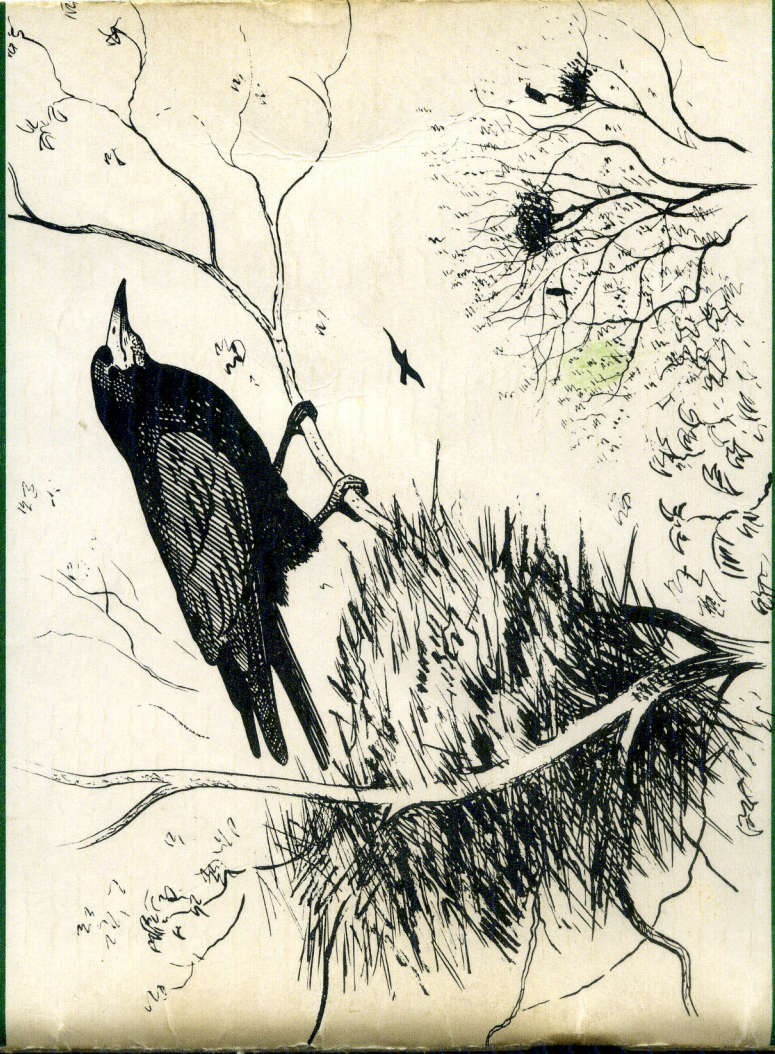


The Sussex Bird Report

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3 SUSSEX BIRD REPORT
NUMBER THIRTY, 1977

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Cover drawing of Rooks by John Reaney

Published December, 1978

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THE SUSSEX ORNITHOLOGICAL SOCIETY

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THE SUSSEX BIRD REPORT, 1977

HON. OFFICERS OF THE SUSSEX ORNITHOLOGICAL SOCIETY
AT 30th JUNE, 1978

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REPORT OF THE COUNCIL FOR 1977

The year saw a number of significant changes in the membership of your Society's Council. Mr. B. A. E. Marr replaced Mr. M. Shrubbs as Chairman and Society Vice-President; Mr. J. F. Cooper took over the Recordship from Mr. C. M. James; and Mr. R. J. B. Jackson inherited the Editorship of the *Sussex Bird Report* from Mr. S. Bayliss Smith. Two new members of Council, Messrs. C. E. Hope and J. Willsher, were elected at the 1977 Annual General Meeting.

Regrettably for personal and business reasons, both the Honorary Secretary—Peter Martin and the Honorary Recorder—John Cooper—had to tender their resignations at the end of the year, after just two and one year respectively in these posts. Fortunately nominations have been received to fill these two vital posts and both retiring officers have been particularly helpful in ensuring that continuity is maintained.

Review of Society activities:

One of the first tasks of your new Chairman of Council was to carry out a full review of all the Society's activities. A discussion document was circulated to all those concerned with the running or advising the Society, and these people were then invited to an all-day meeting at which policies were worked out and settled for all areas of Society work. An interim report was later published and continuous follow-up work has been taking place to ensure that the impetus created is not lost. A final report and definitive policy document is expected by the Annual General Meeting on 8th April, 1978.

The policy meeting resulted in some 40 recommendations in all. A number related to improving and streamlining administrative procedures within the Society, but major ones in other areas included:

Five-year rotation rule—Proposals to amend the Society's rules so that the term of office on Council is for a maximum of five years, with no return for at least one year. This would ensure that no Council member or officer became stale and would allow for a regular introduction of new members. A similar arrangement would be introduced into all committees.

Surveys Committee—to be renamed "Scientific Committee" to reflect its wider responsibilities.

Subscription—proposals to be put to the Annual General Meeting to raise this from £2.00 to £3.00 from 1st January, 1979 for the normal economic reasons faced by all voluntary organisations these days.

Society "Logo"—a competition to be arranged to design a suitable motif or emblem for the Society.

Bird Records—improvements to the methods of receiving, considering and collating records are to be considered by the Records Committee.

Conservation—the Conservation Officer should establish local teams in specific areas to help him with his work.

Newsletter—the meeting expressed its great appreciation of the improvement in the Newsletter under its Editor, Pat Bonham, who had raised it to a very high standard. This was one area where no major changes were needed.

Junior Section—efforts should be made to train junior and intermediate members in the skills of bird counting and survey work.

Meeting Programme—low attendances at indoor meetings, combined with ever-increasing costs, were the factors behind a decision to change our policy. It was agreed that we would have to reduce the number of indoor meetings, but would compensate for this reduction in services to members by:-

- (a) establishing an annual conference for members to start in 1978, on an alternating scientific/general interest basis. The 1978 conference would be a scientific one, concerned with survey work; the 1979 one of general interest to all members; and so on.

- (b) arranging for Society members to be able to attend R.S.P.B. local Group meetings.

Survey Work—a number of points were agreed that were intended to improve the coverage of the county.

Assuming their adoption at the 1978 Annual General Meeting to take effect in 1979, the proposals to institute a five year term of office for Council members would mean that four long-serving officers and members of Council would be due to retire at the 1979 Annual General Meeting. To avoid the upheaval this would cause, the present Assistant Secretary, Mr. C. F. Helyer and the longest serving member of Council, Dr. A. B. Watson both kindly offered to stand down in 1978, and Council agreed to accept these retirements.

Cyril Helyer has carried out his duties as Assistant Secretary for the past nine years in a quiet unassuming way and the Society is greatly indebted to him for all his work, particularly in organising the distribution of Society literature to members. The experience and knowledge contributed by Barrie Watson at Council meetings for the past ten years has been a major asset to the Society. The Council wishes to extend its sincere thanks to both these gentlemen.

Finances:

Financially the year has been very satisfactory, the Accounts showing a surplus of income over expenditure of £677 compared with £268 in 1976. Although total income from subscriptions and other sources remained almost unchanged and some expenses increased, substantial savings were made on printing the *Sussex Bird Report* and on postages of Newsletters, while Special Grants were also much lower.

The balance on the General Fund was £1,768 and on Conservation Fund £900, a total of £2,688, full details being shown in the Accounts.

While it is difficult to make any precise estimates it seems certain that costs will continue to increase and thus the current year may well show a smaller surplus and 1979 little or no surplus at all. In view of this and to enable the Society to maintain its contributions to conservation work, the Council will propose an increase in subscriptions for 1979, these having remained unchanged since 1975.

Sussex Bird Report and Newsletter:

A change of printers for the 1976 *Sussex Bird Report* resulted in a considerable saving in production costs. The presentation of the 1977 issues of the Newsletter reached an extremely high standard, the contents being varied, interesting and informative, and congratulations are due to our Newsletter Editor, Pat Bonham.

Surveys:

The survey work of the Society proved particularly rewarding in 1977 and projects have included:-

- (a) **Nightingale**—since 1974 the number of 2-kilometre squares in Sussex in which this species has been reported in the breeding season has reached 327.

This was the final year of this project.

- (b) **Register of sites of ornithological importance**—to date 96 completed cards have been returned. We hope that the mass of data when submitted to the Nature Conservancy Council will afford the sites greater measures of protection.

- (c) **Nightjar**—a special census succeeded in covering all known breeding sites in one year for the first time ever and more than 180 breeding pairs or singing males were recorded, although only 36 of these were in the east of the county.

- (d) **Redpoll**—the unfinished breeding survey continued to monitor the spread of this finch which is no longer an uncommon bird in the south-east and north-east of the county, although its true status was probably never fully appreciated in the past. To date it has been found in the summer in 90 2-kilometre squares in the county and in 1977 at least 160 pairs of singing males were recorded.

(e) Two new surveys were started:

- (i) **Corn Bunting**—a species which may be extending its range.
- (ii) **Grasshopper Warbler**—a species which has drastically declined since 1970.
- (f) **Golden Plover**—for the first time a national census was successfully conducted and on the 9th January, 1977 a total of 5,566 wintering birds were found in Sussex.
- (g) **Wildfowl and waders**—during the year, seven wildfowl and ten wader counts were made and the results continued to confirm Chichester Harbour as an internationally important wetland refuge for wintering and passage species.
- (h) **Gulls**—for the first time, a count of roosting gulls was carried out giving a figure of 56,000 birds, but coverage was not complete.

Conservation:

Throughout the year the conservation teams worked all over the county from Rye in the east to Pagham in the west, with a diversity of work ranging from building shingle islands at Rye and raking weeds from the mud at Pett Pools, to clearing bracken at Iping Common and constructing a sea wall on the tern island at Pagham. The response was very good and we are pleased to see more members coming along. During 1977 250 man-days were worked on our projects.

Even though many hours have been spent on conservation the results are not always as successful as we would hope. For instance at Pagham we spent two days weeding the island and clearing up and burning the debris but the tern breeding success was very low due to an avian predator. We also built a sea wall at the eastern end of the island but the first very strong easterly gale removed all the timber. On the credit side, Charleston and Strivens benefited from the cutting of the reeds and removal of rough grass which encourages the growth of additional reeds and the Pett Pools project again provided some fine habitat for migrating waders.

Outings and Meetings

Field outings continued to be well supported and 22 varied habitats throughout the county and beyond were visited with new wood and woodland venues being explored. As usual coach trips took us beyond our boundaries with a return in Spring to the popular New Forest site, and in November a novel excursion took place to Bedgebury Pinetum and Bewl Bridge Reservoir, part being in our county and the remainder in Kent.

A good variety of birds was seen, and some more unusual ones encountered too, such as Hooded Crow at Climping in January, up to 40 Hawfinches at Bedgebury, and in the New Forest Dartford and Wood Warbler, as well as Woodlark and Buzzard. In early September, on one of the two traditional visits to the ringing station at Beachy Head, a Red-backed Shrike and two Wrynecks were found, while those who ventured to Dungeness in Kent later that month were rewarded with a fine immature Sabine's Gull.

Two outings catering specifically for beginners took place; one on the coast, the other in a woodland setting.

The speakers at the four indoor meetings held during 1977 were of the usual high calibre and those members who attended were well rewarded. The highlight of the year was the talk on raptor migration given by Mr. Richard Porter following the Annual General Meeting.

The Garden meeting held at the home of our President, Mr. Guy Mountfort, was extremely well supported and resulted in a profit of £152 going to our Conservation Fund. The other fund-raising activity was the annual R.S.P.B./S.O.S. film show at Brighton, which this year was held in conjunction with the local R.S.P.B. Group Open Day; as a result of the hard work of all helpers, the Society's share of the profit was £161.

Summary:

Council wishes to thank all members who help in so many different ways with the running of our Society. Without this valuable assistance, the Society could not operate.

The past year has been an important one for the Society but the Council is confident that with the implementation of the proposed policy document we can look forward to continuing progress.

B. A. E. MARR,
Chairman of Council

CONTRIBUTORS AND ACKNOWLEDGEMENTS, 1977

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

G. Abbott	C. B. Collins	L. Gover
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A. Coley	Mrs. E. Goldsmith	H. J. Kelly
L. Coley	B. A. Goodchild	R. S. Kelly

1978. All records have been sent to the B.T.O. and details appear on Page 50. We thank all the counters for their efforts. They were:—
 At Chichester and Pagham Harbours—P. Raines, Miss H. J. Beck, M. R. Boxhall, Miss D. J. Burton, P. Clement, R. D. M. Edgar, Mrs. J. H. M. Edom, D. S. Flumm, M. J. Hay, C. R. Jamman, I. D. Kraunsoe, O. Laugharne, N. A. G. Lord, B. A. E. Marr, Mrs. G. D. Marriott, P. Martin, C. Mayhead, L. Mayhead, D. A. Parmenter, T. W. Parmenter, J. M. Paton, Mrs. N. Petrie-Hay, R. F. Porter, J. Reaney, R. J. Senior, L. G. Tite, C. R. Tubbs, Mrs. J. M. Tubbs, M. Wellfare, R. Williamson, D. Wiseman.
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CLASSIFIED RECORDS FOR 1977

1. **BLACK-THROATED DIVER (*Gavia arctica*)**.—At the beginning of the year wintering birds were identified as follows: Jan. 8th, 13 offshore at Rye (RK); Jan. 11th, one dead on beach at Rye (RK); Jan. 16th, one badly oiled at Pett Pools (PFB); Jan. 23rd, one on Rye Harbour pits (RK) and on Feb. 26th, one in Chichester Harbour (BAEM, RFP).
 In spring, singles flew east off Brighton Beach on Apr. 18th and 24th (FL, CFW) and on May 6th a party of seven were seen off Beachy Head waiting for bad visibility to clear after which they left to the east (MJR). One flew east past Worthing Pier on May 15th (RJS).
 For details of spring passage see under "Diver species" below.
 At the end of the year single birds were identified off Pett Level on Oct. 5th and Nov. 27th (PR), North Point Beach on Nov. 13th (JET), at Bewl Bridge Res. on Nov. 20th (PCB), on Castle Waters, Rye on Dec. 10th-18th (RK, BG) and off Pett Level on Dec. 13th.

2. **GREAT NORTHERN DIVER (*G. immer*)**.—Singles off East Head, W. Wittering, on Jan. 29th (BJ, CMJ, PJ), Selsey Bill on Oct. 29th and Nov. 26th (MJWH) and Langney Point on Nov. 20th (MJR).

3. **RED-THROATED DIVER (*G. stellata*)**.—During the early part of the year only seven were reported, from three coastal localities. Inland one was seen at Darwell Res. and one at Arlington Res. was first reported in Dec. 1976.
 In spring one was identified as it flew east off Brighton on Apr. 30th. For details of spring passage see under "Diver species" below.

DIVER SPECIES (*Gavia sp.*).—Spring diver passage, with all birds moving east, was recorded at Beachy Head as follows:—

<i>G. arctica</i>	<i>G. immer</i>	<i>G. stellata</i>	<i>G. species</i>
44	—	22	477

In addition, smaller numbers were recorded during occasional watches at Selsey Bill, Shoreham and Brighton. The main movement at Beachy Head was between Apr. 16th (max. 129) and May 6th (for full details see table on page 13).
 At the end of the year records were received from various coastal localities, mainly in mid-late Nov. On Nov. 26th 32 flew west and one east at Selsey Bill.

5. **GREAT CRESTED GREBE (*Podiceps cristatus*)**.—During the early part of the year the offshore total reported was only 44 but no counts were received from Rye Bay where good numbers normally winter. Inland a total of 48 wintering birds were counted at six waters. During the breeding season pairs were recorded as follows:—

Chichester G.P.	15	Petworth Park	5
Horsted Keynes Lakes	2	Darwell Res.	4
Tilgate Park	2	Weir Wood Res.	8
Knepp Lake	2	Eridge Park	1
Waimham M.P.	1	Bewl Bridge Res.	7
Chingford Pond	1	Pett Pools	2
Burton Lakes	1	Rye Harbour LNR	3

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B.T.O. NATIONAL CENSUS OF HERONRIES

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ESTUARY COUNTS

These Counts organised by R. F. Porter were carried out at Chichester and Pagham Harbours, Rye Harbour and Pett Level in May 1977, and from July 1977 to March 1978, and along the whole Sussex Coastline in January and February

Breeding success was evidently quite good: of 27 pairs known to have bred, 25 reared 56 young including 3 pairs at Petworth Park which were double-brooded. In Oct., Nov. and Dec. winter gatherings totalled 67, 83 and 91 respectively on inland waters and 2, 31 and 17 at sea.

6. **RED-NECKED GREBE** (*P. griseogen*).—One at Arlington Res. on Jan. 26th (PJW) and a very late bird flew past Beachy Head with a Cormorant on May 15th (DSF, MJR *et al.*). One at Cuckmere Haven on Nov. 7th (MJR).

7. **SLAVONIAN GREBE** (*P. auritus*).—During Jan.-Mar. maxima of 14 were reported from Church Norton and 19 from Chichester Harbour. These counts however, probably overlapped, there generally being only 6-7 at the former. Singles were seen at Rye Harbour LNR on Jan. 1st-2nd and 17th. Late Mar. and Apr. migrants were recorded as follows:—1 off Saltdean on Apr. 5th, 3 off Beachy Head on Mar. 26th (later seen off Cooden Beach) and 1 off Worthing Pier on Apr. 27th.

The western harbours population began to re-gather in late Oct. with 6 off Church Norton by Nov. 26th and 10 in Chichester Harbour by Dec. 10th.

8. **BLACK-NECKED GREBE** (*P. nigricollis*).—Singles reported from Chichester Harbour on Feb. 5th-7th, Rye Harbour LNR on Aug. 9th-11th and Barcombe Res. on Nov. 6th. In addition a pair was seen possibly prospecting an inland water in spring.

9. **LITTLE GREBE** (*P. ruficollis*).—Jan. and Feb. totals for the whole county were 56 and 81 respectively, the max. recorded being 49 in Chichester Harbour on Feb. 26th. During the breeding season pairs were reported as follows:—

Chichester G.P.	6*	Barnhouse Lake	2
Knepp Lake	1*	Weir Wood Res.	3
Arundel Park	1*	Darwell Res.	1
Pagham Lagoon	1*	Iden Park	1*
Possingworth Park	1*	Pett Pools	1*
Mannings Heath	1*	Beckley	1
Chidmore Pond	1	Rye Harbour LNR	4*

Of the pairs marked * 11 are known to have hatched young: at Rye 4 pairs reared six broods. Clearly many sites in the county are unrecorded and all breeding season records are required.

16. **MANX SHEARWATER** (*Puffinus puffinus*).—On Mar. 27th, an early date, 2 passed west at Beachy Head (DMP). Singles were seen moving west off Selsey Bill on Apr. 25th and Jun. 11th, Ferring on Apr. 26th and Brighton on Apr. 27th. On Sept. 24th 4 flew west off Selsey Bill.

On Jul. 10th a bird of the Balearic race, *p. mauretanicus*, was watched circling off Selsey Bill (PWB).

26. **FULMAR** (*Fulmarus glacialis*).—The first for the year were seen at Beachy Head on Jan. 9th and thereafter the species was reported from all the cliffs from Saltdean to Fairlight. During the breeding season 7 pairs were present between Rock-a-Nore and Covehurst and 5 sites were occupied between Ecclesbourne Glen and Hastings. At Beachy Head 22 sites were occupied but no count was made between Birling Gap and the Cuckmere. At Seaford Head 11 sites were occupied, at Newhaven 12, at Rottingdean 2 and at Saltdean one. No proof of breeding was obtained this year.

During a southerly gale at Selsey Bill on June 11th 36 west and 7 east were more likely to have originated from other parts of the Channel. One west there on Aug. 25th was the last seen for the autumn.

27. **GANNET** (*Sula bassana*).—Recorded in every month from Mar. to Dec. During the spring at Beachy Head a total of 218 moved east and 99 west between Mar. 27th and May 29th with a max. of 34 east on May 3rd. Smaller numbers were

reported from Selsey Bill where summer wanderers were seen from Jun. to Sept. The max. recorded there in autumn was 40 east on Sept. 24th and a max. of 40 east was recorded at Beachy Head on 21st.

28. **CORMORANT** (*Phalacrocorax carbo*).—Recorded in every month of the year from many coastal and inland localities. About 110 were seen flying towards the Arundel roost on Jan. 4th and at least 70 were at the Bognor Pier roost during the same month. On Mar. 12th 43 were counted in the Fairlight roost. Up to 120 had returned to the Arundel roost by the end of the year.

A semi-leucistic bird, only the underwing coverts being black, was seen off Selsey Bill on Oct. 9th.

29. **SHAG** (*P. aristoteis*).—A total of about 29 individuals was reported as follows, all from coastal localities:

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
1	4	3	6	7	0	0	0	2	4	3	3

Reports of immatures roughly equalled those of adults.

30. **HERON** (*Ardea cinerea*).—The number of nests reported as occupied was as follows:—Pagham 2; Parham 39 with 11 probably occupied; Wyckham Wood, Henfield 9; Knepp 10 with 1 probably occupied; Firle Park 44; Leasam, Rye 45. No counts were received from Old Park Wood Fishbourne, Wartling, Eridge, Westham and Priesthaves heronries. Will observers prepared to take on any of these heronries please contact the Assistant Recorder.

31. **PURPLE HERON** (*A. purpurea*).—One at Filsham, St. Leonards-on-Sea, on Jun. 26th (RDME). This record has been accepted by "British Birds".

37. **LITTLE BITTERN** (*Ixobrychis minutus*).—An ad. male was found dead near Birling Gap on Apr. 30th (A. Ciolek, RHC). An imm. bird first seen at Rye Harbour LNR on Aug. 19th (CHD) stayed until 27th (many obs.) and was seen in the presence of a second imm. on 23rd (AVM, JW).

These records have been accepted by "British Birds".

38. **BITTERN** (*Botaurus stellaris*).—One was seen near Glynde on Feb. 9th (DEM) and one at Weir Wood Res. on July 4th (WHL). One, long dead, was found on the shore at St. Leonards on Dec. 17th (JET) and one was seen flying across the Chichester By-pass on Dec. 28th (MM).

40. **WHITE STORK** (*Ciconia ciconia*).—One at East Hoathley on May 24th (RB, DCL, RDL); one at Patching on May 27th (SC, MSC, PJ); one at Rye Harbour LNR on Aug. 21st (PJW, VAW, TAW *et al.*) and one at Newhaven on 22nd (DAN), the last two probably relating to the same bird.

These records have been accepted by "British Birds".

42. **SPOONBILL** (*Platalea leucorodia*).—Five records involving six birds were the most since 1968. One was seen at Pagham Harbour on May 10th (TWP, PPH-W) and one at Pett Level on Jun. 10th (BG) was later seen flying east over Rye Harbour LNR (RK). Two flew up the Cuckmere valley on Jun. 12th (CAT, APM). A report of an adult flying north over Amberley Wild Brooks on Oct. 7th (PDD) was closely followed by one of an imm. at Sidlesham Ferry on 10th (IRW).

Note: The publication in this report of the table showing peak winter populations of wildfowl at selected waters is now discontinued. It has been decided that some high counts quoted in the past may have given a misleading impression of the normal wildfowl capacity at certain localities, particularly at Barcombe and Arlington Reservoirs which are frequently used by the Glynde Levels population as temporary refuges from disturbance.

The figures now quoted in the systematic list will be those obtained during the course of National Wildfowl Counts supplemented by any unusual features obtained from other sources.

45. **MALLARD** (*Anas platyrhynchos*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 1,481 and 1,978 respectively, the species being quite evenly distributed on suitable waters throughout the county.

46. **TEAL** (*A. crecca*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 2,707 and 1,691 respectively, the principal concentrations on both occasions being in Chichester Harbour and at Amberley Wild Brooks.

47. **GARGANEY** (*A. querquedula*).—First recorded in spring at Amberley Wild Brooks on Mar. 11th and up to 4 were seen there between 19th and 30th. Two were at Church Norton on Apr. 11th and single drakes at Sidlesham Ferry on Apr. 13th and May 2nd-12th, and May 23rd. On Apr. 21st 2 were seen at Thorney Island and on 17th 2 flew east at Beachy Head, with another on 27th. In Jun. a drake was present at Rye Harbour LNR.

Few were recorded in autumn. At Pett Level 2 on July 24th and then present from Aug. 4th to Sept. 9th with 5 on Aug. 14th, 4 on 15th, 7 on 20th and 4 on 21st. Elsewhere there was one at Thorney Island from Aug. 13th to 20th and one at Church Norton on Sept. 11th.

49. **GADWALL** (*A. strepera*).—Counts suggested a total of about 75 in the County at each end of the year. There were only occasional records between spring and autumn.

The only records during the summer months were of pairs at Arundel Park on May 28th and Pagham Harbour on Jun. 13th, and a single bird at Pett Level on July 16th.

50. **WIGEON** (*A. penelope*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 2,019 and 2,714 respectively, the largest counts coming from Glynde Levels on both occasions.

On July 31st one was seen at Church Norton. Two or more were present at Pett Level from Aug. 14th onwards and small parties had appeared at 4 further localities by the end of the month.

