

**The
Sussex
Bird Report**

1978



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THE SUSSEX BIRD REPORT

NUMBER THIRTY-ONE, 1978

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Cover drawing of Greater Sand Plover by Keith Noble

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THE SUSSEX BIRD REPORT, 1978

HON. OFFICERS OF THE SUSSEX ORNITHOLOGICAL SOCIETY AS AT 30th JUNE, 1979

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- Records:* J. F. Cooper, C. M. James, B. A. E. Marr, M. J. Rogers, M. Shrubbs, P. J. Wilson
- Programme:* Miss D. du Boisson, B. F. Forbes, Miss M. Jennings, R. Page, A. Simpson

REPORT OF THE COUNCIL FOR 1978

Officers and Council

The Society was without a President following the Annual General Meeting. Mr. Guy Mountfort left Sussex in June and for this reason relinquished his position after 12 years, during which time his guidance and interest in the Society has proved to be of immense value. A presentation of a John Reaney pastel 'Plovers Meadow' was made at the annual conference as a token of our appreciation.

New officers were Mrs. I. Simpson as Secretary and Mr. M. J. Rogers as Recorder, in addition to which two new members of Council were elected, namely Dr. John Newnham of Worthing and Mr. J. E. Trowell of Hastings.

Review of Society Activities

As mentioned in the last Report of Council, the final report and definitive policy document was circulated to all those who attended the special meeting in July 1977 and was made available to any interested member on application.

In accordance with the five year term of office for Council members, the Treasurer Mr. A. J. Cooke will not be eligible for re-election. Arthur Cooke has carried out his duties in a quiet but highly efficient manner and we are most appreciative of his efforts. The Assistant Recorder, Mr. W. Merritt will also have completed his term of office and here again the Society would like to thank him for the long hours spent in the field and on the administration side organising our survey work.

Membership

Membership of the Society continues to show a slight increase each year. In 1978 we recruited 144 new members, but as frequently happens what appears to be a good step forward is heavily eroded by the number who resign on moving away or whose membership lapses through non-payment of subscription. It is pleasing to note that the number lost from the latter category is decreasing. This year a good proportion of the new members were gained as a result of personal recommendation from existing members and this is particularly gratifying. New members also resulted from literature in the information centres at Pagham Harbour, Seven Sisters Country Park and Rye Harbour and the Dome Film Show.

Finance

Unfortunately the Accounts for the year show an excess of expenditure over income of £210. Membership and income showed a small increase but expenditure rose substantially, particularly on printing including the enlarged and improved Sussex Bird Report.

After deducting this deficit, the balance on the General Fund is £1558. The Conservation Fund balance, however, increased to £1140 due largely to a generous legacy from a deceased member. Full details of these funds are shown in the Accounts.

In spite of continuing inflation, it is hoped that the increased rates of subscription for 1979 will enable the Society again to show a surplus which in turn will provide the finance for essential conservation work within the county.

Sussex Bird Report

The Sussex Bird Report was published in December and was printed by Charles Clarke (Haywards Heath) Limited, who were able with certain cost cutting methods to give a competitive quotation. The Editor will continue to seek methods of controlling costs without jeopardising the standard of the Report.

The four issues of the Newsletter covered an even wider range of information and articles on county and national ornithological issues.

Surveys and Records

The Scientific Committee held three meetings during the year and 1978 saw the successful publication of the results of the Rook and Nighthawk surveys in the Sussex Bird Report.

The Corn Bunting and Grasshopper Warbler surveys continued, this being the second year of a four year study. The monthly wader and wildfowl counts during the winter were carried out, and a record of the Golden Plover in the county on two dates was also made.

The Sites Register is continuing in Sussex and completed cards have now been received for 108 sites.

The hand-over of records from the previous Recorder in April was effected smoothly. Despite some set-backs, the draft of the systematic list was prepared on time and the original difficulties encountered over liaison with the Rarities Committee of 'British Birds' were quickly cleared up when the Recorder became Secretary to that Committee in May.

As a matter of joint editorial/recorder policy, the systematic list for 1977 was considerably expanded in content and comment. Initial reactions have been most favourable.

The continued invaluable services of Miss J. V. Stacey in preparation of the master sheets merit the Society's unlimited gratitude.

Conservation

The tasks carried out during 1978 have again been varied, ranging from a new venue at Ashdown Forest where we helped clear conifers from a predominantly heather area, to the new Nutbourne Marsh Reserve. We were also able to help the Sussex Trust at their headquarters, Woods Mill, where we cleared part of the mill stream and banks following the emergency caused by the breaching of the stream in the spring.

The actual work involved in these tasks is carefully planned and we are therefore able to utilise the many skills and abilities of our members. It is very encouraging to see new faces at the working parties and indeed following 250 man-days of work in 1977, we surpassed ourselves in 1978 with 354 man-days.

Conservation is not only involved with manual work on site. We also have a team of 'back-room' helpers who construct rafts, nest boxes, etc., and Council would like this year to particularly thank them for the many hours spent in this connection. It should also be noted that the Society is represented on many Committees dealing with conservation matters in the county and our advice is sought on many specific projects, not the least being the Amberley Enquiry where the records kept by the Society were of prime importance in collating the ornithological data presented by the R.S.P.B. The result of the Enquiry was against the Southern Water Authority proposals.

Publicity

A revised broadsheet setting out the Society's policies and activities was sent to local authorities and other interested bodies. Press releases were issued covering the change of secretary, departure of Mr. Guy Mountfort, the first conference held by the Society and the nomination of Mr. Grahame des Forges as our new President. Contact has also been maintained with Radio Brighton. As a new venture, an exhibition was mounted in the window of a leading building society in Uckfield for a three week period. This proved very successful and the Society has been invited to use the facilities again in 1979.

The Society display stand has been refurbished and was used to effect, together with additional exhibition material, at the R.S.P.B. Christmas Fayre and Dome Film Show in November.

Field Outings

During the year there were 19 conventional field outings and a further two for beginners. Three of the venues were new and that we can continue to find fresh, interesting sites underlines the rich endowment we enjoy in Sussex. As usual a few of our meetings took place outside our county and these were to Farlington Marshes, Hampshire, Northwood Hill and Cliffe in north Kent, and more ambitiously to Minsmere and Walberswick Heath, Suffolk. The two latter meetings were by way of coach trips.

As usual many species of interesting birds were seen on trips and a few uncommon ones too, such as Slavonian and Black necked Grebe, Red throated Diver, Hobby, Shore Lark, Snow Bunting and Arctic Skua.

Our aim with field outings continues to be to show members, particularly new ones, where various species of bird can be found in Sussex and to hope this arouses interest in participating in recording and survey work in the coming years.

Indoor Meetings

The only indoor meeting this year, apart from the annual general meeting, was the scientific conference which was held in July and attended by 120 members. The conference was opened by our Vice-President and Chairman, Mr. B. A. E. Marr, and subjects discussed ranged from the wildfowl and estuary counts to breeding bird surveys. The scientific work of the Society was reviewed and many ideas and valuable suggestions resulted.

The annual general meeting was well attended and Mr. A. Kitson gave an illustrated lecture on his six months sojourn in Ulan Bator, Mongolia. It was an illuminating and interesting talk and we were privileged to see slides of a number of species rarely or never previously photographed.

Junior Section

It was another good year for the Junior/Intermediate Section, with a fair number of new members and increasing interest and enthusiasm amongst the old ones. The regular team of leaders took field outings to a variety of habitats and some good sightings were reported, perhaps the most noteworthy a fine adult Nighthawk—a 'first' for every member present.

The quarterly newsletter often carried excellent articles and letters by junior and intermediates and for the third year the Christmas issue was graced by an original illustration, the work of one of several gifted young artists within our ranks.

A very satisfactory feature of the year was the increasing involvement of members in the practical and scientific activities of the society, including surveying, wader counting and conservation work of many kinds. There is valuable potential here for the success and influence of the Society in the future.

Miss Angela Brooks, the junior section secretary will be retiring this year. With the enthusiasm she has brought to this post, the section has prospered during the last five years and Council is very grateful. We are fortunate to be able to report that a worthy successor has been found in Miss Mary Dixon of Brighton.

Summary

During 1978 Council has made good progress towards implementing the proposals put forward in the policy report and we intend to continue.

Our thanks are extended to all our members who give their unstinting help and support in running the many facets of the Society.

B. A. E. MARR,
Chairman of Council

CONTRIBUTORS AND ACKNOWLEDGEMENTS, 1978

We are grateful to the following observers for records, and we also wish to thank those observers who helped with the breeding surveys.

- | | | |
|---------------------------|----------------------|----------------------|
| C. R. C. Albrecht | A. Dawnay | P. James |
| J. S. M. Albrecht | J. M. Daykin | C. M. James |
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| R. P. Begbie | Miss J. Fiveash | D. C. Lang |
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| M. J. Rogers | C. F. Winyard |
| N. R. Rogers | Dr. C. M. Wright |
| D. M. Rourke | |

ESTUARY COUNTS

These counts organised by R. F. Porter were carried out at Chichester and Pagham Harbours, Rye Harbour and Pett Level from July 1978 to April 1979 and along the whole Sussex coastline in January and February 1979. All records have been sent to the B.T.O. and details appear on page 57. We thank all the counters for their efforts. They were:—
At Chichester and Pagham Harbours—P. Baines, K. F. Burn, P. Clement, R. D. M. Edgar, Mrs. J. H. M. Edom, D. S. Flumm, M. J. W. Hay, Mrs. S. P. Hitchings, C. R. Janman, S. C. Johnstone, I. Jones, A. R. Kitson, I. D. Kraunsoe, O. Laugharne, Mrs. P. Laugharne, B. A. E. Marr, P. Martin, C. Mayhead, L. Mayhead, O. Mitchell, K. Noble, A. J. Noble, D. A. Parmenter, T. W. Parmenter, Mrs. N. Petrie-Hay, R. F. Porter, R. J. Senior, Miss C. Tyson, M. Welfare, R. Williamson.
At Rye Harbour, Pett Level and Sussex Coastline—R. Batchelor, P. F. Bonham, J. F. Cooper, N. Crouch, B. F. Forbes, F. J. Forbes, R. Greenhalf, B. Grimes, B. Hadden, N. Hensley, R. Knight, C. Mead, O. Mitchell, C. E. Messer, J. P. McFear, D. Okines, R. Okines, J. Reeves, P. W. Rouse, R. J. Sandison, C. Spooner, P. J. Wilson.

WILDFOWL COUNTS

D. 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, K. Blackman, P. J. Clay, Dr. Coda, D. Codd, J. F. Cooper, A. Dawney, R. Harris, K. L. D. Hickman, R. Holman, C. E. Hope, R. J. B. Jackson, R. C. Knight, D. C. Lang, P. J. Luffingham, J. McKelvie, J. P. McFear, P. Martin, S. P. Morphew, D. Parish, D. R. Park, R. F. Porter, P. W. Rouse, A. and I. M. Simpson, D. Sneller, C. A. Taylor, G. E. Tomalin.

CLASSIFIED RECORDS FOR 1978

Numbering in the systematic list has been omitted in this report following adoption of the new listing sequence (Voous) and pending national agreement on a new numbering sequence. Spaces have been left for completion in due course by individual members if they so wish.
 The Hon. Recorder would like to express his thanks to Messrs. S. W. M. Hughes, R. J. B. Jackson and M. Shrubbs for assistance in the compilation of the list.
RED-THROATED DIVER (*Gavia stellata*).—During the early part of the year regularly recorded offshore at Rye and Pett Level and occasionally elsewhere along the coast. An unusually large gathering of 32 was seen off Pett on Jan. 4th

followed by 8 still there on 7th and 5 on Feb. 2nd. There were 5 off Newhaven on Feb. 20th. Inland, one stayed at Arlington Res. from Jan. 4th to Mar. 1st. At Selsey Bill 5 were identified on passage between Apr. 8th and 21st and 15 at Beachy Head between Apr. 1st and May 21st. On June 1st a probable immature was seen off Pett Level, and an adult at Church Norton on July 27th constituted the 1st Sussex record for this month.

BLACK-THROATED DIVER (*G. arcitica*).—At the beginning of the year occasional wintering birds were identified offshore at Rye (RK) and 2 were seen off Pett Level on Jan. 4th (CHD). One flew W off Worthing on Feb. 9th (RJS) and another off Rock-a-Nore on Mar. 6th (PR).

Amongst migrant divers seen moving E at Beachy Head singles were identified on 7 occasions between Apr. 2nd and May 16th with 2 on Apr. 9th and 3 on May 2nd (per JFC). Single birds were also identified on passage at Church Norton on Apr. 16th (per IK), off Brighton on 17th (PB), Selsey Bill on 26th (BFF, OMM), Worthing (2) on 30th (JAN), Cooden on May 7th (PSR) and Hove (2) on 20th (JAN, TG).

For details of spring passage see under "Diver Species" below.

At the end of the year there were again several sightings in Rye Bay (per RK). Otherwise the sole records were of one W at Selsey Bill on Nov. 18th (MJWH, OMM, RJSe) and on the Crumbles on Dec. 17th and 24th (JFC, MJR).

GREAT NORTHERN DIVER (*G. immer*).—Two offshore at Church Norton from Jan. 15th to Apr. 8th (many observers) were the sole fully authenticated records for the year.

DIVER SPECIES (*Gavia sp.*).—Spring diver passage up-Channel was recorded at Beachy Head between Mar. 14th and May 21st as follows:—

<i>G. arcitica</i>	<i>G. immer</i>	<i>G. stellata</i>	<i>G. species</i>
12	—	15	384

Maxima were lower than usual: 45 on Apr. 1st, 37 on 29th, 62 on 30th, 34 on May 8th and 40 on 11th. (For details see table on p. 30). At Worthing-Hove watches totalling 175 hours between Apr. 1st and May 20th produced a total of 68 passing E and further W at Selsey-Ferring—Clipping a total of 42 was seen between Apr. 1st and May 13th.

No significant numbers, other than those mentioned specifically, were reported at the end of the year.

LITTLE GREBE (*Tachybaptus ruficollis*).—Jan. and Feb. totals for the whole county were 92 and 124 respectively of which 90 and 115 respectively were on coastal or inshore waters. Of the winter population in the Cuckmere (max. 30 in Jan.), 18 were still present on Apr. 3rd but only 2 by 8th.

During the breeding season pairs were reported as follows:—

Chichester G.P.	Weir Wood Res.	1*
Pagham Harbour	Iden Park	1
Mannings Heath	E. Guldeford	1
Childmore Pond	Rye Hbr. LNR	8-9*
Milland	Bewl Br. Res.	1
Warnham M.P.	Crumbles	1*

Of the pairs marked * 21 were known to have hatched 45 young. At Rye, where a max. of only 10 young were reared, low water temperatures was thought to have adversely affected early broods.

By Nov. the county total was approx. 123 (max. 38 in the Cuckmere on 12th). More than usual were noted at Rye Harbour LNR with 33 there on Dec. 3rd.

GREAT CRESTED GREBE (*Podiceps cristatus*).—During the early part of the year the only offshore reports were of 6 in Chichester Harbour in Jan. and 12 in Feb. The species appears to have now forsaken Rye Bay. Inland, the sole counts received totalled 86 on 2 waters in Feb.

During the breeding season pairs were reported as follows:—

Chichester G.P.	14-15
Horsted Keynes	2
Tilgate Park	1?
Knepp Lake	2+
Warnham M.P.	1
Chingford Pond	1
Burton Lakes	1
Petworth Park	4
Slaugham M.P.	1
Pond Leigh	1
Lurgashall M.P.	1
Shillingee	1

Breeding success was similar to 1977; of about 20 pairs known to have bred, 18 reared 37 young, at least one being double-brooded. Whilst others may have bred undetected, others were known to have failed.

In Oct., Nov. and Dec. winter gatherings totalled 4, 20 and 17 respectively on inland waters (no counts received from Weir Wood Res.) and 40, 24 and 41 at sea.

RED-NECKED GREBE (*P. grisegena*).—One at Castle Pit, Rye Harbour LNR, Feb. 5-12th (PFB, BG, RK *et al*) and one off Seaford Head, Apr. 6-9th (JWH, TWP, PJW *et al*). One on Pagham Lagoon or in the Harbour from Dec. 15th to the end of the year (RSK, OMM *et al*).

SLAVONIAN GREBE (*P. auritus*).—During Jan. a max. of 5 was reported from Chichester Harbour and in Pagham Harbour the max. was 6 in Mar. and early Apr. Singles were also seen at Newhaven from Feb. 20th to Mar. 1st, Arlington Res. from Feb. 11th also to Mar. 1st and at Weir Wood Res. on Mar. 20th.

Spring passage was well marked with singles off Beachy Head on Apr. 19th and Selsey Bill on 22nd, 2 off Beachy Head on 29th, singles there, Pett Level and Chichester Harbour on 30th, 9 off Rye Harbour LNR on May 1st (5 staying to 2nd), 2 off Beachy Head on 6th and one on 14th, bringing the passage total to 19.

At the end of the year singles appeared off Rottingdean on Oct. 11th and at Rye Harbour LNR on 22nd and 9 had gathered at Church Norton by 29th with up to 6 there until Dec. 2nd. Subsequently numbers rose in Chichester Harbour—to 8 by Dec. 16th and until the end of the year. In the meanwhile single stray birds were seen in the Cuckmere on Nov. 12th, at Barcombe Mills Res. on Dec. 23rd and off Brighton on 31st.

BLACK-NECKED GREBE (*P. nigricollis*).—More records than usual. One in the Pagham Harbour area from Jan. 1st to at least Feb. 17th may have been the same as one at Chichester G.P. on Jan. 30th and again at Pagham Harbour on Mar. 11th and 26th. Further singles appeared at West Wittering on Feb. 17th and off Brighton on Apr. 25th. In autumn 2 were seen on Aug. 27-28th, 2 more on Sept. 10th and one on Oct. 21st-22nd. Two were on the Rother at Rye on Dec. 2nd and one at Pett Pools from Dec. 9th to the end of the year. One arrived in Pagham Harbour on Dec. 9th to bring the total for the year to 13-15, double the average since 1967.

FULMAR (*Fulmarus glacialis*).—Present at Beachy Head from Jan. 2nd onwards when over 30 were reported. During the breeding season up to 17 birds were seen along the cliffs at Rock-a-Nore and 12 off Fairlight. No counts were made between Beachy Head and the Cuckmere but at Seaford Head 6 sites were occupied, at Newhaven 10, Peacehaven 2, and a further 3 pairs between Saldern and Roedean. Once again there was no proof of breeding due to the difficulty of viewing nest sites.

Coastal movements were observed in spring and autumn but none of significance. One was seen inland over Arundel Wildfowl Refuge and Offham Hanger on May 29th before it departed S.

SOOTY SHEARWATER (*Puffinus griseus*).—One flew W at Beachy Head on Aug. 20th (PC, RDM, DAP): a conventional date for this species.

MANX SHEARWATER (*P. puffinus*).—On Mar. 28th, one passed west off Southwick (MRW). Although an early date for this species in Sussex it is matched by the Beachy Head record on Mar. 27th in 1977. Of two W at Beachy Head on May 14th, one was considered to show the characteristics of the Balearic race *P. P. mauretanicus* (DAP). Further records of the typical race were of one W off Cooden on May 6th (PSR), one E off Rottingdean on 29th (AJC), one feeding off Beachy Head on Aug. 28th (DSF) and 2 W off Rottingdean on Oct. 17th (AJC).

GANNET (*Sula bassana*).—Recorded in every month from mid-Mar. to mid-Dec. During the spring at Beachy Head a total of 399 moved E and 75 W between Feb. 26th and May 21st with maxima of 115 on Feb. 26th and 39 on May 6th. Watches at Worthing-Hove between Mar. 16th and May 25th produced 53 E and 21 W with a max. of 23, also on May 6th. On the same day 15 passed W off Selsey Bill.

A unum passage was noted mostly in Sept. and early Oct. with maxima of 30 W at both Pett Level and Beachy Head on Sept. 9th and, at Selsey Bill, about 50 on Oct. 4th and 35 on 5th. Oiled or dead birds were found at Angmering in Oct., at Nuthourne on Dec. 16th and Roedean on Dec. 28th.

CORMORANT (*Phalacrocorax carbo*).—Recorded in every month of the year. The winter roosts apparently dispersed by early Apr. and re-formed by perhaps mid-Sept. On Jan. 28th, 95 were seen flying towards the Arundel roost and on Feb. 24th, 80 were roosting on Bognor Pier. Up to 20 were in the Cuckmere during Jan.-Mar. and the Fairlight roost involved 29 or more on Jan. 7th. The winter gathering at Pett Pools stood at a max. of 23 on Jan. 10th and, on the Long Pit at Rye Harbour LNR, 10-32 were noted from Jan. to Mar. with a max. of 32 on Mar. 11th.

The movements and roosting habits of this species offer grounds for further study, particularly in relation to feeding expeditions up the river valleys and the extent to which inland electricity pylons may be used as roosting sites.

SHAG (*P. aristotelis*).—A total of about 38 individuals was reported as follows, all from coastal localities:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
1	3	1	4	3	—	—	—	14	5	2	5

The Sept. total included an unusually large party of 7 adults passing E off Selsey Bill on 16th. This year the proportion of adults to immatures was 3:1.

BITTERN (*Botaurus stellaris*).—One at Chichester G.P. on Feb. 11th (CRJ) may have been that seen in Dec. 1977, and one at Rye Harbour LNR during 2nd week of Jan. was probably the same as one on Feb. 11th to at least 18th (AD *et al.*). One was present at Arundel Wildfowl Refuge Dec. 11-25th (RMB).

HERON (*Ardea cineria*).—The number of nests reported as occupied was as follows:—Pagham 2; Knepp 12; Henfield 15; Eridge 13; Priesthaws 7; Westham 1; Wartling 4; Leasham 38. No counts were received from Fishbourne, Parham or Firle. Largest numbers seen together outside the breeding season were 26 at Thorney Deepes in October and 12 at Bewl Bridge Res. in December.

PURPLE HERON (*A. purpurea*).—An adult was seen in the Cuckmere on May 5th-6th (MJR *et al.*). This record has been accepted by "British Birds" and is the 19th for Sussex.

WHITE STORK (*Ciconia ciconia*).—One passing over Rye Harbour LNR on June 13th (RJE, DH) was probably that seen in Kent during July. One passing over Goring on Dec. 31st (JAF) was probably that seen in Hampshire on Jan. 1st 1979. Both records have been accepted by "British Birds" and it is considered that neither relates to the Dutch escape (see "Escapes").

SPOONBILL (*Platalea leucorodia*).—Two over Rye Harbour LNR on Mar. 30th (Mr. Bywater per RK) were doubtless the same as 2 in the Cuckmere on at least Apr. 2nd-3rd (AJC, DEM, PNR *et al.*).

MUTE SWAN.—The Society took part in the international breeding survey of the species which revealed 98 nests in the county with a further 40 pairs holding territory. All known sites were visited, and it is considered that at least 90% of nests in the county were found.

BEWICK'S SWAN (*C. columbianus*).—At Amberley Wild Brooks the count of 75 at the end of 1977 dropped to 70 by Jan. 19th but increased to 105 for the period Feb. 19th to Mar. 18th after which departures followed quickly. Three on the Adur Levels on Jan. 5th may have wandered from Amberley as may 12-17 on Henfield Brooks between Feb. 6-13th. Elsewhere during the period 5 (3 adults) visited Arlington Res. on Jan. 18th and 2 adults were on the Glynde Levels on Feb. 6th and 27th—and possibly the same birds in the Cuckmere on 25th. Two yellow-dyed adults were seen at Pagham Harbour on Feb. 11th.

In the late autumn the first at Amberley were 4 on Oct. 27th increasing to 45 (only one immature) by Dec. 17th and 56 by 29th. Elsewhere 2 flew E over Rye Harbour LNR on Oct. 29th and 5 there on Nov. 28th may have been those seen flying W at Sidlesham Ferry the same day. On 29th 4 more flew W over Sidlesham and on 30th a lone bird flew N over Fore Wood. Finally, 2 more appeared at Sidlesham Ferry on Dec. 18th.

WHOOPEE SWAN (*C. cygnus*).—A good year for this species. On Glynde Levels an adult was seen on Feb. 7th (PJW) and 2 on 12th (GAS) and Mar. 5th (PC, RDME). At the other end of the year, one flew E at Pett Level on Nov. 5th (CHD, PR) and 4 at West Chidham on Nov. 29th quickly moved on (JHME). A herd of 11 arrived in the Cuckmere in the blizzard on Dec. 31st and remained into the New Year (PJW, RM). On the same day 7 birds most likely of this species were seen departing W at Sidlesham (CRJ).

BEAN GOOSE (*Anser fabilis*).—One at Amberley Wild Brooks on the late date of Apr. 26th (PDD) may well have been of feral origin.

PINK-FOOTED GOOSE (*A. brachyrhynchus*).—One at Rye Harbour LNR on Jan. 14th departed NW (DEM). Two at Amberley Wild Brooks on Mar. 7th were joined by a 3rd on 16th (BFF, FJF, CRJ), one remaining to 25th (OMM). Although shy, one feeding with Canada Geese at Barcombe Mills Res. throughout Dec. (DCL) may have been of feral origin.

WHITE-FRONTED GOOSE (*A. albifrons*).—A party of 6, including 4 immatures, appeared in the Cuckmere on Jan. 16th; two of the latter were shot and the remainder stayed until 30th. At Pett Level, however, an immature survived from Jan. 26th to at least Mar. 24th. At Pagham Harbour one on Feb. 7-11th was joined by 4 more from 22nd to Mar. 5th. Of 5 at Amberley Wild Brooks on Feb. 12th 2 were noted as 'very wild' and soon departed; the others, including one imm. stayed until Mar. 8th. A party of 24 visited Arundel Wildfowl Refuge on Feb. 16th.

Dec. started normally with 2 NE at Pett Level on 5th, 14 at Amberley Wild Brooks on 17th and one there on 29-30th. A bird of suspect origin was at Pagham Harbour from 9th to the end of the month. Then as the cold spell set in on 31st came the start of the exodus from the Continent (probably Holland) and flocks were seen coming in and/or flying W or WNW at Rye (9 and 20), Eastbourne (6), Brighton (21), Hove (14), Worthing (17) and Sidlesham (44). Most unidentified grey geese were probably of this species.

GREYLAG GOOSE (*A. anser*).—All records probably related to birds of local, Kentish or Continental feral stock. The main features were 25 at Ardingly Res. on Feb. 22nd, 4 remaining to 27th. On Mar. 3rd, 9 flew W over the Rother Levels and by 12th the winter's max. of 11 was present at Amberley Wild Brooks. Of these, 5 flew N over Pulborough on 18th, 4 remaining until at least Apr. 26th. In June a pair in Arundel Park (where 5 young were reared in 1977) were doubtless from the Wild Brooks. Similarly 2 at Rye Harbour LNR from mid-May and 6 throughout June were related to the small resident population at Dungeness.

On Sept. 28th 8 flew W off Worthing. Six over Sidlesham Ferry on Nov. 7th and again on 8th were likely to have been the same as 6 on Amberley Wild Brooks by Dec. 17th where 2 remained to the end of the year.

GREY GOOSE SPECIES.—Between Jan. 1st and Feb. 25th there were 5 reports of unidentified grey geese and a further party off Beachy Head on Apr. 17th. At the end of the year a party of 10 flying W over Eastbourne were thought to be White-fronted and this almost certainly applied to the events of Dec. 31st when parties of 30 and 3 flew W at Hove, 25 at Cuckmere Haven, 12 at Worthing, 15 at Bexhill, 2 at Arundel Wildfowl Refuge, 35 near Barcombe and 30 and 35 at Norman's Bay.

CANADA GOOSE (*Branta canadensis*).—The estimated winter and post-breeding maxima in the sub-population areas defined in the Sussex Bird Report of 1972 and re-iterated in that of 1977 were as follows:—

	Jan./Feb.	Sept.	Nov./Dec.
Pagham/Chichester (Eastleigh).....	65	108	86
Amberley/Arundel/Petworth/Warham/Knepp/Mannings Hth (Petworth).....	325	226	325
Arlington/Barcombe/Pevensy Levels/Piashett Park (Herstmonceux).....	105	385	120
Rye/Bewl Bridge/Darwell (Dungeness).....	116	147	216
Weir Wood/Ardingly/Crawley (Ashdown Forest).....	45	—	7
	656	866	754

These figures show a greater seasonal variation than in 1977 but neither year's counts can be regarded as wholly accurate. Nonetheless the overall population level appears to have remained static despite a further considerable increase in the post-breeding Herstmonceux sub-population from 280 in 1977. It is of interest that Ogilvie (1977) gave the national average rate of increase 1968-76 as 8% though considerable regional variations were evident.

During the breeding season a minimum of 61 pairs were found at 30 localities. Of these 51 were known to have bred, hatching a minimum of 256 young (mean brood size: 5.5). Fifteen brood sizes were reported (mean: 5.1; mode 5) as follows:—

Brood size:	3	4	5	6	7
No. of broods	1	2	7	4	1

These results compare favourably with the average clutch size of 5.16 from 63 nests quoted by Thomas (1977) and suggest high hatching rates.

Observers are asked to effect counts at the principal gathering places in late afternoon when max. numbers may be expected. Precise brood sizes are welcome and also any information on local culling activity.

References: Ogilvie, M. A. "The Numbers of Canada Geese in Britain, 1976". *Wildfowl* 28 (1977): 27-34.
Thomas, C. Barry, "The Mortality of Yorkshire Canada Geese"; —: 35-47.

BARNACLE GOOSE (*B. leucopsis*).—Two at Amberley Wild Brooks from Mar. 16th to Apr. 18th and one at Bracklesham Bay on Oct. 1st were probably of feral origin. The same might have applied to 2 flying E at Pett Level on Dec. 23rd and 2 again at Amberley on 29th but the advent of the cold weather undoubtedly brought birds of the Novaya Zemlya breeding population from their normal wintering grounds in the Low Countries. On Dec. 31st one flew W off Brighton and may have been that which later arrived at Sidlesham Ferry. Many more came into the county in early 1979.

BRENT GOOSE (*B. bernicla*).—The Jan. 14th count for Chichester and Pagham Harbours was 6,143 and this rose to 6,269 by Feb. 14th. In the meanwhile one substantial movement of uncertain origin had taken place off Pett Level on Jan. 26th when a total of 410 flew E. Casual observations at a variety of coastal localities between Feb. 20th and 28th produced a total of some 1,040 moving E and, on the evenings of Mar. 6th and 10th a number of parties were heard passing ENE over West Chiltington north of the Downs. Thus, by Mar. 11th the count in the two western harbours had reduced to 4,009. On Mar. 12th 255 E were seen at Beachy Head and a further 535 during the morning of Mar. 14th. More were heard passing over West Chiltington at night on Mar. 18th. There were two in Chichester Harbour until May 13th and a further adult which loitered until June 21st but the last migrants passed Beachy Head on May 28th (6).

