9 presents the numbers of pairs of Reed and Sedge Warblers found in each 10 km square. Only the numbers actually recorded are shown and the extrapolations for under-recorded areas are not included. The distribution is essentially coastal and there are very few birds found in the north of the county. Table 3 summarises information on the numbers present in Sussex. In order to compare sites and to obtain the percentage of the county's Reed or Sedge Warblers at any site, only the counted or estimated figures should be used: all are subject to similar under-recording due to not all of the birds being detected on two visits. On the basis of detectability studies on the Adur Levels, a single visit was found to reveal 60% of Sedge and 75% of Reed Warblers. After two visits these figures should rise to 84% (60% + 60% of the not recorded 40%) and 94% (75% + 75% of the not recorded 25%) for the two species respectively. If this is the case the county totals would rise to about 990 pairs of Sedge and 2900 pairs of Reed Warblers.

TABLE 3. NUMBERS OF REED AND SEDGE WARBLERS IN SUSSEX

	Reed Warbler Count	Reed Warbler Estimate	Sedge Warbler Count	Sedge Warbler Estimate
West Sussex.....	945	945	298	298
East Sussex.....	1532	1791	477	536
Totals.....	2477	2736	775	834

Habitat choice

The basic presumption that Reed Warblers were to be found in *Phragmites* was confirmed, although small numbers in the east of the county were found singing in oil-seed rape and winter cereal. Not all reed was suitable, however, but this survey was not able to investigate the reasons for this. Some of the factors will be discussed later. The different levels all differ in their characteristics, the patterns of farming having modified them from the original snaking creeks so typical of saltmarshes. On the upper Adur Levels dykes (wet ditches) were numerous with up to 21.67 km of dykes per km², while on 30 km² of the levels around Rye the average was 6.94 km per km². In these areas *Phragmites* was found in 12.7% and 15.6% of the dyke length respectively. This is the maximum habitat available for Reed Warblers in these areas at present.

Sedge Warblers were found in a much wider range of habitats. Very few were in pure *Phragmites* although the majority were in *Phragmites* with scattered hawthorn, blackthorn or other bushes. Some chose dykes with dense growths of *Carex* or *Scirpus* but very few were in cropped fields. There were just 5 territories in oil-seed rape and one in winter cereal.

DISCUSSION

Population changes

Few data exist to show how numbers of Reed and Sedge Warblers have changed

over the years. Knox (1845) notes the latter was 'common everywhere' while the former was 'everywhere less common than the Sedge Warbler... and the clearance of reed-beds on Pevensey Levels and at Amberley had made it almost disappear on those areas'. *Plus ça change!* What information that exists does not provide a consistent pattern, perhaps not surprisingly since both species occupy habitats that can be profoundly affected by changing land-use. Table 4 presents a summary of changes in numbers, mostly from G. C. Evans's reports. Reed Warblers have generally shown an increase. Sedge Warblers, on the other hand, with just two exceptions have shown a distinctly downward trend. This is even evident in Combe Haven where Reed Warbler numbers have increased greatly.

TABLE 4. RECORDED CHANGES IN THE NUMBERS OF REED AND SEDGE WARBLERS BREEDING IN SUSSEX

Area	Survey year	Reed Warbler 1986-87 nos.	% change	Sedge Warbler 1986-87 nos.	% change
All W. of A24.....	1976	753	+61	217	+72
Thorney Deepes.....	1975	68	+196	34	+467
Chichester area.....	1975	106	-6	36	-36
Pagham area.....	1975	102	+27	51	+122
Burgham-Houghton Bridge.....	1966	79	-15	15	-91
Lower Adur Levels.....	1976	52	-22	-	-
Combe Haven.....	1969	185	+308	50	-37

TABLE 5. OTHER RECORDED CHANGES IN THE NUMBERS OF REED AND SEDGE WARBLERS IN SUSSEX

Beachy Head ringing	Up to 1975	1976-1980	1981-1986
Sedge:Reed Warbler ratio.....	1:1	1:2	1:3.5
SW ringed per year (average).....	68	66	17
SW as % of all warblers ringed.....	2.4	2.1	0.9

Adur Levels CBC: number of pairs

	1980	1981	1982	1983	1984	1985	1986	Average
Reed Warbler.....	15	26	37	25	39	30	44	31
Sedge Warbler.....	15	22	27	17	12	6	11	16

A long-term decrease in Sedge Warblers, in absolute numbers, as a percentage of all warblers caught and in ratio to Reed Warblers, is clear at Beachy Head where the numbers of warblers ringed are related directly to the numbers present and the ringing effort (see Edgar, 1986, and Table 5). Numbers of Sedge Warblers have decreased sharply in recent years: the main reason is undoubtedly the extended drought conditions since about 1977 in the Sahel region of Africa, where they winter.