52. **PINTAIL** (*A. acuta*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 486 and 177 respectively.

53. **SHOVELER** (*A. clypeata*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 168 and 258 respectively, the main concentrations being at Chichester G.P.

There were no proven breeding records this year although one pair may have attempted. An unusual gathering of drakes occurred at Sidlesham Ferry where 4 were seen on May 22nd, increasing to 17 by 25th, but departed by 26th. The autumn max. at Pett Level was 69 in Aug. but figures of this nature were not reflected elsewhere.

54. **RED-CRESTED POCHARD** (*Netta rufina*).—A pair at Bewl Bridge Res. on Mar. 5th and at Darwell Res. from Apr. 17th to May 29th were doubtless the same as those seen in that area since late 1976. Only the female was to be found at Darwell on Sept. 18th and Bewl Bridge on Nov. 4th.

The possibility of semi-feral origin cannot be excluded.

55. **SCAUP** (*Aythya marila*).—Between Jan. and Mar. singles were reported from Rye Bay, Pagham Harbour and Chichester G.P. Two flew east off Bracklesham Bay on Mar. 7th and at Bewl Bridge Res. there was a drake on Jan. 16th, a pair from Feb. 19th to Mar. 5th and 2 ducks from Mar. 28th to 30th. Two flew east at Beachy Head on May 15th.

At the end of the year singles were recorded from Chichester Harbour on Oct. 8th, Pagham Harbour on Oct. 11th and 20th, Bewl Bridge Res. on Oct. 5th and 16th and Rye Harbour LNR on Dec. 23rd.

56. **TUFTED DUCK** (*A. fuligula*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 542 and 857 respectively, with a general distribution on suitable waters throughout the county.

During the breeding season pairs were recorded as follows:—

Petworth	10	Chichester G.P.	24
Burton Ponds	6	Tilgate Park	6
Forest Mere	2	Lurgashall Pond	2
Coultershaw	2	Chingford Pond	1
Arundel Park	1	Pett Pools	1
Warnham Mill Pond	1	Bewl Bridge Res.	1
Barnholme Pond	1	Weir Wood Res.	2
St. Leonards Forest	1	Alvesworth Pond	3

Counts of young were as follows:—Forest Mere 9; Arundel Park 7; Warnham Mill Pond 1; Chichester G.P. 125; Pett Pools 3; Bewl Bridge Res. 6 and Alvesworth Pond 18.

57. **POCHARD** (*A. ferina*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 724 and 924 respectively, all the higher counts coming from East Sussex.

In June there were 2 at Bewl Bridge Res. on 4th and 6 at Rye Harbour LNR on 5th. At Chichester G.P. 2 pairs bred successfully rearing 15 young. There were a further 8 birds present during June.

58. **FERRUGINOUS DUCK** (*A. nyroca*).—A drake was present at Weir Wood Res. from Feb. 6th to Mar. 6th (NAJH, WHT *et al.*) and what may well have been the same bird reappeared on Oct. 29th and stayed until the end of the year (DJWS).

A drake was identified on a gravel pit between Rye and Winchelsea on Sept. 11th (JGH) and what may have been the same bird reappeared at Pett Pools on Dec. 12th, later moved to Rye Harbour LNR and was still present at the end of the year. It should be noted that this species is widely kept in captivity and the fact that both birds, the first in this county since 1947, were in the east and one appeared on a very early date, gives rise to some suspicion as to their origins.

60. **GOLDENEYE** (*Bucephala clangula*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 75 and 88 respectively.

Last records for spring were one at Chichester G.P. on May 5th and one east at Beachy Head on 12th. First in autumn was one at Arlington Res. on Nov. 3rd and there were 16 in Chichester Harbour by 11th after which the species was fairly widespread.

61. **LONG-TAILED DUCK** (*Clangula hyemalis*).—Fewer than usual; one off Pett Level on Jan. 9th and 2 in Chichester Harbour from Feb. 5th to Mar. 6th; one at Pagham Harbour from Dec. 3rd to the end of the year.

62. **VELVET SCOTER** (*Melanitta fusca*).—In the early part of the year there were 6 off Pett Level on Jan. 1st and 5 on 23rd. On Feb. 26th 13 were seen off Ferring Beach.

During spring passage at Beachy Head 25 passed east between Apr. 16th and May 28th.

Two flew east off Climping Beach on Oct. 22nd and 2 were off Pett Level on Nov. 12th and Dec. 14th.

63. **SURF SCOTER** (*M. perspicillata*).—A fem./imm. was seen off Pett Level from Nov. 23rd to Dec. 2nd (PR, AD, PFB, CHD). This record has been accepted by "British Birds" and is the first for the county.

64. **COMMON SCOTER** (*M. nigra*).—In the early part of the year the max. reported in Rye Bay was about 400 on Jan. 9th.

During spring passage at Beachy Head, 11,331 were recorded passing east between Mar. 12 and May 29th with maxima of 422 on Apr. 3rd, 4,020 on 16th,

1,770 on 17th, 747 on 23rd and 539 on May 3rd (For full details see table on page 13). More occasional observations elsewhere produced smaller numbers—at Brighton 893 were recorded passing east on 14 dates between Apr. 7th and May 21st.

In Rye Bay there were still about 20 on Jun. 26th and 100 or more were there by Aug. 6th. Off Hastings Pier there were 15 on June 10th; 70 or more were off Rottingdean on Jul. 14th. At Selsey Bill 15 flew east and 62 west on Jul. 30th.

Inland there were 2 drakes at Barcombe Res. on July 22nd.
At the end of the year the max. reported was again about 400 in Rye Bay in Nov.

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

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
37	7	116	41	26	6	8	2	4	4	44	37

The Mar. total included an unusual flock of about 100 off Pagham Harbour on 19th.

In addition to the above counts, 23 were recorded moving east at Beachy Head between Apr. 10th and May 22nd with a max. of 13 on Apr. 10th.

In Nov. a party of 25 flying west at Langney Point on 19th may well have been associated with 22 at Church Norton on 26th and 26 in Chichester Harbour on Dec. 10th.

68. **RED-BREADED Merganser** (*Mergus serrator*).—During the early part of the year very few again with only 20 in Chichester Harbour and 30 off Worthing in Jan. In Feb. 78 were seen off Ferring on 26th and in Mar. 40 off Climping on 27th.

During spring passage at Beachy Head, 169 were recorded moving east between Mar. 20th and May 15th with maxima of 41 on Apr. 16th, 45 on 17th and 17 on 22nd (For full details see table on page 13). Small numbers of passage birds were also recorded at various other coastal localities.

In summer: one off Selsey Bill on Jun. 4th-5th; 2 in Chichester Harbour on Jul. 29th.

Towards the end of the year there were 2 off Selsey Bill on Oct. 15th and 25 there by 29th. Between Nov. 5th and 20th 22 flew west at Langney Point and during the rest of the month reports came from 5 other coastal localities. The max. recorded in Dec. was 10 in Chichester Harbour.

Inland there was one at Ardingly Res. on Dec. 21st and one at Bewl Bridge Res. on Dec. 4th.

70. **GOOSANDER** (*M. merganser*).—Singles were reported from Arlington Res. from Jan. 16th to Feb. 6th and a late bird on Apr. 18th. There was one in Pagham Harbour on Feb. 3rd and one at Darwell Res. on 13th.

Two were seen at Bewl Bridge Res. on Nov. 19th and singles at Darwell Res. and Pett Level on 27th.

71. **SMEW** (*M. albellus*).—At Pagham Lagoon a drake on Jan. 2nd was joined by two "red-heads" on 7th, one of which stayed until Feb. 10th. All further reports were of "red-heads"—one at Chichester G.P. from Jan. 8th to Mar. 9th; 2 at Arundel Wildfowl Reserve from Jan. 18th to Feb. 28th; 2 at Bewl Bridge Res. on Jan. 1st; and 2 at Darwell Res. on Jan. 16th and Feb. 13th. At Pett Level/Rye Harbour LNR there was one from Jan. 8th, 2 on 23rd and then one until the late date of Apr. 23rd, the first April record for Sussex.

SELECTED SEA-WATCH DETAILS, BEACHY HEAD, SPRING 1977

DATE	APRIL		MAY	
	16	17	28	29
HOURS	0625 0600	1845 1500	0600 0600 0700 0615	0545 0550 1900 1845
WIND	S NE	S	S E	S E
	3 1	4 1	4 1	4 1
DIVER sp.	124 39	61 4	16 7	35 8
	3996 1770	238 20	174 85	198 539
Velvet Scoter	12	1	1	1
R. B. Merganser	39 45	11	2	2
Grey Plover	—	—	4 78	—
Whimbrel	72 41	15 8	12 4	9 —
Bar-tailed Godwit	—	429 189	392 1054	1318 46
Arctic Skua	4 1	6 5	3 —	1 18
Great Skua	1	3	3	3
Pomarine Skua	—	—	9 20	2 —
Little Gull	—	—	—	11 1
Black Tern	—	—	—	4 —
Common/Arctic Tern	13 33	9 1	63 75	49 335
Little Tern	—	—	—	117 117
Sandwich Tern	937 277	206 74	123 149	149 194
Common Scoter	3996 1770	238 20	174 85	198 539
Velvet Scoter	12	1	1	1
R. B. Merganser	39 45	11	2	2
Grey Plover	—	—	4 78	—
Whimbrel	72 41	15 8	12 4	9 —
Bar-tailed Godwit	—	429 189	392 1054	1318 46
Arctic Skua	4 1	6 5	3 —	1 18
Great Skua	1	3	3	3
Pomarine Skua	—	—	9 20	2 —
Little Gull	—	—	—	11 1
Black Tern	—	—	—	4 —
Common/Arctic Tern	13 33	9 1	63 75	49 335
Little Tern	—	—	—	117 117
Sandwich Tern	937 277	206 74	123 149	149 194

73. **SHELDUCK** (*Tadorna tadorna*).—The wildfowl counts of Jan. 22nd and Dec. 10th/18th produced totals of 1,821 and 1,866 respectively, the vast majority being in the western harbours.

Max. counts of young at known breeding localities during Jun./Jul. were:

Chichester Harbour	134	Cuckmere Valley	11
Chichester G.P.	29	Pett Level	22
Pagham Harbour	142	Rye Harbour LNR	14

A pair with one young was also reported from Offham.

See also the paper on pages 52-54 for details of the counts for the winter 1977/78.

75. **GREYLAG GOOSE** (*Anser anser*).—Sussex is well-removed from any traditional wintering grounds for this species and it is probable therefore that up to 6 in the Pulborough/Amberley area Jan.-Apr. and up to 9 there Nov.-Dec. were of semi-feral origin. The same must apply to 2 at Bewl Bridge Res. on Mar. 28th-30th, 2 at Rye Harbour LNR on Jan. 29th, one near there on Feb. 19th and in particular to 4 there throughout July.

76. **WHITE-FRONTED GOOSE** (*A. albifrons*).—The party of 28 seen in Dec. 1976 were again reported from Arlington Res. on Jan. 1st and 3rd. At Winchelsea 20 flew NW up the Brede Valley on 2nd. One in Pagham Harbour on Jan. 2nd was with a second bird on 9th only, possibly visited Thorney Island on 22nd, and remained in the Sidlesham-Chichester G.P. area until Mar. 27th. At Amberley Wild Brooks 4 were present from Jan. 4th to Feb. 21st and 2 until Mar. 11th, whilst at Arundel Wildfowl Reserve there was one on Mar. 16th. A party of 40 was reported flying east over Worthing on Jan. 19th.

On Dec. 11th, 11 passed over Pett Level and, after a single at Amberley Wild Brooks on Dec. 16th, 6 were seen there on 24th.

78. **PINK-FOOTED GOOSE** (*A. brachyrhynchus*).—One feeding with Canada Geese at Arlington Res. on Jan. 8th (FL) may have been of semi-feral origin. Four, probably 7, were seen in the Camber area on Nov. 27th (PFB, WRM) and one at Amberley Wild Brooks on Dec. 16th (BFF).

79. **BEAN GOOSE** (*A. fabalis*).—Ten on Pevensey Levels on Jan. 2nd (MJR) and Feb. 3rd (PJW, VAW) had largely black bills and may have belonged to the Western Tundra form *a.f. rossicus*.

GREY GOOSE SPECIES.—Between Jan. 2nd and May 1st there were 7 sightings of parties of unidentified grey geese. What were probably the Arlington Res. White-fronted Geese were also seen at Glynde Levels on Jan. 3rd. At the end of the year parties of 5, 24, 22 and 38 were seen in flight in various parts of the county between Nov. 18th and 27th, all moving west or south-west.

80. **BRENT GOOSE** (*Brania bernicla*).—The counts for Jan. for Pagham and Chichester Harbours produced a total of 6,973 compared with a total of 7,375 in Jan. 1976. The counts for Dec. produced a total of 6,073 compared with a total of 5,740 in Dec. 1976.

The Chichester-Pagham Harbour populations had mostly departed by Apr. 4th, and during spring passage at Beachy Head, between Mar. 5th and May 7th, 658 were recorded passing east with a max. of 200 on Mar. 5th.

First recorded in autumn were 2 in Chichester Harbour on Sept. 17th with further reports from Rye Bay and Beachy Head on 18th. The main arrival took place in mid-Nov.

See page 52 for winter 1977/78 details.

81. **BARNACLE GOOSE** (*B. leucopsis*).—Three at Rye Harbour LNR on Feb. 22nd-24th; one at Bewl Bridge Res. on Nov. 19th and one at Amberley Wild Brooks on Dec. 18th. The possibility that all these records related to birds of semi-feral origin cannot be excluded.

82. **CANADA GOOSE** (*B. canadensis*).—Principal winter and post-breeding maxima in the sub-population areas defined in the Sussex Bird Report of 1972 were as follows:

	Jan./Feb.	Sept.	Nov./Dec.
Pagham/Chichester (Eastleigh)	85	120	87
Amberley/Petworth/Warham Mill (Petworth)	425	340	458
Arlington/Barcombe (Hurstmonceux)	217	280	154
Rye/Bewl Bridge/Darwell (Dungeness)	41	17	75
Wet Wood/Ardingly (Ashdown Forest)	—	19	13
Totals:	768	776	787

Although these figures suggest a fairly static population level during the twelve months—and a high rate of mortality, it is also clear that the population in the county has nearly tripled in the past five years, the estimated wintering number in 1972/73 being given as a mere 290. Although only 44 pairs were found breeding in 1977, most were on secluded ponds and lakes in which the county abounds. It can only be speculated what the population ceiling can be but in the meanwhile the ecological impact may require careful monitoring.

84. **MUTE SWAN** (*Cygnus olor*).—The max. count in the West Rother valley was 140 on Jan. 26th. A count of 68 was made on the R. Arun at Amberley on the late date of May 3rd.

This year the pair on Patching Pond hatched 2 (HHKR, MDS) white cygnets (in addition to 2 normal) after one in 1975 and 1976. At Annington Brooks, another pair hatched one white and 2 normal (MDS).

86. **BEWICK'S SWAN** (*C. columbianus*).—In the early part of the year the max. recorded at Amberley Wild Brooks was 86 on Feb. 27th of which only 8 were imm. The flock had reduced to 25 by Mar. 23rd. No reports were received from the Rother Valley; a party of 8 was at Camber on Jan. 8th. Two ad. and 2 imm. were seen at Arlington Res. on 3 occasions between Jan. 4th and Feb. 8th and one was seen in the Cuckmere at Litlington on Jan. 21st. 24 flew over Partridge Green on Mar. 8th and 7 south over Chichester G.P. on Jan 22nd.

The first to return to Amberley Wild Brooks were 7 on Nov. 6th with 15 there by 30th and 75, of which only 14 were imm., by Dec. 27th. Elsewhere 11 visited Chichester G.P. on Nov. 17th and 3 were at Rye Harbour LNR on Nov. 27th.

91. **COMMON BUZZARD** (*Buteo buteo*).—Apart from one resident in one area from Jan. to Sept., single birds were reported from 8 localities between Jan. and Mar. with two more elsewhere on Jan. 23rd. A pair displaying in W. Sussex on Apr. 3rd was not seen again but further sightings of singles occurred on 9 further dates in various parts of the county throughout the breeding season.

On autumn passage some 28 individuals were seen between Aug. and Nov. at 15 localities throughout the county, including 8 at Beachy Head between Sept. 3rd and Oct. 10th. None was reported at the end of the year.

92. **ROUGH-LEGGED BUZZARD** (*B. lagopus*).—Neither of the birds seen in the country towards the end of 1976 was seen again, the sole record in spring being of one flying east over Pound Hill, Crawley, on Feb. 1st (AB). For the second successive year there was no significant autumn influx, the only occurrence being of one in the Cissbury/Chanctonbury area on Nov. 19th (BFF).

93. **SPARROWHAWK** (*Accipiter nisus*).—Despite the fact that only 5 pairs were proved to have bred, the frequency with which this often secretive species was seen during the breeding season in all parts of the county was an indication of its continuing resurgence. It was seen in no fewer than 41 localities in the west of the county and 14 in east and there were innumerable reports during the rest of the year.

95. **RED KITE** (*Milvus milvus*).—One seen at Cuckmere Haven on Oct. 27th flew off westwards (GW).

96. **BLACK KITE** (*M. migrans*).—One seen over Cissbury Ring on May 5th (BFF). This record has been accepted by "British Birds".

99. **MARSH HARRIER** (*Circus aeruginosus*).—In spring there were 3 records relating to females on passage to E or NE: at Pagham Harbour on Apr. 2nd (RJS, IK, MJWH), Rye Harbour LNR on May 28th (RFP, DJB) and at Beachy Head on May 6th (DSF, BAEM, MJR *et al.*).

A male, first seen at Sidlesham on Jul. 21st remained in the area until at least early Aug. (MS) and what may have been the same bird was seen there on Aug. 27th (PWB). On Sept. 3rd a female flew over Rye Harbour LNR towards Dungeness (RK) and another passed SE over Beachy Head on 12th (MJR).

100. **HEN HARRIER** (*C. cyaneus*).—Some 20 individuals were recorded during the current year compared with approx. totals of 29 in 1976, 32 in 1975 and 35 in 1974. Three adult males and 4 "ringtails" were reported from 7 localities during Jan.-Mar. and a male in April.

During the second half of the year, reported from two localities in Sept., one in Oct., 4 in Nov. and 5 in Dec. involving 4 adult males and 9 "ringtails".

102. **MONTAGU'S HARRIER** (*C. pigargus*).—A "ringtail" was watched on the ground and in flight at Rye Harbour LNR on Jun. 4th-6th (RK, FCK) and a male was seen elsewhere on Jun. 18th. For the second year running an imm. bird was seen at Beachy Head on Aug. 23rd (JFC).

103. **OSPREY** (*Pandion haliaetus*).—Reports of one at Chichester Harbour on May 7th (IRW), Petworth Park on May 10th and 12th (JRB, WDH) and Pagham Harbour on 14th (PWB) may have related to the same individual. One flew over Southwick on May 24th (RFP). On Jun. 26th there was one at Darwell Reservoir (RGH) and one at the other end of the county at Bosham (ETR). One was seen at Bewl Bridge Res. on Jul. 24th-26th (PC, VG, RCH). At Weir Wood Res. one was seen on Aug. 14th (CEH, MSH) and then a presumably second individual was regularly seen between Aug. 29th and Sept. 11th (WHT, DJWS, RFP *et al.*). Another record came from Darwell Res. on Aug. 31st (MJS-H) and finally one flew west over Rye Harbour LNR on Sept. 25th (RK).

104. **HOBBY** (*Falco subbuteo*).—First recorded in spring on Apr. 22nd when one flew inland over Littlehampton. Subsequently reported from 12 mainly coastal localities, 5 being recorded passing inland at Beachy Head between Apr. 23rd and May 29th and 4 at Pagham Harbour between Apr. 23rd and May 17th.

Present during the breeding season in at least six areas and at least one pair bred successfully.

Seen at 14, again mainly coastal, localities during autumn, involving a total of some 23 individuals. Last seen on Oct. 9th at Beachy Head.

105. **PEREGRINE** (*F. peregrinus*).—More than usual in spring with one at Glynde Levels on Mar. 3rd (DAP), one arriving from the sea at Beachy Head on Apr. 3rd (JFC), one at Crowlink on Apr. 15th (AJC) and one over Alfriston on Apr. 9th (PJW, VAW).

In autumn single birds on the same date, Oct. 10th, at Sidlesham in the west (MJWH) and Littleington in the east (AJC).

107. **MERLIN** (*F. columbarius*).—More than usual in the early months with singles reported from Rye Harbour LNR on Jan. 2nd, Camber on 3rd, Cissbury on 11th, Warminglid on Feb. 4th, E. Guldeford on 19th, Chichester Harbour on Mar. 6th, Pulborough on 25th, Beachy Head on 27th, Sidlesham on Apr. 13th and the Adur Valley on 22nd.

A very early autumn report came from Sidlesham on Aug. 25th and one was seen at Rye Harbour LNR on Sept. 25th. One, occasionally 2 were seen frequently in the Beachy Head area throughout Oct. when there were also 2 at Bracklesham Bay on 15th, one at Pett Level on 25th and one at Cooden on 27th. In Nov. one was reported from Thorney Island on 4th and one was seen throughout the month in the Pagham Harbour area. No reports were received for December.

108. **KESTREL** (*F. tinnunculus*).—Reported from at least 90 localities during the breeding season; 12 pairs reared at least 19 young.

Apparent migrants were recorded at Selsey Bill on Mar. 20th, Worthing on Apr. 17th and Beachy Head on 4 dates between Mar. 20th and May 7th. No autumn migrants were reported.

Autumn/winter gatherings included 13 (7 together) on Lullington Heath on Oct. 1st, 15 between Burpham and Amberley on Oct. 22nd, 15-20 between Cissbury and Chantconbury Kings on Oct. 19th and 10 in Chichester Harbour on Oct. 15th.

Accidental deaths in the species featured in reports from a number of observers. Individuals were found dead beside the Shoreham By-pass on Jul. 20th and Aug. 1st (LRK) and two were found dead in the Arlington area during the summer, one in a drain and the other in duck wire. Three others were found in a sodden condition at Arlington Res. and later died apparently of shock/exposure (AC). One was found dead in a farm water tank at West Chiltington (KN) and on Jul. 23rd a dead and apparently unwounded female was found still in a squatting posture at Itchenor (WWMcV).

117. **QUAIL** (*Coturnix coturnix*).—One was reported from Brighton Rubbish Tip on May 30th (NAGL). At least 15 were recorded from 8 Downland localities between May 29th and Aug. 10th but there was no proof of breeding. One was trapped at Beachy Head on Oct. 2nd (JFC).

120. **WATER RAIL** (*Rallus aquaticus*).—Thirty-three wintering birds were reported from 24 localities. During the breeding season the species was present at Weir Wood Res. and at E. Guldeford Level where young were heard calling (PFB). Singles were trapped at Beachy Head on Oct. 21st and 23rd.

121. **SPOTTED CRAKE** (*Porzana porzana*).—Singles reported from Charleston R.B. on Sept. 22nd and Dec. 16th (PJW).

125. **CORNCRAKE** (*Crex crex*).—Heard calling at Eartham on Jul. 2nd (WEL) and near Bewl Bridge Res. on Aug. 29th (PCB). One seen at Beachy Head on Oct. 19th (TG).

127. **COOT** (*Fulica atra*).—Well distributed on suitable waters throughout the county, but counts incomplete.

Waders: it should be noted that references to coastline counts in the systematic list refer to those made in 1977. The paper on pages 50 to 55 refers to those made in the winter, 1977/78.

131. **OYSTERCATCHER** (*Haematopus ostralegus*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 1,884 and 924 respectively, most being concentrated in Chichester Harbour in the west and Rye Harbour area in the east, though counts along the Climping to Middleton-on-Sea coastline were

far from insignificant. The harbour counts compared with 1,191 on Jan. 17th, 1976. Inland migrants were noted at Arlington Res. on May 3rd and 13th.

In the Chichester Harbour area 90 were counted on May 7th, 4 pairs apparently bred and 2 pairs hatched 4 young. By Jul. 16th the Harbour count was 189.

In Pagham Harbour there were 80 birds on May 7th; 13 pairs hatched 25 young and there were 138 birds there on Jul. 16th.

At Rye Harbour LNR 5 pairs nested, 3 successfully rearing a total of 5 young and a further pair nested at North Point Pit. There were 112 birds in the Rye/Pett area by Jul. 16th.

Numbers in the western harbours rose steadily to an autumn peak of 1,213 on Sept. 17th, though only 10 were found in the Rye/Pett area on that date. A more seasonable count of 360 was effected at Rye on Oct. 15th but there were fewer there towards the end of the year. For a period there was a parallel decline in the count in Pagham and Chichester Harbours, only 687 being counted there on Nov. 12th but a further wave of wintering birds brought the total there to 1,323 by Dec. 10th.

During the autumn inland records included singles birds at Arlington Res. on Jul. 25th, and Bewl Bridge Res. on Aug. 21st when there were also two at Weir Wood Res.