In autumn the first seen were on Oct. 1st when 30 flew W at Beachy Head, 14 W over Pagham Harbour and 25 W at Bracklesham Bay. The first winter residents arrived at Thorney Island on Oct. 21st. Substantial arrivals apparently took place on Nov. 20th and 25-26th adding to 865 already in Chichester Harbour on 18th. A day ahead of the blizzard of Dec. 31st, the count in Chichester and Pagham Harbours came to a record total of 8,984. On 31st a total of 155 were seen moving W at Brighton—doubtless included in the total of 181 W seen at Worthing.

Individuals of the race *b.b.hrota* known as the Pale-Breasted Brent Goose, were seen at Goring Gap on Nov. 26th and (possibly the same bird?) Pilsey Island on Dec. 2nd.

SHELDUCK (*Tadorna tadorna*).—The wildfowl counts of Jan. 14th and Dec. 17th produced totals of 1,818 and 1,683 respectively, compared with 1,821 and 1,866 respectively on Jan. 22nd and Dec. 10/18th, 1977. The vast majority were again in the two western harbours. A further count on Feb. 11th amounted to 1,898 and 1,999 were in the county by Mar. 11th. The Jan. and Feb. counts for the Sussex/Hampshire harbours were 2,406 and 2,638 suggesting a small arrival with the Feb. cold spell. That the count a month later on Mar. 11th had barely changed at 2,633 was in itself remarkable but still left the timing of dispersal obscure.

During spring passage a total of 82 flew E and 29 W off Worthing-Hove between Mar. 27th and May 26th with a max. of 22 on May 12th. At Beachy Head 84 flew E between Feb. 26th and May 19th, with maxima of 10-14 on Apr. 17th and 23rd and May 8th and 12th. An unusually late gathering of 230 was noted at Sidlesham Ferry during early May.

Max. counts of young at known breeding localities during June/July were as follows:—

Chichester Harbour.....	220	Pett Level.....	Nil.
Chichester G.P.....	7	Rye Hbr. LNR.....	45
Pagham Harbour.....	140	Rye area.....	100
Cuckmere Valley.....	15		

The onset of the cold weather on Dec. 31st brought a marked movement along the coast. At Norman's Bay 33 passed E or NE and 3 W in 3 hours, a further 4 E at Langney Point and a total of 95 W in 2 hours at Worthing.

WIGEON (*Anas penelope*).—Approximate counts on Jan. 14-15th and Feb. 14-15th totalled 1,967 and 2,135 respectively in the whole county. Timing of return passage was obscure. Spring loiterers included 3 males at Bewl Bridge Res. on Apr. 3rd, 2 pairs on Horse Eye Level on 8th and a pair at Barcombe Mills Res. on 22nd.

On July 1st and 22nd one was seen at Thorney Deepes but it was not until early Sept. that arrivals appeared with 16 W at Pett Level on 6th, one at Rye Harbour LNR on 15th and 10 on 29th, and 2 in Pagham Harbour on 16th.

The mid-Dec. count for the county stood at 1,526 but signs of things to come were manifested in the blizzard of Dec. 31st when 729 moved W or S in 3 hours at Norman's Bay and 460 W in 2 hours at Worthing.

GADWALL (*A. strepera*).—The principal haunts of this species in Sussex are Rye Harbour LNR, Darwell Res., Swanbourne Lake in Arundel Park and Chichester G.P. The total at 5 localities was 64 in Jan. and 72 in Feb. Dispersal took place during mid-Mar. Although pairs were present at several localities during the early part of the breeding season there was no evidence of nesting. Numbers generally began to increase in early Nov. and the minimum count at 10 localities for Dec. was 95 which was temporarily enhanced to 127 on Dec. 10th by an exceptional count of 64 at Rye Harbour LNR.

TEAL (*A. crecca*).—Approximate counts for the county on Jan. 14-15th and Feb. 14-15th totalled 1,840 and 2,021 respectively, the increase being attributable to the cold spell in Feb.

Although paired birds were seen in a number of suitable localities in Apr.-June no evidence of breeding was forthcoming.

An approximate total of 1,587 in the county in mid-Nov. led to a mid-Dec. figure of some 2,819.

MALLARD (*A. platyrhynchos*).—Approximate counts for the county on Jan. 14-15th and Feb. 14-15th totalled 1,935 and 2,796 respectively, the increase being attributable to the cold spell in Feb.

During the breeding season brood sizes reported were as follows:—

Brood size:	1	2	3	4	5	6	7	8	9	10	11
No. of broods	—	1	—	—	1	1	6	1	4	1	1

At Pagham Harbour a brood of 9 hatched on the late date of Dec. 4th possibly fell prey to a rat within 3 days.

The approximate county population in mid-Dec. was 4,123.

PINTAIL (*A. acuta*).—The wildfowl counts of Jan. 14/15th and Dec. 17th produced totals of 85 and 175 respectively, compared with 486 and 177 respectively on Jan. 22nd and Dec. 10/18th, 1977. The low Jan. count was redressed to some degree by a total of 215 on Feb. 14/15th. The main departure in spring apparently took place in late Mar. after which the sole records were of a pair at Waltham Brooks on Apr. 9th, 4 moving E at Beachy Head on 23rd and a male at Rye Harbour LNR on May 1st.

The first in autumn was a party of 15 flying W at Pett Level on Aug. 9th and the winter population was well established by mid-Nov. when the Chichester Harbour count stood at 136.

GARGANEY (*A. querquedula*).—First recorded in spring were a pair at Church Norton on Mar. 18th, another pair on Amberley Wild Brooks on 24th and two pairs there on Apr. 2nd. A pair flew east off Lancing on Apr. 24th and single drakes appeared at Rye Harbour LNR on 30th and Sidlesham Ferry on May 23rd. During May the species was present in 3 localities under such circumstances as to suggest possible breeding. At a 4th site one pair successfully reared 4 young to fledging stage.

In autumn the first at Rye Harbour LNR was on Jul. 23rd and subsequently 2 were there on Aug. 13th, 4 on 19th, 1-2 most days until 31st and 1-3 in Sept. until 21st with a max. of 8 on 4th. At nearby Pett Level one on Aug. 19th and 2 on 20th were joined by 5 more on 23rd to 25th, 2 remaining to 27th and one to 30th. 2 more appeared on Sept. 10th. At Sidlesham Ferry one stayed from Sept. 2-14th, in the company of another on 9-12th and one was at Chichester G.P. on 9th. The last for the year was at Rye on Oct. 8th.

SHOVELER (*A. clypeata*).—The wildfowl counts of Jan. 14/15th and Dec. 17th produced totals of 197 and 477 respectively, compared with 168 and 258 respectively on Jan. 22nd and Dec. 10/18th, 1977. The high Dec. count was largely due to the presence of 251 at Chichester G.P.

During spring passage a total of 17 were recorded moving E at Beachy Head and 4 E at Hove on Apr. 7th. Two pairs stayed well into the breeding season on Amberley Wild Brooks whilst in the Pagham Harbour area two pairs bred, hatching 3 and at least 1 young respectively.

RED-CRESTED POCHARD (*Netta rivina*).—A pair was present at Rye Harbour LNR on Feb. 4-12th. The female had wandered to Pett Pools by Mar. 5th, rejoined the male at Darwell Res. on Mar. 12th and then appeared alone at Arlington Res. on Apr. 2nd and in the Cuckmere on 3rd. The male was found on the Rother Levels on June 12th.

One or two were seen at Darwell and Bewl Bridge Reservoirs at the end of the year. These birds, which have been in the east of the county on and off since early 1976 are now clearly to be regarded as of captive origin.

POCHARD (*Aythya ferina*).—The wildfowl counts of Jan. 14/15th and Dec. 17th produced totals of 1,400 and 1,293 respectively, compared with 724 and 924 respectively on Jan. 22nd and Dec. 10/18th, 1977.

At Rye Harbour LNR birds were again present throughout the breeding season but no evidence of nesting was found. At Chichester G.P. one pair hatched 2 young in May and 4 full-grown young were present in July though they may not have been reared there.

FERRUGINOUS DUCK (*A. nyroca*).—The drake at Weir Wood Res. present since 1977 was seen there until Jan. 21st and had moved to Ardingly Res. by Feb. 4th, remaining there until at least Mar. 10th. The other drake reported late in 1977 in the Rye area spent most of Jan. on Shorndene Res., Alexandra Park, Hastings, later moved to Rye Harbour LNR/Pett Pools and was last seen at Pett on Feb. 22nd. The seasonal movements of these two individuals now suggest their wild origins.

TUFTED DUCK (*A. fuligula*).—The wildfowl counts of Jan. 14/15th and Dec. 17th produced totals of 786 and 1,135 respectively, compared with 542 and 857 respectively on Jan. 22nd and Dec. 10th/18th, 1977.

During the breeding season pairs were recorded as follows:—

Petworth	.....	2+	Chichester G.P.	.....	23
Arundel Park	.....	3	Lurgashall Pond	.....	3
Aldsworth Pond	.....	1	Chingford Pond	.....	2+
near S. Harting	.....	2	Amberley W.B.	.....	1
Knepp Lake	.....	1	Pond Leigh	.....	2
Golden Cross (nr. Hailsham)	.....	1	Barcombe Res.	.....	2
Brede Levels	.....	2	Pett Pools	.....	1
Rye Harbour LNR	.....	10-15			

Counts of young were as follows:— Petworth 12, Arundel Park 12; Aldsworth Pond 10; near S. Harting 11; Golden Cross 7; Brede Levels 13; Rye Harbour LNR 40; Chichester G.P. 119; Chingford Pond 14; Barcombe Res. 5; and Pett Pools (11 hatched 3 reared).

SCAUP (*A. marila*).—At Chichester G.P. a male stayed from Feb. 11th to Apr. 29th with a second male on Feb. 15th and females on Apr. 2nd and 22nd. A further late winter resident was at Bewl Bridge Res. from Feb. 12th to Apr. 23rd. At Pett Level a female flew E on Apr. 30th and 3 males and a female stayed from May 3rd-16th.

At the end of the year 2 females were at Chichester G.P. on Sept. 14th and a pair flew W off Pett Level on Oct. 20th. A female at Church Norton on Nov. 11th remained until the end of the year with possibly another on Pagham Lagoon on Dec. 29th. Two females were at Rye Harbour LNR on Dec. 19th-31st and 5 immatures/females flew W off Worthing with the onset of the cold spell on Dec. 31st.

EIDER (*Somateria mollissima*).—Recorded in every month; approximate monthly totals were:—

Jan.	44	Feb.	38	Mar.	116	Apr.	189	May	57	Jun.	36	Jul.	36	Aug.	7	Sept.	10	Oct.	34	Nov.	5	Dec.	41
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The Mar. total included parties of 50 and 20 moving E at Selsey Bill on 19th (c.f. 100 off Pagham Harbour on the same date in 1977) and in Apr. further parties of 25 and 85 E off Selsey Bill on 2nd. In addition to the above counts 99 were noted moving E at Beachy Head between Apr. 1st and May 20th (see table on p. 30) and 12 E and 3 W off Worthing-Hove between Apr. 8th and 28th. The Oct. total included a party of 33 off Church Norton on 8th and which apparently made off to S.

LONG-TAILED DUCK (*Clangula hyemalis*).—After a female in Pagham Harbour on Jan. 8th a male stayed on the Severals at Church Norton from Jan. 15th to May 3rd. At the end of the year 2 females flew W off Selsey Bill on Nov. 11th, another female was at Cuckmere Haven from Nov. 28th to Dec. 2nd and on 9th, 2 more flew W off Selsey Bill. On 10th a female was seen off Thorney Island and on 17th one appeared in Pagham Harbour whilst on 26th a further sighting was made at Thorney Island. All of these latter records could relate to the same 1-2 individuals.

COMMON SCOTER (*Melanitta nigra*).—During the early part of the year up to 500 were resident in Rye Bay, dropping to approx. 200 in Feb. A party of 86 flying E off Selsey Bill on Jan. 7th may have been feeding locally as up to 146 were seen regularly offshore during Mar. until 24th.

During spring passage at Beachy Head 9,376 were noted passing E, with maxima of 1,039 on Apr. 1st, 1,061 on 16th and 1,292 on 17th (see table on p. 30 for details). This compared with totals of 11,331 in 1977 and 20,184 in 1976. It is thought that some major movements may have been missed in late Mar. At Hove-Worthing, watches between Apr. 1st and May 18th produced a total of 2,270 E with a max. of 610 on Apr. 18th.

During the summer months there was a gathering of unusual proportions in Rye Bay which peaked at 550 on July 23rd. A party of 40 was seen off Roedean on 5th but no significant numbers appeared off Selsey Bill.

Counts for the end of the year were inconclusive though 160 were noted in Rye Bay on Nov. 5th.

VELVET SCOTER (*M. fusca*).—The sole record at the start of the year was of one off Selsey Bill on Jan. 28th.

Spring passage at Beachy Head totalled 59 E between Apr. 2nd and May 16th (see table on p. 30) compared with only 25 in 1976 but 289 in 1977. Elsewhere 3 flew E at Selsey Bill on Apr. 2nd and one on 17th and, on 29th, one was seen feeding off Brighton beach and 11 flew E off Worthing. On May 3rd 3 were noted offshore at Rye.

At the end of the year an early drake flew W at Pett Level on Sept. 25th and 4 birds were offshore there on 29th. A drake was on the Long Pit at Rye Harbour LNR from Oct. 21st to at least 26th. One flew W at Beachy Head on Oct. 19th. The sole Nov. record was of 4 W off Selsey Bill on 21st and Dec. was almost as quiet with just 2 W at Church Norton on 2nd and one E at Langney Point on 3rd.

GOLDENEYE (*Bucephala clangula*).—The wildfowl counts of Jan. 14/15th and Dec. 17th produced totals of 57 on both occasions, compared with 75 and 88 respectively on Jan. 22nd and Dec. 10/18th, 1977. As usual the majority were in Chichester Harbour.

Small numbers were still present in the county in early Apr. and the last spring birds were 2 E at Beachy Head on 17th. The first in autumn were 4 at Weir Wood Res. on Oct. 8th. The cold spell on Dec. 31st brought 5 flying W at Brighton Marina.

SMEW (*Mergus albellus*).—One record only—a red-head at Darwell Res. on Feb. 12th.

RED-BREADED Merganser (*M. serrator*).—Casual counts in Jan. totalled 89 and in Feb. 86 (including 3 inland at Warnham Mill Pond on 5th). The max. was 40 off Climping on Jan. 28th and 30 off Ferring on Feb. 11th.

Spring passage at Beachy Head extended from Apr. 1st to May 18th and totalled 354 E with maxima of 58 on Apr. 17th and 70 on 23rd (for details see table on p. 30). The total compared with 169 in 1977 and 323 in 1976. Watches at Hove-Worthing produced a total of 54 E and 11 W between Feb. 20th and May 6th. The last seen in spring were 3 at Pilesey Island on May 11th and 2 past Beachy Head on 18th.

In autumn the first was one passing W at Selsey Bill on Oct. 5th whereafter the species was generally seen along the coast in small numbers. By the end of Dec. some 70 were in the county including 48 in Chichester Harbour and 12 off Selsey Bill. Inland there were 3 at Bewl Bridge Res. between Dec. 10-20th.

GOOSANDER (*M. merganser*).—After one at Chichester G.P. on Jan. 17th and a drake at Amberley Wild Brooks on 22nd a drake frequented Glynde Reach and Barcombe Mills and Arington Resrs. from 29th to Feb. 26th. At Bewl Bridge Res. a red-head on Jan. 14th was followed by a pair on Feb. 4th and a red-head appeared in Pagham Harbour on Mar. 26th.

At the end of the year 5 red-heads were at Bewl Bridge Res. from Dec. 2nd-10th but only 2 there by 20th may have been complementary to one at Rye Harbour LNR on 20-28th and 5 there by 31st. In the meanwhile 4 red-heads were at Barcombe Mills Res. on 17th and, at Pagham Harbour, a drake on 10th, a single on 16th, a pair on 21st and 3 red-heads on 30th. A drake seen at another W. Sussex locality on 31st concluded an unusually good year for this species.

RUDDY DUCK (*Oxyura jamaicensis*).—The very few records hitherto received of this North American diving duck belonging to the group colloquially known as "stiff-tails" were treated as local escapes and therefore not published. However the increase of occurrences in Sussex suggests winter dispersal from the large feral population in the Midlands which has been expanding for some years and it may be that the county is now on the verge of colonisation. It is a proper task of ornithology to monitor the status of such species and all records should be submitted.

During the year two which had been present at Chichester G.P. since Nov. 1977 remained until Feb. 12th and one until at least Mar. 11th. A female at Weir Wood Res. on Jan. 4-15th may have been that which appeared at Bewl Bridge Res. from Feb. 25th to Mar. 6th and again at Weir Wood on Mar. 12th but was replaced there by 2 non-adults on Apr. 9th-23rd. At the end of the year one reappeared at Chichester G.P. on Oct. 29th but quickly moved on. A pair was seen there on Dec. 2nd-4th followed by a non-adult or female on Dec. 21st and 2 on 23rd.

HONEY BUZZARD (*Pernis apivorus*).—One was present in the county during the summer.

In the autumn single migrants were seen at Beachy Head on Aug. 19th (JFC, MK, DAP *et al.*) and Sept. 3rd (RFP).

RED KITE (*Mitris milvus*).—One in the Chilgrove area on Dec. 16th (MS, J. A. Lucas, A. Pym).

MARSH HARRIER (*Circus aeruginosus*).—Very warm overcast weather with southerly winds on May 5th brought a male passing E at Pett (CHD) and females or immatures flying E at Beachy Head (MJR) and W at Brighton at 1400 hrs (TG) and Southwick 5 minutes later (MRW). Up to 2 females or immatures quartered Shoreham Airport on 7-9th (OMM, JAN, MRW) and possibly another flew high to N above the Adur on 7th (MRW). A further bird, of similar plumage passed E over Sidlesham Ferry on May 22nd (MS).

In Aug. a female or immature was present at Cissbury on 25th (BFF) and a male in the Sidlesham area on 28-29th (MJWH, CRJ, MS).

HEN HARRIER (*C. cyaneus*).—At least 28 individuals were reported during the year. Two adult males and 5 ring-tails were reported from 5 localities during Jan.-Mar. and further ring-tails in the Cuckmere on Apr. 5th and 20th and at Sidlesham on May 12th.

A very early male was seen over Lychpole Hill with a Buzzard on Aug. 27th. Subsequently the species was reported from 2 localities in Oct., 6 in Nov. and 12 in Dec. involving a minimum of 4 adult males and 15 ring-tails and including a ring-tail seen arriving from SE at Brighton and a male coasting W at Worthing in the blizzard on Dec. 31st.

MONTAGU'S HARRIER (*C. pygargus*).—A ring-tail at Cissbury on Sept. 10th (FJF).

SPARROWHAWK (*Accipiter nisus*).—Successful breeding was reported from only 3 areas, supporting the view of one experienced observer that it was a poor breeding season. Nevertheless birds were apparently resident during the season in at least 58 widely scattered localities. A second-year male was found shot on a recently established territory at Slinfold in early May.

Outside the breeding season good numbers were reported at both ends of the year with the majority of records coming from the major levels, downland and coastal localities.

All records are still required for a detailed assessment of current status.

BUZZARD (*Buteo buteo*).—During the early part of the year only 3 were reported—one in the north of the county, one on Glynde Levels until Mar. and one in the Lodsworth area Jan.-Mar. Probable immigrants were seen in May at Goring, Alfriston, Gifford's Wood and South Harting and, in early June at Shoreham and Parham Park. No summering birds were reported and one in the north until at least Aug. 28th was probably of captive origin.

After an autumn migrant at Lychpole Hill on Aug. 27th 5 were reported from widely scattered localities between Sept. 10th and 19th (though only one at Beachy Head) and a further 5 between Oct. 7th and 20th. None was seen at the end of the year.

OSPREY (*Pandion haliaetus*).—After an early migrant at Pagham Harbour on Apr. 2nd (CM, LM, DMR) another was present in the same area on May 7-14th (many obs.). One left Beachy Head to SE on May 19th (DSF) and another was seen off Hove on 22nd (TG).

In the autumn one stayed at Weir Wood Res. Aug. 6-11th (JB, TPD, CFT) and another loitered at Chichester Harbour on 18th-22nd (JHME). A late bird at Bewl Bridge Res. on Oct. 3rd-4th (AL per PCB) may well have been that at Darwell Res. on 15th (RGH).

KESTREL (*F. tinnunculus*).—Rather more information than in recent years. The Horsham NHS surveyed about 405 sq. Km (100,000 acres) of central Sussex in the breeding season, recording 65 pairs, a density of 1.6 pairs per 2,500 acres (10 sq. Km). This represents an increase compared with the 1964-67 survey and the results are discussed in full on pages 78-80.

Elsewhere in the breeding season birds were widespread and recorded in a total of 70 localities. In these, pairs were established at 29 sites and breeding proved at 14. Comparing these records with the 1964-67 survey shows that 65% of the sites in which birds were recorded in 1978 also held Kestrels in the former period. Unfortunately not all observers bothered to record the results of successful nesting but 6 pairs reared a minimum of 12 young, broods ranging from one to 3 birds. Post breeding gatherings were also reported at Cissbury, 7 on Aug. 7th, Woodingdean, 6 on Sept. 6th and Findon, 18 on Sept. 14th (RJS), an exceptional number.

The Horsham survey did not cover the winter months but 33% of the other breeding season localities were found occupied by at least one bird between November and February. Elsewhere in the winter, 8 were recorded around Chichester Harbour on Jan. 14th and 7 were wintering on an area of 3,000 acres (12 sq. Km) at Sidlesham at the end of the year, of which one was certainly a winter visitor.

There were only 2 passage records, of singles arriving at Beachy Head on Apr. 29th and Selsey Bill on Sept. 3rd.

MERLIN (*F. columbarius*).—Again a good showing in the early part of the year with singles at Lychpole Hill on Jan. 15th, Roedean on 25th, Hastings on 27th and Lullington Heath on 30th—in Feb., Falmer on 18th, and Adur Valley on 20th, and, in Mar., Rother Levels on 3rd, Rye Harbour LNR on 26th and Beachy Head on 31st. Two were seen together at Rye Harbour LNR on Apr. 3rd.

A female seen at Balsdean on July 17th was the first record for that month in Sussex and as unseasonable as the July Peregrine.

In autumn there was an early arrival at Cissbury on Sept. 6th and one left Selsey Bill SW on 17th. One was present at Rye Harbour LNR on Oct. 4-5th and one in the Selsey/Pagham Harbour area on Oct. 15th may have remained until Nov. 1st. Singles occurred at Balsdean on Oct. 19th and 28th after which two appeared at Arundel Wildfowl Refuge on Nov. 11th, one remaining to 15th. One flew over Chidham on 16th and one arrived at Pagham Harbour on 30th to stay until the end of the year whilst other singletons were reported from Horse Eye Level on Dec. 3rd, Burton Park on 17th, Rye Harbour area on 23rd-28th. This brought the autumn total to 13 compared with 10 in 1977.

HOBBY (*F. subbuteo*).—First recorded in spring at Sidlesham on Apr. 29th and at Beachy Head and Alfriston on 30th. Subsequently the species was reported from the Pagham Harbour area on 8 dates in May and 15 other, mainly coastal, localities during May and June.

Reports came from 5 areas during the breeding season. Two pairs were known to have bred, rearing at least 3 young.

Some 13 individuals were seen during the autumn with sightings on 6 dates in the Pagham Harbour area and 4 dates at Beachy Head and last dates at the former on Oct. 16th and the latter on 19th and 22nd.

PEREGRINE (*F. peregrinus*).—The only three records were of singles at Arlington Res. on Apr. 14th (PJJW), Alfriston on 27th (VAW) and over Higham on July 5th (JA). As records of this and its kindred species are very difficult to substantiate the fullest identification details should be noted in the field.

QUAIL (*Coturnix coturnix*).—One at Beachy Head on May 5th (NAGL, MJR). During the breeding season the presence of only 4 were reported from 2 Downland localities and, so far as could be ascertained only one took up a territory (BFF, FJF, RJS). At Sidlesham 4 were flushed from stubble on Aug. 18th (VAS).

WATER RAIL (*Rallus aquaticus*).—At the start of the year reported from 14 localities involving some 20 individuals but such figures must be unrepresentative. Ten reports were also received for Apr. and the species was still present at Woods Mill, Arundel Wildfowl Refuge and in the Ouse Valley during the breeding season. There were 9 at Arundel on Oct. 2nd.

SPOTTED CRAKE (*Porzana porzana*).—One at Ferry House Pool, Sidlesham, on Oct. 21st (CH).

CORNCRAKE (*Crex crex*).—One at Beachy Head on May 13th (DSF) was the only record for the year.

MOORHEN (*Gallinula chloropus*).—On Mar. 11th an unusual gathering of 80 feeding birds was noted near Chichester Yacht Basin.

During the breeding season 16 pairs/sites were counted on 600 hectares of the Adur Levels between Bramber and Henfield.

COOT (*Fulica atra*).—Counts received for Jan./Feb. included maxima of 172 at Bewl Bridge Res., 400 at Rye Harbour LNR, 280 at Pett Level and 123 at Sidlesham Ferry. In Dec. the max. count at Bewl Bridge was 233, with 650 at Rye and 950 at Chichester G.P.

CRANE (*Grus grus*)—Probably the same individual was concerned in reports from the Ouse Valley near Lewes on Apr. 9th (PNR), over Newhaven on 14th (CFW) and again there on 24th (DAN). The first of these records has been provisionally accepted by "British Birds" as relating to Crane species and the others fully accepted.

OYSTERCATCHER (*Haematopus ostralegus*)—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 1,780 and 1,943 respectively compared with 1,884 and 924 respectively on Jan. 22nd and Feb. 19th, 1977. As usual nearly half were in Chichester Harbour but 400 were at Rye Harbour on both counts.

During spring passage at Beachy Head 83 flew E between Apr. 1st and May 28th with maxima of 25 on Apr. 22nd and 19 on May 10th. Watches at Worthing/Hove between Feb. 21st and May 27th produced a total of 103 E and 32 W.

In Chichester Harbour 2 pairs attempted to breed but gave up after losing two clutches each to the high tides in June. In Pagham Harbour breeding success was above average, 15 pairs hatching 38 young. At Rye Harbour, however, 8 nests suffered the regular attentions of foxes and fledging success was poor. Four pairs at North Point Pit were unsuccessful.

Counts of non-breeding birds included 120 at Rye Harbour LNR and 11 at Rottingdean on June 19th and about 60 in Pagham Harbour during the month. By July 22nd the count for Chichester and Pagham Harbours was 627 but numbers remained steady for several weeks until 1,152 there on Sept. 16th and 1,320 in Chichester Harbour alone on 23rd. In Oct. an unexpected 46 flew E off Southwick soon after dawn on 8th. The Nov. count in the 2 western harbours totalled 1,568 on 18th (compared with 687 on Nov. 12th, 1977) and 500 were at Rye Harbour at this time. Numbers apparently dropped off in Dec.

During the year inland records were of one at Arlington Res. on Aug. 10th and 3 at Bewl Bridge Res. on 17th.

BLACK-WINGED STILT (*Himantopus himantopus*)—One at Chichester G.P. on June 8th (NP-H, JVS *et al.*) and probably the same, Rye Harbour LNR, 11-12th (P. J. Grant, RK *et al.*), then at Sidlesham Ferry, 19-23rd (CRJ *et al.*) and again there, July 11-18th (CRJ, MS *et al.*).

This individual was also seen at Dungeness, Kent on June 10th, 16-17th and 24th and July 6th and during the period of the observations moulted out of summer plumage. These records have been accepted by "British Birds" as probably relating to just one individual and thus constitute the 12th for the county and the first since 1961.

AVOCET (*Recurvirostra avosetta*)—Two, occasionally 3 were present at Sidlesham Ferry from at least mid-Jan. and 2 during Feb., one remaining to about Mar. 4th. Two migrants there on Mar. 26th were followed by singles at Cuckmere Haven on Apr. 1st and Shoreham on 5-7th and 3 at Newhaven also on 5th. On 9th a party of 5 flew W over Pett Pools and a further individual stopped there later that day. On 16th one passed W at Southwick; 3 E at Beachy Head on 23rd and 2 E at Pett Level on 30th. Two arrived at Rye Harbour LNR on May 6th and, on 10th at Beachy Head, 5 arrived from S and flew directly inland followed by 5 coasting E later that day. Singles then appeared at Rye again on 19th and at Sidlesham Ferry on June 6-9th. This brought the rather scattered spring passage total to only 32, fewer than usual in recent years.

In autumn 2 were at Sidlesham Ferry on Sept. 6-20th but the 1st of the wintering birds did not arrive until Dec. 2nd, to be joined by another 5 by 7th, all remaining into the New Year. In the meanwhile one was at Pett Pools on Dec. 9-16th and one visited Newhaven on 31st.

STONE-CURLEW (*Burhinus oedichenus*)—Only one pair was known to be present in the county this year and its breeding success was not established. One was seen at another formerly used locality in June only.

COLLARED PRATINCOLE (*Glareola pratincola*)—One was seen at Rye Harbour LNR on June 8-9th (PFB, RK *et al.*). This record has been accepted by "British Birds" and is the second for the county, the first being in 1840, though there was a Pratincole sp. in 1975.

LITTLE RINGED PLOVER (*Charadrius dubius*)—Few were seen on spring passage with singles at Sidlesham Ferry on Apr. 9th, 11th and 15th, Barcombe Mills and Bewl Bridge Resrs. on 9th and Chichester G.P. on 15th. One flew E with a Ruff at Selsey Bill on 29th.

Only one pair bred in the county this year, at a traditional site, rearing one young. During June wandering adults were seen at Arundel Wildfowl Refuge on 9th, Warnham Mill Pond on 20th and Cuckmere Haven on 30th.

Autumn passage produced very few records, only 12 being reported from 5 localities between July 11th and Aug. 17th. The last for the year was one at Pett Level on Sept. 3-4th.

RINGED PLOVER (*C. hiaticula*)—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 840 and 475 respectively compared with 409 and 418 respectively on Jan. 22nd and Feb. 19th, 1977. Max. counts included were of 393 in Chichester Harbour and 212 at Ferring on Jan. 14th.

