

**The
Sussex
Bird Report**

1980



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Ornithological Society

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THE SUSSEX BIRD REPORT

NUMBER THIRTY-THREE, 1980

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Cover drawing of Kittiwake by David Codd

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THE SUSSEX ORNITHOLOGICAL SOCIETY

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REPORT OF THE COUNCIL

Officers and Council

Under its President, Grahame des Forges, the Society's officers remained almost unchanged from 1979, the only new officer being Mr. C. J. Cummings of Eastbourne who was elected as the Press and Public Relations Officer. Two new Council members, Mr. M. Sennitt of Reigate and Mr. P. Skidmore of Hove were also elected to replace those retiring under the five year rule.

Under this five year term of office for Council members, the Conservation Officer, Mr. A. Simpson will not be eligible for re-election. In addition to organising the considerable number of tasks undertaken by Society members at working parties, Alf Simpson has been the Society's representative on the Wildlife Liaison Group and has forged valuable links with many other conservation bodies in the county. He has carried out an inestimable amount of work for conservation in general and for the Society in particular; it would be true to say that the major part of his spare time has been spent in such work during which he has built up an enormous network of contacts and a vast amount of experience. We hope that we can use this experience to carry on the invaluable work which he has done.

Review of Society Activities

Membership

It is pleasing to report the Society's best year ever for the recruitment of new members and to be able to record a total membership at December 31st just in excess of 1,400, an all time high. 201 new members joined us during 1980 and we hope they will enjoy being with us and benefit from their membership. Regrettably this 'increase' was reduced to a net gain of only 90 as a result of members resigning or moving away, or allowing their membership to lapse through non-payment of their subscriptions. It is however worth recording that this net gain is more than double the net gain for the four previous years combined.

Most new members have been recruited through contact with members of the Society "in the field" or at local events. From these contacts it is clear that many people in Sussex who have an interest in birds are not aware of our Society—a situation which we should all strive to correct. Significant increases in membership not only help the Society to keep the subscription rates down by reducing the unit cost per member of running the Society, but they will also give us a louder 'voice' to assist fellow conservation bodies in putting across the conservationist's point of view at planning enquiries and the like and will enable the Society to continue to fund its commitment to conservation in Sussex. This year's growth has put us well on course for our target of 2,000 members before the end of the 1980's.

Finance

Although our net income by way of members' subscriptions falls short of expenditure by nearly £500, the Society, nonetheless, achieved a record surplus of income over expenditure in the sum of £1,045. This was achieved principally through the income derived from deeds of covenant, interest on surplus monies particularly during the early part of the year, and sales of Bird Reports to non-members. Our expenditure on administration has been pared to the bone and the Society is very grateful to those members who deliver the newsletters and Bird Reports because this saves nearly £300 a year.

Assuming an inflation rate of 10%, during 1981 we ought to achieve a modest surplus but a small deficit is anticipated in 1982. Nevertheless, the Society intends, in a bid to increase membership, to hold its subscriptions at current levels until the end of 1982.

In addition to the healthy state of our General Fund, which now stands at £3,292 after 1980's surplus has been added to it, the Conservation Fund has enjoyed a volatile year. We were glad to help our friends in the S.T.N.C. by making a donation of £1,000 towards their purchase of 175 acres of threatened woodland at Ebernoe Common, and to assist in funding expenses at Rye Harbour

THE SUSSEX BIRD REPORT, 1980

HON. OFFICERS OF THE SUSSEX ORNITHOLOGICAL SOCIETY AS AT 30th JUNE, 1981

COUNCIL

- President:* G. des Forges, Bowders Farmhouse, Balcombe, Haywards Heath, Sussex.
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Scientific: Dr. J. A. Newnham, S. W. M. Hughes, R. J. B. Jackson, A. J. Prater, M. Sennitt, Dr. A. B. Watson, R. Lord, D. A. Parmenter.
- Records:* M. J. Rogers, C. M. James, A. J. Prater, P. J. Wilson, J. F. Cooper, A. Kitson.
- Programmes:* Miss D. du Boisson, R. Page, B. F. Forbes, M. Sennitt, M. J. Mason.

Nature Reserve with regard to the important colony of Little Terns. We also assisted the R.S.P.B. with further costs of the Brent Greese Study in West Sussex. To fund these costly activities, monies were raised at a garden party at Possingworth Park, the profit from T-shirts and car stickers and the sale of Christmas cards and prints which were kindly donated by a member. The Society also ran its first raffle, which brought in nearly £1,350. In all, a very busy year, and our Converstation Fund now shows a healthy balance of £1,469 to tackle the tasks that 1981 will bring.

Sussex Bird Report

The 1979 Report was published in September, and contained special articles on Feral Mandarins, Wintering Blackcaps and Further Nightjar Monitoring, as well as the regular features. The systematic list was compiled by several members, a move that is likely to be continued and was considerably expanded in relation to certain species which resulted in a proportionately longer and more expensive Report.

Newsletter

Society members were saddened by the death of Cyril Helyer in March. He had been involved with the Society for many years, including several as Assistant Secretary, Assistant Newsletter Editor and member of Council. A full appreciation was published in the Summer Newsletter (No. 73). In his capacity as Assistant Newsletter Editor, he had liaised closely with the printers on each issue and organised its distribution to members.

The distribution of the Society literature has been taken over for the time being by Mr. Howard Wheeler.

Mr. Alan Kitson of Steyning has now taken over as Newsletter Editor. We are looking forward to his writing and editing on our behalf.

Scientific Committee

The committee met five times during the year. As usual most of the effort was concerned with the planning of a programme of field work and preparing material for the Sussex Bird Report. However several miscellaneous scientific issues were also considered and action taken either in the form of investigation or the provision of data or advice.

The year's field work included the start of a new Society survey on three wetland breeding species, Yellow Wagtail, Snipe and Redshank and saw the conclusion of the Grasshopper Warbler breeding enquiry which was in its fourth year. In addition, repeat Nightingales and Rook censuses were undertaken on behalf of the British Trust for Ornithology; both of these tasks were efficiently carried out with gratifying results.

The regular wader and wildfowl counts continued as did the annual census of Sussex heronries.

A new venture was the organisation of a small team of 8 observers who undertook a common bird census on approximately 240 hectares of farmland and woodland as the Society's contribution to a Farming and Wildlife Advisory Group project as the West Sussex College of Agriculture, Brinsbury, near Pulborough.

It is envisaged that in the future most national surveys will be undertaken on the basis of 10km squares and the committee has been liaising with the local representatives of the British Trust for Ornithology in neighbouring counties with a view to defining our responsibility.

Records Committee

As at the Annual General Meeting in April, Mr. Michael Shrubbs retired from membership of the committee, bringing to an end an era of service to the Society in one capacity or another since its inception, the committee welcome Mr. Alan Kitson whose expertise in the realm of little known species is now nationally recognised.

No meetings were held during the year as all business is satisfactorily conducted by post.

The problems of processing and publishing the plethora of records arising out of the hard weather at the start of 1979 were successfully overcome. Also to be anticipated were the problems of continued production of a high-standard systematic list after 1983 when the incumbent Recorder retires. After consultation, the answer was considered to lie in the establishment of a team of volunteers which is proceeding satisfactorily.

Conservation

From the results achieved during the year and the new faces seen at the tasks, it is surprising to record that the total man days for the year has dropped from 362 in 1979 to 338 in 1980. Work was carried out at two new sites, Mallydams Wood in East Sussex and Buchan Park near Crawley. Work also continued on the restoration of the dew pond on the downs at Lavant and this project will be entered for the West Sussex County Council countryside conservation award scheme.

A second raft was launched at Runcton Lake, Chichester and nine pairs of Common Terns successfully nested on the two rafts.

The designation of the Arlington Reservoir Nature Reserve took place on August 27th, 1980 and the Society is represented on the advisory committee of this reserve.

The water level was not lowered in the Pett Pool during 1980 but the area was monitored and a report issued so that there will be a comparison between the "fallow" year and the years when the pumping took place.

A major acquisition in the county was the purchase of Ebernoe Common by the S.T.N.C. This is one of the finest woodlands of this type in the county and the Society recognised the importance of this site by donating £1,000.

Publicity

Our display was at farm open days, in banks throughout the county and at the R.S.P.B. film shows at Horsham, Brighton, Chichester and Haywards Heath. We were very pleased with the results, and arrangements are now being made to extend the display and exhibition material.

Field Outings

Twenty-one field trips were arranged during the year and again a new venue was chosen for one of the coach outings—Studland Heath and Poole Harbour, Dorset, which produced splendid views of Slavonian Grebe, Goldeneye and Great Northern Diver. The number of species seen on the field trips ranged from 12 on a very wet and windy day to the 75 at the Pett/Rye Harbour meeting, highlights being the Common Buzzard at Rye and the Wryneck at Beachy. Whilst the coach outings are still well supported, the numbers attending the field meetings have dropped slightly.

Garden Meeting

At the invitation of Lord and Lady Chelwood, an open afternoon was held at Possingworth Park. Everyone enjoyed the tours around the grounds which in the spring are particularly beautiful. A total of £347 was raised, a very valuable contribution to the conservation fund.

Annual General Meeting

The Annual General Meeting was held in Brighton and following the business, members enjoyed a talk by Mr. Alan Kitson in connection with his second visit to Mongolia.

Conclusion

The rise in membership is an encouraging sign in these cost-conscious times, and helps to ensure an active and thriving Society.

We are grateful to the many members who work hard to keep it that way.

B. A. E. MARR,

Chairman of the Council

CONTRIBUTORS AND ACKNOWLEDGEMENTS, 1980

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WILDFOWL COUNTS

D. W. Codd organised the National Wildfowl counts and we are grateful to him for making the figures available to the Society. We would like to thank the following counters for their assistance:

- R. N. Argent, P. C. Bance, K. Blackman, P. J. Clay, D. W. Codd, A. Dawnay, R. Harris, R. C. Holman, M. Horsfall, R. C. Knight, D. C. Lang, P. J. Luffingham, G. Marriott, J. McKelvie, J. McTear, R. Page, D. R. Park, M. J. Ptt, A. J. Prater, P. W. Rouse, A. and I. M. Simpson, C. A. Taylor, G. E. Tomalin, M. R. Welfare.

CLASSIFIED RECORDS FOR 1980

The help of the following in the preparation of this list is gratefully acknowledged: R. J. Fairbank, G. des Forges, J. W. Houghton, S. W. M. Hughes, R. Leverton, Dr. J. A. Newnham, R. J. Sandison, M. Shrubbs, P. C. Turner, Dr. A. B. Watson.

Records of birds ringed have not been cross-referenced to the Ringing Report. The Report on Wader and Wildfowl counts and the Sea-watch Tables should be read in conjunction with the summaries for the individual species.

The abbreviation 'ha.' appears in the Report for the first time. This represents the metric dimension of the hectare replacing the traditional acre. A hectare is a 100 metre square and a grid square (1 km. sq.) consists of 100 hectares.

Reports have also been received for some of the more common species and also certain behavioural notes. These all continue to be welcome and will be preserved in the Society's files but are not published in this list.

1. **RED-THROATED DIVER** (*Gavia stellata*).—During the early part of the year up to 30 were present in Rye Bay, being reported most frequently off Pett Level. Elsewhere 15 were seen off Cuckmere Haven on Jan. 1st but few at other localities. Inland, the Bewl Bridge Res. individual from Dec. 1979 (Sx. B.R. 32: 9) remained until Jan. 13th and one was seen at Arlington Res. on 20th-21st.

Spring passage was noted between Mar. 20th and May 15th mainly at Worthing where 60 E were recorded, mainly in late Mar. At Beachy Head 11 E were identified in May, at Selsey Bill, 4 E and at Brighton Marina 5. On Apr. 7th 2 were seen in Pagham Harbour and one visited Bewl Bridge Res. on 9th.

In Oct. one flew W off Worthing on 11th followed by 6 W on 6th and a handful were reported from a few other coastal localities during the month. In Dec. up to 60 were to be seen in Rye Bay, again mainly off Pett, and other reports were of 15 W at Selsey Bill on 21st and 6 off Widewater on 22nd-24th.

2. **BLACK-THROATED DIVER** (*G. arctica*).—In Jan. single birds were seen at Bewl Bridge Res. from 13th-17th and at Camber on 18th, with 2 offshore at Pett Level on 20th followed by singles there on Feb. 3rd and 24th. Reports from the Selsey/Church Norton area on Feb. 23rd, Mar. 1st and 22nd probably related to the same individual. Another was present at Bewl Bridge Res. from Mar. 20th to Apr. 9th.

Spring passage was noted from Apr. 12th until May 16th at 4 localities along the coast (See also Diver Species). On Apr. 12th 9 E were identified at Selsey Bill and 15 (including a flock of 12) off Hove where another was seen on 13th. At Beachy Head 23 were identified between May 4th and 16th, including 5 on 10th (when 6 were seen off Brighton Marina), 5 on 11th and 6 on 13th. The other acceptable spring records were of singles off Brighton Marina on 12th and Selsey Bill on 10th (2), 13th and 14th.

In Nov. one was present at Bewl Bridge Res. from 6th-14th, and one was seen off Pett Level on 30th. At Bewl Bridge Res. another on Dec. 14th was joined by a second on 16th, both remaining into the New Year, a third being present from 31st. On Dec. 20th two were seen off Galley Hill, Bexhill and two off Rye the following day were possibly the same. Also on 21st one was reported off Widewater, Lancing.

3. **GREAT NORTHERN DIVER** (*G. immer*).—Three were identified during the early part of the year—one in Chichester Harbour on Jan. 17th (AJP), one on the sea at Camber on 18th (PJW), and one at West Wittering on Feb. 10th (IKD). On passage, one in summer plumage flew E past Worthing on May 12th (JAN). In Dec. one was seen at Langney Point on 20th (DC, JFC). These were the only fully authenticated records and represented a slight increase on recent years.

DIVER SPECIES (*Gavia* sp.).—In spring reported from late Feb. to the end of May. Totals at the 4 principal localities were as follows:

	<i>G. stellata</i>	<i>G. arctica</i>	<i>G. immer</i>	<i>G. species</i>
Selsey Bill	4	13	—	120
Worthing	(Not separated)	—	1	186
Brighton	5	7	—	112
Beachy Head	11	23	—	396

In Aug. one flew W off Selsey Bill on 30th followed by 3 during Sept. and 12 in Oct., no records coming from elsewhere. During Nov. 32 were noted from Selsey Bill and 11, mainly flying E, at Worthing. Late Dec. records were more widespread with peak counts of 52 W off Widewater, Lancing on 21st, 48 W off Galley Hill, Bexhill on 22nd and some 50 E off Selsey Bill on both 29th and 30th.

6. **LITTLE GREBE** (*Tachybaptus ruficollis*).—In Jan. 125 were reported from 13 localities of which 95 were seen on the major rivers and coastal and inshore waters, including maxima of 28 on the Cuckmere meanders, 21 in Bosham Channel and the unusually high number of 32 at Rye Harbour LNR. In Feb. numbers dropped to about 88 although the Cuckmere count remained at about 30; there were still 24 there on Mar. 25th.

During the breeding season 60 pairs were reported from 25 localities as follows:

Aldsworth Ponds	2*	Mannings Heath	1
Chidmere Pond	1*	Ifield Mill Pond	1
Pagham Harbour	5*	Weir Wood Res.	3-4*
Chichester G.P.	8*	Bewl Bridge Res.	2*
Forest Mere	3*	West Hoathly	1*
Cook's Pond, Milland	1*	Wiston Pond	1*
Furnace Pond, Fernhurst	1	Alexandra Park	1*
Steadham Sandpit	1	Shornden Res.	1*
Blackdown	1*	Darwell Res.	1
Selham (R. Rother)	1*	Pett Pools	1
Burton Pond	1	Royal Mill, Canal (Wincheba)	1
Chingford Pond	1	Rye Harbour LNR	12*
		E. Guildford Levels	4

Of the pairs marked * 35 were known to have fledged 73 young. At Chichester G.P. 8 pairs reared 14 young, at Pagham Harbour 5 pairs reared 11 and at Rye 5+ pairs on the Ternery Pool reared 11+ young. Successful breeding was recorded for the first time at Bewl Bridge Res.

Post-breeding season counts included 17 at Bewl Bridge Res. on Sept. 29th, 32 at Chichester G.P. on Oct. 4th, 12 at Widewater, Lancing on 27th and about 35 at Rye during July-Sept. The first in the Cuckmere were 3 on Sept. 9th, increasing to 31 by Oct. 29th and 45 by Dec. 16th. In Nov. and Dec. the overall counts rose to the relatively high levels of 192 and 138 respectively at 23 and 13 localities and included a max. of 32 at Bewl Bridge Res. on Nov. 16th.

7. **GREAT CRESTED GREBE** (*Podiceps cristatus*).—In Jan. and Feb. up to 32 were in the two western harbours but only 8 along the remainder of the coast. Inland, max. counts in Jan. and Feb. totalled 57 and 53 respectively, at 7 and 10 localities, and included 29 at Weir Wood Res. on Jan. 26th.

In spring little coastal movement was seen with only 5 at Beachy Head between Apr. 12th and May 14th and 4 at Selsey Bill between Apr. 12th and May 3rd. Singles E were reported from Worthing on Apr. 6th and Brighton Marina on May 14th but numbers off Church Norton varied from 3 on Apr. 3rd to 8 as late as May 24th. Off Clipping, 4 were seen on Mar. 26th and 2 remained until May 4th. A pair in full breeding plumage was still in Thorney Channel on May 16th.

Pairs were present at the breeding sites listed below; several other localities were not visited:

Chichester G.P.	12-4*	Ifield Mill Pond	1*
Burton Mill Pond	1*	Tilgate Pond	1*
Petworth Pk. Lake	3*	Horsted Keynes	1*
Petworth Pk. Pond	1*	Weir Wood Res.	c.8*
Lurgashall Mill Pond	1	Bewl Bridge Res.	1+*
Shillingee Lake	2-3	Eridge Park	1*
Loxwoodhills Pond	1	Wadhurst	1*
Warnham Mill Pond	1	Langney Point	1*
Knepp Lake	1+	Pett Pools	3*
Slaugham Mill Pond	1*	Rye Harbour LNR	4*

Although slightly better than last year the breeding season was again poor, the 40 pairs marked * being known to have fledged only 27 young. At Chichester G.P. 12 pairs reared 3; at Weir Wood Res. about 8 pairs reared a max. of 9 from 17 clutches; and only single young were reared at Petworth Park Lake (3 pairs, 4 clutches), Pett Pools (3 pairs) and Rye Harbour LNR (4 pairs).

After the main breeding season numbers at Weir Wood Res. rose steadily to a max. of 75 on Sept. 22nd. At the coast 12 were off Church Norton as early as July 12th but the Nov. and Dec. counts in the two western harbours produced totals of only 21 and 18 respectively, and only 3 were seen off Pett Level. Inland in Nov. and Dec. max. counts totalled 77 and 57 respectively at 7 and 6 localities, and included 13 at Darwell Res. on Nov. 9th and 16th and 43 and 26 at Weir Wood Res. on Nov. 9th and Dec. 6th.

8. **RED-NECKED GREBE** (*P. griseoga*).—Although seen in nothing like the exceptional numbers in early 1979 (Sx. B.R. 32: 10) the 13 recorded in 1980 was still considerably more than usual. The possibility cannot be ignored that some were returning after having first

come to the country under duress of the hard weather, particularly if at that time they were birds in their first year. It remains to be seen if Sussex might thus become a regular extension to their wintering range.

In Jan. one flew E off Selsey Bill on 5th (MJWH) and was probably the individual originally seen in late Dec. off Church Norton (Sx. B.R. 32: 11). One was present at Rye Harbour LNR from Feb. 20th to the end of Mar. (many obs.), and others in Chichester Harbour on Mar. 9th (KN) and off Church Norton on Apr. 3rd.

Church Norton provided the majority of the autumn reports with birds occasionally straying to Selsey Bill. The first was a summer-plumaged individual on Sept. 27th-28th (CBC, MAC, MRW). Possibly as many as 6 were present on Oct. 11th (MJWH, RML) and 3 were seen on 12th (CBC, RML, CM). Two were still to be found on 22nd (RML). Sightings of singles lasted until Nov. 5th (many obs.). In Dec. one was seen off Widewater, Lancing on Dec. 3rd (AJP) and one flew E off Pett Level on 7th (PWR).

9. **SLAVONIAN GREBE** (*P. auritus*).—At Church Norton up to 4 were seen during Jan., one of them occasionally at Selsey Bill, but during Feb. only occasional singles. On Mar. 1st, 19 appeared, 11 of which were still present on 2nd and 7 still on 30th. Possibly associated with this party were 2 in Chichester Harbour in late Feb., one there in late Mar., one off Shoreham on Mar. 17th and one at Chichester G.P. on Mar. 22nd-23rd. There followed further sightings of a single bird off Church Norton up to Apr. 5th and again on 27th but the latter was more likely a passage migrant. In the east one was at Rye Harbour LNR from Jan. 20th to Feb. 14th and was joined by another on Jan. 26th-27th. Possibly the same were 2 off Camber on Feb. 21st and one back at Rye on Mar. 3rd. Unusually no passage migrants were identified at Beachy Head during the spring but singles off Worthing on Apr. 12th, Galley Hill, Bexhill on 29th and Brighton Pier on May 3rd were doubtless passing through.

At the other end of the year singles off Goring on Sept. 21st and Church Norton on Oct. 9th were the only records until late Nov. when one was seen off Widewater, Lancing on 6th and 2 there on 14th. One appeared at Weir Wood Res. on 7th and 2 at Rye Harbour LNR on 30th. In Dec., 8 at Church Norton on 3rd had increased to 14 by 6th, but only 6 were to be seen by the end of the year. In the meantime 1-2 were in Chichester Harbour, and singles were seen at Bewl Bridge Res. on 14th and 26th-27th and Barcombe Mills Res. on 21st-22nd.

10. **BLACK-NECKED GREBE** (*P. nigricollis*).—Another good year for this species. After one at Langney Point on Jan. 19th and one off Shoreham on Jan. 21st-22nd, another appeared at the former on Mar. 29th. On Apr. 12th 3 were seen together off Ferring, one which later arrived at Worthing Pier from the W may have been related. On May 10th, one was identified off Seaford.

In autumn one was seen at Rye Harbour LNR on Aug. 1st but no further records came until Oct. with one at Widewater, Lancing on 7th and one inland at Bewl Bridge Res. on 26th. In Dec. 2 were seen off Church Norton on 6th and one off Pett Level on 7th. One off Worthing on 24th was the last for the year.

SLAVONIAN/BLACK-NECKED GREBE (*P. auritus/nigricollis*).—With an increasing number of observers sea-watching, records of indeterminate small grebes now deserve the same treatment as unidentified divers, although it is probable that most of the records related to Slavonian. They were as follows: In Mar., one W off Hove on 25th, 3 W off Selsey Bill on 29th and 3 W and 2 E there on 30th; in Apr., one E off Galley Hill, Bexhill on 5th, 2 E at Beachy Head on 12th and one E there and one E off Selsey Bill on 13th; in May, one E off Galley Hill on 2nd and 6 E at Seaford on 3rd. In autumn, one E off Selsey Bill on Oct. 19th and 2 W there on Nov. 15th; and one off Widewater, Lancing on Dec. 29th.

12. **FULMAR** (*Fulmarus glacialis*).—The species was present along most of the county's cliffs throughout Jan., and by Mar. observers were able to pinpoint apparent nest-sites. Breeding season reports were as follows: Rock-a-Nore, Hastings, at least 3 pairs; Beachy Head to Birling Gap, no count but 'evenly spread'; Seven Sisters, no count; Seaford Head, 2 pairs; Newhaven to Peacehaven, 13 occupied sites, 12 of them in holes, and 2 non-flying juveniles seen; Saltdean and Rottingdean, up to 5 sites; Portobello, 2 pairs.

Of perhaps only behavioural interest was the observation of several birds at Hove in April which were crossing the seafront to 'investigate' hotel frontages.

The last seen at Newhaven were on Aug. 27th; a general return to the cliffs was reported by late Dec.

17. **SOOTY SHEARWATER** (*Puffinus griseus*).—Two records: one flying E off Hove on July 30th (RJF) and one flying W at Selsey Bill on Oct. 10th (BJ, CMJ).

18. **MANX SHEARWATER** (*P. puffinus*).—First for the year were 2 E off Widewater, Lancing on May 8th (MRW). There were no further reports until mid-June when 2 flew W off Selsey Bill on 14th (DSF) followed by 6 E there on 16th and one E on 19th (JH). Also on 16th one W and 2 E were seen from Worthing and a further 7 E on July 1st (JAN).

On Sept. 15th one was found inland at Moorhead Farm between Horsham and Crawley and was released at Warnham Mill Pond the following day (SA, SWMH). On 21st singles flew W at Selsey Bill (DH, MJ *et al.*) and off Pett Level (PWR), the latter the only East Sussex record for the year. Late records were of one W off Selsey Bill on Oct. 10th (BJ, CMJ) and one E there on 19th (EL, OM, DS). A record of 29 W at sea off Goring on Nov. 20th (FJF, RJS) was quite exceptional.

22. **STORM PETREL** (*Hydrobates pelagicus*).—One was seen moving W off Shoreham Beach on Sept. 4th (BFF, NAS, MRW).

25. **GANNET** (*Sula bassana*).—Recorded in each month of the year, generally in small numbers but 100 were seen feeding off Selsey Bill on July 14th and a similar number off Langney Point on Oct. 16th. The long-distance feeding flights of this species naturally confuse attempts to quantify passage although at Beachy Head 130 moved E and only one W during Apr. 13th-May 18th. At Selsey Bill records indicated a change to westward movement after the end of June as shown below:

Month	mid Apr.-May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Passing E	67	46	54	13	21	1	0	2
Passing W	44	28	118	20	99	31	0	3

Most unusual inland, a 2nd-3rd year immature was seen at Bewl Bridge Res. on Aug. 8th. Equally unusual was the sight of an all white individual off Beachy Head on Sept. 21st. Three fatalities were reported—oiled birds found at Selsey West Fields on Nov. 29th and Bracklesham Bay on 30th, and an adult dead under powerlines at Sidlesham on 20th.

26. **CORMORANT** (*Phalacrocorax carbo*).—Recorded throughout the year. In the early months coastal parties were reported as follows: up to 27 at Chichester G.P. until Feb., 11 in Mar., 3 in Apr. and June; 20 or more in the Cuckmere; up to 40 on the Fairlight cliffs until late spring but only 11 by June; 40-50 at the Long Pit, Rye Harbour LNR—frequently fighting up the Rother, sometimes as far as Wittersham—but only 6, all immatures by the end of Apr. and into May.

During the latter half of the year, 45 were noted in Chichester Harbour on Oct. 18th; none was seen at Chichester G.P. until 8 in Nov.-Dec.; and 140-150 used the traditional tree-roost at South Stoke during Dec. At Newhaven a party of 26 was noted on July 30th and 15 were apparently cliff-roosting there in Sept. These were apparently associated with regular fighting up the Ouse and visits to Barcombe Mills Res. and may have been additional to 15 given to roosting on electricity pylons near Hamsay Church. On Dec. 6th 28 flew E at Rottingdean and on Oct. 29th 75 flew SW from Cuckmere Haven. At Fairlight, where the cliff-roost had increased to 51 by Sept., 95 were noted on Oct. 5th. At Rye Harbour LNR up to 20 were present in Dec.

Inland, the species was reported from most freshwaters through much of the year: up to 18 using a pylon roost NE of Steyning during Jan., with 9 still present on Apr. 26th; one at Knepp Lake, Horsham in Jan.; 4 imm. using a tree-roost at Ardingly Res. in Jan.; 4 at Darwell Res. from Jan. to at least Mar. 9th and again from Aug. 25th to Dec.; a max. of 25 at Bewl Bridge Res. in Jan. and 21 on Dec. 14th (but 3 shot by Southern Water Authority bailiffs); and at Weir Wood Res., 2-3 during Aug. and up to 4 during Dec. Other inland sightings included 4 flying W over Kithurst Hill on Mar. 1st, one N over Cissbury Ring on Oct. 12th and one flying to N over Horsham on Dec. 14th.

During 1980 a number of observers commented upon individuals apparently showing the characters of the Eurasian race *p. c. sinensis*, including one at Bewl Bridge Res. on Feb. 17th, 7 in the Cuckmere on Feb. 24th, one in Pagham Harbour on Mar. 2nd, one off Seaford Head on 30th and two at Rye Harbour LNR on Apr. 5th. According to *The Handbook* this race has occasionally been identified along the south coast, but Shrubbs (1979) could quote only two Sussex records, as long ago as 1936 and 1938. However, although white-headed individuals have been fairly regular in the county, especially in the Cuckmere, for some years, it is pointed out that old males of the typical race can also show these characters and identification must therefore depend on a green, not beige, gloss to the body plumage. As the eye-catching white head of *sinensis* is only to be seen in full breeding plumage, no true picture of the incidence of the race can ever be drawn. Observers wishing to study the matter in greater detail should refer to Ralph Stokoe's paper "The Spring Plumage of the Cormorant" in "British Birds" Vol. 51: 165-179 (May, 1958). Notwithstanding, the status of birds of this appearance in Sussex may well warrant further study and records based on full and careful observation will be welcome.

27. **SHAG** (*P. aristotelis*).—A total of about 37 as follows:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
1	1	—	7	—	—	—	1	3	12	4	6
(1)	(1)	—	7	—	—	—	1	3	12	4	6

The Feb. record was of one, long dead, found at Camber. The May total included a party of 5 at Beachy Head on 18th which possibly included other sightings during the period. An imm. at Selsey Bill on Aug. 30th was probably in the area until at least Oct. 9th. The Oct. total included a party of 7 at Weir Wood Res. from 13th. Of these, two imm. were found moribund on 18th and it was most interesting that one had been ringed at Ynys Gwylan Fawr, Aberdaron, Gwynedd, on June 9th, 1980. Also in Oct. an imm. was found dead, slightly oiled, at Bracklesham Bay on 5th and at Newhaven an adult with an injured foot was first noted on 30th, being hand-fed by anglers, and survived until at least the end of Dec. In Nov. a heavily oiled adult was found dead at Bracklesham Bay on 30th and in Dec. another near Selsey on 29th.

30. **BITTERN** (*Botaurus stellaris*).—Only two records—one at Arundel Wildfowl Refuge on Jan. 12th and one at Rye Harbour LNR on Feb. 23rd.

39. **HERON** (*Ardea cinerea*).—All known heronries were counted and nests certainly and probably occupied totalled 195 (214 in 1979) as follows: Fishbourne 28, Pagham 3, Parham 29, Henfield 13, Fittle 31, Knepp 13, Eridge 11, Priestnaws 2, Westham 2, Warling 13, Pevensey 2, Leasham 45, Nuthurst 0, Bewl Bridge disturbed by woodcutting and deserted. A new E. Sussex site had one nest in 1979 and 3 in 1980. 32 nests in 6 heronries were reported as probably or certainly not occupied, more than usual.

Largest numbers seen together outside the breeding season were c.40 at Weir Wood Res. and 20 at Thorney Deepes.

40. **PURPLE HERON** (*A. purpuraria*).—An imm. in the Cuckmere on Aug. 12th (ARLG, RR-G), and one seen over Steyning on Sept. 21st (SCJ, ARK). These were the 22nd and 23rd records for the county and have been accepted by "British Birds".

47. **BEWICK'S SWAN** (*Cygnus columbianus*).—During Jan.-Mar. the population at Amberley Wild Brooks remained from late 1979 at about the 50-55 level, but up to 73 were present on Jan. 25-26th. The Adur Levels at Steyning attracted more than usual, up to 12 in Jan. and 44 during early Feb. On Mar. 2nd 15 were seen flying SE at Ferring and the last report from Amberley was of 25 there on 10th. In the east of the county the only record was of 7 near Iden Lock on Jan. 6th.

The first in autumn were 4 at Amberley on Nov. 1st and 17 there on 2nd when 2 were also seen at Barcombe Mills Res.; by 30th 40 (including 11 imm.) were at Amberley. Early Dec. brought further arrivals, 4 visiting Arlington Res. on 7th, and 5 at Glynde Levels on 7-13th. Also on 13th the count at Amberley reached 93 but settled back to 56 on 14th and possibly only 30 by 24th. Two were on the Adur Levels at Steyning on 28th.

51. **WHITE-FRONTED GOOSE** (*A. albifrons*).—As in Dec. 1979 (Sx. B.R. 32: 16-17) rather more than usual were present early in the current year, including up to 10 visiting

Arlington Res. until Feb. 7th, a party of 36 moving E. at Langney Point, Pett Level and Rye on Jan. 20th, 4 in the Cuckmere on Feb. 25th, and 2 at Pulborough Brooks on Mar. 9th. Singles appeared from time to time in the Cuckmere, in the Pagham and Chichester Harbour area, at Barcombe Mills Res., Rye Harbour LNR and Amberley Wild Brooks but some may have been of captive origin.

At the end of the year an early party of 5 appeared at Ham Marsh, Sidlesham on Nov. 1st and 6 were at Pett Level from 2nd-9th. Throughout Dec. a party of 10 was in the Pagham-Chichester Harbour area and on 7th, a flock of 20 was seen moving W off Pett Level.

53. **GREYLAG GOOSE** (*A. anser*).—A feral group of up to 14 at Amberley Wild Brooks and others of up to 17 at Weir Wood Res., and 4 at Rye Harbour LNR were probably the sources of many other sightings in the county throughout the year. A pair at Petworth Park raised two young.

55. **CANADA GOOSE** (*Branita canadensis*).—Numbers in the Arun Valley at the start of the year were still high, reflecting the abnormal movements seen in Dec. 1979 (Sx. B.R. 32: 17). Later in the year substantial flocks were seen at both Arlington and Bewl Bridge Reservoirs. The max. counts at the main localities throughout the year were as follows:

	Jan.-Feb.	Aug.-Oct.	Nov.-Dec.
Chichester G.P./Pagham Harbour	96	150	107
Arun Valley (Pulborough to Arundel)	410	200+	200-
Petworth Park	350	250+	400
Knepp Lake	52	34	90
Warrnam M.P.	48	177	55
Adur Valley	150	18	—
Bewl Bridge Res.	195	444	512
Weir Wood Res./Ardingly Res.	110	82	25
Arlington Res./Hersimoneux	206	450	?
Barcombe Mills Res.	94	4	124
Darwell Res.	79	9	28
Rye Harbour LNR/North Point	48	170	93

During the breeding season 82 pairs were present at 44 known or potential breeding sites; at least 65 attempted to breed. Success was relatively low with 52 pairs known to have fledged only 204 young (av. 3.9). At Chichester G.P. 12 pairs reared 54 young, at Weir Wood Res. 5 reared 22 and 4 pairs at Petworth Park reared only 10 young as at least 6 other nests were destroyed by deer. No information was received from the important site at Pliashett Park.

Observers are asked to make counts at the principal gathering places in late afternoon when maximum numbers may be expected. Precise brood sizes, sometimes difficult to ascertain when more than one pair is present, are also required and also any information on culling or transportation.

56. **BARNACLE GOOSE** (*B. leucopsis*).—Reports of probable escapes, usually associating with parties of Canada Geese, came from most parts of the county and even the status of occasional winter individuals feeding with Brents in the west was rendered questionable through the existence of a free-flying collection of 20 at Arundel Wildfowl Refuge.

57. **BRENT GOOSE** (*B. bernicla*).—The Jan. 19th count in Pagham and Chichester Harbours was 12,202 and that on Feb. 16th, 10,073. The Jan. and Feb. counts for the combined Sussex and Hampshire harbours amounted to 20,621 and 16,983 respectively, compared with 15,172 and 11,934 for the equivalent counts in 1979 thus showing a further spectacular increase in the numbers coming to these havens to winter. Records of grazing flocks appeared to be on the increase elsewhere in the county. In the Cuckmere, where the species was once no more than very occasional, up to 30 were present in Jan. and Feb., with 103 on Jan. 6th and in Mar. 250 put in off passage on 20th, 177 of them remaining until 22nd and 23 to 25th. At Pett Level too, the species was rarely absent, with up to 14 in Jan., 6 in Feb. and, as in the Cuckmere, large numbers stopping off passage in Mar. with a max. of 540 on 23rd. No parallel observations came from the coastal strip of Pevensey Levels.

Eastwards movements, starting as usual in mid-Jan. and lasting until mid-May were widely reported along the whole coast and peaked in March. At Worthing-Lancing 3,222 E

were logged between Jan. 1st and May 24th, 3,056 of them in Mar. The last migrant at Selsey Bill was on May 26th but one was still in Pagham Harbour on June 14th.

First in autumn were 3 E off Shoreham on Sept. 21st and 3 W (the same?) off Worthing on 23rd. In Pagham Harbour the first 4 appeared on 25th and at West Chidham, 6 on 26th. On 27th a total of 121 W was logged at Worthing. Equally early for such numbers was a steady build-up to 185 at West Chidham by Oct. 18th and 780 were there by 29th, albeit including only 4 juveniles. During this period peak westward movements of 953 on Oct. 12th and 598 on 26th had been recorded at Selsey Bill and it was also of interest that at Bewl Bridge Res. 30 moved S on Oct. 16th, 300 on 30th and a further 330 on Nov. 2nd. Spring or autumn the day or nighttime movements of this species, coasting or overland, present a most confusing picture. The Nov. count in the two western harbours totalled 6,052 and that in Dec. 8,588 compared with 10,994 on Dec. 22nd, 1979.

On Jan. 22nd an individual was seen in Pagham Harbour with as yet untraced bright yellow rings on each leg. Also in Pagham Harbour, individuals of the pale-bellied race *b. b. hrota* were identified on Jan. 9th (1), Feb. 2nd (2) and Dec. 23rd (1).

The problem of grazing on farmland in the Chichester Harbour area was again monitored during both winter seasons. As already mentioned (Sx. B.R. 32: 64-65) the results of a special study are to be published elsewhere but in the meanwhile it is an undoubted relief to learn that the Brent Goose is averse to the sight of large blue plastic bags flapping in the wind and it is fervently to be hoped that this will remain so.

61. **SHELDUCK (*Tadorna tadorna*)**.—The Jan. and Dec. wildfowl counts produced totals of 2,582 and 1,871 respectively, the former rather above average (the Feb. count being similar at 2,592), but the latter very much on a par with 1977-78 figures. Only one record came from inland—of 2 at Ardingly Res. on Jan. 16th.

During spring passage at Selsey Bill only 53 E and 13 W were seen between Mar. 30th and May 17th whilst at Worthing-Lancing 164 E and 61 W were logged, on 28 dates, in Apr.-May. At Beachy Head the total was 132 E on 12 days, Apr. 12th-May 18th. On Apr. 8th and 24th and May 29th-31st two were seen at Bewl Bridge Res. and 5 on May 12th.

At known breeding localities the max. counts of young were as follows:

Chichester Harbour	.....320	Newhaven	.....5
Chichester G.P.	.....17	Cuckmere	.....17
Pagham Harbour	.....184	Rye Harbour LNR	.....11
Houghton-Arundel	.....10	Rye area	.....52

A sample of 15 pairs at Chichester Harbour produced an average brood size of 6.8. At Houghton-Arundel 5 pairs were present but only one was known to have bred. The figure for Rye Harbour LNR is for young reared to flying stage from the only three broods—a poor result.