133. LAPWING (*Vanellus vanellus*).—Counts received from most of the important wintering areas between mid-Jan. and mid-Feb. indicated that, in addition to the 24,402 total in the Coastline Wader count of Jan. 22nd, there were at least a further 35,500 in the county during that general period. The Pevensey and Ouse Levels each accounted for some 15,000 and estimates of 2,000 or more came from a further 8 localities. All counts received came from within 12kms. of the coast.

Small post-breeding flocks were noted in a number of areas by mid Jun. In the Pagham and Chichester Harbours 1,102 were counted as early as July 16th and although numbers dropped in Aug., 972 were there on Sept. 17th. In the meanwhile 1,500 had already gathered at Amberley Wild Brooks by Sept. 5th and there were 800 on the levels at Newhaven on Sept. 26th.

The winter population count in the Pagham and Chichester Harbours on Dec. 10th produced only 1,794, compared with 2,812 at the beginning of the year. This was an indication of much reduced wintering numbers in the county as a whole which will be dealt with in the next Sussex Bird Report.

134. RINGED PLOVER (*Charadrius hiaticula*).—The Coastline Wader counts of Jan. 22nd and Feb. 19th produced totals of 409 and 418 respectively. Max. (winter) counts were 145 in Chichester Harbour on Jan. 22nd and 150 on the R. Adur at Shoreham on 24th.

Spring passage of this species in Sussex is not normally pronounced but counts of 17 departing east from the Cuckmere on June 17th and a further 13 there the following day were indicative of late passage, a feature noted in other wader species this year.

During the breeding season 57 pairs were recorded as in 1976, but only one from an inland site. At Pagham Harbour some 30 pairs had 49 nests (some being double-brooded) and hatched at least 116 young but it was thought that some earlier broods did not fare well due to the bad weather in early June. At Rye Harbour LNR about 13 pairs nested with unknown success.

Late summer return passage was evident at Rye Harbour LNR by Aug. 6th when 70 were noted and by Aug. 13th the Rye/Pett total had risen to 171. Further autumn maxima were reported from Newhaven on Aug. 26th (14) and in the Cuckmere on Sept. 18th (30). These maxima were reflected in the Pagham and Chichester Harbours where an autumn peak of 687 was counted on Aug. 13th, though there were still 644 there on Sept. 17th. There were also 200 on the R. Adur at Shoreham on Oct. 4th.

135. LITTLE RINGED PLOVER (*C. dubius*).—First recorded in spring at Newhaven on Mar. 26th and Sidlesham on 27th. During the remainder of the passage about 14 were reported from 11 localities.

Present during the breeding season at 3 sites with 3 young hatched at one, and 2 successfully reared out of 3 hatchings at another.

Single stray adults were seen at Rye Harbour LNR on Jun. 5th, Cuckmere Haven on 18th and Weir Wood Res. on 30th. Return passage started in mid-Jul., some 29 birds being recorded from five localities during the remainder of the autumn with maxima of 5 at Arlington Res. on Jul. 28th and again on Aug. 7th. An adult seen in the Cuckmere on Jul. 30th had badly oiled underparts, a condition hardly to be expected in such a species. The last for the year was at Sidlesham on Sept. 26th.

139. GREY PLOVER (*Pluvialis squatarola*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 1,339 and 1,700 respectively compared with 2,175 on Jan. 17th, 1976. Chichester and Pagham Harbours combined accounted for 82% and 93% of the respective totals.

At Beachy Head spring passage was about normal with 84 east between Apr. 2nd and May 22nd and a max. of 78 on May 3rd. This included one flock of 70, by far the largest yet recorded there.

The Chichester/Pagham Harbour count of 211 on May 7th initially suggested the normal dispersion of the winter population but there were still 40 in Pagham Harbour on Jun. 4th and numbers had risen again to 100 by Jul. 1st. The Jul. 16th count in both harbours amounted to 200 and a total of 739 was achieved on Aug. 13th. A gathering of 10 in the Cuckmere by Jun. 6th left soon afterwards.

Autumn passage swelled the numbers in the two western harbours still further, with 1,059 (all in Chichester) on Sept. 17th, a similar number on Oct. 15th and 1,630 on Nov. 12th. Evidently some birds then moved on, only 1,315 remaining on Dec. 10th.

Inland, the only record for the year was of one at Bewl Bridge Res. on Jan. 3rd.

140. GOLDEN PLOVER (*P. apricaria*).—Few inland reports were received for the start of the year but the coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 4,021 and 5,823 respectively, compared with 2,049 on Jan. 17th, 1976. Dispersion of the wintering population on the Pevensey Levels, the main area for this species, proceeded normally, reducing from 5,300 in the Feb. count to about 250 on Apr. 2nd and 89 by Apr. 24th.

More than usual were recorded during the summer with up to 3 in the Sidlesham Ferry area between May 2nd and Jul. 31st. Two early returning adults arrived in the Cuckmere on Jul. 29th and by Aug. 2nd there were 6 at Sidlesham. Thereafter numbers in the west rapidly increased with 100 in Pagham Harbour by Aug. 27th, 180 on Thorney Island on 28th and an estimate of 150-200 back in Pagham Harbour on 29th. By Oct. 15th there were 429 in Pagham and Chichester Harbours but unfortunately no parallel counts were received from the Pevensey Levels.

At the end of the year there were 1,232 in the two western harbours and 1,100 in the Rye/Pett area on Dec. 10th, and a flock of 320 near Ringmer on 20th.

The first National BTO census into the wintering population and distribution of the species was attempted. The results of counts made simultaneously throughout the county were:—

148. **WOODCOCK** (*Scolopax rusticola*).—Although reports were received from only 10 localities at either end of the year, this species doubtless remains widespread in winter in suitable habitats.

150. **CURLEW** (*Numenius arquata*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 1,442 and 2,283 respectively, compared with 1,337 on Jan. 17th, 1976. The main concentrations were in the Pagham and Chichester Harbours in the west and the Rye/Pett area in the east.

No significant spring passage was reported from coastal sites nor were any breeding records received.

Few birds summered in the Pagham and Chichester Harbours but by Jul. 16th there were 1,611 there, mostly in the latter, and there was an increase to 2,197 by Aug. 13th. At the same time numbers at Rye/Pett rose to 130. Whilst the count there further rose to 203 by Sept. 17th, that in the west dropped to 1,695 but returned to 2,240 by Oct. 15th. After this there was a slight reduction in the overall wintering population which persisted into the New Year.

151. **WHIMBREL** (*N. phaeopus*).—The first reported in spring were 2 at Chichester Harbour on Apr. 14th. Thereafter passage birds were recorded at 9 coastal and 3 inland localities. At Beachy Head 338 were noted passing east between Apr. 16th and May 22nd with maxima of 72 on Apr. 16th, 41 on 17th, 61 on 26th and 44 on May 6th (For full details see Table on page 13). The count in the Chichester and Pagham Harbours on May 7th produced the surprising total of 110, mostly in the latter. On the night of Jun. 3rd a number were heard calling over Eastbourne and one was in Pagham Harbour on 4th.

In Pagham Harbour there were 3 summering birds on Jul. 3rd and 2 were in the Rye Bay area on 6th. Return passage began on Jul. 15th with reports of 1-4 coming from Pett Level, Bewl Bridge Res., Langney Point, Cuckmere Haven, Wilmington, Glynde Levels and Rottingdean between then and the end of the month. In the meanwhile numbers in Chichester Harbour had risen to 71 and Pagham Harbour 12 by Jul. 16th. There was a total of 105 there on Aug. 13th but, in keeping with reports from elsewhere, numbers had dropped to 19 by Sept. 17th. The last seen were 2 passing Selsey Bill on Sept. 25th and 6 lingering in the harbours on Oct. 15th.

154. **BLACK-TAILED GODWIT** (*Limosa limosa*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 1,085 and 700 respectively, solely from Pagham and Chichester Harbours. These counts represented 57% and 65% of the respective totals in the Sussex/Hampshire harbours at the time and compared with only 312 at the same sites on Jan. 17th, 1976.

Unlike the Bar-tailed Godwit (see below) this species is essentially an overland and nocturnal migrant with the result that its passage is relatively difficult to trace. Although there were still some 700 in the Pagham and Chichester Harbours on Apr. 18th, none was to be found there on May 7th (and only one in the Hampshire harbours). Scattered birds appeared elsewhere during the period—one in the Cuckmere on Apr. 7th, one at Pett Levels on 14th, 4 at Newhaven on May 6th and one at Rye Harbour LNR on 21st.

No reports were received for Jun. but at Jul. 16th the count in the Pagham and Chichester Harbours produced 411, rising to 538 on Aug. 13th, 747 on Sept. 17th and 1,189 on Oct. 15th after which the totals dropped by about one third. In the meanwhile, as in spring, only a few records came from elsewhere, mostly involving single birds, but there were 14 at Rye Harbour LNR on Aug. 22nd.

In the winter a party of about 25 were frequenting Amberley Wild Brooks on Dec. 16th and 24th. The Dec. 10th count in the Pagham and Chichester Harbours was 602, 40% of the Sussex/Hampshire total at the time.

	8th/9th Jan. 1977	27th Nov. 1977	1st Jan. 1978	5th Feb. 1978
Chidham Peninsula	9	0	0	0
West Wittering/West Itchenor	499	266	691	706
Earnley/Bracklesham	1050	269	631	45
Selsey/Sidlesham/South Mundham	302	4	802	602
Ford Airport	nc	182	33	0
Adur Levels	11	1	0	0
Glynde/Ringmer	nc	320	320	350
Pevensley Levels	2800	1100	850	1300
Pett Level/Winchelsea/Rye LNR	490	293	437	500
Guldeford Level, Camber	220	163	455	24
Broomhill Level, Camber	185	220	1758	713
Total	5566	2498	2977	4240

Although only a maximum of 22 observers was engaged on any one count it is thought that these figures are a reasonable estimate of the wintering population in an average year—the pleasant aspect of the survey was that so many were found.

142. **DOTTEREL** (*C. morinellus*).—In spring 3 on the Downs above Steyning on April 26th-27th (RB, KB) and one on Chantry Hill above Storrington on May 23rd (JS).

In autumn 2 near Balsdean on Aug. 30th (GAS) and there was one on Pevensley (Horse-Eye) Levels on Sept. 18th (RS).

143. **TURNSTONE** (*Arenaria interpres*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 676 and 556 respectively, compared with 548 on Jan. 17th, 1976.

In spring the max. in Chichester Harbour was 47 on May 7th. In Pagham Harbour a spring max. of 125 was counted on the same date, reducing to 14 by 27th and 3 on Jun. 7th. Passage was also clearly defined in the east of the county with 40 at Rye Harbour LNR on Apr. 16th and 260 on May 10th, dropping to 70 by 19th but still 10 there on Jun. 10th. At Beachy Head 25 were recorded passing east between Apr. 30th and May 16th.

The build-up of early autumn feeding populations also followed similar patterns in east and west. At Rye/Pett on Jul. 16th only 6 were seen but there were 96 by Aug. 13th and only 24 by Sept. 17th. In Pagham/Chichester Harbours, 42 on Jul. 16th increased to 240 on Aug. 13th and dropped back to 60 by Sept. 17th.

By the end of the year the Pagham/Chichester counts amounted to only 388 on Dec. 10th which later proved to be the winter max.

There was only one report from inland during the year, one at Arlington Res. on May 6th.

145. **SNIFE** (*Gallinago gallinago*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced 1,534 and 2,538 respectively, compared with 592 on Jan. 17th, 1976. The largest concentrations were on the Pevensley Levels where the totals were 900 and 2,000 respectively compared with only 350 there in the 1976 count. Away from the coastal sites reports from 13 other localities suggested the presence of a further 2,000 wintering birds.

During the breeding season reports of "drumming" birds were received from Thorney Island (1), Amberley Wild Brooks (2), Steyning (1), North Stoke (2), Fisham Reed Bed (2), Horse-Eye Level (2), Sedlescombe (1) and along the Bluebell Railway-line (2). The present breeding status in the county remains obscure whilst the continued drainage of marshes large and small proceeds; all records of "drumming" birds are still required.

Max. counts received for Nov. were of 300 each at Thorney Island on 11th, Pevensley (Manxey) Levels on 20th and Pevensley (Horse-Eye) Levels on 24th. There were 350 in the Rye/Pett area by Dec. 10th.

147. **JACK SNIFE** (*Lymnocyptes minimus*).—There were records from 8 coastal and 9 inland localities and the monthly figures were:—

Jan.	35	Oct.	5
Feb.	23	Nov.	18
Mar.	2	Dec.	3
Apr.	2		

155. **BAR-TAILED GODWIT** (*L. lapponica*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 667 and 1,227 respectively, compared with 706 on Jan. 17th, 1976. These birds were almost entirely in Chichester Harbour and accounted for 38% and 50% respectively of the total in the Sussex/Hampshire harbours at the time.

During Apr. and May small numbers were noted on passage during occasional observations at Selsey Bill, Shoreham and Brighton. At Beachy Head maximum coverage of diurnal passage was effected, producing a total of 4,145 between Apr. 10th and May 22nd, the maxima being 429 on Apr. 28th, 392 on 30th, 1,054 on May 1st, 1,318 on 2nd and 335 on 6th. (For full details see Table on page 13). The urgency with which this species pursues its spring migration was reflected in the lack of birds found feeding during this period, there being only 10 in the Pagham and Chichester Harbours on May 7th and 6 in the Cuckmere on 3rd. The max. at Rye Harbour LNR was 12 on May 12th.

Returning birds in Chichester Harbour totalled 270 by Jul. 16th with 248 there still on Aug. 13th and a further 204 in the Hampshire harbours. Of 919 in the western harbours as a whole on Sept. 17th, 581 were in Chichester but by Nov. 12th the combined total had dropped to 892, with only 390 in Chichester. A further wave of wintering birds arrived between then and Dec. 10th when the Chichester count had jumped to 1,061 and the total to 1,845.

Very few autumn and winter records were received from other coastal sites.

156. **GREEN SANDPIPER** (*Tringa ochropus*).—Recorded from 9 coastal and 18 inland, but only southern, localities during the year. The approximate monthly totals were as follows:

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.			
	9	2	0	2	0	8	33	67	15	12	13	6			
Jul.						1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Aug.						27	32	8	30	47	19	17	26	18	34
						46	50	61	69	52	27	41	46	40	67
Totals:						73	82	69	99	99	46	58	72	58	101

The July/August totals over the past ten years reveal some interesting phases in the late summer status of the species in Sussex which is clearly not related to changes in observer coverage:—

157. **WOOD SANDPIPER** (*T. glareola*).—Five records in spring were more than usual—at Sidlesham Ferry singles on May 2nd, 25th-27th and Jun. 20th-22nd; at Cuckmere Haven on May 14th and at Arundel Wildfowl Refuge on May 18th.

Autumn passage was also heavier than in recent years and came in four fairly well-marked phases. Early birds appeared at Weir Wood Res. on Jul. 4th and 12th, Sidlesham Ferry on 13th and Cuckmere Haven on 17th. A pause ensued until 2 appeared at Newhaven Tide Mills on Jul. 30th and one at Pett Level the same day. There were then scattered records from 3 localities in early Aug. but by 14th there were 12 in the county including 8 in the Rye/Pett area. Some of these moved on and this was followed by a further wave between 18th and 20th during which an estimated total of 30 birds at five coastal and 2 inland localities was reported. Thereafter numbers dwindled steadily and the last seen were singles at Sidlesham on Sept. 9th and Pett Level the following day.

159. **COMMON SANDPIPER** (*Actitis hypoleucos*).—No reports of wintering birds were received for the beginning of the year and the first spring migrant was seen at Rye Harbour LNR on Mar. 25th. After a single bird at Pagham Harbour on Apr. 16th there was a small arrival, mainly in the western harbours, on 21st-23rd. A further arrival came on May 4th-7th but it was not until May 19th that any significant passage occurred, 47 being reported from 13 mainly coastal localities between then and the end of the month. A total of 16 was feeding along the

shoreline between Fairlight and Rock-a-Nore on May 21st and six flew east at Beachy Head the following day.

In early Jun. single birds were reported from Sidlesham Ferry, the Cuckmere and Rye Harbour LNR and later on, at Rye on 23rd and Pulborough on 28th. Return passage started about Jul. 8th-10th and by the end of the month counts were received of 14 in Chichester Harbour, 4 in Pagham Harbour, 4 at Newhaven, 8 in the Cuckmere, 7 at Arlington Res., 2 or more at Weir Wood Res., 3 in the Rye/Pett area and inland, one at Mannings Heath—a total of 43. August featured the main passage and reports were received from many coastal and inland localities. The largest counts were of 56 in Chichester Harbour on 13th and of 27 flying down the Cuckmere on the evening of 19th. Numbers dwindled steadily thereafter and counts of 9 in Chichester Harbour on Sept. 17th, 20 in Pagham Harbour on 24th and 6 at Arlington Res. on 30th doubtless represented flocks moving quickly through the county. Late stragglers were reported from Selsey Bill and Darwell Res. on Oct. 1st and Chichester Harbour on 15th.

A single bird at Newhaven on Oct. 22nd may have been the one which was still frequenting the R. Ouse near Lewes at the end of the year. In addition, two birds wintered in the Cuckmere Valley.

160. **SPOTTED SANDPIPER** (*A. macularia*).—One at Barcombe Res. from Nov. 23rd to Dec. 2nd (RDME, PC). This record has been accepted by 'British Birds'.

161. **REDSHANK** (*Tringa totanus*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 1,724 and 1,585 respectively, compared with 1,503 on Jan. 17th, 1976. The main concentrations were in the west Sussex harbours.

In common with some other species of wader, there was evidence of some late migration in early Jun.

Breeding reports were received from only 13, mainly coastal, localities, involving some 50 pairs.

The count of only 44 in Pagham and Chichester Harbours on May 7th suggested the presence of breeding birds only. By July 16th there were 1,480 there, and further migrants swelled the population to an autumn peak of 2,176 by Sept. 17th. Most of these birds stayed for several weeks apparently, as there were still 1,883 on Oct. 15th and 2,058 on Nov. 12th. By Dec. 10th, however, the count had dropped back to 1,057—a trend which continued into the New Year.

162. **SPOTTED REDSHANK** (*T. erythropus*).—During the coastline wader count of Jan. 22nd, six were in Chichester Harbour and singles on the Pevensey Levels and at Rye Harbour LNR. A further bird spent the winter in Pagham Harbour. Approximate monthly totals for the year were as follows:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
9	2	6	3	2	3	23	22	18	23	15	17

The larger counts in the latter part of the year were due mainly to the presence of up to 21 in the Chichester Harbour area.

Apart from one at Arlington Res. on Aug. 15th, all records were from coastal localities.

165. **GREENSHANK** (*T. nebularia*).—During the early part of the year two wintering birds remained in Chichester Harbour and one in Pagham Harbour.

Spring passage was confined to May when up to 8 passed through Rye Harbour LNR and 3 were seen passing east at Beachy Head. Approximate monthly totals through the year were as follows:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
1	3	1	2	15	2	54	140	102	41	42	8

The high counts in mid-autumn were due to the presence of 103 in Chichester Harbour on Aug. 13th and 69 there on Sept. 17th.

169. **KNOT** (*Calidris canutus*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 189 and 60 respectively, compared with 780 on Jan. 17th, 1976. Whilst the majority were found in Chichester Harbour, the unusually low count was due entirely to a temporary removal of most birds into Langstone Harbour, Hants.

Elsewhere small numbers were reported from a variety of coastal localities throughout the year.

There were 48 in Chichester Harbour by Sept. 17th and only 20 in Langstone, but by Dec. 10th the former still had attracted only 200 whilst the latter contained 1,656. By the New Year the counts were roughly equal.

There were no records from inland localities.

170. **PURPLE SANDPIPER** (*C. maritima*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 57 and 41 respectively, compared with 49 on Jan. 17th, 1976. Small numbers were reported from a number of localities along the entire coastline at both ends of the year, the East Pier at Newhaven (max. 27 on Feb. 21st) and Pevensey Bay (max. 26 on Jan. 22nd) being the largest concentrations. A further wintering population was found between Hastings and Pett, with a maximum of 25 there on Mar. 26th.

171. **LITTLE STINT** (*C. minuta*).—Recorded in all months except Jan. The approximate monthly totals were as follows:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
—	2	1	1	2	2	13	20+	13+	11+	1	1

The wintering bird present in Chichester Harbour at the end of 1976 was probably one of the two seen there during the wader count on Feb. 19th. Neither of these was seen in Mar. the sole record relating to one on Cooden Golf Course on 26th. It may still have been one of the wintering birds at Sidlesham Ferry from Apr. 4th to at least May 25th, where it was joined by additional ones on May 10th and 13th. The Jun. records came from the Cuckmere and Rye Harbour LNR. Three birds stayed from Jul. into Aug., 3 more into Sept. and 2 into Oct. The Oct. migrants were interesting as one was found in the Cuckmere on 7th, 2 arrived at Sidlesham Ferry on 10th, 3 at Pett Level on 13th, one at Rye Harbour on 14th and another at Sidlesham on 15th all presumably belonging to some more remote breeding population.

One bird remained at Sidlesham until the end of the year.

173. **TEMMINCK'S STINT** (*C. temminckii*).—Two were present at Sidlesham Ferry on May 25th-26th (MS, IK). Another bird was seen there on Aug. 19th-21st (DSF, MS *et al.*). One at Arlington Res. on Aug. 26th-28th (JW *et al.*).

176. **PECTORAL SANDPIPER** (*C. melanotos*).—One at Cuckmere Haven on May 14th (PCB). This was the first spring record for the county.

178. **DUNLIN** (*C. alpina*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 21,540 and 15,528 respectively, compared with 24,441 on Jan. 17th, 1976. The main concentration was in Chichester Harbour (Jan. 15,515; Feb. 12,790). Subsequent counts indicated a steady rate of departure the total dropping to 775 by May 7th.

Elsewhere, the largest winter count had been 1,150 on the R. Adur at Shoreham on Jan. 24th, and other late winter maxima of 150 in the Cuckmere, 200 on the levels near Lewes, 70 at Amberley Wild Brooks and 130 at Newhaven Tide Mills.

In June there was a late spring max. of 11 in the Cuckmere on 6th but only 20 in Pagham Harbour on 7th, whilst at Rye Harbour LNR none was recorded between 4th and 27th. By Jul. 16th, however, the count at Pagham has risen to 438, though only 8 were to be seen in Chichester Harbour (but 930 in Langstone Harbour). The return of non-breeding adults was also noted at Rye where there were 3

on Jul. 2nd 32 by the 8th and in the Cuckmere where there were 32 by 30th. Thereafter the count in Pagham Harbour increased somewhat erratically to 2,400 by Dec. 10th whilst in Chichester Harbour there was a steady progression to 29,035 on that date. Small numbers were recorded at a few other coastal and inland localities during the same period. By mid-December the maxima reported were 420 at Shoreham, 240 at Newhaven, 90 in the Cuckmere, 70 at Amberley Wild Brooks and 245 at Rye.

179. **CURLEW SANDPIPER** (*C. ferruginea*).—Singles were seen at Rye Harbour LNR on May 27th-28th and on Jun. 26th.

Autumn passage started in late Jul. with one at Arlington Res. on 20th, 5 at Rye and one at Sidlesham Ferry on 23rd, 3 more there on 25th and 2 more at Rye on 26th. Strangely, one was found in a garden in north Worthing on 27th. Numbers at Sidlesham rose to 12 by 30th; one arrived in the Cuckmere that day and another was seen flying east at Pett Level.

At Sidlesham four passed through on Aug. 2nd, 8 left before 11th and then 3 more arrived on 12th. One arrived at Pett Pools on 9th to be joined by another on 11th when another was seen at Rye Harbour LNR. These birds all moved on within four days, apart from just one at Sidlesham. Two more arrived there on 30th and one more the following day when 5 also arrived at Pett.

At Sidlesham between one and 3 were seen on several dates until Sept. 15th and 2 on 17th were the last reported. At Pett Pools an additional bird on Sept. 1st made 6 in all which stayed until 15th. An extra one passed through on 7th and 2 on 13th. One appeared briefly in the Cuckmere on 3rd.

The total recorded in the autumn was 8 at Rye Harbour LNR, 12 at Pett Pools, 1 at Arlington Res., 2 in the Cuckmere, one at Worthing and 22 at Sidlesham.

181. **SANDERLING** (*C. alba*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 651 and 441 respectively, compared with 587 on Jan. 17th, 1976. Of the 1977 totals 435 were between Ferring and Climping in Jan. and 282 in Feb.

Numbers in the Rye area were slow to decline in the spring with 40 there on Mar. 21st, 30 on Apr. 5th, 57 on 23rd, 25 on May 8th and 13 on 29th. There were still 100 in Chichester Harbour on May 7th.

During spring passage at Beachy Head 129 flew east between Apr. 16th and May 29th.

The sole June report was of 7 off Church Norton on 5th and none was to be seen in Pagham or Chichester Harbours on Jul. 16th. By Aug. 13th, however, there were 214 in the latter. In the meanwhile there had been 4 at Rye Harbour LNR on Jul. 4th and there were 120 roosting there by Aug. 3rd. Two were seen in the Cuckmere on 22nd and one at Langney Point on 24th.