Evidence of late spring passage again came from the Cuckmere where there were 30 on May 31st. Two birds at Rye Harbour LNR on May 21st were considered to show the characteristics of the small, dark-mantled northern race *c.h. tundrae*.

During the breeding season about 73 pairs were recorded compared with 57 in 1976-77. At Pagham Harbour fewer pairs were double-brooded: 103 young were hatched from 42 nests by about 35 pairs. At Rye Harbour LNR 23 pairs nested but success was minimal due to fox predation. Elsewhere 4 young were hatched by one of 4 pairs at Newhaven, one, 2 and 3 by 3 pairs at Northney in Chichester Harbour. At Stakes Island 3 pairs were washed out but 2 may have relaid. At North Point 2 pairs hatched young.

The species was little in evidence during July though the count in Chichester and Pagham Harbour on 22nd totalled 152. Early Aug. brought the start of return passage. At Shoreham the count of 47 on 8th rose to 120 by 14th and 985 were in the two western harbours by 19th. The max. count at Rye in Sept. was 103. A party of 20 was seen coming S over Lychpole Hill on Sept. 6th and further evidence of day-by-day passage showed at Shoreham where numbers varied from 101 on 3rd to 156 on 10th, 115 on 12th and 131 on 13th. By 16th the harbours count had dropped back to 715 but 121 were still at Shoreham on Oct. 21st. In the harbours the count then dropped steadily to 471 on Nov. 18th and 328 on Dec. 30th.

KENTISH PLOVER (*C. alexandrinus*)—An above average year for records of this species produced single females in the Cuckmere on Apr. 19th (AH) and May 30th (RDME, PJW) and at Rye Harbour LNR also on Apr. 19th (EGC). In autumn single female/immatures were seen at Rye Harbour LNR on Aug. 3rd (RK) and on the R. Adur at Shoreham on 12-13th (RFP, CFH, MRW *et al.*).

GREATER SAND PLOVER (*C. leschenaultii*)—One at Pagham Harbour from Dec. 9th to Jan. 1st, 1979 (ARK, BAEM, RFP *et al.*). This was the first record for Great Britain and Ireland of this species which normally winters in east Africa and has been accepted by "British Birds". Evidence has since come to light suggesting that the bird may have spent the winter in one of the Sussex/Hampshire harbours.

DOTTEREL (*C. morinellus*)—At Rye Harbour LNR a party of 5 flew NE on Apr. 29th (RK) and one was present on Aug. 10th (MHW) and 15th (LA).

GOLDEN PLOVER (*Pluvialis apricaria*)—Again few inland reports were received for the start of the year but the coastline wader counts of Jan. 14th and Feb. 11th produced totals of only 1,968 and 2,644 respectively compared with 4,021 and 5,823 on Jan. 2nd and Feb. 19th, 1977. That winter Lapwing figures

were also low suggests some common factor. Independent counts in early Feb. suggested a total of 3,275 along the coast and 100 inland, including 2,100 on Pevensey Levels on Feb. 3rd. (See also Sx.B.R. 30:20 for results of counts organised by B.T.O. on Jan. 1st and Feb. 5th). During Mar. counts received were of 150 each at Glynde and Horse Eye Levels on 5th, 250 at West Wittering on 18th and 200 at Pett Level on 19th. At Bracklesham Bay 300 were estimated still present on Apr. 2nd. By 8th only 12 remained at Horse Eye and 10 at Pett Level on 16th. Two late migrants were in the Cuckmere on May 12th.

During the summer an injured bird was still in Pagham Harbour on June 6th and 4 were present on 11th; up to 6 apparently summered in the area.

The count at Chichester Harbour was 67 by Aug. 19th but more widespread autumn arrivals started with 2 at Beachy Head on 26th, 10 in Pagham Harbour and one at Pett Level on 27th and one on the Cissbury Downs on 28th. By Sept. 16th 445 were present in the two western harbours but the sole report from elsewhere was of one at Beachy Head on 17th. Incomplete counts from 6 regular sites in December indicated the presence in the county of about 1,260.

GREY PLOVER (*P. squatarola*).—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 707 and 886 respectively compared with 1,339 and 1,700 respectively on Jan. 22nd and Feb. 19th, 1977. As usual the vast majority were in Pagham and Chichester Harbours.

In Pagham Harbour 245 were still to be counted on Mar. 12th with 185 on 29th, 8 on Apr. 23rd and 15 on May 21st. On May 20th, 25 were found at Fishbourne Creek. In the meanwhile spring passage at Beachy Head had totalled only 41 E between Apr. 23rd and May 9th (see table on p. 30 for details). Inland, one was seen at Amberley Wild Brooks on May 3rd.

In June, single birds in apparently 1st year plumage still were seen at Cuckmere Haven on 2nd and at Rye Harbour LNR on 3rd. The occurrence of similar individuals has come to the notice of a number of observers in recent years and requires further research. Elsewhere in summer, there was a max. of 13 in Chichester Harbour in June and 2 flew E at Langney Point on 17th.

At the start of return passage the count in the 2 western harbours was 70 on July 22nd rapidly increasing to a startling 1,291 on Aug. 19th but a more usual 1,552 on Sept. 16th. During this period small numbers appeared at a number of other coastal localities and one was seen inland at Arlington Res. on Oct. 1st. The harbours count had fallen back to 1,390 by Nov. 18th and the Dec. total was only 1,130. Other max. counts in Dec. were 60 at Rye/Pett, 7 at Cuckmere Haven, 80 at Goring Gap and 49 at Ferring. Inland, 6 flew S over West Chiltington on Dec. 7th.

SOCIABLE PLOVER (*Chettusia gregaria*).—One, probably an adult, at Arlington Res. on Oct. 9-10th (JW *et al.*). This record has been accepted by "British Birds" and is the first record for the county.

LAPWING (*Vanellus vanellus*).—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 14,076 and 8,585 respectively and counts from other sources during the period suggested the presence of a further 5,000. This was far below the estimated 60,000 in the county in Jan.-Feb. 1977 but counts in Dec. 1977 had already suggested a lower wintering population than usual.

On 243 hectares of mixed farmland at Sidlesham the number of breeding pairs was reported to have dropped from 24 in 1977 to 13 and on a rather larger overall area in the same locality, from 38 pairs in 1973 to 19. This could not be accounted for by any significant change in farming methods.

At Rye Harbour LNR some 30 pairs nested but severe predation by foxes was reported.

As usual post-breeding flocks began to form from early June with 140 on Glynde Levels on 3rd and 100 on Broomhill Level on 4th. In Chichester Harbour the count was 795 by July 22nd and 1,846 by Aug. 19th. Counts for the remainder of the autumn were inconclusive but 10,000 were estimated on Amberley Wild Brooks on Nov. 23rd. As with several other species the advent of the cold spell on

Dec. 31st brought a spectacular movement to W or SW. Inland, at Maynards Green, 1,150 flew S between 1000 and 1200 hours whilst at Hove 1,100 left the coast between 1045-1200 and 580 at Norman's Bay, 0900-1200. Simultaneously large numbers were arriving from the Continent and moving W—300 per hour on a ½-mile front at Hove, 1,650 between 1015-1130 at West Worthing, "all day in flocks of up to 200" at Brighton Marina and 7,230 between 0900-1200 at Norman's Bay.

KNOT (*Calidris canutus*).—The coastline wader count of Jan. 14th produced 410 in Chichester Harbour and 6 elsewhere. That of Feb. 11th came to 1,150 in the Harbour and 10 elsewhere. As the respective counts in the Hampshire Harbours were steady at 1,352 and 1,288, it was evident that a genuine increase took place in Chichester Harbour, possibly related to the cold weather in Britain at the time. By Mar. 11th the Chichester count was down to 53.

Typically there was little evidence of spring passage. Occasional groups of 1-5 appeared in the Cuckmere and at Rye Harbour LNR during early May though 29 paused at the latter on May 6th. Between Apr. 28th and May 9th only 11 E and 15 W were noted passing Beachy Head. In the end, of 14 loiterers in Pagham Harbour on May 13th, 10 were still there on 21st.

Three birds in Chichester Harbour on July 22nd had perhaps summered there; in Pagham Harbour there were 8 on Aug. 5th and 24 by 19th. The Sept. 16th count for these localities totalled 101 whilst reports from elsewhere along the coast in Sept. totalled only 16. By Nov. 18th, 615 had arrived in Chichester Harbour and the Dec. 30th count stood at 1,337. A party of 18 visited Worthing beach during the blizzard on 31st.

SANDERLING (*C. alba*).—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 463 and 141 respectively but the Chichester Harbour counts were accidentally low at 4 and 5 whereas Thorney Island roost counts stood at 170 on Jan. 7th and 113 still on Mar. 11th. Suitable adjustments create a reasonable comparison with the 1977 coastline counts of 651 on Jan. 22nd and 441 on Feb. 19th.

The timing of dispersal of the winter population was not clearly established although the Ferring counts dropped steadily from 217 in Jan. to 70 in Feb. and 50 by Mar. 30th. At Hove-Worthing 34 passed E in the period Apr. 26-30th and a further 88 between May 16-20th. At Beachy Head, of 49 passing E from Apr. 16th to May 20th only 5 were after May 15th.

At Rye the species was absent from June 1st to July 16th but the max. count in Aug. was 150. Only 2 were found in Pagham and none in Chichester Harbours during the count of Aug. 19th but in the latter there were 326 by Sept. 16th. Further details received were inconclusive.

LITTLE STINT (*C. minuta*).—Recorded in all months for which the approximate totals were:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
1	2	1	1	6	6	3	12	65	15	1	1

The almost resident bird at Sidlesham Ferry displayed some migratory instinct by absenting itself from May 2nd to July 26th. Its presence is included in the figures above. The other winter record was of one in Chichester Harbour on Feb. 11th. A total of 11 individuals on spring passage was higher than usual. After 3 migrants at Sidlesham on Sept. 4th, wet easterly winds on the night of 5th brought many flocks of 100 or more to the east of Britain—and 10 to Pett Level rising to 31 by 12th. In the meanwhile 17 had arrived at Sidlesham Ferry by 8th, rising to 26 by 11th. Numbers dropped off rapidly after 16-18th and only 4 single birds were reported elsewhere during the period. Of 3 at Cuckmere Haven on 30th, one or 2 stayed until Oct. 8th. During the remainder of Oct. a total of 9 were recorded at 3 localities between 4-11th (c.f. 1977—8 birds at 4 localities, Oct. 7-15th). The last migrants were 2 at Pett Level and one in the Cuckmere on Oct. 22nd.

TEMMINCK'S STINT (*C. temminckii*).—One at Cuckmere Haven from May 30th to Jun. 1st (PJW, VAW *et al.*) was the sole record for the year.

BAIRD'S SANDPIPER (*C. bairdii*).—One at Rye Harbour LNR on Jul. 23rd (BAEM, RFP *et al.*). This record has been accepted by "British Birds" and was the 4th for the county, the last being in 1973.

PECTORAL SANDPIPER (*C. melanotos*).—One at Weir Wood Res. on Oct. 1st-10th (CEH, RJB, JSM *et al.*). A wide scattering of this north American species arrived in Great Britain at this time—rather later than usual.

CURLEW SANDPIPER (*C. ferruginea*).—On spring passage one was seen at Rye Harbour LNR on Apr. 22nd and 4 on 23rd (c.f. main arrival of Greenshank).

Autumn started quietly with one at Rye on July 26-27th, 2 W at Pett Pools on 30th and another at Rye on Aug. 6th. Then one arrived at Sidlesham Ferry on 17th and between then and Oct. 4th a total of 44 passed through the Ferry with a max. of 32 on Sept. 9th. In the east the passage came a little later. One at Rye Harbour LNR on Aug. 28th moved to Pett Pools for 29-30th and was joined by 27 more by Sept. 2nd. A total of 40 passed through the Pools between then and 27th with a max. of 37 on 9th (c.f. Sidlesham). Records from elsewhere during the period were of 5 at Cuckmere Haven on Aug. 26th, one at Newhaven on Sept. 16th, one at Shoreham on Sept. 3rd with 4 on 6th and 5 on 13th, and, at Chichester G.P., 3 on Sept. 3rd and 4 on 9th. The arrival and departure of small parties at any of the above localities produced no evidence of either E-W or W-E coastal movement. The last to be seen was one at Newhaven on Oct. 13th bringing the autumn total to a minimum of 99.

PURPLE SANDPIPER (*C. maritima*).—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 37 and 32 respectively compared with 57 and 41 respectively on Jan. 22nd and Feb. 19th, 1977. Additional counts received were of 4 at Fairlight on Jan. 4th and 6 on Feb. 9th—and of 5 extras at Ferring-Goring on Feb. 15th. By Mar. 26th the Newhaven roost had increased from 16 to 19 and 2 had been found on the Palace Pier at Brighton. There were still 19 at Newhaven on Apr. 24th and at Fairlight 36 were seen together on 8th and 31 still on 22nd. The former was apparently the largest gathering to be recorded in the county to date.

Also without precedent were summer records of single birds in May (Cuckmere on 26th), June (Black Rock, Brighton, on 4th) and July (Selsey Bill on 3rd). These may well have involved just one individual.

No significant figures were received for the end of the year.

DUNLIN (*C. alpina*).—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 19,565 and 12,409 respectively compared with 21,540 and 15,528 respectively on Jan. 22nd and Feb. 19th, 1977. The main concentration was in Chichester Harbour (Jan.: 13,725; Feb.: 6,311) whilst the population in Pagham Harbour remained steady at 3,330 in Jan. and 3,471 in Feb. A further count on Mar. 11th revealed little change, 6,916 in the former and 3,560 in the latter, but it was not established when dispersal finally took place. Elsewhere the largest winter counts were of 1,040 on the Goring-Ferring stretch of shore and 630 in the Rye-Pett area on Feb. 11th and 600 at Shoreham on Mar. 3rd. Some evidence of spring passage came from Beachy Head, where 136 moved E between Apr. 23rd and May 20th, and from Hove-Worthing, with 70 E between Apr. 26th-30th.

Scant data were received for early summer but the count in the two western harbours was 1,395 by July 22nd, 675 on Aug. 19th and 831 on Sept. 16th. The autumn passage max. at Pett Pools was 140 on Sept. 30th. The Nov. 18th count for Chichester and Pagham Harbours totalled 21,208 and, quite remarkably, that of Dec. 30th came to 21,201. Max. counts from elsewhere in Dec. totalled 1,490. On Dec. 31st the blizzard brought 6 parties totalling 49 flying W past Brighton Marina.

RUFF (*Philomachus pugnax*).—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 132 and 187 respectively of which 130 and 160

respectively were at Sidlesham Ferry. These figures far exceeded the comparable counts of 72 and 12 on Jan. 22nd and Feb. 19th, 1977, but were eclipsed by independent counts of the roosting flock at Sidlesham—500 on Jan. 1st, 400 on 2nd, 450 on 7th and 460 on 25th. The Amberley Wild Brooks party stood at 5-7 in Jan. but 50-30 in Feb.

Approximate monthly totals through the year, with the number of localities in parenthesis were:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
502	487	511	7	12	12	29	37	63	88	102	1017
(2)	(7)	(4)	(3)	(4)	(2)	(4)	(5)	(5)	(4)	(4)	(9)

Dispersal of the wintering flocks took place rapidly during mid-March. April-May records consisted largely of passage migrants. The June total included 3 adult males at Sidlesham Ferry from 7-17th and another on 19th. Late July marked the return of the Chichester Harbour population which later peaked at 38 in Oct. and 35 in Nov. The max. at Pett Level was 7 on Sept. 4th. The Sidlesham roost stood at 65 on Nov. 18th, increasing rapidly to approx. 200 on Dec. 14th, 450 on 15th, 500 on 17th and 570 on 19th. The population on the Selsey Peninsula as a whole on Dec. 29th was reliably estimated at 1,000, though the Sidlesham roost still stood at 540 the following evening.

There is no known precedent in Western Europe for a winter gathering on this scale at a time when most birds should be in Africa. Reports indicate that the phenomenon is not currently reflected elsewhere in Europe. The suggestion that it may represent an early return passage, which normally commences in mid-January, may be borne out by further research.

JACK SNIPE (*Lymnocyptes minimus*).—Records were received from 8 coastal and 5 inland localities and the minimum monthly totals were:—

Jan.	Feb.	Mar.	Apr.	Oct.	Nov.	Dec.
23	26	10	2	2	6	6

Included in the totals were 15 at Thorney Deepes in Jan.-Feb. and 8 there in Mar. The last seen in spring was one at Pett Level on Apr. 9th and the first in autumn was at Pevensey Sluice on Oct. 2nd.

SNIPE (*Gallinago gallinago*).—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 2,194 and 2,618 respectively compared with 1,534 and 2,538 respectively on Jan. 22nd and Feb. 19th, 1977. Both Feb. counts took place during cold spells and show an unexpected similarity. The largest concentrations were 1,800 on Pevensey Levels in Jan. and 2,300 there in Feb. Interpretation of counts from elsewhere suggested the very minimum of a further 1,500 in Jan. and probably far more in Feb. (e.g. 1,100 on Amberley Wild Brooks alone on Feb. 25th). Numbers dropped slightly with the thaw at the end of Feb. but substantial passage was evident towards late Mar. as the count of Brede Levels rose from 80 on 12th to 226 on 24th and at Arundel Wildfowl Refuge from 11 on 11th to 120 on 23rd.

During the breeding season reports of "drumming" birds were received from Barcombe (2), Doleham (1), Glynde Levels (2), near Horsted Keynes (2), Crowborough Bog (3), Pett Level (2), Thorney Deepes (1), Horse Eye Level (2), Adur Levels—Bramber to Henfield (3) and Brede Levels (3).

In autumn counts at Arundel Wildfowl Refuge suggested a steady increase to mid-Dec. The max. count elsewhere was 800 on Amberley Wild Brooks on Dec. 29th.

WOODCOCK (*Scolopax rusticola*).—Few records were received for the beginning of the year but a shooting party at Coombe, near Lewes, reported 30+ on Jan. 4th and 6 were flushed in 200 yards at Wepham on Feb. 13th.

Early roding was reported from Broadford Bridge on Feb. 2nd and Fore Wood on 26th. In the Mar.-June period 88 roding birds were reported from 51 widely scattered localities as follows:—

The Pagham and Chichester Harbour counts in early autumn possibly indicated a successful breeding season compared with 1977 (comparable counts in parenthesis)—2,653 on July 22nd (1,480) and 2,640 on Aug. 19th (1,596) but levelling out to 2,144 on Sept. 16th (2,176). Further departures took place normally, leaving 1,824 on Nov. 18th and 1,656 on Dec. 30th—a level comparable to that of 1976-77 figures.

GREENSHANK (*T. nebularia*).—The coastline wader counts of Jan. 14th, Feb. 11th and Mar. 11th produced 3, 1 and 3 respectively, all in Chichester Harbour and constituting the residue of 8 there in Dec., 1977. One in Pagham Harbour on Mar. 12th was doubtless a winterer from elsewhere.

Spring passage was more pronounced than usual and started with singles at Pagham Harbour on Apr. 9th and 13th. All remaining records came after 21st and those in May and June involved passage migrants at 11 localities. Approximate monthly totals during the year were as follows:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
3	1	4	21	14	2	78	103	110	16	20	—

The July, Aug. and Sept. totals included max. counts of 54, 66 and 76 respectively in Chichester Harbour. Max. counts elsewhere 7 in the Cuckmere on July 28th, 8 on Sept. 21st and 6 on Oct. 7th, 6 at Pett Pools on Aug. 19th, 7 at Arlington Res. on Sept. 6th and 7 in Pagham Harbour on Oct. 17th. The count in Chichester Harbour on Nov. 18th was 13 but, unusually, none was to be found in the county during Dec.

GREEN SANDPIPER (*T. ochropus*).—Recorded from 15 coastal and 22 inland (but only southern) localities during the year. The approx. monthly totals were as follows:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
6	14	14	18	3	6	55	73	14	11	20	18

The higher than usual figures during Feb.-Apr. were probably due to an influx initiated by the cold spell in Feb. coupled with passage birds in Apr. All the June records, which came from 4 localities, were somewhat mysteriously confined to the period 15-21st. The July and Aug. totals were the highest in recent years (see Sx.B.R. 30:22). Records at this time of year all relate to adults and such an increase could indicate a high degree of breeding failure. It could, however, be an indication of higher breeding population levels as males tend to leave the breeding grounds well before fledging of the young is complete.

WOOD SANDPIPER (*T. glareola*).—The sole spring record was of one at Amberley Wild Brooks on Apr. 23rd.

Autumn passage, which was unremarkable, started with one at Rye Harbour LNR on July 14th. By the end of the month 9 more had been reported from 5 localities. At Pett Level, now a popular locality for this species, the first appeared on Aug. 6th with a max. there of 8 by the 8th but only 4 more passing through subsequently, the last being 4 there on 23rd. At Rye Harbour LNR 1-2 were present until Aug. 21st. Otherwise there was only a handful of records for the county, with singles in the Cuckmere on Aug. 3rd, 10-11th and 27th, at Weir Wood Res. on 6th and 16th and at Sidlesham Ferry on 19th. Five were at Thorney Deeps on 16th and 2 at Chichester GP on 26th. None was reported in Sept.

COMMON SANDPIPER (*Actitis hypoleucos*).—The 2 wintering birds in the Cuckmere were seen up to Mar. 4th and the R. Ouse individual was doubtless that at Glynde Levels on Feb. 6th. Other wintering birds appeared at Rye between Jan. 14th and Mar. 12th and at Ardingly Res. on Jan. 4th. One at Arundel Wildfowl Refuge on Mar. 24th and 2 at Ardingly Res. on 31st may also have over-wintered.

The timing of spring arrival was the same as in 1977. After 4 at Ardingly Res. and one at Rye Harbour LNR on Apr. 16th, migrants arrived with a rush on 21-22nd with a total of 26 at 7 localities and a further 21 at 9 additional localities between 21-30th. Another arrival started on about May 4th when 7 were at

Ardingly Res. and up to 20 were grounded overnight in the Cuckmere on 5-6th. The species was so widely reported during the remainder of May (119 bird/days from 14 localities) that no further passage features could be distinguished.

For the first time in Sussex a pair bred in the W of the county, hatching 3 young, though it is not known whether they reached flying stage.

In June summer wanderers were seen at Rye Harbour LNR on 1st and 3rd in the Cuckmere on 2nd and at Arundel Wildfowl Refuge on 7th. Return passage started in late June with records from Rye on 23-24th and Arundel on 28th (2) and 29th. A July total of some 102 individuals included gatherings of 23 at West Chidham on 22nd, 25 at Thorney Deeps and 10 at Chichester G.P. on 29th and 13 at Pett Level on 30th. This earlier and larger passage than usual was followed by a further estimated total of 160 individuals in August including 26 on the R. Adur at Shoreham on 2nd, an autumn max. of 10 at Bewl Bridge Res. on 1st, 15 at Thorney Deeps on 12th and 18 there on 16th, 37 flying over Rye Harbour also on 16th and 10 at Chichester G.P. on 27th. This species habitually feeds in inaccessible and minor waterways during the day but such pre-migratory gatherings as these can often be located on an autumn evening amidst a chorus of excited call-notes.

In early Sept. only 13 were seen up to 13th and with 2 at Darwell Res. on 17th and one at Weir Wood Res. on 23rd to Oct. 8th passage came to an end. Although one at Barcombe Mills Res. on Oct. 4th may have been a migrant another there on 30th was still present on Nov. 13th. Equally another potential winterer was on the R. Adur at Shoreham from Oct. 27th to Nov. 5th. Singles at Darwell Res. on Nov. 19-26th and Dec. 17th and in the Cuckmere on Nov. 28th and Dec. 17th appeared to have settled in for the winter.

TURNSTONE (*Arenaria interpres*).—The coastline wader counts of Jan. 14th and Feb. 11th produced totals of 485 and 413 respectively compared with 676 and 556 respectively on Jan. 22nd and Feb. 19th, 1977.

Small numbers were seen on passage in Apr.-May including 66 E at Beachy Head between Apr. 22nd and May 9th but roost flocks still amounted to 65 at Stakes Island in Apr. and 41 in May, and, at Rye Harbour LNR, 100 in Apr. and 260 in May.

A minimum of 23 summered in the county and by July 22nd a total of 52 was in the Pagham and Chichester Harbours. This rose to 193 by Aug. 19th and 300 by Sept. 16th. By Aug. 26th, 15 had returned to Langney Point and 54 to Pett Level by Sept. 10th. Numbers along the coast rose steadily through late autumn with 65 at Glynde Gap on Nov. 20th and 63 at Pett Level on Dec. 2nd. An average of 50 was at Langney Point throughout Dec. but numbers in the 2 western harbours dropped back to 237 on Nov. 18th and only 281 there on Dec. 30th compared poorly with 388 on Dec. 10th, 1977.

WILSON'S PHALAROPE (*Phalaropus tricolor*).—One at Pagham Harbour on Oct. 21st (Dr. W. M. & Mrs. M. J. Ramsden). This record has been accepted by "British Birds" and was the 2nd record for the county.

RED-NECKED PHALAROPE (*P. lobatus*).—One record—a female at Sidlesham Ferry on June 5th (KA, NP-H, JVS).

GREY PHALAROPE (*P. fulicarius*).—One was found freshly dead at Pagham Harbour on the late date of Dec. 17th (CBC, MAC).

POMARINE SKUA (*Stercorarius pomarinus*).—For the second year running spring passage was disappointingly small. At Beachy Head only 15 were seen between Apr. 24th and May 16th (many observers), with a max. of 6 in one party on May 4th (see table on p. 30 for details). On May 2nd one was seen off Rye Harbour LNR (RK) and on 6th, 2 or 3 were watched feeding 3 miles off Portslade (EWS). Two flew E off Hove on 16th (JAN) and 5 E off Southwick on 18th (OMM). A party of 10 skuas passing E at Rye on 29th may well have been of this species.

17th and Barcombe Mills Res. on 20th. Passage was light in early May, only 10 being recorded between 1st and 8th.

Summering immatures were commoner than usual with 3 at Chichester G.P. on May 17th, one remaining until Aug. whilst at Rye Harbour LNR singles were seen on 7 dates between May 19th and Aug. 2nd.

In Sept. one was at Pett Level on 6-16th and 2 on 9th whilst singles were seen at Worthing on 12th and Pagham on 16th. Oct. passage was more pronounced: 3 at Worthing on 6th were followed by 21 W at Pett on 8th, 4 at Chichester G.P. on 10th and a further 16 at Pett on 22nd. Along the coast only 3 were seen in Nov. but winter wanderers totalled 9, mainly off Selsey Bill, between 1st and 15th—and an adult off Brighton on 31st.

BLACK-HEADED GULL (*L. ridibundus*).—At the Stakes Island colony the balance of nature interfered once again—over 1,000 pairs were present in Apr. but a high tide on May 23rd washed out most clutches. At the 2nd attempt there were 1,120 nests by June 20th but a further high tide on 22nd disposed of all but a few nests and the larger of 78 chicks. In the end, rearing success was minimal. The small colony at Rye Harbour LNR fared better, 15 pairs raising 15 young.

Further roost counts were received for the winter months including estimates of 11,000 in Pagham Harbour on Jan. 28th, and at Shoreham, 2,000 on Jan. 7th, 6,000 on Feb. 18th and 3,000 on 26th. On Dec. 2nd, 30-50,000 were estimated along Worthing Beach during onshore gales.

COMMON GULL (*L. canus*).—Counts of winter gatherings were received as follows:—100 in Pagham Harbour on Jan. 28th; 110 in the Cuckmere on 14th and 150 there on Feb. 13th; 200 at Higham on Feb. 7th; 750 mainly adults at Rottingdean-Saltdean on Feb. 18th; and, at Southwick, 200 on Mar. 10th and 750 on 27th. Passage was noted at Beachy Head from Apr. 8th to May 3rd.

LESSER BLACK-BACKED GULL (*L. fuscus*).—During the early part of the year the pattern of occurrence appeared to conform with what little is currently known of the seasonal movements of this species. After a scattering of small wintering groups of 1-20 throughout Jan. and into early-Feb. and mainly near the coast, larger gatherings such as 180 at Rye Harbour LNR on Feb. 28th began to appear. Coastal and inland passage of adults continued through Mar. into at least early Apr.

The St. Leonard's rooftop pair returned for the 4th year but their breeding attempt was again foiled—this time by squatters—a pair of Herring Gulls.

In the north of the county CMJ reported large scale foraging incursions from the north during the winter months and it was thought that up to 300 were visiting the Itchingfield and possibly Faygate areas. It is possible that these birds roost on the Surrey/Middlesex reservoirs. Any comparable information from the north of the county would be most welcome.

An adult showing the characteristics of the Scandinavian race *lf. fuscus* was identified at Camber on Feb. 3rd. This race is undoubtedly under-reported at present.

HERRING GULL (*L. argentatus*).—In the Rye Harbour LNR area about 38 pairs reared about 30 young to flying stage. Reports of rooftop breeding came from Eastbourne, St. Leonard's and Hastings. Observers have commented on the minimal breeding success between Beachy Head and the Cuckmere where most nest sites are on the cliff edge and provide an easily accessible supply of nourishment for regularly patrolling foxes. Inland breeding continued on a quarry face at Lewes.

Individuals showing the characteristics of the yellow-legged Scandinavian race *l.a. omissus* were identified at Chichester G.P. on June 17th, Rye Harbour LNR on Aug. 5th, Southwick (2) on 10th, Sidlesham Ferry on 19th, Southwick on Sept. 4th, Rye on Nov. 19th and Newhaven on Dec. 21st.

GLAUCOUS GULL (*L. hyperboreus*).—An individual in first-winter plumage was seen in the Cuckmere on Dec. 5th (ACBH).

GREAT BLACK-BACKED GULL (*L. marinus*).—At the beginning of the year the largest gatherings reported were of up to 250 at Shoreham in Jan. and early Feb. and 80 at Black Rock, Brighton. Up to 300 were present in the Rye Harbour area during the winter months and, by mid-Nov., there were 700 roosting at Shoreham and at least 300 at St. Leonard's.

KITTIWAKE (*Rissa tridactyla*).—As usual recorded throughout the year with minor coastal movements observed at almost any time. At Beachy Head spring passage to E totalled 980 between Feb. 26th and May 28th with a max. of 142 on May 10th (see table on p. 30 for details). During the same period 90 moved W.

The now 2-years old breeding colony prospered. On June 17th, 52 nests were occupied and by July 1st, 34 young had hatched. A further count on July 15th revealed 76 occupied nests and 31 pairs had hatched 48 young. The final success rate was not known. The expansion of this colony, the first in Sussex, has progressed from 5 nests in 1976 and 29 in 1977.