Table 5 also presents the recent counts on the Adur Levels and this indicates that a major decrease in Sedge Warblers took place between 1983 and 1985. In this area Sedge Warblers, unlike Reed Warblers, were not affected by habitat destruction. Table 5 also shows that the numbers of Reed Warblers fluctuated considerably. These variations were almost entirely due to the timing of the clearance of all vegetation from the dykes by the Southern Water Authority. In some years clearance was partial; in others it took place in late autumn or winter but sometimes it occurred during the breeding season.

Unfortunately it was not possible to directly compare 1986 with 1987 across the county, and thus it has to be assumed that the two seasons were comparable. Most observers, however, felt that Sedge Warblers were slightly more numerous in 1987 and that Reed Warbler numbers were broadly unchanged.

Factors affecting the breeding habitat

In reed-beds where there is a minimal flow of water, such as the Severals at Pagham Harbour LNR or Burton Pond LNR, there can be a problem of silt build-up and invasion by other plants, especially willows and sallows. Over a period they would become unsuitable for Reed Warblers in particular. Hence the SOS is involved at the former site in reed cutting to reinvigorate the reed and to prevent a build-up of litter. There are few areas like this in Sussex, due partly, no doubt, to the extensive drainage of the wet sections to the levels over the centuries.

Most *Acrocephalus* warblers are on the extensively farmed levels and it is factors associated with farming and water flow that affect them the most.

There are two types of dykes on the levels. First, a system of major drainage dykes can be found on each level: these come under the management of the Southern Water Authority, often under contract to the farmer-dominated Internal Drainage Boards. Their function is to remove 'excess' water rapidly and, in many cases, to lower water levels over large catchment areas, especially by pumped drainage schemes. To do this, water levels are usually kept several feet, in places up to eight feet, below marsh levels. Such dykes are usually subject to straightening and excessive clearance with some dredging, often on an annual basis. In fact many of these dykes could be cleared of excess marginal emergent vegetation on a 7-10 year rotation (which would benefit all wildlife) rather than an annual one. Clearance in the winter removes the dead stems of reeds and it is these that are required by Reed Warblers to build their nest around early in the season. However, clearance has been carried out in the middle of the breeding season! This certainly happened on the Adur Levels with the destruction of about 20 active nests in 1985. As most of these major dykes have a reasonable water flow, they have the greatest potential for supporting good marginal reed-beds. Positive help from and changes in the attitude of the SWA and IDBs would help enormously.

The other smaller dykes on the levels, which are much more extensive than the main dykes, are under the control of the individual farmer. They tend to be subject to a wider range of problems: these are dyke clearance, dyke neglect, fertiliser run-off, herbicide drift and over-grazing. Clearance should be on a long-term rotation and any healthy reed-bed with a good water flow should be left until work on it was really needed. Ironically clearance is vital for the maintenance of the plant and animal communities.

Dyke neglect also poses a problem. Where dykes are never cleaned out, rank growths of *Glyceria* and other grasses occur which tend to reduce the value of the waterway. Reeds tend to dry out and become sparse with weak stems, almost useless as a breeding habitat. The small internal field dykes tend to suffer this fate if they are no longer required to act as 'wet fences' to prevent stock moving from one field to the next.

As farming intensifies there is inevitably a greater use of chemicals. These will affect dykes through two main processes, run-off of fertiliser and an increased use of herbicides and the consequent drift of them into the dykes. The former is the principal problem and it is most likely to compound the effects of enhanced drainage. An increase of fertiliser in the dykes results in a rapid growth of algae which soon start to choke the other aquatic plants and, when they start to break down, to deoxygenate the water, with the widespread death of fauna and flora. In most of the levels in Sussex it is possible to find several dykes suffering this fate. In contrast, herbicide drift is found in relatively few areas, although Hitchings (1987) noted it in several sites on Pevensy Levels.

The other main farming influence on the dyke flora is the intensity and timing

of grazing. Cattle and sheep are long established on lowland wet grassland and, especially the former, are necessary as part of the traditional management which benefits birds. However, where animals are kept at a high stocking rate or are allowed to graze right down to the water's edge throughout the spring and early summer, they can have a significant impact on the vegetation in the dykes. Cattle are quite willing to reach over smaller dykes or even wade into shallower ones and graze on *Phragmites*. This destroys breeding habitats of Reed Warblers and in many areas limits the distribution of that species. Amberley Wild Brooks provides a particularly good example where heavy grazing ensures that *Phragmites* is unable to develop and no Reed Warblers are present. Horses are increasingly being grazed on the levels with a similar but slightly less severe impact. In both cases fencing of the dykes which contain reed-beds would be effective in limiting grazing impact. Sheep are less of a problem for the dyke flora but it should be noted that they are less good in creating sward suitable for breeding waders.