Autumn records inland came from Arlington Res. on Nov. 10th, Weir Wood Res. on 30th, Darwell Res. on Dec. 14th and Bewl Bridge Res. on Nov. 4-5th (2) and 30th.

63. **MANDARIN (*Aix galericulata*)**.—During the year reported from Alfriston, Balcombe, Bayham, Crawley (Buchan and Tilgate Parks), East Grinstead (Moat Pond), Eridge Park, Horsham (Birchen Bridge Pond), Lower Beeding, Mannings Heath (Roosthole Pond), Old Heathfield, Petworth Park, St. Leonard's Forest (hammer Pond), Shillinglee Lake and Slaughter Mill Pond. Bred successfully at the Hammer Pond and Petworth Park. See Sx. B.R. 32: 72-76 for the current status in the county.

64. **WIGEON (*Anas penelope*)**.—The Jan. and Feb. wildfowl counts produced totals of 2,602 and 1,534 respectively compared with the equivalent 1978 counts of 1,967 and 2,135 (those in 1979 being unusually inflated by the cold weather). Small numbers were present until early Mar. at several localities but 100 were still at Amberley Wild Brooks on 21st. 5 at Rye Harbour LNR on Apr. 5th and a drake at Weir Wood Res. on May 18th were the last for the spring.

In July one appeared at Chichester G.P. on 9th and remained throughout Aug. One had arrived at Rye by Aug. 22nd, 4 each were seen at Pagham Harbour on 25th and Bewl Bridge Res. on 27th and 10 were on Pett Level by 31st. A more general arrival took place during mid/late Sept. and again during cold weather in early Nov. to bring the wildfowl count for that month to 1,332. The Dec. figure was a thoroughly average 2,650.

67. **GADWALL (*A. strepera*)**.—The Jan. and Feb. wildfowl counts produced totals of 123 and 62 respectively and those of Nov. and Dec. 102 and 124, all being well within the average for the county in recent years. The principal localities were the Arundel area and Chichester G.P. During the spring migrants were noted at several coastal localities from mid-Mar. to early May, including a party of 8 E at Beachy Head on May 3rd. A pair displaying at Rye Harbour LNR in early May gave rise to vain hopes of breeding: at Arundel park a pair hatched 6 young.

69. **TEAL (*A. crecca*)**.—The Jan. and Feb. wildfowl counts produced totals of 2,953 and 1,821 respectively, compared with the equivalent 1979 counts of 3,272 and 2,747 which were well above average. The principal counts were in the two western harbours, Amberley Wild Brooks and Glynde Levels.

During May and June the species was seen at Horse-Eye Level, Greatham Bridge and Pulborough North Brooks, Sidlesham, Chichester G.P., Langton Green sewage works. East Guldeford Level and Weir Wood Res. but without evidence of breeding. At Forest Mere in the NW of the county, two pairs bred, rearing 6 and 7 young.

At the end of the year the Nov. and Dec. wildfowl counts produced totals of 2,451 and 2,955 respectively.

70. **MALLARD (*A. platyrhynchos*)**.—The Jan. and Feb. wildfowl counts produced totals of 4,336 and 2,266 respectively, compared with the equivalent 1979 counts of 5,516 and 3,222 which were well above average.

Rather early broods were seen at Sidlesham Ferry on Apr. 6th and Combe Pond, Rogate on 19th. At least 30 broods were noted at Bewl Bridge Res. By Aug. 20th some 750 were feeding on stubble at North Stoke.

The Nov. and Dec. wildfowl counts produced totals of 3,316 and 4,016 respectively.

72. **PINTAIL (*A. acuta*)**.—The Jan. and Feb. wildfowl counts produced totals of 382 (4 localities) and 197 (5 localities) respectively, compared with equivalent 1979 counts of 207 and 348. As usual most were in the two western harbours. In general the species was widely reported and the largest counts elsewhere were of 200 on Amberley Wild Brooks on Jan. 9th, 30 flying W at Pett Level on 19th and 25 on the Adur Levels at Steyning on Feb. 17th.

Spring passage records included a party of 12-13 passing E on Mar. 18th which was seen at both Worthing and Brighton Marina, a further 10 E at Worthing on 19th, 12 E off Hove on 25th and, on Apr. 4th a party of 4 seen successively at Selsey Bill, Worthing and Beachy Head. Unfortunately the time of observation was noted in one instance only and a good opportunity to measure the speed of passage was lost. The last in spring were 2 E at Beachy Head on May 10th and 2 at Pett Pools on 16th.

After a suspect tame individual at Weir Wood Res. during Aug. 12-23rd, 2 appeared at Rye Harbour LNR on Sept. 19th. By 27th the Chichester Harbour count stood at 45 and the Oct.-Dec. counts for the two western harbours totalled 27, 111 and 318 respectively. Main arrivals may have been in mid-Oct. as suggested by reports of 40 W in 2 hours at Langney Point on 16th and 17 W there on 26th.

73. **GARGANEY (*A. querquedula*)**.—First in spring were a drake at Pett Pools on Apr. 5-7th and a pair E at Beachy Head on 13th. Subsequent records were of a drake at Hammerport on 15th, a pair at Church Norton on 16-17th and drakes at Sidlesham Ferry on May 3-4th, Rye Harbour LNR on 3-7th and another there on 19th. At Beachy Head a further record was of a drake E on May 18th and a drake was at a Chichester Harbour locality on 26th.

The only autumn records were of up to 3 at Rye Harbour LNR between Aug. 23rd and Sept. 17th and one at Darwell Res. on Sept. 16th.

75. **SHOVELER (*A. clypeata*)**.—The Jan. and Feb. wildfowl counts produced totals of 543 and 314 respectively, compared with the equivalent 1979 counts of 408 and 329. As usual most were at Chichester G.P. but 150 were at Rye Harbour LNR in Jan.

Spring passage numbers at sea-watching sites were low, totalling only 13 E at Selsey Bill, 38 E at Worthing and 14 E at Beachy Head.

During the summer months 1-3 were seen, usually briefly, at a number of coastal and inland localities. In the Sidlesham area 5 pairs were present throughout but there was no

evidence of breeding and a similar situation existed at Rye Harbour LNR though fewer birds were involved.
At the end of the year the Nov. and Dec. wildfowl counts produced totals of 185 and 234 respectively.

76. **RED-CRESTED POCHARD** (*Netta rufina*).—The drake at Darwell Res. in late 1979 (Sx. B.R. 32: 20) was again seen on Jan. 6th. Two drakes briefly visited gravel pits near Eastbourne on Mar. 1st and a female appeared at Tilgate Park, Crawley on Apr. 4th. At the end of the year a drake was at Bewl Bridge Res. from Nov. 16th to at least Dec. 31st and an immature drake at Barcombe Mills Res. on Nov. 15-23rd. As usual none can be regarded as certainly of wild origin.

77. **POCHARD** (*Aythya ferina*).—The Jan. and Feb. wildfowl counts produced totals of 815 and 541 respectively, somewhat below average compared with the equivalent 1979 counts of 1,056 and 1,009.

Apart from the occasional drake or pair, most waters had been vacated by early May. Up to 8 remained at Chichester G.P. during the breeding season but no young were seen. At Rye Harbour LNR up to 14 were present during June-July and one pair raised 2 young. Rather unexpectedly a pair was found to have bred at Forest Mere in the NW of the county, rearing 4 young.

Winter populations built up during late Oct. and the Nov. and Dec. wildfowl counts produced totals of 780 and 848 respectively.

79. **FERRUGINOUS DUCK** (*A. nyroca*).—After a female at gravel pits near Eastbourne on Jan. 6th and possibly the same at Arlington Res. on 12-13th, a possible female was identified at Rye Harbour LNR on 26th. The drake at Arundel Wildfowl Refuge previously reported as remaining into Feb. (Sx. B.R. 32: 20) was joined by a hybrid Ferruginous x Pochard on Jan. 26-27th. In autumn a female was again identified near Eastbourne on Oct. 12th.

80. **TUFTED DUCK** (*A. fuligula*).—The Jan. and Feb. wildfowl counts produced totals of 1,312 and 1,205 respectively compared with equivalent 1979 counts of 985 and 956 which in themselves were average.

During the breeding season the species was under-reported from some traditional sites but found at some new ones. Pairs were recorded as follows (numbers of young in parentheses):

Aldsworth Pond	10	Rye Harbour LNR	15 (c.34)
Petworth Park	3? (4)	Weir Wood Res.	3
Burton Water	3?	Forest Mere	4+(18)
Chichester G.P.	25+(151)	Hammer Pond, Chithurst	1
Amberley Wild Brooks	2+	Ebernoe Common	1
Graveley Manor	1 (4)	Cook's Pond, Milland	2
Golden Cross	1	Unnamed water, near Rake	1
Barcombe Mills	1+(7)	Shillingale Lake	1
Brede Valley	1 (6)	Cotchet Fishery (Black Down)	3 (3+)
Darwell Res.	2	Wadhurst Park	1 (2)
E. Guildford	1 (3)	Bewl Bridge Res.	1 (3)
Pett Pools	1 (3)		

At Chichester G.P. the survival rate was considered calamitous, possibly due to predation by pike. At Bewl Bridge Res. young were hatched on a raft provided on the Nature Reserve. At the end of the year the Nov. and Dec. wildfowl counts produced totals of 1,063 and 1,052 respectively.

81. **SCAUP** (*A. marina*).—There were fewer records than usual. On the coast up to 4 remained at Pagham Harbour into Apr. and a pair was seen off Pett Level on 6th. Inland, singles appeared at Chichester G.P. on Feb. 28th and Weir Wood Res. on 29th. Although not without precedent, a drake at Rye Harbour LNR on July 13-18th was unexpected as were 3 individuals there on Sept. 18-19th. In the autumn a party of 4 well inland at Ardingly Res. on Oct. 25th was noteworthy, and one visited Weir Wood Res. on Nov. 10th. Along the coast there were 4 records of singles in Oct.-Dec. and 3 immatures were seen at Langney Point on Nov. 9th.

82. **EIDER** (*Somateria mollissima*).—Approx. monthly totals were as follows:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
29	25	54	69	9	32	—	5	8	7	24	96

Most Mar. reports referred to birds moving E but May passage was poor. About 30 were in the Selsey Bill area in June. A considerable increase took place in late Dec. when the count at Newhaven rose to 21. At Widewater, Lancing, counts of 40 on 21st and 50 on 22nd possibly involved the same group as 42 in Chichester Harbour on 26th.

86. **LONG-TAILED DUCK** (*Clangula hyemalis*).—A good year for the species. At Darwell Res. a female, first seen on Dec. 16th, 1979 (see Additions to 1979 Report) remained until at least Jan. 13th and a drake at Scotney Court gravel pits, Camber, present from at least Jan. 21st was last seen on Apr. 26th. In Feb. one was at Chichester G.P. from 10th to at least 23rd and possibly the same was there on Mar. 10th whilst in Chichester Harbour, 3 (one drake) were seen also from 10th to at least Mar. 16th. On Mar. 4th 2 flew E. at Seaford Head. In Apr. a drake was offshore at Worthing on 6th and 12th and at Selsey Bill one passed E on 13th and 2 on 22nd. Another was noted passing E there on May 3rd and on 17th a female was seen in Chichester Harbour.

Towards the end of the year an immature was at Chichester G.P. from Oct. 30th to Dec. 28th and on Nov. 2nd a pair flew E off Pett Level. On 14-15th a female or immature visited Widewater, Lancing and a female appeared at Pagham Harbour on 15th, remaining until at least 23rd. On 29-30th an immature was at North Point G.P., Camber. Finally a female visited the Cuckmere on Dec. 1st and one was seen at various places in Chichester Harbour from 16-21st.

87. **COMMON SCOTER** (*Melanitta nigra*).—During Jan.-Feb. up to 200 were present off Pett Level and on Jan. 19th, 50 E were seen off Brighton.

During spring passage only 1,760 E were seen at Selsey Bill between Mar. 30th and June 1st with a max. of 709 E on Apr. 12th. At Worthing-Lancing 4,268 E were logged during 292 hours of observations on 48 dates between Mar. 5th and May 31st, with a max. of 1,632 in 6 hours on Mar. 23rd. At Hove, 1,331 E were recorded in 4½ hours on Apr. 12th and at Brighton Marina 3,222 E were noted in 38 hours of observations between Mar. 18th and May 9th with a max. of 1,562 E in 3 hours on Mar. 23rd. As usual Beachy Head produced the heaviest numbers with 8,401 in only 139 hours of observations between Mar. 23rd and May 18th with maxima of 3,966 in 5 hours on Mar. 23rd and 1,640 in 5½ hours on Apr. 12th. (See tables on pp. 31-33 for full details).

June records came from several localities along the coast including 10 E of Brighton Marina on 11th and a total of 55 W and 14 E at Selsey Bill where 168 W and 7 E were logged during July. By Nov. 50 were again off Pett Level and on 7th 43 W were noted at Worthing. Small movements were noted at Selsey Bill between then and the end of the year whilst at Pett the Dec. max. rose to only 60 but off Widewater, Lancing reached 75.

Inland records were of 4 at Weir Wood Res. on Mar. 18th, 3 at Bewl Bridge Res. on Apr. 2nd and 5 at Chichester G.P. on June 19th.

89. **VELVET SCOTER** (*M. fusca*).—In Jan. one was off Pett Level on 20th and another in Pagham Harbour on Feb. 2nd. Off Pett 10 were present on Mar. 9th and 5 on Apr. 6th. During spring passage 51 E were noted at Selsey Bill between Apr. 12th and May 11th with a maximum of 38 on Apr. 12th; at Worthing-Lancing, 22 E on 5 dates between Mar. 19th and May 11th; at Bognor, 1 W on Apr. 20th and at Hove 2 E on 11th. At Beachy Head, 116 E were noted on 8 dates from Mar. 23rd to May 11th with maxima of 48 on Apr. 12th and 30 on May 3rd. A party of 7 at Brighton Marina at 0545 hrs on 11th was seen at Beachy Head at 0628, giving a ground speed of approx. 33 kph.

More than usual were seen towards the end of the year—2 in Rye Bay on Oct. 12th, 2 W at Selsey Bill on 17th and 5 W off Worthing on 31st. In Nov. 1-3 were reported from Selsey Bill, Bexhill and Shoreham and 8 off Pett Level on 9th. On Dec. 4th 2 flew W at Selsey Bill, on 28th 3 were still off Pett Level and off Widewater, Lancing a feeding party first noted on 4th numbered 15 from 5th to 21st.

91. **GOLDENEYE** (*Bucephala clangula*).—The Jan. and Feb. wildfowl counts produced totals of 76 and 65 respectively, the majority being in Chichester Harbour (46: 53) but 13 and 7 were at Rye Harbour LNR.

Spring passage records were of 3 E at Worthing on Mar. 19th, 2 E there on 25th and 2 E at Beachy Head on 23rd. A few remained in the county until early Apr. and the last were single males at Rye until 14th and Pagham Harbour on 17th.

First in autumn was one flying E at Selsey Bill on Oct. 12th after which there was a scatter of records throughout the county until the end of the year. The Nov. and Dec. wildfowl counts could muster no more than 20 and 29 respectively.

93. **SMEW** (*Mergus albellus*).—Although increasingly common in recent winters it is possible that unusual numbers during the current year involved at least some returning individuals from the hard spell at the start of 1979. Again the emphasis was in the E of the county.

In mid-Jan. a minor influx occurred with 2 redheads on pits near Eastbourne on 12th, a drake and 4 redheads at Bewl Bridge Res. and a redhead at Weir Wood Res. on 13th and a drake and 2 redheads at Pagham Harbour on 14th. Probably one of the Eastbourne individuals visited the Cuckmere, Arlington Reservoir and Piddinghoe Pond on various dates up to 21st but then remaining in the Cuckmere until Feb. 10th. At Bewl Bridge Res. varying numbers were noted, possibly coming from Kent waters, one drake being present until Feb. 11th and 2 on 3 dates Jan. 17th to Feb. 8th and up to 5 redheads also until Feb. 11th. On Jan. 20-26th the redhead at Weir Wood Res. was joined by another and one was at Pett Pools on 20th. The last for the winter was a further redhead there on Mar. 9-10th.

In Dec. a redhead appeared at Bewl Bridge Res. on 6th and possibly another was at Eastbourne and Arlington Res. on 7th and again possibly the same in the Cuckmere on 8th. On 10th one was noted at Pagham Lagoon where it stayed into 1981 and on 15th a redhead most unexpectedly visited Knepp Lake, Horsham.

94. **RED-BREASTED MERGANSER** (*M. serrator*).—Casual counts in Jan. totalled 87 and in Feb. 73, the max. being 53 off Ferring on Jan. 19th. Good numbers continued to be reported off the coast from Shoreham to Climping throughout Mar. and there were regular counts of 50-70 off Worthing in early Apr., the latter perhaps including some passage migrants.

During spring passage a total of 150 E and 49 W was noted at Selsey Bill between Mar. 29th and May 25th with a max. of 47 E on Apr. 12th. At Worthing-Lancing birds passing E in Apr. and May totalled 98 whilst at Beachy Head 202 passed E on 13 dates between Mar. 23rd and May 18th.

After two June reports—of a pair in Pagham Harbour on 2nd and of 10 redheads visiting Chichester Channel on 27th, there were no reports until Sept. when singles were seen at Worthing on 3rd, Church Norton on 12th and Selsey Bill on 21st. By 27th, 6 were at Widewater and on 28th, 26 flew W at Selsey Bill. The species was widely reported along the coast thereafter and on Oct. 26th 4 E and 52 W were logged at Selsey Bill. About 96 were present along the coast by late Dec.

There was one inland record—a redhead at Weir Wood Res. on Oct. 18th.

95. **GOOSANDER** (*M. merganser*).—Drakes appeared at the Cuckmere on Jan. 1st, Darwell Res. on 27th and at Rye Harbour LNR on Feb. 20th and redheads at Barcombe Mills Res. on Jan. 13th and Bewl Bridge Res. on Feb. 2-19th. During spring sea-watches a redhead flew E at Beachy Head on Mar. 23rd and a drake and 2 redheads at Hove on Apr. 12th.

In autumn drakes were seen at Ardingly Res. on Nov. 28th, Chichester G.P. on Dec. 3-4th, flying N over the Downs near Lewes on 7th and at Barcombe Mills Res. on 14th and 27th. An immature drake most unusually found the moat at Herstmonceux Castle a suitable place to seek food on 15th. Redheads appeared at the Cuckmere on Nov. 30th, Arlington Res. on Dec. 6th, Barcombe Mills Res. on 7th, the Cuckmere again on 16th and Pett Pools on 28-29th, all possibly involving the same individual amongst this most restless of species.

96. **RUDDY DUCK** (*Oxyura jamaicensis*).—Although the species remained in evidence no further breeding was proved and the number of records did not significantly increase. A male was at Chichester G.P. throughout the year and was in the company of a female on Jan. 13th and Aug. 3-9th. At Weir Wood Res. a pair was seen displaying between Apr. 28th and May 5th; a female reappeared there on Dec. 27th and remained into 1981. At Rye

Harbour LNR a pair was seen on Jan. 6th only and at nearby Pett Pools a pair was present on Aug. 3-5th, the female remaining to about 9th. As some discrepancies are occurring, observers are asked to take particular care over ageing and sexing this species.

97. **HONEY BUZZARD** (*Pernis apivorus*).—One flew S at Beachy Head on Sept. 27th (JFC *et al.*).

98. **BLACK KITE** (*Milvus migrans*).—One was seen near Chantconbury Ring on July 12th and early on 13th (JAN, AS, RJS *et al.*). What was probably the same was well seen as it flew W at Sidlesham Ferry later that day (CM *et al.*) and again near Emery Down in Hampshire during the afternoon. The record constituted the 4th for the county, all since 1970, and has been accepted by "British Birds".

99. **RED KITE** (*M. milvus*).—One picked up dead at Fernhurst in Apr. (ALW) had been poisoned, the third such incident in the county in 12 months. Readers' attention is drawn to A. J. Prater's note on this subject in the Society's spring 1981 Newsletter, no. 76. The Fernhurst individual had been poisoned by alphachloralose and the two in 1979 by mevinphos, the latter an agricultural seed-dressing which, ironically, replaces the now restricted dieldrin. To use either alphachloralose or mevinphos in baits likely to be taken by birds of prey is illegal and there is no possibility that the latter could be taken by a kite in any other way. Every assistance should be given to the R.S.P.B. to stop this abuse.

Happier reports were of birds on the wing at Alfriston on June 5th (VAW) and Sidlesham on Nov. 3rd (NP-H, JVS).

103. **MARSH HARRIER** (*Circus aeruginosus*).—In a most exceptional year for the species, 25 were reported between Mar. 10th and Sept. 21st. Approx. monthly totals of identifiable males and others were as follows:

	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.
Adult males	1	1	1	1	1	1	2
Imm. males	1	1	6	1	1	2	2
Others	1	1	1	6	5	5	4

Most occurred in the periods Apr. 29th to May 8th (4), May 24th to June 1st (4), Aug. 24th to Sept. 10th (10) and Sept. 20-21st (3). All except singles near Henfield on Apr. 13th and at Burton Park on Aug. 25th were on the Downs or along the coast.

104. **HEN HARRIER** (*C. cyaneus*).—In the early months singles were wintering at Alfriston, Pett Level, Parham Park and adjacent Downs, and Glynde Level. 7 or 8 others were recorded between Jan. 1st and Apr. 14th some of which may also have wintered but the records do not confirm this. Of the 11-12 reported, 6-7 were adult males, an unusually high proportion. At the end of the year passage migrants were reported from Oct. 12th and apparently wintering individuals were subsequently reported from Chichester Harbour (2—one male), Sidlesham/Pagham Harbour (2), Balsedean and Ashdown Forest. Approx. monthly totals for the year were as follows:

	Jan.	Feb.	Mar.	Apr.	Oct.	Nov.	Dec.
Adult males	1	1	3	2	1	1	1
Ringtails	5	4	4	2	2	6	5

105. **MONTAGU'S HARRIER** (*C. pygargus*).—An unusual autumn influx. On the Downs between Worthing and Brighton there were 3 or 4 between Aug. 24th and Sept. 6th (many obs.), the same period as the first autumn influx of Marsh Harriers (*qv*). How much ground these birds covered is difficult to establish but most probably there were 4 different individuals. Earlier one was seen at Rye Harbour on July 29th (RHK, RS) and one at Thorney Island on Aug. 18th (CBC, MAC). One was present around Sidlesham from Sept. 17th-23rd (many obs.) and another was seen at Cissbury on the 22nd (RJS); again these birds coincided with an arrival of Marsh Harriers.

108. **SPARROWHAWK** (*Accipiter nisus*).—In the breeding season 39 occupied territories were reported (a minimum of 3 sightings during the period Mar.-Aug. being taken to signify occupation) and individuals were located at 43 other sites. Breeding was proved for 17 pairs of which 8 fledged at least 19 young and one failed; an average brood size of 2.1 or more being fairly satisfactory. The species is now clearly well-distributed throughout the county although there have been few reports east of a line from Eridge to Eastbourne. Population densities have been difficult to estimate as much of the picture is pieced together

from incidental observations. However, many such records from well-watched areas form clusters when mapped, in which pairs or birds are spaced 1.6 to 3.2 km apart (average 2.8), suggesting minimum densities of one pair per 600-700 ha. This implies a county population of over 600 pairs, double that indicated by Shrubbs (1979). It is important to monitor this species fairly closely and some accurate density figures for defined areas, preferably 10 km squares, would be of great value.

During the winter 48% of the breeding season localities were found occupied, again mainly through incidental observations, and individuals were noted at 16 other sites. As the species tends to be highly parochial, such additional localities are worth checking during the breeding season.

109. **BUZZARD** (*Buteo buteo*).—The year presented a confused picture: approximate monthly totals were as follows:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
1	—	2	2	6	1	2	5	5	7	—	—

A total of 17-20 individuals was apparently involved and the table suggests one or two birds summering and the remainder on passage. However, mapping of records indicated the possible presence of residents in 3-4 areas, accounting for over 60% of the year's reports. However, without details of observer activity an accurate interpretation of the data is not possible. The exact status of this species in the county needs further study. Readers' attention is drawn to A. J. Prater's note in the spring 1981 Newsletter (see Red Kite) on the Buzzard's vulnerability to poisoned baits.

The Jan. record was at Rye Harbour LNR on 5th. Four records along the coast between Aug. 31st and Oct. 26th probably related to migrants.

113. **OSPREY** (*Pandion haliaetus*).—Spring records were of singles at Arlington Res. on Apr. 15th (AV) and off Shoreham on May 12th (AJP, MRW). In the autumn singles were seen at Pagham Harbour on Aug. 20th (BJ, CMJ), Bewl Bridge Res. on Aug. 31st to Sept. 6th (per PCB) and at Camber on Sept. 24th (MJH).

115. **KESTREL** (*Falco tinnunculus*).—In the breeding season 93 occupied territories were reported (a minimum of 3 sightings during the period Apr.-Aug. being taken to signify occupation) and there were reports from 52 other areas. Densities in the Horsham area were considered unchanged from 1979. At Sidlesham and on the Worthing downs an apparent increase to densities of 3.2 and 3.0 pairs per 2,500 acres (10 sq km) may have been partly due to local shifts in distribution round and in study areas. Breeding success was apparently marginally higher than in 1979, 31 pairs being known to fledge 55 or more young, an average brood size of 1.8 or more; 3 pairs (9%) failed. All records were plotted on maps and it was then possible to estimate spacing for 79 occupied territories which averaged 2.1 km apart. Extrapolated for the whole county this figure gives an average density of 2.8 pairs per 2,500 acres (10 sq km) or a county population of about 1,150 pairs. This, however, may be too high as a calculation on the density figures stated above provides a perhaps more realistic 800 pairs. Nevertheless, both calculations confirm a substantial increase, of not less than 33% since 1967.

No large autumn gatherings were reported this year and migrants were few, with singles arriving at the coast at Selsey Bill on Apr. 12th and May 1st, and leaving there on Oct. 4th, and 3 passage individuals noted at Findon on Oct. 8th (RJS).

118. **MERLIN** (*F. columbarius*).—Seven recorded between Jan. 1st and Apr. 6th and 11-12 between Sept. 6th and Dec. 31st. Monthly totals were:

Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
4	4	5	1	5	7	4	2

All records were of single birds on the Downs or coast, except for one in the Adur Levels in the early months and one at Bewl Bridge Res. on Jan. 15th.

119. **HOBBY** (*F. subbuteo*).—Six pairs were proved to breed, rearing 10-11 young. An unusual number of migrants recorded at the coast between Apr. 27th and Oct. 10th, approximate monthly totals being:

Apr.	May	June	July	Aug.	Sept.	Oct.
1	11	3	1	6	18	3

123. **PEREGRINE** (*F. peregrinus*).—Singles at Beachy Head on Sept. 20th (JFC *et al*) and Cissbury on the 27th (per ARK) were the only acceptable records.

131. **QUAIL** (*Coturnix coturnix*).—During the summer the species was reported from 5 Downland sites. Although present at one until Aug. 22nd and another until 28th, breeding was not proved.

136. **WATER RAIL** (*Rallus aquaticus*).—The species was reported from only 10 coastal and inland localities during Jan.-Mar., perhaps reflecting the mild weather. Six were located on Brede Levels on Jan. 27th. A spring migrant was glimpsed in Hampden Park, Eastbourne, on Apr. 10th and one was at Pett Pools on 13th. At Arundel Wildfowl Refuge at least one was present from 3rd to 17th and again on May 14th and Aug. 24th whilst at Pond Leigh the species was encountered on Apr. 10-19th and July 15th. On June 7th one was noted at Heath Common, Storrington and on Aug. 19th an adult and two juveniles were seen in the upper Cuckmere area. Breeding was proved and young heard at a site on the Brede Levels and the species was present at one other site in the east in late May. Overall, breeding season records were more widespread than in recent years.

Towards the end of the year a stranded night migrant was found at a dew pond on top of the Downs near Seaford on Oct. 4th and up to 15 were present at Arundel Wildfowl Refuge on 20th; at least 7 were still there on Dec. 22nd. In general, reports suggested an arrival in the county in mid-Nov.

142. **MOORHEN** (*Gallinula chloropus*).—During the breeding season 7 pairs were noted in the vicinity of the 8 km of the Bluebell Railway whilst at Chichester G.P. 14 adults and 8 young were counted on June 15th and 24 adults and 15 young on Aug. 24th. On Brede Levels a drastic decline was reported, estimated at 50% down on the 66 pairs of 1979, low water levels and presence of 3 Mink being the suspected causes.

During the year regular counts at Chichester G.P. by CRJ produced 107 on Feb. 3rd, 56 by Mar. 1st and 16 in Apr.-May, 42-44 in Sept.-Nov. but 123 by Dec. 28th.

145. **COOT** (*Fulica atra*).—Maximum counts reported during Jan.-Mar. and Oct.-Dec. were as follows:

Chichester G.P.	Jan.	Mar.	Oct.	Dec.	Barcombe Mills Res.	Jan.	Mar.	Oct.	Dec.
1029	769	75	50	80	80	—	—	—	—
102	—	—	—	69	68	—	—	—	—
190	—	—	—	474	352	—	—	—	—
500+	—	—	—	200	600+	—	—	—	—
35	28	—	—	—	—	—	—	—	—

During the breeding season reports included 11 pairs at Weir Wood Res., 17 at Pett Pools and 46 nests were seen at Bewl Bridge Res. Regular counts at Chichester G.P. showed a substantial increase in numbers of adults in early June; on July 20th there were 578 adults and 68 young and by Aug. 24th the number of adults had increased to 739. Thereafter, counts remained remarkably stable to the end of the year.

146. **CRANE** (*Grus grus*).—The immature in the Brede Valley, first seen on Dec. 24th, 1979 (Sx. B.R. 32: 26) remained until at least Apr. 10th.

151. **OYSTERCATCHER** (*Haematopus ostralegus*).—The coastline wader counts in Jan. and Feb. produced totals of 2,448 and 1,533 respectively, compared with averages of 1,659 and 1,859 on the equivalent counts in 1978-79.

During spring passage the only significant count at Selsey Bill was of 28 W on May 3rd but at Worthing-Lancing 37 E and 13 W were logged in Apr. and 128 E and 84 W in May, though local movements were doubtless much involved. At Beachy Head 21 E were noted on 3 dates, May 3-11th.

At Rye Harbour LNR, the protective electric fence proved its worth in sheltering 2 pairs which reared 3 young; 7-8 pairs outside failed due to fox predation. At nearby North Point, 4 pairs attempted nesting; 2 raised one young each. A pair was also in territory on East Guldeford Level, and another on Pett Level but there was no evidence of breeding. In the west, 19 pairs nested at Pagham Harbour of which 15 within the protected area raised about 18 young but 4 outside failed through flooding and trampling. At the other end of the harbour 2 pairs nested unsuccessfully at Sidlesham Ferry and another held territory at Ham Marsh with no evidence of breeding. In Chichester Harbour 2 pairs at one site raised 3 and one young respectively but 2 pairs at another site were flooded out.

The summer counts at Rye were much the same as 1979, reaching 180 by Aug. and the population there during Sept.-Dec. remained stable at monthly maxima of 396, 360+, 362 and 400 respectively. In the two western harbours the total counts for the 4 months were 2,132, 1,678, 1,104 and 1,260 respectively. On Oct. 26th an individual with an orange rump was seen at Selsey Bill; it had been marked by the Wash Wader Study Group during the autumn.

Inland records during the year were of 4 at Bewl Bridge Res. on Mar. 18th and 2 on 19th and of one flying E over Sheffield Park on Aug. 9th.

153. **AVOCET** (*Recurvirostra avosetta*).—The individual in the Pagham Harbour area at the end of 1979 (Sx. B.R. 32: 27) was last seen on Jan. 6th. The next records were of singles on the Rother at Rye on Mar. 22nd and at Selsey Bill and Pagham Harbour on Apr. 5th; on 28th two were at Sidlesham Ferry. There followed a good passage in May: on 1st, 9 E off Worthing at 0900 and 8 E off Brighton Marina at 1030 (presumably the same if it be assumed they paused at Shoreham); on 3rd, 3 E from the Cuckmere, later seen from Galley Hill, Bexhill; on 4th, one at Rye Harbour LNR; on 10th, one seen successively at Lancing, Southwick, Brighton Marina and eventually flying N up the Cuckmere Valley; on 12th, one E at Beachy Head; and on 27th, two more at Rye. On June 4th another visited the Cuckmere. Throughout this period up to 4 were seen at Sidlesham Ferry and in July 5 were seen.

Sept. 21st brought a confusing series of reports as a party of 7 visited Langney Point at 1000 hours and apparently another 7 at 1040, though it hardly seemed likely at the time. However, the former were seen to visit the Cuckmere and in due course passed W off Worthing at 1051 hours. It is impossible to decide whether any of these 14 were involved in the flock of 24 which spent the latter part of the morning in Pagham Harbour. Such numbers were most unusual in Sept. (see Shrubbs, 1979). The year ended with one in the Sidlesham area.

154. **STONE CURLEW** (*Burhinus oediconemus*).—After records of a calling bird in the east of the county on Mar. 25th and of a migrant pair at Sidlesham on May 10th, two pairs were located at breeding sites of recent years but neither stayed. At a further locality however, a pair had produced a clutch of three eggs by June 13th and were still present on 20th but hatching success was not known.

158. **LITTLE RINGED PLOVER** (*Charadrius dubius*).—First recorded in spring were 2 at Bewl Bridge Res. on Apr. 3rd, another there on 8th, and singles at Small Dole, Henfield on 4th and near Eastbourne on 13th. The species was present at Arundel Wildfowl Refuge for much of the period Apr. 19th to May 2nd, with 3 on Apr. 26-29th and a 4th on 27-29th. Of a pair in the Cuckmere on 25th one remained to 26th when one appeared at Widewater, Lancing. During May one passed Beachy Head on 3rd, one flew W at Littlehampton West Beach on 4th, 3 were at Bayham on 6th and one appeared at a past breeding site on 26th. Summer records were of 2 at Waltham Brooks on June 21st, one remaining to 22nd, one at Bewl Bridge Res. on 23rd and one at Rye Harbour LNR on 29th. There were no breeding records although one pair was present at a traditional site.

Autumn passage commenced in mid-July with adults at Rye on 11th and Sidlesham Ferry on 12-14th. A further 8 individuals visited the latter between then and Sept. 6th including 4 immatures on Aug. 9th. Elsewhere there were few records—an immature at Arundel Wildfowl Refuge on July 15-16th, an adult and immature at Arlington Res. on 17th, two at Rye on Aug. 8th and 10th, 3 immatures at Littlehampton/Climping on Sept. 4th, and another there on 13-15th, singles at Darwell Res. on Sept. 6th and Greatham Bridge on 9th and finally 3 at Chichester G.P. on 17th.

159. **RINGED PLOVER** (*C. hiaticula*).—The Jan. and Feb. coastline wader counts produced totals of 712 and 413 respectively, compared with averages of 643 and 464 on the equivalent counts in 1978-79.

During the breeding season some 84 pairs were reported. At Rye Harbour LNR, 28 pairs were located within the SSSI but due to poor food supplies in the bad weather, only 15 young were reared to flying stage. At Pagham Harbour there were 31 nests but early clutches were again predated by crows and the chicks by a male Kestrel (see also Little

Tern). As a result second broods were still being reared well into Aug., the latest hatching being on 13th. At traditional sites elsewhere, 5 pairs were at Newhaven, broods of 2 and 4 being reared; at least 3 pairs in the Cuckmere but just one brood of 3; and 3 pairs at Langney Point which did not appear to breed. At some more recently colonized points a pair again appeared at Brighton Marina and succeeded in raising one young at the second attempt, at least 5 pairs were found in the Sidlesham area, 2 pairs reared 3-5 young to flying stage at Widewater. Lancing and a pair took up territory on Selsey Bill though with no evidence of nesting. In Chichester Harbour, 4 pairs were located on Ellanore Point, with unknown success, but 1-2 pairs on Stakes Island were washed out.

Towards the end of the year the total counts for Ferring and the Adur at Shoreham stood at 326 in Sept., 301 in Oct. and 263 in Dec., whilst the Nov. and Dec. counts for the two western harbours produced 206 and 275 respectively.

161. **KENTISH PLOVER** (*C. alexandrinus*).—A good year for the species, doubtless as a result of some protracted spells of easterly winds, brought records of males at Rye Harbour LNR on April 8th (RCK) and 12th (AD), 2 males and a female at Sidlesham Ferry (KN) and a female in Chichester Harbour (RDME, AJP) on May 1st, and one flying E off Brighton Marina on 11th (DSF). In autumn 3 females or immatures were found on the Adur at Shoreham on Sept. 21st, one remaining until 24th (TCS, MRW, TJW *et al.*).

163. **DOTTEREL** (*C. morinellus*).—On Apr. 26th a party of 8 at Church Norton were seen to arrive from SW and continue NE (TAG) and on May 14-16th a pair was on the Downs at Steyning (PJM, KN, AJP *et al.*).

165. **GOLDEN PLOVER** (*Pluvialis apricaria*).—The Jan. and Feb. coastline wader counts produced totals of 1,712 and 1,135 respectively compared with 3-year averages on the equivalent counts in 1977-79 of 2,314 and 3,021 respectively. Numbers in the county appear to vary wildly from year to year and perhaps depend largely on how many come on through from the very large gatherings in Kent. Spring departures were rather early. The count on Pett Level dropped from 400 on Mar. 16th to only 30 by 23rd and none was reported in the county throughout Apr. The last were 10 at Selsey on May 5th and one there on 17th.

The first "autumn" record was very early—3 flying W at Seaford Head on July 21st but subsequent arrivals were more conventional, with singles at Lullington Heath and Cissbury on Aug. 24th and again at the latter on 28th and 31st. One was at Sidlesham on 30th. On Sept. 3rd a party of 15 flew W at Newmarket Hill, Woodingdean and on 28th 14 came in at Selsey Bill. The count in Chichester Harbour rose from 45 in Sept. to 365 in Oct. and 700 were in the Pagham Harbour area for the Oct. count. On Pett Level the Nov. and Dec. totals were 300 and 600 respectively and on Pevensy Levels estimates of 1000 were reported on Nov. 9th and Dec. 16th.

166. **GREY PLOVER** (*P. squatarola*).—The Jan. and Feb. coastline wader counts produced totals of 2,113 and 1,186 respectively, compared with averages of 832 and 509 for the equivalent counts in 1978-79. The current Jan. figure was well above previous mean levels and that in Feb. also unusually high (see Shrubbs, 1979) thus continuing the overall trend in recent years. At Pett Level the roost reflected this with a peak of 76-82 between Jan. 27th and Feb. 17th.