During the summer small parties of sub-adults were noted at various coastal localities but there was no customary large gathering at Rye. Generally autumn passage was uneventful but on Dec. 1st at Selsey Bill 200 passed E in 4 hours during a SE blow.

SANDWICH TERN (*Sterna sandwicensis*).—Again there was one record in winter—off Pagham Harbour on Jan. 2nd.

Spring passage started on Mar. 24th with one at Selsey Bill and 2 in Pagham Harbour. At Beachy Head 4,403 were logged passing E between Apr. 1st and May 28th with maxima of 450 on Apr. 17th, 403 on 23rd and 405 on 30th (see table on page 30 for full details). Observations at Worthing-Hove produced a total of 2,406 E between Mar. 30th and June 1st, peak passage occurring between Apr. 16th and 25th. At Selsey Bill the max. reported was 213 in 6 hours on Apr. 30th.

At Chichester Harbour the breeding season started promisingly with 50 or more birds sitting on May 22nd, but the colony was washed out by high tides. By June 20th, 88 eggs were in 54 nests but these too were washed out and in the end no young were hatched at all.

Return passage was uneventful and 100 in Pagham Harbour on Sept. 16th was the sole large count received. Small numbers were seen at the west end of the coast until early Oct. and the last, still in summer plumage, was at West Wittering on Nov. 5th.

ROSEATE TERN (*S. dougalii*).—One flew E at Hove on May 18th (DAN, RFP) and one paused at Rye on July 16th (KC).

COMMON TERN (*S. hirundo*).—At Chichester G.P. 5 pairs nested successfully on the Society's raft, hatching 14 young, 12 to flying stage. A count at the Chichester Harbour colony on June 20th revealed 69 nests containing 92 eggs and 82 young but the colony was obliterated by a high tide 2 days later. By July 7th however, hatching had already recommenced at 43 new nests and it is thought that most of 97 young were successfully reared. In the east of the county the North Point site at Rye was not occupied but at Rye Harbour LNR 28 pairs nested but reared only 15-20 young to flying stage.

COMMON/ARCTIC TERN (*S. hirundo/paradisaea*).—First seen in spring at Hove on Apr. 14th. At Beachy Head a record total of 11,707 was logged moving E between Apr. 15th and May 28th, with 5,995 between Apr. 29th and May 3rd. It is thought that the frequent passage of frontal weather systems rather than the incidence of SE winds brought larger numbers than usual within observation range. (See table on page 30 for full details). The same applied at Worthing-Hove where mostly early morning watches of limited duration between Apr. 14th and May 27th still produced a total of 4,773 E. The only heavy movement seen at Selsey Bill was 527 E in 3½ hours on May 1st.

Autumn passage started towards the end of Aug. and the largest numbers reported were approx. 200 at roost at Pett Level on Sept. 6th, 100-150 W there on 9th and 200 feeding off Selsey Bill on 16th. Smaller numbers were seen in early Oct. with a max. of 50 feeding off Worthing on 4th. The last for the year were no later than Oct. 9th when 21 were resting at Pett Level.

ARCTIC TERN (*S. paradisaea*).—It is known that unusual numbers of this species were seen in S.E. England in April thus providing some perspective to reports of 173 E in 2 hours at Hove on Apr. 18th and 30 feeding at Southwick on 20th. Two were identified at Pett Level on May 14th and, once again there were July records—2 in Pagham Harbour on 13th and one at Rye Harbour LNR on 14th. Another was at Rye on Sept. 10th.

LITTLE TERN (*S. albigrons*).—First recorded in spring near Hove on Apr. 16th. Birds were prospecting the Rye and Pagham Harbour colonies by 17th and 19th respectively. Passage at Worthing-Hove totalled 429 E between Apr. 16th and May 25th with maxima of 46 in 2½ hours on Apr. 29th (matched by 50 E in 1 hour at Langney Point that evening) and 50 in 2 hours on May 2nd. Though fewer in total, passage at Beachy Head was a record with 383 E between Apr. 17th and May 20th with a max. of 115 on Apr. 29th but only 22 in 10 hours on May 2nd. (See table on page 30 for full details). At Selsey Bill passage data are confused by the proximity of breeding birds but 82 were logged E on Apr. 30th.

The Chichester Harbour colony had a disastrous breeding season. The high tide of June 22nd washed out all 31 existing nests; 9 pairs tried again but predation, possibly by a Sparrowhawk, took all but one fledgling. Ten pairs moved to another site and were thought to have enjoyed more success.

At the Pagham Harbour colony all 47 nests were mysteriously deserted in late June. In the end 6-10 pairs moved from the island to the main beach and succeeded in rearing 12-15 young to flying stage.

Of 14 pairs at Rye Harbour LNR, 3 succeeded in rearing a total of 3 young to flying stage but foxes took 15 other young.

Elsewhere 2 pairs prospected a potential new site but did not stay.

Little was seen of autumn passage, the max. recorded being 30 W at Pett Level on Sept. 9th. The last was at Shoreham on Oct. 10th.

BLACK TERN (*Chlidonias niger*).—Spring passage was first noted with the unusual record of a party of 25 passing E over Wych Cross on the evening of Apr. 23rd. The remainder of the season was uneventful only 100 being recorded between then and May 19th with a max. of 24 E at Beachy Head on Apr. 28th (see table on p. 30) but 7 at Chichester G.P. on 29th and May 5th and 9 E at Hove on 17th. Late in the month one appeared at Rye Harbour LNR on 27th and 2 at Sidlesham Ferry on 31st followed by 2 more at Rye on June 4th. Two loitered at Rye on June 16-18th and one visited Chichester Harbour on 19th.

Return passage began with a trickle of adults from July 27th, a total of 17 being recorded along the coast by the end of Aug. In the period Sept. 6-17th, 40 were seen with max. counts of 5 at Pett Pools on 9th and Pagham Harbour on 14th. Only 4 more were seen before Oct. 2nd when 5 had arrived at Weir Wood Res., one staying to 3rd. The last record was of one at Pett Level on 8th.

GUILLEMOT (*Uria aalge*).—Reported from various coastal localities in Jan. (1), Feb. (3—1 dead, 1 oiled), Mar. (4—1 dead, 3 oiled), Apr. (4), May (2—1 dead), July (1), Sept. (2), Oct. (1), Nov. (1) and Dec. (2—oiled). No migrants were identified at Beachy Head.

RAZORBILL (*Alca torda*).—Reported from various coastal localities in Jan. (3—1 dead), Feb. (1 dead), May (7—1 oiled), Sept. (2), Nov. (3) and Dec. (3—1 oiled). The May records were all between 13-26th (see Auk sp. below). During spring passage at Beachy Head 21 were identified mainly moving E between Apr. 15th and May 21st with a max. of 7 on May 14th.

LITTLE AUK (*Alle alle*).—One flew W at Langney Point on Nov. 18th (MJR) and one was found freshly dead in a barn at Westbourne on 21st (JHME). A number were recorded in the North Sea at this time.

AUK SPECIES.—During spring passage at Beachy Head 112 unidentified auks flew E and 15 W between Apr. 1st and May 21st with maxima of 27 on May 12th and 14-16 on 4 other dates between 11-19th. (See table on p. 30 for details). The incidence of Razorbills during this period suggests that most auks were of this species. At Worthing-Hove watches produced a total of 13 E and 7 W between Apr. 16th and May 20th. At Langney Point 6 flew E on June 17th.

STOCK DOVE (*Columba oenas*).—Easterly movement was noted at Rye on Mar. 4-5th and up to 80 were feeding on the LNR during Apr.-May.

During the breeding season recorded in some numbers from 32 general localities with an apparent bias towards Downland valleys in both east and west. Some doubt appears to exist as to the current distribution and status of this species (see Shrubb, 1979) and all breeding season records (Apr.-Aug.) would be welcomed.

Unusual numbers were commented upon in autumn when, in some years, large numbers arrive from the Continent, usually in early Nov. Between Nov. 8-19th feeding flocks were noted at Pett Level (103), Rye Harbour LNR (150-200), Piddinghoe (150) and Thorney Deepes (60); on 19th, 50 passed SW over Rye. Some large flocks were still present in late Dec.

WOODPIGEON (*C. palumbus*).—The only autumn migratory movements reported were of 3000 flying S over Heathfield on Nov. 25th and 1,300 SE over Maynard's Green on 27th. On Dec. 31st the cold weather movement of many species along the coast produced only one report—a flock of 200 NW over Brighton Marina.

COLLARED DOVE (*Streptopelia decaocto*).—At Housedean Farm near Lewes, 2 pairs attempted to nest inside farm buildings; one failed but the other reared 2 young in a nest on metal girders.

TURTLE DOVE (*S. turtur*).—First recorded in spring at Rye Harbour LNR on Apr. 20th and Church Norton and West Chilington on 21st. Between 24-30th it appeared at 10 further localities with max. counts of 22 at Beachy Head and 30 at Newhaven on 29th and a further general arrival on May 10-15th.

Counts received for the breeding season included 2 pairs on approx. 87 hectares of woodland at Wych Cross, 9 along the 5 miles of the Bluebell Railway and 6 on approx. 375 hectares of farmland elsewhere.

The max. autumn count at Beachy Head was 31 on Aug. 26th. The last recorded were at Lancing on Oct. 17th and Pagham Village on Nov. 12th.

CUCKOO (*Cuculus canorus*).—First recorded in spring at Fore Wood on Apr. 10th, Sidlesham on 13th, Heathfield on 15th, Parham Park on 19th and 16 further localities by 26th when it was clearly widespread. Although autumn gatherings are common it was unusual to find 6 together, feeding and displaying near Balcombe Lake on May 4th.

Juveniles on the wing were noted from July 3rd onwards. During the remainder of the autumn singles were seen at Beachy Head on 5 dates up to Oct. 8th with 3 there on 5th.

BARN OWL (*Tyto alba*).—The number of breeding pairs reported was maintained at 9 of which 8 came from the west of the county. Single birds seen during the breeding season were down from 31 to 16 but it is possible that half of these were paired. In one case 3 young fledged from 9 eggs, otherwise there was little information on breeding success. In winter single birds were reported from a further 8 localities. All records are still required.

LITTLE OWL (*Athene noctua*).—In the breeding season 31 known and 2 probable pairs were reported, constituting a further annual increase, but reports of singles declined from 43 to 17. Breeding season reports were divided equally between the east and west of the county. In winter the species was reported from a further 14 localities. All records are still required.

TAWNY OWL (*Sirix aluco*).—Fewer records were received than in 1977 but nevertheless widely reported during the breeding season with 69 pairs or calling birds in 49 localities. Counts in defined areas included 3 pairs in Arundel Park, and 4 pairs along the 5 miles of the Bluebell Railway; in total 6 pairs were known to have raised 13 young.

Records of this species are always welcome; breeding season counts, details of breeding success and records from urban areas will be of particular interest.

LONG-EARED OWL (*Asio otus*).—In Jan.-Feb. recorded in 3 localities in east and 2 in west, including one roosting with Short-eared Owls near Pagham Harbour.

One pair bred successfully, rearing two young at the same site as 1977. Records of apparently single birds came from 3 other localities well into the breeding season but of these two were on the coast and may have involved migrants.

The only autumn migrant was one at Beachy Head on Oct. 11th but by Dec. one was again roosting with the Short-eared Owls near Sidlesham Ferry. There were also 4 together at Rye Harbour LNR and one elsewhere in the east.

SHORT-EARED OWL (*A. flammeus*).—Rather more than usual, with an emphasis on autumn passage. Approximate monthly totals were:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
26	9	6	6	2	—	—	1	3	27	26	24

The totals at the start of the year included roosts of 6 at Thorney Island, 5 at Pagham Harbour LNR and 7 on Horse Eye Level. The May records were of migrants from the Continent—in the Cuckmere on 6th and at Rye on 8th. The Aug. record was at Pett Level on 30th. In Oct. only 2 were seen before 16th and 5 more between then and Nov. 26th were apparently passage migrants. One Dec. record was of a bird fleeing before the snow over Worthing on 31st. Otherwise the Dec. total was normal as the figures for the decade show:—

Dec. total	69	70	71	72	73	74	75	76	77	78
	2	25	12	14	13	28	17	21	21	24

NIGHTJAR (*Caprimulgus europaeus*).—One calling at Five Hundred Acre Wood on May 27th was the first record for the year. During the breeding season 16 'churring' males were located on Ashdown Forest compared with 12 in the 1977 census; birds were found at 7 sites not occupied during the census period whilst 2 1977 sites were not occupied in 1978. Elsewhere coverage was fragmentary with only 22 males reported from 10 sites, one of a female which had not been used in 1977.

The last record for the year was of a female which stayed at Beachy Head from Aug. 12th to Sept. 10th. This was only the 7th record of the species there and the 1st since 1973.

Records of this species are always welcome.

SWIFT (*Apus apus*).—First recorded in spring near Seaford and at Beachy Head on Apr. 22nd and 6 coastal and one inland locality on 23-24th. Large gatherings of feeding birds were noted in many places during damp overcast weather on May 5-7th but otherwise arrivals took place without event.

Again quirks of weather and food supply brought large numbers together from time to time during the summer—800 over Bewl Bridge Res. on June 10th, 220 flying N in $\frac{1}{2}$ -hour over Lullington Heath on 12th, up to 1,000 over Rye during the 2nd week of the month and 700 over Northiam on 28th.

By July 30th emigration was well in progress, large numbers being reported from Beachy Head and Selsey Bill on 31st. Heavy passage was again noted in mid-Aug., including 300 at Shoreham on 9th, 600 at Mile Oak and 400 at Higham on

10th, 34 per hour leaving Selsey Bill to SW and 1,000 gathered at Beachy Head on 12th and 550 SW there on 19th. After this few were seen, the sole Sept. records being 4 between 14th and 29th. A further 12 single birds occurred between Oct. 1st-11th and the last was at Pett Level on 14th.

ALPINE SWIFT (*A. melba*).—One flew E over Rye Harbour LNR on June 8th (PFB). This record has been accepted by "British Birds" and was the 12th for the county.

KINGFISHER (*Alcedo atthis*).—In Jan. and Feb. 21 birds were reported from 19 coastal and inland localities. During the breeding season only 17 sites were located, with successful breeding established at 3. At the end of the year 25 individuals were reported from 24 localities during Nov. and Dec.

ROLLER (*Coracias garrulus*).—One on the county boundary with Surrey a mile N of Gatwick Airport on May 29th (the late Dr. J. G. Harrison). This record has been accepted by "British Birds" and is the 17th for the county. (It should be noted that Shrubbs (1979) gives the total to 1976 as 14 but quotes 15).

HOOPOE (*Upupa epops*).—After an early record at Horsham on Apr. 4th (NR) singles were seen at Wadhurst (SG) and Newmarket Hill (NAGL) on 24th. On 29th one seen arriving from the sea at Selsey Bill (CRJ, MRW) was possibly the same as one at Church Norton (per IK). One was present at Beachy Head on 29-30th (JFC, MK, RAO *et al.*). After one at Rye Harbour LNR on May 1st (AD) another appeared at Beachy Head on 5th-8th (JFC, DSF, NAGL *et al.*) and, also on 5th, fishermen rescued a hapless bird from drowning off Selsey Bill but it later died (CRJ *et al.*). On 6th one at Waller's Haven on Pevensey Levels (LC, JJ) was followed by a 3rd individual at Beachy Head on 9th (SS). The 11th record relating to evident migrants came from Newmarket Hill again on May 22nd (NAGL).

No breeding records were received this year but individuals were seen at 3 possible localities during the season.

WRYNECK (*Jynx torquilla*).—In the spring one at Litlington on Apr. 23rd and one at Sidlesham Ferry on 24th suggested a small under-recorded arrival.

The lack of winds from an easterly quarter led to a dearth of autumn records which merely consisted of singles at Church Norton on Sept. 5th, Beachy Head on 7th, Newmarket Hill on 18th and Beachy Head on Oct. 7th.

GREEN WOODPECKER (*Picus viridis*).—In the breeding season reported from 71 localities including counts of at least 6 pairs in Arundel Park, 8-9 pairs along the 5 miles of the Bluebell Railway, 3 pairs on approx. 1,875 hectares at Ebernoe and 2 pairs in approx. 87 hectares of mixed woodland at Wych Cross.

Information on the distribution and status of this species is still required for all parts of the county and particularly for Downland areas and the coastal plain; counts for defined areas will also be most welcome.

GREAT SPOTTED WOODPECKER (*Dendrocopos major*).—During the breeding season 44 pairs were reported from 22 localities and the species' presence was noted in another 40. In June 16 pairs were located on approx. 1,875 hectares of woodland at Ebernoe; further reports of this type would be most welcome.

Information on the distribution and status of this species is still required for all parts of the county and especially for Downland and coastal areas. Details of the penetration into suburban gardens and parks at any season will also be of interest.

Possible Continental immigrants were recorded at Beachy Head on Oct. 18th and 28th.

LESSER SPOTTED WOODPECKER (*D. minor*).—During the breeding season reported from 38 widely scattered localities and from a further 14 during the autumn and winter months. Two parties, each of 5 birds, were seen at Pulborough and Amberley Wild Brooks on Jan. 16th. All records at all seasons are required for this species.

WOODLARK (*Lullula arborea*).—The sole authenticated record for the year was of one in song at a likely breeding site in the west of the county.

SKYLARK (*Alauda arvensis*).—During the breeding season 23 singing males were noted along the 5 miles of the Bluebell Railway.

Reports of sizeable wintering flocks in Jan. and Nov. were eclipsed by accounts of the cold weather movement which began on Dec. 31st. At Norman's Bay 1,050 passed W and 225 NW between 0900 and 1200 hours and 60 were feeding, whilst 500 were seen flying W at Rottingdean. 'Huge numbers' were described passing W or NW 'from first light until late afternoon'. At Hove arrivals from SE coincided with a coastal movement to W all day, peaking at 1,500 per hour between 1015 and 1130 hours and at Worthing 3,000 plus, in flocks of up to 100 moved through between 1015 and 1130 hours. As the arctic weather also hit the West Country it can only be hoped that the flight of these birds was not in vain.

SHORELARK (*Eremophila alpestris*).—One on the beach at Pagharn Harbour on Nov. 18th (PRE, CRJ *et al.*), remained into the New Year. The last bird to winter in the county was at the same locality in 1972/73.

SAND MARTIN (*Riparia riparia*).—First recorded in spring at Church Norton on Mar. 13th, Arundel Wildfowl Refuge on 17th and Pett Level on 19th whereafter only 2 were seen until a more general arrival on Apr. 21st-24th.

Counts of occupied nest sites at breeding colonies were:— Washington and Storrington sandpits—140; Rye Harbour LNR—20-25; North Point Pt, Rye—up to 6.

In early autumn a pre-migratory gathering of 600 was noted at Rye Harbour LNR on July 29th and large movements to S or W were observed at Pagharn Harbour on Aug. 12th, Pett Level on 16th and Selsey Bill on 19th. On 28th, 1,500 or more were estimated at Rye and over 1000 on Sept. 3rd. Many thousands were over Pett Level on the evening of 4th and over 1000 moved off to W early on 5th. At Birling Gap 4000 were estimated moving W during the morning of 17th. On 30th, 50 were still present at Chichester G.P. and 100 at Rye on Oct. 1st. Only 2 more were seen before the last for the year—at Beachy Head on Oct. 22nd and Kingley Vale on 29th.

SWALLOW (*Hirundo rustica*).—First recorded in spring at Parham Park on Mar. 15th, Beachy Head on 26th and Chichester G.P. and Pett Level on 31st. No more than a few lone birds were seen during the subsequent cold weather but immigration began in earnest on Apr. 20-24th and pairs quickly appeared at breeding sites. Arrival continued into late May.

On the Downs near Lewes a poor breeding season was reported, only 38 young being ringed compared with 96 in 1977 and only one out of 10 pairs attempting a 2nd brood. A similar situation was manifested along the 5 miles of the Bluebell Railway where all 5 pairs laid late, rearing only 24 young from 1st and two 2nd broods.

The migratory gathering at Beachy Head reached 2,000 by Aug. 26th and steady passage was noted there and Pett Level during early Sept. At Birling Gap approx. 8,000 moved W in 3 hours on 17th, 3,000 plus were over Cissbury on 20th and a further 4,000 had gathered at Beachy Head on 23rd. Thereafter departure proceeded steadily until 3rd week of Oct. but there were still 10 at Sidlesham on Nov. 1st and 15 in Eastbourne on 3rd. A further 21 were seen at various coastal localities until 26th, the last recorded being one at Herstmonceux on 27th and one feeding in Lewes High Street in appalling wintery weather on 28th.

HOUSE MARTIN (*Delichon urbica*).—First recorded in spring at Beachy Head on an early date of Mar. 19th after which none was seen until 2 arrived at Barcombe Mills Res. on Apr. 14th and 7 at Weir Wood Res. on 18th. A general influx came with warm weather between then and 24th.

During the breeding season at Maynards Green 7 out of 14 pairs were double-brooded but most of 10 pairs at the University of Sussex were single-brooded. At Sheffield Park Client nest-boxes were occupied for the first time and 2 pairs were found on cliff sites at Brighton Marina.

By Aug. 26th the migratory gathering at Beachy Head totalled 5,200 and 8,000 were estimated moving W there on Sept. 17th. Further large gatherings included 2,000 over the Downs near Lewes on 28th, 2,700 in the Pevensey area on Oct. 2nd, 4,000 over West Chiltington on 5th, 5,000 at Beachy Head on 7th and 9,000 there on 8th when steady passage was also noted at Selsey Bill. Migrants were noted over Maynards Green only until 15th but coastal passage continued apace until 21-25th. At Eastbourne 70 were still loitering on Nov. 3rd but thereafter only a scattering was seen along the coast the last being at Arundel Wildfowl Refuge on 28th.

TAWNY PIPIT (*Anthus campestris*).—One appeared at Beachy Head with a large fall of passerine migrants early on Apr. 29th (DSF). This record has been accepted by 'British Birds'. Rarely for Sussex there were no autumn records but very few were seen in the country as a whole.

TREE PIPIT (*A. trivialis*).—Few records in the spring. The first was on Apr. 4th at Telscombe Village after which singles were reported from Arundel on 17th, Nuthurst on 18th and Lavington on 19th as the weather improved. There was a general increase after 24th.

During the breeding season casual reports totalled 58 pairs or singing males from 20 widely scattered inland localities.

At Beachy Head autumn passage was poor with peaks of only 30 and 20 on Aug. 17th and 27th respectively. At Cissbury maxima were 29 on Aug. 24th and 27 on 27th. The last for the year were of singles at Arundel on Oct. 2nd and Beachy Head on 9th.

MEADOW PIPIT (*A. pratensis*).—Spring passage was generally without feature but for an interesting mid-morning arrival on a strong westerly wind in bright sunlight on Mar. 8th when 402 flew N on a 4-mile front on Pevensey Levels between 1130 and 1330 hrs whilst 800-1000 passed NE over Pett Level during the morning.

During the breeding season 33 pairs were located on 300 hectares of the Adur Levels between Bramber and Henfield.

In the autumn a max. of 350 W was recorded at Beachy Head on Sept. 13th and migrants in substantial numbers were reported between then and 20th. Departures to the Continent apparently continued to mid-Oct. The wintering population was thinly though generally distributed.

ROCK PIPIT (*A. spinoletta*).—Winter counts along the full length of the coast suggested the presence of about 62 individuals apparently of the British race *a.s. petrosus*.

No counts were received for the breeding season.

Individuals showing the characteristics of the typical race *a.s. spinoletta*, colloquially known as the Water Pipit, were identified as follows:— one at Sidlesham Ferry remaining from 1977 until at least Feb. 26th; one at Mewsbrook, Littlehampton from at least Feb. 6th to Mar. 30th; one at Bewl Bridge Res. on Apr. 3rd; and at least 6 at Pett Level on Apr. 16th, one or more remaining to 27th. At the end of the year there was once again one at Sidlesham Ferry from Nov. 10th to at least 30th.

At Rye Harbour LNR an individual on Mar. 24-27th was considered to show the characteristics of the Baltic race *a.s. littoralis*, sometimes known as the Scandinavian Rock Pipit, and which is now only infrequently identified on the Sussex coast in spring when once it was regular.

An individual in the Cuckmere on Mar. 3rd could not be sub-specifically distinguished between *a.s. spinoletta* and *littoralis*.

YELLOW WAGTAIL (*Motacilla flava*).—First recorded in spring in the Cuckmere on Apr. 1st and near Rye on 5th, with 7 more at 3 localities in the east by 12th. From 14th arrivals were noted along the whole coast and particularly after 26th. On 29th, 20 were seen arriving at Selsey Bill and a max. of 30 were seen at Rye Harbour LNR on 30th. Immigration continued to mid-May.

During the breeding season about 10 pairs again bred at Rye Harbour LNR where fledging success was considered good. Other counts received included 10-15 pairs on Glynde Levels and 3 at Snailham Marsh (Brede Levels)—but apparently only one each on Thorney Deepes and on 600 hectares of the Adur Levels between Bramber and Henfield.

Autumn passage at Rye Harbour brought a max. of 50 on Aug. 25th but 100 had been noted at Pett Level on 24th. At Beachy Head fewer than usual were recorded with maxima of only 35-40 on Aug. 20th, Sept. 2nd and 13th. On the Downs at Cissbury numbers peaked at 60 on Sept. 1st, whereas the max. at Pagham Harbour came with 70 on 9th. The species had largely departed by mid-month after which only stragglers were seen—at Cissbury on 20th, Rye Harbour on 23rd and a handful at Beachy Head. October records were of singles at Selsey Bill on 5th, Pevensey Sluice on 8th and the last for Beachy Head on 22nd but a late migrant, inconspicuously consorting with 2 Snow Buntings remained at Pett Level on Nov. 19-20th.

The nominate race *m.f. flava*, colloquially known as the Blue-headed Wagtail, was commoner than usual in spring. Singles were reported as follows:—Barcombe Mills Res., April 21st; Beachy Head, 23rd; Horse Eye Level, 26th; Sidlesham Ferry, 27-29th; Selsey Bill, 29th; Pett Level, May 3rd-5th; Rye Harbour LNR, May 3rd and 10th; and Church Norton also on 10th—a total of 9. In addition a female at Brede Levels on May 3rd appeared to be paired with a local Yellow Wagtail.

Of particular interest was a male showing the characteristics of the race *thunbergi* at Sidlesham Ferry on Sept. 10th (MS).

GREY WAGTAIL (*M. cinerea*).—Many traditional sites were visited during the breeding season, particularly in West Sussex, producing a total of at least 51 pairs. A register of breeding sites is in preparation to facilitate annual monitoring of the species.

At both ends of the year wintering birds were reported from only 23 localities. More than half of these were in the main river valleys and the reservoirs whilst the remainder were found at a variety of coastal and inland habitats. Reports were received for only 3 sewage plants and this probably accounts for the low numbers.

During the spring passage one at the Cuckmere on May 6th may have been a late migrant. In autumn at Beachy Head the species was recorded on 16 dates involving some 39 birds, with maxima of 5 W on Sept. 9th and 9 W on 22nd. Other autumn migrants were reported from Cissbury with 2 W on Sept. 9th and 1 W on 20th.

PIED WAGTAIL (*M. alba*).—Filter-beds at sewage disposal plants are a much favoured haunt of this species, particularly in winter, such a site in Rotherfield attracting 100-150 in cold weather in Feb. but no fewer than 250-300 with the onset of the cold spell on Dec. 31st. At Shoreham Reed Bed, however, the arctic weather caused the departure of up to 700 which had roosted there during Nov.-Dec.

In Nov. a long-standing traditional roost in a tree in Terminus Place, Eastbourne, contained some 30 birds which doubtless pass the winter foraging around the many ornamental gardens in the area.

Spring and autumn passed without untoward event.

In spring individuals showing the characteristics of the Continental race *m. alba*, colloquially known as the White Wagtail, were again widely reported. Two at Selsey Bill on Mar. 11th were early, more typical being 4 at Pett Level on Apr. 9th, another there on 16th, one at Rye Harbour LNR on 12th, one at Barcombe Mills Res. on 21st-24th and 3 at Selsey Bill on 29th. One at St. Leonards on June 3rd was exceptionally late and may well have been summering.

WREN (*Troglodytes troglodytes*).—Along five miles of the Bluebell Railway there were 26 or 27 pairs with a further 29 close by during the breeding season (31 and 33 in 1977, 36 and 20 in 1976). 43 pairs bred at Fore Wood, 13 pairs were recorded in 35 acres of woodland at Wych Cross, and 16 singing males in 20 hectares at Palfrey Copse. A poor autumn passage was reported from Beachy Head with a low max. of 18 seen on Oct. 5th.

DUNNOCK (*Prunella modularis*).—At Pagham Harbour unusual numbers, suggesting an arrival of migrants, was noted on Mar. 8th.

During the breeding season 14 pairs were located on or adjacent to the 5 miles of the Bluebell Railway, 5 pairs on 87 hectares of woodland at Wych Cross and 7 pairs at Fore Wood.

No significant autumn passage was noted at Beachy Head.

ROBIN (*Erithacus rubecula*).—During the breeding season 31 pairs were located along the 5 miles of the Bluebell Railway with a further 17 close by (compared with a total of 71 in 1977). A similar reduction in numbers was noted at Fore Wood where 44 pairs represented a drop of 30% on 1977. Non-comparative counts received were of 12 pairs on 20 hectares at Palfrey Copse and 7 on approx. 87 hectares at Wych Cross.

In autumn at Beachy Head peak counts were of 40 on Oct. 11th, 50 on 12th and 40 on 29th.

A total albino was resident in a garden at Kirdford from Aug. 25th to the end of the year.

NIGHTINGALE (*Luscinia megarhynchos*).—Cold weather in mid-Apr. spanned the normal arrival period for this species and no song was heard until 22nd at West Chilington. Only 3 more were located before 30th. It was apparently mid-May before the species was widespread.

No systematic breeding survey took place this year but observers should note that the species is to be the subject of the B.T.O. National Survey in 1980.

Apart from one at Cissbury on Aug. 28th the sole autumn records came from Beachy Head where singles were reported daily to Aug. 30th (max. 3 on 6th) and one on Sept. 8th.

BLACK REDSTART (*Phoenicurus ochtrurus*).—One or more overwintered in the Southwick/Shoreham Fort area and one at Cuckmere Haven/Seaford Head. Otherwise singles were reported from East Wittering, Ovingdean, Newhaven and Birling Gap during Jan.-Feb.