At Rye up to 115 remained in the area until the end of Sept. after which the counts dropped back to 40 on Nov. 28th and 60 on Dec. 10th. Parallel figures came from the counts in Chichester Harbour, 204 on Aug. 13th, rising to 305 on Sept. 17th but only 144 by Nov. 12th. By contrast the Nov. counts on Climping Beach rose from 100 on 1st to 290 on 12th.

184. **RUFF** (*Philomachus pugnax*).—The coastline wader counts of Jan. 22nd and Feb. 19th produced totals of 72 and 12 respectively, compared with 9 on Jan. 17th, 1976. Of the 72 in Jan. 48 were in Pagham Harbour where the max. count for that month was in fact 100. These figures did not include the important wintering flock at Amberley Wild Brooks where the Jan. and Feb. maxima were 45 and 52 respectively.

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

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
156	152	165	72	2	1	36	65	66	7	72	375
(5)	(2)	(3)	(4)	(1)	(1)	(2)	(8)	(4)	(3)	(2)	(6)

The above figures are based on the monthly max. counts from the localities involved but wide variations in day-to-day figures suggested that flocks were characteristically moving about a great deal. No count was received from Chichester, Harbour in Oct. where there were 43 in Sept. and 54 in Nov. It would seem that there was a minor influx into the county between Dec. 1976 (when only 33 were recorded) and Jan. 1977. This was repeated on an obviously larger scale in Dec. 1977 and in fact continued into the New Year. The Sussex wintering population during the past two years has been at the highest level on record in modern times.

185. AVOCET (*Recurvirostra avosetta*).—The 4 wintering birds at Sidlesham Ferry, still present in Jan. had reduced to 3 by Feb. 6th; two were in Chichester Harbour in late Feb. None was seen in that area in Mar. A party of 7 flew east along Cooden Beach on Mar. 26th and one was seen at Church Norton and Widewater, apparently moving west on Apr. 5th. Principal passage took place during May and Jun., with 4 at Sidlesham on May 22nd and a further 3 on 28th. Six flew east past Worthing Pier on May 3rd and parties of 5 and 8 past Beachy Head on 12th and 25th. Two were in the Cuckmere on 27th and one at Rye on 30th. Also at Rye there were 19 on Jun. 9th and a further 7 at 10th, whilst at Pagham Harbour there was one from 10th to 21st with 4 on 18th, 13 on 23th and 2 on 26th-27th. Total passage between Mar. and Jun. probably amounted to 80 birds which is the highest total since 94 in 1971.

It should be pointed out that the spring migrants seen in Sussex are considered to be of Continental origin. Rarely lingering, they represent a few chance sightings of the very large numbers which migrate north-east from the Iberian coast.

189. STONE CURLEW (*Burhinus oedichenemus*).—Two migrants were seen in the Beachy Head area on Apr. 15th (AJC). Two, possibly 3 pairs were present in the county during the breeding season. One successfully reared two young.

193. ARCTIC SKUA (*Stercorarius parasiticus*).—The first for the year were seen at both Selsey Bill and Beachy Head on Apr. 16th. At the latter a total of 202 was recorded moving east between then and May 28th with maxima of 31 on May 6th and 25 on 11th (see table on page 13 for full details). Smaller numbers were also reported from Selsey Bill, Ferring, Hove, Brighton and Seaford Head.

Summer wanderers were seen at Rye on Jun. 30th (2) and Rottingdean on Jul. 21st and 26th (2).

Return passage is never very obvious on the Sussex coast; only in poor visibility, which prevents birds moving out to sea, are significant numbers seen. 1977 proved no exception, only scattered reports coming from various localities from mid-Aug. onwards. Last seen were two singletons flying west off Langney Point on Nov. 5th.

194. GREAT SKUA (*S. skua*).—As winter records of this species are rare in Sussex the discovery of a recently dead bird at Thorney Island on Feb. 19th was of particular interest. At Beachy Head more were recorded there on spring passage than since 1969, with a total of 24 passing east between Apr. 10th and May 11th (See table on page 13 for full details).

Autumn records were few—singles flew west at Langney Point on Aug. 13th and again there and at Beachy Head on Oct. 8th.

195. POMARINE SKUA (*S. pomarinus*).—Atlantic cyclonic weather patterns persisted during the main passage time for this species in spring. As a result there were few ideal south-easterly days for its appearance along the Sussex coast. Nonetheless a total of 43 were recorded at Beachy Head between May 1st and 12th with a max. of 20 on May 2nd (MJR, DSF, NAGL *et al.*). (See table on page 13 for full details).

198. GREAT BLACK-BACKED GULL (*Larus marinus*).—At the beginning of the year the largest gatherings reported were of 92 at Shoreham on Jan. 9th, 250 near Mill Hill on 15th and 130 off the Seven Sisters on 30th. In autumn 112 were counted at Glyne Gap on Sept. 16th, no less than 400 in the Shoreham area on Oct. 4th and 100 at Black Rock, Brighton on Nov. 25th.

199. LESSER BLACK-BACKED GULL (*L. fuscus*).—Between Jan. and mid-Mar. a total of about 110 was reported from 7 mainly coastal localities followed by up to 12, probably passage birds, at Arlington Res. between April 14th and 19th.

The pair which nested on a roof-top in St. Leonards-on-Sea in 1975-76 returned once again but were disturbed by building repairs.

Small numbers were occasionally recorded on autumn passage at Selsey Bill; the largest gathering at roost to be reported was of about 240 near Rye on Nov. 12th.

200. HERRING GULL (*L. argentatus*).—On the Long Pit at Rye Harbour LNR 24 pairs attempted nesting rearing only 8 young, whilst at North Point Pit, Camber, about 12 pairs raised a min. of 12 young. Reports were received of roof-nesting pairs as follows:—Grand Parade, Eastbourne (2), Over Street, Brighton (1), Hamilton Mansions, Hove (1), Worthing (1), St. Leonards-on-Sea (1). Two pairs bred inland at Cliffe Hill Quarry, Lewes and a count along the chalk cliffs at Beachy Head from Birling Gap to Cow Gap on Jul. 9th produced a min. of 96 pairs.

Up to 6 birds of the yellow-legged Scandinavian race spent the summer at Pagham Harbour.

201. COMMON GULL (*L. canus*).—The largest roost count at the beginning of the year was of about 3,000 at Arlington Res. on Feb. 6th but the species was most widely noticed during spring passage from mid-March to early May. 250 were counted in the Cissbury/Chanctonbury area on Apr. 30th and at Beachy Head, maxima of 350 on Mar. 12th, 180 on Apr. 21st, 240 on 23rd and 200 on May 6th all involved birds moving east.

Gatherings of about 400 were noted at Rottingdean on Nov. 29th, and 100 or more at Drayton and 200 on Bramber Levels on Dec. 15th.

202. GLAUCOUS GULL (*L. hyperboreus*).—An imm. bird was present in the Winchelsea Beach area from Jan. to at least Apr. 2nd (PFB) and further imm. birds were identified at Brighton on Jan. 24th and Beachy Head on Oct. 29th (DSF). These were the only fully substantiated records received.

205. MEDITERRANEAN GULL (*L. melanocephalus*).—The bird first seen at Hove Lagoon on Dec. 18th, 1976 remained there throughout Jan. and Feb. and was trapped and ringed on Jan. 15th (DAP, TWP). In the meanwhile an adult was seen at Church Norton on Jan. 6th (DM), a 2nd winter imm. at Rye Harbour LNR on Jan. 21st and again at Pett Level on 23rd (CHD), a 1st winter imm. at Thorney Island on Jan. 22nd (TWP) and an adult there on Feb. 5th (BAEM). On Mar. 13th an adult was seen with other gulls on a rooftop at King's Beach Estate, Pagham (AFF, GAF).

Spring passage at Beachy Head produced fewer than 1976 but again involved apparently paired birds—and adult and a slightly sub-adult on Apr. 18th (JFC) and 2 adult on 30th (MJR). A similarly marked sub-adult to that of 18th appeared at Rye Harbour LNR on Apr. 21st (RF, SS).

None was recorded in May or June and it was not until the end of July that the species re-appeared on the coast. An adult was again seen on the Pagham roof-top on Jul. 27th-28th (AFF, GAF) and single adults, probably involving only one or two individuals wandering from the Dungeness area were seen at Pett Level on Jul. 25th and 31st and Aug. 4th, 5th, 7th and 21st (PR, CHD, JET *et al.*).

There was then another long gap in reports until early winter when a series of sightings of single adults came from the Lagoon at Lancing on Nov. 7th (AH), Pett Level on 27th and Dec. 3rd (PR), Shoreham on 5th (CFH), Pett Level again on 20th (CMJ, PJ), Selsey Bill on 24th (CMJ, PJ) and Hove Lagoon, once again, on 25th (CMJ, PJ).

The pattern of occurrence during the year clearly indicated the status of this species in Sussex as basically that of a passage migrant and winter visitor as suggested by the data for the past 10 years in the table below:—

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
21	9	10	25	9	4	9	7	8	2	14	10

The total of at least 19 in 1977 follows that of 20 in 1976, both well in excess of any previous annual total, and may be a reflection of increasing numbers now wintering on the French coast, particularly in Boulogne Harbour. The number of immature birds fully identified remains disproportionately small and all observers are urged to apply fully the now firmly established identification criteria.

207. LITTLE GULL (*L. minutus*).—One at Pett Level on Feb. 27th, one in the Cuckmere from Feb. 26th to Mar. 13th and another at Rye Harbour LNR on Mar. 22nd were the only late winter reports received.

At Beachy Head only 29 were seen on eastward passage between Apr. 17th and May 15th, possibly due to the lack of easterly winds with which its appearance on the Sussex coast is usually associated. (See Table on page 13 for full details). Two flew east off Selsey Bill on Apr. 16th and there was one at Rye the following day. A further 5 were recorded there between May 1st and 28th whilst 8 were seen in the Pagham Harbour-Chichester G.P. area during the same period. One was at Sidlesham Ferry on Jun. 3rd.

None was recorded during the remainder of Jun. or Jul. After one at Chichester G.P. on Aug. 15th a further 11 were reported from 8 localities between 20th and 31st including up to 3 at Weir Wood Res. from 28th to Sept. 4th. Further singles appeared at Rye on Sept. 8th, Beachy Head on 10th and Newhaven on 12th, and 8 were recorded moving west off Langney Point on 25th. One was at Hove on Oct. 3rd.

Late migrants were seen moving west off Langney Point on Nov. 5th (2) and 20th and in December single birds were reported from Chichester G.P. and Pagham Harbour on 10th and the Cuckmere on 27th.

208. BLACK-HEADED GULL (*L. ridibundus*).—At the Stakes Island colony in Chichester Harbour an estimated total of 1,000 nests on Jun. 2nd was decimated by the high tides and gale of the 6th leaving only 383 occupied nests on 15th, though there were a further 96 running young.

Many roost counts were received from all parts of the county and these will be embodied in the full survey of gull roosts to be published in due course. In the meanwhile all counts of roosts and large roosting movements, particularly inland, are required.

211. KITTIWAKE (*Rissa tridactyla*).—As usual recorded throughout the year from all coastal localities but one inland at Weir Wood Res. on Sept. 6th.

At Beachy Head 530 were recorded on spring passage to east between Mar. 13th and May 29th with a max. of 106 on May 14th. During the same period 136 moved west.

The breeding colony first reported in 1976 increased to 29 pairs of which 10 were known to have hatched at least 16 young.

In the Rye/Pett area there was a large summer gathering starting on Jul. 4th, rising to 280 on 14th and dispersing by 25th. This was probably associated with similar gatherings which occur annually at Dungeness during the summer.

212. BLACK TERN (*Chlidonias niger*).—First recorded in spring were single birds at Rye Bay on Apr. 15th, off Brighton on 20th and Beachy Head on 26th. Between May 3rd and 14th 12 were reported from 4 localities including one at Arlington Res. on 14th. On May 15th, 53 were reported from 6 coastal localities, including 35 east at Beachy Head. Whilst there were only 9 at Chichester G.P. that day up to 26 were there on 16th dwindling to one by 20th. During the remainder of the month a further 10 were seen at various places.

After one at Rye Harbour LNR on Jun. 2nd, another at Chichester G.P. on 3rd and 7 departing NE from Chichester Harbour that day, there came an unusual movement in the middle of the month. At Church Norton 13 flew east on 18th and on 19th a further 7 were seen whilst 20 were feeding off Selsey Bill and 5 were at Rye. Thereafter there were 3 more Jun. stragglers but 7 in early Jul., including 6 in Chichester Harbour on 5th, was unusual.

August started quietly with a total of some 20 seen at several inland and coastal waters between 7th and 23rd. On 24th a "wreck" of terns occurred in a SW gale. At Shoreham about 70 were found feeding over the R. Adur in the evening and by the following day they had found their way to Chichester G.P. where 64 were counted in the morning, apparently moving on to Church Norton to roost. On 26th, 72 were counted on the Pits and 30 at Pagham Harbour, though the counts may have involved some duplication. The birds slowly dispersed during the following 2 weeks whilst smaller numbers continued to filter along the coast until the end of Sept. and into Oct. The last seen in the east was one at Rye Harbour LNR on Oct. 3rd whilst one remained in Pagham Harbour until 13th. A late bird was found feeding over Ambertley Wild Brooks on Oct. 30th.

217. COMMON TERN (*Sterna hirundo*).—One pair nested successfully at Chichester G.P. on a raft placed by the Society. In Chichester Harbour, where fledging success was described as good, the colony had been washed out by the high tide of Jun. 6th but finally at least 57 pairs bred. At Rye Harbour LNR none nested on the Reserve but at least 26 pairs nested at North Point Pit, Camber, possibly rearing as many as 50 young.

COMMON/ARCTIC TERN (*S. hirundo/paradisaea*).—First seen in spring at Pagham Harbour-Selsey Bill on Apr. 8th. At Beachy Head a total of 6,670 was recorded moving east between Apr. 16th and May 29th with a max. of 2,043 on May 6th (see table on page 13 for full details). Smaller numbers were also seen during more occasional watches at Selsey Bill but regular though more limited periods of observation at Brighton on 13 dates between Apr. 20th and May 22nd produced a total of 1,020 passing east. As with the Black Tern there was an unusual passage in mid-June when 338 flew east in 1½ hrs. off Church Norton on 18th and 170 were feeding off Selsey Bill on 19th.

During the autumn recorded up to Nov. 6th, the largest movement reported being 182 west at Beachy Head on Aug. 8th.

218. ARCTIC TERN (*S. paradisaea*).—Two were identified at Chichester G.P. on the unusual date of Jul. 8th. A late bird flew west at Pett Level on Nov. 5th and in Chichester Harbour one of the "portlandica" type was seen on Nov. 12th and 15th (RFP, MRW).

219. ROSEATE TERN (*S. dougallii*).—One at Rye Harbour LNR on Jun. 8th (PFB, RK).

222. LITTLE TERN (*S. albigrons*).—First recorded in spring at Selsey Bill on Apr. 13th. First birds were on breeding sites at Pagham Harbour and Rye Harbour LNR by 16th and passage at Beachy Head started on 17th with 174 recorded there up to May 28th (see Table on page 13 for full details). Smaller numbers were noted on passage elsewhere.

At Rye Harbour LNR 16 pairs attempted to nest but only 2 were successful, rearing 2 young each. At the Pagham Harbour colony 220 adults were present by early Jun. and 70 nests were found, containing a total of 142 eggs. Tragedy then struck, thought to be in the form of a Little or Tawny Owl, killing at least 38 adults, mostly breeding females. This meant that by mid-Jul. the max. number of juveniles on the wing was a mere 20.

The Chichester Harbour fared little better though in this case winter erosion of the site and the high tides of Jun. 6th were to blame, washing out 18 early nests. Ultimately only 9 pairs bred, rearing just 4 young to fledging stage.

In autumn no significant passage was noted and the last seen were 2 at Southwick on Oct. 9th.

223. SANDWICH TERN (*S. sandwichensis*).—One was seen at Southwick on Jan. 30th. Winter records of this species are very rare.

The first spring migrant was seen at Selsey Bill on Mar. 15th whereafter the species was regularly seen along the coast. At Beachy Head a total of 4,653 was recorded between Apr. 3rd and May 29th with a max. of 943 on Apr. 16th, an early date for a movement of that scale (see Table on page 13 for full details). Smaller numbers were recorded during occasional watches at Selsey Bill but at Brighton 613 were seen on 13 dates between Apr. 18th and May 25th.

The new Chichester Harbour colony had mixed fortunes. On Jun. 2nd 105 nests were counted (compared with 35 pairs nesting in 1976) but the high tide of 6th decimated the colony and only 48 nests, containing 40 eggs, were to be found on Jun. 15th. Nonetheless fledging success was reported to have been good.

No significant passage was reported in autumn though a party of 50 flying west at Arlington Res. on Aug. 27th was unusual. Other inland reports included 5 SW over the Downs near Lewes on Aug. 5th, 2 more at Arlington Res. on 14th, 3 at Bewl Bridge Res. on 21st and one at Weir Wood Res. on Sept. 9th.

The last seen were singles at Chichester Harbour on Oct. 18th and Brighton on 22nd.

224. RAZORBILL (*Alca torda*).—Reported from various coastal localities in Jan. (1), Feb. (1), Apr. (1), May (3), Oct. (2), Nov. (1) and Dec. (1). During spring passage at Beachy Head 20 were identified, 19 of them flying east, between Apr. 17th and May 28th.

227. GUILLEMOT (*Uria aalge*).—Reported from various coastal localities in Apr. (2), May (4), Jun. (3), Sept. (1), Oct. (1) and Nov. (2). During spring passage at Beachy Head 4 were identified between Apr. 30th and May 19th.

AUK SPECIES.—During spring passage at Beachy Head 104 unidentified auks flew east and 24 west between Apr. 16th and May 28th with a max. of 17 on May 6th. Smaller numbers were seen during more occasional watches at Selsey Bill and Brighton.

232. STOCK DOVE (*Columba oenas*).—During the breeding season reported from some 20 localities. A late flock of 50 was seen in the Mile Oak area on May 22nd. Breeding in nest boxes was reported from Possingworth Park, Woodingdean and near the Bluebell Railway Line.

234. WOOD PIGEON (*C. palumbus*).—Autumn passage at Beachy Head was less pronounced than usual with a max. of only 950 on Oct. 29th. At Pett Level about 7,000 were estimated moving west on the morning of Nov. 13th.

A nest containing two eggs was found at Plumpton on Dec. 12th but hatching was abortive.

235. TURTLE DOVE (*Streptopelia turtur*).—First reported in spring at Beachy Head on Apr. 17th with further and more widespread reports between 23rd and 30th. The main arrival was not until mid-May. Widely reported during the breeding season but with no indications as to its current status.

236. COLLARED DOVE (*S. decacota*).—A total of 10 seen flying east at Beachy Head on Apr. 19th may have been immigrants.

237. CUCKOO (*Cuculus canorus*).—First recorded in spring at Hove and Mayfield on Apr. 13th and six other localities between 16th and 18th. By 24th-25th it was widespread in the county.

An individual of the brown, 'hepatic' phase was seen at Pett Level on Jul. 31st (DJP, PR).

In autumn juveniles were reported up to Sept. 10th; the last seen, an adult, was on Ashdown Forest on Oct. 2nd.

241. BARN OWL (*Tyto alba*).—Well reported during the breeding season with pairs reported from 10 localities and single birds at a further 31 compared with a total of 26 in 1976.

Only one was found dead this year.

246. LITTLE OWL (*Athene noctua*).—Well reported in the breeding season with 22 known pairs at 17 localities and singles sighted at a further 43, compared with a total of 40 localities in 1976.

247. TAWNY OWL (*Strix aluco*).—Well reported in the breeding season with 71 known pairs at 50 general localities and a further 40 heard calling elsewhere, compared with a general total of 54 sites in 1976 plus 65 birds in the Burwash/Brede area.

248. LONG-EARED OWL (*Asio otus*).—Two pairs bred, successfully rearing 3 and 5 young respectively. In addition a partially downy juvenile was found dead at another locality, two separate road fatalities occurred in the west of the county during March and one more was seen during the breeding season in the north.

The only autumn migrants were one at Beachy Head on Sept. 4th and one at Balsdean on Nov. 13th-18th.

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

Jan.	Feb.	Mar.	Apr.	May	Aug.	Sept.	Oct.	Nov.	Dec.
9	10	8	4	1	1	2	17	9	21

The totals at the start of the year included 2-3 at Rye Harbour LNR until Apr. 9th. The May bird was a migrant at Beachy Head on 14th. The record in Aug., an unusual month for this species in Sussex, was at Rye on 28th, possibly the same as that at Pett Level on Sept. 3rd. The Dec. total included 7 at Bosham on 11th and 5 at Pagham village on 10th.

252. NIGHTJAR (*Caprimulgus europaeus*).—This species was the subject of a special survey in 1977, details of which appear in a report on page 66.

255. SWIFT (*Apus apus*).—First recorded in spring at Pett Level on Apr. 17th then at 3 localities on 24th, and 4 on 26th but numbers remained small until a major arrival on May 13th-14th, a typical date.

The inclement weather in Jun. caused some widespread displacement of feeding birds and reports were received of 300 at Bewl Bridge Res. on 12th, 500 over Pagham Harbour on 13th, 450 over Selsey Bill on 14th-15th, 200-300 over central Eastbourne on 16th, 1,350 at Chichester G.P. and 100 flying east over Mile Oak on 17th, 500 at Castle Goring on 21st and 850 over Pagham Harbour still on 26th. As this species is known to travel considerable distances in search of food these figures cannot be taken as indicative of the county's breeding population.

Emigration commenced punctually at the end of July when large numbers were seen assembling and moving off south over Pulborough. Over 1,000 moved through the Rye area on Aug. 13th and 700 were recorded at Beachy Head between 20th and Sept. 4th. Numbers then declined rapidly to mid-Sept. and it was recorded at only 4 localities between 21st and 25th. A party of 35 flying south over Possingworth Park on Oct. 2nd was exceptional and doubtless of distant origin. The last seen at Beachy Head was on Oct. 10th and the last for the year were 2 over Eastbourne on Oct. 21st.

258. **KINGFISHER** (*Alcedo atthis*).—During the breeding season reports were received of the presence of birds at 30 localities amongst which pairs were seen at 8 and young known to have fledged at 4.

It is evident that at present this delightful species is holding its ground in the county and members are reminded that it is not essential to obtain proof of breeding. Nonetheless, reports of juveniles on the wing are welcome.

During the late autumn and winter 45 birds were reported from 18 coastal/tidal and 16 freshwater localities.

260. **ROLLER** (*Coracias garrulus*).—One at Upwaltham Down on Jun. 20th-22nd (RAC, JHM *et al.*). This record has been accepted by "British Birds" and is the 16th for the county.

261. **HOOPOE** (*Upupa epops*).—Single birds (unless otherwise stated) were seen at Penhurst on Mar. 27th-31st (JMC), arriving from the sea at Birling Gap on Apr. 17th (many obs.), at Bullock Down, Beachy Head earlier the same day, staying until 20th (many obs.), at Ninfield also on 17th (RC), at Charleston reed bed from 19th-23rd (PJW, VAW), at Etchingham on 21st (two birds) (SM), Littlehampton on 23rd (MSC) and Church Norton on 27th (JK). In May there was one at Birling Gap on 4th (DSF, MJR *et al.*) and one at Bury on 26th (per FP), bringing the spring total to 11 birds.

For the second year running one pair successfully bred in the county, rearing two young to flying stage by mid-July but it was later reported that both young and one of the adults had been killed, probably by a fox.
None was reported in autumn.

262. **GREEN WOODPECKER** (*Picus viridis*).—Reports were received of the presence of birds at 79 localities during the breeding season but this doubtless represented but a small proportion of this ubiquitous and successful species.

263. **GREAT-SPOTTED WOODPECKER** (*Dendrocopos major*).—During the breeding season reports were received of 57 pairs at 33 general localities and its presence at a further 43. Many records were received from other areas during the remainder of the year, contributing to an increasingly comprehensive picture of the status of the species in the county. All observations are still required.

What may have been a Continental emigrant arrived from the sea at the time of the Jay movement at Pett Level on Oct. 8th.

264. **LESSER-SPOTTED WOODPECKER** (*D. minor*).—Reported from 41 localities during the breeding season in all parts of the county and involving only chance sightings of this rather uncommon and elusive species, the true distribution of which remains somewhat obscure. All observations are still required. Comparative totals of localities over the last seven years are as follows:—

1971	1972	1973	1974	1975	1976	1977
47	50	48	50	36	35	41

Late autumn and winter records were many and widespread. Rather strangely singles were recorded at Beachy Head on Sept. 4th and Oct. 3rd.

265. **WRYNECK** (*Jynx torquilla*).—Two were recorded during the spring, one at Beachy Head on May 6th and one at Church Norton on May 1st.