Although spring passage at Selsey Bill was normal, with a total of 62 E between Apr. 5th and May 14th, that at Worthing-Lancing amounted to 259 E and 2 W of which 178 E were seen during May 3-12th. Brighton Marina observers obtained a small share: 53 E between Apr. 3rd and May 11th whilst at Beachy Head 119 E were noted on 11 dates between Apr. 26th and May 15th with a max. of 44 on May 3rd. A further indication of unusual passage numbers, possibly due to persistent easterly winds and inclement weather in May, was the presence of late flocks in Chichester Harbour, increasing from 28 on 4th to 44 on 15th, 65 on 21st and no fewer than 80 on 30th.

Apart from 2 at Rye Harbour LNR on June 6th, there were no summer reports away from the western harbours. At a Chichester Harbour roost max. counts were 50 in June, 156 in July, 2,052 in Aug. and 2,205 in Sept. It was of interest that of the June birds only 5% were in summer plumage, but 75% were so by July, perhaps indicating the proportion of 2nd-summer birds involved.

At Pett Level the maximum Nov. count was 40 and that in Dec. 60, whilst at Ferring-Goring 50 were noted in Nov. but only 23 in Dec. In the two western harbours the Oct.-Dec. totals were 2,130, 916 and 1,217 respectively, again very high.

169. **LAPWING** (*Vanellus vanellus*).—The Jan. and Feb. coastline wader counts produced totals of 28,276 and 20,275 respectively. The respective totals from other sites were 3,450 and 3,700.

Breeding season data received were as follows: about 25 pairs in the Arun Valley between Houghton Bridge and Arundel; 5 pairs along the west bank of the Arun between Timberley Farm and Waltham Brooks; 13 pairs on Pulborough Brooks between Swan Bridge and Greatham Church; 6-8 pairs on the 260 ha. of Pett Level (rather better than 1979); 34 pairs on the 935 ha. of Brede Level; 25-30 pairs within the 725 ha. of the SSSI at Rye Harbour LNR; 24 pairs within the environs of Bewl Bridge Res.; 5 pairs along the 8 km of the Bluebell Railway; only 13 pairs found during visits to 116 km sqs in the NW; and 86 pairs on 465 ha. of the Selsey Peninsula of which no fewer than 58 were in three areas of grass marshland totalling only 57 ha. In the Selsey area it was noted that although hatching was possibly quite good, fledging success was inhibited by persistent predation by Kestrels. Post-breeding gatherings reported included 120 at Rye by June 8th, 200 on East Guldeford Level by 12th, 130 on the Adur Levels by 15th and at least 500 on Horse Eye Level on 28th. By mid-Aug., 1,000 were on the Adur Levels and 2,500 between Kithurst and Burpham. Nov. and Dec. figures were inconclusive but 3,000 were on Amberley Wild Brooks and 1,000 on the Ouse Levels at Lewes in Nov., together with 1,550 on Pett Level, and in Dec., at least 2,700 on Pevensy Levels, 1,000 at Rye and 1,100 on Pett Level.

170. **KNOT** (*Calidris canutus*).—The Jan. and Feb. coastline wader counts produced totals of 2,001 and 40 respectively, compared with averages of 1,176 and 1,192 for the equivalent counts in 1978-79. The low Feb. count was probably due to large numbers moving into Langstone Harbour (see Sx. B.R. 32: 67).

More than usual were seen during spring passage at sea-watch sites. At Selsey Bill 8 passed E on May 10th and 9 on 11th whilst at Worthing-Lancing all but 3 of 61 E came between May 8-13th. Record numbers were seen at Beachy Head, totalling 193 between Apr. 26th and May 12th with a max. of 123 on May 11th.

At Rye Harbour LNR, where up to 11 had been seen in early June and one on July 25, 27th an injured bird remained throughout Aug. and a party of 6 appeared on 15th. One was in the Cuckmere from Aug. 22nd to Sept. 23rd and 3 were at Church Norton on Aug. 31st. During the remainder of the year up to 5 were seen from time to time at various localities away from the two western harbours where the Oct.-Dec. counts totalled 153, 158 and 15 respectively.

171. **SANDERLING** (*C. alba*).—The Jan. and Feb. coastline wader counts produced totals of 614 and 788 respectively, compared with averages of 323 and 208 for the equivalent counts in 1978-79.

During spring passage at Selsey Bill 125 E were noted between Apr. 6th and May 26th with a max. of 35 E on May 3rd, whilst at Worthing-Lancing the totals were 519 E and 85 W between Apr. 10th and May 31st. Of these 390 passed E in the 16 days May 4-20th but why 61 should have been seen moving W on May 31st (when there were also unusual tern movements) is puzzling. The generally short watches at Brighton-Marina produced a max. of only 28 E in 6 hours on May 11th and 14 E on 12th and the less than customary coverage at Beachy Head provided a total of only 122 E on 12 dates between May 3-18th, peaks being 38 on 3rd and 21 on 10th.

In June the one record was of a party of 30 at Rye Harbour LNR on 15th followed by one on July 13th and 2 between 20-31st. At Selsey Bill 3 were seen on July 4th and 13 on 27th and 4 were at Church Norton on 16th. At Rye 35 at the start of Aug. increased to 109 by 10th but, rather strangely, only 2 were seen elsewhere during the month. The max. at Rye in Sept. was 55 but the Chichester Harbour population increased to 340. The Oct.-Dec. counts for the two western harbours totalled 430, 158 and 15 respectively; those at Ferring-Goring were 13, 70 and 104; and Rye, nil, 20 and 70.

175. **LITTLE STINT** (*C. minuta*).—A rather poor year for the species, with records for only 6 months. Approximate monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
		2	3				16	21	11		

The 2 in Mar. were on the Rother at Rye on 23rd and the May records were of singles at Sidlesham Ferry on 3-4th, 12th and 30th-31st. A stint sp. flew over Beachy Head on 6th. The July records may have involved the same individual—at Sidlesham Ferry on 26th and Chichester G.P. on 27th. Present at Chichester G.P. and the Cuckmere almost continuously from early Aug. to mid-Oct., the only reports from elsewhere were of singles at Widewater and Rye Harbour LNR in Aug., Newhaven on Sept. 5th and 2 at Pett Pools on 28th. The maxima at Sidlesham were 8 on Aug. 6th and 7 on Sept. 17th, 2 remaining to Oct. 10th. In the Cuckmere most were present in early Sept. with a maximum of 6, the last being on Oct. 14th. The last records for the year were one at West Wittering on Oct. 24th and 2 there on 25th.

176. **TEMMINCK'S STINT** (*C. temminckii*).—The only record was of one at Arundel Wildfowl Refuge on May 4-6th (RMB, AJP).

180. **PECTORAL SANDPIPER** (*C. melanotos*).—One in the Cuckmere on May 18th (PJW) constituted the second spring record for the county, the first being at the same locality on May 14th, 1977 (Sx. B.R. 30: 24). In autumn one was at Church Norton on July 26-27th (JHG *et al*) and a juvenile was at Littlehampton West Beach on Sept. 13-15th (GB, RG, BS *et al*).

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

Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.
5	2	—	5	16	12	1

On spring passage a party of 5 was seen at Bewl Bridge Res. on Apr. 26th followed by one at Sidlesham Ferry on May 3rd-7th and another there on 17th.

In what was a poor autumn for the species only 2 were seen other than at Sidlesham Ferry or the Cuckmere, these being singles at Rye Harbour LNR on Sept. 7th and on the Adur at Shoreham on 11-12th. At least 10 were reported from the Cuckmere between Aug. 9th and Sept. 27th with a max. of 6 on Sept. 12th. Passage at Sidlesham started with 2 on July 5th, another 3 on 26-27th, up to 4 on many dates up to the end of Sept. but 10 there on Aug. 19th. The Oct. record was of one, also at Sidlesham, on 4-5th.

183. **PURPLE SANDPIPER** (*C. maritima*).—Although the published coastline wader counts for Jan. and Feb. (Sx. B.R. 32:68) showed totals of only 23 and 29 respectively there were probably more than this in the county at the time. Other records in Jan. were of 6-9 at Rock-a-Nore, Hastings, a regular site for the species, 8 on Littlehampton West Pier on 17th, and up to 3 in the Selsey Bill area throughout the month. There were still at least 10 at Rock-a-Nore in Feb. and 3 there on Mar. 22nd whilst 10 at Climping on Mar. 15th may have been related to the Littlehampton party. Regular counts at Newhaven by Miss B. O. Lloyd produced a most interesting detailed picture of the timing of spring departures which spanned a period of 32 days from Apr. 18th to May 21st, 9 leaving between the nights of Apr. 18th and May 9th and a further 8 during the nights of 14th and 15th.

In autumn the first along the coast was a single at Widewater, Lancing on Aug. 12-20th, 2 in the Selsey Bill area on Sept. 13th and one at Worthing on 15th. The first 3 at Newhaven arrived on the night of Oct. 27-28th and further arrivals took place over a period of 42 days up to Dec. 9th, 7 arriving on the night of Nov. 9-10th and 6 during the nights of 16-20th. The total there by Dec. 10th was 28. Elsewhere during this period only one had been seen at Rock-a-Nore but 2-3 were at Galley Hill, Bexhill during late Dec. In the west, 9 were on Littlehampton West Pier on Nov. 13th and 8 (the same?) at Ferring on Dec. 16-18th. Singles were seen at Langley Point on Nov. 22nd and Selsey Bill on 30th.

184. **DUNLIN** (*C. alpina*).—The Jan. and Feb. coastline wader counts produced totals of 28,820 and 22,981 respectively, compared with averages of 18,201 and 12,497 for the equivalent counts in 1978-79. Counts on the Adur at Shoreham were indicative of more general passage timing, dropping from 730 on Mar. 8th to only 50 by 23rd. At Rye

Harbour LNR, however, the river roost only dropped from 300 in Feb. to 260 in Mar. Visible migration was more obvious than usual during Apr.-May, 352 E being logged at Worthing-Lancing and 112 at Beachy Head.

The summer and early autumn were largely uneventful; by Oct. the total in the two western harbours stood at 10,834 followed by Nov. and Dec. counts of 11,129 and 9,757, considerably lower than in 1979.

188. **RUFF** (*Phylomachus pugnax*).—As anticipated, numbers on the Selsey peninsula were again high during the early part of the year, probably in excess of 300 in Jan. A firmer count in Feb. was of 226-228 and on Mar. 1st, 120. By Mar. 22nd the figure had dropped to 50 and by Apr. 12th only 9. Elsewhere during this period up to 35 were at Amberley Wild Brooks and singles at Rye Harbour LNR on Feb. 18th, Arundel Wildfowl Refuge on Apr. 2nd and Shoreham on Apr. 11th and 21st. As it is not inconceivable that the Amberley winter population travels to roost at Sidlesham, any information to this effect or the contrary would be most welcome.

Approximate monthly totals through the year, with the number of localities in parentheses, were as follows:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
305	264	120	12	6	2	3	32	126	82	403	240
(2)	(3)	(1)	(3)	(3)	(1)	(2)	(5)	(7)	(3)	(3)	(1)

On May 12th one was seen to arrive from the SW at Beachy Head; the summer months featured various wanderers. The Sept.-Oct. max. counts at Sidlesham were about 80; 9 were at Rye Harbour LNR on Sept. 17th. During Nov. a sample count of 263 at Sidlesham was noted to contain only 20 adult males. An estimated 400 were feeding on flooded fields in the vicinity on 18th. The max. in Dec. was 240 on 3rd. Further sample counts, by AJP, on 20th were of 86 which included only two adult females—and 26 all of which proved to be 1st-winter immatures. The only records from elsewhere at the end of the year were of 2 at Watersfield Brooks on Nov. 2nd and one at Glyne Gap on 22nd.

Further to the comment in these pages in 1978 (Sx. B.R. 31: 25), enquiries by AJP now indicate that the Selsey peninsula population does indeed constitute by far the largest such gathering to be found in Europe during the winter months, the entire population probably numbering less than 3,000. Although the reason for their advent remains a mystery, the third successive winter of the steady build-up of numbers indicates that early return passage is not involved as was originally suggested. The phenomenon is of such a nature as to merit more detailed observation. Whilst it is known that the fullest counts can only be obtained at dusk, other information would be most welcome—sample counts relating to age and sex, any evidence suggesting persistent segregation between flocks and accurate counts stating time and nature of activity.

189. **JACK SNIFE** (*Lymnocyptes minimus*).—Records were received from 8 coastal localities and the minimum monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
8	1	7	5	4	2	8					

In Jan. 5 were present at a marsh near St. Leonards and 4 were at Pett Level in Mar. The unusual Apr. total included one flushed from the shoreline at Worthing Beach on 2nd and another in flight at the same locality on 25th. In Oct. 3 were at Pett Pools on 3rd, and in Dec. 5 at Glyne Gap on 23rd.

190. **SNIFE** (*Gallinago gallinago*).—The Jan. and Feb. coastline wader counts produced totals of 609 and 593 respectively. The similarity of the figure suggested true counts and were thus well below the levels in 1977 and 1978 (1979 being distorted by cold weather) but matched the 592 recorded on Jan. 17th, 1976. Elsewhere during the period 350 were on Henfield Brooks during Jan., 500 on Amberley Wild Brooks in Jan. and 200 in Feb., 100 on the Adur Levels north of Steyning in Jan. and, on the Brede Levels, 50 in Jan. and 150 in Feb. At the latter there were still 100 on Mar. 16th and at Amberley, 300 on 21st. Away from such habitats the only significant report was of 35 at Rotherfield sewage works in Jan.

During this, the first year of the Society's current breeding survey, 67-68 pairs or territories were located in the county.

At the end of the year counts were inconclusive. In Chichester Harbour the Oct.-Dec. totals were 50, 309 and 541 respectively whilst the equivalents on Pett Level were 60, 260 and 260. Elsewhere counts were of up to 200 on the Ouse levels, 200 at Glynde Gap marsh, 85 at Arundel Wildfowl Refuge and up to 150 on Amberley Wild Brooks.

194. **WOODCOCK** (*Scolopax rusticola*).—Evidence of spring passage was scant but singles were flushed from the beach at Selsey Bill on Mar. 1st and the shore of Pagham Harbour on Apr. 29th.

Many reports of roding were received but, as usual, practically no records of eggs or young in what is a widespread breeding species. Roding reports from tetrads in which the species was not recorded during the 1966-75 breeding seasons (see Sx. B.R. 28: 66-79 (1975)) would be most valuable. Late roding was noted at Dallington Forest on July 27th. Evidence of autumn passage came with one flying N from the sea at Selsey Bill on Oct. 7th and singles at Beachy Head on 18th and Nov. 8th.

195. **BLACK-TAILED GODWIT** (*Limosa limosa*).—The Jan. and Feb. coastline wader counts produced totals of 631 and 535 respectively, compared with averages of 232 and 279 for the equivalent counts in 1978-79. Away from the western harbours reports were of one at Rye Harbour LNR on Feb. 18th, 2 at Amberley Wild Brooks on Mar. 30th (one to 31st) and 5 in the Adur valley on Apr. 4th (2 to 6th). On Apr. 5th, 130 were still at the high-tide roost at West Chidham.

Diurnal migration overseas is unusual in this species but the inclement weather of May 3rd perhaps explained the sighting of a party of 14 seen moving E, firstly at Worthing-Lancing, then Beachy Head and finally Galley Hill, Bexhill. A further 5 E were seen off Worthing on 4th and singles in the Cuckmere, then Beachy Head, on 11th and at Rye Harbour LNR on 23rd.

On May 27th no fewer than 235 were feeding at Sidlesham Ferry and 30-40 used the pool throughout the summer. In the east of the county 3 were found at a suitable breeding locality on June 15th but were not known to have stayed. During Aug.-Sept. ones and twos were to be seen at several coastal localities and a Sept. count in Chichester Harbour stood at 206. The Oct.-Dec. totals for the two western harbours were 1,234, 812 and 400 respectively.

196. **BAR-TAILED GODWIT** (*L. lapponica*).—The Jan. and Feb. coastline wader counts produced totals of 1,180 and 69 respectively, compared with averages of 789 and 1,083 for the equivalent counts in 1978-79. The low Feb. figure was due to a temporary absence of many birds in Langstone Harbour (Sx. B.R. 32: 67).

Although good numbers were seen on spring passage from the seawatch sites, the situation was confused by the frequency of northerly winds combined with heavy overcast in which, for reasons yet to be fully understood, many flocks tend to turn inland at almost any point along the coast. This was particularly demonstrated this year and it was not surprising that exceptional numbers, often in large flocks, were also seen passing E or N over the London area. The first incident on the coast was at Rye Harbour LNR on Apr. 25th when flocks of 10, 59 and 200 flew inland to NE during the evening. Then, in May, 50 flew in NE over Seaford Head and 14 NE over Bewl Bridge Res. on 3rd, 50 to NE at Weir Wood Res. on 4th, 40 to NE over Brighton on 11th and 25 to N over Lewes on 12th.

At the principal seawatch sites the numbers observed therefore varied considerably. At Selsey Bill only 938 E were seen between Apr. 12th and May 17th, with a peak of 658 on May 3rd, but at Worthing-Lancing 5,820 E were logged on 26 dates between Mar. 17th and May 24th. This total largely consisted of 2,266 in 4 hours on the evening of Apr. 25th and 2,146 in 5½ hours on May 3rd. The latter date also featured at Hove where 1,293 were seen in 4 hours, Brighton Marina, 793 in 7½ hours, and Galley Hill, Bexhill, 936, but no times given. However, at Beachy Head only 1,006 were seen in 11 hours, another indication of the proportion turning inland. The total there, on 14 dates between Apr. 25th and May 18th was 3,204.

Towards the end of the year the Sept. count in Chichester Harbour stood at 826 and the total counts for the two western harbours in Oct.-Dec. were 1,144, 702 and 550 respectively. Elsewhere the species was seen at most suitable localities along the coast but rarely more than two at a time.

198. **WHIMBREL** (*Numenius phaeopus*).—First in spring were singles in the Cuckmere on Mar. 24th and passing E at Hove on 28th and Selsey Bill on Apr. 6th. During spring passage at the latter a further 40 E were noted up to May 26th but an additional flock of 41 was seen moving E over Church Norton on Apr. 22nd. At Worthing-Lancing 754 E were logged on 32 dates between Apr. 12th and May 26th, with a peak of 203 in 8½ hours on May 7th and a further 149 in 5 hours on 8th. At Brighton Marina 54 E were seen during 76 hours of observations between Apr. 3rd and May 11th, whilst at Beachy Head 164 E was the total from 13 dates between Apr. 12th and May 17th, with a max. of 62 on May 9th. However the movement on 7-8th was not covered. No significant visible passage was noted at Rye, but 84 were at roost on the LNR on May 8th. Inland, 2 were seen at Henfield on Apr. 15th and one at Weir Wood Res. on 19th and 2 flew E over Storrington on May 2nd. On 3rd a party of 6 flew inland to NE from Seaford Head. Two late migrants were seen at Rye on June 2nd and occasional singles were noted at Pagham Harbour throughout the month.

Return passage had commenced by July 2nd when one appeared at Rye and the species was increasingly in evidence from mid-month. By Aug. 7th, 25 were to be seen in Pagham Harbour and ones and twos were seen moving W at Crowborough, Beachy Head, at Cissbury, and also at Selsey Bill during the latter half of the month. Sept. brought only 8 records, mostly of singles, up to 28th and the last for the year was one over Balcombe on Oct. 2nd and one in Pagham Harbour on 11th.

199. **CURLEW** (*N. arquata*).—The Jan. and Feb. coastline wader counts produced totals of 1,089 and 1,918 respectively, compared with averages of 1,149 and 1,496 for the equivalent counts in 1978-79. Again the winter population at Pett Level was about 800, dropping to 300 by the end of Feb.

As is normal no significant movements were seen along the coast during the spring, individuals moving E at Selsey Bill amounting to only 17; at Worthing-Lancing, 33; at Brighton Marina, 12; and at Beachy Head, 49.

During the breeding season pairs were again present on Ashdown Forest and in the Milland area, the latter probably breeding somewhere between there and Rake. In autumn there was a further occurrence of feeding on chalk downland habitats, up to 14 being seen once again near Cissbury Ring from Oct. 17-27th. This behaviour may be a reflection of events elsewhere in Britain (e.g. the colonisation of chalk upland in the Yorkshire Wolds since 1955 referred to by Parslow (1967) in his "Breeding Birds of Britain and Ireland").

At Pett Level, where up to 150 had been present in July, counts stood at 200-250 until the end of the year. In Chichester Harbour the Sept. figure was 1,131 and the Oct.-Dec. counts for the two western harbours totalled 1,711, 442 and 1,008 respectively, slightly below average.

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

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
12	4	1	4	2	4	12	17	42	5	4	4

All but one of the Jan. and Feb. records came from Chichester Harbour, the other being in Pagham Harbour until at least Mar. 1st. On Apr. 26-27th, 3 in summer plumage were seen in the Cuckmere after one there a few days earlier. For June only 4 records was well below average; one of these was of one flying W 2km off Lancing. Autumn passage was unexceptional, the highest concentrations being in Chichester Harbour with 8 on July 5th and 25 on Sept. 27th, although 6 W off Selsey Bill on Aug. 23rd and 5 at Weir Wood Res. on Sept. 2nd were of note. All the Oct. and Nov. records were from the western harbours.

202. **REDSHANK** (*T. totanus*).—The Jan. and Feb. coastline wader counts produced totals of 1,904 and 2,303 respectively, compared with averages of 1,335 and 1,419 for the equivalent counts in 1978-79.

In the first year of the current survey some 200 pairs were found breeding in the county.

Autumn counts revealed 2,640 in Chichester Harbour alone in Sept.; the Oct.-Dec. totals for both western harbours were slightly above average at 2,466, 1,517 and 2,152 respectively. At Rye Harbour LNR the autumn max. was 128 in Nov.

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

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
4	4	2	8	36	2	6	120	120	28	6	7

Away from Chichester Harbour winter records were of singles at Pett Level and then Rye Harbour LNR on Feb. 9-10th and Pagham Harbour on Mar. 15th. Spring numbers were well above average and included a party of 7 flying E at Worthing on May 2nd and 7 in the Cuckmere on 22nd. Both June individuals were also in the Cuckmere. Return passage was generally normal with records scattered along the coast and inland, the majority in Chichester Harbour—50 on Aug. 24th, 95 on Sept. 27th, and 20 still there on Oct. 25th. All the Nov.-Dec. records were from the two western harbours.

208. **GREEN SANDPIPER** (*T. ochropus*).—Reported throughout the county in what was the best year on record for the species with the following approximate monthly totals:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
12	17	8	15	5	8	50	77	37	18	17	6

Despite the high figures few notable gatherings were seen, the largest being 12 on the Adur on July 9th and 10 at one locality in Chichester Harbour on 26th. Parties of 6, 7, and 9 were reported during Aug. and there were still 6 on the Adur on Sept. 9th.

The July-Aug. total of 127 matched that of 1978, further emphasising the low numbers in the mid-70s (see Sx. B.R. 30: 22). A three-year moving-average analysis of the autumn totals (July-Oct.) since 66 shows the trend still more clearly:

Year	1966	67	68	69	70	71	72	73	74	75	76	77	78	79	80
July-Oct. total	103	153	100	138	87	154	134	67	95	106	90	128	153	132	182
Moving average	—	119	130	108	126	125	118	99	89	97	108	124	138	156	—

Given that observer coverage of likely localities for this species has probably remained constant during the period since 1966 the decline in numbers during 1970-74 which was reversed in 1975 would appear to be significant and is reflected in a similar analysis of annual totals:

Year	1966	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Annual total	126	174	146	214	120	221	178	101	128	144	154	168	238	181	262
Moving average	—	149	178	160	185	173	167	136	124	142	155	187	196	227	—

Any further interpretation of the above data must rest for the time being on whether a similar event occurred elsewhere in Britain.

Note: The use of moving averages is a statistical device for evening out short-term irregularities to demonstrate longer term trends which may otherwise be obscured. A 3-year period is best suited for the purposes of this particular analysis and the moving average for 1972, for example, is obtained by adding the totals for 1971, 1972 and 1973, and dividing by 3.

209. **WOOD SANDPIPER** (*T. glareola*).—The approximate monthly totals were:

Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.
—	1	—	9	13	1	1

The May record was, rather unusually, of one passing over Fore Wood NR on 5th. Autumn records were widely scattered. The first came early with singles at Weir Wood Res. on July 20th, Chichester Harbour and Sidlesham Ferry on 26th, and 2 at Rye Harbour LNR also on 26th. Another had arrived at Sidlesham by 28th and 3 were there on Aug. 3rd. Three on Glynde Levels on July 30th also stayed into Aug. None was then seen until Aug. 11th, when 2 were at Sidlesham Ferry followed by singles at Arundel Wildfowl Refuge on 12th, Rye on 13th and, possibly the same, at North Point, Camber on 17th. One remained at Chichester G.P. during 23rd-31st and another was seen in Chichester Harbour on 30th. Finally, rather late migrants were singles at Sidlesham Ferry on Sept. 20-27th and Strivens Reed Bed on Oct. 5th.

SELECTED SEA-WATCH DETAILS, SELSEY BILL, SPRING, 1980

SPECIES	DATE												WIND	HOURS WATCHING
	APRIL						MAY							
	9	10	11	12	13	14	1	2	3	4	5	6		
Black-throated Diver	9	10	10	10	10	10	10	10	10	10	10	10	SE	10
Diver sp.	8	8	8	8	8	8	8	8	8	8	8	8	ESE	8
Brent Goose	49	49	49	49	49	49	49	49	49	49	49	49	SE	49
Common Scoter	709	709	709	709	709	709	709	709	709	709	709	709	SE	709
Velvet Scoter	38	38	38	38	38	38	38	38	38	38	38	38	SE	38
R.B. Merganser	47	47	47	47	47	47	47	47	47	47	47	47	SE	47
Sanderling	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bar-tailed Godwit	2	2	2	2	2	2	2	2	2	2	2	2	—	2
Whimbrel	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pomarine Skua	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Arctic Skua	4	4	4	4	4	4	4	4	4	4	4	4	—	4
Great Skua	1	1	1	1	1	1	1	1	1	1	1	1	—	1
Little Gull	5	5	5	5	5	5	5	5	5	5	5	5	—	5
Sandwich Tern	446	446	446	446	446	446	446	446	446	446	446	446	—	446
Common/Arctic Tern	17	17	17	17	17	17	17	17	17	17	17	17	—	17
Black Tern	—	—	—	—	—	—	—	—	—	—	—	—	—	—

SELECTED SEA-WATCH DETAILS, BEACHY HEAD, SPRING, 1980

SPECIES	DATE												WIND	HOURS WATCHING		
	MARCH						APRIL								MAY	
	18	19	20	21	22	23	1	2	3	4	5	6			7	8
Divers (all)	62	50	153	1	4	19	8	5	5	5	5	12	5	39		
Slavonian Grebe	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Eider	7	—	38	—	—	—	—	—	—	—	—	—	—	—		
Common Scoter	3966	1640	800	53	43	594	56	5	37	69	42	223	324	66		
Velvet Scoter	4	48	12	—	—	—	—	—	—	—	—	—	—	—		
R.B. Merganser	10	81	26	—	—	—	—	—	—	—	—	—	—	—		
Grey Plover	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Bar-tailed Godwit	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Whimbrel	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Pomarine Skua	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Arctic Skua	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Great Skua	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Little Gull	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Kitiwake	46	—	—	—	—	—	—	—	—	—	—	—	—	—		
Sandwich Tern	—	317	537	30	28	110	32	20	23	16	84	92	55	25		
Common/Arctic Tern	—	14	40	—	108	2830	578	124	761	202	936	2230	800	600		
Little Tern	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Black Tern	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Auk sp.	2	—	—	—	—	—	—	—	—	—	—	—	—	—		

217. **POMARINE SKUA** (*Stercorarius pomarinus*).—Persistent easterly winds during the normal spring passage period brought more than usual within sight of a host of observers along much of the coast. The first record was one E off Hove and possibly the same at Beachy Head on May 2nd followed by 5 singles E at Selsey Bill on the evening of 4th. On 5th parties of 11 and 2 E were seen at Beachy Head, and on the evening of 7th 3 E at Selsey Bill were seen soon afterwards passing Lancing. Early on 9th 2 flew E at Selsey Bill and a party of 9 and a single at Beachy Head, the latter possibly the same as one off Brighton Marina. On the evening of 10th a party of 7 passed Selsey Bill eastbound.

Early morning on 11th found a party of 10 moving E at Selsey Bill at 0700 and probably the same, minus one bird, passing Worthing at 0748 and Beachy Head at 0930. Slightly behind them an extraordinary flock of 55 off Hurst Point in Hampshire at 0930 moved on eastwards out of sight of the Sussex coast but in the meanwhile another party of 25 had been seen at Brighton Marina at 0635, Beachy Head at 0730 until 0805 and then at Dungeness at 0920. During the remainder of the day further parties of 4, 4 and one were seen at Selsey Bill, 3, 2 and 7 at Worthing-Lancing and 2 at Beachy Head.

The first evidence of possible roosting off the Sussex coast came the following morning when observers found parties of 17 and 24 resting on the sea off Worthing-Lancing and 19 off Brighton Marina. All had moved on by 0830 but were not seen at Beachy Head as no observers were present, 0900-1045. Even so a party of 20 E there at 1120 may have related to the others. Also during the early morning 2 and one had been seen at Selsey Bill, probably to join the resting flocks later, but a further 7 (3, 3 and one) passed Worthing-Lancing later on. Also at Worthing a party of 4 settled for a while in mid-afternoon before moving on E. The evening brought a confused scene, and a strict interpretation of the available data suggested that 10 E at Selsey Bill at 1640 returned westwards past Worthing and Ferring at about 1820. In the meanwhile a further 12 flew E at Selsey Bill at 1815. Moved slowly to Worthing-Lancing to be seen at 1900-1950, were subsequently joined by a further 3 and one moving E and seen from the same localities and finally returned westwards as a flock of 16 at 2000. The day's events also provided evidence that this species occasionally loses its migrational impetus in inclement weather, perhaps serving to explain the situation in May, 1976 when large numbers passed E at Beachy Head but not Dungeness on 7th, but did appear at Dungeness on 8th.

The remainder of the passage consisted of 10 E at Seaford Head on 13th, singles E at Beachy Head on 13th and 18th, 4 W at Worthing on 13th and, at Selsey Bill, one W on 21st and 3 E on 22nd. This brought the spring total to an absolute minimum of 197 and all observers are to be complimented on the detailed data supplied.

218. **ARCTIC SKUA** (*S. parasiticus*).—The first spring migrants were 2 E off Worthing on Mar. 23rd followed by an extremely unusual record of a party of 8 moving E at Bexhill on Apr. 3rd. At Selsey Bill only 24 were seen moving E between Apr. 12th and May 31st and at Worthing-Lancing 34 E between Mar. 23rd and May 31st, with a maximum of 6 on May 12th. On May 11th 2 flew inland to the N at Birdham. Although Beachy Head watches were less than usual 52 E were noted between Apr. 12th and May 17th with a maximum of 9 on Apr. 13th and May 11th and 10 on May 2nd.

Summer records included 4 singles at Selsey Bill between June 21st and 28th and one off Worthing on 19th followed in July by singles off Selsey Bill on 4th and 20th and 2 off Rye Harbour LNR on 12th. As usual, autumn passage consisted mainly of scattered records of single birds moving W at various localities. On Oct. 26th 3 were seen at Langney Point between 0630 and 1000 and 3 at Worthing between 1020 and 1315. The last for the year were 2 W at Worthing on 30th.

220. **GREAT SKUA** *S. skua*.—The first for the year were 2 off Worthing-Lancing on Mar. 24th and singles on 28th and Apr. 2nd. At Beachy Head the first came on Apr. 9th followed by another 10 by May 13th. At Selsey Bill only 5 were noted between Apr. 1st and May 13th. Other records were of singles passing E at Seaford Head on Apr. 13th, Brighton Marina and Galley Hill, Bexhill on May 2nd, Rottingdean on 11th and Worthing-Lancing on 12th. Finally for the spring 2 E were seen off Pett Level on May 25th.

More than usual were seen in autumn—2 W off Beachy Head on Aug. 9th, and singles at Galley Hill on Sept. 1st, Widewater, Lancing on 5th, Beachy Head on 7th, Selsey Bill on 16th and Worthing on 21st. On 10th one was seen coming southwards over the Downs near Steyning and on 18th an individual with an injured leg appeared at Rye Harbour LNR and stayed until Oct. 3rd. During the remainder of Oct. records of singles came from Selsey Bill on 6th, Pett Level on 12th and Worthing and Selsey Bill on 26th. Also on 26th 2 passed W at Langney Point. A late individual caused panic amongst the gulls at Saltdan on Dec. 2nd.

222. **MEDITERRANEAN GULL** (*Larus melanocephalus*).—Records of this species are now too numerous to warrant personal attribution but will still only be published if regarded as properly authenticated.

Whilst an adult was seen at Sumping rubbish tip on Jan. 12th the 2nd-winter individual present in the Shoreham/Lancing area during late 1979 (Sx. B.R. 32: 35) was regularly noted until Mar. 20th. Another 2nd-winter individual was in the same area on Jan. 29th and one of these may have been that at Goring on Feb. 2nd, Worthing on 10th and Sumping refuse tip on Mar. 1st. An adult was at Pett Level on Mar. 3rd and at Rye Harbour LNR on 9th and Apr. 5th. The remainder of the spring reports related to migrants moving E: an adult at Worthing on Mar. 20th, a 1st-summer at Selsey Bill on Apr. 12th, a 1st-year there on May 13th, a 1st-year at Worthing on May 4th, an adult there on 10th, and two 2nd-summer individuals at Seaford Head on May 9th.

An adult at Pett Level on Aug. 3rd was presumed the same as that still there from mid-Sept. to at least Oct. 27th. A 2nd-summer individual moulting into adult plumage at Lancing on Aug. 6th was likely to have been one of the adults which remained in the Shoreham/Lancing area until the end of the year and was possibly the returning individual of 1979-80 (see above). An adult was seen at Chichester G.P. from Sept. 27th to Oct. 8th and another at Ferring on Sept. 30th was seen intermittently until the end of the year. Adults were also seen (the former following the plough—infrequent in this species) at Sidlesham on Oct. 22nd and inland at Cissbury on Nov. 16th and may have been one of those observed on the adjacent coasts. An adult at Worthing on Nov. 21st had different head-markings from both the Ferring and Lancing individuals indicating at least 3 wintering on that stretch of the coastline; further reports of 2 adults together at Lancing on Dec. 23rd added to this probability. Finally came records of a sub-adult at Arundel Wildfowl Refuge on Dec. 13th, a 2nd-winter bird following the Newhaven ferry on 20th and an adult at Selsey Bill on 23rd.

The total of at least 21 individuals, comprising 11 adults, 7 2nd-year and 3 1st-year, was the highest annual total so far recorded. The pattern of occurrence followed that of recent years and clearly relates to the increased incidence on the Kent coast. The minimum number each month was:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
3	3	3	2	5	0	0	3	4	4	3	5

It should be added that spring passage figures tend to rest on chance sightings of singles or pairs moving quickly along the coast and therefore may vary considerably from year to year.

225. **LITTLE GULL** (*L. minutus*).—The only winter record was of an immature at Seaford on Feb. 3rd. An immature at Sidlesham and an adult at Pagham Harbour on Mar. 23rd heralded the spring passage which came with 5 E at Selsey Bill on Apr. 12th followed by 7 E there on 13th, and 7 E at Beachy Head and one at Chichester G.P. also on 13th. One at Lancing on 20th and 2 at Beachy Head on 24th were the only records for the latter part of Apr. The main coastal passage came with E to SE winds during May 3-14th when 57 passed E off Worthing (21 on 11th), 40 E at Brighton Marina (23 on 11th) and 44 at Beachy Head (10 on 11th).

Summer records were of 2 immatures at Chichester G.P. on June 15th, one immature off Worthing on 19th and an adult at Rye Harbour LNR on July 11th.

During autumn an adult flew W at Selsey Bill on Aug. 19th and during late Aug. and Sept. one or 2 immatures were reported from 10 scattered localities including Weir Wood and Darwell Reservoirs and Chichester G.P. The main passage occurred in Oct. with two notable dates: on 12th 12 adults flew W over West Chiltington and on 26th, in a strong

onshore blow, 6 moved W at Langney Point, 15 W at Worthing and 10 W and 2 E at Selsey Bill. After this the only records were of an adult at Selsey Bill on Nov. 8th, one at Worthing on 18th and an adult at Rottingdean on Dec. 26th.

The pattern of records conformed with the statement by Shrubbs (1979)—'a scarce winter and summer visitor but a regular passage migrant, particularly in spring'. To this should perhaps be added—'but passage numbers largely dependent on the incidence of onshore, and particularly easterly, winds'. During the current year the minimum monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
0	1	3	19	105	3	1	7	8	35	2	1

228. **BLACK-HEADED GULL** (*L. ridibundus*).—There was no coordinated roosting gull count during 1980. Casual counts received were of 2,000+ at Weir Wood Res. and 2,500 at Bewl Bridge Res. on Jan. 26th. The only coastal counts were of 1,500 at Portobello on Mar. 9th and 30,000 on Worthing beaches between Mar. 16th and 26th; these had all dispersed by 28th.

The June assessment of the Stakes Island colony in Chichester Harbour was immediately preceded by flooding. On South Stakes, where up to 1,000 pairs breed, a total of only 105 chicks and 82 eggs from 68 nests showed the degree of damage caused. The growing North Stakes colony, with an estimated 160 pairs was less devastated as 25 nests containing 47 chicks and 21 eggs were counted. Later, however, 700-800 pairs had more success in rearing second broods.

The Scotney Court G.P. colony at Camber showed a further increase to 110 pairs and at Rye Harbour LNR 6 pairs reared 8 young. Non-breeding immatures using the Tern Pool to roost throughout the summer exceeded 1,000 on July 12th.

During the autumn the gathering at Worthing increased from 2,000 on July 15th to 10,000 by 31st. No further counts from the coast were received and the only inland reports were of 2,000 at Weir Wood Res. and 3,000 at Bewl Bridge Res. during Dec.

233. **COMMON GULL** (*L. canus*).—The only notable winter counts were of some 3000 generally at Rye Harbour LNR, 350 in the Cuckmere on Jan. 18th, 250 at Rottingdean on 30th, 550 in the Brede Valley on Feb. 17th and 600 at Higham in late Mar. An influx of adults was noted at Rye and Worthing during late July but the only counts were of 350 at Newhaven on Nov. 3rd and 200 at Rottingdean on 7th.

234. **LESSER BLACK-BACKED GULL** (*L. fuscus*).—Adults of both British (*L. f. graellsii*) and Scandinavian (*L. f. fuscus*) races were recorded in small numbers from various coastal localities between Jan. and mid-May, with the majority in the east of the county. At Camber Sands 43 (38 Scandinavian) were noted on Feb. 20th and at Rye Harbour LNR up to 56 (46 Scandinavian) throughout Mar. and Apr. At Chichester G.P. 20 adults and several juveniles were seen on June 26th. Thereafter just a few reports came from the coast until Nov.

The largest gatherings, as in recent years, were recorded inland with 160 at Roffeyhurst on Mar. 9th, 85 and 100 over Ruspur on Aug. 10th and 23rd respectively. As many as 900 at Colgate Refuse Tip, near Faygate, in late Oct. related to previously reported observations in this area (Sx. B.R. 31: 32; 32: 39).