Spring passage commenced with singles at Church Norton on Mar. 11th, in the Cuckmere on 12-14th, at Balsdean on 15th and, unusually, 3 inland—on Ashdown Forest on 13th, Burgess Hill on 20th and Horsebridge on 23rd. Three were in the Selsey/Church Norton area by 31st and one at Rye Harbour LNR on Apr. 1st. A further 16 were reported from 8 coastal localities by 9th, 9 more from the coast by 30th and 5 up to May 13th with a late migrant at Sidlesham Ferry on 21st. This brought the spring total to about 40, twice that of 1977.

At least 2 singing males, plus one nesting pair were again found in the Brighton area. Two young were successfully reared from a first brood and 3 from a second.

After singles in autumn at Sompting on Sept. 21st, Brighton on Oct. 4th and Beachy Head on 8th a general influx took place on 14-16th when 22 appeared along the coast from Beachy Head (6) to West Wittering. Of 18 birds remaining at 12 localities between then and the end of Nov. winterers apparently settled in at Selsey, Southwick, Black Rock, Brighton, Rottingdean, Newhaven (one or more), Cuckmere Haven and Pevensey village. Also of note was one inland at Darwell Res. on Nov. 19th.

REDSTART (*P. phoenicurus*).—First recorded in spring at Selsey Bill on a normal date of Apr. 5th but apart from one at Winchelsea Beach on 16th cold weather prevented further arrivals until further singles at East Chilington on 25th and Langney Point on 26th. A general arrival appeared on 29th with 7 in the Selsey/Pagham Harbour area, 6 at Beachy Head, one in Eastbourne and 2 at

Newhaven. Whilst one inland pair was already in territory by May 5th and others by mid-month scattered arrivals appeared along the coast until 31st, though only 12 in all.

During the breeding season the species was recorded at 9 localities, including 8 singing males at one, 5 at another and singles at 6 others. At one site, 4 young were successfully reared in a nest-box.

Return passage apparently started with one at Church Norton on Aug. 19th, a sprinkling on the Downs at Cissbury between 24th-31st and at Langney Point, Charleston Reed Bed and Church Norton on 27th. At Beachy Head passage was spectacular with maxima of only 8-9 on Aug. 27-28th and Sept. 5th but 12 on Sept. 3rd. Elsewhere the max. reported was 6 at Cissbury on Sept. 2nd-4th but the species was nonetheless widely reported with a further 23 in coastal and Downland areas in Sept. and 11 in Oct. The last at Beachy Head was on Oct. 21st when one was also seen at Thorney Island. The last for the year was at West Wittering on Nov. 5th.

WHINCHAT (*Saxicola rubetra*).—First recorded in spring at Fairlight on Apr. 23rd with 4 at Selsey/Sidlesham Ferry on 24th and a few scattered records until 28th when there was only one at Beachy Head. On 29th the count there was 56, the largest spring figure on record for this locality and other arrivals were noted at Cuckmere Haven, Fairlight and Selsey.

After one at Sompting on July 2nd, 2 at Sidlesham Ferry on 17th and one there on 29th, little was seen of the species until mid-Aug. At Beachy Head autumn passage was recorded from 13th with maxima of only 22 on 27th and 14 on Sept. 2nd. At Rye Harbour LNR migrants were noted from Aug. 19th onwards and at Pagham Harbour from 17th. Migrants also appeared on the Downs at Cissbury from 23rd with a max. of 25 on Sept. 2nd. Generally, however, passage was uneventful and, after 3 singles in early Oct. the last to be seen were at Beachy Head on 11th and Church Norton on 15th.

STONECHAT (*Saxicola torquata*).—In Jan. 30 birds were reported from 14 coastal and Downland localities. In Feb. 37 were reported during the coastline wader count on 11th and another 9 were seen in Downland areas during the month.

In the breeding season pairs or singing males were reported as follows:—

Iping Common	1	Tilgate Forest	1	Seaford Head	1
Ambersham Common	1	Whitebush Hill	1	Cuckmere	1
Cissbury	1	Ditchling Common	1	Seven Sisters	2
Shoreham	2	Chailey Common	1	Glyne Gap	1
Nuthurst	2	Ashdown Forest	7	Fairlight	2

Coverage of Ashdown Forest was incomplete but in one large area numbers were said to be reduced by half. No reports were received for the Beachy Head area or a number of other areas where the species is known to breed.

Passage was noted at Cissbury with maxima of 6 on Sept. 13th and 20th, at Beachy Head with maxima of 43 on Oct. 8th and 20 on 20th, on the Selsey peninsula with 13 on Oct. 14-15th and at Thorney Island with 8 on Oct. 21st.

Although coverage of suitable areas was incomplete, 31 birds were reported in Nov. and 23 in Dec. One was present on Chailey Common on Dec. 23rd.

WHEATEAR (*Oenanthe oenanthe*).—First recorded in spring at Church Norton on Mar. 11th with 10 between there and Selsey Bill on 12th and singles at 6 other localities between Climping and Rye. Scattered birds were seen along the whole coastal region thereafter with evidence of further falls on Mar. 31st, Apr. 5th and 21st-24th. At Beachy Head the count was 80 on Apr. 29th and 120 on 30th when a good arrival was also noted at Rye Harbour LNR and migrants were seen arriving at Selsey Bill.

During the breeding season reported as follows:—Newhaven Tide Mills (one pair—one young); Langney Point (one pair—3 young); Willingdon Hill (one pair—3 young); and Rye Harbour LNR (8 pairs—10-15 young). Single juveniles were also found on Kithurst Hill and Chantry Hill on July 13-14th.

Return passage started in late July. At Beachy Head maxima of 39 on Aug. 13th, 80 on 17th, 52 on 20th and 57 on 27th were in part matched by 50 in only part of Pagham Harbour on 13th, 35 in another part on 17th and a max. of 30 at Rye Harbour LNR on 19th. Thereafter small numbers were reported from many localities until the last at Rye Harbour LNR on Oct. 28th and Beachy Head on 29th. Two late birds were recorded—one at Glyne Gap, St. Leonards, on Nov. 12th and one at Pagham Harbour on Dec. 17th.

RING OUZEL (*Turdus torquatus*).—The first record in the spring was of one at Beachy Head on Apr. 9th. The next was at Sidlesham on Apr. 16th followed by one at Lychpole on 19th. A single bird was seen in the Glynde area on 24th and there was one at Sheepcote Valley, Brighton on 27th. There was a small influx on 29th when there were 7 at Beachy Head, with 4 there on 30th and one at Cuckmere Haven on the same date.

In the autumn many fewer than usual were seen at Beachy Head, with records on 17 dates between Aug. 27th and Oct. 28th with the most on any one day only 3. Elsewhere there were single birds at Cissbury on Sept. 17th, Oct. 19th and 22nd, one on the Downs near Lewes on Oct. 16th, one at Sidlesham on Oct. 30th and the last at Church Norton on Nov. 1st.

BLACKBIRD (*T. merula*).—Ringing results from near Lewes showed a good survival rate for juvs. doubtless due to a wet July. An autumn influx was recorded on 13th/14th Nov. at Brighton, Selsey and Church Norton, and a flock of 60 in Nov. rising to 80 by the end of the year was noted feeding on windfalls in an orchard at Great Dixter.

FIELDFARE (*T. pilaris*).—In Jan. flocks of 100 or more were reported from five localities, with the largest 500 at West Chilmington on 28th. In Feb. some movement of birds was noted with an influx at Rye Harbour LNR on 12th involving up to 300 birds and a westerly movement of 140 birds at Eastbourne on 13th. Elsewhere there were records of 100 or more from eight localities including 300 near Pagham Harbour on 18th and 350 at Glynde Levels on 27th. Records were less widespread in March, but there were still flocks of over 100 at seven localities with 300 at Fittleworth on 22nd. The only large flock reported in April was 100 at Hailsham on 20th, otherwise numbers were small. Late records in May were of 2 in Parham Park on 2nd, one at Beachy Head on 12th, one there on 13th and 2 at Pett on the same day.

The first autumn record was at Fore Wood on Sept. 29th. There were no further reports until Oct. 20th, from Beachy Head. On Oct. 21st 120 flew SW at Bewl Bridge. Very few were recorded in Nov. the only flock of significance being of 200 at Amberley. In Dec. there were many more birds in the county with reports of 100 or more birds at eleven localities with 1000 at Horseye Level on 2nd and 1000 on the Adur Levels on 17th.

SONG THRUSH (*T. philomelos*).—Good numbers were reported passing through at Beachy Head during Oct. (maximum 65 on 12th), and exceptional numbers on autumn passage on the Downs west of Lewes where double the average number was ringed, but very few were there after early Dec. An arrival was also noted at Selsey Bill and Church Norton on Oct. 14th. On Dec. 31st many were reported moving NW at Brighton Marina and a small number W at Norman's Bay.

REDWING (*T. iliacus*).—Numbers were small in Jan. totalling no more than 750. More were reported during Feb. with reports of 300 or more from three localities and smaller flocks elsewhere. Numbers dwindled in early Mar., the only large flock in the later part of the month being 200 at Fittleworth. Records in single figures continued into Apr., with the last at Sidlesham on 16th.

The first autumn record was from Fore Wood on Sept. 29th. Small numbers appeared in early Oct., but it was not until late Nov. that there was any influx. Heavy nocturnal migration was noted on Oct. 21st, 25th-28th and 30th and Nov. 6th, and a large fall was reported from Brighton on Oct. 27th, but most of these

birds appeared to be passing through or over the county. In late Nov. there were about 1000 on the Downs near Lewes, and then in Dec. there were 300 at Horse Eye Level on 2nd and 10th, 100 on Glynde Levels on 3rd, 1200 at Cissbury on 9th, 300 on the Adur Levels on 10th and 1000 there on 17th, 250 on the Downs behind Shoreham on 10th, a roost of 400 at Shoreham Sanctuary in mid-Dec., and 700 at West Chilington on 26th with smaller flocks elsewhere. Snowfall on Dec. 31st caused a strong weather movement when many hundreds were recorded moving W at Norman's Bay, Brighton Marina and High Salvington and S at Maynard's Green.

CETTIS WARBLER (*Cettia cetti*).—At Pett Level one of the 2 remaining from 1977 was present until Jan. 14th and possibly the same bird was re-located on Mar. 3-5th (CHD). In the meanwhile however, one was found on Manxey (Pevensey) Level on Jan. 15th but subsequent searches proved negative (MJR). At Arundel Wildfowl Refuge at least one wintering bird remained until Apr. 17th, 2 certainly being present on Mar. 29-30th (RWB, SCR). The 2 wintering birds at Church Norton left on about Mar. 27th and it remains a matter of interesting speculation whether at least one of them called at Arundel on its journey.

During the breeding season one was found at a previously used site in East Sussex on July 6th and a singing male was present at a new locality inland in June to at least 17th. In West Sussex one was located in a likely breeding area on Apr. 15th only.

In autumn one arrived at Pett Level on Oct. 8th and what may have been the same individual remained from Oct. 25th to the end of the year. On Sept. 7th one was found close to Arundel Wildfowl Refuge but apparently moved on. The first wintering bird there arrived on Oct. 11th; 2 were there by Nov. 9th and at least 3 by 12th. One or two remained to the end of the year but as many as 4 may have been present on Dec. 17th.

The source of the current wintering population in Sussex is not yet proved but it seems most likely that it constitutes a short-distance dispersal from the breeding population in East Kent.

See page 54 for details of 1976 records not previously published.

GRASSHOPPER WARBLER (*Locustella naevia*).—First recorded in spring at Arundel Wildfowl Refuge punctually on Apr. 17th and a further 19 were reported from as many localities up to mid-May. Several observers remarked that singing males arrived at traditional breeding sites but subsequently moved on.

This species remains the subject of a Special Breeding Survey and records are again required for all singing birds from mid-May to mid-Jul. together with 6-figure grid references.

SEDGE WARBLER (*Acrocephalus schoenobaenus*).—First recorded in spring at Arundel Wildfowl Refuge on Apr. 5th and Church Norton on 9th. Cold weather inhibited further arrival. Although 12 had been recorded at Church Norton and 34 at Arundel by 26th the first at Pett Pools was not heard until 16th, Strivens Reed Bed and Iden Lock until 23rd and Rye Harbour LNR until 24th. It was not until the end of the month that the species was widespread.

Counts received for the breeding season were:—17 males in song on 600 hectares of the Adur Levels between Bramber and Henfield; at least 20 pairs at Snailham Marsh (Brede Levels); and 12-15 singing males at Rye Harbour LNR. At a reed bed near Sidlesham 15 pairs was a similar population to that in the 1960s.

Autumn passage at Beachy Head was less conspicuous than usual, possibly due to favourable conditions for night-time departures, the maxima recorded being only 24 on Aug. 24th, and 10 on 13th and 17th. At Shoreham Sanctuary there was a similar picture, only 2 being ringed. The last for the year were at Arundel Wildfowl Refuge on Oct. 12th and Beachy Head on 18th.

MARSH WARBLER (*A. palustris*).—For the second year running one pair bred, successfully raising at least one young to at least fledging stage.

REED WARBLER (*A. scirpaceus*).—First recorded in Spring at Pagham Harbour and Arundel Wildfowl Refuge on Apr. 27th, Selsey Bill on 29th and Pett Pools, Brede Levels and Rye Harbour LNR on 30th.

During the breeding season the following counts of pairs or singing males were received:—

Strivens R.B.	15	Cuckmere	3
Shoreham Sanc. & Reed Bed	16	Horse Eye Level	4
Woods Mill	2	Pevensey Haven	6
Balcombe Lake	1	Pett Level	20+
Leigh Pond	1	Brede Levels	2
Adur Levels (600 hectares)	21	Rye Harbour LNR	30
Weir Wood Res.	1	Iden Lock area	2

At Beachy Head far fewer than usual were seen on autumn passage, the maxima being 20 on Aug. 20th, 25 on 28th and 18 on Sept. 4th. The last reported were 2 at Rye Harbour LNR on Oct. 6th and one at Beachy Head on 15th.

GREAT REED WARBLER (*A. arundinaceus*).—A male in song at Rye Harbour LNR was present from May 23rd-30th (PFB, AD, RK *et al.*). This record has been accepted by "British Birds" and was the 8th for the county.

ICTERINE WARBLER (*Hippolais icterina*).—One trapped at Beachy Head on Aug. 12th was the 13th and earliest autumn record at this locality (JFC, RH, MK).

DARTFORD WARBLER (*Sylvia undata*).—Winter and breeding season reports indicated the presence of isolated individuals at 2 traditional sites and one elsewhere but there was no evidence of breeding. At a further locality where a pair had been present since 1976, fledging young were seen on July 4th.

Winter wanderers were seen at Pagham Harbour on Mar. 24th and Nov. 4th.

LESSER WHITETHROAT (*S. curruca*).—First recorded in spring at Piddinghoe on Apr. 14th but arrivals were slow. After further singles at Pett Level on 24th and Arundel Wildfowl Refuge and Shoreham Sanctuary on 25th the first main arrival was delayed until 29th when there were 20 at Beachy Head and first arrivals at Patcham and Church Norton.

The species was widely reported during the breeding season but without comment on population levels.

At Rye Harbour LNR peak autumn numbers occurred at the end of Aug. and in the Cissbury-Lychpole area on Aug. 28th and Sept. 2nd. Beachy Head figures were lower than usual with maxima of only 40 on Aug. 28th and 50 on Sept. 7th and 10th. The last for the year were seen at Rye on Oct. 5th and Beachy Head on 11th.

WHITETHROAT (*S. communis*).—First records in spring were a week late—at Darwell Res. and Beachy Head on Apr. 23rd and in the Cuckmere on 25th. A further arrival was noted on 29th when 10 were seen at Fairlight. After that the species was widespread.

However, a number of reports were received of very low breeding numbers. On a farm of 243 hectares at Sidlesham only four pairs were present compared with a general level of 20 in the 1960s, the only lower count being after the population crash in Africa in 1973. At Newmarket Hill, Brighton, 8 pairs represented a 30% decrease on 1976-77 and poor numbers were noted in the Doleham area. Along the 5 miles of the Bluebell Railway, however, 7 pairs was the same as 1977. Other, non-comparative counts were of 35 singing males on 500 hectares of mixed Downland scrub between Cissbury and Chantonbury but only 8 on 600 hectares of the Adur Levels between Bramber and Henfield.

Autumn passage apparently reflected a low breeding population. At Beachy Head, where the ringing total was much reduced, the daily maxima were only 50 on Aug. 27th and 30-40 on 18th, 28th and Sept. 3rd. On Downland near Lewes only 25 were ringed, a lower figure than in 1975-77. The last reported were at Beachy Head on Oct. 1st and in the Cuckmere on 10th.

It is apparent that, without a succession of good breeding seasons, this species cannot maintain its traditional population levels in the face of increased hazards on the spring crossing of the African deserts which have extended so far south during the past decade.

GARDEN WARBLER (*S. borin*).—First recorded in spring at South Malling on Apr. 23rd, Church Norton on 29th and Rye and West Chiltington on 30th.

Little information was available for the breeding season but 4 pairs were located along the 5 miles of the Bluebell Railway and 4 were known to have bred at Woods Mill. Counts in well-defined areas will be most welcome. Return passage was noted at Rye and Beachy Head from mid-Aug. Peak numbers at Beachy Head were 30 on Aug. 28th and 25 on Aug. 11th and Sept. 8th. At Cissbury 5 were present on Aug. 27th and Sept. 14th. The last for the year was at Beachy Head on Oct. 21st.

BLACKCAP (*Sylvia atricapilla*).—During Jan.-Mar. at least 17 were reported from 9 coastal and 2 inland localities. The first arrival of migrants came at the end of March and by mid-April the species was widespread.

In the breeding season counts of pairs or singing males were received as follows:—7-8 along the 5 miles of the Bluebell Railway; 5 in Arundel Park, 3 in Fore Wood, 2 in 87 hectares at Wych Cross. Counts for defined areas will be most welcome from any part of the county.

Return passage was noted at Cissbury from Aug. 27th and Rye from 31st. At Shoreham Sanctuary 37 were trapped compared with 85 in 1977. At Beachy Head numbers were also low, especially in Oct.; maxima were 110 and 120 on Sept. 14th and 16th with other peaks of 100 on Sept. 22nd, 28th and 30th. At Cissbury the max. was 23 on Sept. 20th.

At the end of the year at least 10 birds were present in 6 coastal and 4 inland localities.

WOOD WARBLER (*Phylloscopus sibilatrix*).—First recorded in spring in the Cuckmere on Apr. 30th. Reports received suggested that the species was exceptionally numerous this year. Between May 6th and 10th 13 singing birds were reported from 9 coastal and inland localities, most of which were probably arriving migrants. By early July 23 singing males had been reported from 15 suitable breeding localities, plus 3 others near the coast.

Autumn passage at Beachy Head was again above average, 8 birds being recorded between Aug. 11th and 27th of which 4 were trapped. One or more was seen at Arundel Wildfowl Refuge on Aug. 10th and one at Church Norton on 12th.

CHIFFCHAFF (*P. collybita*).—Reports of over-wintering birds in Jan.-Feb. came from Sidlesham, Church Norton, Chichester G.P., Arundel Wildfowl Refuge, Portslade, Shoreham (3), West Chiltington, Lewes, Arlington Res. (2), Eastbourne and Rye (2).

After a first migrant at Beachy Head on Feb. 28th the species was widely reported by Mar. 11th and was general throughout the county by 24th. Together with other warblers a further arrival took place with warm weather on Apr. 14-16th.

During the breeding season counts of singing males were received as follows:—3 on 20 hectares at Palfrey Copse, 4 in Coghurst Wood, Hastings, one on approx. 87 hectares of woodland at Wych Cross, 5 in Patching Woods and 7 in Abbott's Wood; along the 5 miles of the Bluebell Railway only 3 were located.

Autumn passage at Beachy Head was well up to average with peak counts of 100 on Sept. 16th and 300 on Oct. 3rd. At Shoreham Sanctuary the autumn trapping total of 53 was average. The last apparent migrants occurred in early Nov. with one at Rye Harbour LNR on 6th and two at Arundel Wildfowl Refuge and one at Herstmonceux on 10th. The status of one at Pett Level on the 4th posed problems—it flew off high to NE.

At the end of the year single wintering birds were found at Chichester G.P., Lewes and Eastbourne.

WILLOW WARBLER (*P. trochilus*).—First recorded in spring at Weir Wood Res. on Mar. 30th, Church Norton on 31st and 3 further localities by Apr. 2nd but cold weather generally inhibited further arrivals until 14-16th after which the species was widespread. A further large arrival started on the night of 26-27th and on 29th 250 were estimated at Beachy Head, though only 9 at Selsey Bill.

Counts during the breeding season included 14 males singing on 20 hectares of Palfrey Copse and, along the 5 miles of the Bluebell Railway only 6-10 pairs compared with 22 in 1977. Equally only 2 pairs bred on approx. 87 hectares of woodland at Wych Cross.

Autumn passage was at an average level and, as in 1977, 100 or more were recorded on 9 dates between Aug. 4th and 28th with maxima of approx. 200 on 4th, 11th, 13th and 28th and 450 on 17th. These figures were reflected in part at Arundel Wildfowl Refuge on 11th and on the Cissbury-Lychpole area of Downs on 28th. At Shoreham Sanctuary too, the autumn trapping total of 92 was average.

At Rye Harbour LNR and elsewhere small numbers of migrants were noted until mid-Sept. The last recorded were singles at Strivens Reed Bed on Oct. 1st, in the Cuckmere on 8th and at Beachy Head on 11th.

GOLDCREST (*Regulus regulus*).—There was no significant spring passage.

During the breeding season the following counts were made:—6 singing males on 20 hectares of Palfrey Copse; 4 on approx. 87 hectares of woodland at Wych Cross; 3 at Fore Wood; and 7 along or near the 5 miles of the Bluebell Railway. A marked increase was noted in all suitable localities in a 10 mile radius of Findon.

Autumn passage at Beachy Head was less than usual with maxima of only 40 on Oct. 3rd, 15th and 19th but 70 on 7th.

FIRECREST (*R. ignicapillus*).—The first record for the year was at Halsey's Farm, Pagham on Mar. 5th followed by singles in the Cuckmere on 14th, and Church Norton on 21st-24th and 2 on Crowlink on 30th. At Beachy Head there were 3 on Apr. 3rd and singles on 9th and 19th whilst one was at Fairlight on 8th and singles at Rye Harbour LNR on 3rd and 14th. Once again there were single representatives of some different population movement at Beachy Head on May 6th, 12th and 13th and a loiterer there for several days in late June may have contemplated breeding in SE England. Otherwise there were no summer records.

Autumn passage at Beachy Head was above average with a minimum of 65 individuals between Sept. 21st and Nov. 12th with peaks of 12 on Oct. 8th, 6 on 9th, 8 on 16th and 5 on 21st. Elsewhere there was a total of 10 in Oct.:—singles at Rye Harbour LNR on 7th and 30th; Pett on 14-19th; Balsdean on 8th; Rottingdean on 15th; Cissbury on 16th and 22nd and Lane End Common on 24th with 2 at Church Norton on 28th. Six more came in early Nov.:—Fairlight on 4th, Pagham on 7th and Rye on 6th and again there, Balsdean and Shoreham on 11th. In addition there was a late bird at Herstmonceux on Nov. 21st and one at Alfriston from 6th stayed until Dec. 5th. Another was seen in the Cuckmere on Dec. 3rd. This brought the autumn total to 84 compared with only 17 in 1977 and well exceeds the previous highest recorded autumn figure of approx. 70 in 1974. Strangely this is in direct contrast to the generally poor autumn for other passerine migrants.

SPOTTED FLYCATCHER (*Muscicapa striata*).—First recorded in spring at Church Norton on Apr. 22nd, at Beachy Head on 29th and at Rye Harbour LNR on May 1st. Ten were seen at mainly coastal localities between then and 16th and the species became widespread between 18th and 22nd.

During the breeding season 5 pairs nested at Fore Wood and 5 pairs were located along the 5 miles of the Bluebell Railway, one successfully raising 2 young in a disused railway carriage.

At Beachy Head autumn passage was about normal with maxima of 38 on Aug. 27th, 14 on 28th and 13 on Sept. 2nd. At Church Norton 10 were counted on Aug. 19th and 12 on 26th whilst on the Cissbury-Lychpole Downs 9 were found on Aug. 28th. The species was little seen during Sept. though 7 appeared at Darwell Res. on 17th. The last at Rye Harbour LNR was on Oct. 1st, 5 were at Church Norton on 2nd, one loitering on Selsey Bill on 5-7th and the last was at Beachy Head on 10th.

PIED FLYCATCHER (*Ficedula hypoleuca*).—During the spring passage 10 were reported from 5 localities between Apr. 24th and May 21st including one in song at Fore Wood on May 12th.

None was seen during the summer months. Autumn passage was recorded at Beachy Head on only ten dates between Aug. 10th and Oct. 10th with maxima of 5 on Aug. 27th and Oct. 8th. Reports from other localities covered a similar period but due to the general lack of easterly winds to bring drift migrants from the Continent, numbers were low. After one at Church Norton on Aug. 11th and 2 on 12th and one at Rye Harbour LNR on 13-19th only 6 more were seen in Aug. and 11 in Sept. although 3 in Shoreham Town centre on Sept. 17th suggested a more widespread overnight arrival. At Rye Harbour LNR singles were seen on Oct. 3-4th with another on 6th and the last for the county on 15th.

BEARDED TIT (*Panurus biarmicus*).—At the beginning of the year there were up to 10 at Thorney Island and 3 at the Severals, Church Norton till Mar. 25th. On Feb. 5th there were 2 on Broomhall Level and one at Pett Pools. On Mar. 3rd there were 2 at Arundel Wildfowl Refuge.

A large autumn influx began with 2 at Church Norton on Oct. 4th. On Oct. 11th 2 were at Rye Harbour LNR. On Oct. 13th there were 2 at Pett Pools and on Oct. 14th 2 at Chichester G.P. By Oct. 15th there were 4 at Church Norton and 4 at Pett Pools. On Oct. 18th 7 birds were recorded in the Cuckmere Valley between Charleston Reedbed and Litlington. On Oct. 23rd there were 8 at Arundel Wildfowl Refuge and by Oct. 29th the number at Pett had risen to 6. On Nov. 4th there was at least one at St. Leonard's and a flock of at least 30 was discovered on a neglected vegetable patch at Pett Level feeding on Fat Hen. By Nov. 29th this flock had increased to 40 and by Dec. 18th there were at least 50. Many of these were mist netted and future ringing recoveries may be interesting. Elsewhere there were 2 at Thorney Deepes on Nov. 18th, at least 4 there on Dec. 2nd and one on Dec. 30th.

LONG-TAILED TIT (*Aegithalos caudatus*).—Widely reported during the breeding season with the usual parties during the winter and autumn months.

MARSH TIT (*Parus palustris*).—Breeding season records were received from only 19 localities including counts of pairs as follows: 10 in 1,875 hectares of woodland at Ebernoe; 10 at Fore Wood; and 5 along the 5 miles of the Bluebell Railway. It was reported to be the dominant tit in downland scrub on the north escarpment in the Plumpton area.

This species is very much under-reported and there is little exact information on its distribution and status. Any such information and, in particular, counts from defined areas will be most welcome.

WILLOW TIT (*P. montanus*).—Reported from only 7 localities during the breeding season and a further 8 at the beginning or end of the year. This species is obviously very much under-reported and all records are now required at all seasons so that an accurate assessment of its distribution and status can be made.

COAL TIT (*P. ater*).—No repeat of last year's unusual numbers. Recorded on ten dates at Beachy Head between Sept. 16th and Nov. 11th with a max. of 5 on Sept. 17th. No evidence of birds of continental origin was noted.

GREAT TIT (*P. major*).—In the breeding season 34 pairs on the Bluebell Railway between South Park and Horsted Keynes (of which 24 were in nest boxes) raised 165 young. A poor year for the species was reported from the Ashcombe and

Housedean area W of Lewes where only 34 were ringed compared with 102 in 1977, with fewer juveniles and no large winter parties which were a feature of the previous year. A small westerly movement was noted at Pevensey Sluice on Oct. 8th and 16th involving 15 birds.

BLUE TIT (*P. caeruleus*).—A party of 40 was recorded on Ashdown Forest on Feb. 11th. 30 pairs (19 in nest boxes) along 5 miles of the Bluebell Railway raised 169 young. As with the previous species a poor season was reported from Ashcombe and Housedean with only 62 ringed as against 136 in 1977 and 109 in 1976 with very few juveniles, and at Fore Wood 81 pairs bred, a drop of 36%. The only movement reported was of 5 W at Pevensey Sluice on Oct. 8th and 5 W on Oct. 16th.

NUTHATCH (*Sitta europaea*).—Breeding season counts of pairs were received as follows:—7 along 5 miles of the Bluebell Railway; 2 in approx. 87 hectares of woodland at Wych Cross; 2 in approx. 125 hectares of woodland near Ebernoe Common and 5 in 100 hectares at Slinfold Village.

This species is very much under-reported and whilst it is known to be widespread in many woodland areas there is little accurate information on numbers. Details of distribution in the Downs, the coastal plain and in urban areas will be most welcome as well as breeding season counts from defined areas.

TREECREEPER (*Certhia familiaris*).—Breeding was recorded from various parts of the county, but only from the Brighton area on the coast.

GOLDEN ORIOLE (*Oriolus oriolus*).—Males were seen at Beachy Head on May 7th (NAGL) and 21st (SG, MEN) and South Chidham on 19th (JHME). A male was also seen away from the coast on June 15th.

RED-BACKED SHRIKE (*Lanius collurio*).—After the plethora of records in 1977—a poor year. None was seen in the spring. An early female appeared at Pett Level on July 7th. An immature male was at Sidlesham Ferry on Aug. 19-20th and at Beachy Head, a very late immature on Nov. 5th.

GREAT GREY SHRIKE (*L. excubitor*).—One on Ashdown Forest near Chelwood Vachery on Jan. 12th was followed by reports of at least 3 on the Forest generally from Mar. 6th to 26th, one remaining until May 2nd. Elsewhere there was one at Piddinghoe on Feb. 3rd and one near Bramletye on Feb. 16th.

In autumn single migrants appeared at Church Norton on Oct. 4th, Rye Harbour LNR on 15th, Amberley Wild Brooks on 22nd and Sidlesham Ferry on 30th. By Nov. 4th one took up winter residence at Horse Eye on the Pevensey Levels and another winterer found on Lullington Heath on Dec. 29th continued singing into the New Year.

JAY (*Garrulus glandarius*).—After the invasion of 1977 there were no reports of migrants at any time during 1978.

MAGPIE (*Pica pica*).—Gatherings of 10-20 birds were recorded from various parts of the county at the beginning of the year.

JACKDAW (*Corvus monedula*).—A pre-roost gathering of 2,200 birds was reported from Pea Down near Friston on Nov. 28th.