In autumn 15, possibly 18, were reported between Aug. 13th and Sept. 17th. The first was at Church Norton on Aug. 13th with another there on 20th. One appeared at Beachy Head on 22nd and two there on 24th. A further bird was found between Church Norton and Sidlesham on 25th-27th. On 27th one was reported from Rye Harbour LNR and 8 from the Beachy Head area. Most of these rapidly moved on, though one remained at Beachy Head until Sept. 3rd when 2-3 were thought to be present. The last record came from Sidlesham on Sept. 17th.

271. **WOODLARK** (*Lullula arborea*).—Although evidence of nesting was not forthcoming, this often secretive species was present at 3 suitable sites during the breeding season, suggesting a pleasing but as yet uncertain return to the county.

Single migrants were recorded at Beachy Head on Sept. 23rd (TWP, JBW) and Oct. 2nd (RHC).

272. **SKYLARK** (*Alauda arvensis*).—In Jan. a large weather movement after snow took place on 13th when about 600 were estimated feeding at Pagham Harbour. Counts of large feeding flocks on Downland were again received for the winter months.

274. **SWALLOW** (*Hirundo rustica*).—Spring arrivals were exceptionally early. After a single bird at a previous nest in Shoreham as early as Mar. 7th-8th, 3 were seen arriving from the sea at Pett Level on 11th, further singles on 12th, 18th and 19th, and at Pagham Harbour on 20th. No fewer than 11 were at Arlington Res. on 27th and 8 more elsewhere. However wintery weather returned on 28th and it was not until Apr. 16th that the first main influx took place, followed by further waves between May 10th and 15th.

A total albino was seen at Rottingdean on Sept. 9th. On Sept. 3rd a third brood was still in the nest, near Lewes.

The first major migratory gathering at Beachy Head was on Sept. 10th when 10,000 were estimated, and up to 4,200 were recorded there on six further dates up to Oct. 13th. In the meanwhile large movements were noted at Pett Level on Sept. 18th, Woodingdean on Sept. 25th and Possingworth Park on Oct. 7th. As usual many records were received throughout Oct. and up to the end of Nov. though most stragglers had gone by mid-month. An imm. was seen at Climping on Nov. 27th and one can only speculate as to the fate of another at Plumpton on Dec. 20th.

276. **HOUSE MARTIN** (*Delichon urbica*).—First recorded in spring at Amberley Wild Brooks on Mar. 27th followed by singles at Arlington Res. on Apr. 1st and Weir Wood Res. on 2nd. After only 5 scattered reports between Apr. 8th and 11th there was no significant arrival until the 3rd and 4th weeks of the month with more following in mid-May.

Very few records were received for breeding colonies and it is certain that this species is at present under-reported. All breeding records are required, together with 6-figure grid reference.

Autumn emigration at Beachy Head was marked by gathering of up to 3,000 between Sept. 12th and Oct. 10th, with about 6,000 there on 11th and 5,000 on 12th, after which there was a rapid decline in numbers. On Oct. 8th, 280 were counted leaving Selsey Bill to the SE. An unusually large number of late records were received. Ten were seen between Nov. 20th and 25th, 11 on 26th (a Saturday), followed by singles on 28th and 30th. The last was at Arundel Park on Dec. 3rd-4th.

277. **SAND MARTIN** (*Riparia riparia*).—As with the swallow, an exceptionally early spring for this species. First seen was at the Cuckmere on Mar. 6th (coincident with one at Portland, Dorset). Another was seen at Winchelsea on Mar. 12th. A most unusual arrival took place on 27th with a total of 94 reported from 9 coastal localities, including 30 at Amberley Wild Brooks and 31 at Arlington Res. On 28th, 60 were seen at Chichester G.P. and 38 were still struggling in bitter, snowy weather in the Cuckmere. Apr. 17th-20th marked the first really widespread arrival, whereafter numbers built up normally.

Counts of occupied nests at breeding colonies received were: Washington and Storrington sandpits—about 107; River Rother at Durford—6. All such records are particularly required.

An albino was seen flying west at Pett Level on Sept. 17th and one was at Chichester G.P. on 25th.

Large pre-migratory gatherings were recorded at Pett Level/Rye/Camber on Aug. 6th (1,000) and 20th (800) and 27th (1,000). On Sept. 6th, 1,000 were estimated at Chichester G.P. and on the evening of that day many 1,000s were seen passing Pett Level. The exodus continued to 10th, but a further 100 left Beachy Head on 14th and there were still 200 in the Rye area on 18th. Few were seen thereafter—2 at Beachy Head on Oct. 12th but 16 still at Chichester G.P. on 18th. One at Pett Level on Nov. 5th was the last reported.

278. **GOLDEN ORIOLE** (*Oriolus oriolus*).—One at Beachy Head on May 19th (NAGL); one at Balsdean on May 29th (GAS) and one at Rye Harbour LNR on Jul. 16th (RK).

279. **RAVEN** (*Corvus corax*).—The bird first seen in the Beachy Head area in 1976 was seen occasionally up to May 1st (RHC, PJW, MJR). One near Steyning on Jan. 15th (RFP, DJB).

281. **HOODED CROW** (*Corvus corone corvix*).—One west over Brighton on Jan. 4th and one over Bramber on 7th; one at Climping from Jan. 15th to Feb. 19th and one at Sidlesham from Feb. 19th to Mar. 23rd. One at Fairlight on Feb. 13th. Singles at Hailsham on Feb. 8th and Pevensey (Manxey) Level on 21st may have been the same bird.

In autumn one at Pett Pools on Nov. 13th and one near Seaford on 30th.

282. **ROOK** (*C. frugilegus*).—This species formed the subject of a comprehensive breeding survey in 1975 details of which appear in a report on page 56. On Oct. 10th, 8 arrived from SE at Beachy Head.

286. **JAY** (*Garrulus glandarius*).—Perhaps once in a decade large numbers of this species arrive in this country from the Continent in autumn. This happened in 1977. On Oct. 7th, 102 were counted at Beachy Head and many more were flying west; 14 were seen at Litlington, 22 at Pett Level and 26 flew east at Shoreham. The following day a party of 29 was seen at Pett. On the 9th, 95 were logged at Beachy Head and 50 on 10th when 21 were noted flying NW at Chichester G.P. By this time a number of observers inland had noticed unusual numbers. A further arrival started on 13th with 27 at Beachy Head; then 20 in the Pagham Harbour area on 17th were followed by a further 32 at Beachy Head on 18th, only one 19th, 40 on 20th and a further 65 on 22nd when 12 were recorded at Pagham Harbour. After this, numbers returned to normal although 10 in the Cissbury-Chantonbury area of the Downs on 26th and 29th were well away from their normal habitat.

288. **GREAT TIT** (*Parus major*).—After general indications of some heavy mortality in nest boxes during the hot summer of 1976, there were again reports of poor fledging success in 1977, particularly at Possingworth Park and Horsted Keynes (where, however, a pair successfully raised 6 young in a steam-roller). There was a heavy influx in Oct., noted principally at Beachy Head where maxima recorded were 35 on 9th, 45 on 10th, 60 on 13th, 40 on 20th and 64 on 22nd. This, rather than fledging success, may have accounted for exceptional numbers trapped in the Lewes area during the latter part of the year.

289. **BLUE TIT** (*P. caeruleus*).—Apparently, unfledged young of this species fared as badly as the Great Tit during the poor weather in summer. This too was followed by a major influx in Oct., again most marked at Beachy Head where the count rose from 20 on Oct. 3rd to 150 on 10th, peaked again at 130 on 13th, dropped to 30 on 18th and rose to 140 on 22nd; many were noted moving west. The ultimate destination of these movements remains obscure but perhaps a clue lay in the astonishing party of 130 seen on Ashdown Forest on Nov. 29th.

290. **COAL TIT** (*P. ater*).—As with the previous two species, heavy mortality of fledglings and poor general breeding success was noted in a number of localities. Again this was followed by an unusual autumn at Beachy Head with 162 bird/days between Sept. 12th and Oct. 29th, with maxima of 23 on Oct. 2nd, 15 on 8th and 17 on 10th. Between Oct. 7th and 29th the species was also noted high on the Downs near Lewes where it is normally absent and in Dec. totally abnormal numbers were trapped in the same area.

292. **MARSH TIT** (*P. palustris*).—Though not a common species in Sussex it is still considered to be under-reported during the breeding season. Records came from 17 localities, mainly away from the coast with up to 10 pairs along the R. Arun north of Arundel.

293. **WILLOW TIT** (*P. montanus*).—Reported from 17 localities during the breeding season. Comparable figures for the past decade which are set out below, suggest that the species is fairly stable in Sussex, the variations arising from observer coverage:—

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
16	25	20	22	26	26	13	18	17	17

294. **LONG-TAILED TIT** (*Aegithalos caudatus*).—Continues as a common and successful resident species. Although not infrequently recorded as an autumn migrant, none was involved in the tit influx in Oct.

295. **BEARDED REEDLING** (*Panurus biarmicus*).—Two at Rye Harbour LNR on Feb. 25th and one at Church Norton on May 2nd, were the only reports early in the year. The annual autumn passage started at Pett Level Pools on Oct. 9th with a min. of 10 and possibly 28 in all, 4 remaining until at least 22nd and a further singleton on Nov. 13th. At Beachy Head 2 left south on Oct. 14th and 3 at Sidlesham on 15th-16th may well have moved on to the Severals at Church Norton where there were 7 on Oct. 25th, 6 on Nov. 13th-19th and at least 2 until the end of the year. Elsewhere there were 3 at Thorney Island on Nov. 27th and one until the end of the year and, after 4 on Oct. 29th, 2 wintered at Arundel Wildfowl Refuge. Finally, two were seen at Rye Harbour LNR on Dec. 31st.

296. **NUTHATCH** (*Sitta europaea*).—Noted during the breeding season as follows: Heathfield Park (1 pair); Mounfield (2-3 pairs); Darch's Wood (6 or more pairs); Wych Cross (3 pairs) and along 5 miles of the Bluebell Railway Line—3 occupied nest boxes and 2 other birds. Singles were also recorded at Burton and Bignor Parks, Church Norton and Ambersham Common. This species is very much under-reported at present.

297. **WALLCREEPER** (*Tichodroma muraria*).—One found on the cliffs at Ecclesbourne Glen, east of Hastings on Apr. 6th (AD) was seen to leave out to sea on the morning of 10th. This was the 3rd record for the county, the 9th for the British Isles and has been accepted by "British Birds". It cannot go without mention that of the 3 "Hastings Rarities" 2 were alleged to have been taken at this exact locality. It is also of interest to note that the bird which spent the winter in Somerset was last seen on Apr. 6th.

Reference: Nicholson E.M. and Ferguson-Lees I.J. "The Hastings Rarities" "British Birds" 55:281-384.

299. **WREN** (*Troglodytes troglodytes*).—Along the five miles of the Bluebell Railway Line during the breeding season, 31 pairs were located, with a further 33 close by (compared with 36 and 20 respectively in 1976).

During the autumn the max. counts at Beachy Head were 70 on Oct. 3rd, 40 on 5th and 7th and 50 on 13th—fewer than usual.

302. **FIELDFARE** (*Turdus pilaris*).—During the early part of the year numbers in the county were about normal. Jan./Feb. counts included 250 each at Horse-Eye and Manxey (Pevensey Levels), 250 at Amberley Wild Brooks, 200 at Eridge Park, 180 at Possingworth Park, 350 at W. Chiltington and 370 near Pett Level. During April, reports of up to 200 came from 6 localities and the last seen were one at Beachy Head on May 7th and 3 exceptionally late birds near Sompington on Jun. 5th (K.B.T.).

In autumn first recorded at Camber Castle on Sept. 1st followed by singles at Lillington on 19th and Stump Bottom and Rye Harbour LNR on 25th. Several observers considered numbers to be very low on eastern marshland areas during the later months but in the west there were 800 between Amberley and Greatham Bridge on Dec. 24th.

303. **SONG THRUSH** (*T. philomelos*).—Though autumn counts at Beachy Head (max. 35 on Oct. 10th) suggested no significant arrival of Continental birds this year, grey birds typical of that race were noted in good numbers on the Downs near Lewes from late Oct. onwards.

304. **REDWING** (*T. iliacus*).—Although the main Jan./Feb. counts amounted to no more than 2/3,000 from 7 localities (including 1,000 est. at Maynard's Green), heavy snowfall on Jan. 13th brought about a westward movement of many thousands over Goring and Pagham Harbour. During early March numbers seen dropped very rapidly and the last were reported from South Stoke on 19th and Amberley Mount on 21st.

The first autumn record was at Beachy Head on Sept. 20th and 10 were near E. Grinstead on 23rd. A few more arrived during the 1st week of Oct. and there were several reports of significant night movement on 10th, 13th and 14th. By then there were 200 on the Downs near Steyning. There were relatively few in the county at the end of the year; the max. count received was 200 in the Amberley area on Dec. 24th.

An albino was reported from Goring Gap on Mar. 13th and a semi-leucistic bird at Runcton on Oct. 26th-29th.

307. **RING OUZEL** (*T. torquatus*).—First reported in spring from Beachy Head and Chichester G.P. on Mar. 29th. After one near Washington on Apr. 2nd and 2 at Cissbury Ring on 6th there was a small influx on 15th-17th when 9 were seen at 6 coastal localities. This was followed by a further 20 or more on 21st-29th at 8 localities. A late bird was seen near Lullington Heath on May 18th.

After 2 early autumn migrants at Arlington Res. on Sept. 7th ones and twos were seen at various places until 25th when there were 12 at Beachy Head, 6 at Fairlight and 2 elsewhere. Thereafter small parties continued to appear along the coast and Downs, including 2 in Brighton Cemetery on 29th. Counts of 12 came from Beachy Head again on Oct. 2nd and at Plumpton on 14th, and on 15th there were 19 at 5 localities. The following weekend produced 10 still at Cissbury, 16 at Beachy Head and 4 elsewhere but after that there were only a few sightings, last reported being singles near Firle Beacon on Nov. 8th and at Woodingdean on 10th.

308. **BLACKBIRD** (*T. merula*).—The max. recorded at Beachy Head during the autumn as 40 on Oct. 13th; a large influx appeared to have taken place in the Church Norton area by 15th.

311. **WHEATEAR** (*Oenanthe oenanthe*).—First recorded in spring at West Wittering on Feb. 28th and Winchelsea Beach on Mar. 4th with further singles at Bracklesham Bay and Sidesham on 8th. There were scattered reports until 26th when small parties were found at a number of localities: Climping (20), Pett Level (10), Selsey Bill (6) and Newhaven (3). On Mar. 29th there were 40 at Beachy Head and 36 at Goring Gap. The cold winds of early April then halted further arrivals until 26th when 130 were estimated at Pagham Harbour-Sidlesham and 120 at Beachy Head.

During the breeding season reported from Newhaven Tide Mills (2 pairs) where at least one young fledged, and at Rye Harbour LNR where 7 pairs attempted nesting on the Reserve and 1/2 elsewhere. On the Reserve at least 9 young were reared to flying stage. No evidence of breeding was received from Downland areas.

At Beachy Head autumn maxima of 70-80 were recorded on 7 dates between Aug. 12th and Sept 3rd whilst passage at Rye was noted from Aug. 15th onwards; there was an autumn max. of 30 at Pagham Harbour on 13th. The species was widely reported during the remainder of the autumn leading to a scattering of records in mid-Oct., singles at 5 localities on 22nd-23rd, one at Shoreham on 29th and finally one at Pett Level on Nov. 13th.

The wing-length of a juvenile trapped near Lewes on Sept. 10th indicated that it belonged to the Greenland race *o.o. leucorrhoa*.

317. **STONECHAT** (*Saxicola torquata*).—In Jan. 32 were reported from 17 localities but Feb. records were incomplete.

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

Bosham	3	Ashdown Forest (parts of)	11
Cissbury	1	Mile Oak	1
Amberham Common	2	Telscombe Cliffs	1
Stedham Common	1	Peasehaven	2
Worthing Tip	1	Newhaven Head	3
Weavers Down	3	Newhaven Tide Mills—Seaford	5
Woolbeading Common	1	Seven Sisters	3
Devils Dyke	1	Fairlight	3

No reports were received for Beachy Head or a number of other areas where the species is known to breed.

There were indications of the presence of migrants during Oct. when 120 were reported from 15 localities, including 30 at Beachy Head on 6th, 14 at Church Norton on 10th, 17 between Cissbury and Chantonbury on 14th and 15 in the Birling Gap/Crowlink area on 22nd. A total of 60 was reported from 19 localities in Nov. but only 36 from 18 in Dec. was less than usual.

318. **WHINCHAT** (*S. rubetra*).—First reported in spring at Arlington Res. on Apr. 19th followed by further singles at Piddinghoe and Goring on 22nd, 8 on the West beach at Littlehampton on 23rd and 3 elsewhere the same day. Arrivals continued normally with weekend totals of 18 on May 7th-8th and 21 on 13th-15th.

Breeding records are now rare in Sussex and it was pleasing to hear of an adult with 4 newly-fledged young seen on Ashdown Forest on Sept. 4th (C.F.T.).

In July 3 wanderers were reported and a few records came for early Aug. but it was not until mid-month that passage started in earnest. The autumn peak occurred between 27th and 29th with 40 at Beachy Head on 2 days, 35 at Chantonbury-Cissbury on 29th, up to 40 in the Pagham Harbour-Selsey Bill area, 27 at Brighton rubbish tip, 11 at Rye Harbour LNR and 6 elsewhere—a total of at least 159. Passage continued on a lesser scale throughout Sept. and into early Oct. and the last seen were singles at Beachy Head on Oct. 26th, Sidlesham and Selsey on 28th and Pett Level on Nov. 3rd-6th.

320. **REDSTART** (*Phoenicurus phoenicurus*).—First reported in spring was an early male at Mile Oak on Mar. 31st. None was seen during the ensuing cold weather until warmer winds brought one to Pagham on Apr. 16th and one at Beachy Head on 21st. A further 17 were seen along the coast between then and 26th and six more up to May 15th.

During the breeding season singing males were reported from 2 suitable localities; 4 pairs bred successfully in one other area and one in another.

After one bird at Seaford Head on Aug. 8th, autumn passage started about 20th-21st with a peak during the weekend of 27th-29th when 7 were seen in the Pagham Harbour area and 31 between Cissbury and Chantonbury. There was no similar fall at Beachy Head where the autumn max. of 22 came on Sept. 3rd. The species was widely reported during the remainder of Sept. and well into Oct. Two last was at Beddingham Hill on Oct. 26th and one at Beachy Head on 27th; the last was at Church Norton on Nov. 13th.

321. **BLACK REDSTART** (*P. ochrurus*).—Apart from 3 wintering at Southwick, singles were reported from Bracklesham Bay, Saltdean and Seaford Head during Jan.-Feb. The onset of spring passage was marked by further singles at Rye Harbour LNR on Mar. 6th, Birling Gap on 12th, Seaford Head on 20th, Selsey Bill and Rye on 26th and Beachy Head on 27th. Nine birds were reported from 9 localities in April with a further 5 up to May 9th.

In 1977 this species was the subject of a periodical B.T.O. Breeding Survey. A brief history and an account of the present status of this species in the county appears on page 65. In the course of the survey 2 pairs which nested successfully were discovered in the Brighton area, with two unmated males also present, and another pair possibly bred on the cliffs east of Hastings.

Two early migrants were seen at Pagham Harbour on Sept. 17th but it was not until mid-Oct. that passage got under way. After 4 there on 15th and 13 at Beachy Head on 16th, small numbers were reported throughout Downland and coastal areas. There was an evident peak during the period 26th-29th when about 50 were seen along the coast, including 28 at Beachy Head and one inland at Midhurst. Stragglers were again widely reported up to mid-Nov. Unusually far from the coast were single birds at Ardingly Res. on Dec. 3rd and Mile Oak on 28th-29th. Wintering birds were seen in the Cuckmere on 18th and at Selsey on 17th but at Shoreham/Southwick no fewer than 9 were counted on Dec. 15th, although they later dispersed.

322. **NIGHTINGALE** (*Luscinia megarhynchos*).—In this, the 4th and final year of the Society's survey, despite poor weather, 253 singing males were reported between May 7th and Jun. 5th from 60 tetrads in W. Sussex and 52 in E. Sussex. Both counties produced 14 tetrads which were new to the survey, bringing the 4-year total to 340.

During the autumn at Beachy Head an unusual number were again recorded with a max. of 6 on Aug. 2nd and 5 on 14th; in all some 20 were trapped.

All records of singing males for the period mid-May to early Jun., accompanied by 6-figure grid references, are still required.

324. **BLUETHROAT** (*L. svecica*).—A female at Fishbourne on May 20th (IRW). One trapped at Charleston Reed Bed on Sept. 21st (PIW, VAW); one in Brighton Cemetery on Sept. 23rd (PB); and one in a garden at Woodingdean on Sept. 24th (HJK).

325. **ROBIN** (*Erithacus rubecula*).—During the breeding season 45 pairs were located along the 5 miles of the Bluebell Railway Line with a further 26 close by.

Peak autumn figures at Beachy Head were 40 on Sept. 19th, 75 or more on 25th and 50 on Oct. 14th.

326. **CETTS WARBLER** (*Cettia cetti*).—At Pett Level 2 from Oct. 16th to the end of the year (CHD) and one other nearby on Oct. 22nd (CHD). At Arundel Wildfowl Refuge one remaining from 1976 was last recorded on Apr. 3rd. Then one, occasionally 2 were present from Oct. 16th until at least Dec. 18th (SCR *et al.*). At Church Norton one was present from Oct. 22nd and 2 from mid-Nov. to the end of the year (many obs.)

Singles were trapped at Beachy Head on Sept. 25th, Oct. 14th and 23rd (JFC, TWP, DAP *et al.*) and at Shoreham Sanctuary on Oct. 3rd and 7th (JAN).

It should be noted that this species is no longer subject to consideration by the Rarities Committee of "British Birds." All reports should therefore be sent direct to the Recorder; any suspected of breeding will be dealt with in confidence, if requested.

327. **GRASSHOPPER WARBLER** (*Locustella naevia*).—First recorded in spring punctually at Beachy Head and Church Norton on Apr. 16th whereafter scattered birds were reported from a variety of localities. During the breeding season singing birds were reported as follows:—

Amberley Wild Brooks.....	1	Friston Forest.....	1
Portfield G.P.....	1	Lullington Heath.....	2
Bushy/Finches Wood.....	1	Lewes.....	1
Singleton Forest.....	6	near Arlington Res.....	1
near Freshfield.....	1	near Horsham.....	1
near Groombridge.....	1	Graveyard Wood.....	1
Benges Wood.....	2	Dallington Forest.....	1
Gratham/Duncton.....	3	Midhurst Forest.....	1

The species was noted as absent from Possingworth Park and Rewell Wood and its continued retreat from the county appears to persist for reasons which are not yet totally clear. It remains the subject of a Special Breeding survey for 1977-80 and records are required of all singing birds from mid-May to mid-Jul., together with 6-figure grid references.

During the autumn at Beachy Head the max. was 10 on Sept. 8th and the last was seen on the late date of Oct. 23rd. The ringing total was 21.

333. **REED WARBLER** (*Acrocephalus scirpaceus*).—First recorded in spring at Shoreham Sanctuary on Apr. 20th, Charleston R.B. on 23rd and Rye Harbour LNR on 24th.

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

Fishbourne Creek—Dell Quay 12	Newhaven.....	2
Pagham Harbour (north).....	Cuckmere.....	6
Thorney Island.....	Weir Wood Res.....	1
North Stoke.....	Darwell Res.....	1
Strivens R. B.....	Pett Level.....	4
Shoreham Sanctuary.....	Rye Harbour LNR.....	min. 12
near Horam.....	E. Guideford.....	min. 20

Several areas favoured by this species were not surveyed in 1977.

During autumn passage at Beachy Head 100 were estimated present on Aug. 24th and 60 on Sept. 4th. A good total of 234 was ringed. The last reported were at Pett Level on Oct. 29th, and Beachy Head on 30th, the second latest date for the county.

334. **MARSH WARBLER** (*A. palustris*).—One pair bred successfully in the county, rearing 3 young to flying stage; singing birds were reported from two other likely localities.

337. **SEDGE WARBLER** (*A. schoenobaenus*).—First recorded in spring at Arundel Park on Mar. 27th and at Chichester G.P. on Apr. 2nd, both very early dates. After one at Selsey on Apr. 11th a more widespread arrival took place on 15th with the onset of warmer weather. There was evidence of further arrivals during the 1st week of May.

Breeding season reports this year were fragmented, the species not being subject to survey at present.

In autumn the max. recorded at Beachy Head was 45 on Aug. 9th and a total of 116 was ringed during the season. The last seen there was on Oct. 9th and one was at Rye Harbour LNR on 14th.

338. **AQUATIC WARBLER** (*A. paludicola*).—One in the Cuckmere Valley on Aug. 12th (JFR); one near Church Norton from Aug. 27th (BI, PJ) to Sept. 3rd (PM). These records have been accepted by "British Birds."