235. **HERRING GULL** (*L. argentatus*).—No winter gatherings or large roosts were reported. Breeding records were of 78 pairs at Fairlight, 20 at North Point Pit, 24 at Rye Harbour LNR, 4 on the shingle islands in the Cuckmere, and a scattering on rooftops in Eastbourne, St. Leonards and Hastings.

Individuals of the yellow-legged race *L. a. omisus* were seen at Shoreham on Mar. 26th (2), Aug. 21st, Aug. 29th, Oct. 4th (5), and Oct. 8th (2)—and at Pagham Harbour on Sept. 19th.

237. **GLAUCOUS GULL** (*L. hyperboreus*).—The only record was of an immature in the Cuckmere on Feb. 22nd (PJW).

238. **GREAT BLACK-BACKED GULL** (*L. marinus*).—The only notable records of this under-reported species were of 100-280 at Rye Harbour LNR during the winter months, 40 and 100 at Bulverhythe on Aug. 25th and Sept. 21st respectively, and 175 on the Adur at Coombes on Oct. 19th.

240. **KITTIWAKE** (*Rissa tridactyla*).—Recorded throughout the year from coastal sites only. Very few were noted until Mar. 24th when 198 passed E at Seaford Head during 1½ hours observation. Thereafter smaller eastward spring movements were noted from all regular sea-watching stations, with most being observed during May and peaks of 150 E at Beachy Head on May 10th and 80 E at Selsey Bill on May 24th.

The Newhaven breeding colony, which is that to which reference has been made since 1976, continued to prosper as the July count revealed 204 nests, 91 of which contained 135 young (see pp. 78-80).

During Oct. there were 2 notable passages recorded at Selsey Bill—on 19th, 1,080 moving eastwards in 2½ hours, and, on 26th, 628 W and 65 E in 7 hours. There were still good numbers in the Channel in late Dec. as indicated by reports of 33 E at Worthing in ½ an hour on 20th and 70 W at Selsey Bill on 21st.

245. **SANDWICH TERN** (*Sterna sandwichensis*).—First records in spring were of singles off Worthing on Mar. 20th, Selsey Bill on 23rd and Hove on 25th followed by 4 at Pagham Harbour on 29th and 2 at Rye Harbour LNR on 31st. At Selsey Bill 1,906 E were noted up to June 1st with a maximum of 446 on Apr. 12th and 304 on 13th—and a late movement of 82 E on May 31st and 51 the following day. At Worthing-Lancing 2,465 E and 123 W were logged during the 292 hours of observations between Mar. 20th and May 31st with maxima of 221 on Apr. 12th, 252 on 25th and 238 on May 9th. At Hove, watches totalling 14 hours produced no fewer than 999 E between Apr. 12th and 15th whilst at Brighton Marina 1,132 E were noted in 76 hours between Apr. 3rd and May 11th. Reduced observation hours at Beachy Head, totalling 139 hours resulted in a low figure of only 1,482 E between Mar. 29th and May 18th with maxima of 317 on Apr. 12th and 537 on 13th. In June some apparent westwards movement was noted in the evenings at Worthing—30 on 6th, 35 on 21st and 32 on 22nd.

At the Chichester Harbour breeding site, nature had taken a hand during the winter by depositing a shingle bank thereon. As a result, high tides on June 14th caused little loss and in the event some 70 pairs bred with excellent fledging success.

At Rye Harbour LNR, where up to 5 had been present through June, 117 were noted by July 17th. Of these only 9 were juveniles but 24 were noted with 89 adults on 26th. Thereafter, daily counts steadily diminished to a single on Sept. 17th. At Newhaven 70 were seen feeding on Sept. 10th whilst at Selsey Bill westward movements included 73 on 6th and 74 on 21st. The last at Rye were two juveniles on Oct. 4th and at Pagham Harbour one on 12th. The last for the year were one off Lancing on Oct. 14th and 2 off Selsey Bill on 20th.

Inland records were of 2 flying S over Cissbury Ring on Sept. 21st and, at Weir Wood Res., one on Aug. 23rd, 3 on 25th, 5 on 30th, one on 31st and another on Sept. 13th—an unusual series for an inland locality.

246. **ROSEATE TERN** (*S. dougalii*).—More records than usual in spring—one off Worthing at 0815 on May 2nd was possibly the same as one off Brighton Marina at 0910 and perhaps even one at Rye Harbour LNR on 4th. On 10th 2 flew E at Brighton Marina at 0555 followed by one at Beachy Head at 0800 and one at Worthing at 0840. On the following day 2 more passed E at Brighton Marina and possibly the same were seen offshore at Beachy Head.

During June one lingered at Rye from 21st to 23rd and an adult was present on 4 dates between July 5th and 25th. On 18th a first- or second-summer individual (sometimes described as the *portlandica* phase) was identified—a very rare occurrence in Britain. In Aug. a pair with one juvenile were present from 2nd to 8th. As in 1979 all the Rye records can probably be associated with the breeding birds at Dungeness.

247. **COMMON TERN** (*S. hirundo*).—At Chichester G.P. 9 pairs nested on the rafts installed by this Society, 26 eggs were laid and fledging success seemed good. At the Chichester Harbour colony 40 nests were lost during mid-June tides but eventually some 60 pairs succeeded in breeding with good hatching and rearing results. At a further nearby site attempted breeding was terminated by predation, possibly by rats.

At Rye Harbour LNR 80 pairs were present during June and 74 nested eventually bringing at least 42 young to flying stage.

247/248. **COMMON/ARCTIC TERN** (*S. hirundo/paradisaea*).—First recorded in spring were singles off Ferring (an Arctic) and Brighton Marina on Apr. 11th; a number of sightings followed on 12-14th. At Selsey Bill, 5,448 were noted moving E between Apr. 12th and June 1st with a maximum of 906 on May 5th of which 844 were during the evening. A late movement of 456 E occurred on 31st. Off Worthing-Lancing the log was of 8,996 E and 55 W during 292 hours observations Apr. 12th to May 31st with maxima of 1,484 on May 3rd and 1,163 on 9th. As at Selsey Bill a late movement was noted on 31st, totalling 446. The May 3rd movement was also watched at Hove where 1,044 passed E between 0715-1115, and at Brighton Marina, where 888 were seen. The total there, during 76 hours observations from Apr. 3rd to May 11th was 3,427. Despite the reduced coverage at Beachy Head, the 139 hours observations embraced the main movements and totalled 11,092 between Apr. 12th and May 18th, with maxima of 2,830 on May 3rd and 2,230 on 10th. There was no watch there on May 8th but at Seaford Head 1,140 E were noted between 1320-1920. On May 10th a party of 11 was seen flying N over Cissbury Ring.

Late summer and autumn records inland were more numerous than usual, especially at Bewl Bridge and Weir Wood Reservoirs: at the latter approximately 100 were noted on Sept. 19th. On the coast an immature (*portlandica* phase) individual was seen at Selsey Bill on July 14th. Some 274 W were noted there during 14 dates in Aug. and 407 on 26 dates during Sept.-Oct., whilst at Worthing-Lancing peak movements of 120 W in one hour were noted on Aug. 11th and 348 W in 2 hours on Sept. 21st. At Rye Harbour LNR 6 Common were present on Oct. 4th and the last 4 on 7th. One of either species was at Darwell Res. on 12th and one at Church Norton on 26th, when an Arctic passed W at Langney Point. The last for the year were a Common off Worthing on 27th and an indeterminate at West Wittering on 30th.

248. **ARCTIC TERN** (*S. paradisaea*).—Of six records for the year only two were significant and are mentioned above. It should be borne in mind that the spring tern passage includes a high proportion of this species, but there is no accurate way in which it can be assessed. The repeated paucity of published records therefore bears no relation to its true status as a migrant in this county.

251. **LITTLE TERN** (*S. albigifrons*).—The first for the year were singles at Pagham Harbour on Apr. 4th, Selsey Bill and Hove on 12th and Worthing-Lancing on 13th followed by others at Brighton Marina and Rye Harbour LNR on 14th.

During spring passage at Selsey Bill, 409 were noted moving E up to June 1st with a maxima of 62 E on May 31st. Off Worthing-Lancing 699 E and 54 W were logged between Apr. 13th and May 31st with maxima of 51 E on May 6th, 63 E on 10th and 72 E on 11th. At Brighton Marina 139 E were seen during 76 hours observations between Apr. 18th and May 11th with a further 11 on 12th. At Beachy Head 244 E were seen in 139 hours between Apr. 26th and May 18th.

The breeding season brought mixed fortunes. In Chichester Harbour the season started with 15 pairs prospecting at one site but two which did nest were washed out by tides in June. At a nearby site 30 pairs were present at the outset but only 6 or 7 appeared to have nested by June and fledging success may have been poor due to predation by rats. In Pagham Harbour 35 pairs were breeding by the end of June but a local male Kestrel took so many young that only 20 were successfully reared to flying stage. The tale at Rye Harbour LNR was again one of success largely due to the fox-proof fencing (see Corrections to 1979 Report). By July 43 pairs were nesting and brought off an excellent total of 58 young.

Post-breeding season up to 95 were roosting at Rye during early Aug. but the species was scarce by the end of the month and the last was seen there on Sept. 15th. At Selsey Bill 20 moved W on Sept. 21st. The last for the year were singles in Chichester Harbour on Oct. 2nd and off Selsey Bill on 9th and 14th.

Inland, one was seen at Barcombe Mills Res. on July 11th.

253. **BLACK TERN** (*C. niger*).—Spring arrivals were earlier than usual for the second year running, with one E off Worthing on Apr. 12th quickly followed by singles at Sidlesham Ferry, off Hove and at Rye Harbour LNR on 13th and Chichester G.P. on 14th. There were no further records until 4 E off Worthing on 27th and a total of 209 E was recorded there during the spring passage. At Beachy Head 142 E were logged and at Selsey

Bill, 76. Good up-Channel movements were seen on May 3rd when 87 were reported from 8 localities (though as few as 30 may have been involved); also 6 were seen at Chichester G.P. and one at Weir Wood Res. On 7th 48 E were noted at Worthing but mid-week coverage at other coastal localities produced only 3. The largest movement occurred on 10-12th with a total of 232 E at 11 coastal sites, 111 of which were seen at Worthing-Lancing and 61 from Beachy Head. During this period inland records were of 10 at Chichester G.P., 7 at Weir Wood Res. and singles at Bewl Bridge Res., Ardingly Res. and near St. Leonards. Passage continued at Beachy Head with a further 49 E between 13-18th, but apart from 10 E off Selsey Bill on 14th few others were seen with only 9 in the last 10 days of May. June wanderers were reported from Chichester G.P. on 15th and Rye Harbour LNR on 21st and 24th.

Another at Rye on July 19th marked the start of return passage, but only 36 well-scattered records ensued during Aug. including 11 E at Beachy Head on 17th. In Sept. 73 were reported, in particular up to 4 at Chichester G.P. and 12 at Langney Point on 12th, and 20 W at Selsey Bill on 21st which may have included 7 W seen at Worthing. Oct. produced only one—at Church Norton on 4th, and one at Weir Wood Res. on Nov. 4th was the first record for that month since 1967.

254. **WHITE-WINGED BLACK TERN** (*C. leucopterus*).—One, an adult, at Chichester G.P. on Aug. 5-7th (CRJ, OM, JVS) was the 28th record for the county and has been accepted by "British Birds".

255. **GUILLEMOT** (*Uria aalge*).—Reported from various coastal localities as follows:

Month	Jan.	Feb.	Mar.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Dead	—	1	1	—	—	—	—	—	—
Oiled	—	1	1	—	—	—	—	—	—
Dead & Oiled	—	1	1	—	—	—	—	—	—
Others	—	—	—	—	—	—	—	—	—
See also Auk Species	—	—	3	—	4	—	1	9	1

257. **RAZORBILL** (*Alca torda*).—Reported from various coastal localities as follows:

Month	Jan.	Feb.	Mar.	Apr.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Dead	—	—	—	1	—	—	—	—	—	—
Oiled	—	—	—	1	—	—	—	—	—	—
Dead & Oiled	—	—	—	1	—	—	—	—	—	—
Others	—	—	—	—	—	—	—	—	—	—
See also Auk Species	—	—	—	3	—	—	5	12	22	3

261. **PUFFIN** (*Fratercula arctica*).—One was found dead at Camber on Feb. 23rd (PJG, RRG) and one flew E at Beachy Head on Apr. 12th (ARK, AJP) and 2 W off Worthing on May 9th (MRW).

AUK SPECIES.—During spring passage at Selsey Bill only 4, unspecified, auks moved W and 3 E between May 11th and June 1st and at Worthing-Lancing numbers were scarcely higher with just 2 W on Mar. 23rd, none during Apr. and only 12 W and 11 E during May watches. At Beachy Head however, 78 moved E between Apr. 12th and May 18th (c.f. 78 in 1979).

From mid-Nov. unusual numbers of auks, considered mostly Guillemots, were present off Worthing and on Dec. 19th 39 flew W there in one hour. There were also reportedly exceptional numbers in Rye Bay, again mostly Guillemots. It is known that there were large numbers from Kent to Cornwall at this time.

264. **STOCK DOVE** (*Columba oenas*).—Winter and other flocks reported included 40 at Church Norton in Jan., 30 at East Head in Feb., 135 on Kithurst Downs in Mar., 300 on Pett Level in late Apr., 40 on Ambersham Common in late May, 40 on Thorney Island in Aug. (and 110 there in Nov.), 100 on the Cissbury Downs in Sept. and 42 along the lower Ouse in Dec.

The species was widely reported during the breeding season mainly in or near Downland valleys and from the Weald generally. Counts received included 5 pairs on 30 ha. of farmland at West Chiltoning, 2-3 at Buchan Park, Crawley (70 ha.), 3 at Alexandra Park, Hastings (26 ha.) and 7 along the 8km. of the Bluebell Railway.

All breeding season and flock records of this species are still welcome.

266. **COLLARED DOVE** (*Streptopelia decoreata*).—Despite an appeal for information on large winter flocks and their apparent food source (Sx. B.R. 32: 42) the only reports received were of up to 300 in the Shoreham Harbour area (food source uncertain). 180 at a Coombes farm (apparently associated with feed for horses and geese), up to 120 in the Selsey/Sidlesham area (on spilled grain in fields), still some 250 at Rye Harbour LNR (farm grain store) and a 'large flock' at the Bentley Wildfowl Collection, Halland (doubleless sharing the handouts). At a Loxwood farm it was noted that a permanent gathering of some 80 birds obviously enjoyed uninterrupted access to open-topped grain silos.

267. **TURTLE DOVE** (*S. turtur*).—First recorded in spring at West Chiltington on Apr. 12th, Newmarket Hill on 17th and Bewl Bridge Res. on 19th followed by scattered reports until a more general arrival in early May.

Breeding season counts were of 4 pairs or singing males along or adjacent to the 8km of the Bluebell Railway. 6 at Finches Wood, Nuthurst (50 ha.), 4 at West Chiltington (30 ha.), 3 on 65 ha. of mixed habitat in the Steyning tetrad but only one at Fore Wood NR (55 ha.).

In the autumn again noted as numerous in the Sidlesham area with a flock of 100 on Sept. 23rd immediately prior to emigration. At this time too, 35 were seen moving S at Gissbury Ring on 18th and another 7 on 22nd and 10 were at Scaford Head on 20th. Subsequently the only reports were of singles at Church Norton on Oct. 8th, Beachy Head on 11-12th and Rye Harbour LNR on 17th.

An individual associating with Collared Doves in the Shoreham area on Mar. 25th, Nov. 11th and Dec. 2nd may have been of domesticated stock although it is not unknown for occasional individuals to adopt the habits of the resident species.

271. **CUCKOO** (*Cuculus canorus*).—An early individual reported from Fore Wood NR on Apr. 3rd was the first for the spring, the next being at Storrington on 10th and Fitzhall and Sandhurst on 12th. A steady trickle of records ensued from 16th, mainly inland localities, and by 25th the species was widespread.

During the breeding season some 55 territories were reported, including 11-12 in the Maynard's Green/Horam area, 9 adjacent to the Bluebell Railway, 6 near Hurstpierpoint and 4 in Buehan Park, Crawley. The first flying juvenile reported was at Church Norton on July 13th but few were seen in autumn with only 11 records but 3 were seen at Selsey Bill on Aug. 30th. Singles were reported in Sept. from Rye Harbour LNR on 1st and 3rd, Steyning on 4th, the Downs on 5th and finally at Widewater on 21st.

274. **BARN OWL** (*Tyto alba*).—During the breeding season 14 proven and 8 probable pairs raised at least 16 young, a welcome increase on both counts over recent years. Breeding singles (23) and isolated winter records (10) maintained the improvement noted last year. Coverage was again widespread but further investigation of breeding singles would almost certainly swell the total of breeding pairs. One negative area report was offset by one new positive; one pair was reported shot by a game-keeper, which is utterly disgraceful, another pair bred in a tea chest and only one roadside death was reported.

279. **LITTLE OWL** (*Athene noctua*).—Maintained observer coverage throughout the county, coinciding with a probable population growth, produced 40 known and 9 probable pairs, an encouraging increase of 10 pairs in the former category. Singles further increased to 44 (31 in 1979) and casual winter records totalled 16, an increase of 10. Breeding results were average with 19 young raised from 16 nests but other successful sites were almost certainly under-recorded. At least one site was lost to Dutch elm disease but this was compensated for by the attempted nesting of a pair in a rabbit burrow.

280. **TAWNY OWL** (*Strix aluco*).—The success of the previous year was maintained with once again 89 pairs or calling birds reported from 59 localities and 13 singles from other areas during the breeding season, when 22 pairs were known to have raised 34 young. Casual winter records totalled 9 birds.

Reports were again widespread but records from residential areas remained sparse. A count along the 8km of the Bluebell Railway produced 2 pairs and 7 other calling birds.

281. **LONG-EARED OWL** (*Asio otus*).—Winter/spring records were of up to 4 at Rye Harbour LNR during Jan., 1-2 in Feb. and up to 3 during Mar., 1-2 in the Balsdean area

from Jan. to mid-Apr., one at Bewl Bridge Res. from late Feb. to mid-Mar., 2 at Sidlesham on Mar. 10th and at least 6 in a Downland roost until early Mar.

During the breeding season two were present at a Wealden locality and one near the coast, both away from recently recorded sites, but there was no evidence of actual breeding. At the traditional site of recent years only one bird was present and may have been the mate of one found dead with a clean-broken leg earlier in the year. Another such report concerned a male with both legs broken, found in the Glynde area in mid-Mar., and this also gave rise to suspicion of pole-trapping. Although a search of both localities produced no relevant evidence these incidents must be viewed with some misgivings.

On Aug. 26th one reappeared at Rye Harbour LNR and by the end of the year 1-2 were again present in the Balsdean area, one at Pagham Harbour, 6 again at the Downland roost and one elsewhere on the Downs.

282. **SHORT-EARED OWL** (*A. flammeus*).—Approximate monthly totals were:

Jan.	9	Feb.	9	Mar.	8	Apr.	9	May	2	Jun.	—	Jul.	3	Aug.	—	Sept.	11	Oct.	13	Nov.	4	Dec.	—
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The low figures at the start of the year continued those at the end of 1979 (Sx. B.R. 32: 43), and were largely accounted for by a roost of 5 at Pagham Harbour in Jan.-Feb. The Apr. figure included 2 migrants at Selsey Bill but the lack of May migrants was noteworthy. The June records came from Camber and Sidlesham. The Nov. total included a party of 6 moving south over Wivelsfield Green and another at Climping on 13th.

284. **NIGHTJAR** (*Caprimulgus europaeus*).—The first for the year was an individual being mobbed by gulls as it arrived at Selsey Bill on May 3rd. Inland, early records came from Ashdown Forest on 11th, the Goodwood area on 17th and in the NW in mid-month.

The species was the subject of a further limited survey during 1980, details of which were set out in the Society's Summer Newsletter (No. 77). Up to 101 pairs or "churring" males were reported, 35 from East Sussex and 66 from West.

The last inland record came from a breeding site on Aug. 29th but one was trapped at Beachy Head on Sept. 11th.

289. **SWIFT** (*Apus apus*).—First recorded in spring were singles at Chichester G.P. on Apr. 25th and Rye Harbour LNR on 26th. A general arrival throughout the county followed immediately, albeit in small numbers, but by 29th there were 30 or more at both Chichester G.P. and Barcombe Mills Res. Some 150 were gathered at the latter on May 9th and on 11th many 100s were noted moving E at Climping.

Several observers commented upon apparent early departures in July. It should be borne in mind, however, that in addition to the sometimes misleading impression of population levels given by large feeding gatherings (Sx. B.R. 30: 31), the long journeys undertaken by this species to stay with food-supplies can be mistaken for genuine migration (see "mid-Season Movements of Swifts in Sussex" by D. D. Harber, "British Birds" Vol. 45: 216-218). Notwithstanding, small numbers were seen leaving Selsey Bill to the S from July 12th onwards and only 50 were to be seen feeding over Bewl Bridge Res. by 20th. At the start of Aug. up to 300 daily were feeding over Rye Harbour LNR but all suddenly departed on the night of 9th, perhaps to join the many 1000s delayed by thick mist at Beachy Head the following day. The last at Bewl Bridge Res. was on 12th and passage at Beachy Head was over by 25th. A scattering of records came during the first half of Sept. and 5 were at Beachy Head on 21st. The last for the year were singles there on 26th and 28th, Maynard's Green also on 28th and Icklesham on Oct. 1st.

291. **ALPINE SWIFT** (*A. melba*).—One at Beachy Head on May 14th (JFC, MS-H; NAGL *et al*) was the 14th record for the county and has been accepted by "British Birds"; a further record remains under consideration. (See also Additions to 1979 Report).

293. **KINGFISHER** (*Alcedo atthis*).—During Jan. and Feb. about 20 were reported from 7 coastal and 9 inland localities. An increase in breeding season records brought reports from 32 known or potential sites. Although successful breeding was proved at only 5 sites, some indication that the season had been good came with an increase in post-breeding dispersal records and from ringing results at Weir Wood Res. and Shoreham Sanctuary where 2 and 6 birds of the year respectively were trapped. At the end of the year 33 birds were reported from 5 coastal and 20 inland localities, including 6 at Bewl Bridge Res.

297. **HOPOE** (*Upupa epops*).—An early individual appeared at a Wealden locality on Mar. 21st and remained until July 31st but was unmated (per SWMH). A good arrival occurred in mid-Apr. with singles at Beachy Head on 13th (RHC, TJT, PIW), near Nutley on 16th (DA, PF, PG), Earham on 22nd (VL), East Preston on 23rd (CDP), Plumpton on 28th (DCL) and near Bignor also on 28th (FWB). During the month one was shot by a gamekeeper at Bosham in mistake for a Jay—perhaps understandable but nonetheless inexcusable. In May singles appeared at Sidlesham on 5th (NP-H, IK) and near Herstoncoex Observatory on 16th (LC).

Unusually there were three autumn records—singles at Balcombe on Aug. 25th (per GdF), at Beachy Head from Sept. 18th to early Oct. (MEC, RHC *et al*) and, also in Oct., in a Bosham garden (JWE) bringing the year's total to 13.

298. **WRYNECK** (*Jynx torquilla*).—For the first time since 1966 there were no spring records but some 15 were reported in autumn: singles at West Beach, Littlehampton, on Aug. 28th, Sept. 3rd and 28th; Beachy Head on Aug. 31st, Sept. 21st and 22nd; Selsey Bill on Aug. 31st; Fairlight on Sept. 1-8th; Hampden Park, Eastbourne, on Sept. 3rd. (sadly, killed by a cat); Hove on 11th; Church Norton and Woodingdean on 20th; Pease Pottage on 21st; Brighton on 25th; and the Cuckmere from 28th to Oct. 5th.

300. **GREEN WOODPECKER** (*Picus viridis*).—The population levels in 3 areas which have been studied in earlier years remained unchanged. In the open country round Rogate the species was reported to outnumber the Great Spotted Woodpecker by 2:1 but, as might be expected, counts suggested the reverse in the more heavily wooded areas of the NW (MJR).

A systematic search of tetrads in the Horam area (PCT) indicated a density of one pair per 250 ha. but ringing studies on the Downs near Lewes (RL) pointed to a larger territory size of 400-600 ha. Breeding season counts in defined areas in any part of the county will be most useful to determine future population trends.

302. **GREAT SPOTTED WOODPECKER** (*Dendrocopos major*).—Breeding season reports from localities studied annually, including Fore Wood NR, West Chilmington, the Bluebell Railway and Heath Common, suggested no significant change in population levels. New counts from defined areas were of 3 pairs at Buchan Park, Crawley (70 ha.), 3 at Fairlight (65 ha. of woodland), 2 at Steyning (46 ha. of farm and woodland scrub) and 9-10 at Horam (1,600 ha.). A survey of 6 heavily wooded areas in the NW (MJR) showed the species to be widespread with densities varying between one pair in 2.3-4.0 sq. kms (average 2.8) but probably underestimated true population levels. Detailed information is welcomed from any area but particularly from the Downs and coastal plains.

303. **LESSER SPOTTED WOODPECKER** (*D. minor*).—During the breeding season the species was reported from 59 localities throughout the county and at other seasons from a further 26 all but 5 of which would have been suitable breeding areas. A paper on the status of this species, 1962-81 is in preparation; it is therefore particularly important that all 1981 sightings be reported.

310. **WOODLARK** (*Lullula arborea*).—Most pleasingly reports were received of singing males present at 4 localities during the breeding season, at least one being paired. An autumn migrant was seen at Beachy Head on Nov. 9th (PC).

311. **SKYLARK** (*Alauda arvensis*).—Breeding season counts received included 18-25 pairs or singing males along or nearby the 8 km of the Bluebell Railway, 25 on 935 ha. of Brede Levels, 3 on 32 ha. of farmland at West Chilmington (6 in 1979), 11 on 43 ha. of fields at Fairlight and 30 on about 133 ha. of grassland at Bewl Bridge Res. Also 13 were counted on Iping Common and 6 at Pulborough North Brooks. In the NW of the county the species was found to be very sparsely distributed.

Autumn movements were not spectacular. At Cissbury about 200 were noted feeding on Sept. 22nd and on Oct. 12th steady arrivals were seen both at Beachy Head and Selsey Bill whilst inland at Maynard's Green 358 passed NW in 4 hours. On 16th, 150 were counted at Cissbury and on 18th '100s' of new arrivals were to be seen at Beachy Head.

313. **SAND MARTIN** (*Riparia riparia*).—First recorded in spring were 4 at Chichester G.P. on Mar. 29th and 7 at Arlington Res. on Apr. 1st but there was a fairly general arrival and small numbers were subsequently seen throughout the county. Some 400 were feeding at Rye Harbour LNR by 17th.

As usual there was little information on breeding. Two colonies were reported as active, the long-standing one at Storrington containing some 60 occupied nest-holes. At Rye Harbour LNR, where 12-15 pairs nested within the SSSI, 3 did so successfully in a concrete artificial nesting bank installed at the Tern Pool. By June 29th, 80 gathered at Rye proved to be nearly all juveniles.

Autumn gatherings came in two phases; in late July 4,000 or more were roosting on Camber Dunes on 25th, but Aug. numbers over the pits at Rye did not exceed 360. Departures from Selsey Bill were noted from Sept. 6th and on 18th, 340 moved S over Hurst Green during the early morning in a mere 15 minutes. On 21st several 1000s were gathered at Beachy Head—and an estimated 6,000 the following day. On 25th 100s were still moving SE there after which few were to be seen anywhere. Oct. brought only 5 records and the last were one at Rye on 19th and 2 in the Cuckmere on 28th.

314. **SWALLOW** (*Hirundo rustica*).—First in spring were singles at Worthing Beach on Apr. 2nd and 3rd, Fairlight on 3rd, 3 further localities on 4th and subsequently in small numbers throughout the county until main arrivals towards the end of the month and in early May.

At Beachy Head autumn pre-migratory gatherings numbered several 100s on Aug. 10th and at least 1,500 were noted on 22nd. On Sept. 3rd some 3,000 were roosting at Thorney Island and substantial departures took place from Selsey Bill on 6th and 18th. Also on 18th, 500 passed S over Hurst Green in 1½ hours. At Beachy Head on 21st the species formed the majority amongst tens of 1000s of hirundines which gathered and moved on but passage continued on 22nd with an estimated 10,000. Although substantial numbers were seen on the move at Newhaven, nowhere else along the coast provided such a spectacle. Departures generally continued throughout Oct., including over 500 from Selsey Bill on 12th (and 40 on 24th), up to 50 at Rye Harbour LNR until 19th, 30 still at Houghton on 23rd and 100 at Beachy Head on 25th. On Nov. 1st 10 flew S at Newhaven and 3 were at Rye—and on 5th, 3 youngsters were found weatherbound at Pagham Harbour. Thereafter only 10 more were reported up to 9th and the last were at Worthing on 20th, 2 at Church Norton on 21st and 2 leaving Selsey Bill on 26th.

316. **HOUSE MARTIN** (*Delichon urbica*).—First in spring were singles at Fairlight and Bewl Bridge Res. on Apr. 3rd, Bateman's Mill Pond on 5th and Climping on 6th. Between 11th and 29th the species began to appear at nesting sites inland and by early May was widespread.

Post-breeding gatherings came to notice from mid-Aug. onwards. By Sept. 14th some 2,000 had gathered at West Chilmington and full-scale departures had started by 21st when many thousands were seen at Beachy Head. Emigration, sometimes in very large numbers, was noted all along the coast up to, and particularly including, Oct. 13th; the last left Bewl Bridge on 12th. On 18th, 400 were noted resting on a doubtless warm, slate roof in Hastings; on 19th the last 150 were seen at Shoreham Sanctuary. An isolated movement of some 500 was noted at Beachy Head on 25th. The last few records were of 2-3 at 4 localities between Oct. 28th and Nov. 2nd and, finally, one at Brighton on Nov. 20th.

318. **TAWNY PIPIT** (*Anthus campestris*).—After a spring migrant at Beachy Head on May 4th (DC, JFC, ARK) came an exceptional autumn. First was a single at Beachy Head on Aug. 16th (DC, DRC, JFC) and then 2 near Cissbury Ring on Sept. 21st-22nd (BFF, ARK) and another at Littlehampton on 21st (RG). The 21st also brought no fewer than 6 to Beachy Head—a single (RHC *et al*) and a wholly unprecedented party of 5, 4 of which remained until 22nd (RJF, DAP, TWP *et al*). Finally came one near Eastbourne on 27th (DC, DRC, JFC) to bring the year's total to a record 12. It is of note that this arrival, brought about by a quirk of the weather at the time, was largely confined to Sussex. All records have been accepted by "British Birds".

320. **TREE PIPIT** (*A. trivialis*).—First record in spring was a pair in territory at Buchan Park, Crawley, on Apr. 3rd after which only a very thin spring passage was seen at the coast totalling no more than 15-16 individuals between Apr. 4th and mid-May.

During the breeding season reports received totalled 109 pairs or singing males from 32 widely scattered localities as follows (*denotes incomplete count):

Grid ref.		Grid ref.	
SU 81	Westdene Woods	TQ 02	Plaietow
SU 82	Rogate and Chithurst	TQ 03	Loywood
SU 82	Langley Wood Rake	TQ 12	Finches Wood
SU 82	Lower Common Wood	TQ 22	Warren Wood
SU 82	Chithurst	TQ 22	Leonardslee
SU 82	Henley	TQ 23	Buchan Park
SU 82	Stredham Marsh	TQ 23	Broadfields/Crawley District
SU 82	Woodbeding Common	TQ 23	St. Leonards
SU 82	Common Wood	TQ 23	Ilgate
SU 82	Iping Common	TQ 32	Balcombe
SU 82	Ambersham Common	TQ 33	Wakehurst
SU 91	Duncton Common	TQ 42	Sheffield Park
SU 92	Verdley Wood	TQ 42	Ashdown Forest
SU 92	Bexleyhill	TQ 43	Ashdown Forest
SU 92	Henley-Bexleyhill	TQ 71	Fore Wood
SU 92	Balls Cross	TQ 81	Fairlight
TQ 01	Sullington Warren		

Autumn passage at Beachy Head, first noted on Aug. 2nd, totalled some 200 in Aug. and 40 in Sept., with a maximum of 100 on Aug. 16th, whilst at Cissbury 193 were seen in Aug. and 48 in Sept. In all over 500 were reported with a few stragglers into Oct. and a very late individual at Bexhill on Nov. 9th.

322. **MEADOW PIPIT** (*A. pratensis*).—Winter flocks reported included 40 each at Lavant Dew Pond and Chichester G.P. in Feb.

Spring migration started in mid-Mar. and substantial arrivals were noted along the whole coast on 30th and again on Apr. 2nd-3rd.

Breeding season counts received were of 8-10 pairs on 935 ha. of Brede Levels, at least 7 on 260 ha. at Pett Level, 10 on Pulborough Brooks (North and South), 8 along the W bank of the Arun at Waltham Brooks and 30 at Bewl Bridge Res. where it was considered a record season. It was noted to be a very sparsely distributed species in the NW of the county.

Autumn migration was noted at Selsey Bill from Sept. 18th to Oct. 19th with a peak on Oct. 4th, whilst at Beachy Head the only significant gatherings fell on Sept. 20th-21st. At Littlehampton-Climping peak numbers were seen feeding on 23rd. Inland, substantial southward passage was recorded over Buchan Park on 26-27th and, also on 27th, the season's maximum of 500 was noted at Cissbury Downs.

More information is required on the winter status of this species (see Shrubbs, 1979); all records for Dec.-Feb. would be most welcome, including comments on areas from which it is generally absent.

324. **ROCK PIPIT** (*A. spinoletta*).—Further winter counts received included—Newhaven 5, Portobello 2, Brighton Marina 4, East Head 10 and West Chidham 4. The remainder of the coast produced similar numbers to those given in the last report (Sx. B.R. 32: 46). In addition were two inland—one at Arlington Res. on Dec. 7th and one at Arundel Wildfowl Refuge during Oct. and on Nov. 3rd. A further inland report came from the River Tillingham at Rye on Apr. 7th.

Individuals showing the characters of the typical race *a. s. spinoletta*, colloquially known as the Water Pipit, were fully identified at Pett Level on Apr. 5th, Rock-a-Nore on 13th, Arlington Res. on 15th and Shoreham Airport on 17th. On Nov. 15th one was well-watched on the beach at Selsey Bill, a marine locality unusual for this race, but one at Sidlesham on Dec. 27th was on more familiar habitat.

Two individuals at Church Norton on Mar. 5th were considered more closely to resemble the Baltic race *a. s. littoralis* now only infrequently identified in Sussex and one at Rye Harbour LNR on Apr. 5th could not be ascribed to either race.

325. **YELLOW WAGTAIL** (*Motacilla flava*).—First reports in spring were of singles at Fairlight on Apr. 3rd, Rye Harbour LNR on 5th and Pett Level on 6th. Only a scattering followed during 13th-22nd but 15 at Chichester G.P. on 25th and steady arrivals over the coast during May 1st-3rd indicated the arrival of the main population.

During this the first year of the Society's breeding survey, 319-324 pairs were reported. Autumn migratory gatherings were well marked at the end of Aug. moving 77 on the Downs at Cissbury on 24th, 50 at Beachy Head on 25th-31st, and 55 moving W at Littlehampton West Beach on 31st. On Sept. 6th 40 were counted at Church Norton and at least 70 were estimated round the Harbour on 7th and on the 19th, 100 at both Bishopstone and the Cuckmere perhaps signalled the fall of 20th-21st which brought at least 200 to Beachy Head on 20th and an astonishing 750+ the following day. Also on 21st 150 were found at Littlehampton West Beach and 50 at Glebe Farm, Shoreham. As with the other species involved, the migrants quickly moved on and only 30 were to be seen at Beachy Head on 22nd. After this only a few were to be seen up to Oct. 6th and the last for the year were singles at Beachy Head on 12th and 18th.

Individuals of the typical race *m. f. flava*, colloquially known as the Blue-headed Wagtail were identified at the Cuckmere on Apr. 12th, Waller's Haven on 16th, near Upper Beeding on 26th, on Pett Level on May 6th and at Rye Harbour LNR on 21st. In July a male was noted associating, but apparently not mated, with a female Yellow Wagtail at Pett. The fall on Sept. 21st brought 2 males to Beachy Head and one to Littlehampton West Beach.

On May 3rd a male showing the characters of the race *m. f. thunbergi*, the Grey-headed Wagtail, was identified at Langney Point (DC, JFC).

327. **GREY WAGTAIL** (*M. cinerea*).—In Jan. and Feb. reported from only 19 localities all but one of which were inland, either at or near known breeding sites. Most returned to their sites in early Mar. At the coast there was little evidence of spring passage although singles were noted at Rottingdean Pond and Winchelsea Beach on Mar. 27th.

In the breeding season pairs were reported from 51 traditional sites and absent from only one—at East Hoathly. There was a single bird at Brighton Marina on May 14th.

Post-breeding dispersal was noted as early as Aug. 2nd when 2 were at Sidlesham Ferry. Coasting individuals were first reported from Selsey Bill on 30th and Climping and Beachy Head on 31st. At Beachy Head as many as 20 were noted on the latter date and a further 28 between Sept. 1st and 15th, with peaks of 5-7 on 6th and 14th. Elsewhere 3 were at Widewater, Lancing on 9th, 5 at Norman's Bay on 11th and, on the Downs, singles over Cissbury on 14th and Oct. 19th. In Nov. and Dec. reported from 26 inland and 6 coastal localities.

328. **PIED WAGTAIL** (*M. alba*).—Winter roosts included the traditional 30-40 in a tree in Terminus Road, Eastbourne and a newly reported one of up to 70 in bushes on a traffic island on the A264 at Horsham. Both serve to illustrate a remarkable propensity for ignoring human activity and, in particular, road traffic which it seems to elude with greater skill than most other species. More typical roosts were of up to 500 in a reedbed at Shoreham Airport in Oct. (later moving elsewhere) and up to 100 in waterside vegetation at Horam.

As commented upon by Shrubbs (1979) little is known of the current breeding status of this species in Sussex though it was thought to have seriously declined in recent years. However, MJR found it to be unexpectedly well distributed in the NW of the county, particularly in the upper Arun area where a high proportion of farm establishments and large houses with well-kept lawns supported pairs. It may be that this is more generally so. A survey of Alexandra Park, Hastings revealed 3 pairs on 26 ha., a good breeding density.

Evidence of autumn migration again came from Beachy Head with 78 seen between Aug. 2nd and Oct. 25th with peaks on Oct. 9th, 19th and 25th. At Hampden Park, Eastbourne, no fewer than 100 were found feeding on Oct. 7th.

Individuals showing the characters of the typical race *m. a. alba*, colloquially known as the White Wagtail, were identified as follows: Pett Level, Mar. 16th; Sidlesham, 29th; near Eastbourne, Apr. 4th; Church Norton, 13th; Littlehampton, 25th; Arlington Res., May 8th; near Crowhurst, Jul. 19th; Cuckmere Haven, Aug. 30th; and Seaford, Nov. 22nd.