ROOK (*C. frugilegus*).—5 were recorded arriving from SW at Beachy Head on Apr. 28th. In the Goring-Durrington area where they previously bred, they were reported as absent, tree-felling being the main cause. Observers submitting records of rookery counts are asked to send a map reference and not just a place name.

CARRION CROW (*C. corone*).—On Jan. 16th, 100 or more were noted at roost at Goring and on May 13th over 60 were seen together on Horse Eye Level alone. In the Shoreham area and at Rye Harbour LNR noticeable increases in winter were reported.

The above reports suggest a current need for monitoring the population levels of this omnivorous species and any supportive evidence of a major increase in summer or winter would be most welcome.

HOODED CROW (*C. corone corvix*).—One was seen flying SW at Chichester G.P. on Apr. 2nd, and one, perhaps the same, on a shingle bank offshore at Selsey Bill on 23rd. At Rye Harbour LNR one was seen flying E on May 26th and again on Jun. 14th, and on Jun. 16th there was one in the Castle Pits area. There has been no summer record since 1948. It seems likely that one bird was involved. At the end of the year there was one at Rye Harbour LNR on Dec. 6th.

STARLING (*Sturnus vulgaris*).—The main feature of the year was the westerly movement at the start of the cold spell on Dec. 31st. At Norman's Bay, 1,950 flew W and 200 NW in 3 hours 0900-1200, whilst at Rottingdean an estimated 25,000 passed W in 1½ hours, 0930-1100 and at Hove an estimated 7,500 arrived from SE over a 1 mile front in 2½ hours, 1030-1300. There is little doubt that this was part of a major exodus from the Continent.

TREE SPARROW (*P. montanus*).—Counts received for Jan.-Mar. totalled some 850 at 8 localities including a max. of 500 at Wiggonholt on Mar. 16th.

A survey of 600 hectares of the Adur Levels between Bramber and Henfield during the breeding season revealed only 3-4 pairs. On 187 hectares at West Chilton, however, 5 pairs bred, 4 of them in nest boxes. At Slinfold the species was described as too common to estimate. Of 4 pairs in nest boxes at Maynard's Green 3 were successful and 24 young were fledged in 3 nest boxes along the 5 miles of the Bluebell Railway. On the Downs in the Kingston/Lewes area the continued use of occupied and vacated crows nests was reported and fledging success was good.

CHAFFINCH (*Fringilla coelebs*).—In Jan.-Mar. wintering flocks totalling 920 were reported over 6 localities including 300 at Wiggonholt in Jan.

During the breeding season 18 singing males were noted on the 20 hectares of Palfrey Copse and 4 pairs bred on approx. 87 hectares of woodland at Wych Cross. Along and near to the 5 miles of the Bluebell Railway 35-42 pairs were counted and at Fore Wood 13 pairs bred compared with 20 in 1977.

During the autumn the max. count at Beachy Head was 200 on Oct. 19th. Winter flocks were reported from only 4 localities at the end of the year, the max. being 200 at Cissbury on Dec. 9th.

An albino was seen at Ditchling on Feb. 26th.

BRAMBLING (*F. montifringilla*).—Widespread in parties of 1-5, occasionally more, in Jan. (4 localities), Feb. (13), Mar. (9) and Apr. (4) totalling some 94 birds. The last spring migrant was at Fairlight on Apr. 23rd.

The first record in autumn was of 2 at Fore Wood on Oct. 11th. At Beachy Head, 94 were recorded over 8 dates between Oct. 16th and Nov. 10th with a max. of 47 on Oct. 19th. Elsewhere there was only one bird seen in Nov., and Dec. produced only 21.

SERIN (*Serinus serinus*).—A male at Mewsbrook, Littlehampton, from Jan. 14th to May 2nd was joined by a second male from Apr. 9th to at least 20th (ASC, RG *et al.*). On spring passage singles flew E at Beachy Head on May 1st (a probable male) (DSF), May 9th (sex undetermined) (NAGL, TWP, MJR) and May 10th (a male) (DAP, MJR *et al.*). All records have been accepted by "British Birds".

GREENFINCH (*Carduelis chloris*).—At the start of the year wintering flocks reported included 100 at Wiggonholt and 200 at the Midrips in Feb. Some immigration was noted at Selsey Bill in mid-April.

In autumn little visible passage was observed although 300 were reported feeding in the Norman's Bay area on Oct. 22nd and 200 on Nov. 5th. By Nov. 29th 200 were flocking at Shoreham and 400 at Wiggonholt with a further 100 at Goring Gap on Dec. 10th. At Rye Harbour LNR the population increased to 600 in December.

GOLDFINCH (*C. carduelis*).—In Jan. the sole flocks reported were of 30 at Darwell Res. and 100 at Wiggonholt—the latter reducing to 50 by Mar. 16th.

Spring arrivals were noted in small numbers at Selsey Bill on Apr. 24th (max. of 90) and 29th and May 13th and 20th whilst at Beachy Head there was a max. of 160 arriving westwards on May 7th.

Between Sept. 27th and Oct. 12th feeding flocks totalling some 1,200 were reported from 6 coastal localities whilst at Pevensey Sluice 100 per hour were passing W on Oct. 2nd and steady passage continued until Nov. 5th. At Beachy Head peak movements were of 300 on Oct. 16th and 200 on 20th.

At the end of the year the largest gathering was once again at Wiggonholt with 200 there on Dec. 29th. The only other counts for the month were of 20 at Maynards Green, 12 at Lords Wood and 100 reducing to 20 at Langney Point.

SISKIN (*C. spinus*).—Although only 30 had been reported in Dec. 1977, reports from 9 localities in Jan. totalled 73 though this was still far below normal winter levels. In Feb. only 33 were seen and 19 in Mar. Ashdown Forest attracted good numbers of migrants in Apr., 'many' being reported on 8th, a flock of 67 on 16th, flocks totalling 113 on 17th and 30 on 25th. This was not reflected on the coast where there was but one at Beachy Head on Apr. 29th, though 8 were seen at Storrington on 26th. The Ashdown flocks may well have involved passage migrants returning to the Continent after the big influx of autumn 1977.

A single bird at Beachy Head on May 19th was one of several such late migrants from the Continent in recent years. Shrubbs (1979) does not mention records of this species during the summer months. One at Alfriston on June 13th is certainly only the 2nd record for the month since at least 1962, the last being at Rye on June 1st, 1973. Equally, 3 at Higham on Aug. 26th may have been unique for the county and connected with scattered breeding in south-east England in recent years.

Only 6 were seen on autumn passage at Beachy Head and only 25 elsewhere along the coast between Oct. 5th and Nov. 13th. The county total for Dec. was a meagre 55.

During winter months 6 instances were reported of birds feeding in gardens from bags of nuts.

LINNET (*C. cannabina*).—At the start of the year the sole flocks reported were of 30 in the Cuckmere in Jan. and 50 at Wiggonholt Common on Mar. 16th. A party of 20 on Ashdown Forest on Mar. 21st were considered to be spring arrivals. Spring passage at Selsey Bill was noted from Apr. 7th; 100 were counted at Goring on 10th and 200 at Climping on 16th. Arrivals continued to mid-May and 400 arrived to W at Beachy Head on May 7th.

During the breeding season 3 pairs were located along the 5 miles of the Bluebell Railway.

Autumn maxima at Beachy Head were of 700 feeding and 300 W on Oct. 8th and 200 W on 20th. At Selsey Bill on 5th, 150 were feeding and 50 flew N. Other Oct. gatherings included 200 at Shoreham Sanctuary on 14th and 300 at Cissbury on 25th.

Late autumn/winter flocks seemed scarce, the only reports being of 30 at North Point on Nov. 19th, a max. of 70 at Maynards Green on Dec. 2nd and 100 at Goring Gap on 10th. During the onset of the cold spell on Dec. 31st small numbers were noted passing NW all day at Brighton Marina.

TWITE (*C. flavirostris*).—Between Jan. 3rd and Feb. 20th up to 30 were present at Shoreham. There were 3 at Sidlesham Ferry on Jan. 9th, 1-2 in the Cuckmere during Feb., 2 at Newhaven on Feb. 17th and 10 at Rottingdean on 19th. At Rye 20-30 were on the Rother saltings from Jan. to mid-Feb. though 15 were still present at North Point on Mar. 26th.

The first at Rye in autumn were 6 on Oct. 28th increasing to 14 by Dec. 2nd, and at Shoreham 10 on Oct. 30th had increased to 35 by Nov. 29th. The sole other reports at the end of the year were of one at Sidlesham Ferry on Nov. 30th and 2 in Pagham Harbour on Dec. 9th and 26th.

REDPOLL (*C. flammea*).—Although reported from 17 areas during the early part of the year, including coastal areas in West Sussex, the only large flocks noted were 20 at Amberley Wild Brooks in Jan. and 100 at Wepham Wood on Feb. 13th.

During the breeding season there were records of 93 pairs or singing and displaying males—principally from the NE or N of the county including St. Leonard's Forest. There were also records from the west, but breeding season records were not received from most of the SE of the county this year.

Little if any spring passage was noted but on 4 dates in Oct. a total of 550 were reported from Beachy Head whilst small movements of up to 30 at a time were seen at Pevensey and Little Common in Oct. and early Nov.

At the end of the year the species was very scarce with fewer than 50 birds being found in total, these being at Arundel, Slinfold, Nutbourne, Horsham, Fore Wood and Ashdown Forest.

CROSSBILL (*Loxia curvirostra*).—During the year came a scatter of records typical of non-invasion years—9 (3 males) at Pett Level on May 26th; a female in a woodland area in the west during June; one passing over Cooden on Aug. 10th; and a male at Coombe Hill, Willingdon, on Sept. 21st.

HAWFINCH (*Coccothraustes coccothraustes*).—Although, in the past, this species has been regarded as under-reported due to its generally unobtrusive habits, its characteristic high-pitched flight-call is evidently attracting attention far more widely than in recent years. The presence of some large wintering flocks in west Kent since 1977 may be relevant. Even so, the puzzling lack of year-to-year continuity in breeding season records from any one favoured locality suggests the possibility that many such sightings merely relate to wandering individuals rather than secretive breeding birds.

After one at Ardingly on Jan. 10th, 3 were present near Horsham from 28th to Feb. 28th. One was seen at Brede on Feb. 19th and, at Lodsworth, a male appeared in Feb. and a female in Mar. One flew over Arundel Wildfowl Refuge on Mar. 24th.

At Fore Wood the species was present in Jan.-Feb. and from Apr. to July and 3 pairs were believed to have bred. Between mid-May and early Aug. reports also came from Lurgashall, Warham, Patcham, Stanstead Forest, near Petworth, Sheffield Forest, Maynard's Green and Slinfold.

All autumn records apparently related to migrants:—at Arundel Wildfowl Refuge on Oct. 5th; Beachy Head on 21st; Kingley Vale on 29th; Sidlesham Ferry on Nov. 8th; and Church Norton on 15th. The travels of one found in Brighton in Nov. had been summarily ended by a cat.

LAPLAND BUNTING (*Calcarius lapponicus*).—Three at Cuckmere Haven on Feb. 17th, one remaining to 19th (PJW, VAW). Three flew W at Pevensey Sluice on Oct. 23rd (PSR).

SNOW BUNTING (*Plectrophenax nivalis*).—In the Rye Harbour LNR/Camber Sands area up to 18 birds wintering from 1977 increased to 20 on Feb. 3rd and 17th, dwindled to 14 by Mar. 3rd and had departed by 25th. The sole record elsewhere was of 6 at Langney Point on Jan. 15th.

In autumn singles were seen at Pevensey Sluice on Nov. 5th and 20th, Langney Point on 19th, and Sidlesham Ferry on 25th. Two were at Pett Level on Nov. 20th and 3 on 30th. At Rye Harbour LNR, where the first for the autumn had been on Oct. 28th, one or 2 were seen occasionally until a wintering flock of 13 appeared on Nov. 24th, increasing to 15 by Dec. 27th. At a regular site for the species at Newmarket Hill, Brighton, 2 appeared on Dec. 18th.

YELLOWHAMMER (*Emberiza citrinella*).—During Jan.-Feb. gatherings of up to 70 were reported from 10 localities totalling some 600 birds including a roost of 200 at Fairlight. Counts of winter flocks of 10 or more remain welcome.

During the breeding season the following counts were received:—at a Sidlesham Farm, 18 pairs on 243 hectares (the max. in over 20 years); 10 singing males on 600 hectares of the Adur Levels between Bramber and Henfield; 12 on 20 hectares of Palfrey Copse; and 20-24 along the 5 miles of the Bluebell Railway. At Ashcombe Farm near Lewes it was thought that nearby scrub clearance on the Downs may have caused a big drop in ringing figures from 167 in 1976 to 54 in 1977 and only 37 in 1978.

Very few reports were received for the end of the year.

CIRL BUNTING (*E. cirius*).—After the 6 known pairs and one singing male in 1977 the sorry total for 1978 was just 2 pairs at Beachy Head, 2 in the Cuckmere and a singing male in the west of the county.

REED BUNTING (*E. schoeniclus*).—On a farm of 243 hectares at Sidlesham, 8-10 breeding pairs represented about half the numbers in 1975-76. Although 2 were found in clover fields the species was noted as having withdrawn from atypical nesting sites such as cornfields and hedgerows.

A singing male was present in open woodland at Palfrey Copse during June.

Also in June 46 pairs were located on 600 hectares of the Adur Levels between Bramber and Henfield. On Ashdown Forest the species was described as very common on heathland but in the more wooded country along the 5 miles of the Bluebell Railway only 3 singing males were found.

Of rare interest was the discovery of a clutch of 4 immaculate white eggs at Snaitham Marsh.

No records of autumn migrants were received from Beachy Head but 15 flew W at Pevensey Sluice on a typical date of Oct. 22nd. With the onset of the bitter weather on Dec. 31st, 40 were found feeding at Norman's Bay.

ESCAPES

(This feature will now be regularly published in order to promote the proper monitoring of the status of such species away from captivity).

MARABOU.—One over North Mundham on Sept. 5th was subsequently seen at a number of localities until it reached Pagham Harbour in late Oct.

WHITE STORK.—One at Ashburnham from Sept. 30th to at least Dec. 17th was identified by a Dutch ring and damage to two primaries in the left wing as identical to that found dead under power lines at South Heighton on Jan. 17th 1979, and which proved to have been a 9-year-old male retained for breeding purposes at Nieuwpoort Zoo, Netherlands, which escaped in spring, 1978. (See B.F.O. News, March, 1979: 4-5). It was doubtless the same as a ringed bird seen at Barnham on Sept. 18th. This individual was also recorded in Leicester in April and Berkshire in August.

CHILEAN FLAMINGO.—One was present in the county throughout the year.

ROSY FLAMINGO.—One was present in the county throughout the year.

BLACK SWAN.—A pair widely seen in 1977 apparently wandered independently during Jan.-Mar. but eventually bred at Maresfield Park, rearing 4 young. One reappeared in the Cuckmere in Nov.-Dec.

BLACK-NECKED SWAN.—One at liberty in the county for at least the past 2 years was possibly that at Falmer in Jan. and Shoreham in Feb.

BAR-HEADED GOOSE.—Two at Barcombe Mills Res. on Dec. 4th were doubtless connected with several at liberty in the county for at least the past 2 years.

BLYTH'S PIPIT; A BIRD NEW TO BRITAIN AND SUSSEX

By M. SHRUBB

Blyth's Pipit (*Anthus godlewskii*):—One was taken by a bird-catcher near Brighton on Oct. 23rd 1882. The skin is now in the British Museum (Tring), ex coll. Swaysland, reg. no. 83-10-10-1.

This skin was discovered by the late Ken Williamson when preparing his 1963 paper on the identification of Richard's and Tawny Pipits, labelled as a Tawny Pipit, under which identification it was recorded by T. Parkin in "Zoologist", 1883, and by Walpole-Bond in "History of Sussex Birds". The BOU Records Committee has now decided to accept Williamson's identification and admit the record as a Blyth's Pipit to the British List under Category "B" (birds not recorded during the past 50 years). It therefore constitutes the first British and Sussex record for this species and, in fact, there was no further European record until one was recorded in Finland in September 1975. A full discussion of the British record appears in the Bulletin of the BOC of June 1977 but, unfortunately, the only details of the original capture ever recorded were the date and approximate locality, a rather unsatisfactory basis for so rare a bird.

Blyth's Pipit breeds in the Eastern Palearctic, in Transbaikalia (USSR), Mongolia, southern Manchuria, western China, Tibet and Assam and winters in India and Ceylon. It is not, therefore, a very likely vagrant to Europe and a recent paper by Kitson (1979) shows that identifying it in the field is difficult. It will be interesting to see how long elapses before it is convincingly recorded again.

References

Kitson, A. R. "Identification of Olive-backed Pipit, Blyth's Pipit and Pallas's Reed Bunting" Brit. Birds Vol. 72, pp. 94-100.
Williamson, K. "Blyth's Pipit *Anthus godlewskii* in the Western Palearctic" Bull. B.O.C. 1977: 97(2).

SUMMARY OF BIRD RINGING IN SUSSEX IN 1978

Compiled by P. J. Wilson

The total number of birds ringed in Sussex in 1978 was 9,206 of 79 species, compared with 23,368 of 98 species in 1977.

This marked difference is largely due to the fact that neither Filsham Ringing Group nor one of the Beachy Head ringing stations were operating during the year. It was also a generally poor autumn for nocturnal migrants at the main ringing stations.

This is the last ringing report that I shall be compiling so please note that in future all totals and recoveries should be sent to:—

Roy Leverton, 36 Bonchurch Road, Brighton BN2 3PH

SNOW GOOSE (and BLUE SNOW GOOSE).—At least one of each phase widely seen in the county during the year.
CACKLING GOOSE.—One consorting with Canada Geese at Arlington Res. in 1976 may have been that at Bewl Bridge Res. in Jan.-Apr.
EGYPTIAN GOOSE.—One with Canada Geese at Sidlesham Ferry on Dec. 15th.

PARADISE SHELDUCK.—One at Arlington Res. on Dec. 30th.
NEW ZEALAND SHELDUCK.—One at Arlington Res. on Jan. 2nd.
WOOD DUCK.—A pair hatched 3 young at Arundel Park.
MANDARIN.—At least 2 pairs apparently resident in the county, one rearing 2 young in the wild near Horam.

LAYSAN TEAL.—One apparently of this species at Chichester G.P. on Feb. 3rd.
SULPHUR-CRESTED COCKATOO.—One in the Pagham Harbour area from Jan. 20th to Mar. 12th.

RING-NECKED PARAKEET.—Despite the colonisation of the Home Counties by this species, few records are being received for Sussex. Two were seen at Pagham Harbour on Jan. 21st and 3 pairs were found breeding at Hollingbury where one pair was present and probably bred in 1977. Two possibly of this species were seen near Polegate on May 4th.

WAXBILL SPECIES.—One at Selsey Bill on Aug. 11th.
GREEN SINGING FINCH.—One in song at Selsey Bill on Aug. 18th-19th.

ADDITION TO 1971 REPORT

BLACK-HEADED BUNTING (*Emberiza melanocephala*).—An adult male at Rye Harbour LNR on Sept. 8th (DSF, SCR). Although accepted by "British Birds" the possibility of captive origin cannot be excluded, particularly as autumn vagrants are usually immatures.

ADDITION TO 1976 REPORT

326. CETT'S WARBLER.—At Arundel Wildfowl Refuge, one from Oct. 31st to the end of the year, 2 on Nov. 9th and possibly 2 on Dec. 15th. These records have been accepted by "British Birds".

ADDITIONS AND CORRECTIONS TO 1977 REPORT

80. BRENT GOOSE.—A small party heard passing N over Barcombe at night on Mar. 11th.

145. SNIPE.—One "drumming" at Pett Level.

160. SPOTTED SANDPIPER.—The individual at Barcombe Mills Res. was a juvenile and was present from Nov. 3rd to 11th and not Nov. 23rd to Dec. 2nd as published.

213. WHITE-WINGED BLACK TERN (*C. leucopterus*).—Adult, Pagham Harbour, July 30th (D. J. Smith). This record has been accepted by "British Birds" and the following records, already accepted, were omitted in error: adult, Sidlesham Ferry, May 26th (CRJ, MS); a juvenile, Pett Pools, Aug. 27th to Sept. 10th, two on Sept. 2nd-3rd (CHD, JWH, EWS *et al.*).

BLUE ROCK THRUSH (*Monticola solitarius*).—Rye Harbour LNR, Aug. 10th (D. J. and T. Perkins). This record has been accepted by "British Birds" as a Category "D" species, the possibility of captive origin not being excluded.

370. RED-BREASTED FLYCATCHER.—One at Crowlink, Seven Sisters, on Oct. 8th (GWG).

SELECTED LIST OF RECOVERIES REPORTED IN 1978
Key to symbols and terms (Ring numbers are omitted)

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
- Note:** Even numbers indicate birds of unknown age, odd numbers indicate known age

Age

- 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

- ♂ Male
 ♀ Female

Distance

The distance is given in kilometres and the direction is approximate

BIRDS RINGED IN SUSSEX

Canada Goose	3	10.07.76	Chichester G.P. (CRG)
	v	02.07.78	Beaulieu Firth, Inverness. 775km NNW
	1	03.07.77	Chichester G.P. (CRG)
	v	02.07.78	Beaulieu Firth
Black-headed Gull			Both birds were controlled in the regular moulting flock at Beaulieu Firth, most of which come from Yorkshire. Movements of this length are without precedent for Canada Geese in this country
House Martin			Birds ringed on Worthing-Goring beaches were recovered during the year in Finland (5), Sweden, Denmark, Holland (3) and Belgium
Sand Martin			There were recoveries from Kent, Beds, Worcs, Dorset and Suffolk
Song Thrush			There were recoveries from Hants (3) and Dorset
Blackbird	3	21.10.77	Beaulieu Head (BHRG)
	+	19.02.78	Joncels, Bedarieux, (Hénault), France
	3 ♂	09.11.74	Beaulieu Head (BHRG)
	x	mid.02.78	Oelegem, (Antwerpen), Holland
	3 ♀	16.10.76	Beaulieu Head (BHRG)
	x	26.03.78	Epe, (Gelderland), Netherlands
	2 ♀	19.10.75	Lidlington (PIW)
Nightingale	x	13.08.78	Leck (Schleswig-Holstein), W. Germany
	3	07.08.75	Lidlington (PIW)
	v	14.05.78	Aldermaston G.P. (Berks). 110km WNW
Robin	3	11.08.77	Beaulieu Head (BHRG)
	x	14.02.78	Nozay, (Loire-Atlantique), France
Reed Warbler	3	30.08.77	Beaulieu Head (BHRG)
	x	19.05.78	Arbousa, Morocco
	x	14.08.78	Note the late departure from Africa
	4	(02.11.78)	Beaulieu Head (BHRG)
Blackcap	+		Cap Cantin, Safi, Morocco
	3 ♂	09.11.74	There were also recoveries from Hants, Yorks. and Essex
	x	14.01.78	Beaulieu Head (BHRG)
	x		Saintes, (Charente-Maritime), France
	2 ♀	21.10.77	Beaulieu Head (BHRG)
	()	10.15.02.78	Los Palacios (Savilla), Spain
			Another wintering bird
	2 ♀	11.09.77	Beaulieu Head (BHRG)
	x	00.02.78	Dovar Bouhal-ia, (Bab-Taza), Morocco
	2 ♀	26.09.77	Beaulieu Head (BHRG)
	x	12.05.78	Wisham, Chard, (Somerset) 220km W
Willow Warbler			There were recoveries from Lets., Derby, Norths., Kent and Surrey
Chiffchaff	2	26.09.77	Beaulieu Head (BHRG)
Spotted Flycatcher	x	08.05.78	Llandysul, (Cardigan)
	3	27.09.77	Beaulieu Head (BHRG)
	x	(28.05.78)	Thorpe, Norwich, (Norfolk). 218km NNE
Starling	2 ♂	23.12.75	Alfriston (PIW)
	x	25.04.77	Jægerum, (Jutland), Denmark
	4	25.02.76	Plumpton (RJJ)
	v	04.10.77	Heerenbroek, (Overijssel), Netherlands
Goldfinch	3J	04.09.77	Shoreham-by-Sea (JAN)
	x	05.01.78	Château Chiron, (Nièvre), France
Bullfinch	2 ♀	16.11.74	Beaulieu Head (BHRG)
	x	15.02.78	Weybónige, (Surrey). 85km NW
	x		Quite a journey for a normally sedentary species

Reed Bunting 3 ♀ 25.10.75 Shoreham-by-Sea (JAN)
 v 26.02.78 Banbury, Oxon. 150km NNW

BIRDS RINGED ELSEWHERE AND RECOVERED IN SUSSEX

Canada Goose	1	10.07.77	Fleet, (Hants)
	v	08.07.78	Chichester G.P. (CRG). 48km S
Black-headed Gull	1	22.06.77	Piersko Bytyn, Poland
	x	14.08.77	Nr. Lewes (RJJ)
Swallow			Birds were controlled on Worthing and Goring beaches that had been ringed in Poland, Belgium, Estonian S.S.R. and Holland (2)
	3	26.08.78	Par. St. Austell, (Cornwall)
	v	02.09.79	Chichester G.P. (CRG). 280km E
Reed Warbler			There were 2 controls, 1 each from Hants and Dorset
Reed Bunting	3	03.07.76	Spijkensisse, (Zuid Holland), Netherlands
	x	06.03.78	Sidlesham (MS)
			(Ring found in Kestrel pellet)

COASTAL COUNTS OF WADERS AND WILDFOWL IN SUSSEX AND EAST HAMPSHIRE 1978/79

By R. F. PORTER

This is the 16th year of the Sussex Ornithological Society's survey and once again it is encouraging to report that comprehensive coverage was achieved for the season's nine counts. The details for Chichester and Pagham Harbours are presented in Tables 1 and 2; Rye and Pett Level in Table 3; and the now annual Sussex coastline counts of January and February in Tables 4 and 5.

Most counts were simultaneous with those in Langstone and Portsmouth Harbours and the observations made there are included in the appropriate Tables. The winter under review being the coldest since 1963, was interesting in several respects, but particularly for the high number of dabbling ducks and Brent Geese.

The Teal population, for example, was the highest ever recorded in Chichester Harbour, reaching 1,636 in January. Wigeon numbers were also high, the January count of 1,189 in the harbour being well above the average peak. Flocks of this grazing duck move away from the harbours during the day to feed on grass meadows in the surrounding countryside thus the true figures for Chichester and, particularly, Pagham were much higher than the counts indicated. It should be remembered that these wader and wildfowl counts are always made at high tide and invariably in the middle of the day, and this in itself may bias the numbers of wildfowl recorded. In the case of Wigeon, casual observations at Pagham in January showed an evening influx of about 2,000 birds to roost in the comparative safety of the Harbour's salt marsh. These were not picked up by the counts. Counts of Pintail and Mallard, too, were larger than usual, and the peaks well above the average. The high numbers of these four species of duck are almost certainly linked with the fact that cold weather prevailed over much of Europe during January and February, so pushing birds off those continental wintering grounds which had become frozen over. In view of this it is surprising that grebes and diving ducks were in such low numbers. Perhaps these had moved even further south or west.

After the low counts of the last two winters, Shelduck numbers were back again to the level of the late 1960s and the first half of the present decade. It seems, therefore, reasonable to conclude that the low numbers were a result of a succession of mild winters which kept birds, that otherwise would have come to Britain, on the Danish coast (Porter, 1977). The alternative suggestion for the decline being that it was caused by the increase in algal growth which had brought about a reduction in *Hydrobia ulva*, the main food item of the Shelduck.

Dark-bellied Brent Geese have steadily increased in the West Sussex and East Hampshire harbours in recent years and the December and January counts of over 15,000 birds were the highest ever recorded. The reasons would appear to be

twofold. Firstly, no doubt the population was boosted by continental birds coming westwards as a result of the weather. Secondly, the species had a good breeding season, indicated by the number of young present (approximately 29%). 15,000 birds represents about 12% of the world and 25% of the British wintering population of dark-bellied Brent Geese (A. St. Joseph, pers. comm.). Thus, when cold weather prevails in Europe, southern England's relatively ice free estuaries assume even greater importance as sanctuaries for birds ousted from their normal wintering grounds. It is important that this is remembered when considering our international responsibility to protect these areas.

The trend witnessed over the last four winters, for Brent to move from their intertidal feeding grounds (where their diet is largely algae, *Enteromorpha* sp. and *Eel-grass*, *Zostera* sp.) onto grass and winter cereals continues. Table 6 shows that as early as the 30th December, 72% of the birds in Chichester Harbour were feeding terrestrially and high numbers were feeding in the fields in January and February. Caution must be exercised in interpreting the February figure, for numbers then were lower than expected in the harbours. This was probably because birds had moved further inland to feed and thus were missed. It is interesting to note that for the first time large flocks were feeding on winter wheat or barley, though it would appear that grass is still the preferred terrestrial food.

The move by Brent Geese away from their traditional food plants is being carefully monitored in the surveys, but more years of observations are necessary before too many conclusions can be drawn. Two tendencies, however, appear to be emerging. First, that more birds can be found in the fields in late January and February, presumably after food resources in the harbours have become scarce through grazing. Second, that a higher percentage of young feed on grass and cereals, than do on the intertidal foods.

Despite the cold weather, the wader populations in the western harbours with few exceptions, showed no major change in levels to those of the last few winters. Knot numbers, however, were much higher than normal, with a peak of 1,337 on 30th December, whilst, predictably, the snipe population was well below normal, doubtless due to the freezing over of freshwater marshes particularly on Thorney Island. It is interesting to note that the Dunlin counts in Chichester continued to show the pattern of high numbers in November and December, gradually dropping away as the winter progressed.

The regular counts at Rye Harbour and Pett Level which were resumed last winter, continued and were made simultaneously with those of the western harbours.

The two Sussex coastline wader counts were made after the onset of the cold spell. Little change to the numbers of previous winters was noted in most species. Four, however, were well down or absent, these being Lapwing, Golden Plover, Snipe and Jack Snipe. Lapwing numbers over the two counts averaged 3,592—21% of the mean (16,800) of the counts of the last three winters. Similarly Golden Plover were down to 26% of the mean of the previous three winters; Snipe to 15%, whilst Jack Snipe were not recorded at all. Frozen ground had presumably caused these largely non-intertidal species to move to where feeding conditions were more favourable.

Acknowledgements

Those responsible for undertaking these wader and wildfowl counts are acknowledged on page 7, and their continued support for the Society's longest running survey is greatly appreciated. I would like to thank once again D. F. Billett and D. J. Stevenon for supplying the Langstone and Portsmouth Harbour counts and to the latter for allowing us to publish data for these East Hampshire estuaries.