339. **MELODIOUS WARBLER** (*Hippolais polyglotta*).—One heard in song and well seen at Icklesham, near Winchelsea on Jun. 12th (TW, TAW, WEW). This was the second spring record for the county and amongst the very few recorded in the British Isles at this time of year.

340. **ICTERINE WARBLER** (*H. icterina*).—One trapped at Beachy Head on Aug. 23rd (JFC, DMC, RS) and one at Pett the same day (JW). A further bird trapped at Beachy Head on Aug. 27th (RHC).

343. **BLACKCAP** (*Sylvia atricapilla*).—In Jan. wintering birds were reported from 7 urban localities along the coast and one inland. Only two remained into early Feb. but this was followed by others at Haywards Heath, Durrington and Horsham on Feb. 10th, 22nd and 24th respectively. Further reports, from Earham on Mar. 3rd, Possingworth Park on 4th and Burgess Hill on 5th-6th doubtless involved birds which had wintered elsewhere.

The first arrival of migrants came at the end of Mar. and into early Apr. with widespread reports from coastal and Downland areas.

Whilst the breeding population in Possingworth Park was considered to be reduced, several observers elsewhere considered the species much commoner this year. It was better reported and 85 singing males were found at 23 general localities.

Beachy Head celebrated another record autumn with a total of 1,222 birds trapped. Estimates of 200 present were made on Sept. 14th, 21st and 26th and Oct. 3rd. Shoreham Sanctuary also had its best season yet, with 85 trapped.

At the end of the year there was one at Hampden Park, Eastbourne on Dec. 10th and one in a garden at Shoreham during mid-Dec.

346. **GARDEN WARBLER** (*S. borin*).—The first recorded in spring were at Lancing on Apr. 14th, Sidlesham on 23rd and Darwell Woods, Church Norton and Shoreham Sanctuary on 24th. There were indications that the main arrival took place between May 5th and 13th.

The species was widely but sparsely reported during the breeding season. Along 5 miles of the Bluebell Railway Line 4 pairs were located and in 7 miles between Hellingly and Heathfield there were 3. Elsewhere breeding birds were reported from Weir Wood (widespread), Plashett Park, Darch's Wood, Darwell Woods, Friston Forest (W. Dean), Stanmer Wood, Plumpton Wood, Ambersham Common, near Worthing Golf Course and Iping Common.

At Beachy Head 251 were ringed during the autumn passage and maxima seen were 50 on Aug. 12th and 33 on 28th. Last reports came from Shoreham, Church Norton and Rye Harbour LNR on Sept. 24th-26th after which there was only one straggler—at Beachy Head on Oct. 23rd-29th.

347. **WHITEThroat** (*S. communis*).—First recorded in spring at Beachy Head on Apr. 13th and the species was widely seen from 17th onwards. There were indications of further arrivals on or about 26th and 30th.

During the breeding season a min. of 250 were reported from some 30 general localities. Counts of singing males produced 4 in 3 miles in the Lavant-Trundle area, 11 in 7 miles between Hellingly and Heathfield and 7 in 5 miles along the Bluebell Railway Line, producing averages per mile of 1.3, 1.5 and 1.4 respectively. About 28 were counted in the West Dean-Charleston Bottom area of Friston Forest.

At Beachy Head 447 were ringed during the autumn passage with up to 80 seen on 7 days between Aug. 21st and Sept. 8th. The last reports came from Brighton Cemetery and Rye Harbour LNR on Sept. 26th, the Cuckmere on Oct. 2nd and Beachy Head on 9th.

348. **LESSER WHITETHROAT** (*S. curruca*).—First recorded in spring at Chichester G.P. on Apr. 22nd with further scattered arrivals on 24th-25th. There were indications of a main influx on or about May 7th-8th.

Widely reported during the breeding season. Singing males counted included 3 in 7 miles between Hellingly and Heathfield, 5 in 4 miles between Amberley and Houghton but apparently none along the 5 miles of the Bluebell Railway Line. There were 5 in the West Dean-Charleston Bottom area of Friston Forest.

During the autumn passage at Beachy Head 227 were ringed, fewer than usual, with a max. seen of 70 on Sept. 8th. An autumn max. of 10 came on Sept. 7th at Rye Harbour LNR but there were still 6 at Fairlight on 25th. The last reports were of one at Pett Level and 2 at Beachy Head on Oct. 5th and another there on 11th.

352. **DARTFORD WARBLER** (*S. undata*).—Breeding season reports indicated the presence of the species at two traditional sites at one of which there were 3 singing males and one at the other. A pair was also found in a locality which had not been occupied in the past 30 years but two other areas had been deserted.

One was seen at Filsham rubbish tip on Dec. 12th, a typical winter occurrence for this species.

354. **WILLOW WARBLER** (*Phylloscopus trochilus*).—First recorded in spring at Rackham Woods on Mar. 23rd and Chichester G.P. on 25th. There were reports from 5 coastal localities on 27th whereafter it was widespread, though in small numbers, until a major arrival on or about Apr. 26th when there was 100 or more at Beachy Head and about 60 between Lynchpole Hill and Cissbury Ring. At Shoreham Sanctuary, where 193 were trapped during spring, peak passage was between Apr. 14th and 30th. Two birds seen in the Cuckmere and one at Bayham on May 14th displayed the characteristics of one of the northern races (PFB).

Counts during the breeding season included 22 singing males in 7 miles between Hellingly and Heathfield and 15 in 5 miles along the Bluebell Railway Line, averages of 3.1 and 3.0 per mile respectively.

In autumn, Beachy Head reported its best season ever with 1,593 ringed and maxima seen of 600 on Aug. 9th, over 1,000 on 10th, 500 on 12th, 350 on 13th and a further 200 on Sept. 8th. A better than usual passage was also reported from Shoreham Sanctuary where 101 were ringed.

The last recorded was one at Beachy Head on Oct. 14th.

356. **CHIFFCHAFF** (*P. collybita*).—Birds overwintering from 1976 included 2 at Chichester G.P., up to 3 at Selsey Bill and 2 in Arundel Park where 7 were seen on Feb. 12th. Elsewhere 2 spent some part of the winter at Church Norton, 2 at Shoreham Airport and singles at Southwick, Eastbourne and Camber.

The first arrival of spring migrants came on Mar. 1st when 6 were at Beachy Head; by mid-month the species was widespread in the county.

At Beachy Head, where 555 were ringed during autumn passage, 100 or more were recorded on 9 dates between Sept. 8th and Oct. 5th with maxima of 250 on Sept. 10th, 150 on 16th and 120 on Oct. 2nd. The last migrant there was on Nov. 6th and a late bird at Weir Wood Res. on 26th may also have been a migrant. Even so one at Chichester G.P. the previous day remained until at least Dec. 1st and a second bird was there on Dec. 11th. At Church Norton 2 took up winter residence once again and singles were seen at four other places during the cold spell in early Dec. One was at Shoreham Sanctuary on Dec. 31st.

357. **WOOD WARBLER** (*P. sibilatrix*).—First recorded in spring at Church Norton on Apr. 24th and the Mens Woods and Parham Park on 25th.

During the breeding season 15 singing birds were reported from 11 widely dispersed localities and one spent the summer at Church Norton.

One was trapped at Pett on Jul. 29th, an unusually early date and at Beachy Head, 12 birds, far more than usual, were seen or trapped between Aug. 8th and 29th. One was seen at Balsdean on Aug. 16th.

358. **BONELLI'S WARBLER** (*P. bonelli*).—One was trapped at Beachy Head on Sept. 15th (JFC, TG *et al.*). This record has been accepted by "British Birds."

364. **GOLDCREST** (*Regulus regulus*).—There was no significant spring passage. In autumn 223 were ringed at Beachy Head where max. counts were 75 on Oct. 10th, 95 on 11th, 125 on 13th and 90 on 19th. A notable influx was reported from the Downs near Lewes from Oct. 16th onwards.

365. **FIRECREST** (*R. ignicapillus*).—One was seen at Arundel Park on Jan. 11th and 2 were at Runcton between the 22nd and Feb. 6th, with one still there on Mar. 8th.

At Beachy Head 11 were recorded between Mar. 7th and Apr. 9th and one later bird on May 1st. Five were seen in the Cuckmere between Mar. 3rd and Apr. 9th and elsewhere there were 1/2 at Church Norton on Mar. 12th-19th, one at Fairlight on 12th, one at Cooden on Apr. 2nd and a late bird at Balsdean on May 9th. There were no reports of suspected breeding.

Autumn passage was sparse, only 14 being recorded at Beachy Head between Sept. 18th and Oct. 26th. Elsewhere there was an early migrant at Fairlight on Sept. 18th, one at Selsey on Oct. 22nd, one at Church Norton on 29th and one still there on Dec. 19th.

366. **SPOTTED FLYCATCHER** (*Muscicapa striata*).—First recorded in spring between Beckley and Peasmarsh on May 1st and Winchelsea on 3rd, becoming more widespread from 7th onwards.

Reports during the breeding season were incomplete.

A number of observers noted migratory gatherings in late Aug. with 30 at Church Norton and nearby by 27th, 15 at Kingley Vale and 50 in the Cissbury area on 29th. At Rye Harbour LNR 10-20 were present on Sept. 3rd and at Coney Hill, Brighton, 17 were seen on Sept. 9th whilst at Beachy Head autumn passage peaked at 60 on 8th and 21 on 14th, after which numbers dwindled rapidly. A max. of 9 were in Brighton Cemetery on Sept. 23rd and 40 on 26th was the max. at Church Norton. By Oct. 2nd only one remained there and the last birds reported were at Brighton, Selsey Bill, Beachy Head and Rye Harbour (3) on Oct. 9th.

368. **PIED FLYCATCHER** (*Ficedula hypoleuca*).—Nine were reported from 7 localities between Apr. 21st and 26th including one inland at Warringlid. Further birds were seen at Church Norton on May 3rd, Beachy Head on 12th and West Hove (2) on 25th.

One at West Chiltington on Jul. 16th was noteworthy as passage migrants did not appear until Aug. 13th when reports arrived from the whole coast from Rye to Church Norton. Passage continued with no outstanding features, maxima of only 10-11 being recorded at Beachy Head on Aug. 14th, 19th and 27th and of 5 at Rye on Sept. 3rd. During the remainder of Sept. only 11 more were seen and the last was at Rye Harbour LNR on Oct. 2nd.

370. **RED-BREASTED FLYCATCHER** (*F. parva*).—One at West Beach, Littlehampton on Sept. 27th (CRJ) was possibly the same as one at Littlehampton Golf Course on Oct. 1st (OMM).

371. **DUNNOCK** (*Prunella modularis*).—Autumn maxima at Beachy Head were 70 on Sept. 25th and 50 on 26th.

373. **MEADOW PIPIT** (*Anthus pratensis*).—As usual only a few were to be seen in the early part of the year, records of 1-5 coming from only 7 localities. Immigration started on or about Mar. 27th and continued until at least Apr. 13th.

In autumn, the maxima at Beachy Head were 400 on Sept. 29th and 300 on Oct. 10th. Migratory parties were seen at a number of localities and about 200, many leaving south, were recorded at Climping on Oct. 8th.

375. **TAWNY PIPIT** (*A. campestris*).—A record year for this species. After one at Crowlink, Beachy Head, on Aug. 21st (PC, RET) one was at Cissbury Ring on 23rd (BFF) and one on the Crumbles, Eastbourne, on 26th (MJR). On 27th, one flew east at Beachy Head early in the day (MJR) and later 2 more were found near Belle Tout, Beachy Head (JFC, TWP, DAP *et al.*). One was seen at Church Norton on 28th (CAH, SEG) and one at Pett Level on Sept. 3rd (CAT, GS).

A second arrival came at the end of Sept. with one at Beachy Head on 25th (JFC), one at Littlehampton on 27th (CRJ) and two in the Cuckmere on 29th (RDME) one remaining until Oct. 1st (DSF, PJW, VAW).

These records have been accepted by "British Birds."

376. **TREE PIPIT** (*A. trivialis*).—Again very few in spring. The first was punctual on Apr. 9th at Eridge Park after which singles at Beachy Head on 17th, Broad Halfpenny on 18th and Washington and East Grinstead on 30th were the sole reports. Even so the species was well reported during the breeding season, 52 pairs or singing males being found at 27, entirely inland, localities. These figures arose out of a systematic search of likely areas.

At Beachy Head autumn passage was heavy, starting in mid-Aug. and peaking at 115 on 21st and 70 on 22nd. Migrants were seen in small numbers at other coastal localities until late Sept. and the last reported were 4 at Rye Harbour LNR on Oct. 22nd and 2 at Burwash on 25th.

379. **ROCK PIPIT** (*A. spinoletta*).—Winter counts along the full length of the coast indicated the presence of about 40 birds apparently of the British race *a.s. petrosus*.

Individuals showing the characteristics of the typical race *a.s. spinoletta*, colloquially known as the Water Pipit, were identified near Hooe on Jan. 30th, Cooden on Apr. 2nd, and at Sidlesham Ferry from Feb. 27th to at least Apr. 11th with 2-3 there on Mar. 13th. At Thorney Deep 3 birds seen on Mar. 6th were evidently of the Baltic race *a.s. littoralis*.

At the end of the year there was once again one of the race *a.s. spinoletta* at Sidlesham Ferry from Nov. 3rd onwards, with at least 3 there on Dec. 18th and one still on 24th.

380. **PIED WAGTAIL** (*Motacilla alba*).—In Feb. a roost at Greenway School, Horsham, contained at least 100 birds; several smaller roosts were reported elsewhere.

Autumn maxima at Beachy Head were 30 on Sept. 29th, Oct. 2nd and 26th. At Selsey Bill a total of 21 left to S or SE on Oct. 8th.

Spring records of birds showing the characteristics of the Continental race *m.a. alba* were more numerous than usual, singles being reported from Church Norton on Feb. 20th, Beachy Head on Mar. 13th, Winchelsea Beach and Falmer on 25th, Bexhill on Apr. 11th, Rye saltings on 14th-16th, Rye Harbour LNR on most days in Apr., Dog's Hill, Winchelsea on 16th-23rd, Sidlesham Ferry on 17th and Rottingdean on 26th.

381. **GREY WAGTAIL** (*M. cinerea*).—In Jan.-Feb. only 11 wintering birds were reported.

Many suitable sites were visited during the breeding season, particularly in the east of the county, producing a total of 53 pairs at 45 sites and singles at a further 23. There was evidence of successful breeding in the case of 16 pairs. Allowing for the fact that coverage of the county was by no means complete, these figures compare favourably with the results of the 1967-69 Breeding Survey (Bird Report 1969; 68-80).

Autumn passage at Beachy Head was described as less than usual, the species being seen on only 21 days with a max. of 4 on Aug. 29th. At Pett Level and Rye Harbour 17 were recorded on 8 dates between Jul. 25th and Sept. 11th with a max. of 4 on Aug. 27th.

At the end of the year, 12 wintering birds were reported from 6 localities.

382. **YELLOW WAGTAIL** (*M. flava*).—First recorded in spring at Chichester G.P. on Mar. 29th, Rye Harbour LNR on Apr. 3rd and Horse-Eye Level on 8th. Few were seen until Apr. 15th-17th when the main arrival took place.

No systematic counts were made in the main breeding areas for this species but ten pairs were known to have nested at Rye Harbour LNR.

During autumn passage at Beachy Head maxima of 100 were recorded on Aug. 21st and 29th and 50 on Sept. 3rd and 10th. At Pett Level there was a max. of 25 on Sept. 9th and at Rye Harbour LNR 100 were present by Aug. 28th dropping to 30 by mid-Sept. and 6 by 27th. At Selsey Bill there were 36 on Aug. 27th and 40

on Sept. 10th. The last recorded were 2 at Church Norton on Oct. 2nd and at Shoreham on 3rd.

Birds showing the characteristics of the Continental race *m.f. flava* were seen at Chichester G.P. on Apr. 23rd, Sidlesham Ferry on May 2nd and 8th, Pett Level on 3rd and in the Cuckmere on May 13th and Sept. 1st.

383. **WAXWING** (*Bombycilla garrulus*).—One at Mannings Heath on Dec. 28th (GET) was the sole record for the year.

384. **GREAT GREY SHRIKE** (*Lanius excubitor*).—Single birds were seen at Chidham Marsh on Mar. 2nd, Amberley Wild Brooks on Jan. 18th and Feb. 6th, Ashdown Forest on Feb. 12th, Chailey Common on Feb. 27th, and Udimore on Feb. 13th.

At the end of the year rather fewer than usual—singles at Hindleap Warren on Oct. 30th, Wych Cross on Nov. 23rd and Lychpole Hill, Sompington on Dec. 11th.

388. **RED-BACKED SHRIKE** (*L. collurio*).—More than usual were seen this year, particularly on autumn passage. A pair was seen near Slaugham on May 15th and a female at the Midrips on 28th; a male between Horsted Keynes and Sheffield Park on Jun. 4th and a female at Striven's R.B. on 8th; a male near Lewes on Jul. 8th and females at Sidlesham Ferry on 16th and Balsdean on 20th.

After one at Beachy Head on Aug. 12th an unusual influx took place later in the month. Singles appeared at Church Norton and Rye Harbour LNR on 26th, with 2 or more at the latter locality on 27th, one staying until 29th. There were 3 at Beachy Head on 27th-28th and the species was reported there daily until Sept. 13th. One was seen near Pevensey on Aug. 31st and further singles at Seaford Head, Pett and Rye Harbour LNR on Sept. 3rd. On the 4th there were 4 at Beachy Head and 3 the following day. One was at Woodingdean on 7th. Up to this time, trapping at Beachy Head indicated that seven individuals had been present; there was one more on Oct. 2nd.

389. **STARLING** (*Sturnus vulgaris*).—A quiet year for reports on this species. A roost at Shoreham Sanctuary was estimated at 50,000 on Oct. 19th but it had moved elsewhere by 26th.

391. **HAWFINCH** (*Coccothraustes coccothraustes*).—After but one winter record of a bird at Petworth Park on Jan. 23rd, up to 4 were in the Mannings Heath area from Apr. 11th to mid-Jun., a similar number at Roundhurst, Blackdown in mid-May and up to 3 at Wakehurst Gardens during the same period. One was seen at Chantonsbury Ring on Jun. 19th, 2 in Slinfold on Jul. 3rd and one near Haywards Heath on 13th. One was near Glynde on Aug. 29th. In late autumn 2 flew west at Beachy Head on Oct. 23rd and between then and the end of the year 6 others were reported from five central/western localities.

392. **GREENFINCH** (*Carduelis chloris*).—On Oct. 19th, 300 were estimated between Cissbury and Chantonsbury Rings and on 23rd an autumn max. of 300 passed west at Beachy Head. On Nov. 16th, 100 flew west at West Wittering and on 22nd a further 260 in 1½ hours. 200 were still on the Downs at Cissbury on Nov. 18th.

393. **GOLDFINCH** (*C. carduelis*).—During the early months the only noteworthy reports were of parties of 15 at Thakeham, 20 in Eridge Park and 35 at Slaugham. Records of any wintering flocks are required in order to clarify the status of the species at this time of year.

By late March the return of breeding birds had been noted in many inland areas but at Beachy Head spring passage maxima came later, on Apr. 24th and May 13th; small numbers of immigrants were also recorded at Selsey Bill on Apr. 16th, 18th and 29th.

During the breeding season 6 pairs were found along the 5 miles of the Bluebell Railway Line. There was thought to be a noticeable increase in the Mannings Heath-Monk's Gate area.

Autumn passage at Beachy Head peaked at 1,000 on Oct. 8th and 500 on 10th. At West Wittering, 80 passed west on Nov. 16th and 25 in 1½ hours. on 22nd. Passage at Pett Level was recorded from Sept. 13th and on 23rd, 167 flew east in ½ hour. Further heavy movement took place between Oct. 19th and 22nd, continuing on a lesser scale into Nov. when passage again peaked, at 400 per hour, on the mornings of 10th and 13th.

In Dec. reports of winter flocks came from Darwell (20), Monk's Gate (50) and West Chiltonton (40).

394. **SISKIN** (*C. spinus*).—As noted in 1976, the county remained virtually deserted of this species during the winter, only about 20 being reported.

Most unusually, a male was found, in song, at Beachy Head on May 30th-31st.

Autumn passage started rather early with 7 at Beachy Head on Sept. 12th, 16 at Pett Level on 18th and, at Litlington in the Cuckmere Valley, 15 on 19th and 100 on 26th. Equally significant was a total of 62 east in one hour at Pett Level on 23rd. After 3 at Littlehampton on 27th and 2 at Crowborough on Oct. 2nd the peak came at Beachy Head with 65 on 2nd and 31 on 3rd. On 6th, 30 passed over Arundel Wildfowl Refuge and on 10th there were 4 at Selsey Bill and 10 at Apuldram. None was then reported until Oct. 22nd after which a further 46 were seen at various localities up to Nov. 26th, largely involving apparent passage birds.

In Dec. only 30 were reported, from 8 localities.

395. **LINNET** (*C. cannabina*).—Few reports were received for the start of the year, the largest gathering noted being c.250 on the Downs near Amberley Mount on Jan 31st.

The start of immigration was noted at Climping and Beachy Head on Mar. 26th-27th and further arrivals were recorded at Selsey Bill from Apr. 2nd to 18th and Beachy Head again on 19th. Small numbers were still seen arriving up to mid-May.

During the breeding season 4 pairs were located along the 5 miles of the Bluebell Railway Line.

Maxima on autumn passage at Beachy Head were 400 west on Oct. 7th, 500 on 10th and 400 on 14th. In the meanwhile large numbers were seen feeding at various localities—800 at Cissbury-Chantonsbury on Sept. 25th and about 1,500 on Littlehampton Golf Course on Oct. 8th. On that date 1,040 were recorded leaving Selsey Bill to the SE and a further 600 the following day. There were still about 1,000 feeding on Cooden Golf Course on Oct. 27th. By the end of the year reports indicated the presence of only small numbers in the county.

396. **TWITE** (*C. flavirostris*).—Between Jan. 3rd and Feb. 14th up to 50 were recorded at Shoreham. There were 10 at Pagham Harbour on Feb. 25th and at Rye, a party of 30 on Jan. 3rd had dwindled to 5 by 23rd. On Jan. 18th 11 were seen at Newhaven Tide Mills.

The first at Rye in autumn were 6 on Oct. 8th, increasing to 33 by Dec. 20th. Three were in the Cuckmere on Oct. 22nd, 80 at West Wittering on Nov. 9th, 3 at Sidlesham Ferry on 26th, but still only 14 at Shoreham on Nov. 17th.

397. **REDPOLL** (*C. flammea*).—Widely reported during the early part of the year, parties of 50 or more being seen at Pippingford and Eridge Parks, 500 Acre Wood near Crowborough (100 birds on Apr. 17th) and near Horsham. Reports of 20 or more came from Darwell Woods, Crowborough Warren, North Stoke and Nap Wood.

During the breeding season there were records of approximately 160 breeding pairs or singing/display birds. These were chiefly in the north-east of the county and

Ashdown Forest, together with the High Weald generally and the south-east in the upper Brede Valley, Fairlight and Battle, Mountham and Bexhill districts. There were also reports of family parties in St. Leonard's Forest and of other breeding sites in the west of the county. This species is the subject of a special Breeding Survey and all records are required for May-Jul.

At Beachy Head, autumn passage maxima were 125 on Sept. 26th, 260 on Oct. 2nd, 200 on 3rd and 200 on 10th. At Pett Level passage was noted from Sept. 17th until late Nov. with maxima of 40 on Sept. 21st, 500 or more in one hour on Oct. 8th and 80 in $\frac{1}{4}$ hour on Nov. 4th.

400. **SERIN** (*Serinus serinus*).—A female at Birling Gap on May 13th (MJR) was the sole record this year.

This record has been accepted by "British Birds."

404. **CROSSBILL** (*Loxia curvirostra*).—One at Selsey Bill on Aug. 27th (BAEM) and at Beachy Head on 29th (BAEM). At least 2 at Bewl Bridge Res. on Nov. 4th (PCB).

407. **CHAFFINCH** (*Fringilla coelebs*).—A gathering of 300-400 was estimated at 500 Acre Wood, near Crowborough on Mar. 12th.

Spring passage at Beachy Head was un spectacular with a max. of 50 on Mar. 26th.

Ringling results from the Downland farms near Lewes suggested that the species had enjoyed a successful breeding season, most trapped being juveniles.

November feeding flocks included 150 at Weir Wood Res. and Pippingford Park.

408. **BRAMBLING** (*F. montifringilla*).—Very few in the early part of the year—one in Houghton Forest on Jan. 16th, 6 near Arundel on 11th and single passage migrants at Beachy Head on Mar. 26th and near Crowborough on Apr. 10th and 17th.

First recorded in autumn on Sept. 25th at Beachy Head where subsequently reported on 12 dates with a max. of 20 on Oct. 29th. In the Cuckmere 3 were seen on Sept. 26th. Reports of small numbers came from a number of localities, mainly along the coast, between mid-Oct. and mid-Nov.

Dec. records included a flock of about 30 on the Ashdown Forest, and about 25 elsewhere.