329. **WAXWING** (*Bombicilla garrulus*).—One was seen at Blunt's Wood, near Cuckfield, on Nov. 23rd (WS).

331. **WREN** (*Troglodytes troglodytes*).—Breeding season counts received were of 19 pairs or singing males on 46 ha. of farm and downland scrub at Steyning, 37 on the 55 ha. of Fore Wood NR (21 in 1979), 70 on the 70 ha. of Buchan Park, Crawley, 41 on 184 ha. of Fairlight Country Park and 16 pairs and 16 males on the 26 ha. of Alexandra Park, Hastings. Along the 8 km of the Bluebell Railway, 47 were located (34 in 1979). Counts on Brede Levels suggested no change on those in 1979.

Two instances were reported of the species using House Martin nest-boxes for roosting purposes, 4 individuals being in the one and, at Waldron in Jan. no fewer than 31 in the other. At Keymer in Apr. a pair of Blue Tits held their own when a Wren also decided to construct a nest in their box.

333. **DUNNOCK** (*Prunella modularis*).—Breeding season counts received were of 16 pairs or singing males on 46 ha. of farm and downland scrub at Steyning, 9 on the 55 ha. of Fore Wood NR (7 in 1979) and 7 on the 26 ha. of Alexandra Park, Hastings. Along the 8 km of the Bluebell Railway 19 were located together with a further 10 adjacent thereto (19 overall in 1979) representing an increase possibly only of a strictly local nature.

336. **ROBIN** (*Erithacus rubecula*).—Breeding season counts received were of 31 pairs or singing males on 46 ha. of farm and downland scrub at Steyning, 43 on the 55 ha. of Fore Wood NR (32 in 1979), 64 on the 70 ha. of Buchan Park, Crawley, 16 on the 26 ha. of Alexandra Park, Hastings, but only 29 on 184 ha. of woodland, fields and scrub at Fairlight Country Park which is likely to have been an undercount. Along the 8 km of the Bluebell Railway 51 were located (41 in 1979) and 22 singing males were found along 3.5 km of the Rother valley between Woolbeding and Iping Bridges. These linear counts provide averages of 6.4 and 6.1 per km respectively and thus match 6.4 per km from 82.5 km of random counts by MJR in the NW of the county during the season.

In autumn passage arrivals were noted at Selsey Bill on Oct. 17th and 24th and 2-3 suspected immigrants, judged by behaviour and weight, were trapped at Ashcombe, near Lewes, on 13-14th.

338. **NIGHTINGALE** (*Luscinia megarhynchos*).—First in spring were 4 singing in Moulsecomb Wild Park, Brighton on Apr. 10th followed by reports from 3 further localities on 13th. Unusually early, the species was widespread by the following day.

The B.T.O. breeding survey revealed 858 singing males in 259 tetrads (see "The Population and Distribution of Nightingales 1980" on pp. 89-91).

During the autumn a possible 45 individuals were recorded at Beachy Head on 19 dates between Aug. 2nd and Sept. 20th, with a maximum of 5 on Aug. 9th and 16th. Elsewhere there were 5 records of singles in Aug. and 2 in early Sept.

342. **BLACK REDSTART** (*Phoenicurus ochtruros*).—Six wintering individuals were reported in Jan. including those previously reported at Selsey Bill, Rustington, Lancing and Shoreham (Sx. B.R. 32: 49) together with singles at Beachy Head on 1st and Bewl Bridge Res. on 7th. Of these only the Selsey Bill bird was seen in Feb., on 2nd.

Some 30 individuals were reported during the spring, the first migrant being at Selsey Bill on Mar. 8th followed by one at Cissbury on 15th and 2 on Lancing beach on 16th. Only 3 were then reported until early Apr. when a small arrival occurred involving 3 at Church Norton on 4th, one on Worthing Golf Course on 5th and 2 each at Selsey Bill and Seaford Head on 6th. Two more were at Beachy Head on 7th and 3 in the Cuckmere. After this only 10 were seen up to the end of the month and only 3 more in May, the last being at Black Rock, Brighton on 10-11th.

In the breeding season a pair held territory at a new site in West Sussex while at the 1979 site in East, 2 pairs were found, one raising one young; nearby an additional male was in song in late May. No records were received from the Brighton area this year.

The origin of a mid-Aug. wanderer near Seaford may have been a further breeding site but a male at nearby Newhaven on the early date of Sept. 6th was more likely a migrant. After one in the Cuckmere on Sept. 27th and 3 at Beachy Head on Oct. 5th few were seen until 15-18th when 28 appeared along the coast from Selsey Bill (13 on 17th) to Beachy

Head (4) and a further 6 inland—3 on the Downs at Cissbury, 2 at Arlington Res. and one at Alfriston. Further arrivals and lingerers accounted for 30 records up to early Dec. when 11 were still present in the county. Of these, individuals seemed to be set for the winter at Littlehampton, Widewater/Lancing Beach (up to 4), Shoreham Harbour and Brighton Marina.

343. **REDSTART** (*P. phoenicurus*).—The first spring record came from Sidlesham Ferry on Apr. 7th and passage continued thinly until the end of the month; by mid-May 59 had been recorded mainly in the Selsey Bill and Beachy Head areas.

In the breeding season 34 pairs or singing males were located—3 in the NW, one of which successfully fledged young, and 31 in the NE, where 2 males were already holding territory by Apr. 20th, one pair raised 3 young in a nest box, up to 10 young were seen near one colony, and at another at least 4 pairs were seen feeding young. Although coverage was very patchy in the NW, the NE was extensively covered and it appeared that in the latter at least, the species was steadily recovering from the "crash" in 1970.

Possibly significantly autumn passage was again also above average, some 350 being recorded throughout the county. At Beachy Head, where the first migrants were noted on Aug. 9th, a total of 180 was logged, with a maximum of 45 on Sept. 21st. At Cissbury the Aug. and Sept. totals were 39 and 23 respectively. Elsewhere the species was widely reported from the Downs and the coast. After the end of Sept. only 12 were seen but one at Sidlesham on Nov. 28th (MS) was so late as to dislodge the previous record holder—at St. Leonards on Nov. 23rd, 1968 (Sx. B.R. 21: 47).

344. **WHINCHAT** (*Saxicola rubetra*).—First recorded in spring at Beachy Head on Apr. 4th; there were no further reports until singles at Paghman Harbour on 13-14th and again at Beachy Head on 19th. Spring passage was altogether sparse with only 5 further records in Apr. and a mere 33 throughout May, widely scattered at 15 localities and nowhere more than 4 together.

A pair seen on Brede Levels several times in May, and the presence of a juvenile there on Jul. 2nd strongly suggested breeding. Also 2 juveniles at Barcombe Mills Res. on July 11th may have been of local origin but a pair seen feeding 3 fledged young on the Downs in Aug. may not have come from Sussex.

Although 7 were reported in late Jul. and early Aug., including 3 at Selsey Bill on 2nd, return passage did not start until mid-Aug. Some 40 were seen at 8 localities between 22nd-25th and 26 were seen at Cissbury on 27th. Sept. passage was unevenful at the outset but on the night of 20th SE winds drifted wholly exceptional numbers onto the eastern end of the coast, not reaching the west of the county until 22nd. On the first day, notable estimates were of 100 on Pett Level, 500-1,000 at Beachy Head, 100 on Seaford Head, 50 on the Adur Levels and 28 on the Downs at Cissbury. On 22nd, 130 were counted at Sidlesham (the largest number there for years), together with 30 at Selsey Bill. Inland, 11 were to be seen at Bewl Bridge Res. also on 22nd. Few stayed, only 40 being at Sidlesham by 24th, 20 at Beachy Head on 25-27th and only 3 were reported from the county as a whole during 28th-31st. 11 were seen in Oct., 6 coming between 12th and 18th. The last for the year dawdled at Selsey Bill until 26th.

345. **STONECHAT** (*S. torquata*).—During Jan. and Feb. 61 and 11 respectively were reported from 26 and 11 mainly coastal localities.

Although a systematic count has not been undertaken since the 1962-73 survey (Sx. B.R. 26:50-56), breeding records over the last 2-3 years appear to show that this species is suffering one of its periods of scarcity. Random breeding season reports were received from the Downs, Ashdown Forest and other likely areas as follows (*indicates birds with young):

Selsey peninsula	1*	Ashdown Forest	15 (8*)
Iping Common	1*	Newhaven Tidemills	1*
Ambersham Common	1*	Newhaven cliffs	1*
Woolbeding Common	1*	Crowlink	1*
Tilgate Park	1*	Birling Gap/Belle Tout	4
Downs above Brighton	1*	Chailley Common	2
Withyham	1*	Fairlight	2*

The total of 33 compares with 32 breeding season reports in 1979.

Evidence of autumn dispersal/migration was noted at Sidlesham on Aug. 2nd and 17 possible migrants were counted in Whitbread Hollow on 10th. Movement continued thinly throughout Sept. but peaks were noted in Oct. with 14 in the Selsey area on 4th and 10 near Birling Gap on 12th. In all over 80 were reported from 26 localities in Oct. Nov. records were well down on average with only 17 individuals reported but in Dec. 29 were found. All winter reports were from the coast except for one in the NE in Nov. and one on Ashdown Forest in Dec.

346. WHEATEAR (*Oenanthe oenanthe*).—First recorded in spring at Rye Harbour LNR on Mar. 8th and near Lewes on 19th. On 22nd-23rd, 25 were seen, mainly along the coast, including 7 at Beachy Head. There were scattered reports until 30th when 18 were seen at West Beach, Littlehampton and 10 at Rye. Good numbers were reported during early Apr., notably 21 at Worthing Beach on 3rd, 20 at Selsey Bill on 6th, 15 at Beachy Head on 7th and 15 at Langney Point on 13th but few were then to be found until 29th when 15 appeared at Woodingdean. Between May 3rd and 6th, over 135 were recorded in the county, with up to 36 at Beachy Head and Woodingdean. Only 8 scattered records ensued, the last migrant being at Chichester Harbour on 26th.

Breeding season reports were received from Rye Harbour LNR where 17 pairs reared 20 young, all but 2 pairs using nest-boxes—and Langney Point where one pair bred. In Jun. and early Jul. isolated birds were seen at 3 downland localities, together with West Wittering and Newhaven; juveniles were noted at Sidlesham Ferry on July 4th and near Lancing College on 16th.

Autumn passage started in late Jul. with 3 at Pagham Harbour on 22nd, and singles at Bewl Bridge Res. on 25th, and Church Norton and Selsey Bill on 29th. In Aug. few migrants were seen until mid-month when 32 were noted at West Beach, Littlehampton on 14th and 80 at Beachy Head on 16th together with smaller numbers elsewhere. Another arrival came on 23rd-25th with 24 at Littlehampton, 28 at Cissbury, 55 at Beachy Head and 50 at Rye. Sept. was generally quiet until 21st when SE winds brought up to 500 in at Beachy Head (c.f. Whinchat), the highest numbers seen there in a decade. Strangely, few were reported from elsewhere. After this things returned to normal: the species was seen throughout the county in small numbers into Oct. when 32 were recorded in the first week, 13 on 11-12th and 14 during 17-20th. 5 remained along the coast between Oct. 31st and Nov. 3rd and the last for the year were singles in the Cuckmere on 6th and at Beachy Head on 8th.

359. RING OUZEL (*Turdus torquatus*).—First recorded in spring were singles at Race Hill, Brighton, and Sidlesham Ferry on Mar. 29th and near Alfriston on 30th. None was then seen until one at Charlston Bottom on Apr. 13th and 2 at Pagham Harbour on 14th. Further arrivals appeared later in the month, 10 being seen between 25-29th: at Beachy Head (3), Balsdean (2), Newmarket Hill (3) and Pagham Harbour (2). Subsequently a further 15 were reported from 8 localities during early May, including 3 at Balsdean, 2 at Cissbury and 5 at Beachy Head, all on 4th. The last for the spring was one at the latter on 10th.

Autumn passage was generally good, but less protracted than usual, starting on Sept. 9th with 2 at Beachy Head after which the species was seen there almost daily—up to 4 until 6 on 20th and 10 on 21st. Numbers then fell away until an arrival of 15 on 25-26th and the last of these was seen on Oct. 10th. Away from Beachy Head few were seen during this period apart from up to 9 in the Castle Hill, Lewes area on 21st-23rd and 6 at Fairlight on 30th. On Oct. 12th a further 15 at Beachy Head and 9 at Cissbury, and 5 at Pett on 16th, together heralded the arrival of some 78 at 10 localities on 17-18th, with maxima on the 18th of 7 at Fairlight, 34 at Beachy Head, 8 at Seaford Head, 7 at Denton (Newhaven) and 10 at Church Norton. Most moved on immediately, 6 or less being seen at Beachy Head thereafter; the last was seen on 25th, a relatively early date.

360. BLACKBIRD (*T. merula*).—Breeding season counts received were of 35 pairs or singing males on 46 ha. of farm and downland scrub at Steyning, 17 on the 55 ha. of Fore Wood NR (26 in 1979), reportedly as many as 71 in the 26 ha. of mature deciduous woodlands forming Alexandra Park, Hastings, 36 on 184 ha. of woodland, field and scrub at Fairlight Country Park and at least 22 on the 70 ha. of Buchan Park, Crawley. Along the 8 km of the Bluebell Railway 45 were located compared with 49 in 1979.

During the autumn migration period evidence of influxes was noted at Selsey Bill on Oct. 17th and 24th and on the Downs at Ashcombe, near Lewes, on 13th, 25th and Nov. 9th. At the latter double the average number of first-year birds was trapped during Oct.

364. FIELDFARE (*T. pilaris*).—Large flocks at the beginning of the year were scarce, reflecting the mild weather, but over 300 were seen on the Adur Levels on Jan. 6th and about 450 at West Chiltington on 23rd with 500 there on Feb. 10th. In Feb. about 1,000 were seen on Amberley Wild Brooks on 9th and 200-300 near Crowborough on 28th. On Apr. 6th, 300 were still to be seen on Brede Levels. The last spring records were all in the first week of May—4 at Cissbury on 3rd, 24 near East Grinstead also on 3rd, 12 near Forest Row on 4th and singles at Falmer and Pevensey Levels on 5th.

After a very early individual at Baisdean on Sept. 17th (c.f. Sept. 10th at Beachy Head in 1979—Sx. B.R. 32: 51) the main autumn arrivals were not seen until well into Oct., starting with one at Cissbury on 12th. In Nov. some substantial flocks were seen including 300 on the Adur Levels on 16th, 400 moving S over Hurst Green on 18th, 300 at Cissbury on 24th and 400 at Amberley on 25th, but in Dec. there were only 2 such reports—600 at West Chiltington on 28th and 500 at Nutbourne on 31st.

365. SONG THRUSH (*T. philomelos*).—Breeding season counts were of 4 on 46 ha. of farm and downland scrub at Steyning, 10 on the 55 ha. of Fore Wood NR (8 in 1979), 8 on the 70 ha. of Buchan Park, Crawley, 34 in the mature deciduous woodlands of Alexandra Park, Hastings (26 ha.) but only 15 on 184 ha. of woodland, fields and scrub at Fairlight Country Park. Along or adjacent to the 8 km of the Bluebell Railway, 25-27 were located compared with 22 in 1979.

366. REDWING (*T. iliacus*).—At the beginning of the year sizeable flocks were noted at West Chiltington (450 on Jan. 9th), Amberley Wild Brooks (400 on Jan. 24th and Feb. 9th), the Adur Levels (several 1000s on Jan. 27th), Brede Levels (200 on Jan. 24th), Maynards Green (235+ on Feb. 17th), Darwell Res. (200 on Feb. 17th) and Lodsworth (200 on Mar. 7th). Spring passage reports came in early Mar. with 'heavy movement to N and NE before and during darkness, between Brighton and Eastbourne, on 6th' and, at Shoreham, peak movements at night on 8-9th and 9-10th. Subsequently 1,000 were noted at Ashurst Wood and 300 at Darwell Res. on 16th, up to 200 at Maynards Green on 20th and 200 at Higham on 26th; 'large flocks' were still at Kingley Vale on Apr. 10th. The last spring record was of one at Sidlesham on Apr. 27th.

The first in autumn was one at Beachy Head on Sept. 28th. On Oct. 4th, 247 in one hour were counted moving W at Crawley and westward movements were generally observed over much of the county on 12-13th. After this, the mild weather lasting well into Dec. permitted widespread dispersal and the only notable gatherings were of 200 at Coombes on Nov. 16th, up to 250 at Ashcombe, near Lewes in Nov.-Dec. and 200 on Pevensey Levels on Nov. 29th. A roost at Shoreham Sanctuary held 500 on Nov. 30th.

367. MISTLE THRUSH (*T. viscivorus*).—Breeding season counts received were of at least 22 pairs on about 400 ha. at Stanmer Park, 6 on 46 ha. of farm and downland scrub at Steyning, at least one on the 26 ha. of Alexandra Park, Hastings, 5 on the 55 ha. of Fore Wood NR and 8 on 141 of woodland and scrub at Fairlight Country Park. Along or adjacent to the 8 km of the Bluebell Railway, 12 pairs were noted.

369. CETTIS WARBLER (*Cettia cetti*).—The overwintering individual at Arundel Wildfowl Refuge (Sx. B.R. 32: 51) was last recorded on Feb. 1st and it or another reappeared on Oct. 30th, remaining to the end of the year (RWB *et al.*). At Pett Pools one was present from Oct. 4th to at least Dec. 31st (CHD, PWR).

373. GRASSHOPPER WARBLER (*Locustella naevia*).—First recorded in spring at Lullington Heath on Apr. 13th, with a further 17 reported from various localities until mid-May. Breeding numbers were again very low, with no improvement on the previous year. Autumn passage numbers were also very low, the last date being one at Beachy Head on Oct. 5th.

375. SAVITS WARBLER (*L. luscinioides*).—A first-winter individual was trapped at Beachy Head on Sept. 19th (DEL, TWP). This was the 5th record for the county and has been accepted by "British Birds".

377. **AQUATIC WARBLER** (*A. paludicola*).—One was seen near Denton, Newhaven on Aug. 15th (DC). The record has been accepted by "British Birds" and was the 23rd for the county since 1962 (See Additions to 1975 Report).

378. **SEDGE WARBLER** (*Acrocephalus schoenobaenus*).—In spring the species arrived suddenly, with singles at Strivens Reed Bed and Rye Harbour LNR on Apr. 12th and 4 further localities the following day, but the main arrival came at the end of the month as indicated by 10 at Church Norton on 28th and at least 20 at Arundel Wildfowl Refuge on 29th. On May 11th one was found in full song in a hawthorn in St. Peter's Road, Burgess Hill, a dry, suburban site, and what was assumed to be the same individual reappeared on Sept. 5th.

Breeding season data was scant and more counts from defined areas would be welcomed. Along the W side of the Arun valley (Timberley Farm to Waltham Brooks) 16 singing males were noted and in the Ouse valley 22 between Lewes and Hamsey Church on the west side and 5 between the Church and Barcombe. At Pell's Meadow, Lewes (4.75 ha.) the count was 6-8. On Brede Levels a slight increase was estimated and at Rye Harbour LNR 10-15 males were considered to be present within the SSSI.

Observers at both Beachy Head and Selsey Bill noted a poor autumn passage the maximum at the former being 20 during the passerine fall of Sept. 21st. The last there and at Shoreham Sanctuary were on 25th and the last for the county was at Arundel Wildfowl Refuge on Oct. 11th.

382. **REED WARBLER** (*A. scirpaceus*).—First in spring were singles at Pett Pools on Apr. 13th and Strivens Reed Bed on 15th and 3 at Arundel Wildfowl Refuge on 16th where 20 or more were present by 19th, suggesting a more general arrival in the county.

Breeding season data was scant but random counts on Brede Levels indicated no change in population figures. At Rye Harbour LNR 25-30 pairs or singing males were estimated within the SSSI.

During autumn passage the species was seen at Beachy Head from July 26th onwards but in general numbers were not large, with a maximum of 45 on Aug. 9th and 20 or more on 10th and 14th and Sept. 1st and 17th. The fall of Sept. 20th however, brought a count of at least 100. The last 6 were seen there on Oct. 15th but further singles were seen at Sidlesham on 17th and near Coombes on 19th.

388. **MELODIUS WARBLER** (*Hippolais polyglotta*).—One was seen at Church Norton on Sept. 17-20th (BJ, CMJ, RML *et al.*).

389. **DARTFORD WARBLER** (*Sylvia undata*).—Two pairs were present and at least one probably bred at the site occupied since 1978. No records came from elsewhere.

396. **BARRED WARBLER** (*S. nisoria*).—Three records: one at Rye Harbour LNR on Sept. 4th (PAH, RCK, TAW); one at Beachy Head on 20th (DC, JFC, PIW); and one trapped there on 22nd (RDME).

397. **LESSER WHITETHROAT** (*S. curruca*).—First for the year were singles at Arlington and Moullescombe on Apr. 18th and 19th respectively followed by one at Church Norton on 23rd and 3 at Cissbury on 26th. There was a general arrival during the first week of May.

During the breeding season counts included 3 pairs or singing males on 30 ha. of farmland at West Chiltington and 14 on 119 ha. of mixed habitats at Fairlight. Linear counts were of 4-5 in 11 km between Hellingly and Heathfield and 2 along the 5 km of the Bluebell Railway. In the NW of the county the species was found to be unexpectedly scarce, only one singing male being found during visits to 116 different 1 km squares.

Autumn passage at Beachy Head was particularly good with maxima of 150 on Sept. 1st, 90 on Aug. 24th, 60 on 25th, Sept. 14th and 20th and 50 on Aug. 27th and Sept. 15th. In the west the peak at Selsey Bill was 9 on Aug. 31st and, on the same day, 14 at Littlehampton West Beach. On the Downs at Cissbury the maximum count was 33 on Aug. 27th whilst at Rye Harbour LNR Aug. 24th brought a total of 25 and Sept. 3rd a further 20. Passage was complete by late Sept. but for Oct. stragglers—3 at Beachy Head and one at Church Norton on 19th.

398. **WHITETHROAT** (*S. communis*).—First recorded in spring at Church Norton and Nuthurst on Apr. 13th, Beachy Head on 14th and Littlehampton, Cissbury and Billingshurst on 15th.

During the breeding season the species was very widely reported throughout the county, many observers emphasising a particularly good year and several finding evidence of good breeding results. On downland west of Lewes, 54 juveniles were ringed up to July 31st compared with 47 in the same period in 1979. Counts from defined areas were of 31 pairs or singing males on 119 ha. of scrub at Fairlight, 3 on the 70 ha. of Buchan Park, Crawley, 6 on 5 ha. at Nuthurst, 3 on 46 ha. of farm and downland scrub at Steyning, 5 on 30 ha. at West Chiltington and 4 on 25 ha. at Roffey/Horsham. Linear counts were of 8-9 in 11 km between Hellingly and Heathfield, 7 along or near the 8 km of the Bluebell Railway, 6 along 3 km of the Ouse near Lewes and 6 along 2 km of the Arun south of Waltham Brooks. In areas of unspecified dimension, 12 were noted at Lullington Heath, 8 at Charlton Bottom and 10 at Newmarket Hill, Woodingdean.

Autumn passage from early Aug. at Beachy Head produced maxima of 100 on Aug. 10th, 150 on Sept. 20th and 100 on 24th with 50 or more on 5 other dates but only a handful after Sept. 25th. The maximum count at Selsey Bill fell on Aug. 31st. On the Downs at Ashcombe, near Lewes, most occurred during the first half of Aug. but at Cissbury peak dates were Aug. 15-16th and 27th. This is not the first time in recent years that these pages have contained evidence to suggest the possibility of a slow westward retreat amongst some autumn migrants rather than immediate overnight departures and it may be that the need to build up body weight is the answer.

The last for the year were singles at Selsey Bill on Sept. 27th, near Seaford on Oct. 4th and at Beachy Head on 25th.

399. **GARDEN WARBLER** (*S. borin*).—First in spring were an unusually early individual at Bewl Bridge Res. on Apr. 6th followed by singles at Seven Sisters Country Park and Pagham Harbour on 13th. The main arrivals appeared to be during late Apr. and the first half of May.

Breeding season reports of 1-7 pairs came from some 35 localities throughout the county, including 5 near the coast. Counts of pairs or singing males included 7-8 on 150 ha. of woodland at Stanmer Park, 6 on 100 ha. at Maynards Green, 4 on 60 ha. of farmland at West Chiltington, 3 on 70 ha. at Buchan Park, Crawley, 3 in managed areas of the 55 ha. of Fore Wood NR and 3 on 50 ha. of young conifers at Monks Gate. Linear counts were of 6 in 11 km between Hellingly and Heathfield and 8 along or near the 8 km of the Bluebell Railway. None was found on the Downs above Graffham, where 5 had been in 1979, because of scrub clearance and ploughing.

Return passage at Selsey Bill, Littlehampton and Cissbury was noted from mid-Aug. to mid-Sept. but generally only 1-2 at a time. The last in the west was one at Church Norton on Sept. 22nd. At Beachy Head passage started with 12 on July 26th with a maxima of 70 on Aug. 25th and 40 or more were present on 9 dates between Aug. 9th and Sept. 25th. The last for the year were 2 there on Oct. 19th.

400. **BLACKCAP** (*S. atricapilla*).—During Jan.-Mar. 20 overwintering individuals were reported from 9 coastal and 2 inland localities. The first likely migrants arrived in mid-Mar. and the species was widespread on coast and Downs by mid-Apr.

In the breeding season the species was very widely reported from mainly inland localities throughout the county, several observers finding it much more numerous than for several years. Counts of pairs or singing males included 25 on 150 ha. at Stanmer Park, 20 on 1,200 ha. at Nuthurst, 14 on 100 ha. at Maynards Green, 13 on 26 ha. at Alexandra Park, Hastings, 10 in 65 ha. of woodland at Fairlight, 8-10 on the 70 ha. of Buchan Park, Crawley, 7 on 60 ha. of farmland at West Chiltington, 6 on 46 ha. of farm and downland scrub at Steyning and 5 in managed areas of the 55 ha. of Fore Wood NR. Also received were linear counts of 20-21 along or near the 8 km of the Bluebell Railway, 7 in 11 km between Hellingly and Heathfield and 5 along 2 km of the Amberley-Rackham road.

Autumn passage at Beachy Head was wholly exceptional with maxima of 1,000 or more on Sept. 20th, 500 on Sept. 13th and 24th and 100 or more on no less than 17 other dates between Jul. 26th and Oct. 13th. Peak numbers at Cissbury were 104 on Sept. 9th and

at Ashcombe Farm, near Lewes, many more than usual were recorded in Oct. Small numbers were noted at many coastal localities during the period. Some late migrants may have been involved in the 8 records from 6 coastal and 2 inland localities between Nov. 9th and Dec. 30th.

408. **WOOD WARBLER** (*P. sibilatrix*).—First in spring was at Stanmer Park on Apr. 23rd after which a further 8 migrants were reported from 6 coastal localities.

During the breeding season 26 males were found holding territories or singing at potential breeding sites in widely scattered areas in the northern half of the county. An extensive search was made in the NE and 12 males were found in territory in stands of middle-stage silver-birch either on the edge of woodland or in glades.

In autumn the species was recorded at only 5 localities, none later than Sept. 16th, and the maximum at Beachy Head was 3 on Aug. 3rd.

409. **CHIFFCHAFF** (*P. collybita*).—None of the 5 wintering individuals reported in Dec. 1979 (Sx. B.R. 32: 54) was seen again but during Jan. further singles were seen at Church Norton on 10th, near Friston on 20th and at Chichester G.P. on 24th. The latter may have been that in song there on Mar. 9th and another was in Arundel Park. After 2 at Chichester G.P. on 14th there was a thin but widespread arrival during 22nd-25th and first arrivals continued to be reported from many localities up to Apr. 8th. On Mar. 30th up to 50 were seen moving northwards from the coast at Sompting.

Breeding season counts were 3 pairs or singing males at Fore Wood NR (55 ha.), 7 at Buchan Park, Crawley (70 ha.), 8 at West Chiltington (60 ha.), 10 at Steyning (46 ha.), 30 at Fairlight Country Park (218 ha.), and 11 at Alexandra Park, Hastings (26 ha.). 10 were located along the 8 km of the Bluebell Railway (3-4 in 1979) and 8 in 11 km between Hellingly and Heathfield (7 in 1979). At Gravetye Wood, East Grinstead, the species was calculated to constitute 3% of the passerine population in oak and 7% in 13 years old pine and larch.

Autumn passage at Beachy Head began in earnest with 50 on Sept. 1st leading to maxima of 280 on 14th, 600 on 15th, 650 on 20th and 300 on 24th, each signifying a fresh wave of migrants and providing a near record ringing total. Daily counts dropped back to 50 by 26th but a further 75 came through on Oct. 10th. After 20 on 14th few were seen. A similar sequence was noted at Ashcombe Bottom, near Lewes, where main passage was from Sept. 1st to 23rd, the peak numbers being trapped on 5th, 13th, 18th and 20th to provide the best total since 1975. On the Downs at Cissbury, counts of warblers considered to consist mainly of this species peaked at 95 on Sept. 4th, 283 on 9th and 94 on 19th. During late Oct. and throughout Nov. migrants occurred at several, mainly coastal, localities although 2 were seen at Pulborough sewage works on Nov. 25th. Probably the last migrant was one at Langney Point on 30th. Characteristically, Chichester G.P. and Church Norton each harboured 2 wintering individuals through much of Dec. and others were seen at Kemp Town and Greatham Bridge NR (singles) and West Firle (2).

410. **WILLOW WARBLER** (*P. trochilus*).—In spring the species arrived early and in force with 8 at Church Norton on Mar. 29th, singles in the Cuckmere and at Rye Harbour LNR on 30th and a wide scattering along the coast and inland during the next few days. Subsequent major arrivals apparently occurred during 11-13th and on 25th and 30th. Foul weather on the night of May 2nd-3rd grounded 60 on the Downs at Cissbury but an even greater fall on the night of 6-7th, when 1,500 were grounded at Dungeness, Kent, was evidenced in Sussex only by some unusual numbers noted in the Shoreham area and 30 in a small park in the centre of Brighton.

Breeding season counts received were of 32 pairs or singing males at Buchan Park, Crawley (70 ha.), 6 at West Chiltington (60 ha.), 20 at Steyning (46 ha.) and 16 at Fairlight in the 184 ha. of woodland, hedge and scrub. Along the 8 km of the Bluebell Railway 18 were located (9 in 1979), 17 in 11 km between Hellingly and Heathfield (14 in 1979) and 17 in 3 km between Mannings Heath and Nuthurst. At Gravetye Wood, East Grinstead it was calculated to be the dominant species in coppiced areas and sallow scrub. Ringing work by RL at Ashcombe Bottom, near Lewes, during the breeding season, most interestingly revealed that no fewer than 13 of 49 adults had been trapped there as adults or young in

1979 and several were known to be breeding in the same territories. Figures later in the season suggested disastrous fledging results, the July total of 10 adults and only 13 juveniles comparing with 13 adults and 123 juveniles in July, 1979.

At Beachy Head, autumn passage was about average, the first main wave coming on Aug. 3rd-6th (up to 200) followed by 250 on 10th, 300 on 14th and a massive 700 on 16th. Daily counts dropped back thereafter until a further 300 appeared with the passerine fall on Sept. 20th. The fall on Aug. 16th also featured on the Downs at Cissbury with a count of 550 of which 400 were counted as they trickled westwards across the car park in one hour, 0715-0815. A peak of 45 at Selsey Bill also fell on 16th. After the fall of Sept. 20th few were seen in the county and the last ordinary migrants were 2 at Shoreham Sanctuary on 25th and one at Worthing on Oct. 3rd. However, at Hurst Green, on Nov. 24th an individual showing the characters of the northern race, *p. t. acedula*, was carefully observed as it consorted with a Chiffchaff—constituting the 3rd Nov. record for the county.

411. **GOLDCREST** (*Regulus regulus*).—After the remarkably low numbers on autumn passage in 1979, when Beachy Head recorded a maximum of only 6, the 1980 figures were back to normal. There were 10 in Whitebread Hollow as early as Aug. 22nd, and 20 daily from mid-Sept.; during Oct. numbers peaked at 100 on 5th and 14th. Smaller influxes were noted at Selsey, Cissbury and the Cuckmere on Oct. 16th (a Thursday). No records were reported for Jan. or Dec.: this is one species for which the forthcoming Winter Bird Census will provide much-needed information.

412. **FIRECREST** (*R. ignicapillus*).—The wintering individual at Church Norton (Sx. B.R. 32: 55) remained until late Feb. and 2 were reported on 18th. One was seen at Pett on Jan. 13th. Spring passage was generally poor, with only 21 individuals seen, the first being at Beachy Head on Mar. 15th followed by one at Church Norton on 21st and 3 in the Cuckmere on 23rd. During 29th-31st, 2 visited a Hove garden and singles were seen at Beachy Head, Winchelsea and Rye Harbour LNR. One at Balsdean on Apr. 2nd was followed by one at Beachy Head on 5th when 2 more garden visitors were seen in the Brighton area. During Apr. 8-13th singles were reported from Steyning, Stanmer Park, Liffington, Beachy Head, Fairlight and Rye (up to 3) and the last for the spring was at Church Norton on 16th. After such a showing it was perhaps not surprising that none were reported during the breeding season.

After the first autumn migrant at Newhaven on the early date of Aug. 26th this tiny gem of a bird was present at Beachy Head almost continually from Sept. 6th to mid-Nov. although numbers were judged to be down on recent years. In Sept. up to 10 were seen there in total, with 3 on 6th, and 4 on 20th-21st but only 3 were to be found elsewhere along the coast. During Oct. 8 were recorded at Beachy Head, at Rye 4 on 16th, and in a Southwick garden, 2 on 26th together with a further 6 scattered along the coast at 4 localities during the month. Nov. reports were slightly more numerous, including at least 10 individuals at Beachy Head and 20 at 10 other localities. Peak counts were of 6 at Church Norton and 5 at Beachy Head on 1st, and 8 at the latter on 8-9th. Also on 9th 3 were found at Langney Point. Inland, one at Buchan Park, Crawley was unexpected as perhaps were 2 in Rackham Woods on 25th. Of 3 seen at Balsdean on 20-24th, one remained into Jan., 1981 and one of 2 at Arundel Wildfowl Refuge in Nov. was still present in Dec. presumably to winter. Other Dec. records came from round Pagham Harbour, where at least one was present throughout the month, Runcton on 11th and perhaps most surprisingly, 3 in Stanmer Park on 2nd-3rd.

413. **SPOTTED FLYCATCHER** (*Muscicapa sylvatica*).—First recorded in spring at Worthing on Apr. 14th followed by a more general arrival during May 3rd-12th. By 14th a pair was nest-building at South Chidham.

Although widely reported during the breeding season there were indications of scarcity. Although 2 pairs appeared on 30 ha. at West Chiltington where only one was seen in 1979, only one pair nested at Fore Wood NR (55 ha.) (3 in 1979) and none could certainly be located along the 8 km of the Bluebell Railway (5 in 1978-79). Equally the species was late in arriving on the Downs at Ashcombe, near Lewes, numbers were well down and autumn passage was negligible. Prior status at Buchan Park, Crawley, was not known; one pair nested but had gone by mid-Aug.

Reports from the Downs at Cissbury and along the coast clearly indicated far fewer than usual departing during Aug. and early Sept. The maximum at Cissbury was 55 on Sept. 1st compared with 102 on Aug. 31st, 1979 and at Beachy Head only small numbers were seen until the major passerine fall of Sept. 20th-21st which produced counts of 75 and 105 respectively. At this time up to 20 appeared at Church Norton and 20 or more were found in just one valley at Fairlight. Most moved on very quickly, the county being generally vacated by 24-26th and the last for the year were singles at Beachy Head on 28th and Tortington Woods, north of Bognor, on 30th.

416. PIED FLYCATCHER (*Ficedula hypoleuca*).—First in spring were singles at Chichester G.P. and Stanmer Woods on Apr. 25th and Beachy Head on 26th. In all, 14 were reported from 6 localities up to May 13th, no fewer than 4 being at Stanmer Woods currently under regular observation in spring.

For the second year running the first autumn migrant was seen at Runcton, on Aug. 9th, but passage was generally featureless with a further 14 scattered individuals at 9 localities in Aug. and 10 at 9 localities in the first half of Sept. All reports were of singles except for 2 at Chichester G.P. on Aug. 12th and 2 in a Hove garden on 28th. During late Sept. six were at Church Norton on 20th-22nd and 9 at Beachy Head on 21st but only 5 were seen elsewhere at about this time. On 26th two were seen at Selsey Bill (one remaining to 28th) and one at Rye Harbour LNR; the last for the year was at Beachy Head on Oct. 4th.

TITS AND TREECREPER.—Some excellent breeding season counts in defined areas were done in Sussex in 1980. The tabulated figures refer to pairs or singing males and are usually minimum totals. The Bluebell Railway count includes birds on and adjacent to the line, and in this and other cases the large-scale provision of nestboxes may have influenced both the density and the composition of the population to an unknown extent.

Localities, area, and observer	Goldcrest	Long-tailed Tit	Marsh Tit	Willow Tit	Coal Tit	Blue Tit	Great Tit	Treecreeper
Weir Wood Reservoir, 30 ha. (RFS).....	3	4	2	2	1	5	5	2
Buchan Park, Crawley, 70 ha. (RAC).....	15	5	2	2	12	28	26	4
Fore Wood, 55 ha. (MFW).....	Absent	4	5	—	8	80	48	8
Steyning Downs, 46 ha. (MPH, SGS, BSG).....	8	2	5	—	4	22	20	1
Alexandra Park, Hastings, 26 ha. (KB, PWR, JET).....	7	—	—	—	2	25	8	3
Fairlight (woodland), 65 ha. (BG <i>et al</i>).....	4	1	8	—	7	33	13	2
Fairlight (hedge and scrub), 119 ha.	—	—	—	—	1	36	28	—
Bluebell Railway, 8 km linear (ERGA).....	9	9	5	4	8	62	57	5

417. BEARDED TIT (*Panurus biarmicus*).—Of the 5 at Pett Level by the end of 1979 (Sx. B.R. 32: 56), 4 were still present on Jan. 13th, 3 on Feb. 10th and a pair until Mar. 23rd. At a Chichester Harbour locality 6 were seen on Jan. 19th of which all 4 males had been ringed as juveniles at Radipole Lake, Dorset, on June 1st and 28th, 1979. Elsewhere a migrant was seen at the Severals, Church Norton, on Apr. 4th.

The autumn was exceptional. The first 6 appeared at Pett Level on Oct. 4-5th but 4 had apparently departed before 12th when 2 flew W over Beachy Head. On 15th at least 2 were at Rye Harbour LNR and 7 were found at the Sidlesham end of Pagham Harbour. Two flew inland at Cuckmere Haven on 18th; a pair trapped at Charleston Reedbed the following day were presumed the same. Also on 19th 4 flew E at Rye and 2 pairs appeared at the Severals. The following day 4 arrived at Arundel Wildfowl Refuge from the SW—and departed 2 hours later. By 25th a further 5 had arrived at the Severals whilst at Pett—and 8 new arrivals brought the total there to 10 of which 6 had moved on by 27th. At least one was still present at the north end of Pagham Harbour until late Nov. and 2 or more at the Severals until 10th, whilst at Chichester Harbour, 2 on 8th had been joined by 2 more by 21st to remain until the end of Dec. At Pett Level, where 2 more visitors had been seen on Nov. 23rd, 4 remained until the end of the year. Elsewhere one was heard at Strivens Reedbed on Nov. 30th and, at an Ouse valley reedbed, 2-3 were found on Dec. 26th.