Reference

Porter, R. F. 1977. Coastal Counts of Waders and Wildfowl in Sussex and East Hampshire in 1977/78. *Sussex Bird Report*, 1977.

TABLE 1. WILDFOWL COUNTS IN PAGHAM, CHICHESTER, LANGSTONE AND PORTSMOUTH HARBOURS 1978/79

	1978 July 22nd	Aug. 19th	Sept. 16th	Oct.	Nov. 18th	Dec. 30th (A)	Jan. 27th (B)	Feb. 10th (C)	Mar. 17th (D)	Apr. 14th
Great Crested Grebe										
Pagham	5	10	21	4	1	1	6	1	1	6
Chichester	4	3	12	8	5	7	13	7	13	2
Langstone	—	—	29	54	4	10	4	10	4	—
Portsmouth	—	—	—	—	—	—	—	—	—	—
Silvian Grebe										
Pagham	—	—	—	—	—	—	2	1	—	—
Chichester	—	—	3	1	1	—	2	3	—	—
Langstone	—	—	—	—	—	—	—	—	—	—
Portsmouth	—	—	—	—	—	—	—	—	—	—
Black-necked Grebe										
Pagham	—	—	—	—	—	—	—	—	—	—
Chichester	—	—	—	—	—	—	—	—	—	—
Langstone	—	—	—	—	—	—	—	—	—	—
Portsmouth	—	—	—	—	—	—	—	—	—	—
Little Grebe										
Pagham	1	2	11	12	22	12	18	3	8	3
Chichester	6	8	6	25	35	25	26	13	29	7
Langstone	—	—	2	1	16	—	15	4	12	4
Portsmouth	—	—	—	—	—	—	—	—	—	—
Mallard										
Pagham	350	10	297	189	418	189	139	213	137	85
Chichester	108	166	148	297	316	544	330	330	197	52
Langstone	57	143	46	80	55	84	84	68	15	—
Portsmouth	34	48	148	191	191	145	107	82	26	8
Teal										
Pagham	8	29	132	948	900	700	84	400	4	2
Chichester	5	60	380	900	900	471	1636	979	339	11
Langstone	—	—	—	87	2	87	87	345	150	—
Portsmouth	—	—	—	—	—	—	—	47	—	—
Wigeon										
Pagham	1	1	2	15	142	503	154	117	3	—
Chichester	—	—	—	—	1205	1000	1076	781	86	—
Langstone	—	—	—	—	—	—	—	—	—	—
Portsmouth	—	—	—	—	—	—	16	82	—	—
Pintail										
Pagham	—	—	—	—	18	57	75	180	9	—
Chichester	—	—	—	—	136	112	113	158	68	2
Langstone	—	—	—	—	10	47	98	119	7	—
Portsmouth	—	—	—	—	—	—	2	—	—	—
Shoveler										
Pagham	6	2	9	20	30	12	3	3	5	4
Chichester	—	—	—	—	77	128	97	111	62	—
Langstone	—	—	—	—	—	—	—	—	—	—
Portsmouth	—	—	—	—	—	—	—	—	—	—
Goldeneye										
Pagham	—	—	—	—	1	3	14	8	—	—
Chichester	—	—	—	—	27	35	50	56	51	—
Langstone	—	—	—	—	9	24	90	101	26	—
Portsmouth	—	—	—	—	—	22	52	—	—	—
Eider										
Pagham	14	9	2	4	4	1	1	1	10	—
Chichester	13	—	8	—	—	2	3	7	—	—
Langstone	—	—	—	—	—	10	—	—	—	—
Portsmouth	—	—	—	—	—	—	—	—	—	—
Red-breasted Merganser										
Pagham	—	—	—	—	8	5	1	1	7	10
Chichester	—	—	—	—	46	48	18	22	34	31
Langstone	—	—	—	—	11	122	20	38	34	—
Portsmouth	—	—	—	—	—	27	29	—	—	—
Shelduck										
Pagham	130	35	54	162	588	554	466	600	181	232
Chichester	246	155	141	588	87	1072	1841	3130	2317	699
Langstone	5	7	12	87	—	483	1079	1565	725	400
Portsmouth	10	—	—	—	—	166	2	672	237	27
Brent Goose										
Pagham	—	—	—	—	865	1200	1500	150	178	2
Chichester	2	2	—	—	2332	4700	5529	4914	2377	70
Langstone	—	—	—	—	—	—	—	—	—	—
Portsmouth	—	—	—	—	—	1317	947	—	798	53

(A) Dec. Langstone wildfowl counted on 16th
 (B) Jan. Langstone wildfowl counted on 13th
 (C) Feb. Langstone wildfowl counted on 10th
 (D) Mar. Portsmouth wildfowl counted on 18th

TABLE 2. WADER COUNTS IN PAGHAM, CHICHESTER, LANGSTONE AND PORTSMOUTH HARBOURS 1978/79

	1978		1979					Apr. 14th		
	July 22nd	Aug. 19th	Sept. 16th	Oct.	Nov. 18th	Dec. 30th	Jan. 27th		Feb. 10th	Mar. 17th
Oystercatcher										
Pagham	158	126	148		198	330	177	263	324	204
Chichester	469	421	1004		1370	906	607	883	708	423
Langstone	509	1132	1187		1300	1000	1373	985	1026	370
Portsmouth	42	211	164		85	330	110	9	150*	59
Lapwing										
Pagham	88	15	81		183	574	96	345	112	45
Chichester	795	1846	1045		1809	2990	1145	1585	323	73
Langstone	180	300	300		641	901	257	401	60	2
Portsmouth	116	155	114		60	110	115	170		
Ringed Plover										
Pagham	67	207	210		134	50	45	52	74	106
Chichester	85	778	505		337	278	155	142	89	12
Langstone	21	250	175		380	82	9	13	27	6
Portsmouth	4	295	300		34	35	60	79	19	8
Grey Plover										
Pagham	33	151	252		344	365	57	247	522	183
Chichester	37	1140	1300+		1046	765	581	553	694	567
Langstone	12	365	640		644	713	343	698	382	263
Portsmouth		2			28	75	280	302	180	
Golden Plover										
Pagham	4	67	122		25	327	937	192	300	
Chichester			323		154	210	2	56		
Langstone										
Portsmouth										
Turnstone										
Pagham	4	30	145		180	81	309	330	113	39
Chichester	48	163	155		201	63	103	36	36	105
Langstone	10	46	77		26	107	41	88	46	65
Portsmouth		8			1	16	70	43		
Snipie										
Pagham	3	23	47		1	6	6	4	4	1
Chichester	1	2	13		75	100	7			8
Langstone										
Portsmouth										
Jack Snipe										
Pagham										
Chichester										
Langstone										
Portsmouth										
Curlew										
Pagham	336	330	204		116	116	101	22	155	146
Chichester	1305	1722	1321		721	926	921	726	1241	721
Langstone	700	700	664		594	1070	416	594	410	150
Portsmouth	500	530	575		314	200	210	170	170	180
Whimbrel										
Pagham	24	30								1
Chichester	168	59	13							
Langstone										
Portsmouth										
Black-tailed Godwit										
Pagham	14	32	10		79	12	14	1	153	170
Chichester	260	396	642		603	256	218	119	446	170
Langstone	42	162	354		131	369	74	168	159	158
Portsmouth	6	100	192				6			
Bar-tailed Godwit										
Pagham	306	629	1024		839	1268	819	1200	323	4
Chichester	70	158	273		355	714	285	263	343	59
Langstone										363
Portsmouth										
Redshank										
Pagham	380	19	318		157	317	122	157	142	79
Chichester	2373	2621	1823		1667	1339	1101	745	1346	262
Langstone	458	1491	1342		553	422	40	295	239	106
Portsmouth	350	840	750		134	60	31	170	210	33
Spotted Redshank										
Pagham	18	11	21		2	6	3	1	2	1
Chichester	1	3	4		1	1	1	1	1	1
Langstone										
Portsmouth										
Greenshank										
Pagham	2	66	76		1	13	2	1	3	1
Chichester	54	32	93							
Langstone	8	8	6							
Portsmouth										

* Pett Level counts made on 20th August and 17th September.

TABLE 3. COUNTS OF SELECTED SPECIES OF WILDFOWL AND WADERS AT PETT LEVEL AND RYE HARBOUR, JULY 1978-MARCH 1979 (Co-ordinated by R. Knight and P. W. Rouse)

	1978		1979										Mar. 18th	
	July 22nd	Aug. 19th	Sept. 16th	Oct.	Nov. 18th	Dec. 30th	Jan. 27th	Feb. 10th	Mar. 17th	Apr. 14th				
Great Crested Grebe														
Little Grebe														
Mallard	13	22	25		26	27	27	27	27	27	27	27	27	27
Teal	42	125	114		243	220	220	220	220	220	220	220	220	220
Shoveler	25	22	15		59	375	61	41	41	41	41	41	41	41
Tufted Duck	15	47	6		16	54	17	44	44	44	44	44	44	44
Pochard	21	72	21		79	165	181	129	54	54	54	54	54	54
Goldeneye					81	12	96	54	27	27	27	27	27	27
Common Scoter					9	3	7	8	7	7	7	7	7	7
Eider	550				9	3	201	402	13	13	13	13	13	13
Shelduck	159	36			29	17	77	88	66	66	66	66	66	66
Coot	138	199	258		420	850	1056	1190	482	482	482	482	482	482
Oystercatcher	350	395	550		542	570	435	435	435	435	435	435	435	435
Lapwing	383	880	1048		2900	13000	230	1100	351	351	351	351	351	351
Ringed Plover	26	2			21	19	18	16	53	53	53	53	53	53
Grey Plover					24	51	60	56	26	26	26	26	26	26
Golden Plover	17	139	91		11	1040	17	110	250	250	250	250	250	250
Turnstone	2	14	12		82	330	45	67	90	90	90	90	90	90
Snipie														
Jack Snipe														
Black-tailed Godwit	134	203	241		320	205	1	318	301	301	301	301	301	301
Curlew	29	14												
Common Sandpiper														
Wood Sandpiper														
Green Sandpiper														
Redshank	57	191	219		209	63	65	58	125	125	125	125	125	125
Spotted Redshank														
Greenshank	2	13	4											
Knot														
Dunlin	112	139	107		130	710	968	285	53	53	53	53	53	53
Sanderling														

* Pett Level counts made on 20th August and 17th September.

THE DISTRIBUTION AND POPULATION OF THE NIGHTINGALE
IN SUSSEX 1974-1977

By W. MERRITT

Introduction

The Nightingale (*Luscinia megarhynchos*) holds a special place in the hearts of ornithologists as much as, if not more than of laymen, and yet little data exists on its present status within Sussex or the United Kingdom as a whole. What little information there is is both fragmentary and contradictory as to whether the species is declining or increasing—most observers intuitively tending to the former view without valid reasons for their choice.

It was learnt in 1973 that the British Trust for Ornithology proposed to remedy the situation by organizing a national survey in 1976. The Sussex Ornithological Society (S.O.S.) decided that several years of preparatory work would be needed (to recruit sufficient observers, find all extant sites, and iron out all the inevitable faults in administration) before the actual census year, and, further, that 1977 might well be needed to fill in some final detail. The years 1974-1977 inclusive were therefore chosen for the survey.

Method

Each year of the survey special census forms accompanied the March edition of the Society's newsletter, in which an article explained the aims and methods of the survey. Members were asked to notify me of the areas they proposed to cover, or alternatively to ask for an area to cover. In this way duplication of cover (effort) was avoided. In either case observers were supplied with all records for the previous 10 years for the area to be covered. The census period in each year was from the second week in May to the first week in June inclusive and the presence of a singing male (δ) was taken as evidence of an occupied territory. Members were asked to provide the following information:— date, number of singing $\delta\delta$, locality by means of a six-figure one inch O.S. map reference, and a classification of the habitat into one of the following categories—oakwood (A), hazel coppice (B), thorn scrub (C), young coniferous plantation (D), or miscellaneous (E). Special teams were used to cover the Burwash, Battle, Brede area in 1976 and 1977.

Results

The numbers of singing $\delta\delta$ for each year of the survey were:— in 1974, 256 from 101 tetrads; in 1975, 180 from 79 tetrads, of which 40 were new to the survey; in 1976, 661 from 246 tetrads, of which 166 were new; and in 1977, 260 from 117 tetrads, of which 29 were new. A tetrad is a 2x2 km. square of the national grid. In the years 1974-77 inclusive, singing $\delta\delta$ were reported in at least one year from 336 different tetrads; if the maximum number of singing $\delta\delta$ recorded in any one of the four years of the survey for each of the 336 tetrads is added together a total of 870 singing $\delta\delta$ is obtained, giving a density of 2.6 singing $\delta\delta$ per tetrad. Of the 336 tetrads, 159 had just one singing δ each, 65 had 2 singing $\delta\delta$ each, 38 had 3 singing $\delta\delta$ each, and 23 had 4 singing $\delta\delta$ each. The four most densely populated tetrads had respectively 12, 14, 19 and an outstanding 23 singing $\delta\delta$ each in at least one of the survey years.

TABLE 4. SUSSEX COASTLINE WADER COUNT—27th JANUARY, 1979

Species	Chichester	Pagham	Climping-Middleton	Goring-Ferring	Shorham	Newhaven Tide-Mills	Cuckmere	Pevensy	Pett Level (28th)	Rye Harbour	Totals
Oystercatcher	607	177	185						200	450	1539
Lapwing	1145	96	6		300	150	200	800	120	30	2927
Ringed Plover	155	45	32	131	30	12	23		60	18	446
Grey Plover	581	57	83	173			4		17		958
Golden Plover	937										958
Turnstone	63	309				40	42	32	200	25	604
Snipe	73	7						11	20		218
Jack Snipe											0
Curlew	921	101	2			2	3		200	6	1233
Black-tailed Godwit	218	14									232
Bar-tailed Godwit	819	16	2		2					6	845
Redshank	1101	122	5	18	250	23	27	6	12	53	1917
Knot	760										760
Dunlin	12642	1720	88	340	850	150	80		28	940	16838
Sanderling	14		17	82					1	70	184
Purple Sandpiper				3		24					27
Ruff	1										1
											Total 28625

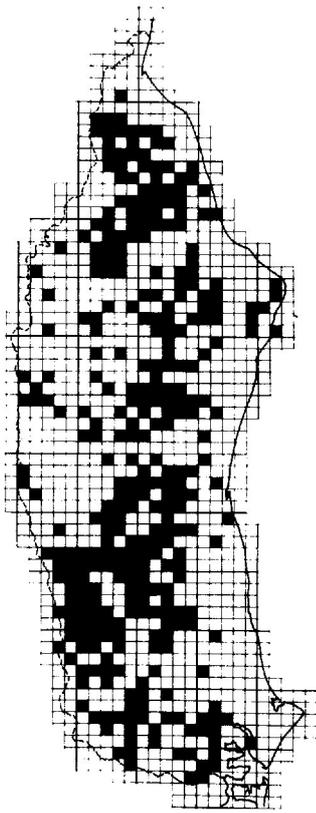
TABLE 5. SUSSEX COASTLINE WADER COUNT—10th FEBRUARY, 1979

Species	Chichester	Pagham	Climping-Middleton	Goring-Ferring	Shorham	Newhaven Tide-Mills	Cuckmere	Pevensy	Pett Level	Rye Harbour	Totals
Oystercatcher	883	263	172	4	300	200	260	460	43	410	1775
Lapwing	1585	345	8		50	10	27		80	300	4258
Ringed Plover	142	52	34	123	50	10	27		50	16	453
Grey Plover	553	247	93	184					50	6	1133
Golden Plover	192				12	1	280	10	100	10	593
Turnstone	103	330	2	14		14	200	14	200	10	673
Snipe	66	4			1	50	65	28	40	27	281
Jack Snipe											0
Curlew	726	22				2			300	18	1088
Black-tailed Godwit	119										120
Bar-tailed Godwit	1200	5	7						15	43	1272
Redshank	745	157	1	23	150	15	24	4	15		1177
Knot	27										27
Dunlin	9510	1261	300	300	1000	100	65	70	100	180	12586
Sanderling	7		130	62						75	215
Purple Sandpiper						24					24
Ruff											0
											Total 25663

TABLE 6. Number and percentage of total population of Brent Geese feeding on grass or winter cereals in Chichester Harbour during mid-winter estuary counts. 1978/79

	Dec. 30th	Jan. 27th	Feb. 10th
Total count	7784	8143	5914
No. on grass	3280	928	2089
% on grass	42%	11%	35%
No. on winter wheat/barley	2300	2000	887
% on winter wheat/barley	30%	25%	15%

Fig. 1. Distribution of the Nightingale 1974-77 inclusive



Key
 ■ At least one singing ♂ in at least one of the four years

The following table gives the maximum number of singing ♂♂ for each tetrad added together to give 10km totals:—

SU 70—5	TQ 10—3	TQ 42—9	TQ 82—41
SU 71—3	TQ 11—28	TQ 43—4	TQ 92—2
SU 72—10	TQ 12—43	TV 59—7	
SU 80—17	TQ 13—22	TQ 50—39	All other part
SU 81—12	TQ 20—3	TQ 51—26	or whole 10km
SU 82—29	TQ 21—44	TQ 52—6	squares had no
SU 90—8	TQ 22—22	TQ 53—2	singing ♂♂
SU 91—27	TQ 23—6	TQ 61—21	See map
SU 92—61	TQ 30—4	TQ 62—36	
SU 93—8	TQ 31—28	TQ 63—3	
TQ 00—10	TQ 32—19	TQ 70—3	
TQ 01—27	TQ 33—5	TQ 71—57	
TQ 02—92	TQ 40—7	TQ 72—10	
TQ 03—21	TQ 41—28	TQ 81—13	

The numbers of observers helping were 48 in 1974, 63 in 1975, 132 in 1976, and 66 in 1977. It is thought that about 180 different observers took part, which made it one of the most popular breeding surveys conducted in the county.

Coverage was good with virtually all the county being visited at least once in one of the four years, and most of it at least twice.

Fig. 1 gives the distribution of the species in the years 1974—1977 inclusive on a present or absent basis.

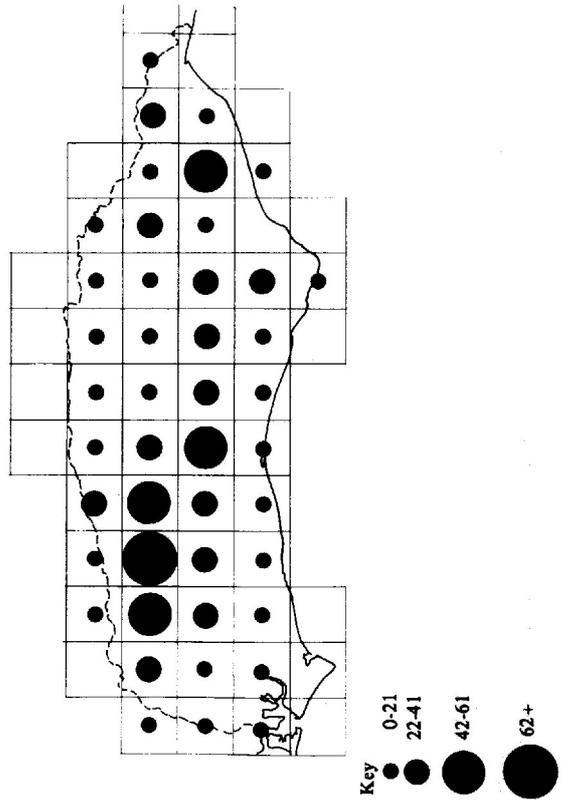
Fig. 2 gives a visual indication of the relative abundance of the species on a 10km. square basis.

The most comprehensive habitat data relates to 1976, when details were provided for 336 out of a total of 661 ♂♂ as follows:—

- A (oak wood)—48 singing ♂♂ (14% of sites for which data was provided)
- B (hazel coppice)—35 singing ♂♂ (10%)
- C (thorn scrub)—192 singing ♂♂ (57%)
- D (young coniferous plantation)—27 singing ♂♂ (8%)

Smaller percentages were reported from various combinations of A, B, C and D. In the miscellaneous category (E) 2 singing ♂♂ were reported from overgrown orchards and 2 singing ♂♂ from willow carr (*salix*).

Fig. 2. Max. number of singing ♂♂ during period 1974-77 inc. for each tetrad added to give 10km square totals



Key
 ● 0-21
 ● 22-41
 ● 42-61
 ● 62+

Discussion

A Nightingale survey is most easily carried out during the normal song period of the species, from mid-April to early June, but the accuracy of such a census would be limited by the number of singing birds located which may only be on passage through the county. To avoid this, either each site has to be visited at least twice at an interval of not less than a fortnight—passage birds are unlikely to stay more than a week—or the census has to avoid the peak passage period of mid-April to the first week in May. The latter option was chosen because of the limited time available to most observers.

The weather during the census period is critical—cool, windy or wet weather causes a virtual cessation of song, and this was undoubtedly the cause of the relatively poor results in 1975 and 1977. ♂♂ also sing less frequently in areas of low abundance, presumably because of the lack of competition. It might therefore be thought that the absence of the species from most of the forest ridges between Horsham and Rotherfield is more apparent than real, but this is not the case; the absence is considered genuine because tape recorder challenges (which are almost always answered if birds are present) have been used without response in these and other poorly populated areas.

There is no quantitative data relating to the period prior to the establishment of the S.O.S. In the years immediately preceding the survey i.e. 1966-1973 inclusive, figures from the Society's records show a combined tetrad maximum of 405 singing ♂♂ from 149 tetrads. The lower figures are to be expected, since no special efforts were being made by observers to find the species. What is interesting is that the density of 2.7 singing ♂♂ per tetrad is virtually identical to that found in this survey, which could suggest that the population of the species has been constant over the last 15 years.

Sharrock (1976) refers to "13.8 pairs per km² in the mature yew/oak and associated shrub growth at Kingley Vale NNR (Sussex)". I think that this is misleading from two points of view. Firstly, the figure quoted of 13.8 pairs appears to be an extrapolated figure presumably relating to the 8 singing ♂♂ present in 1968. The extrapolation means that 8 singing ♂♂ had territories totalling 0.57 km² which is a figure and density I do not believe possible, and I do not think it is a valid exercise to extrapolate in these circumstances. Secondly, the proper description of the habitat is "close growing shrub with mature oak and young yew" (Williamson 1978). The suggestion, reading Sharrock, is that the birds breed in mature oak and mature yew which is clearly inaccurate.

Parslow (1967) quotes data suggesting that the United Kingdom population was low in the 1930s, that it rose during the 1940s, and reached a high in the early 1950s from which it has since declined to a level similar to that of the 1930s. Most people, if asked about the population of the species in the past compared with the present, would for subjective reasons say that the species had declined, but this may simply be because they tend to remember the "recent" years of plenty and forget the "distant" lean years. Certainly there are cases of local decline in Sussex over the last 15 years, such as Rewell Wood (SU 9808), Bexley Hill (SU 9024), Verdley Wood (SU 9026), Clapham Wood (TQ 1006), Dover House (TQ 0606), Little Bognor (TQ 0020), Flexham Park (TQ 0022), Marlpost Wood (TQ 1424), and Darwell Wood (TQ 7018/7020), but these have been due to reafforestation from deciduous to coniferous woodland. This raises a question, as yet unanswered, as to whether the species actually nests in young coniferous plantation or does it nest in adjacent thorn scrub simply using the coniferous plantation perhaps for feeding? Nobody seems to have documented cases of the species occurring in areas where it had never previously occurred because of the creation of suitable habitat. And yet, after all, succession to climax woodland in southern England is an established fact. At best a site would remain suitable for the species for a maximum of 20 years in the absence of grazing and on this basis 5% of the population must move to new sites in any one year—hence the moan "they used to breed at the bottom of my garden"?

The present situation, with the species being present in 336 tetrads out of a total of 1008 tetrads, is thought to be a healthy one, especially considering that of the remaining 672 tetrads many are either too high (the species appears to avoid hilly ground over 400' e.g. the forest ridges and the Downs), in built up areas, or simply lack suitable habitat e.g. Pevensy Levels. There cannot be many counties, even in SE England, with the breeding density per 10 km² that occurs in Sussex. There are however still many tetrads with what appears to be suitable habitat but with no Nightingales. Either we do not know precisely what constitutes essential habitat for the species, or the population is at as low an ebb as Parslow suggests. If the former is true, more research is needed—which might make it clearer why the breeding densities around Kirdford/Plaistow/Wisborough Green are high relative to the rest of the county.

The data on habitat suffers from ambiguities in that one observer may classify a site as A, whereas another may see it as A/C; most of the sites known to me personally should really be classified as various combinations of A, B, C, D or E. A further question arises as to whether one can distinguish between nesting habitat and feeding habitat.

A common denominator in virtually all Sussex sites is the presence of impenetrable hawthorn/blackthorn/bramble scrub, be this in the form of actual

thicket within a derelict hazel coppice with oak standards woodland, an old parish boundary hedge on its own, or pioneer scrub on commonland/downland. Another factor common to the sites is their general dampness and the absence of grazing by farm animals—many sites were provided by fenced-off thorn thickets by the side of a stream or pond.

Past authors have talked as if coppice woodland is the classic habitat for the species. It is true that in Sussex the major concentrations are where coppicing is still carried out, but this conjunction seems to be coincidental as the coppice is 99% sweet chestnut in which the species rarely, if at all, nests. There is a great deal of hazel coppice woodland in Sussex, but most of it is derelict due to economic factors. If it does hold Nightingales it appears to be because of the presence of thorn. A form of coppicing which is beneficial to the species in the county is the periodical clearance of the rides under high voltage power lines where they cut through woodland, thus encouraging the growth of thick undergrowth.

What of the future? The main factor working against the maintaining of present population levels, other than the vagaries of the climate, is the gradual and almost imperceptible deterioration of habitat due to succession to climax woodland. Many of the commonlands which hold a considerable proportion of the county's population e.g. Milton Hide near Hailsham, Markstake Common near Chailey, Lodsworth Common, Strood Green near Wisborough Green and Steers/Great Common near Kirdford are already experiencing changes which mean that the ground flora/undergrowth is being shaded out and the Nightingale will move out in the not too distant future unless measures are taken. Active intervention i.e. the felling of young oaks to let in light to bring back a thick tangled undergrowth is often misunderstood by the layman and ornithologist alike and thought to be against the interests of conservation. Even supposing this opposition can be overcome the problem remains in these times of economic stringencies of who will pay for such management programmes? Should the farmer be given a subsidy to do it? Or should the County Council do it through its job creation scheme? Perhaps it will in the end be left to the local conservation bodies like the Sussex Trust for Nature Conservation and the S.O.S. to try and maintain some suitable habitat for this most attractive of songsters.

Summary

A breeding survey of the Nightingale (*Luscinia megarhynchos*) was carried out in the years 1974-1977. Results gave a breeding density of 2.6 singing ♂♂ per tetrad. Earlier records are discussed which suggest the population may have been constant for the last 15 years. It is considered the present population level is healthy. Reasons for local declines are discussed, and the question of what constitutes suitable habitat is examined. Suggestions for the future conservation of the species are made.

Acknowledgements

I would like to thank all the members of the S.O.S. who took part in the survey, especially those who spent the small hours searching for the species. I am also grateful to the members of the Scientific Committee for their patience in waiting for this paper, and to T. W. Parmenter who drew the maps. Finally I would like to thank Ted and Viv of the Salvation Army without whose help this paper would never have been written.

References

- Parslow J. L. F. 1967. Changes in status among breeding birds in Britain and Ireland. *Brit. Birds* 60 pp. 403-4.
Sharrock J. T. R. 1976. The Atlas of Breeding Birds in Britain and Ireland. Berkhamsted.
Williamson R. 1978. The Great Yew Forest. London.

THE BREEDING SEASON STATUS OF THE REDPOLL IN SUSSEX

By J. W. HOUGHTON

The Redpoll, *Carduelis flammea*, is distributed throughout most of England, Scotland, Wales and Ireland, and is a numerous breeder (order 6) everywhere save in the Outer Hebrides, Orkney, West Wales, Cornwall (breeding in these areas only having been confirmed in the late 1960s) and apparently Avon, Wiltshire and most of Somerset (Parslow 1976). Re-afforestation by conifers of the upland moors in the north and west, and the increase of land under commercial woodland cultivation in central and southern England has assisted this finch to build up its numbers considerably (Parslow 1976). The B.T.O. Atlas Survey 1968-72 estimated that the total population for England, Wales, Scotland and Ireland was at least 300,000 pairs and might be twice that figure. Numbers began to build up from 1950 but a four-fold increase has been detected between 1964 and 1974 and it was confidently asserted that the Redpoll population in the British Islands was greater in 1974 than it had been for at least a hundred years (Parslow 1976). It should also be mentioned that an increase and spread in 1900-10 was followed by a decline and disappearance from many areas in the 1920s (Parslow 1976).

Our knowledge of the breeding season status of the Redpoll in Sussex over the years has been patchy and subject to generalisation. Walpole-Bond (1938) was unable to trace "wild" breeding in Sussex before 1894 although he tacitly draws the distinction between discovery and existence. Furthermore Walpole-Bond gives little information as to the breeding numbers but describes the species as excessively local, with breeding pairs or small colonies of not more than eight separated by several miles from others of their kind. He also recorded that numbers of breeding pairs were subject to fluctuation from year to year and noted the abandonment, for several years, of sites which still appeared suitable. Although Walpole-Bond does not give or estimate numbers, reading between the lines, the county population was probably fewer than 50 pairs. The principal breeding area was given as a rough oblong 35 miles long, 10 miles wide encompassing areas between Tunbridge Wells—just in Kent—in the north-east, Loxwood in the north-west, and Storrington and Heathfield in the south-west and south-east respectively. Breeding was also reported at Midhurst, West Harting, Milland, Walderton, Wiston, Bramber, Battie, Brightling and St. Leonards-on-Sea, but apart from Midhurst and St. Leonards-on-Sea where breeding took place annually, these were isolated records from 1895 to 1929.

Because it was felt that in recent years the Redpoll had been under-recorded during the breeding season and in order to ascertain if a spread and increase in numbers had occurred, the author was invited to undertake a private survey which was conducted during 1976, 1977 and 1978.

Method

It is not known whether the Sussex breeding stock leaves the County during the winter months but numbers are swollen in the Autumn by birds from further north and subsequent cross channel movement is noted. Walpole-Bond, however, does not give an opinion whether this traffic includes local birds. The reverse movement takes place from early Spring until the end of April and early May and to avoid confusion with passage birds it was decided that the survey should be conducted during the months of May, June, July and August. At its inception the survey suffered from four principal constraints.