409. **YELLOWHAMMER** (*Emberiza citrinella*).—On Jan. 3rd a flock of 100 was noted at West Chilington. The winter status and distribution of this species is somewhat obscure and records of parties of 10 or more in Dec. and Jan. are required.

410. **CORN BUNTING** (*Miliaria calandra*).—In this, the first year of the Society's survey into the distribution of this species, breeding season records were received from 26 observers for 105 tetrads. All of these relate to the Downs or the west Sussex coastal plain with the exception of 11 in the Rye area and an extraordinary record from Denne Park, Horsham. However, coverage round the Chichester area in particular, was poor.

Three winter roosts were reported—at Strivens R.B., max. 300; Shoreham Sanctuary, max. 200; and at Kingston, near Lewes, in gorse, max. 100.

All records of singing males for the period mid-May to the end of Aug., accompanied by 6-figure grid references, are required.

415. **GIRL BUNTING** (*E. citrlus*).—The diminution of this species in the county, for reasons which remain obscure, continued in 1977. The only known pairs were one at Bexhill, 3 at Beachy Head and 2 in the Cuckmere Valley. An established male in North Lancing was the only other likely breeding bird. There was no evidence that 3 other singing males were mated.

After only 11 definite pairs in 1976, this year's drop to 6 or 7 brings the species to the brink of extinction in Sussex; it is to be hoped that this may be only a phase in the fortunes of this attractive bunting.

416. **ORTOLAN BUNTING** (*E. hortulana*).—One at Beachy Head on Aug. 27th (MJR) and one on Sept. 18th (RHC, JRC *et al.*).

421. **REED BUNTING** (*E. hortulana*).—Noted in atypical breeding habitats in a Downland cornfield at Steep Down and amongst arable land at Northiam.

Also during the breeding season, 32 pairs were located along the R. Arun between Arundel and Houghton.

An albino was seen at Doleham Marsh on Apr. 3rd-May 13th.

422. **LAPLAND BUNTING** (*Calcarius lapponicus*).—One at Pagham Harbour on Oct. 10th (IRW).

423. **SNOW BUNTING** (*Plectrophenax nivalis*).—Apart from one at Rottingdean on Jan. 8th all records at the start of the year came from Rye Harbour LNR where the species was present throughout Jan., with 15 on 2nd and 13 on 28th and then 17 on Feb. 19th after which all departed. Passing birds were seen there on Mar. 24th and Apr. 15th.

In autumn first reported at Rye on Sept. 17th with 2-3 from Oct. 11th onwards and 6 on 13th. Then present throughout Nov. with 7 on 13th and 18 on 27th, doubtless the same as 16 at Camber on Dec. 30th. Elsewhere one was seen at Barcombe Res. on Oct. 9th, one at Bracklesham Bay and 2 in Pagham Harbour on Nov. 27th, one at Cuckmere Haven on Dec. 1st and 5 at Langney Point on Dec. 3rd.

424. **HOUSE SPARROW** (*Passer domesticus*).—A leucistic bird was seen at Mile Oak in April and May.

425. **TREE SPARROW** (*P. montanus*).—Counts received for Jan.-Mar. totalled 957, including a flock of some 200 at Climping which remained intact until at least Mar. 26th. Equally 40 near Slaugham Common were still flocking on Apr. 3rd. No winter counts were received from East Guldeford Level where, in the breeding season, some 20 pairs were considered by PFB to be present in 6 tetrads. A survey of a further 17 tetrads in south-east (Battle-St. Leonards-on-Sea-North Point-Bodiam) suggested the presence of at least 25 pairs and a further 8 singles. Elsewhere breeding season reports were incomplete, although up to 50 pairs were thought to have nested in the Climping colony, and 6 pairs were located in 5 miles along the Bluebell Railway Line. Successful breeding in nest boxes was reported from 3 localities.

Autumn passage at Pett Level was noted from Oct. 7th to Nov. 12.

ADDITIONS AND CORRECTIONS TO 1972 REPORT

189. **STONE CURLEW**.—One pair nested at a further locality.

ADDITIONS AND CORRECTIONS TO 1975 REPORT

379. **ROCK PIPIT**.—The record relating to Water Pipit *a.s. spinoletta* on Mar. 19th-23rd should be deleted at the request of the observer on the grounds of possible confusion with *a.s. littoralis*.

ADDITIONS AND CORRECTIONS TO 1976 REPORT

70. **GOOSANDER**. Add.—One fem. Swanbourne Lake, Arundel, Feb. 4th-7th.

71. **SMEW**. Add.—One fem. at Arundel Wildfowl Refuge on Feb. 16th.

76. **WHITE-FRONTED GOOSE**. Add.—At Pagham Harbour, 5 on Oct. 31st.

91. **BUZZARD.** Add—Also one at Arundel Wildfowl Refuge on Dec. 2nd.
 103. **OSPREY.** Add—Also one at Fairlight on Sept. 26th (CHD).
 248. **LONG-EARED OWL.** Add—In Jun., young were heard calling at one further locality.
 281. **HOODED CROW.** Add—At Filsham Tip, 3 on Feb 24th and one on Dec. 8th.
 295. **BEARDED REEDLING.** Add—At Arundel Wildfowl Refuge 3 between Jan. 20th and Mar. 2nd, with 5 on Feb. 18th and 2 remaining to Mar. 16th.
 365. **FIRECREST.** The record relating to 2 at Shoreham should read Oct. 16th not Aug. 16th.
 375. **TAWNY PIPIT.** Add—One at Arlington Res. on Sept. 4th (JW). This record has been accepted by "British Birds."
 400. **SERIN.** The following records should be deleted—"up to 2 present at Beachy Head on May 8th (many observers)" and "one present here on Oct. 9th (RME, TWP, BJS)."

SUMMARY OF BIRD RINGING IN SUSSEX IN 1977

Compiled by P. J. Wilson

The total number of birds ringed in Sussex in 1977 was 23,368 of 98 species, almost half of this total (46%) being ringed at Beachy Head.

Some indications of the scale of Warbler passage through this area can be gained from the number of Blackcaps (1,316) and Willow Warblers (2,010) ringed there, from the total catch of 5,580 Warblers during the autumn months.

SELECTED LIST OF RECOVERIES REPORTED IN 1977

Key to symbols and terms
 (Ring numbers are omitted)

- | Age | Manner of Recovery |
|--|--|
| 1. Pullus (nestling or chick not yet flying) | v Caught or trapped and released with ring |
| 2. Full grown, but year of hatching quite unknown | + Shot or killed by man |
| 3. Definitely hatched during current calendar year | x Found dead or dying |
| 4. Hatched before current calendar year but exact year unknown | () Caught or trapped alive and not released or released but with ring removed |
| 5. Definitely hatched last calendar year. | ?/ Method of recovery quite unknown |
| 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

Sex
 ♂ Male
 ♀ Female

Distance
 The distance is given in kilometres and the direction is approximate

BIRDS RINGED IN SUSSEX

Black-headed Gull	3 adults ringed at Worthing in December, 1975 were recovered in Sweden (April), Finland (June) and Denmark (November)
House Martin	3 birds ringed at Beachy Head during September were recovered during the breeding season in Middlesex, Yorkshire and Warwickshire
Sand Martin	There were controls from Hampshire (2), Kent, Berkshire and Caernarvon
Song Thrush	Lewes (RJL)
	01.12.74
	22.10.77
	17.10.77
	26.11.77
Blackbird	Shoreham-by-Sea (JAN)
	02.11.74
	03.01.77
	13.11.76
	07.05.77
	08.11.75
	22.05.77
Ring Ouzel	Beachy Head (BHRG)
	3 10.09.77
	v 13.12.77
Redstart	Goulmima, Morocco
	1 12.06.67
	+ 10.10.67
	(not reported until 1977!)
Reed Warbler	Pett Level (FRG)
	4 10.07.76
	v 09.08.77
	v 03.09.77
	v 04.10.77
	There were also controls from Hampshire (2), Kent and Essex
Sedge Warbler	Filsham (FRG)
	3 04.09.75
	x 17.05.77
	3 10.08.76
	x 23.06.77
	3 02.08.77
	x 05.08.77
	There were also controls from Hampshire (6), Northants, Durham, Buckinghamshire and Berkshire
Blackcap	Beachy Head (BHRG)
	2 20.09.76
	x (24.03.77)
	4 20.09.76
	x 05.06.77
	2 18.09.76
	x 11.07.77
	2 01.09.77
	() (28.09.77)
	3 12.09.77
	() (19.11.77)
	This is the first British ringed Blackcap to be found south of the Sahara
Whitethroat	Beachy Head (BHRG)
	3 18.09.76
	x 13.05.77
	2 Autumn birds from Beachy Head were found in May in Shropshire and Perth
Lesser Whitethroat	Hodcombe, Beachy Head (RHC)
	2 14.09.77
	x 03.12.77
	Willow Warbler
	/?/ 04.09.77
Chiffchaff	La Rochelle, (Charente-Maritime), France
	4 17.05.76
	x 09.01.77
	3 08.09.76
	v 12.04.77
	Landed exhausted on lights and released at Dunkerque on 13.04.77
	2 04.09.77
	v 01.10.77
	v 21.02.77
Goldcrest	Marley Common (PGD)
	2 ♀ 04.11.76
	v 18.04.77
	2 ♂ 13.10.77
	v 16.10.77
Pied Flycatcher	St. Albans Head, Dorset. 160 W
	3 ♂ 16.08.77
	x 05.09.77
	Cascais, (Estremadura), Portugal

Starting	Sex	Date	Location
	5 ♀	18.01.75	Plumpton (RIL)
	x	10.09.75	Chernyakhovsk, (Kalinograd), U.S.S.R.
	(not reported until 1977)		
	2 ♂	24.10.76	Shoreham-by-Sea (JAN)
	x ♂	26.03.77	Wilnis, (Utrecht), Netherlands
	x ♂	23.12.75	Alfriston (PJW)
	2 ♂	26.04.77	Jaegerum, (Jutland), Denmark
	x ♂	05.04.76	Shoreham-by-Sea (JAN)
	5 ♀	29.01.77	Nr. Tavistock, Devon, 275 W
	3	07.09.77	Hodcombe, Beachy Head (RHC)
	/?	01.11.77	Palomares de Eschalar, (Navarra), Spain
	3J	08.09.77	Beachy Head (BHRG)
	()	11.12.77	Zabaldea, (Pamplona), Spain
	6 ♂	22.01.76	Marley Common (PGD)
	x ♂	16.04.77	Grasbo, (Vastmanland), Sweden
	x ♀	26.08.75	Shoreham-by-Sea (JAN)
	3 ♀	07.04.77	Baracaldo, (Vizcaya) Spain

BIRDS RINGED ELSEWHERE AND RECOVERED IN SUSSEX

Species	Sex	Date	Location
Herring Gull	y	01.07.75	Dalkey Island, Dublin
	6	14.12.75	Worthing (not reported until 1977)
Mediterranean Gull	y	12.04.72	Kalmthout, (Antwerpen), Belgium
	1	15.01.77	Hove
Black-headed Gull	1	06.06.75	Suursadam, (Hiiumaa), Estonia
	y	15.01.77	Hove
	6	17.05.74	Wakering, Essex
	y	13.02.77	Worthing 115 SW
Reed Warbler	3	17.08.77	Mierzeja Wislana (Gdansk), Poland
	y	25.09.77	Chichester G.P. (CRG)
	y	27.09.77	
			Other birds controlled in Sussex were ringed in Hertfordshire (5), Hampshire (7), Surrey, Northants, Cambridgeshire, Cheshire, Lancashire and Kent
Sedge Warbler			Birds controlled in Sussex were ringed in Warwickshire, Northumberland, Berkshire and Hampshire
Starling	3	04.06.74	Kaunas, Lithuania
		13.03.76	Shoreham-by-Sea (JAN) (not reported until 1977)
Redpoll	3		birds controlled by PGD at Marley in winter were ringed in Northants, Yorkshire and Kent

COASTAL COUNTS OF WADERS AND WILDFOWL IN SUSSEX AND EAST HAMPSHIRE IN 1977/78

R. F. PORTER

A total of ten monthly counts were undertaken in Chichester and Pagham Harbours between May, 1977 and March, 1978, and the data is presented in Tables 1 and 2. This is the fifteenth year of the Society's survey in these harbours and, apart from counts made in neighbouring Langstone, it is believed to be the longest running survey of its kind in Britain.

Virtually all counts were made simultaneously with those in the East Hampshire harbours of Langstone and Portsmouth. Once again data was exchanged with the Ornithological Section of the Hampshire Field Club and their observations are also included in Tables 1 and 2.

Though the systematic list embraced in the main section of this report draws attention to a number of facts produced by the counts, several points are felt worthy of particular mention. The Teal population which has been rising steadily over the past ten years was, once again, very high, reaching a peak of 1,233 in January. Conversely, Shelduck continued to decline with the peak count being just over 1,400 in January. This was a 62% decrease compared to the peak of 3,740 in the winter of 1971/1972.

Dark-bellied Brent geese remained about 5,500 in Chichester Harbour between December and February, which was slightly lower than the previous winter. Examination of the flocks there showed hardly any juveniles; 18 (less than 1%) being the maximum counted, a fact which must surely indicate a poor breeding season in the Arctic and could be the reason why fewer birds were feeding on grass or winter wheat (Table 3) compared to the winter of 1976/1977. The view has been expressed that proportionately more young than adults go onto fields because feeding is easier, especially during the mid to late winter period when competition for the rather limited, and presumably preferable, algae and *Zostera* is high and adults are likely to take priority. The study of the proportions of adults and young feeding terrestrially and inter-tidally would make an interesting project for future winters.

In Pagham Harbour there appeared to be an appreciable drop in Brent geese, though the count dates may not have recorded the full complement of birds that were present. Dunlin numbers there were slightly lower than in previous winters, but the Turnstone flock continued to remain at a high level. Dunlin in the four Harbours reached the exceptionally high peak of 68,935 in December, but thereafter there was a considerable decrease, the birds presumably moving on further south.

It is pleasing to report that the Rye Harbour and Pett Level counts were resumed and a total of nine undertaken between July, 1977 and March, 1978. These were co-ordinated by Richard Knight and P. W. Rouse, and the data is presented in Table 4. As usual two Sussex Coastline Wader Counts were carried out in January and February (Table 5 and 6). Coverage was excellent and totals of 45,776 and 35,488 recorded respectively.

Finally, mention should be made of the impending sale of Thorney Island in Chichester Harbour. In 1977 the Ministry of Defence deemed 1,670 acres that they owned on Thorney Island surplus to their requirements. The Sussex Ornithological Society, together with the R.S.P.B. and Sussex Trust for Nature Conservation, realising the possible consequences should the Island be obtained by a person or organisation with an eye to future development, worked closely with the West Sussex County Council in providing data for the planning brief which, hopefully, would influence the sale. This outlined those areas, notably Pilsey Island, the inter-tidal mud, the Deeps, and certain sections of the perimeter, which were vital for wildlife conservation. The input would not have been possible without the information from the wader and wildfowl counts made by the SOS over the last fifteen years, which showed the international importance of the area. It is hoped that the Properties Services Agency in disposing of the Island will respect the wishes of the conservation bodies and the local authorities that the zones of highest importance for wildlife will be offered first to a body who will ensure their future as areas where nature conservation takes first priority.

Acknowledgements

Those responsible for undertaking these wader and wildfowl counts are acknowledged on page 7. I would again like to thank D. F. Billett for providing the Langstone Harbour figures, and D. J. Steventon for both supplying the Portsmouth Harbour counts and allowing us to publish data for all the East Hampshire estuaries. I am grateful to Michael Shrubbs for comments on the results of the season's counts.

TABLE 5. SUSSEX COASTLINE WADER COUNT—14th January, 1978

Species	Chichester	Pagham	Middleton	Goring	Shoreham	Newhaven	Tide-Mills	Cuckmere	Pevensy	Pett Level	Rye Harbour	Totals
Oyster Catcher	979	166	168	9	300	1000	440	8500	2000	58	400	1780
Lapwing	524	P	12	25	212	2000	1300	14076	18	1	13	840
Ringed Plover	393		25	212	18	7	28	7	7			707
Grey Plover	585	17	43	20								1968
Golden Plover	450								850	500	168	485
Turnstone	37	254	6	2					150	1800	100	2194
Snipe	65	49									3	31
Jack Snipe	6											1063
Curlew	826	86	17									232
Black-tailed Godwit	216	16										733
Bar-tailed Godwit	730	3										1054
Redshank	691	151	5	25	50	17	26	19	3	67		416
Knot	410											19565
Dunlin	13725	3330	8	810	700	90	84	400	200	218		463
Sanderling	4		102	217								37
Purple Sandpiper												132
Ruff	2	130		4								45776

Also recorded:
 Green Sandpiper 3
 Avocet 2
 Common Sandpiper 1
 Spotted Redshank 10
 Woodcock 18
 Greenshank 3
 P = Present but not counted

TABLE 6. SUSSEX COASTLINE WADER COUNT—11th February, 1978

Species	Chichester	Pagham	Middleton	Goring	Shoreham	Newhaven	Tide-Mills	Cuckmere	Pevensy	Pett Level	Rye Harbour	Totals
Oyster Catcher	978	250	235	19	30	400	370	6000	13	48	400	1943
Lapwing	647	316	22	55	150	10	13	42	3	1	21	8585
Ringed Plover	55	128	25	50	150	10	13	42	3	48	1	475
Grey Plover	634	140	26	34								886
Golden Plover	551	262								1300	200	2644
Turnstone	19	221								98	30	413
Snipe	29	26								80	2300	2618
Jack Snipe	5									11		18
Curlew	1247	316								300	50	1924
Black-tailed Godwit	288	152										439
Bar-tailed Godwit	960	384										954
Redshank	960	384								36	24	1662
Knot	1150	6								4		1160
Dunlin	6311	3471	5	1040	300	100	122	430	30	600		12409
Sanderling	5		43	70								141
Purple Sandpiper												32
Ruff	160											187

Also recorded:
 Green Sandpiper 1
 Avocet 2
 Woodcock 8
 Spotted Redshank 1
 Little Stint 1
 Greenshank 2

Species	1977		1978		1978		1978		1978			
	May 7th	Jul 16th	Aug 13th	Sept 17th	Oct 15th	Nov 12th	Dec 10th	Jan 14th	Feb 11th	Mar 11th		
Greenshank												
Pagham	1	2	5	48	50	10	200	410	1150	53		
Chichester	3	33	103	69	31	12	8	3	1	3		
Langstone	2	75	47	49		3	1					
Portsmouth	5	6	13	8	2							
Knot												
Pagham	1									6		
Chichester	10									860	1218	421
Langstone										492	70	
Portsmouth												
Dunlin	538	438	351	85	1403	1078	2400	3330	3471	3560		
Pagham	775	8	1113	2847	5072	10045	29035	13725	6311	6916		
Chichester	3300	930	800	5564	25100	12770	35000	24300	8900	6700		
Langstone												
Portsmouth	21	9	57	38	1200	3000	2500	2000	5500	4400		
Sanderling												
Pagham	2									8		132
Chichester	100		214	305	252					4	5	113
Langstone												
Portsmouth	1											

TABLE 3. Number and % of total population of Brent Geese feeding on grass in Chichester Harbour during period of Estuary Counts, 1977/78. (N.B. None recorded on Winter Wheat).

Total count	1977		1978		Mar. 11th
	Oct. 15th	Nov. 12th	Dec. 10th	Jan. 14th	
On grass	—	53	5613	5493	3409
% on grass	—	0	5%	13%	41%

TABLE 4. COUNTS OF SELECTED SPECIES OF WILDFOWL AND WADERS AT PETT LEVEL AND RYE HARBOUR, JULY 1977-MARCH 1978 (Co-ordinated by R. Knight and P. W. Rouse)

Species	1977		1978		1978		1978		1978		
	Jul. 16th	Aug. 13th	Sept. 17th	Oct. 15th	Nov. 12th	Dec. 10th	Jan. 14th	Feb. 11th	Mar. 11th		
Great Grebe	3										
Little Grebe	13	26	20	27	19	6	5	8	29	7	
Mallard	34	92	81	77	71	154	287	410	410	51	
Teal	8	32	9	18	17	20	16	159	31		
Shoveler	5	14	5	8	46	20	81	14	14		
Tufted Duck	61	61	96	70	139	170	151	241	127		
Pochard	10	7	48	96	67	176	226	139	14		
Goldeneye											
Common Scoter											
Eider											
Shelduck											
Coot	21	104	109	110	301	623	583	600	257		
Oystercatcher	112	204	10	360	311	225	458	448	465		
Lapwing	28	970	1250	1350	1686	2500	3300	800	400		
Ringed Plover	30	171	116	48	23	51	14	22	21		
Grey Plover											
Golden Plover	2	2	101	43	279	1100	668	530	200		
Turnstone	6	96	24	68	45	157	40	75	200		
Snipe		21	11	73	52	350	130	120	220		
Jack Snipe											
Bar-tailed Godwit											
Curlew	130	203	55	122	152	152	123	350	203		
Common Sandpiper	3	26	6	1							
Wood Sandpiper											
Green Sandpiper	104	177	234	1	78	155	70	97	1		
Redshank											
Spotted Redshank											
Greenshank											
Dunlin	11	191	127	105	173	520	418	630	446		
Sanderling		120	135		8	60	120	23	50		

THE ROOK IN SUSSEX THE BREEDING POPULATION AND ITS DISTRIBUTION IN 1975

By W. MERRITT

INTRODUCTION

In 1971 it was learnt that the British Trust for Ornithology were to organize a national survey of the Rook *Corvus frugilegus* in 1975, the main aim of which would be to record the location and size of rookeries, so that the data would form a baseline against which future changes in distribution and population could be measured.

In Sussex it was thought impracticable to accomplish this in one year, so an extended survey was devised: the period 1972-1974 was used to locate the various rookeries in the County and to iron out counting and administrative difficulties; whilst the full BTO survey was carried out in 1975 by a band of willing observers.

Method

A rookery was defined as any group of two or more nests which was situated at least 100 metres from any adjacent group.

In the period 1972-1974 census forms went out in March of each year to all members of the Sussex Ornithological Society (approximately 1,000) asking them to search their local area and to record the following data for each rookery in April: the nearest village to the rookery, the exact location of the rookery with a six figure OS map reference, a count of the nests, the date(s), the tree species used, and its history. In 1975 the county was divided into 82 non overlapping areas, each with an official counter. Lists detailing the exact location and size of the rookeries known to be in these areas were sent to the 82 observers who were asked to count them and to count any new rookeries that had been formed since 1974.

The number of observers who helped in the survey was 54 in 1972, 123 in 1973, 82 in 1974 and 86 in 1975: over the 4 years as a whole some 216 different observers were involved.

Results

A total of 736 rookeries was found in 1975 comprising 18,180 nests and giving an average size in Sussex of 24.7 nests per rookery. Full details listing the number of nests per tetrad (2km x 2km) are given in the Appendix.

Large rookeries, of which there were 21 with over 100 nests are listed in Table 1, whilst the distribution of rookeries by size which is presented in Table 2, is in the same form that will be adopted when the National data is published. (B. S. Sage and J. D. R. Vernon in prep.), so facilitating direct comparison between the Sussex and the national data. This method of presentation has however, certain drawbacks, for more important than the size of rookeries is the number of nests found in each category of rookery size. Table 3 summarizes this information.

The breeding distribution of the species within the county is shown in Fig. 1 which also gives the nest density per tetrad.

Although the data on tree species used for rookeries was rather limited, it is worth recording that a total of 23 species was identified in Table 4.

A study of the frequency with which species were used has not been attempted because the information is rather incomplete. Nevertheless, it was clear that the most commonly used species were Oak and Scots Pine (in the order of 33% each) and Beech and Elm (in the order of 10% each).