418. LONG-TAILED TIT (*Aegithalos caudatus*).—The ringing returns, up 43% on 1979, suggested a general increase following a mild winter. However, in the extreme E. of the county it appeared unusually scarce, with no records in 1980 at Brede Valley, and only one pair in 184 ha. of woodland and scrub censused at Fairlight. In contrast, 8 pairs were found on 30 ha. at West Chilmington, followed by a party of 40 there on 28th Sept., the largest recorded.

At each end of the year, parties were reported moving through town centres: 9 in Lewes on Jan. 13th and 7 in roadside trees in Eastbourne on Dec. 8th.

419. MARSH TIT (*Parus palustris*).—Widely reported in the breeding season, though mainly as single pairs. In the NW, MJR visited 116 different km squares and found 46 pairs or singing males. Other counts were of 8 territories in TQ 5818 (Maynards Green), and 2 pairs on 60 ha. at West Chilmington.

On the Downs, mixed scrub seems a favoured habitat, as at Steyning and Ashcombe Bottom, though at Fairlight it was absent from 119 ha. of hedge and scrub while being found in woodland. In Gravetye Wood, it was equal with Great as the commonest Tit in dense larch—a most atypical habitat—with 7 contacts per hour, as against only one contact per hour in oak (DJWS).

Even in winter, all records suggest that this is essentially a rural bird in Sussex, which may explain its absence from the built-up coastal plain.

420. WILLOW TIT (*P. montanus*).—The wide scatter of records referred mainly to pairs or single birds. At each end of the year, MJR visited over 100 1km squares in the NW and saw only 15 birds in the 116 kms traversed. In the breeding season, 4 pairs on 60 ha. at West Chilmington was the highest density reported. Though many reports from Darwell, Weir Wood and Bewl Bridge reservoirs testified to its liking for dampness, breeding in chalk scrub was reported from Lychpole Hill, Steyning, Ashcombe Bottom and Lullington. In the E. of the county, a pair was seen at Brede, while an autumn single at Pett Level was the first there for 2 years. Like the Marsh Tit, all records were essentially rural.

422. COAL TIT (*P. ater*).—Breeding in nestboxes was noted by three observers—at Marley Common, at the Royal Greenwich Observatory, and on the Bluebell Railway for the first time ever, where 11 young fledged. At Fore Wood NR there was a substantial decrease for the 2nd year running, while in Gravetye Wood DJWS recorded only 2 sightings per hour in Corsican Pine, fewer than for Blue and Great Tits, and 3 sightings per hour in larch, where it was even outranked by Marsh Tit.

In autumn, 3 at Beachy Head on Oct. 19th and one showing characters of the continental race at Holywell on Nov. 9th were the only suggestions of movement.

Perhaps this is a less common species in Sussex than is generally thought.

423. BLUE TIT (*P. caeruleus*).—Breeding success in monitored nestboxes was excellent. The average brood-size from 6 boxes at Buchan Park, Crawley was 11.6 (largest 14), on the Bluebell Railway 189 young were fledged from 27 successful nests, while at Heath Common, Storrington, over 30 young flew from 3 occupied boxes in a garden, normally a sub-optimal habitat.

However, the only record suggesting autumnal movement was of 25 at Selsey Bill on Sept. 24th and though there were no reports of exceptional winter flocks a 48% increase in the number trapped for ringing in Sussex probably reflected good survival of young in a "beech-mast year".

424. GREAT TIT (*P. major*).—At Ebernoe Common, a total of 135 feeding mainly on beechmast on Nov. 30th.

425. NUTHATCH (*Sitta europaea*).—Breeding season counts for localities studied in previous years, including the Bluebell Railway, West Chilmington and Fore Wood NR, suggested no significant change in general population levels. New counts from defined areas were of 2 pairs in the 75 ha. of woodland at Fairlight where the winter population had numbered 9 individuals and of 3 on the 70 ha. of Buchan Park, Crawley in Mar., only one staying to breed. Other counts were of at least 6 pairs in the mature deciduous woodland of Alexandra Park, Hastings (26 ha.), 7 in three areas of woodland bordering Bewl Bridge Res.

and 3 along the 8 km of Worth Way. A systematic search of tetrads in the Horam area by PCT produced valuable information on the detailed distribution and numbers in the area. Similar studies would be welcome from anywhere and in particular the Downs and coastal plain.

427. **TRECREPPER** (*Certhia familiaris*).—In Feb., one was seen creeping up concrete posts at Brinsbury (RAC), a habit not mentioned in the "Handbook". Besides the tabulated breeding season counts, there were at least 12 territories in 1 km sq. TQ 5818, Maynards Green. Presence at a lower density in downland woodland and scrub was reported from Steyning and Ashcombe, while a coastal (and urban) pair was found among the mature elms at the Level, central Brighton. A total of 7 birds was recorded at Beachy Head on 5 dates between late July and Oct. 25th.

432. **RED-BACKED SHRIKE** (*Lanius collurio*).—Five autumn records: a juvenile at Cissbury Ring on Aug. 14th; an apparent adult female at Belle Tout, Beachy Head, on Sept. 22nd; a juvenile at Foxhole, Cuckmere, on 22-24th; a female or juvenile at Paghham Harbour also on 24th; and a late juvenile in Alfriston village on Oct. 11th.

434. **GREAT GREY SHRIKE** (*L. excubitor*).—A very poor year for this species, the only records being of singles at Whitbread Hollow, Beachy Head, on Nov. 2-9th, Horse-Eye Level on Dec. 25-27th and Sidlesham Ferry on 31st.

435. **WOODCHAT SHRIKE** (*L. senator*).—A juvenile at Selsey Bill on Oct. 16-18th (OM, MS *et al*) was the 24th record for the county and has been accepted by "British Birds".

436. **JAY** (*Garrulus glandarius*).—During the breeding season 5 pairs were noted on the 55 ha. of Fore Wood NR, a minimum of 4 on the 70 ha. of Buchan Park, Crawley, and 2 in 65 ha. of woodland at Fairlight. At Alexandra Park, Hastings (26 ha.) 4 individuals were present but breeding not proved. In the NW of the county, where pheasant rearing for game is widespread, the species was noted to be singularly common.

In autumn a count of 12 at Beachy Head on Sept. 24th suggested some immigration.

437. **MAGPIE** (*Pica pica*).—The flocking habits of this species attracted the attention of a number of observers, particularly early in the year. Although the "Handbook" mentions gatherings of up to 200 and Shrubbs (1979) a Sussex flock of equal proportions, the following are not without significance—27 near Milland on Jan. 1st; 35 in one tree near the above on Feb. 15th; 50-60 by Hollingbury Golf Course at the end of Feb.; 20 at West Heath, near Henley, and 16 by Paghham Harbour on Mar. 2nd; 33 at Linchmere on 15th; 30 at Ashcombe Farm, Lewes on 24th; and 19 at Beachy Head on the late date of Apr. 15th. During surveys in the NW by MJR the last multiple count for the spring was of 5 on Apr. 19th.

During the breeding season counts were received of 2 pairs on the 26 ha. of Alexandra Park, Hastings, 2 pairs on the 55 ha. of Fore Wood NR and 4 pairs on 184 ha. of Fairlight Country Park.

441. **ROOK** (*Corvus frugilegus*).—Rather surprisingly the rookery situated between the Terminal building and the railway station at Gatwick Airport increased in size from 6 to 10 occupied nests. A report on the 1980 sample census appears on page 80. Observers submitting rookery counts are asked to provide 6-figure map references for each site.

442b. **HOODED CROW** (*Corvus corone cornix*).—The only records were of singles at Pett Level on Apr. 19th, arriving from the S at Beachy Head on 13th (c.f. Apr. 18th, 1979—Sx. B.R. 32: 58) and another there on 25th. In autumn one was at Rye Harbour LNR on Nov. 8th. A "crossbreed" with Carrion Crow was seen in the Cuckmere on Feb. 2nd.

448. **TREE SPARROW** (*Passer montanus*).—Counts for Jan.-Mar. totalled 711, the largest gatherings being 75 at Strivens Reed Bed in Jan. and, in Feb., 80 on Pett Level and 100 at Pulborough. Reports came from 7 localities in Jan., 6 in Feb. and 12 in Mar., perhaps signifying spring dispersal into breeding areas. Reports for the breeding season were mixed. At Sidlesham the species was considered scarcer and on the Downs at Ashcombe, near Lewes, none nested for the second successive year. On the Brede Levels, however, 15

pairs were located, compared with 3 in 1979, 3 of them in pollard willows and 12 in old orchards. At Maynards Green 3 nestboxes housed successful clutches and along the 8 km of the Bluebell Railway 4 pairs also bred successfully in nestboxes, raising at least 15 young (3 pairs in 1979). Other counts were of 11 pairs on the 43 ha. of fields and hedgerows at Fairlight Country Park, 2 in 8 km between Lewes and Barcombe and, at West Chilmington, 8 pairs, 4 of them double-brooded, on 30 ha., compared with 6 in 1979.

Autumn passage at Beachy Head was generally light and the maximum count was 120 on Oct. 18th.

451. **CHAFFINCH** (*Fringilla coelebs*).—In Jan. flocks totalling 360 were recorded at 3 localities (the largest 200 at Wiggoholt); 620 in Feb. (300 Worth Way, 200 Wiggoholt, 120 Horam) and 1050 in Mar. (220 Kithurst Clump and 200 Henley and Polegate).

Breeding season counts were of 31 pairs or singing males at Buchan Park, Crawley (70 ha.), 18 in woodland at Fairlight Country Park (76 ha.), 15 at Fore Wood NR (55 ha.), and 18 pairs plus 20 singing males in the mature deciduous woodlands of Alexandra Park, Hastings (26 ha.). Along the 8 km of the Bluebell Railway, 58 were located (41 in 1979).

Autumn passage was generally noted on Oct. 12th when movement to N and W was recorded at Beachy Head (1,500+), Maynards Green (2,100+), Cissbury (950), Newmarket Hill, Woodingdean (120) and Selsey Bill (67). It is of interest to note that 20,000 were logged at Dungeness, Kent, that day. During Nov. flocks totalling 845 were reported from Cissbury, Ashdown Forest, Hellingly and Maynards Green whilst in Dec. 6 flocks totalling 600 were to be found in stubble in the Horam-Hellingly-Chiddingfold-Waldrone area.

452. **BRAMBLING** (*F. montifringilla*).—During Jan., Feb. and Mar. records totalled 2, 12 and 12 respectively, the largest party being no more than 5 in the Brede Valley on Mar. 8th. Two or more were at Rye Harbour LNR on Apr. 5th.

Autumn passage at Beachy Head featured 85 or more on Oct. 12th but only 10 more up to 25th. Also on 12th, 14 were seen at Newmarket Hill, Woodingdean. At the end of the year only 8 were seen in the whole county during Nov. and none in Dec.

453. **SERIN** (*Serinus serinus*).—Two records—one at Beachy Head on Apr. 16th (NAGL *et al*) and a male in song at the University of Sussex, Falmer, on May 13th (KW) have been accepted by "British Birds".

455. **GREENFINCH** (*Carduelis chloris*).—Apart from 100-180 feeding on apple waste at Horam during Jan. 1st to Apr. 7th the only other records for the period were of 80 at Blackrock and 7 at Widewater, Lancing during Jan.

Breeding season counts were of 12 pairs on 141 ha. of Fairlight Country Park, 1-2 at Fore Wood NR (55 ha.), 15 pairs plus 6 singing males in the 26 ha. of mature deciduous woodland of Alexandra Park, Hastings, but none in the mainly old coniferous habitats of Buchan Park, Crawley (70 ha.). Along the 8 km of the Bluebell Railway 3 pairs were located. In the NW of the county MJR found none away from the vicinity of human habitation, and most on the edges of towns and villages.

456. **GOLDFINCH** (*C. carduelis*).—In Jan. 131+ were recorded in total from 3 localities, 323 from 5 localities in Feb. (including 200 at Rye Harbour LNR on 17th) and 38 from 3 localities in Mar.

Breeding season counts were of 15 pairs on 141 ha. of Fairlight Country Park and 3 pairs plus 9 individuals on the 26 ha. of Alexandra Park, Hastings. Four pairs were found along the 8 km of the Bluebell Railway.

Peak coastal movements recorded in the autumn were of 500 W at Galley Hill, Bexhill on Oct. 9th, 500 W and N at Beachy Head on 12th, and 400 E at Langney Point on Nov. 9th. During Dec. 60 at Paghham Harbour on 29th and 25-30 at Hellingly on 27th were the only records.

457. **SISKIN** (*C. spinus*).—The Jan., Feb. and Mar. recorded totals remained relatively stable—248, 191 and 231 respectively. Flocks of 40-60 were recorded at Fairlight, Tilgate Park, Buchan Park, Wakehurst Place, Stedham, and near Staplefield. April numbers dropped to 53 and finally one was seen at Beachy Head on May 4th.

469. **BULLFINCH** (*Pyrrhula pyrrhula*).—Breeding season counts received were of 3 pairs on the 70 ha. of Buchan Park, Crawley, 11 on 141 ha. of woodland and scrub at Fairlight Country Park, 4 on the 55 ha. of Fore Wood NR, and 6 pairs and 2 others in the mature deciduous woodlands of Alexandra Park, Hastings (26 ha.). Along the 8 km of the Bluebell Railway 4 pairs were located.

470. **HAWFINCH** (*Coccothraustes coccothraustes*).—The usual scatter of records from all parts of the county included one at Patcham on Feb. 2nd, 17 at Wakehurst Place on Mar. 15th, a pair near Stanmer in late April, a pair at Lodsworth in early May, one near Arundel on May 5th and one at Flimwell on 9th. At Fore Wood NR the species was present from Apr. to June and at least 2 pairs bred. A pair with one young was seen in the Rye area in July. In autumn one was seen in a Slinfold garden on Nov. 28th.

493. **LAPLAND BUNTING** (*Calcarurus lapponicus*).—The only record was of an immature at Pett Level on Nov. 16th (CHD. PWR).

494. **SNOW BUNTING** (*Plectrophenax nivalis*).—The 2 at Rye harbour LNR at the end of 1979 (Sx. B.R. 32: 61) were again seen on Jan. 6th. All other records were for Nov., with 2 at Pett Level and one at Beachy Head on 9th, one at Widewater, Lancing on 12th, 2 at Langney Point on 16th and finally one at Rye on 30th.

496. **YELLOWHAMMER** (*Emberiza citrinella*).—In late Jan. a feeding flock of 220 was found at Ifield; records from 11 other localities produced an average flock size of 28.

Breeding season counts were of 4 pairs or singing males on the 70 ha. of Buchan Park. Crawley, 35 on 119 ha. of fields and scrub at Fairlight Country Park, 6 on 46 ha. of scrub and farm at Steyning and 6 on 50 ha. of Finches Wood, West Chilton. Along the 8 km of the Bluebell Railway 21-22 were located and 12 along 3.5 km of disused railway and fields at Hartfield. Other counts were of 5 singing males on Iping Common and 7 at Danwell Res.

Oct.-Dec. reports from 4 localities averaged 15 birds per flock.

497. **CIRL BUNTING** (*Emberiza cirius*).—Pairs were present at two traditional sites throughout the year and one successfully reared 2 young. Otherwise the only records were of 2 on Ashdown Forest on Jan. 13th—an unusual locality, and of a male apparently in territory at a western locality on Apr. 24th. The decline in numbers of this species is general in Britain and it should be noted that it is now categorised as a "Rare Breeding Bird" by "British Birds". Information on the whereabouts of breeding birds should be handled with discretion.

506. **REED BUNTING** (*Emberiza schoeniclus*).—Very few records were received for the beginning of the year; about 70 on Ashdown Forest on Jan. 13th was the largest gathering reported. Evidence of spring passage came on Mar. 21st with 9 in a Goring garden and 25 at Barcombe Mills Res. and, on 22nd, 25 at Langney Point and 20 on Horse Eye Level.

During the breeding season 14 singing males were reported from 13 small waters in the NW of the county. At the larger waters counts were of 13 at Bewl Bridge Res., 4 each at Weir Wood and Darwell Reservoirs, and 2 at Arlington Res. Along the Arun valley, counts of territories were of 4 in 1 km at Slinfold, 4 in 1.5 km at Loxwood, 2 in 2 km at Billingshurst, 11 in 2 km at Watersfield and 6 on 200 ha. at Pulborough North Brooks. In the Ouse valley 5 were located in 4 km to the north of Hamsay and 5 in 4 km to the south and in the Cuckmere, 4 in 1 km near Horam. The count on Horse Eye Level was 6.

On the commons counts were of 3 at Iping, one at Ambersham and one at Chailey. In addition reports were received of males holding territories in coniferous plantations at Finches Wood (Monks Gate), Minepit Copse (Fernhurst), Petshalls Copses and Old Wood (Balls Cross) and Sheffield Forest; and, in other woodland, Lower Common (Rogate), Shaves Wood and Coghurst Wood. Other atypical sites included farmland at Slinfold, West Chilton, Horsted Keynes and at Sidlesham where there were 2 territories in an 8 ha. field of clover.

At the end of the year there were few records but a party of 15 frequented Chailey Common in Oct.-Nov. A leucistic individual, first seen at Church Norton in Sept. 1979, was again noted in June and Aug.

Autumn passage at Beachy Head totalled at least 173 between Sept. 24th and Oct. 18th whilst at Arundel Wildfowl Refuge 137 were noted between Oct. 2-23rd, on the Downs at Cissbury, 63 between Oct. 24-30th and at Selsey Bill, 57 between Oct. 12th and Nov. 9th. Maximum counts for the county during Nov. totalled 245-255 and included 40-50 at Horsham on 8th, and 40 at Lindfield on 4th. Dec.'s total of 115 involved 25 at Northchapel on 3rd and 23 at Buchan Park on 4th.

458. **LINNET** (*C. cannabina*).—Flocks of 50-60 at Hellingly on Jan. 13th and 50 at Cissbury Ring on 27th were the only Jan.-Mar. records.

Breeding season counts were of 2-3 pairs on the 70 ha. of Buchan Park, Crawley where the 76 ha. of heathland and scrub in its environs. Along the 8 km of the Bluebell Railway, 3 pairs were located, as in 1978-79.

Autumn passage was noted at the coast from Sept. 16th to Nov. 9th; 400 were seen at Langney Point on Oct. 5th and Nov. 9th, and 500 and 450 at Beachy Head on Oct. 12th and 24th respectively. In Dec., 200 at Rye Harbour LNR and 100 at Waldron were the only records.

459. **TWITE** (*C. flavirostris*).—In the early part of the year recorded at only 4 localities: up to 4 in the Cuckmere on 6 dates from early Jan. to Mar. 9th; 3 at Pagham Harbour on Jan. 5th; and 8 at Newhaven on 14th. The remaining records were from Shoreham where up to 12 were seen on Jan. 18-19th, 16 on Feb. 23rd and 2-3 on various dates between.

There were also few reports at the end of the year: 9 at Shoreham on Nov. 11th and 10 there on Dec. 26th; 4 at Newhaven on Nov. 21st; 2 on the Rother saltings from Nov. 23rd and one at Sidlesham Ferry on Dec. 27th.

Observers are reminded that a few individuals of this species in a flock of immature Linnets, on a dull winter's day, can give a misleading impression.

460. **REDPOLL** (*C. flammea*).—There were very few records for Jan. but for a party of 21 at Horam on 12th and a number along the Arun at Horsham during 2nd-19th. In contrast, good numbers were found during Feb. On 1st a flock of about 100 was at Buchan Park, Crawley, increasing to 180 by the end of the month; 80 remained until at least Mar. 19th. Not far away, a party of 35 was seen at Tilgate Park on Feb. 11th whilst, further east, 30 were seen at Darwell Res. on 17th, 50 in Sheffield Forest on 25th and 70 in the vicinity of Bewl Bridge Res. at the end of the month. In Mar. 40 were recorded in Eridge Park whilst the Bewl Bridge flock remained into early April. The only spring movement recorded was of 45 moving N over Brighton on May 1st.

Breeding season reports of pairs or displaying males amounted to 104, a more than 50% increase on 1979 figures; as usual the majority were in the SE (51) and NE (32) with smaller numbers in the N and NW of the county.

First autumn passage was noted as early as mid-Aug. in the Pagham/Sidlesham area but the usual large coastal movements were not seen at Beachy Head until Oct. which produced a total of about 500, including 200 on 18th. Elsewhere smaller parties were noted particularly at Arundel where 110 were recorded between Oct. 1st and Nov. 4th. On Oct. 4th, 30 were seen on the Downs near Seaford and on 5th, 32 at Pagham Harbour. Local late autumn-early winter flocks were small; 50 at Weir Wood Res. and 25 at Buxted in early Oct. and 30 at Waldron on 19th probably all related to passage birds. After this the only large flock seen was of 50 at Pett Level on 27th-31st December.

463. **CROSSBILL** (*Loxia curvirostra*).—Evidence of the influx in late 1979 (Sx. B.R. 32: 61) continued with records of up to 35 at Tilgate Park during Jan.; at least 65 still near Henley on 13th; a party of 35 flying SE over Bewl Bridge Res. also on 13th; 8-10 near Branbridge Park on Mar. 5th; and 6-7 on Ashdown Forest on Apr. 10th. Also during the early part of the year the species was present at some 7 localities under circumstances which suggested breeding and most probably bred at one. There were, however, no records after April.

Given adequate food supplies this species will breed at almost any time of year; any relevant information should be broadcast with caution as birdcatchers are currently suspected of taking an interest in this species.

ESCAPES AND FERALS

MARABOU (*Leptotilos crumeniferus*).—One was reported from Arundel Wildfowl Refuge on Nov. 12th and in the Herstmonceux Castle area on 18th and 24th. The possibility that the following species was involved cannot at present be excluded.

GREATER ADJUTANT STORK (*L. dubius*).—An individual in flight over Chichester G.P. on Sept. 7th was considered to be of this species.

SACRED IBIS (*Threskiornis aethiopica*).—Two were at Bewl Bridge Res. on Mar. 8th and Apr. 4th and presumably one of the same in the Cuckmere on May 8-10th and June 5th and Weir Wood Res. on Aug. 12th.

GREATER (OR ROSY) FLAMINGO (*Phoenicopterus ruber*) and **CHILEAN FLAMINGO** (*P. ruber*).—What were presumably just singles of each, widely seen in the county since 1978 (Sx. B.R. 31:55; 32: 62) were again present at Rye Harbour LNR, Pett Pools or Pagham Harbour through much of the year.

BLACK SWAN (*Cygnus atratus*).—At Shornden Park, Hastings, a pair hatched 3 young but only one survived. Four juveniles seen at Ardingly Res. on Aug. 25th may have been reared in the wild. Other records involved one at Bewl Bridge Res. from June 17th being joined by another from Oct. 10th, both remaining to at least Nov. 16th.

PINK-FOOTED GOOSE (*Anser brachyrhynchus*).—At least one was present in the county, usually consorting with Brent or Canada Geese—in Chichester Harbour in Jan., at Arlington Res. in Mar., the Rye/Pett Level area in Sept.-Oct. and Pagham Harbour in Nov.

SNOW GOOSE (*A. caerulescens*).—Up to 6 were seen at various localities throughout the county during much of the year.

BARNACLE GOOSE (*Branta leucopsis*).—Apart from those individuals of questionable origin already mentioned, a party of 6 was seen with Canada Geese at Arlington Res. on Dec. 7th.

EGYPTIAN GOOSE (*Alopochen aegyptiaca*).—Two free-flying individuals were present in the west of the county up to at least Apr. 28th and possibly another was at South Stoke in Apr. and Chichester Harbour in June. Two were seen at Rye Harbour LNR in Nov.

NEW ZEALAND SHELDUCK (*Tadorna variegata*).—One was seen at Arlington Res. in Jan.-Feb.

RUDDY SHELDUCK (*T. ferruginea*).—At Rye Harbour LNR a female was seen on June 16th, an adult and 3 possibly hybrid immatures on Sept. 25th to Oct. 5th and an adult on Oct. 19th. The possibility that wild individuals ever reach this country is currently under review elsewhere.

WHITE-CHEEKED (BAHAMA) PINTAIL (*Anas bahamensis*).—One was seen at Rye Harbour LNR in late Sept.-mid-Oct.

CHILOE WIGEON (*A. sibilatrix*).—Singles were seen at Greatham Bridge NR and Bewl Bridge Res. in Dec.

CAROLINA DUCK (*Aix sponsa*).—A pair at Swanbourne Lake, Arundel, through much of the year, successfully bred, rearing 2 young.

BARROW'S GOLDENEYE (*Bucephala islandica*).—An adult male remained at Bewl Bridge Res. from Jan. to Apr. 6th and on May 13th.

BLACK VULTURE (*Aegypius monachus*).—One, a known local escape, was seen at Bewl Bridge Res. on June 12th and subsequently in surrounding areas.

COCKATIEL (*Nymphicus hollandicus*).—One seen in West Worthing on Apr. 11th was possibly that at Church Norton on Aug. 2nd-9th and that which drowned in the sea off Rye the following day.

ROSE-RINGED (OR RING-NECKED) PARAKEET (*Psittacula krameri*).—Of 3 at Church Norton on May 15th one remained in the area until at least Sept. 22nd. Otherwise singles of, or likely to have been of, this species were reported from Fishbourne in Jan., Keymer in June, Climping in Aug. and Pevensy Levels in Oct. It should be noted that records of this one species were given under separate headings in the 1979 report (Sx. B.R. 32: 63).

CORRECTION TO 1965 REPORT

SHORT-BILLED DOWITCHER (*Limnodromus griseus*).—The record of one at Sidlesham Ferry on Feb. 14th to Mar. 15th, then accepted as relating to this species (British Birds 59: 287; Sx. B.R. 18: 28) has now been reviewed by "British Birds" and has been accepted as **LONG-BILLED DOWITCHER** (*L. scolopaceus*).

LONG-BILLED DOWITCHER (*L. scolopaceus*).—One at Sidlesham Ferry on Feb. 14th to Mar. 15th, now accepted as relating to this species by "British Birds" constitutes the third record for the county.

ADDITION TO 1971 REPORT

394. **SISKIN**.—About 100 feeding at Hooksway, North Marden on Mar. 7th.

ADDITION TO 1975 REPORT

338. **AQUATIC WARBLER**.—Locality and observers withheld; nine immatures trapped as follows: 3 on Aug. 10th; 2 on 11th; 2 on 17th; one on 18th; and one on Sept. 4th which remained to 5th. These records, recently accepted by "British Birds", brought to 20 the total for the county since 1962.

ADDITION TO 1978 REPORT

GULL-BILLED TERN (*Gelochelidon nilotica*).—One was seen at Rye Harbour LNR on Aug. 27th (G. Bowell, C. K. and Mrs. F. Dunckley, R. H. B. Forster *et al*). This record has now been accepted by "British Birds" and constitutes the 57th record for the county but only the 3rd since 1967.

ADDITIONS AND CORRECTIONS TO 1979 REPORT

3. **GREAT NORTHERN DIVER**.—Rye Harbour LNR (Sx. B.R. 32: 9); was seen on Dec. 18th.

8. **RED-NECKED GREBE**.—One at Rye Harbour LNR on May 5th (possibly same as that last seen on Apr. 29th—Sx. B.R. 32: 10).

51. **WHITE-FRONTED GOOSE**.—Eleven at Arlington Res. on Jan. 6th; 50 there on Feb. 2nd; 47 on 3rd; approximately 200 from 24th to Mar. 1st; and finally approximately 250 departing E on same day. All but the Jan. record can probably be regarded as relating to the Glynde Levels records during this period (Sx. B.R. 32: 15-16). Under the same reference, at p. 16, line 9, the following should be inserted after the word 'Pet' and before the word 'were': 'Where 400 were counted on 5th. Also on 5th at least 200'.

76. **RED-CRESTED POCHARD**.—A female was seen at Arlington Res. on Nov. 17th. 86. **LONG-TAILED DUCK**.—A female at Darwell Res. on Dec. 16th remained to at least Jan. 13th, 1980.

89. **VELVET SCOTER**.—A drake was at Arlington Res. on Feb. 22nd and 5 were off Selsey Bill on Oct. 23rd.

93. **SMEW**.—Present at Bewl Bridge Res. from Jan. 2nd to Mar. 3rd with a maximum of 17 (8 drakes) on Jan. 16th. At Arlington Res. a drake and 3 redheads on Jan. 2nd, 2 redheads on 7th and a drake on the nearby Cuckmere River on Feb. 22nd-24th. On Jan. 6th, 15 redheads were in the Cuckmere (additional to the 2 drakes already published, Sx. B.R. 32: 22).

95. **GOOSANDER**.—Ten at Arlington Res. on Jan. 6th (Total for 5-8th, Sx. B.R. 32: 22-23, should now read 5!). Also 4 drakes at Weir Wood Res. on Feb. 24th.

103. **MARSH HARRIER**.—A male seen from Park Brow, Chantconbury, on Aug. 20th (RJS).

109. **BUZZARD**.—Four, not 2 as stated, were seen in Nov. (Sx. B.R. 32: 24).

240. **KITTIWAKE**.—At the 3-year old colony (Sx. B.R. 32: 39), 46 young were counted on July 11th and 14 clutches were still under incubation.

251. **LITTLE TERN**.—Rye Harbour LNR (Sx. B.R. 32: 40). The statement that the electric fence had failed to keep out foxes was wholly erroneous. It was in fact highly successful and apologies are due to Mr. Richard Knight, the Warden, for this unfortunate error.

261. **PUFFIN**.—Two E were seen at Beachy Head on May 10th (NAGL). An adult, freshly dead and slightly oiled, was found at Galley Hill, Bexhill, on Dec. 15th (KMJ).
 281. **LONG-EARED OWL**.—One found dead, Westfield, Apr. 8th, was sent to Monk's Wood for examination—result not known.
 291. **ALPINE SWIFT**.—One over Chichester on Sept. 25th (A. D. Fox) was the 13th record for the county and has been accepted by "British Birds".
 324. **ROCK PIPIT**.—An individual showing the characters of the race *a. s. spinoletta*, was identified at Pett Pools on Apr. 28th.
 325. **YELLOW WAGTAIL**.—An individual showing the characters of the race *a. s. spinoletta*, was identified at Pett Pools on Apr. 28th.
 409. **CHIFFCHAFF**.—One was seen at Greattham Bridge on Dec. 25th.

BARROW'S GOLDENEYE (*Bucephala islandica*).—An adult drake was present at Bewl Bridge Res. from Jan. 7th to late Mar. and, presumably the same, from Dec. to early 1980. Although the identification has been accepted by "British Birds" the possibility of captive origin could not be disregarded.

COASTAL COUNTS OF WADERS AND WILDFOWL IN SUSSEX AND EAST HAMPSHIRE 1980/81

By A. J. PRATER

Counts were made throughout the winter at Chichester, Pagham and Rye Harbours, and Pett and Pevensy Levels. The annual coastal counts in January and February also took place.

Tables 1 and 2 show the counts of the two western Harbours along with those of the neighbouring Langstone and Portsmouth Harbours. Most of these counts took place simultaneously. The breeding season of 1980 was poor in the Soviet arctic and this had an effect on most of the wintering species, numbers of which were down slightly on the previous winter. Among the wildfowl this was fortunate because there was a reduction in Brent Geese in Pagham Harbour by 45%, and in Chichester Harbour by 22%. Consequently there was less inland feeding activity and less damage occurred. Teal increased in Chichester to a massive 2,760 during an obvious influx in January. Otherwise only Shelduck increased showing that last winter's low was not necessarily the start of a trend.

Wader numbers were also fairly low although the two most important species in a European context—Grey Plover and Black-tailed Godwit—maintained their 'characteristic' large numbers but variable pattern!

The information in Table 3 (Rye Harbour and Pett Level counts) and Tables 4 and 5 (the complete coastal counts) shows clearly that areas away from Pagham and Chichester do play a significant role for waterbirds in Sussex. This is true for some of the specialist intertidal feeders such as Ringed Plover, Sanderling and Turnstone, as it is for the more inland species such as Golden Plover, Lapwing and Snipe. Of special note were 220 Ringed Plovers on the Adur and 1,260 Snipe (seen) on Pevensy Levels, both in January.

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I would like to thank D. F. Billett and D. J. Stevenson for supplying and allowing us to publish counts from Langstone and Portsmouth Harbours.

TABLE 1. WILDFOWL COUNTS IN PAGHAM, CHICHESTER, LANGSTONE AND PORTSMOUTH HARBOURS 1980/81

	1980 Sept 27th	Oct 25th	Nov 22nd	Dec 20th	1981 Jan. 24th	Feb. 21st	Mar. 21st
Little Grebe							
Pagham	—	—	—	—	—	—	—
Chichester	4	10	13	18	8	34	8
Langstone	—	7	26	28	34	43	13
Portsmouth	0	0	0	0	1	0	1
Great Crested Grebe							
Pagham	—	—	—	—	—	—	—
Chichester	—	22	6	9	3	2	0
Langstone	0	0	13	9	5	3	4
Portsmouth	2	10	10	8	19	10	8
Slavonian Grebe							
Pagham	—	—	—	—	—	—	—
Chichester	0	0	2	2	7	3	0
Langstone	0	0	5	1	0	0	0
Portsmouth	0	0	0	0	0	0	1
Black-necked Grebe							
Pagham	—	—	—	—	—	—	—
Chichester	0	0	0	0	0	0	0
Langstone	0	14	0	12	21	32	36
Portsmouth	0	0	0	0	0	0	0
Brent Goose							
Pagham	—	15	730	1500	1400	1250	32
Chichester	0	1276	5322	7088	6758	4852	1025
Langstone	185	2065	7400	6218	5581	5862	1446
Portsmouth	4	1050	—	1322	1476	1437	—
Shelduck							
Pagham	—	89	446	535	667	641	248
Chichester	108	456	644	1266	2635	2754	1532
Langstone	315	200	283	335	1004	1237	573
Portsmouth	—	—	3	67	406	283	65
Wigeon							
Pagham	—	5	85	259	176	116	93
Chichester	80	305	821	844	832	688	9
Langstone	315	1250	1660	350	600	800	75
Portsmouth	—	50	140	20	9	6	—
Teal							
Pagham	—	66	179	430	155	278	15
Chichester	768	913	1112	1455	2760	1456	104
Langstone	500+	638	600	400	710	300	20
Portsmouth	12	53	70	100	40	37	—
Mallard							
Pagham	—	239	140	97	247	86	145
Chichester	249	575	444	249	502	525	98
Langstone	150	40	40	40	80	70	20
Portsmouth	192	140	66	117	111	53	10
Pintail							
Pagham	—	0	23	218	173	89	0
Chichester	45	27	88	100	107	190	28
Langstone	9	15	20	65	57	100	0
Portsmouth	—	—	3	4	3	12	2
Shoveler							
Pagham	—	6	2	16	9	1	4
Chichester	1	16	30	28	34	24	0
Langstone	45	75	70	95	66	65	12
Portsmouth	1	1	5	10	10	29	2
Eider							
Pagham	—	3	3	16	2	0	11
Chichester	0	0	0	6	6	0	1
Langstone	—	—	—	1	2	0	0
Portsmouth	—	—	—	—	—	—	—
Goldeneye							
Pagham	—	1	0	2	2	0	0
Chichester	0	3	14	24	96	73	0
Langstone	—	—	52	50	41	25	14
Portsmouth	—	—	8	3	12	1	—
Red-breasted Merganser							
Pagham	—	0	5	19	14	4	16
Chichester	0	1	48	47	48	38	47
Langstone	—	7	66	155	83	55	34
Portsmouth	—	—	—	—	—	—	—

Also counted but not included in Table

Red-throated Diver, Great Northern Diver, Cormorant, Heron, Mute Swan, Canada Goose, Gadwall, Pochard, Tufted Duck, Scap, Long tailed Duck, Snew, Water Rail, Moorhen, Coot.

TABLE 2. WADER COUNTS IN PAGHAM, CHICHESTER, LANGSTONE AND PORTSMOUTH HARBOURS 1980/81

	1980				1981			
	Sept. 27th	Oct. 25th	Nov. 22nd	Dec. 20th	Jan. 24th	Feb. 21st	Mar. 21st	
Oystercatcher								
Pagham	2002	210	111	196	161	193	161	
Chichester	1150	1468	993	1064	1417	895	232	
Langstone	89	1150	1100	1220	1280	1000	500	
Portsmouth	437	328	138	225	268	298	58	
Ringed Plover	135	44	528	306	202	109	54	
Pagham	71	68	50	50	130	88	45	
Chichester	437	328	138	225	268	298	58	
Langstone	44	528	306	202	109	109	54	
Portsmouth	135	28	0	0	1	50	3	
Golden Plover								
Pagham	45	700	0	5	200	12	4	
Chichester	0	365	142	227	1949	71	41	
Langstone	0	0	0	0	0	4	0	
Portsmouth	0	0	0	0	0	0	0	
Grey Plover								
Pagham	1983	352	214	255	400	306	305	
Chichester	378	1778	702	962	1022	996	2143	
Langstone	2	644	997	242	209	2161	0	
Portsmouth	1685	400	50	476	1000	162	101	
Lapwing	5000	1100	1060	1350	630	400	88	
Pagham	59	100	140	122	250	75	0	
Chichester	2	153	157	15	370	874	24	
Langstone	50	177	830	1000	20	25	0	
Portsmouth	340	400	99	109	321	183	390	
Dunlin								
Pagham	1638	580	1200	1675	3612	1765	462	
Chichester	8270	10254	9929	8082	12744	21036	807	
Langstone	426	12800	15680	23050	9175	1048	320	
Portsmouth	0	1740	6000	5450	7800	11765	0	
Jack Snipe								
Pagham	0	0	0	0	0	0	0	
Chichester	0	1	1	1	4	8	1	
Langstone	0	0	0	0	0	0	0	
Portsmouth	0	0	0	0	0	0	0	
Snipe								
Pagham	17	23	26	12	55	22	6	
Chichester	33	50	309	541	291	86	135	
Langstone	1	1	4	80	60	40	13	
Portsmouth	208	440	153	225	345	48	25	
Black-tailed Godwit	521	794	659	595	175	313	254	
Pagham	148	143	0	320	400	0	3	
Chichester	826	700	524	306	530	700	162	
Langstone	175	393	544	577	920	132	2	
Portsmouth	0	0	0	7	1	1	2	
Whimbrel								
Pagham	0	0	0	0	0	0	0	
Chichester	5	0	0	0	0	0	3	
Langstone	2	0	0	0	0	0	0	
Portsmouth	1131	1629	418	660	860	452	729	
Curlew	491	990	330	290	270	460	180	
Pagham	25	5	1	2	2	2	0	
Chichester	20	4	0	0	0	0	1	
Langstone	0	1	0	0	0	0	0	
Portsmouth	0	0	0	0	1	0	0	

*Incomplete count in Langstone Harbour due to weather conditions. Also counted but not included in Table: Avocet, Little Stint, Purple Sandpiper, Ruff, Green Sandpiper, Common Sandpiper.