If a hay crop is taken off the field, usually in late June or early July, and the aftermath is grazed from late July, this results in just about the best conditions (if water levels are high) for the levels and the dykes. Where there is no dykeside grazing (due to hay, fencing or cereal production) then reed-beds are potentially able to flourish if water conditions permit.

In summary this survey has shown that good conditions for breeding Reed and Sedge Warblers can be created in the Sussex levels. The two basic requirements are a good flow of clean fresh water and a long cycle of dyke clearance, using a 7-10 year rotation. On top of this, relatively high water levels are needed, and ideally the area should be farmed on a traditional, low intensity system: this could involve a mixture of hay meadows with low stock density and low input grazing on other fields.

With European agriculture going through change at the present time, some opportunities exist if the farming communities and the politicians have the will to really help conservation. A small start has been made through the designation of the South Downs and the areas of levels in the Arun, Adur, Ouse and Cuckmere Valleys which lie immediately along the line of the Downs, as an Environmentally Sensitive Area (ESA). Under this farmers receive a payment to permit farming in a traditional manner. Sadly the requirements for payment are the inevitable compromise and are not really adequate to make massive changes to the levels, although they may help to maintain the *status quo*. Unfortunately the designation does not cover the most important parts of lowland Sussex for Reed and Sedge Warblers. Two initiatives are required: the extension of ESAs over all of the levels, and realistic conservation prescriptions with equally realistic payments to farmers to encourage them to cooperate.

We must, however, ensure that the areas identified as of great importance to Reed and Sedge Warblers are not lost in the furtherance of agricultural change or over-zealous clearance.

SUMMARY

The virtually complete cover of all areas suitable for breeding Reed and Sedge Warblers in 1986-87 revealed total county populations of 2477 pairs of Reed Warblers and 775 pairs of Sedge Warblers. It is possible that these figures may need to be increased to c. 2700 and c. 825 respectively to allow for suitable areas not covered, and then also by up to 6% and 19% respectively to allow for birds present but not detected due to the methodology used. Lessons that the survey revealed relating to the impact of changing land use are summarised and suggestions made as to ways of improving conditions for these species.

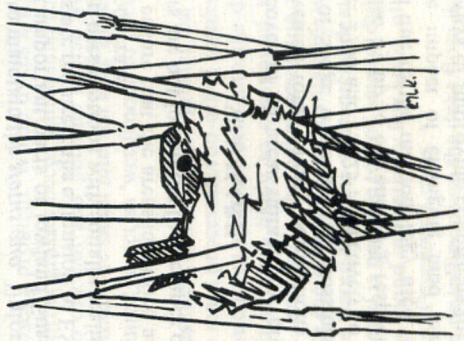
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UNUSUAL RECORDS

All records of unusual species are considered by the Records Committee and it may be assumed that those published have been fully authenticated. Such reports should be submitted on separate sheets or on special forms available from the Recorder. Reports of rarities as defined by *British Birds* should be submitted on, or in the same format as, the forms obtainable from the Secretary to the Rarities Committee. The following list embodies those unusual species in Sussex for which descriptions are normally required. The Recorder may seek supportive evidence in the case of other species occurring under unusual circumstances. This list is not exclusive and any observer in doubt or needing advice on any species should send details accordingly:

All divers (except Red- and Black-throated on the coast)

Red-necked and Black-necked Grebes
 All shearwaters and petrels (except Fulmar)
 Shag (inland records only)

Bittern
 Purple Heron
 White Stork
 Spoonbill
 Whooper Swan
 Bean and Pink-footed Geese
 Garganey

Red-crested Pochard
 Ferruginous Duck
 Honey Buzzard
 Red Kite

Marsh and Montagu's Harriers
 Goshawk
 Rough-legged Buzzard
 Osprey
 Peregrine

Quail
 Spotted Crake
 Corncrake
 Crane

Stone Curlew
 Kentish Plover
 Dotterel

Temminck's Stint
 Pectoral Sandpiper
 Buff-breasted Sandpiper
 Phalaropes

Pomarine and Long-tailed Skuas
 Sabine's, Ring-billed, Iceland and Glaucous Gulls
 Roseate Tern
 Black Guillemot
 Little Auk
 Puffin

Hoopoe
 Wryneck
 Woodlark and Shore Lark
 Richard's, Tawny and Water Pipits
 Waxwing
 Dipper

Bluethroat
 Warblers: Cetti's, Savi's, Aquatic, Marsh, Icterine, Melodious, Dartford, Barred, Yellow-browed
 Red-breasted Flycatcher
 Golden Oriole
 All shrikes
 Raven
 Serin

Scarlet Rosefinch
 Lapland, Cirl and Ortolan Buntings

In addition: all unusual races of Yellow Wagtail and Rock Pipit.