- i) Many members considered the Redpoll to be a drab and unexciting species and in consequence participation was likely to be small.
- ii) Its flight call and song—its usual betrayal of its presence particularly in the breeding season—are either insufficiently known or overlooked by many members who normally participate in survey work.
- iii) Its strongholds particularly in the north-east and south-east—away from the coast—are underwatched, especially the former area.

iv) Due to its catholic choice of breeding habitat, at least in counties where it breeds much more densely, it should be possible to find Redpoll in the majority of Sussex habitats, and in parts of the county where they might breed very thinly they were likely to be overlooked.

All four factors, but especially the shortage of observers, precluded a full census being undertaken in any one season of the three year survey and the numbers of breeding pairs given in Table 1 represent the peak numbers found irrespective of year. There was insufficient manpower to go back in subsequent years to every site.

The object of the survey was to prepare a map showing tetrads in which breeding was confirmed or suspected and those in which the species was considered absent so that future expansion or decline could be measured. Observers who had previously submitted records of Redpoll in either the breeding or winter months were asked to participate and in all 23 people took part. Where they had submitted previous breeding season records they were asked to revisit the areas concerned to determine whether the numbers of pairs had increased. More particularly all participants including members who had not submitted records before were asked to search in all suitable breeding areas in their districts. All negative reports were requested too. Additionally members who were participating in the Nightjar survey which was undertaken during June-August 1977 were asked to report Redpoll and some useful coverage and observations were obtained in this way as Redpoll are particularly active at dusk. B.T.O. Site Register work covered further ground. Apart from numbers, information was sought as to whether breeding was colonial or scattered and detail of nest sites was asked for. As it is very difficult to detect nests and because of the limited coverage and not least to avoid disturbance, all singing and displaying males (even single birds) and adults with parties of young birds during the period May-August, were accepted as proof of probable breeding.

Coverage

Despite the limited number of observers all those areas where Redpoll are likely to have bred in strength were visited. The B.T.O. Atlas quotes instances of this species breeding on farmland, but very thinly and it would be surprising if this did not occur in Sussex. However, in view of the relative scarcity of Redpoll in several southern counties it is unlikely that lack of coverage in some areas (see Fig. 1) which are principally areas of high agricultural activity and urban development, has materially affected the results of the survey.

Breeding numbers and distribution

During the three years of the survey Redpoll were found breeding or there was evidence to support it at 150 sites in 120 tetrads (2 x 2 km squares) as depicted in Fig. 1. It was decided to break the records down into the following geographical districts and they are as follows:—

District	No. of sites	No. Pairs	No. Tetrads
North East Sussex	56	139	47
(High Weald & Ashdown Forest)			
North Sussex	21	61	10
(principally districts in the area of Horsham-Crawley-Worth)			
North West Sussex	10	30	10
(Common & Heaths on Hants/Surrey border)			
South East Sussex	52	122	39
Other sundry sites in West	9	18	12
Other sundry sites in East	2	2	2
	150	372	120

Breeding Habitats

Redpoll are late breeders and the survey has produced no evidence to refute Walpole-Bond's findings that in general the first clutches are rarely laid before the last third of May.

Breeding habitat is diverse and includes carr, commons, heaths, edges of woodland especially the scrub before the woodland proper, large shrubby gardens, hedgerows, disused and used railway embankments, large parks, orchards, and young and medium stage conifer plantations. Although not exclusively so, water or the nearness to it is often a common factor to breeding sites. J. I. R. Sharrock concluded from the B.T.O. Atlas survey 1968-72 that the four-fold increase in breeding Redpoll during the years 1964-74 was assisted by the species utilising early and medium stage conifer woodlands and the details given below at Table 2 relating to Sussex breeding pairs confirms the importance of this habitat. There was no evidence of breeding taking place on farmland in Sussex but it could have been overlooked although none was found in this habitat in the north-east and north-west which were extensively covered. In recent years breeding has been confirmed in at least one of the London parks (R.S.P.B. Birds Magazine) but to date there is no evidence of breeding in similar areas in Sussex.

TABLE 2. No. of pairs of breeding redpoll

Habitat	North-East	South-East	North	North-West	Other West	Other East	Total
Conifer Plantations	25	52	30	—	—	2	109
Heathland (Scattered Scots Pine Heather/Gorse) Stands of Birches	52	—	—	—	—	—	52
Open Woodland Spinney/Woodland Edge	18	15	1	—	5	—	39
Carr and Thickets By and in swampy streams	24	9	—	1	—	—	34
Commons Gorse/Heather/Birch Scrub	7	—	—	23	5	—	35
Birch Scrub	—	1	25	—	—	—	26
Hedgerow	2	20	—	—	—	—	22
Bracken/Gorse Thicket	—	5	—	—	—	—	5
Railway/Embankments	3	—	—	—	—	—	3
Dense Woodland	—	2	—	—	—	—	2
Gardens	2	2	—	—	—	—	4
Orchard	1	2	—	5	—	—	8
Unspecified	5	14	5	1	8	—	33
TOTAL	139	122	61	30	18	2	372

The details given in Table 2 confirm that, whilst overall, conifer plantations are the most important habitat (c.29%), this was not so in the north-east of the county which is the most important area for this species. In the north-east the heathlands of Ashdown Forest were the most favoured habitat (c.14% of overall figures) but in stating this, it must be admitted that the classification of nesting habitat can be arbitrary. Ashdown Forest now contains several areas of birch and young Scots

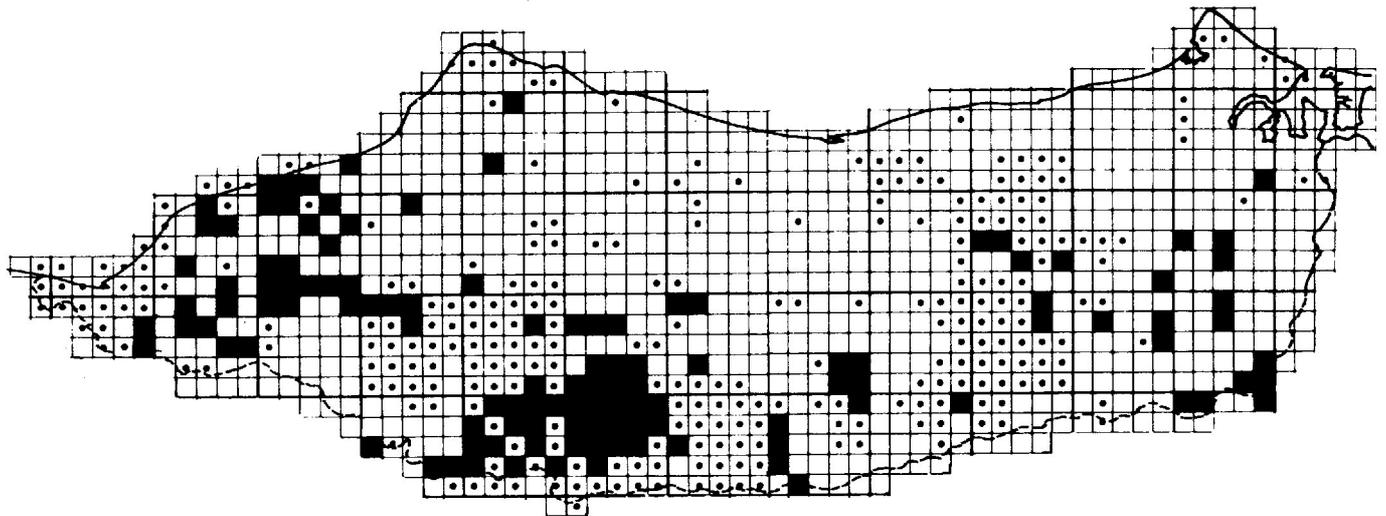


Fig. 1. Breeding distribution of the Redpoll, 1976-78

pine scrub and it could be argued that a few of the Ashdown pairs might more properly be included with the conifer figures and certainly others with the numbers for birch scrub. The figures, however, as presented show that birch scrub is preferred in c. 7% of cases but if they were drawn to show Ashdown Forest as fragmented, rather than overall heathland, then the birch scrub numbers would be similar to those for carr (c. 9%) and open woodland, edges and spinneys (c. 10%). Commons account for (c. 9%) and hedgerows (c. 6%) and the general list is evidence of the species widespread choice in breeding habitat. Although Redpoll were found in only 4 garden sites this figure is likely to be only a fragment as there are many large and sometimes overgrown gardens in the county, particularly in the north and north-east, but the difficulty in locating pairs in these circumstances is obvious.

If the criterion that more than one pair breeding per acre constitutes a colony is adopted then 107 of the 372 breeding pairs bred singly. The largest colonies, up to 20 pairs, were found in the north-east and show an enlargement on Walpole-Bond's maximum of 8 pairs. The survey did not find that breeding has ceased in places where it had been recorded between 1968/1975, except where it had been found in a garden site at Haywards Heath. The desertion of suitable sites referred to by Walpole-Bond, does not appear to have occurred in recent years and as Redpoll bred so thinly in the general area he depicted it is difficult to say whether there has been any change of status within his "oblong" or outside especially as he names only the places where it bred infrequently.

Discussion

If the peak numbers are considered for each site irrespective of year of observation the total number of pairs would be no more than 372. Even if it was assumed that observers found only 50% of the Sussex breeding population the county's numbers (say 740) would be well below the national average. Sharrock (1976) from the Atlas Survey estimated that the average breeding density throughout the British Isles (including Ireland) was at least 100 pairs per 10 kilometre square (25,000 acres). On a comparable basis for Sussex the population ought to be in the region of 3,500 pairs. The Atlas does record though that the Redpoll is generally a scarcer breeding bird in Central Southern England particularly in the counties of Avon, parts of Somerset, Wiltshire, and in areas of Hampshire despite an increase on heathlands in the north-east of that county in recent years. The picture from Kent shows that not surprisingly Redpoll do not breed in the wastes of Dungeness, Sheppey and Grain or in the coastal and levels areas but that elsewhere they are fairly evenly distributed. The Atlas Survey found that by taking into account proven, probable and possible breeding pairs Redpoll were present in 233 tetrads (Sussex 120). The land area of Kent is roughly comparable with Sussex and it is evident that the species is more widespread in Kent and by inference more numerous. The areas of greatest density in Kent are central and South-west Kent, particularly those parts adjoining the districts of relatively high breeding in north-east and south-east Sussex.

Although it is safe to conclude that numbers of breeding Redpoll have increased since Walpole-Bond's day, the general breeding area is much the same today save for the extensive colonisation in the south-east. The increase and spread in Sussex and other southern counties is not on a par with more northerly counties where it most likely has always been commoner. The previous under recording of the species during the summer months makes it difficult to say for certain when the breeding stock increased but a search in the early 1960s for this species on Ashdown Forest (S. Knight and M. Port) found none and noted that it was an extremely scarce breeder in the north-east. As Table 1 shows, this is not the case today, but since the early 1960s the Friends of Ashdown Forest and the Conservators have cut rides/fire breaks so that although Spring/Summer fires still occur they are not so extensive thus allowing stands of birch scrub and Scots Pine to develop. It seems, therefore, that the growth in numbers in Sussex probably took place during the period 1964-74 referred to by Sharrock.

Finally it is pertinent to mention that outside the British Isles, Lesser Redpoll have started to colonise south-west Sweden and in his paper Götmark (1978) records that between the years 1973/77 14/18 breeding pairs have been found in seven separate localities. Elsewhere this finch has increased as a breeding species in the Netherlands, and in Denmark where the population is put at a few thousand pairs. The increase and spread of the species therefore has not been confined to Great Britain and Ireland.

Further Monitoring

There is a great deal of very suitable habitat currently uncolonised both within the general breeding areas and outside it.

The greater part of Sussex is potentially suitable for the species and members should be requested to visit and submit breeding season records, either positive or negative, so that any further spread or in-filling can be recorded.

Selected sites ought to be visited annually so that fluctuations in breeding numbers can be monitored as it should not be forgotten that a previous increase this century was followed by a decline. As breeding records have been haphazard in the past, it has not been possible to note and so determine the useful age of conifer plantations. It is unlikely though that late middle stage or mature conifer plantations except perhaps for the margins would be useful to this finch. A large proportion of woodland is approaching this stage in East Sussex and after felling the renewed cycle ought to keep available this type of habitat.

Although recording at selected sites and random breeding records gives a guide to status, a further full survey ought to be considered in the late 1980s but with wider coverage and ideally in conjunction with neighbouring counties.

In the interval it would assist future study if more attention was given to ringing during the breeding seasons and subsequent control sought, as it is still not known for certain whether our breeding stock leaves the county for the winter months. If it remains then climatic severity of exceptional winters may come into play and it might then be more than a coincidence that the four-fold national increase in the breeding Redpoll took place during a period punctuated by exceptionally mild winters. A policy of inland ringing and recovery could give answers to the winter movement of other "resident" or partial migrant birds such as Stonechat, *Saxicola torquata*, and Meadow Pipit, *Anthus pratensis*.

References

- Birds R.S.P.B. Magazine Summer 1976, p. 14.
Götmark F. The Redpoll colonising South-western Sweden 1978. pp. 133-135. Gothenburg.
Sharrock J. T. R. 1976. The Atlas of Breeding Birds in Britain and Ireland, pp. 422-3. Berkhamstead.
Walpole-Bond J. 1938. A History of Sussex Birds, pp. 85-91. London.

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Summary

The results of a survey in Sussex of the breeding status of the Redpoll, *Carduelis flammea* undertaken during the breeding seasons in 1976, 1977 and 1978 are presented and discussed. Although a full census was not undertaken in any of the survey years it is considered that the breeding population might be at least 372 pairs. This is only approximately 10% of the figure that would be reached by applying the national average figure to the Sussex land mass, but the Redpoll is recognised as being scarcer than average in southern counties.

Although the previous random recording of this species in Sussex hinders an accurate assessment of the increase in breeding pairs a seven-fold growth may have been achieved since the 1930s. The greater part of the increase has taken place during the 1964/74 period in line with the national increase but apart from the colonisation of the south-east and the pockets of breeding elsewhere, the principal breeding area is broadly similar to that defined by Walpole-Bond 50 years ago. As in other parts of the country the increase in numbers has been assisted by the cultivation of commercial conifer plantations.

Further selective monitoring is suggested and a full scale survey is recommended for the late 1980s.

ROOSTING GULLS IN SUSSEX IN WINTER

By R. F. PORTER

Introduction and History

With the level of sophistication that organised ornithology has reached, it is surprising that no attempts have previously been made to survey the wintering population of the commonest non-passerine family in Sussex: the gulls *Laridae*.

The county's population of nesting gulls is reasonably well documented (Shrub, 1979). In 1965 there was an estimated 790 pairs of breeding Herring Gulls *Larus argentatus* with slightly more (861-982) in 1969. In the late 60s birds were starting to nest on buildings, a trait that has increased during the last decade and now a whole new roof-top world, with virtually no competitors, has availed itself to their exploitation. Casual observations indicate that any future census of this species will show that there has been a large increase. The Black-headed Gull *L. ridibundus* breeding population in Sussex has dramatically risen in recent years. At Chichester Harbour, for example, the 4 pairs in 1971 had increased to 1,120 pairs by 1978. Numbers at Rye at the eastern end of the County would doubtless be much higher were it not for the control methods imposed to keep them compatible with those of the nesting Common Terns *Sterna hirundo*. Common Gulls *L. canus* used to nest in small numbers, and it is likely that the Lesser Black-backed Gull *L. fuscus* does so occasionally.

The increase in breeding population of our commonest two gulls reflects to some extent the national situation. Herring Gulls have been increasing at the rate of 13% in Britain each year since about 1945—more than four times faster than any other breeding gull. The population was estimated at 750,000 pairs in 1976 (Coulson and Monaghan, 1978). Similarly, there has been a colossal increase in Black-headed Gulls. The 1973 Census in England and Wales indicating there to be over 100,000 pairs, which is about double the total recorded in 1958 (Gribble 1976).

Britain now has a vast breeding gull population and as territorial activities decline and birds spread away from their nesting sites the population, swelled by the progeny of the year, has to find, amongst other things, safe roosting sites.

Records have indicated that Sussex in recent years has supported large winter roosts on the coast and rather fewer on inland reservoirs and that the Black-headed Gull is the commonest species. However, information has been rather patchy.

Shrub states for Herring Gull that there is 'very little recent information available about the winter numbers'. For Lesser Black-backed Gull he reports up to 120, and for Great Black-backed Gull *L. marinus* 'no complete winter counts have been made but fairly regular flock counts at coastal sites suggest a minimum wintering population in the order of 2,000 birds'. For Common Gull: 'coast flocks of up to 2,000 have been noted but few counts are available and larger numbers may occur'. Finally, for Black-headed Gull he states 'very incomplete counts since 1967 suggest a minimal wintering population on the coast of some 40,000 birds but numbers may be much larger'.

Objects and Methods

Against this background of rather sparse information, three winter counts in February 1977, January 1978 and January 1979, were organised with the object of counting the County's roosting gulls. Observers were designated a particular stretch of coastline or harbour and often a team had to be organised where counting conditions were particularly complicated, usually when high numbers were involved. They were asked to arrive at their site about three hours before dusk and the birds as they arrived, in most cases from their inland feeding sites. Those present at inland waters and reservoirs were asked to do the same, except that they were to make a last minute count at dusk of birds actually present on the water, for many gulls use these inland waters as staging posts for their onward flights to the coast. Birds were to be assigned to two categories—'large gulls' (Great Black-backed, Lesser Black-backed and Herring) and 'small gulls' (Common and Black-headed) and, where possible, identified.

Results and Discussion

Numbers involved. The basic results are shown on Table 1. From these it can be seen that 56,807, 63,657 and 125,287 were counted in Feb. '77, Jan. '78 and Jan. '79 respectively. In the first year coverage was by no means comprehensive, being fairly good in West Sussex but poor in the East, and this almost certainly accounts for the low figure. In the second year, though coverage was much better, heavy rain and strong winds combined to make observations difficult and many birds were probably missed. In the final year, coverage was best of all and this, together with the less inclement weather, helped observers reach the highest total of the three years—125,287. It would be dangerous to conclude that the variation in counts represents anything other than varying degrees of coverage and weather conditions.

Distribution. It would appear that the choice of roosting sites varies with weather conditions, state of tide, and time: certainly the same pattern of distribution was not shown in each year. Nevertheless, some localities were relatively more important than others and roosts holding over 10,000 birds in any of the three years were at Chichester Harbour, Pagham Harbour, Shoreham to Worthing, and Rye; all areas with a large expanse of mud or sand at low tide. In February 1977 Pagham, in fact, held nearly 25,000 birds—some 44% of the total recorded roosting; in January '78 the spread was a lot more even along the coast, whilst in 1979 the largest concentration was at Worthing between Brooklands and Ferring, where near 43,000 were present (34% of the wintering population). In that year Pagham held nearly 19,000—thus these two sites alone accounted for half the roosting gulls in the county.

Inland where, unfortunately, less comprehensive coverage was achieved, it would appear that only Weir Wood and Arlington Reservoirs regularly hold roosting gulls, whilst Darwell and the recently constructed Bewl Bridge Reservoirs may. Numbers were not high: 13% of the total population in 1977, 6% in 1978, and 14% in 1979, in which year over 10,000 were at Arlington, the highest number recorded roosting at an inland site in the county.

Species involved. In most cases observers were able to assign to either of the two categories 'large' and 'small', and from the results it is clear that 'small' gulls dominated the roosting scene, accounting for between 63% and 89% of the total.

The number of gulls specifically identified varied considerably (68% in Feb. '77, 34% in Jan. '78 and 53% in Jan. '79) and Table 2 shows their numbers and percentages. From this it can be seen that the Black-headed Gull was by far the commonest and that none of the other species accounted for more than 15% of the total roosting population. By extrapolation of the figures in Table 2 to take into account the unidentified birds the theoretical population for each species was calculated and the results are presented in Table 3. In each case the highest figure has been used irrespective of the year from which it was obtained. With our current knowledge these figures are probably the nearest one can hope to get to estimating the number of each species of gull roosting in the county, though they do not take into account annual fluctuations which may be significant in some or all species. The Lesser Black-backed Gull totals in Table 2 demonstrate this. It is interesting to note that Sussex percentages are similar to those obtained in Hampshire in the winter counts of January 1977 and January 1978, when totals of 38,983 and 55,714 were obtained respectively (Clark, 1978). The Hampshire species were present in the following proportions (average percentage of the two counts): Black-headed Gull 83%, Common Gull 9%, Herring Gull 5%, Great Black-backed Gull 3% and Lesser Black-backed Gull <1%.

Whilst it would be encouraging to think that the figures for Sussex will provide a guide to the roosting gull population of the late 1970s against which future population changes may be measured, it is clear that a fully comprehensive series of counts along the entire coastline and at all inland reservoirs is necessary before we have what can be regarded as a reasonably accurate picture.

Acknowledgements

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Summary

The highest of three gull counts organised in Sussex in February 1977, January 1978 and January 1979, showed the roosting population to be over 125,000 birds. Extrapolation of the data collected showed the approximate theoretical populations of the five commonest species to be: Black-headed Gull 101,500 (76%), Common Gull 18,800 (14%), Herring Gull 8,900 (7%), Lesser Black-backed Gull 3,200 (2%), Great Black-backed Gull 1,450 (1%). The majority of gulls roosted on the coast; the maximum recorded on the inland reservoirs being 14% in 1979.

References

- Clark J. 1978. Roosting Gull Survey, Jan. 28th 1978. *Newsletter of Ornithological Section of Hants Field Club* No. 32.
- Coulson J. and P. Monaghan 1978. Herring Gulls Move into Town. *New Scientist* Vol. 79 No. 1116: 456-458.
- Gribble F. C. 1976. A Census of Black-headed Gull Colonies. *Bird Study* 23: 135-145.
- Shrubbs M. 1979. *The Birds of Sussex, Their Present Status*, 1979. Phillimore & Co. Ltd.

TABLE 1. ROOSTING GULLS IN SUSSEX AT DUSK—5th Feb. 1977, 28th Jan. 1978 and 20th Jan. 1979

Reservoir	Total			"Large" Gulls (G.B., L.B-b & Herring)			"Small" Gulls (B-headed & Common)		
	Feb. 77	Jan. 78	Jan. 79	Feb. 77	Jan. 78	Jan. 79	Feb. 77	Jan. 78	Jan. 79
1. Chichester Harbour	6571	13250	14739	465	689	640	5882	9785	14099
2. Paghram	24783	13010	18827	416	765	910	23226	987	16312
3. Climping	646	400	—	85	200	—	561	200	—
4. Worthing (Brooklands to Ferting)	6000	5272	42912	1500	1312	7505	4500	3960	25407
5. Shoreham	1600	13350	360	100	2000	0	1500	11350	0
6. Southwick	3607	0	8410	507	0	110	3100	8300	0
7. Brighton	—	—	6898	—	—	1339	—	5559	—
8. Newhaven	—	1300	—	500	—	—	800	—	—
9. Cuckmere Estuary	—	578	—	63	—	—	515	—	—
10. Seaford	—	730	—	—	—	30	—	700	—
11. Pevensey-Eastbourne	—	750	—	750	—	—	—	—	—
12. Bexhill	—	2200	570	—	1950	257	—	313	—
13. Hastings	—	0	836	—	0	336	—	500	—
14. Rye Harbour	6100	9547	14000	1100	803	3079	5000	8744	10921
15. Burton Park Lake	—	0	0	—	0	0	—	0	—
16. Barcombe Mills Reservoir	—	0	690	—	0	0	—	690	—
17. Weir Wood Reservoir	—	2526	3750	—	71	0	2455	3750	—
18. Arlington Reservoir	7500	1300	10000	500	0	0	7000	13000	10000
19. Bewl Bridge Reservoir	—	992	—	—	14	148	—	59	—
20. Ardingly Reservoir	—	—	0	—	—	0	—	0	—
21. Darwell Reservoir	—	—	1573	—	—	191	—	—	1382
TOTAL	56807	63657	125287	4897	8893	14545	50769	40405	98382
	12360	14359	1141	141	23%	2%	78%	63%	89%
	0	395	0	0	10%	0	0	0	0

Key: — No count made
0 None seen

TABLE 2. Numbers and percentages of the five commonest species of gull recorded roosting in Sussex on the counts of February 1977, January 1978 and January 1979.

	5th Feb. 1977	28th Jan. 1978	20th Jan. 1979
Great Black-backed Gull	782 (2%)	516 (2%)	680 (1%)
Lesser Black-backed Gull	1	1140 (5%)	10
Herring Gull	1734 (4%)	3113 (14%)	2095 (3%)
Common Gull	4879 (13%)	3269 (15%)	9699 (15%)
Black-headed Gull	30703 (81%)	14145 (64%)	54377 (81%)
Total identified	38099 (100%)	22183 (100%)	66861 (100%)
Unidentified	18708	41474	58426
Grand total	56807	63657	125287

TABLE 3. Approximate theoretical population of the commonest species of gull roosting in Sussex in winter. Figures have been calculated by extrapolation of the relevant data from Table 2—see text.

Black-headed Gull	101,500 (76%)
Common Gull	18,800 (14%)
Herring Gull	8,900 (7%)
Lesser Black-backed Gull	3,200 (2%)
Great Black-backed Gull	1,450 (1%)
	133,850

A REPEAT CENSUS OF THE KESTREL IN NORTH WEST SUSSEX

By S. W. M. HUGHES and F. W. DOUGHARTY

The status of the Kestrel *Falco tinnunculus* in Sussex during the 1964-67 breeding seasons has been described by Shrubbs (1969), who found the species to be generally distributed and reasonably numerous, with breeding densities in 10 widely distributed study areas varying between 1.1 and 3.9 pairs per 2,500 acres (10 sq km). More recently a number of subjective observations in West Sussex had suggested a possible decline in the breeding population. Thus in the 1978 breeding season a one year census was undertaken in a large sample area to determine the present day status of the species in typical wealden habitat.

The area chosen comprised 100,000 acres of mixed farmland and woodland, eastern boundaries were defined by the following O.S. grid references: TQ 050340, 050200, 250200, 300300 and 300420 with the northern boundary following the Surrey/West Sussex border. This sample area was chosen to encompass the largest special study area (50,560 acres) described by Shrubbs, but its extent was determined largely by the availability of observers and ease of public access, thereby minimising the difficulties of making regular observations.

The census was organised under the auspices of the Horsham Natural History Society and a total of 24 observers submitted all sightings of the species during the months March-July. Additional breeding information was also sought in August.

All sightings were plotted on 1 inch O.S. maps, following the method adopted by Shrubbs and in this way the sightings of single birds were often found to form discrete groupings. In the absence of more precise information, these groupings were accepted as occupied territories, if they comprised a minimum of four sightings during the period April-July and related to at least three of the four months. This method is considered legitimate in view of the inconspicuousness of the species during the nesting period. Furthermore previous work has shown that in Sussex the species is subject of some kind of spacing mechanism even if it is not strictly territorial in an exclusive sense. That there is some risk of error due to overlapping of hunting territories is recognised but this is thought to be small. In fact most territories were much better documented either with many more sightings of single birds or pairs, display or by the identification of nest sites.

Coverage of the census area was very good except for four areas, namely one to the north of Wisborough Green; an area east of Southwater including Copsale; the area between Knepp and Shipley and Brantridge Forest. A total of 65 pairs were identified using the criteria mentioned above and of these only four were marginal, in so much as the major part of their ranges were likely to have been outside the study area.

TABLE 1. The breeding density of Kestrels in the Sussex Weald

Area	Year	Size of Sample (acres)	Density per 2,500 acres (10 sq. km.)
Horsham & Crawley	1978	100,000	1.6
Horsham	1967*	50,560	1.1
Midhurst & Petworth	1967*	12,800	1.6
Ashdown Forest	1967*	12,800	1.4
Ditchling	1967*	5,120	1.5
			Average 1.4

* Information from Shrubbs (1969)

The 1978 figure of 65 pairs in 100,000 acres gives an overall density of 1.6 per 2,500 acres. In 1967, Shrubbs' largest study area, which was approximately half the size of the 1978 area and within it, had a density of only 1.1 per 2,500 acres. As the proportion of suitable kestrel habitat in both samples was similar, these figures suggest an increase in numbers. That this is a real increase is further supported by comparison with the four wealden samples, described by Shrubbs, which together totalled 81,280 acres and had an average density of 1.4. The 1978 figure of 1.6 equals the highest density recorded in a wealden area in 1967 but it should be noted that it is still much lower than that found in the favoured grass marshland habitat which had a density of 3.9 (Shrubbs, 1969).

From the results of this latest census it would appear that, far from declining, the number of Kestrels in north west Sussex has increased by 45% since 1967. Shrubbs had detected a 13% increase in the weald during the 1964-1967 period, thus the present situation appears to be a continuation of this trend. The area censused in 1978 comprises approximately a tenth of the whole of Sussex, thus the above information together with more recent information for the Sussex coastal plain where the density in 1979 was 3.3 compared with 2.15 in 1967 (Shrubbs, pers. comm.) suggests a general increase throughout the county. In this context it is also interesting to note that a substantial increase in the national population since 1966 has recently been reported by Marchant (1978).

The results obtained from this sample census demonstrate again the suitability of this species for study at a local level and it is hoped that others may be encouraged to determine population levels in other districts for which there is little information.

- References**
 Marchant J. H. 1978. Bird population changes for the year 1976-77. *Bird Study* 25: 245-252.
 Shrubbs M. 1969. The present status of the Kestrel in Sussex. *Sussex Bird Report* 1968: 58-69.

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UNUSUAL RECORDS

All records of unusual species are considered by the Records Committee and it may be assumed that those published have been fully authenticated. Such reports should be submitted on separate sheets or on special forms available from the Recorder. Reports 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) | Dotterel |
| Grebes (other than Great Crested and Little) | Tenninck's Stint |
| Shearwaters | Pectoral Sandpiper |
| Storm and Leach's Petrels | Phalaropes |
| Shag | Pomarine Skua |
| Bittern | Mediterranean and Sabine's Gulls |
| Spoonbill | Iceland and Glaucous Gulls |
| Bewick'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 | Bluethroat |
| Goshawk | Warblers: Cetti's, Marsh, Icterine, Melodious, Barred, Yellow-browed |
| Rough-legged Buzzard | Red-breasted Flycatcher |
| Golden Eagle | Golden Oriole |
| Osprey | Red-backed Shrike (non-adult) |
| Peregrine | Raven |
| Quail | Crossbill |
| Spotted Crane | Lapland and Ortolan Buntings |
| Corncrake | |
| Stone-curlew | |
| Kentish Plover | |

In addition: all unusual races of Yellow Wagtail and Rock Pipit