TABLE 3. COUNTS OF SELECTED SPECIES OF WILDFOWL AND WADERS AT RYE HARBOUR AND PETT LEVEL, SEPTEMBER 1980-MARCH 1981 (Co-ordinated by R. C. Knight and P. Rouse)

	1980				1981			
	Sept. 27th	Oct. 25th	Nov. 22nd	Dec. 20th	Jan. 24th	Feb. 21st	Mar. 21st	
Little Grebe	21	27	5	6	15	10	14	
Great Crested Grebe	0	3	3	1	5	7	8	
Brent Goose	16	4	4	0	6	0	1	
Shelduck	1	0	3	27	31	31	40	
Wigeon	15	16	52	64	0	1	0	
Teal	17	79	240	88	80	76	12	
Mallard	220	382	222	290	450	304	54	
Shoveler	11	12	15	18	0	1	0	
Pochard	52	113	120	171	193	230	10	
Tufted Duck	44	43	163	61	112	94	42	
Eider	0	0	3	8	5	5	0	
Goldeneye	0	0	0	1	5	5	0	
Red-breasted Merganser	0	30	0	0	0	0	0	
Oystercatcher	505	452	390	550	350	538	498	
Ringed Plover	80	5	39	21	42	35	14	
Golden Plover	1	2	98	813	800	61	38	
Grey Plover	0	3	40	40	72	70	0	
Lapwing	1364	1450	4017	2884	2600	1050	224	
Knot	0	0	1	0	10	0	1	
Sanderling	0	0	20	0	94	120	78	
Dunlin	17	58	321	376	321	414	70	
Snipe	64	120	275	276	106	115	220	
Bar-tailed Godwit	0	0	1	0	0	0	0	
Curlew	63	150	160	196	500	501	201	
Redshank	105	64	144	81	85	56	91	
Green Sandpiper	0	1	0	1	0	0	0	
Common Sandpiper	2	147	240	250	150	220	301	
Turnstone	120	147	240	250	150	220	301	

TABLE 4. SUSSEX COASTLINE COUNT—24th JANUARY, 1981

Species	Chichester	Pagham	Climping	Goring-Ferring	Shoreham	Newhaven	Tide Mills	Cuckmere	Pevensey	(25th) Pett Level	(25th) Rye Harbour	Totals
Oystercatcher	1417	161	188	0	0	0	0	0	9	124	226	2125
Ringed Plover	268	130	79	120	220	27	8	7	0	0	42	901
Golden Plover	1949	200	0	0	0	0	0	0	190	800	0	3139
Grey Plover	1022	400	115	6	0	0	0	0	8	72	0	1623
Lapwing	2928	1000	1520	0	3200	500	300	400	400	1400	1200	12448
Knot	370	0	0	0	0	0	0	0	0	7	10	387
Sanderling	321	0	25	40	0	0	0	0	0	0	94	480
Purple Sandpiper	0	0	3	0	0	32	0	4	0	0	0	39
Dunlin	12744	3612	14	240	1100	125	53	52	100	221	18261	0
Ruff	0	0	0	0	0	0	0	0	0	0	0	0
Jack Snipe	1	0	0	0	0	0	1	4	1	1	1	8
Snipe	291	55	0	0	0	30	85	1260	100	6	1827	898
Black-tailed Godwit	553	345	0	0	0	0	0	0	0	0	0	898
Bar-tailed Godwit	530	10	0	0	0	0	0	0	0	0	0	540
Curlew	1810	191	0	2	0	27	0	0	0	500	0	2530
Spotted Redshank	2	0	0	0	0	0	0	1	0	0	0	3
Redshank	1554	387	2	7	130	45	84	11	16	69	2305	0
Turnstone	26	157	20	7	0	0	0	150	150	0	0	410

SUMMARY OF BIRD RINGING IN SUSSEX IN 1980

Compiled by R. Levertton

Details were received of 18,162 birds of 94 species ringed in Sussex in 1980. Most of the groups had a good autumn, while Beachy Head caught such notable birds as Savi's and Banded Warbler, and a Scarlet Grosbeak. Five full-grown Sparrowhawks were netted (and others narrowly lost) in widely separated areas: a heartening sign of this exciting predator's continuing recovery, and backed up by the record of a Sussex nestling which survived in the county through five potential breeding seasons.

However, 1980 was the year when Black-headed Gull easily deposited Blue Tit or some other small passerine as our most ringed species. The Gull Study Group weighed in with nearly a tonne of gulls—over 3,000 birds—and generated another 50 foreign recoveries and controls, a fair reward for endless dedication and effort on beach and rubbish tip throughout the coldest time of the year. This is certainly the most important ringing study currently being undertaken in Sussex, producing a whole mass of new information about the origins and behaviour of the increasing number of gulls wintering on the South Coast: most are from the Baltic. Because of the potential health hazard of gulls scavenging on rubbish tips all day and then resting on school playing fields and on our reservoirs of drinking water, the interest is not purely scientific . . .

Even when so much is already known, the highlights of well over 200 controls and recoveries provided new information about birds in Sussex. A dead Heron at Hurst Green proved to have been ringed as a nestling, not at some Sussex colony, but in Norway (there was one from Sweden at Burgess Hill in 1967). A Robin at Shoreham in autumn and controlled on a Danish island in early April seems a new one for Sussex, as does the December ringed (wintering?) Song Thrush found in spring on the very northern tip of Denmark. Both these birds were probably travelling further on into Scandinavia. There have been around 40 foreign recoveries since 1960 of Starlings ringed in winter in Sussex, but mostly from the Low Countries, so the Plumpton bird found in Finland was another County first. Extensive ringing of garden Greenfinches at East Grinstead is showing how these birds, while not often crossing the sea, may make long movements towards the milder south-west in winter, as far as Devon, and then return.

However, warblers on passage are the traditional forte of Sussex ringing, and though only one foreign recovery was reported in 1980, there were several outstanding long-distance internal movements revealing how birds from all corners of the British Isles are funnelled through the county on their way south. Beachy Head alone ringed over 1,200 Blackcaps in 1980, more than the average birdwatcher might see in a lifetime. Most ringers feel strongly that the facts they discover about birds should be used to help conservation, and the national importance of Sussex as a staging post for migrating warblers is repeatedly shown by records such as these. Perhaps it should be a legitimate duty of Sussex ornithology to cater specifically for these birds of passage by preserving as much suitable habitat as possible, especially near the coast, at a time when reedbeds are being lost and downland scrub (now belatedly being recognised as a threatened habitat) is rapidly disappearing under the bulldozer.

TABLE 5. SUSSEX COASTLINE COUNT—21st FEBRUARY, 1981

Species	Chichester	Pagham	Climping	Goring-Ferring	Shoreham	Newhaven	Tide Mills	Cuckmere	Pevensey	(22nd) Pett Level	(22nd) Rye Harbour	Totals
Oystercatcher	895	193	173	14	0	0	0	0	2	110	428	1815
Ringed Plover	298	88	34	130	20	15	18	0	0	0	35	638
Golden Plover	71	12	0	0	0	0	0	0	630	50	11	774
Grey Plover	996	306	53	58	0	0	0	0	0	70	0	1483
Lapwing	410	162	14	0	20	700	380	1200	1000	50	50	2936
Knot	874	0	0	0	0	0	0	0	5	0	0	879
Sanderling	183	0	133	42	0	0	0	0	9	50	70	487
Purple Sandpiper	0	0	6	5	0	30	0	6	0	0	0	47
Dunlin	21036	1765	22	250	400	70	90	180	84	330	24227	0
Ruff	0	0	0	0	0	0	0	0	0	0	0	0
Jack Snipe	0	0	0	0	0	0	0	5	15	0	1	21
Snipe	86	22	0	0	0	25	120	NC	100	15	368	668
Black-tailed Godwit	313	48	0	0	0	0	0	0	0	0	0	361
Bar-tailed Godwit	700	6	0	0	0	0	0	0	0	0	0	706
Curlew	901	113	0	0	0	20	1	0	500	1	1536	2
Spotted Redshank	2	0	0	0	0	0	0	0	0	0	0	2
Redshank	1216	234	1	0	90	24	53	9	24	32	1683	0
Turnstone	34	106	10	4	0	0	0	110	220	0	0	484

SELECTED LIST OF RECOVERIES REPORTED IN 1980

Key to symbols and terms (Ring numbers are omitted)

- Age**
- 1. Pullus (nestling or chick not yet flying)
 - 2. Full grown, but year of hatching quite unknown
 - 3. Definitely hatched during current calendar year
 - 4. Hatched before current calendar year but exact year unknown
 - 5. Definitely hatched last calendar year
 - 6. Hatched before last calendar year but exact year unknown
 - J. This suffix indicates a bird still in juvenile plumage
- Manner of Recovery**
- v Caught or trapped and released with ring
 - + Shot or killed by man
 - x Found dead or dying
 - () Caught or trapped alive and not released or released but with ring removed
 - /? Method of recovery quite unknown
- Sex**
- ♂ Male
 - ♀ Female
- Distance**
- The distance is given in kilometres and the direction is approximate

Species	Age	Date	Location	Sex	Distance
Shag	1	09.06.80	Aberdaron, Gwynedd, Wales		
Heron	x	18.10.80	Weir Wood Reservoir (RFS)		
Sparrowhawk	1	29.05.80	Vaga, Bokn, Kogalond, Norway		
Kestrel	x	18.11.80	Hurst Green (MJP)		
	x	12.06.74	Rake, W. Sussex (PGD)		
	x	02.03.80	Nutbourne, nr. Pulborough		
	3	15.08.79	East Grimstead		
	x	16.09.79	Llanhenog, Gwent 206km WNW		
Black-headed Gull	3	02.10.79	Prudhoe, Northumberland		
Herring Gull	v	12.01.80	Sompting Tip (GSG) 468km SSE		
Little Owl	1	11.06.80	Plumpton (RJL)		
	x	13.11.80	Chiddingfold, 19km E		
House Martin	3	06.08.80	Beachy Head (BHRG)		
Wren	x	30.10.80	Shirley, Southampton, Hants. 119km W		
Robin	3	14.10.79	Shoreham-by-Sea (JAN)		
Ring Ouzel	v	02.04.80	Christianso, Bornholm, Denmark		
Blackbird	v(=♂)	21.05.80	Trefil, Tredagar, Gwent, Wales		
	3♂	20.09.80	Ashcombe, Lewes (RL) 249km ESE		
	x	07.10.78	Ashcombe, Lewes (RL)		
Song Thrush	3	03.03.80	Dorsten, Munster, W. Germany		
	x	21.12.79	Ashcombe, Lewes (RL)		
	x	07.04.80	Hjorring, Jylland, Denmark		
	x	12.11.79	Ashcombe, Lewes (RL)		
	+	09.12.80	St. Christoly de Blaye, Gironde, France		
	3	09.10.77	Beachy Head (BHRG)		
Sedge Warbler	x	03.02.80	Sao Pedro, Tras os Montes, Portugal		
	3	28.08.79	Oxford Island, Armagh, N. Ireland		
	v	09.09.79	Chichester G.P. (CRG) 557km SE		
	3	06.08.80	Balhepburn, Perth, Tayside		
	v	16.08.80	Church Norton, Selsey (CRG) 647km SSE		
	3	05.09.78	Hiers-Brouage, Charente-Maritime, France		
	v	18.08.80	Church Norton, Selsey (CRG)		
Reed Warbler	There were six controls involving Dorset, Kent, Essex, Lines., Notts and Humberside.				
Lesser Whitethroat	3	28.09.77	Beachy Head (BHRG)		
	v	25.08.80	Cressage, Shrewsbury, Salop 287km NW		
	3	18.08.79	Beachy Head (BHRG)		
Willow Warbler	v	06.05.80	The Calif, Isle of Man 504km NW		
	3	28.08.79	Beachy Head (BHRG)		
	x	25.05.80	Achnagout, Inverary, Strathclyde 704km NW		
	3♂	24.08.78	Beachy Head (BHRG)		
	v	14.05.80	Daresbury, Warrington, Cheshire 350km NW		
	3	27.08.79	Hodcombe, Beachy Head (RHC)		
	v	25.05.80	Guisborough, Cleveland 430km NNW		
	3	14.08.80	Plumpton (RJL)		
	x	25.09.80	St. Croix du Mont, Gironde, France		

Firecrest

Starling

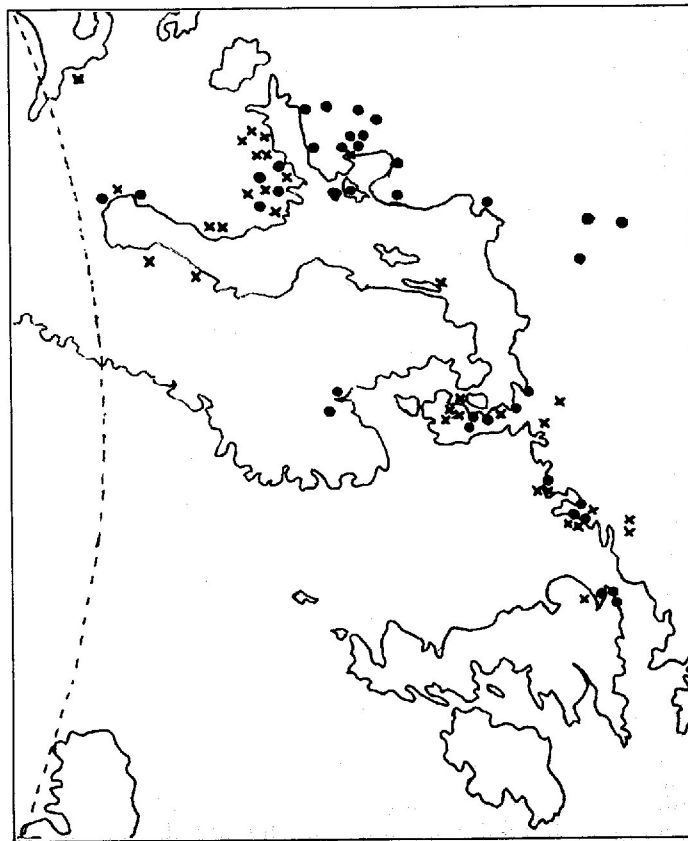
Greenfinch

- 3♂ 12.10.79 Hodcombe, Beachy Head (RHC)
- v 02.03.80 Ensbury, Bournemouth, Dorset 145km W
- There are very few recoveries of British Firecrests
- 6♂ 22.01.78 Bierbeek, Brabant, Belgium
- v 13.02.80 West Worthing (JAN)
- 3♂ 30.11.77 Wetteren, Oost-Vlaanderen, Belgium
- v 18.01.80 West Worthing (JAN)
- 3♂ 28.10.79 Middelkerke, Oost-Vlaanderen, Belgium
- v 07.01.80 West Worthing (JAN)

In addition, Sussex-ringed birds were recovered in Belgium, the Netherlands, and France (2), plus the following bird from quite a different population:

- 6♀ 24.03.80 Plumpton (RJL)
- x 30.05.80 Vammala, Turku-Pori, Finland
- 5♂ 10.07.79 Chichester G.P. (CRG)
- x 09.01.80 Ellistown, Leicester 210km N
- 4♀ 24.04.79 Colchester, Essex
- v 28.12.80 East Grimstead (RFS) 105km SW
- v 30.12.79 Sandwich Bay, Kent
- 4♂ 20.12.80 East Grimstead (RFS) 99km WSW
- v 29.04.79 East Grimstead (RFS)
- 6♀ 28.02.80 Ottery St. Mary, Devon 237km WSW
- v 25.01.81 East Grimstead (RFS)

Four more movements from East Grimstead and Kent confirmed the strong west or southwest trend in winter, while the Chichester bird dead further north in January was the odd one out.



(map after J.A.N.)

BLACK-HEADED GULL: Sussex ringing recoveries, 1975-80
 ● Ringed as nestlings, and controlled at Worthing in winter
 x Breeding season adults, to or from Worthing in winter

LITTLE CRAKE: A FURTHER HASTINGS RARITY?

By M. J. Rogers

LITTLE CRAKE (*Porzana parva*).—A female, claimed to have been caught by a dog at Winchelsea on Aug. 15th, 1904. The skin, now mounted, is at the Spalding Museum, Lincolnshire.

E. J. Redshaw, Esq., Curator of the Spalding Museum has kindly informed us that the specimen is labelled as coming from the Welstead Collection having been purchased by A. K. Maples of Spalding at Stevens' Salesrooms on Oct. 11th, 1929 as Lot 224 and as originally bought by J. B. Nichols from George Bristow.

Apparently not previously referred to in any text, this record conforms with the pattern of incidence of the so-called "Hastings Rarities" (Nicholson and Ferguson-Lees, 1962) and, in 1904 alone, follows others "taken by dogs" at Pevensey on May 7th and near Rye in June. The names of J. B. Nichols and George Bristow are familiar in this general context. Unless convincing evidence should emerge to prove that the "Hastings Rarities" constituted a credible series of records, this one must join the others. Even so, present-day ornithologists should note that dogs are adept at rooting out and catching crakes!

References

- Arnold, E. C. "Birds of Eastbourne", Eastbourne, 1936, p.91.
 Harrison, J. M. "Bristow and the Hastings Rarities Affair", 1968, pp. 100-101, 120, 142.
 Nicholson, E. M. and Ferguson-Lees, I. J. 1962 "The Hastings Rarities", *Brit. Birds*, Vol. 55, pp. 352-353.

BARN OWLS IN SUSSEX—THE LAST TWELVE YEARS

By R. J. Sandison

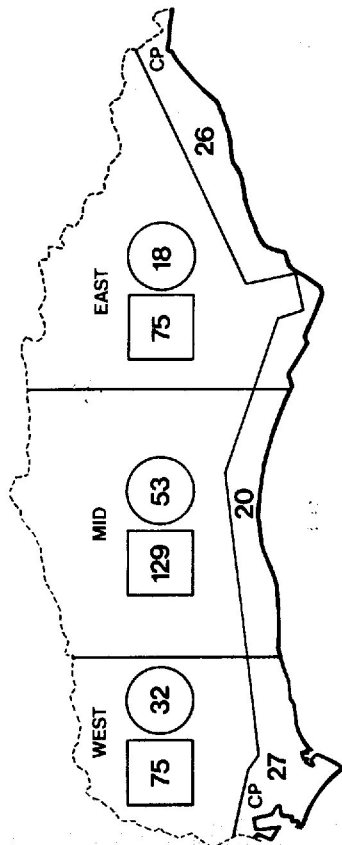
If the title accorded to this paper opens up a vision of an historical melodrama it should be made clear that it is in fact the task I have been charged with—the presentation of a historical record of the Barn Owl (*Tyto alba*), drawn entirely from observations submitted by members of the Sussex Ornithological Society over the last twelve years and spiced with a few dramatic incidents and facts that so fittingly enshroud this ethereal bird.

Unavoidably, any paper dealing with facts derived from such a nest of information requires much perusal, mastication and regurgitation! Thus, it might profit to start with some of the lighter facts that have emerged, such as the three records of Barn Owls frequenting the vicinity of public houses; which of course may reflect more upon the habits of its human observers than those of the owl. Less innocent is a 1969 record of five white fantail pigeons which were despatched in one night by a pair of Barn Owls, the headless bodies being found in a pigeon loft and bearing mute testimony to their executioners' desire to occupy the loft and procure an easy evening meal. If further evidence is required of this macabre habit there is a 1964 record from the same observer who reported the demise of 34 fantails in approximately one month, presumably victims of the same fanatical dietarians.

Method

The method adopted to present a record of territories has been to prepare a card-index of localities, or bird/sites; a bird/site representing one specific locality, as extracted from the Society's record sheets for the years 1968-1979. A sighting, at any time of the year, constitutes a bird/site, even a single record being accepted as such, based on the Barn Owl's sedentary nature and the assumption that the bird lives somewhere in the area. A great many sites recur annually in the records, and these are recorded on the appropriate card, as one site.

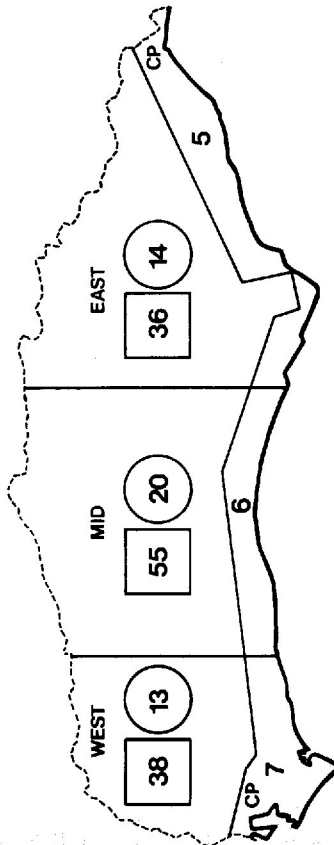
Fig. 1. Barn Owl: Site distribution map



Key □ Total number of bird/sites per section recorded between 1968-1979 inc.
 ○ Total number of reported breeding pairs per section
 CP Coastal Plain—number of bird/sites (included in total □)

Note: All totals refer to individual sites, i.e., any site recurring annually is included once only

Fig. 2. Barn Owl: Site distribution map



Key □ Numbers of pairs or birds present in the breeding season
 ○ Wintering only birds
 CP Coastal Plain—numbers of winter only records

Note: Numbers quoted have been included in totals in Map 1, i.e., bird/sites

For a general representation of the distribution of the Barn Owl in Sussex, the county map has been divided into three sections, labelled West, Mid and East by extending a line from the mouths of the rivers Arun and Ouse, northwards to the county boundary. Into this arbitrary distribution map (figure 1), numbers have been inserted showing the total bird/sites and the number of known breeding pairs per section, as compiled from the card index. Figure 2 shows numbers of pairs or birds present in the breeding season and other birds recorded e.g., wintering birds. Again, a site is only recorded once but where a number of birds have been reported in a small area, such as around West Chiltington, Slinfold, Sidlesham and Rye/Pevensay, the figures have been adjusted to take account of this more detailed information. A further arbitrary line has been drawn transversely across each section, the area to the south of which represents the coastal plain; the figures inserted here have already been included in the main section areas.

With Sussex possessing such a long and varied coastline, it seemed possible that this might exercise some geographical influence over the Barn Owl's breeding and wintering habits but apart from the long Selsey peninsula it will be seen, from the two maps, that the coastal plain seems to have had little significant influence on numbers. It was thought that a preponderance of observers living along the coast might weight the records in favour of this strip, but this does not seem to be the case, probably because the area is relatively shallow in depth and predominantly built-up. Also, bird watchers are a highly mobile race nowadays! Winter records from the coast are very scarce, the most interesting coming from Climping beach, Kingston Gorse, Norman's Bay and Telscombe Cliff.

Status and Distribution

In view of the title of this paper it is inevitable that there should be some statistics on the annual status of the Barn Owl during the period 1968-79 (see Table 1). For this purpose and to preserve uniformity I have unashamedly made use of the table from Shrubbs (1979) and added to it the missing information for 1974. For this paper the record sheets have all been re-examined and certain additional data have been extracted in order to produce the totals given in figures 1 and 2.

TABLE 1. ANNUAL TOTALS OF BARN OWLS RECORDED IN SUSSEX, 1968 to 1979

	Pairs proved to breed	Pairs of birds present in breeding season	Other birds recorded	Total bird/sites
1968	6	17	23	46
1969	3	18	23	44
1970	5	16	38	59
1971	14	33	31	78
1972	10	10	50	70
1973	6	14	40	60
1974	15	23	16	54
1975	7	17	40	64
1976	12	35	24	71
1977	15	39	12	66
1978	9	19	6	34
1979	5	13	22	40

Whereas it is possible to depict the distribution of the Barn Owl in Sussex, the bird's actual status in recent years is more difficult to define accurately. Blaker (1934) in a survey for the Royal Society for the Protection of Birds, provided a figure of 12,000 pairs in England and Wales but a further survey by Prest (1965) for the British Trust for Ornithology, showed that the bird had decreased in many areas, notably in southern and eastern England. Assuming the BTO figures to have

been in the region of 10,000 pairs for 1964, an average spread over 50 English and Welsh counties, and making an allowance for a further decline of 25% in the south, a figure of at least 150 pairs in Sussex would seem likely.

In the light of these calculations the breeding figures given in Table 1, with an average of nine pairs over a twelve year period, seem incredibly low and if the total in column 2 of Table 1 is added to the proven pairs, the average would still be only 30 pairs. However, figure 1 shows that 279 bird/sites were recorded during the twelve year period and that 103 sites were reported as holding breeding pairs. It is very probable that the totals in Table 1 do not depict the true position but that the figure of 103 breeding sites, reinforced by the 129 sites holding pairs or single birds (figure 2) represents the approximate annual number of breeding pairs, which is much nearer the projected figure of 150 pairs. One is left surmising as to whether observer coverage has been insufficient (although in Sussex observers are probably as dedicated as in any county), whether it is just that the bird itself is elusive and probably much more wide-spread or whether the figures given reflect the true position in recent years. I believe that the truth lies in the first two options, in that there are relatively large tracts of the county "unexplored" and despite this owl's close ties with humanity, it is overlooked in many other areas. On this basis, it is not improbable that Sussex possesses an annual breeding population of between 100 and 150 pairs of Barn Owls.

In an attempt to enlarge on this hypothesis, I have examined closely the records for those localities where records are consistent and well documented, suggesting continuous coverage. Of the 279 bird/sites recorded in the period, 109 (39%) were reported once only and 49 sites (c17%) merely twice. With c56% of all sites proving, apparently, rather unproductive, this highlights the remaining areas where both records and breeding reports, successful or otherwise, are consistent and productive. In the west these areas comprise Bosham, the Selsey peninsula, Petworth, Coultershaw Bridge, Fittleworth, Coates Common, Burton Park, Sutton, West Burton, Compton, Bury Hill, Slindon, Stopham and Ford. This would appear to leave scope for more detailed observation in the north west corner of the county and also Goodwood and Midhurst, although there is limiting woodland in the latter two areas.

The mid-Sussex sites are concentrated mainly around the Horsham district embracing, in particular, Slinfold, West Chiltington and Billingshurst and it is worthy of mention that the two first mentioned areas have provided productive records in all but one of the last twelve years, as is also the case at Selsey. Other productive areas, for which there are also wintering records, are Bignor Park, the Arundel area, Amberley, Greatham, Rackham, Pulborough, the Cissbury-Chanctonbury area, Clapham and Patching, Findon, Sompting, Steyning, Washington, Wiston Park, the Adur Levels, Balcombe, Plumpton, Rusper, West Grimstead, the Haywards Heath area and Maresfield. Niches requiring study in this sector would appear to be in the extreme north of the county and in the hinterland behind Shoreham and Brighton.

The east is well represented by Bishopstone, the Lewes area, Ringmer, Alfriston, Arlington Reservoir, Firle, Beachy Head, Berwick, Wilmington, Little Common, the Pevensay area and the Rye area. Perhaps the more open country not represented in the records is devoid of suitable nesting sites but the north east corner might hold some surprises. In the twelve years under review there have been only four "negative" reports and it is feasible that a study of such negative areas might produce evidence as to their unsuitability.

The value of continuous, detailed, study of a productive area can be further instanced by the current survey being undertaken by Michael Shrubbs over a 15 sq. km. (3,700 acres) area on the Selsey peninsula. This study has produced six pairs/occupied sites with two other pair/birds hunting over the area, given a density of four pairs per 10 sq. km (2,500 acres). Perhaps more important it shows no change in density since 1967, when all existing sites on the area were occupied, giving a good indication that breeding/occupation here has been regular and

incidentally, giving some indication of the size of territory required by a pair of Barn Owls in Sussex. This particular area, as will be instanced later, has undergone quite severe habitat changes in recent years but the numbers of pairs has remained steady.

Evidence that Barn Owls will compress into a smaller area than that found by Shrubbs, comes from the regular coverage of the farming region around West Chilington by Frank Dougharty who reported three pairs present in approximately 1,000 acres in 1975 and 1978. Likewise, three pairs were reported by Stuart Hughes from approximately 1,750 acres in the Slinfold area in 1970 and 1971. In the Findon/Cissbury locale, I have not met with such consistent success but one or two breeding pairs are usually recorded each year. All the foregoing examples illustrate the compelling importance of regular coverage if an attempt to judge the true status of the Barn Owl, as a breeding bird, is to succeed.

Population Trends and Habitat

Statistical records are totally dependent on observer coverage and assuming that observers have been increasing steadily over the past ten years it is possible that this factor has influenced the figures that point to the recovery since 1964 mentioned by Shrubbs (1979). Although fluctuating slightly, this recovery peaked between 1975-1977, apart from two exceptional years, 1971-1972 (Table 1). In the peak years it is relevant to note that the numbers of pairs proved to breed increased quite dramatically in two of the three years. This seems a natural corollary and it appears equally relevant to point out that in 1972 there was an equally sharp rise in winter numbers, which totalled 50 out of the 70 bird/sites; also 1975, with 40 out of a reported total of 64. A large annual total of records does not necessarily imply increased breeding success, and two factors influencing this are, obviously, shortage or abundance of food supply and, less obviously, the movements out of, or into the county of both non-breeding and wintering birds. Unfortunately there is little information in the Society records to formulate any opinion on these options. There are only two viable records relating to passage from the continent over the last twelve years.

The Barn Owl generally shuns woodland, dense thickets and plantations for breeding purposes and in Sussex, being heavily wooded, breeding is concentrated in particular around farmsteads and villages, hamlets, small towns, scattered copses and open country with suitable sites, though downland summits and ridges are avoided. There are no indications at all of cliff breeding.

The sharp decline in the past two years is intriguing. When looking for reasons one is tempted to link Walpole-Bond's estimation of 65% of Sussex Barn Owls preferring to breed in farm buildings to the suitability of present day farm sites and availability of other living quarters. One would imagine that modern cement-and-asbestos farm buildings were hardly conducive to our owl's requirements yet there must be very many disused, albeit dilapidated old buildings still available. Perhaps there is a certain standard of accommodation below which the Barn Owl will not tolerate. This however is merely an assumption and one that appears to be at variance with Walpole-Bond's assertion that "ruins of all kinds, even sometimes to the meanest of hovels—tumble beyond recall—also give shelter to this species."

From our own members come a good number of tree-nesting reports, and although there is insufficient information to project realistic figures it is interesting to dip once more into Walpole-Bond and to extract the observation that "hollow timber in park, meadow and even hedgerow and garden is freely used"—all sites mentioned in recent years by Society observers, and not excluding the odd dove-cote. Perhaps a few disused windmills might be worth exploring?

All records relating to Barn Owls in direct association with either farms or barns have been extracted from the records over the full twelve years and these amounted to 80 individual bird/sites; approximately 30% of the 279 bird sites recorded in the same period. As a great many sites reported merely relate to place names, this figure is probably a gross under-estimate of the true picture and is well

below the 65% already quoted from Walpole-Bond. With the current decline of old barns and farm buildings—very often not replaced—the figure today is probably mid-way between the two, i.e., approximately 45%. Michael Shrubbs has kindly instanced this decline by quoting figures for a farm in West Sussex where the number of thatched buildings has declined from 18 to 5. We are left with the question, do resident Barn Owls, thus dispossessed, find alternative accommodation in the area and if so do they revert to old trees, coppice, other buildings, etc? Only a handful of records mention church towers or domestic buildings as Barn Owl habitats and the practice of wiring-in such desirable refuges limits further the owl's scope. Some success has been obtained from the provision of nest boxes but again information is sparse.

Brood Size

A detailed perusal of the records for the twelve year period has provided just sufficient information to assess brood sizes. The results, based purely on nest sites where the number of young successfully raised was known with certainty, are presented in Table 2 and from this it will be seen that 40 sites produced 87 young, with a resulting brood size of 2.2. For the sake of uniformity the table has been compiled on the same sectional basis as Figures 1 and 2.

TABLE 2. BROOD-SIZE OF BARN OWLS BREEDING IN SUSSEX, 1968-1979 (SECTIONAL BASIS)

	West		Mid		East	
	No. of b/sites	young raised	No. of b/sites	young raised	No. of b/sites	young raised
1968	1	1	2	3	2	3
1969	1	1	—	—	1.5	—
1970	2	5	3	4	1.3	—
1971	2	4	7	17	2.4	—
1972	2	4	3	8	2.7	2
1973	1	3	—	—	—	2
1974	1	2	1	2	2	4
1975	1	5	—	—	—	—
1976	—	—	1	3	3	—
1977	2	4	2	4	2	—
1978	2	4	—	—	—	—
1979	—	—	1	2	2	—
	15	33	20	43	2.1	11
					2.2	2.2

Summation
 No. of sites (whole of county) 40
 Young raised (whole of county) 87
 Brood-size (whole of county) 2.2

Accepting the figures in the Handbook of British Birds of between 4 and 7 eggs as a usual clutch, the Sussex brood-size, even making allowance for added eggs, inclement weather, prey shortage and a host of other accidents that befall the Barn Owl, would seem to be on the low side. However this figure should be taken in the context of the number of known successful sites (40) and the total of all sites known to contain breeding pairs, or with pairs of birds present in the breeding season, a total of 232. Thus the brood-size figure of 2.2 has been arrived at from only 17% of all possible sites, which is probably inadequate to produce an accurate assessment.

The fact that our owl has mixed fortunes with its breeding can be instanced from two items taken from the records. In 1978, near Bosham, a pair had laid nine eggs in a nest box in early June but brought off only three young, the remaining eggs being addled. Of the three young that were ringed and flew successfully one

was subsequently found dead on a railway track near Winchester; a sad end but quite a journey for a juvenile. In 1971 a pair was suspected of breeding in a derelict house, which was found to contain many old pellets. The house was then taken over as the setting for a horror film and no doubt the pair took exception to this "hammering" and sensibly departed in a hurry.

Demise

That such a popular bird as the Barn Owl should receive more memorial notices than most species is both bizarre and saddening and one can only conjecture why so much mortality occurs along our roadsides (Table 3). That the answer must be connected with food supply is obvious, but one would have thought that roadside verges were fairly unproductive sources, compared with ricks, yards, stubble and open ground. From the records it would appear that the carnage is more noticeable on minor roads where hedges and ditches are more prevalent rather than on the wider verges of dual carriageways and motorways.

TABLE 3. MONTHLY ANALYSIS OF BARN OWL CASUALTIES IN SUSSEX, 1968-1979

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Found dead on road.....	1	3	5	1	3	1	1	—	5	7	2	2	31
Other causes*	—	1	2	—	2	2	—	—	—	2	—	—	10
	1	4	7	1	5	3	1	—	5	9	2	3	41

*Breakdown of deaths by other causes

- February (1) found shot
- March (2) (a) found dead by railway-line
- (b) found drowned in cattle trough
- May (2) (a) carcase found on rubbish tip
- (b) collided with wires, neck broken
- June (2) (a) found dead in woodland
- (b) found drowned in cattle trough
- October (2) (a) found dead by railway-line
- (b) discovered exhausted in a garden on Shoreham beach, died later*

*This specimen was sent to Tring and examined by Dr. Burion, who considered the bird to be of the type found in Belgium and Northern France, and therefore had probably crossed the channel
found dead in woodland

A dead Barn Owl will, not unnaturally, attract more observer attention than other victims. The average over twelve years produces the small, but nevertheless distressing figure of 3.4 roadside deaths per annum and one wonders how many others die unrecorded. Perhaps the Barn Owl does succumb because of its intense aural concentration on the sounds it wishes to hear, whilst its senses become bemused by the roar of traffic and glare of headlights. Certainly there is no viable comparison with that other popular roadside hunter the Kestrel (*Falco tinnunculus*) which is rarely found so butchered. The latter is more frequently seen on wide verges and slopes and delights in motorways, but is, of course, diurnal.

From the figures, there seems little correlation between the worst months for deaths (March, September and October) and juvenile birds coming on the wings, though adults may be involved in March when hunting for growing broods. The picture is further complicated by the owl's alleged habit of breeding right through the year! The peak years for accidents during 1974-76 do relate to similar peaks for numbers of breeding pairs but the reverse applies for 1969-70 when mortality was high but numbers of breeding pairs and birds present in the breeding season were on the low side. The last two years—low numbers and low casualties make sense, but how far observer coverage governs the figures is open to question. The

majority of roadside casualties reported occurred on the A27 (9); in the Slimfold-Horsham area (5) and the Selsey peninsula (4). There are surprisingly few records on the north-south routes, i.e., the A24 and A23, although these bisect the most dense areas of bird/sites. It is of interest to note that the only April fatality, a bird found dead by the roadside near Sidlesham in 1970, brought to light the presence of salmonellosis in its organs, although this was not considered to be the direct cause of death.

Hunting Habits

Whilst discussing road fatalities, which accounted for 75% of all recorded deaths in the period it seems relevant to refer to the number of reports submitted where observers have stated that Barn Owls were actually hunting along or over a main or secondary road. These incidents are comparatively well documented and when examined on an area basis are found to be proportionate to the number of bird/sites in the distribution maps. Tables 4 and 5 show monthly totals for roadside observations. Whilst extracting these figures from the record cards, the opportunity has been taken to project in similar form, those records where observers reported that Barn Owls had been actually hunting, as opposed to being merely present, perched (most unusual) or generally loafing. Although this set of figures refer to the countryside at large, it is quite obvious that a small percentage of the records are common to both tables, i.e., actual hunting taking place along roadsides, but it is very difficult to assess what proportion of owls hunt their prey in this manner, owing to the large numbers of records referring to birds as simply being seen, as already mentioned.

TABLE 4. MONTHLY TOTALS OF BARN OWLS RECORDED IN THE VICINITY OF ROADSIDES IN SUSSEX, 1968-1979

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
West.....	1	5	1	—	—	1	—	1	—	1	—	—	11
Mid.....	3	1	6	2	5	6	7	1	2	3	3	3	42
East.....	2	2	—	1	1	1	—	—	—	1	2	4	14
	6	8	7	3	6	8	7	2	2	5	5	8	67

TABLE 5. MONTHLY TOTALS OF BARN OWLS RECORDED AS ACTUALLY "HUNTING" IN SUSSEX, 1968-1979

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
West.....	3	—	4	4	2	3	4	—	1	1	1	2	25
Mid.....	—	2	2	2	3	5	5	—	2	1	1	3	26
East.....	3	3	1	1	2	—	—	—	1	1	—	1	14
	6	5	7	7	7	8	9	1	4	2	3	6	65

Again, the records are insufficient to correlate to breeding records, but readers may care to judge for themselves. Michael Shrubbs, who is at present conducting a Barn Owl survey over a large area, has noticed that much hunting time appears to be concentrated on hedges and ditches adjacent to roadsides.

Now, with 1980 behind us, it will be of great interest to see how the Barn Owl has fared through yet another season. It is to be hoped that, as well as continuing to add to the well-filled record cards, yet more new ones will need to be created thereby reflecting the continued well-being of a bird that not only fulfills a special role in our countryside, but whenever it is seen or heard, brings to us a rich satisfaction.

Breeding Data

The rate of growth of the colony at Newhaven together with the number of young birds reared during the period 1976-1980 is given in Table 1. The slight decrease in 1979 is not considered to be significant and is most likely due to low numbers of adult birds being present at the time of the count with the result that some occupied nests were missed. There is however some evidence to suggest that cliff falls during 1979 may have resulted in the loss of some nests.

Table 1. Number of occupied nests and young counted at a Kittiwake colony, Newhaven, Sussex, 1976-1980

Year	No. of Occupied Nests	No. of Young Counted
1976	4-5	2
1977	29	15
1978	76	48
1979	74	46
1980	204	135

Discussion

The establishment of a colony of Kittiwakes at Newhaven, Sussex in 1976 together with its subsequent expansion are part of a nationwide trend. It is likely that this population expansion in range and numbers is attributable to a greater availability of waste food, particularly in the form of fish offal. Coulson (1974) has shown that by preference the Kittiwake is a fish feeder taking over 90% fish during the breeding season, particularly sandeels (*Ammodytes*) and small gadoids (cod family). However when fish are scarce, a wide range of planktonic invertebrates may be taken, particularly in winter.

At present little is known of where the birds from the Sussex colony of Kittiwakes feed, with the further complication that this species may show seasonal variation in feeding site (O'Connor, 1974) and that birds may feed offshore, up to forty miles away from their breeding colonies (Coulson, 1974). However it is possible that the large volume of shipping in the English Channel, particularly entering and leaving Newhaven Harbour may produce upwellings of planktonic invertebrates, thus providing important feeding sites for Kittiwakes.

The discharge of sewage off nearby Portobello may also be an important source of food. O'Connor (1974) has shown that in late March, before egg-laying has begun, Kittiwakes at a colony at Howth, Co. Dublin feed only at a nearby sewage outlet, although later in the breeding season this feeding site is not used and birds feed offshore. Clearly further observations throughout the breeding season will be necessary to establish the feeding patterns of Kittiwakes from Newhaven.

At present it is only possible to speculate on the further growth of this colony. When a population is expanding in a limited space, the population density continues to increase until the presence of other individuals reduces fertility due to competition for resources. At this point the colony is saturated, although many populations will show oscillations about this point depending on fluctuations in the limiting resources. It is likely that competition for nest sites at Newhaven will eventually limit the Kittiwake population rather than availability of food.

Most Kittiwake colonies contain a non-breeding surplus of birds which may occupy ledges during the breeding season but do not construct nests. In 1980, non-breeding birds were seen occupying ledges particularly at the western end of the colony representing a considerable expansion in the extent of cliff-face previously occupied. Thus it seems likely that the colony will continue to increase in size due to the availability of as yet unutilised ledges for nest-sites, and because young birds do not return to their natal colonies until about three years old (Coulson, 1974).

Observers are requested to supply accurate counts of occupied nests and young birds present at Newhaven in subsequent breeding seasons, although the importance of restricting disturbance at this colony to a minimum cannot be over stressed.

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Summary

An attempt has been made to assess the status and distribution of the Barn Owl (*Tyto alba*) in Sussex during the years 1968-79 inclusive, without an organised survey, by collating records from the Society's files and listing them on site record cards. In view of the twelve year period involved, a new approach to mapping has been used, mainly by sectioning the county and inserting numbers of sites. Breeding statistics show a more or less static position, with cyclical fluctuations, although observer coverage may have some influence on this. An analysis of the bird/site totals, making due allowance for lack of coverage, suggests an annual breeding population of between 100 and 150 pairs. Attention has been paid to brood sizes, which averaged 2.2 throughout the county, and also to mortality caused through varying factors. Some aspects of the Barn Owl's personal life and fortunes have also been described.

NESTING OF THE KITTIWAKE IN SUSSEX

By P. James

During the period from 1959 to 1969 the Kittiwake (*Rissa tridactyla*) like a number of other gull species expanded its range and numbers dramatically (National Kittiwake census, 1959, Operation Seafarer survey, 1969/70), the total British nesting population increasing by 49%, an annual increase of almost 5% (Coulson 1974). However in some areas, particularly the Irish Sea, a recent marked reduction in the size of a number of colonies has occurred. The reasons for this apparent decline are as yet unclear, and it is estimated that this species is now increasing at a rate of only 1% per annum (B.T.O. News 111).

In south-east England, Kittiwakes were first found nesting in 1967 with a total of seventeen pairs present at Dover, Kent. Since then this colony has expanded considerably with a total of 1,189 occupied nests in 1978 (D. W. Taylor pers. com.). In Sussex, two adult Kittiwakes were seen visiting a small stretch of chalk cliff at Newhaven on May 22nd, 1976. A further visit on July 3rd, 1976 revealed the presence of 4-5 closely grouped nests with single well grown young birds in two of these. This was the first confirmed breeding record of Kittiwakes in Sussex. Since 1976 this colony has continued to expand both in the number of nests constructed, and in the extent of cliff occupied. In 1980 an estimated two-hundred and four nests were occupied, the colony occupying a length of approximately one kilometre of cliff-face.

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SAMPLE SURVEY OF THE BREEDING ROOK POPULATION IN SUSSEX, 1980

By M. V. Sennitt

Introduction

Over the past fifty years, national and local breeding surveys of the Rook *Corvus frugilegus* in the United Kingdom have suggested that numbers increased steadily from the 1930s to the late 1950s and early 1960s. There then came evidence of a marked decline (Sage and Vernon, 1978). This together with the advancing menace of Dutch Elm disease caused the British Trust for Ornithology to organise a national survey of rookeries in 1975. The aim of the survey was to locate and count every rookery in Britain. It showed that in England the total number of nests had declined by 45% since the 1945 survey (Sage and Vernon, 1978). The estimate of the decrease in the Sussex breeding population during the same period was 41% (Merritt, 1977). The 1980 sample survey was organised to examine the progress of this trend with particular reference to Dutch Elm disease.

Method

The survey was carried out as in 1975 (Merritt, 1977; Sage and Vernon, 1978). Each observer was given a map indicating the area to cover within a selected 10km square, and a list detailing the position and size of rookeries found there in 1975. As in the previous survey, a rookery was defined as any group of nests 100 metres or more from the next nearest group. Observers were asked to count all nests within each rookery whether occupied or not, to record the tree species present in the rookery and, if possible, to count the number of nests in each tree species. In addition, observers were asked to indicate obvious causes of any decline in a rookery since 1975. Counts were made between late March and early May; 53 observers took part.

Coverage

Ten 10km squares (see Appendix 1) were selected at random by the British Trust for Ornithology. These comprised some 20% of the total area of Sussex. Comparison of returns from areas allocated to more than one observer indicated that coverage and reliability were good.

Results and Discussion

In the ten 10km squares surveyed in 1980, 169 rookeries were located and contained a total of 4,667 nests. The distribution of rookeries by size is shown in Table 1, and the number of nests found in each category of rookery size in Table 2. Geographical distribution of rookeries was essentially the same as in 1975 (see Appendix 2). The tree species used by Rooks was reported for 76% of the nests recorded (Table 3). It can be seen that Oak and Pine were the most frequently used, followed by Ash, Elm and Beech.

As the aim of the survey was to examine changes in the breeding Rook population since 1975, the results obtained in the same ten 10km squares in 1975 are also shown in Tables 1 and 2. Before discussing these it is useful to examine whether observations in the selected squares give a reliable indication of the total picture. The comparative data extracted from the complete survey results in 1975

are presented in Table 4. They show that the selected squares did indeed give an excellent reflection of the whole. It seems reasonable to conclude therefore that the sample survey in 1980 allows a fairly reliable examination of the County picture presently prevailing. If this is so, it can be calculated that the Rook population in Sussex is now in the region of 20,300 pairs, compared with at least 18,180 pairs in 1975 (Merritt, 1977). For reasons discussed by previous authors (Merritt, 1977; Sage and Vernon, 1978), it is likely that both figures are underestimates of the true population by perhaps 5-10%. However if it is assumed that the underestimates are similar in both surveys, the results in 1980 suggest an increase of around 12% in the breeding Rook population in Sussex since 1975. Hence there seems to have been at least a halt to, and probably a reversal of, the decline apparent since the early 1960s.

The data in Table 1 and 2 suggest that changes have occurred since 1975 in both rookery size (Table 1) and the proportion of Rooks nesting in rookeries of a given size (Table 2). In particular, Table 1 shows there has been an appreciable increase in 1980 of rookeries with 26-50 nests. This is apparently due to growth of smaller rookeries, for the proportion of rookeries with 25 nests or less fell from 72% to 59% over the five year period. Such rookery growth is essentially a reversal of the trend towards fragmentation noted in the 1975 survey (Merritt, 1977). The data in Table 2 show that the proportion of birds nesting in the smallest category of rookery fell from 36% in 1975 to 24% in 1980, observations again consistent with rookery growth. In fact the average rookery size in 1980 was 27.6 nests compared with 23.3 in the same squares in 1975.

One reason for the present survey was to assess the influence of Dutch Elm disease on distribution and size of rookeries. Any adverse effects will most likely be seen in those counties with a high proportion of their nests in English Elm *Ulmus procera*. For example, 66% of Rook nests in Oxfordshire in 1975 were in Elms (Sage and Vernon, 1978). In Sussex, Merritt (1977) estimated that Elms housed only some 10% of nests, a figure similar to that found in the census squares in 1980 (Table 3). However, this overall figure hides large local differences and differences between East and West Sussex.

Most Elms died in West Sussex in 1976-1977, and there was substantial felling in 1978-1979. In contrast, there are considerable areas of East Sussex where Elms remain. This is partly because of the isolated nature of the Elm populations, and partly because of the strenuous efforts made by local authorities to control the spread of the disease (Stern, 1980; Benyon, 1980). Indeed these East-West differences are apparent from the data in Table 3. Thus only 2% of all Rooks in the West Sussex squares nested in Elms whereas in the East Sussex census squares, the figure was 32%. The 1980 survey showed that nest numbers increased in East Sussex by 11.5% and in West Sussex by 11.7%. It must therefore be concluded that Dutch Elm disease in well-wooded West Sussex has had little or no effect on breeding success there. On the other hand, the disease did have marked effects in a few localities. For example, in TQ 00 (encompassing the Littlehampton area) where some 30% of nests were in Elms in 1975, the loss of Elms caused the extinction of twelve rookeries and a decrease in four others. The net result was a fall of 5% in nest numbers, a change against the trend in the County as a whole. In East Sussex Elms are common in the Cuckmere valley and Fittlehampton region (Shrubbs, 1979). Indeed 52% of Rooks in TQ 50 nested in Elm in 1980. Future loss of Elms in this region may well adversely affect the Rook population.

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Summary

In the sample survey of the breeding Rook population in Sussex, 1980, a total of 169 rookeries was located and contained 4,667 nests. Extrapolation to the whole county suggests that some 20,300 pairs of Rooks nested in Sussex in 1980. This is an increase of around 12% since 1975, and hence represents a reversal of the decline apparent since the early 1960's. Destruction of the English Elm by elm tree disease seems to have had no effect on the size of the Rook population in Sussex as a whole, but caused losses in some locations. Oak and Pine remain the trees most commonly used by nesting Rooks.

Table 1. Distribution of rookeries by size in Sussex, 1980: Comparison with 1975.

Rookery size (Number of nests)	1-25	26-50	51-100	101-200	201-300	300+
Number of rookeries	100 129	47 30	16 17	5 2	1 1	0 0
% of all rookeries	1980 1975	59.2 72.1	27.8 16.8	9.5 9.5	3.0 1.1	0.6 0.6

Table 2. Number of Rook nests in selected category size of rookery, Sussex 1980: Comparison with 1975.

Rookery size (Number of nests)	1-25	26-50	51-100	101-200	201-300	300+
Number of nests	1980 1975	1120 1491	1695 1123	1004 1130	608 229	240 226
% of Total nests	1980 1975	24.0 35.7	36.3 26.9	21.5 27.0	13.0 5.5	5.1 5.4

Table 3. Distribution of Rook nests by tree species, Sussex, 1980.

Tree species	Percentage of nests found*	
	West Sussex	East Sussex
Oak <i>Quercus robur</i>	27.1	28.8
Pine** <i>Pinus sp.</i>	26.3	29.7
Ash <i>Fraxinus excelsior</i>	18.3	5.8
Elm <i>Ulmus procera</i>	14.6	32.4
Beech <i>Fagus sylvatica</i>	8.6	0.4
Holm Oak <i>Quercus ilex</i>	2.0	3.4
Horse chestnut <i>Aesculus hippocastanum</i>	1.5	2.5
Poplar <i>Populus sp.</i>	0.7	0
Sycamore <i>Acer pseudoplatanus</i>	0.4	0.6
Chile pine <i>Araucaria ancana</i>	0.3	0
Cedar <i>Cedrus libani</i>	0.1	0.2
Willow <i>Salix alba</i>	0.1	0
Hornbeam <i>Carpinus betulus</i>	0.1	0.3

* These results were calculated from the 76% of nests where tree species was recorded. There may be a slight underestimate of ash and Beech, but an overestimate of Elm.

** These nests were mainly in Scots pine *Pinus sylvestris*, but some were found in Corsican pine *Pinus nigra* and Stone pine *Pinus pinea*.
Other tree species in which Rook nests were recorded include: Lime *Tilia sp.*, Cherry *Prunus avium*, Birch *Betula sp.*, and Spruce *Picea sp.*

Table 4. Distribution of rookeries and Rook nests, Sussex, 1975: Comparison of results in selected ten 10km squares with those of total survey.

Rookery size (Number of nests)	1-25	26-50	51-100	101-200	201-300
% of rookeries in that category	69.4	17.8	9.9	2.5	0.2
Total survey	72.1	16.8	9.5	1.1	0.6
% of nests in that category	31.4	26.0	26.5	13.8	2.4
Total survey	35.7	26.9	27.0	5.5	5.4

Appendix 1. A list of the 10km squares in Sussex, chosen to be surveyed in the 1980 sampler census.

10km squares	Area
SU 81	East Harting to West Dean
TQ 00	Littlehampton and Arundel
TQ 02	Billingshurst
TQ 21	Upper Beeding and Hurstpierpoint
TQ 32	Haywards Heath
TQ 43	East Grinstead to Withyham
TQ 50	Cuckmere valley
TQ 72	Hurst Green and Robertsbridge
TQ 81	Hastings and Pett Level
TV 49	Seaford

Appendix 2. Rookeries and Rook nests per tetrad (2km x 2km) in selected 10km squares in Sussex, 1980.

Tetrad	Rookeries	Nests	Tetrad	Rookeries	Nests
SU 8014	2	46	TQ 0024	1	15
SU 8018	1	12	TQ 0222	2	42
SU 8210	1	2	TQ 0224	1	30
SU 8214	2	254	TQ 0620	1	43
SU 8410	2	86	TQ 0622	2	17
SU 8412	2	10	TQ 0624	4	57
SU 8416	1	139	TQ 0626	1	10
SU 8418	2	60	TQ 0822	1	10
SU 8612	4	22	TQ 2010	2	43
SU 8616	1	64	TQ 2016	1	5
TQ 0000	3	35	TQ 2018	2	61
TQ 0002	1	2	TQ 2020	1	5
TQ 0004	2	52	TQ 2210	1	42
TQ 0006	5	89	TQ 2214	3	137
TQ 0200	1	4	TQ 2218	4	71
TQ 0204	1	49	TQ 2610	2	58
TQ 0206	3	87	TQ 2612	4	132
TQ 0404	1	10	TQ 2616	3	59
TQ 0604	1	33	TQ 2812	1	56
TQ 0606	1	38	TQ 2814	1	62
TQ 0608	2	33	TQ 3022	1	60
TQ 0804	2	53	TQ 3222	1	16
TQ 0806	2	42	TQ 3226	2	60
TQ 0808	3	154	TQ 3422	1	12

Tetrad	Rookeries	Nests	Tetrad	Rookeries	Nests
TQ 3426	1	47	TQ 5408	1	40
TQ 3428	2	38	TQ 5602	2	93
TQ 3622	3	26	TQ 5604	1	125
TQ 3624	2	28	TQ 5800	1	4
TQ 3628	1	22	TQ 5020	1	9
TQ 3822	1	33	TQ 5420	1	41
TQ 3826	1	15	TQ 5424	1	12
TV 49	1	20	TQ 5428	1	57
TQ 4034	3	122	TQ 5624	2	18
TQ 4236	1	54	TQ 5626	1	20
TQ 4432	1	8	TQ 5820	1	3
TQ 4434	1	10	TQ 5824	1	45
TQ 4636	1	24	TQ 5826	3	4
TQ 4638	1	5	TQ 7222	3	44
TQ 4834	1	21	TQ 7226	1	131
TQ 4836	1	83	TQ 7824	3	82
TQ 5002	1	36	TQ 7828	1	16
TQ 5004	3	46	TQ 8012	1	40
TQ 5006	2	129	TQ 8018	1	1
TQ 5200	2	77	TQ 8212	1	2
TQ 5204	5	67	TQ 8218	1	3
TQ 5206	1	61	TQ 8418	1	25
TQ 5208	6	132	TQ 8612	1	32
TQ 5404	5	129	TQ 8814	3	53

CHANGES IN THE INLAND STATUS OF THE SHELDUCK IN SUSSEX

By S. W. M. Hughes

The Shelduck *Tadorna tadorna* differs from most other British breeding ducks in that it occurs mainly in maritime counties and normally nests adjacent to tidal water. In recent years a small proportion of the British population has shown an increasing tendency to breed inland (Parslow, 1973). The majority of inland sites are within 20km of the coast, although some sites are more than 30km, for example in Cambridgeshire, and a few pairs have nested over 100km from the coast in Warwickshire (Sharrock, 1976). This trend is thought to be due to increased abundance, following protection throughout most of its European range during the last 50 years (Atkinson-Willes, 1963).

In Sussex, the first recorded breeding was in 1904, when the species colonised the harbours in the west of the county. Walpole-Bond (1938) described its breeding status as "locally common on the coast", but he also mentioned that in 1926 a pair bred in Amberley Wild Brooks. Furthermore he inferred that breeding had probably occurred in north east Sussex on more than one occasion in the previous 15 years. Such inland breeding records were quite exceptional; indeed any sightings more than a few kilometres from the coast were unusual and Walpole-Bond made a point of recording occasional sightings on ponds at Harting and in the Horsham and Crawley areas. Other records, in the South Eastern Bird Report, confirm its scarcity inland but include a party of 5 on floods at Greatham in February, 1938, and 2 in both the Adur Valley and Amberley Wild Brooks in February and March, 1940, respectively.

During the last 40 years the species has continued to breed successfully in coastal areas at both ends of the county, with a small number regularly using sites on the coastal plain some 3-5km inland, particularly west of Chichester (Shrubbs,

1979). For example, in April, 1969, there were 11 pairs at Holme Farm by Stanstead Forest, and in early June, 1977, there were 6 pairs between Funtington and Westbourne and 25-30 birds near Stanstead House. Chichester G.P.s were colonised in 1951; breeding was proven again in 1954 and 1957, and since 1964 2-4 pairs have bred there annually. The pits are also used outside the breeding season. During early 1973 numbers frequently exceeded 40 and reached a maximum of 56 during March of that year. More recently numbers have been lower, but the species is still a regular visitor.

Elsewhere, there have been irregular attempts by a small number of pairs to breed a few kilometres up the Cuckmere and Ouse valleys; similarly a few pairs have also been reported along the eastern River Rother, e.g. at Iden, and the River Brede but breeding has not been proven (Erends and Pankhurst, 1980).

Recent Inland Records

Further inland (defined here as more than 5km from the coast), Shelduck are certainly seen more frequently than they were pre-war, nevertheless they still remain sufficiently unusual to be worth noting. Whilst the increase in records may be partly due to better observer coverage there can be little doubt that more birds do come inland and a major factor influencing this must have been the creation of suitable habitat in the form of new reservoirs.

Reservoirs. Not all are equally attractive to the species and the pattern of records for each differs considerably (Table 1). Powdermill reservoir, at 23 hectares is the second smallest in the county, and having been built in 1932 is the longest established. However its small size, and perhaps more important, the fact that it is surrounded by forest must make it relatively unattractive and it is not surprising that the files do not contain a single record for this water. Nearby Darwell is three times the size. It was constructed in 1940, and enlarged in 1950, and it is somewhat surprising that the first record on file is for 1954. Furthermore despite the relative abundance of the species in general vicinity of Rye, it has only been reported from Darwell in 11 of the 25 years prior to 1979. Most records have been of 1-2 seen in the winter months; half relate to the month of January with 7 in January, 1966 being the largest party seen so far. The only breeding season record is of a pair visiting the area regularly in June, 1963.

Table 1. Monthly totals of Shelduck at Reservoirs in Sussex (1954-1979)

Reservoir	Year filled	First record	Number of birds seen											
			Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Arlington	1971	1970*	3	4	4	16	1	2	3	2	1	1	17	35
Barcombe Mills	1964	1968	3	3	1	0	2	0	0	0	0	0	10	8
Bewl Bridge	1979	1976*	14	0	0	6	8	6	0	0	12	1	0	0
Darwell	1940	1954	13	2	2	3	0	0	0	0	0	0	2	2
Weir Wood	1954	1957	31	13	18	10	7	3	1	13	2	11	23	70

*reservoirs still under construction

To date, Weir Wood (114 hectares) has proved to be the most important inland water. This may be due to its location at the head of the River Medway. Although constructed in 1954 the first record for the water was not until November, 1957. Thereafter it was visited irregularly by a few birds (only 14 being reported in 8 years with a maximum of 4 at any one time) until 1966 after which it started to be used regularly by increasing numbers. Numbers peaked between 1972 and 1974, but since then numbers have been less (Table 2). The records for this water are for every month but most are for the early winter (c.f. Darwell) and daily numbers have occasionally reached 10-14 in December.

Table 2. Annual totals of Shelduck at Reservoirs in Sussex (1966-1979)

Reservoir	Number of birds seen each year													
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Arlington	—	—	—	—	6	24	2	5	4	10	6	6	4	13
Barcombe Mills	0	0	8	2	0	0	0	5	2	0	5	1	2	2
Bewl Bridge	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Darwell	7	1	0	1	0	0	3	0	0	1	2	0	1	0
Weir Wood	12	8	2	10	7	8	32	59	24	1	9	5	6	4

To the north and east of Weir Wood is Bewl Bridge (310 hectares) which is the largest water in south eastern England. No fewer than 11 Shelduck were seen there in January, 1976 when the reservoir was still under construction. A pair frequented the site in May and June, 1976; two pairs were present in April-June, 1977 and one pair briefly in April, 1978. Since filling in 1979 there have been only a few records; two in January and May and one in October but a party of 12 in September, which was seen to fly off N.E. was of interest. Ardingly Reservoir (70 hectares), to the south and west of Weir Wood is also of recent origin and so far no reports have reached the Society of Shelduck using this water. In future it will be of interest to monitor the usage of both of these new waters and compare them with Weir Wood.

In the south of the county Barcombe Mills Reservoir (16 hectares) by the River Ouse and Arlington Reservoir (63 hectares) by the River Cuckmere, completed in 1964 and 1971 respectively, both attract Shelduck in modest numbers. Of the two Arlington is the more important. The species was first recorded there in 1970 whilst the reservoir was still under construction and there have been records every year since. The species has been reported there in every month but most birds occur during the winter, (60% of all records being for November and December, when 4-6 birds are often present and occasionally as many as 9).

Shelduck were not reported from Barcombe Mills until 4 years after it had been filled. Thereafter they were very irregular until the mid 1970s, since when they have been annual visitors. As at Arlington the majority of records (75%) have been for November and December but the overall numbers have been much lower.

The Levels. For many years Shelduck have been seen several kilometres inland on some of the major levels, particularly in the presence of flood water. An analysis of the post-war records provides evidence of increasing numbers and an interesting pattern of usage. Unlike most of the reservoirs, the great majority of records for the levels relate to the first three months of the year and November and December records are exceptional.

Records available for the Arun valley, as far north as Pulborough, show that the species was seen in only 6 years between 1951 and 1965 (inclusive). In most years only a single bird was reported, except for 1958, when 3-4 were present in February. Since 1966 the species has been reported in each winter, except 1973. Numbers have increased greatly with annual (January-March) maxima normally in the region of 8 or 9 with however two quite exceptional years, 1967 and 1975 when up to 16 were present. The highest total reported in the area was in April, 1966, when there were 20 on extensive flood waters. There are no November records for the valley and only 5 December records, involving a total of 6 birds, since 1951.

By contrast winter records in the Adur valley are few. In 1971 a party of 10 was seen on floods and there were 2 in 1977, at Bramber, under similar conditions. Why the Adur valley should have been used so little is not entirely clear. Similarly, other than a party of 4 on the river at Southouse and 7 at Piddinghoe, both in March, 1976, there are no records for the Ouse valley. However, further inland the

species has been reported on Glynde Levels in 10 winters since 1957. The numbers involved have never been more than 3 and most records have been for the January-March period, although a total of 7 birds have been seen over the years in November and December. There are no records on file for the upper Cuckmere valley which is surprising in view of the numbers reported from Arlington Reservoir.

No attempt has been made to assess the numbers which use the levels in the vicinity of Rye as these have been regarded as coastal sites. Nevertheless it should be noted that some birds do fly further inland, along the eastern River Rother, as far as Wet Level where as many as 20 were reported in February, 1974.

Recent Inland Breeding

Inland breeding (i.e. more than 5km from the coast) is currently confined to the Arun valley between Arundel and Pulborough and at one other site in West Sussex.

A pair summered in the Arun valley in 1963 and then again in 1964. In 1965 there were 2 pairs, one of which was occasionally seen in the area of Burton Park. The status remained the same in 1966. In 1967 the maximum number seen in the valley rose to 10, and one pair was seen displaying at Coates Common. In the following year the numbers were lower and a pair was already visiting Burton Pond in mid-February. It seems probable that all of these records for the Burton Park/Coates area relate to the same pair. Breeding was never proven and birds have not been seen there since 1968.

The first confirmed breeding in the Arun valley, in recent times, came from Parham Park in 1969 and since then breeding has been attempted by 1-3 pairs annually at 4-5 sites until 1977. Since then there has been no evidence of breeding although pairs were present in 1978 and 1979 in the usual areas and in 1980 a pair was seen as far north as Wisborough Green. Further details of breeding in the Arun valley are given in Table 3.

Table 3. Breeding Status of the Shelduck in the Arun Valley (1963-1979)

Year	No. birds summering	No. pairs nesting	Comments on Breeding Status
1963	2	0	No evidence of breeding
1964	2	0	No evidence of breeding
1965	4	0	No evidence of breeding
1966	4	0	Pair visiting Burton Pond; no evidence of breeding
1967	10	0	Pair displaying on Coates Common
1968	6	0	Pair visiting Burton Pond; no evidence of breeding
1969	6	1	Pair with 11 young, Parham Park
1970	2	2	Pair with 1 young, Parham Park
1971	4	1	Pair with young, Parham Park
1972	4	2	Possibly attempted to breed at Burpham and Parham Park
1973	6	2	Attempted to breed at Arundel and Burpham
1974	8	2-3	Pair with 9 young at Swarbourne; pair with 19 young (? 2 broods) at Burpham
1975	8	2	2 pairs at Offham; one pair raised 2 young
1976	7	2	Pair bred at Arundel; pair seen with 8 young, South Stoke
1977	7	1	Pair bred at Offham
1978	6	0	No evidence of breeding
1979	4	0	No evidence of breeding

Elsewhere in the county a pair was present at the same site annually from 1963 to 1969 and bred successfully in three years. A pair was present there again in 1978 and 1979 but no information is available for the years 1970-1977.

Other Inland Records

In addition to the records for the reservoirs and the levels there are a few other inland sightings on file. A pair was seen at Knepp lake in April, 1957 where

they stayed for 2 weeks prior to gradually moving south down the River Adur and finally summering between Lancing and Steyning. In April, 1969 a pair stayed at Lurgashall Mill Pond for 4 weeks but showed no sign of breeding. Single birds have also been reported making brief visits to Warnham Mill Pond and Knepp lake in February, 1978 and March, 1979, respectively. One flying east over Bolney in April, 1971 may have been travelling to Weir Wood but it is more difficult to speculate on the destination of one flying west over Ditchling in September, 1968. Perhaps of greater significance is a record of four parties, totalling 58 birds, flying south-west over Darwell in January, 1966, which may have been moving overland from the Thames Estuary. More recently, at the end of May, 1979, a party of 7 were seen flying north-east over the Downs at Cissbury.

Discussion

The bird reports for most maritime counties record increased numbers of Shelduck over the last 30-40 years, especially in southern and eastern England. In Sussex the changed status has been apparent mainly in the form of greatly increased winter numbers (Shrubbs, *loc. cit.*). By comparison changes at other seasons have been difficult to detect. The substantial non-breeding population in the western harbours is much the same now as it was in 1947 but the small number of breeding pairs which have moved further inland on the coastal plain is perhaps evidence of some increase in the breeding population.

The changed status inland appears to have reflected the situation at the coast with most reports relating to the winter months and a limited attempt to colonise inland areas for breeding. These developments may be summarised chronologically. In the 1950's breeding at Chichester G.P.s was very occasional and the species was still an uncommon visitor to the Arun valley. However by the mid 1960's breeding at Chichester was regular and serious prospecting was taking place at several sites in the Arun valley. During the same period winter numbers at Weir Wood increased markedly and it was not unusual to see the species there at any season. Similar developments were reported from the gravel pit reserve at Sevenoaks, Kent (Harrison, 1972). Successful breeding first occurred in the Arun valley in 1969 and the number of breeding pairs and wintering birds in the valley increased gradually during the early 1970's. During the same period increased usage of other reservoirs, namely Arlington, Barcombe and Darwell, was also noted, particularly in the winter months.

In the 1974/75 winter the maximum counts at the coast dropped below 3,000 for the first time since 1965/66, when counts were started (Shrubbs, *loc. cit.*). The spring counts at Chichester G.P.s also declined having peaked in March, 1973 as did the winter numbers at Weir Wood which peaked in November, 1973. Since 1975 inland numbers have generally been lower and although the species is still seen in the Arun valley each winter and during the breeding season, successful breeding has not been recorded there since 1977.

The future status of Shelduck inland, as both a winter visitor and a breeding species should be worth watching closely. It will be of interest to establish whether it continues to reflect overall population trends and the extent to which the new inland waters influence the picture.

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Summary

All available post war records of Shelduck *Tadorna tadorna* seen inland in Sussex have been collated and reviewed. These show that the species is now seen inland more frequently than it was 40 years ago. Inland records increased rapidly in the mid 1960s but have declined since 1973, thereby following the overall population trend as judged by counts at the coast. The majority of inland sightings have been reported from reservoirs, where the species is most numerous early in the winter, and on the levels, particularly in the Arun valley, where numbers are highest later in winter. Details are given of inland breeding (i.e. more than 5km from the coast), which occurs mainly in the Arun valley where the species is known to have bred annually from 1969 to 1977.

THE POPULATION AND DISTRIBUTION OF THE NIGHTINGALE IN SUSSEX DURING 1980

By John A. Newnham

Introduction

Between 1974 and 1977 the Nightingale (*Luscinia megarhynchos*) was intensively studied in Sussex and its distribution and population was well documented (Merritt, 1978). During 1976 the British Trust for Ornithology (B.T.O.) conducted a full survey of this nocturnal songster and showed Sussex to hold 20 per cent of the national population (Hudson, 1979). The spring of 1980 was chosen by the B.T.O. for a further census of Nightingales to re-assess their breeding status.

Method

The method employed was similar to previous studies (Merritt, 1978, Hudson, 1979). The census period was from late April until early June with the emphasis on May. As in previous surveys, the sites were identified by a 6-figure grid reference and then plotted by tetrad (2km x 2km square) and ultimately mapped by 10km grid square. Some observers used tape-recorded challenges of Nightingale song to stimulate song of nearby Nightingales especially in areas of low breeding density.

Results

A total of 201 observers located 858 singing Nightingales. These were reported from 259 tetrads within 45 different 10km squares. The following table outlines the results of the survey in 10km squares and compares the results with the previous national survey in 1976.

DISTRIBUTION OF SINGING NIGHTINGALES

10km square	Number 1980	Number (1976)	Number tetrads containing Singing birds 1980 (1976)	Maximum Number Singing birds per tetrad 1980	Estimated per cent Observer Coverage 1980
SU 70	2	(4)	1	2	40
SU 71	1	(2)	1	(3)	30
SU 72	6	(6)	3	(2)	30
SU 80	27	(12)	7	(7)	80+
SU 81	15	(10)	10	3	70
SU 82	29	(28)	9	(9)	70
SU 83	1	(0)	1	(0)	30
SZ 99	1	(0)	1	(0)	30
SU 90	6	(8)	3	(2)	30
SU 91	14	(15)	5	(3)	60
SU 92	55	(40)	8	(11)	70
SU 93	14	(4)	3	(2)	50
TQ 00	5	(6)	2	(3)	60
TQ 01	23	(12)	8	(7)	60
TQ 02	133	(85)	19	(15)	80+
TQ 03	49	(18)	8	(7)	80+
TQ 11	31	(13)	11	(7)	75
TQ 12	67	(34)	17	(14)	80+
TQ 13	10	(21)	5	(5)	50
TQ 20	3	(2)	1	(2)	80+
TQ 21	26	(17)	11	(10)	60
TQ 22	8	(16)	5	(6)	70
TQ 23	11	(2)	6	(2)	70
TQ 30	6	(1)	2	(1)	70
TQ 31	21	(21)	6	(8)	50
TQ 32	11	(14)	5	(6)	50
TQ 33	1	(4)	1	(4)	30
TV 49	1	(0)	1	(0)	50
TQ 40	1	(6)	1	(2)	20
TQ 41	10	(22)	4	(8)	50
TQ 42	10	(5)	5	(4)	60
TQ 43	1	(3)	1	(3)	20
TV 59	6	(4)	4	(1)	80
TQ 50	70	(36)	9	(8)	80
TQ 51	22	(18)	12	(9)	70
TQ 52	6	(2)	4	(2)	60
TQ 53	2	(1)	1	(1)	50
TQ 61	2	(20)	2	(9)	25
TQ 62	41	(34)	12	(15)	70
TQ 63	4	(2)	4	(1)	50
TQ 70	1	(3)	1	(3)	50
TQ 71	25	(55)	11	(17)	60
TQ 72	17	(6)	6	(5)	60
TQ 81	23	(12)	8	(4)	80
TQ 82	40	(37)	14	(9)	80

The average density of singing males was 3.3 per tetrad and of the 259 tetrads recording Nightingales, 99 had one singing male; 57 had 2 singing males; 27 held 3 singing males and 79 held four or more singing males each. From the county records it appears there were 77 tetrads where Nightingales were recorded for the first time and 204 tetrads where Nightingales have previously been noted but not heard during 1980.

Discussion

1980 was clearly a remarkable year for Nightingales, with Sussex recording an increase of 29 per cent compared with 1976. Similar increases were reported from many other English counties (Davis, personal communication). The number of tetrads where Nightingales were recorded was similar in 1980 to 1976 suggesting that this increase is due to a higher density of breeding Nightingales in favourable areas rather than widening of the range within the county. Further

support for this suggestion comes from the evidence that in 1980 66 per cent of the county population occurred in high density areas containing four or more singing males per tetrad compared with only 46 per cent in the years of Merritt's study. If this higher density pertained through the possible 330 tetrads found by Merritt in his four-year survey, then an estimated 1980 population would be about 1,100 pairs; a figure considerably higher than quoted by Shrubbs, 1979.

Fig. 1 shows the distribution of singing Nightingales in 1980 and a comparison with Merritt reveals marked similarities to 1974-77. The area in North West Sussex between Lodsworth, Kirdford and Horsham (SU 92, TQ 02, TQ 03, TQ 12) contained 35 per cent of the county total. East Sussex held about 40 per cent of the county total and here the main concentration was near to Jevington (TQ 50). Only two areas showed a marked decrease, one near Lewes (TQ 41) and the other near Battle (TQ 61 and TQ 71).

Summary

The Sussex results of the B.T.O. Nightingale survey, 1980 are presented and are compared with the 1976 survey. The 858 Nightingales in 259 tetrads shows an increase of 29 per cent, possibly due to higher densities in favoured localities.

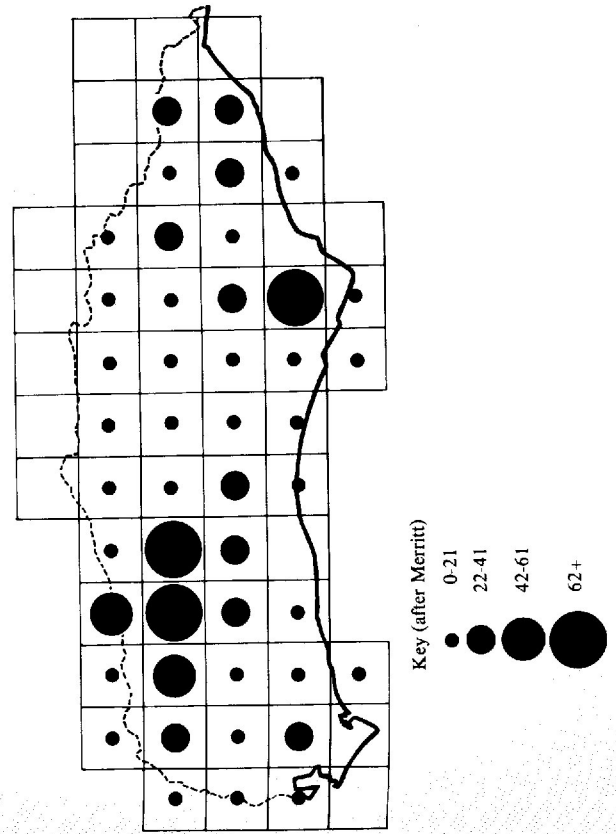
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Fig. 1. The number of singing male Nightingales in each 10km square during 1980



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 on 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:

Divers (except Red- and Black-throated on the coast)	Temminck's Stint
Grebes (other than Great Crested and Little)	Pectoral Sandpiper
Shearwaters	Phalaropes
Storm and Leach's Petrels	Pomarine Skua
Shag	Mediterranean and Sabine's Gulls
Bittern	Iceland and Glaucous Gulls
Reeve's Swan (other than at Amberley Wild Brooks)	Roseate Tern
Whooper Swan	Black Guillemot
Bean and Pink-footed Geese	Little Auk
Red-crested Pochard	Puffin
Long-tailed Duck	Woodlark and Shore Lark
Honey Buzzard	Waxwing
Red Kite	Dipper
Marsh and Montague's Harriers	Bluetit
Goshawk	Warblers: Cetti's, Marsh, Icterine, Melodious, Barred, Yellow-browed
Rough-legged Buzzard	Red-breasted Flycatcher
Osprey	Golden Oriole
Peregrine	Red-backed Shrike (non-adult)
Quail	Raven
Spotted Crane	Crossbill
Corncrake	Lapland and Ortolan Buntings
Stone-curlew	In addition: all unusual races of Yellow Wagtail and Rock Pipit
Kentish Plover	
Dotterel	