Discussion

The figure of 18,180 for the total number of nests in Sussex is considered to be reasonably accurate. If anything it is probably a shade low, not because of poor coverage—only three rookeries comprising some 101 nests were discovered in 1976, which were thought to have existed in 1975—but because observers tend to

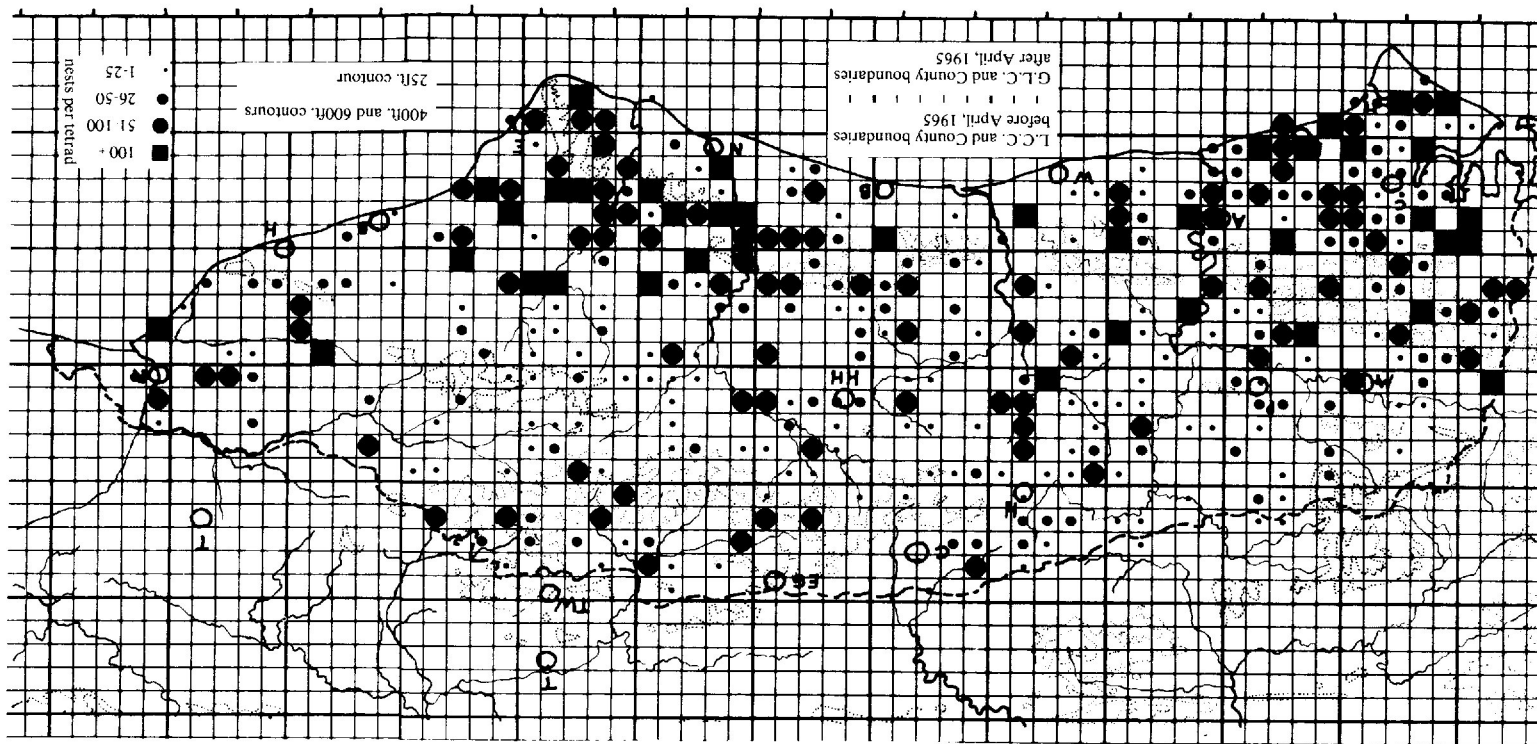


Fig. 1—The Breeding distribution and nest density per tetrad of the Rook, 1975

undercount the larger rookeries (those of 50 nests or over) by up to 5%. This undercounting is most prevalent where evergreen trees such as Scots pine, Monterey cypress and holm oak are involved. A further factor leading to an under estimate of the breeding population is the problem of late nesters (Nav. B. S. 1960). Fortunately the majority of sites were counted in mid to late April, but unavoidably a minority of sites were counted in late March and early April—this error is not thought to amount to more than 250 nests as only a proportion of rookeries show the phenomenon in any case. The total errors involved in the census are not thought to involve more than 750 nests, giving a Sussex population of not more than 19,000 pairs in 1975.

Tables 2 and 3 reveal that although 69.4% of rookeries are under 26 nests in size, only 31.3% of the population actually nests in these small rookeries. Therefore it is clearly more important to consider numbers of nests rather than rookery size. For this reason the raw data from which the distribution of the species within the county has been derived has been presented in the Appendix in the form of nests per tetrad. In the appendix the number of rookeries per tetrad has also been given, but simply as an aid to future survey workers. A tetrad is chosen as the largest convenient unit area that reflects the relationship between climatic edaphic and biotic factors and the distribution of the species, and is now widely used in all biological recording.

Comparison of Fig. 1 with a map of the county showing woodland cover and soil types confirms the impression that the highest breeding density of Rooks occurs in regions that are low, open and on neutral or alkaline soils, e.g. the Chichester area, particularly around East Ashling, and the eastern end of the South Downs between Lewes and Eastbourne—those regions where arable farming is most prevalent. Areas not suited to arable farming, i.e. those that are hilly, well wooded or on acid soils have low breeding densities, e.g. the Forest Ridges between Crawley and Battle or the High Weald north of Petworth and Midhurst.

Comparison of 1975 results with 1945 survey

In 1945 a survey organised by James Fisher was sponsored by the Agricultural Research Council and attempted to count all rook nests in Britain.

In only one area of Sussex, namely a portion of the central Sussex seaboard, was the survey sufficiently documented (Newton R. G. 1945) to enable a direct comparison with the 1975 survey to be made. This area comprised 358.5 square kilometres of Downland divided into 5 regions and extended between the rivers Adur and Cuckmere north to the scarp slopes of the South Downs. The boundaries are shown in Figure 2, whilst counts for nests for these areas for 1945 and 1975 are shown in Table 5.

One should treat the percentage change figures with some caution, as population studies in other parts of Britain (BTO/IWV 1976) suggest that the Rook population increased from the 1930's up until the late 1950's, so that the decline since the late 1950's is in all probability even greater than the decline since 1945.

The greater decline for Regions 1 and 2 appears to be due to a greater degree of urbanization in these areas since 1945. Within Region 1 neighbourhoods where rookeries have become extinct or drastically declined since 1945 are Steyning (70 nests in 1945, none in 1975), North Lancing (100 nests in 1945, none in 1975), and in Region 2 Mile Oak/Portisade (90 nests in 1945, 6 nests in 1975), Hove (30 nests in 1945, none in 1975), Preston Park (30 nests in 1945, none in 1975) and the Levels and Victoria Gardens (60 nests in 1945, 20 nests in 1975).

The data from the 1945 survey was not in a form which enabled a comparison of rookery size to be made, but fortunately this is possible through data collected by the East Sussex and Hastings Natural History Society since 1939.

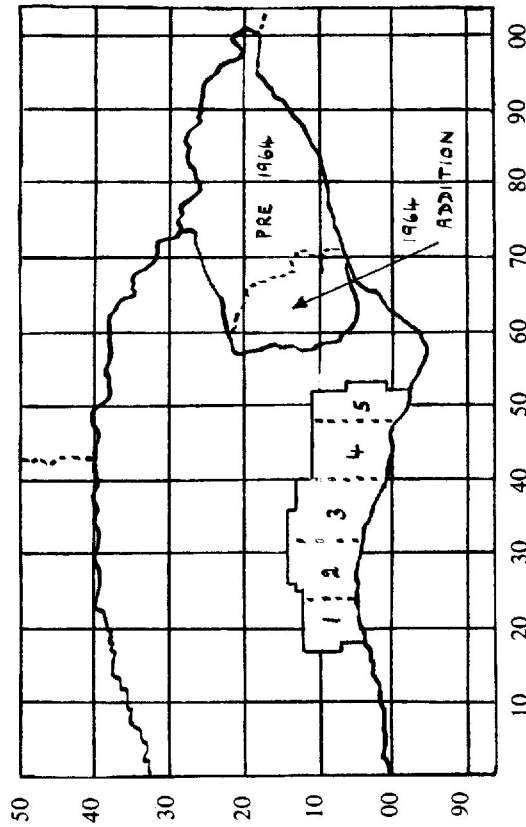
East Sussex and Hastings Natural History Society Surveys in 1939, 1949 and 1965

The area of East Sussex which comes within the recording area of the East Sussex and Hastings Natural History Society is shown in Fig. 2. Note that in 1964 their recording area was enlarged and this has been taken into account in the data which is presented in Table 6 and which was extracted from the appropriate volumes of that Society's proceedings (E.S. & H.N.H.S. 1940, 1950 and 1966). The percentage change for the old/new recording areas has been calculated and is presented in Table 7. Thus the rise in population between 1930 and the late 1950's mentioned earlier is hinted at by a 29% increase in population between 1939 and 1949. Besides the decline in the absolute populations since 1939 there has been a decline in the average size of rookeries as the data in Table 8 shows.

The decline in rookery size since 1939 may be less than is apparent from the figures in Table 8. Poorer observer coverage in 1939 probably meant that some small rookeries were overlooked; further under the present 100 metre definition of a rookery, some of the large 1939 and 1949 rookeries would have been subdivided in the later surveys.

Finally a word of caution to future observers who check the list of sites in Table 1 or the list of tetrads in the Appendix. Rookeries cannot be considered in isolation; there appear to be considerable fluctuations from year to year, possibly because birds move between adjacent rookeries. This tends to mean that although the count for a single site varies annually, the total population of a group of associated rookeries will be found to remain fairly constant over several years, barring natural disasters. Probably the smallest area that needs to be surveyed to negate this effect is one containing approximately 1,000 nests.

Fig. 2—Extent of 1945 Survey and E.S.H.N.H.S. Recording Area



Summary

1. A comprehensive survey of rookeries in Sussex in 1975 showed there to be 18,180 nests in 736 rookeries. The average rookery size was 24.7 nests.
2. 21 rookeries held over 100 nests and the largest comprised 226 nests.
3. The commonest trees for rookeries were Oak, Scots pine, Elm and Beech.
4. The greatest breeding densities were found in regions where arable farming is the primary land use.

- 69% of rookeries were below 25 nests in size whilst the actual number of nests in rookeries of that size was 31% of the total.
- Comparison with earlier surveys indicates a decline in the average size of rookeries and a decline in population of the order of <40% since the 1940's.

Acknowledgements

I wish to thank R. F. Porter for preparing an early draft of this paper, the members of the scientific committee for many useful comments and T. Parmenter for preparing the maps. My thanks also to all those observers, too numerous to name individually, without whose help this survey would not have been possible.

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TABLE 1. ROOKERIES WITH 100 OR MORE NESTS IN SUSSEX, 1975

Site	grid ref.	Nests	Site	grid ref.	Nests
Hambrook	SU792071	116	Aleiston	TQ495055	150
Oakhurst	SZ943963	143	Iford	TQ408473	186
Sennicoat	SU828073	205	Piddinghoe	TQ432034	192
Chilgrove	SU825145	226	Eastcote	TV556970	109
Bognor	SU935002	112	Folkington	TQ361046	101
West Chillington	TQ089164	129	Hellingly	TQ579132	168
Greatham	TQ035153	146	Hankham	TQ623057	121
Scampton	TQ163063	189	Stone Cross	TQ613062	134
Dial Post	TQ158200	105	Herrimoncote	TQ656118	109
Patcham	TQ299089	106	Sedlescombe	TQ777186	107
Edburton	TQ214114	128			

TABLE 2. DISTRIBUTION OF ROOKERIES BY SIZE IN SUSSEX, 1975

No. of nests in rookery	1-25	26-50	51-100	101-200	201-300	over 300
No. of rookeries of that size	511	131	73	19	2	0
% of rookeries of that size	69.4	17.8	9.9	2.5	0.3	0

TABLE 3. NUMBER OF ROOK NESTS IN SELECTED CATEGORY SIZES OF ROOKERY, SUSSEX 1975

No. of nests in rookery	1-25	26-50	51-100	101-200	201-300	over 300
No. of nests in rookery of stated size	5705	4722	4819	2508	431	0
%	31.3	26.0	26.5	13.8	2.4	0

TABLE 4.

Alder	.....	<i>Alnus glutinosa</i>
Ash	.....	<i>Fraxinus excelsior</i>
Beech	.....	<i>Fagus sylvatica</i>
Scots Pine	.....	<i>Pinus sylvestris</i>
Elm	.....	<i>Ulmus procera</i>
Oak	.....	<i>Quercus robur</i>
Sycamore	.....	<i>Acer pseudoplatanus</i>
Horse Chestnut	.....	<i>Aesculus hippocastanum</i>
Stone Pine	.....	<i>Pinus pinea</i>
Willow	.....	<i>Salix alba</i>
Poplar	.....	<i>Populus sp</i>
Birch	.....	<i>Betula sp</i>
Sweet Chestnut	.....	<i>Castanea sativa</i>
Monterey Cypress	.....	<i>Cupressus macrocarpa</i>
Plane	.....	<i>Platanus x hybrida</i>
Yew	.....	<i>Taxus baccata</i>
Wych Elm	.....	<i>Ulmus glabra</i>
Larch	.....	<i>Larix deodora</i>
Cherry	.....	<i>Prunus avium</i>
Hazel	.....	<i>Corylus avellana</i>
Chile Pine (Monkey Puzzle)	.....	<i>Araucaria araucana</i>
Box	.....	<i>Buxus sempervirens</i>
California Redwood	.....	<i>Sequoia sempervirens</i>

TABLE 5. A COMPARISON OF ROOK NEST COUNTS IN 1945 AND 1975 FOR AREAS OF CENTRAL SUSSEX SEABOARD (see Fig. 2)

Region	Area in sq. kilometres	Total nests			% change from 1945 to 1975
		1945	1974	1975	
1	50.5	937	244	297	-68.7
2	73.75	1146	419	379	-66.8
3	88	980	670	618	-37.0
4	88	1101	944	980	-11.0
5	58.25	805	625	622	-22.7
Total	358.5	4969	2902	2896	-41.7

TABLE 6. A comparison of the 1939, 1949, 1965 and 1975 Rook surveys in the old and new recording area of the East Sussex and Hastings N.H.S. (see Fig. 2)

Recording Region	Area in sq. km.	1939		1949		1965		1975	
		total nests	No. of rookeries	total nests	No. of rookeries	total nests	No. of rookeries	total nests	No. of rookeries
Old	475	2502	24	3223	29	1532	44	1311	45
New	644	—	—	—	—	2176	51	2136	72

TABLE 7. Percentage change in numbers of Rook nests in old and new recording areas of East Sussex and Hastings N.H.S. (see Fig. 2) as shown by surveys: 1939, 1949, 1965 and 1975.

Recording Region	1939/1949		% change 1939/1975		1949/1975		1965/1975	
	Old	New	Old	New	Old	New	Old	New
Old	+29	—	-45	—	-59	—	-14	-2
New	—	—	—	—	—	—	—	—

TABLE 8. Change in size of rookeries in 1939, 1949, 1965 re 1975 in old and new recording areas of the East Sussex and Hastings N.H.S. (see Fig. 2)

Recording Region	Year	Size of Rookery (number of nests)						
		1-25	26-50	51-100	101-200	201-300	301-400	400+
Old	1939	7	4	6	4	2	—	1
	1949	4	9	5	6	2	—	2
	1965	18	13	8	5	—	—	—
New	1975	26	11	7	1	—	—	—
	1965	19	15	12	5	—	—	—
	1975	45	14	9	4	—	—	—

**APPENDIX: Rookeries and rook nests per tetrad (2km x 2km) in Sussex
1975**

Tetrad	Rookeries	Nests	Tetrad	Rookeries	Nests	Tetrad	Rookeries	Nests	Tetrad	Rookeries	Nests
SZ7898	2	7	SU8220	1	39	TQ0602	1	2	TQ1634	1	38
SU7402	1	14	SU8222	1	16	TQ0604	2	16	TQ1636	1	21
SU7408	1	10	SU8422	2	7	TQ0606	1	34	TQ2004	1	3
SU7602	1	22	SU8426	1	18	TQ0608	1	45	TQ2206	1	25
SU7604	1	5	SU8620	1	24	TQ0802	1	2	TQ2406	1	6
SU7608	2	100	SU8820	2	97	TQ0804	2	59	TQ2808	1	106
SU7806	2	136	SZ9098	1	103	TQ0806	3	54	TQ2010	1	6
SU7808	3	114	SZ9498	4	83	TQ0808	3	102	TQ2018	2	14
SU7412	3	86	SU9002	4	43	TQ0012	4	57	TQ2016	3	18
SU7612	1	53	SU9004	4	59	TQ0016	1	6	TQ2018	2	14
SU7614	2	42	SU9006	5	85	TQ0214	2	161	TQ2210	2	35
SU7814	5	55	SU9008	5	41	TQ0414	1	5	TQ2214	3	35
SU7818	7	91	SU9200	2	126	TQ0418	1	10	TQ2218	1	33
SU7616	1	12	SU9204	3	31	TQ0614	1	10	TQ2610	2	37
SU7620	3	110	SU9206	3	33	TQ0616	1	10	TQ2612	4	97
SZ8096	3	107	SU9400	2	81	TQ0816	1	25	TQ2616	2	61
SZ8098	2	22	SU9402	2	81	TQ0818	1	129	TQ2812	1	48
SZ8294	1	33	SU9404	3	27	TQ0024	1	19	TQ2814	1	50
SZ8296	4	66	SU9406	1	7	TQ0224	1	13	TQ2816	1	2
SZ8492	5	73	SU9408	3	105	TQ0620	1	10	TQ2024	1	7
SZ8496	3	153	SU9600	4	167	TQ0622	2	9	TQ2028	1	48
SZ8498	3	26	SU9602	2	81	TQ0624	4	60	TQ2228	1	6
SZ8696	11	48	SU9604	3	71	TQ0626	1	14	TQ2420	1	21
SZ8698	1	2	SU9800	3	30	TQ0822	2	25	TQ2424	1	12
SZ8896	3	35	SU9802	2	27	TQ0828	1	6	TQ2622	2	63
SZ8898	3	65	SU9804	2	43	TQ0230	1	24	TQ2624	2	18
SU8004	2	50	SU9012	3	69	TQ0632	1	22	TQ2626	1	23
SU8008	4	152	SU9216	4	105	TQ0634	1	24	TQ2628	1	34
SU8200	3	121	SU9218	1	17	TQ0832	1	19	TQ2034	1	34
SU8202	1	24	SU9416	3	69	TQ1004	2	6	TQ2036	5	84
SU8204	4	32	SU9610	1	28	TQ1204	1	14	TQ2236	1	31
SU8206	4	312	SU9612	1	85	TQ1208	2	11	TQ2438	1	6
SU8400	2	16	SU9614	1	2	TQ1606	1	189	TQ2630	1	10
SU8402	3	32	SU9616	2	69	TQ1808	2	50	TQ2634	1	5
SU8404	3	23	SU9818	2	64	TQ1016	1	29	TQ3004	1	21
SU8406	1	42	SU9814	1	12	TQ1018	1	29	TQ3206	1	11
SU8408	2	22	SU9022	2	39	TQ1216	3	13	TQ3208	2	26
SU8600	5	31	SU9026	1	40	TQ1218	1	84	TQ3402	2	81
SU8602	4	44	SU9028	1	34	TQ1412	1	17	TQ3404	2	13
SU8604	1	3	SU9220	1	21	TQ1612	3	54	TQ3602	1	13
SU8606	2	29	SU9422	1	49	TQ1616	1	57	TQ3604	1	28
SU8608	3	81	SU9428	1	2	TQ1810	3	35	TQ3806	1	56
SU8800	2	124	SU9624	1	10	TQ1814	1	12	TQ3808	1	67
SU8802	3	40	SU9820	1	31	TQ1816	1	14	TQ3012	1	67
SU8804	2	92	SU9826	1	44	TQ1022	1	11	TQ3014	1	21
SU8806	4	66	SU9622	3	26	TQ1024	1	18	TQ3016	3	43
SU8808	4	46	SU9624	1	13	TQ1026	1	28	TQ3018	1	49
SU8014	2	31	SU9230	1	2	TQ1222	1	69	TQ3212	2	26
SU8018	3	31	SU9430	2	11	TQ1226	3	15	TQ3214	1	7
SU8210	1	45	SU9432	1	2	TQ1428	1	105	TQ3410	1	47
SU8214	2	232	SU9630	1	31	TQ1620	1	9	TQ3412	4	61
SU8218	1	27	SU9632	2	19	TQ1622	4	4	TQ3612	4	38
SU8410	1	74	TQ0000	4	43	TQ1624	1	57	TQ3614	2	91
SU8412	1	29	TQ0002	4	43	TQ1822	2	62	TQ3812	4	95
SU8416	1	87	TQ0004	2	52	TQ1828	2	99	TQ3818	4	46
SU8418	1	21	TQ0006	4	88	TQ1832	1	4	TQ3022	1	35
SU8612	4	36	TQ0008	3	28	TQ1432	2	26	TQ3324	1	9
SU8616	1	10	TQ0204	1	41	TQ1434	1	21	TQ3226	1	24
SU8022	1	69	TQ0206	1	128	TQ1630	2	10	TQ3422	2	44
SU8024	1	68	TQ0404	1	15	TQ1632	1	43	TQ3426	2	72
									TQ3428	1	17
									TQ3622	1	17
									TQ3624	2	35

Tetrad	Rookeries	Nests	Tetrad	Rookeries	Nests	Tetrad	Rookeries	Nests
TQ3628	1	23	TQ5408	2	54	TQ7412	1	46
TQ3822	1	52	TQ5602	2	74	TQ7612	1	32
TQ3826	1	8	TQ5604	1	101	TQ7618	2	144
TQ3030	1	3	TQ5800	1	18	TQ7814	2	86
TQ3432	4	51	TQ5808	1	4	TQ7816	4	87
TQ3830	1	15	TQ5210	2	47	TQ7222	2	35
TQ3832	1	52	TQ5214	1	3	TQ7226	1	83
TV49	1	22	TQ5216	5	41	TQ7424	1	70
TQ4006	2	192	TQ5418	2	8	TQ8012	1	40
TQ4008	5	53	TQ5612	1	113	TQ8212	1	4
TQ4202	5	217	TQ5614	1	5	TQ8218	1	2
TQ4204	1	7	TQ5616	2	5	TQ8418	1	23
TQ4206	2	115	TQ5812	4	127			
TQ4402	2	9	TQ5818	1	25			
TQ4406	2	73	TQ5816	1	4			
TQ4600	1	39	TQ5020	1	24			
TQ4606	2	177	TQ5028	1	3			
TQ4804	1	150	TQ5228	1	8			
TQ4806	2	11	TQ5420	1	50			
TQ4808	4	76	TQ5424	1	16			
TQ4010	3	70	TQ5428	1	60			
TQ4012	1	3	TQ5620	1	3			
TQ4014	2	29	TQ5624	2	18			
TQ4212	2	58	TQ5626	3	26			
TQ4214	3	29	TQ5628	1	3			
TQ4410	2	103	TQ5820	1	5			
TQ4412	1	20	TQ5824	1	24			
TQ4418	1	24	TQ5826	3	25			
TQ4612	3	32	TQ5030	1	68			
TQ4616	1	12	TQ5034	1	13			
TQ4618	4	65	TQ5232	1	84			
TQ4810	2	13	TQ5234	1	5			
TQ4812	5	144	TQ5236	1	9			
TQ4818	2	16	TQ5434	2	49			
TQ4022	1	84	TQ5832	1	30			
TQ4026	1	4	TQ5834	1	40			
TQ4420	1	16	TV6098	5	41			
TQ4426	1	38	TQ6004	3	93			
TQ4620	1	6	TQ6006	1	134			
TQ4622	1	17	TQ6202	1	24			
TQ4624	2	23	TQ6204	1	121			
TQ4626	1	15	TQ6404	2	72			
TQ4820	1	7	TQ6408	1	87			
TQ4034	3	80	TQ6608	1	8			
TQ4236	1	12	TQ6012	1	63			
TQ432	1	17	TQ6218	3	37			
TQ4434	2	7	TQ6410	2	136			
TQ4636	1	23	TQ6414	2	15			
TQ4638	1	5	TQ6416	1	50			
TQ4834	2	29	TQ6020	1	13			
TQ4836	1	80	TQ6028	2	13			
TV5298	1	64	TQ6422	1	35			
TV5496	1	109	TQ6624	1	12			
TV5498	1	86	TQ6828	1	21			
TV5898	2	54	TQ6628	1	7			
TQ5002	1	57	TQ6030	1	22			
TQ5004	2	43	TQ6032	2	64			
TQ5006	2	91	TQ6234	2	46			
TQ5200	2	74	TQ6632	2	67			
TQ5204	4	97	TQ6036	1	25			
TQ5206	2	81	TQ7006	1	22			
TQ5208	6	95	TQ7408	1	44			
TQ5404	6	120	TQ7012	1	3			

Tetrad	Rookeries	Nests	Tetrad	Rookeries	Nests
TQ7412	1	46	TQ8612	1	27
TQ7612	1	32	TQ8814	2	15
TQ7618	2	144	TQ8818	1	4
TQ7814	2	86	TQ8220	1	30
TQ7816	4	87	TQ8224	1	30
TQ7222	2	35	TQ8226	1	10
TQ7226	1	83	TQ8420	3	70
TQ7424	1	70	TQ8620	1	51
TQ8012	1	40	TQ9016	7	211
TQ8212	1	4	TQ9022	1	73
TQ8218	1	2	TQ9024	1	17
TQ8418	1	23	TQ9220	2	37

THE BREEDING STATUS OF THE BLACK REDSTART IN SUSSEX R. F. PORTER

The Black Redstart *Phoenicurus ochruros* according to Calvert *et al.* (1944) first nested in Britain when a pair bred in Sussex in 1923. Walpole-Bond (1938) in his ornithological classic appeared to be uncertain of the south coast county in which this record referred, and he quotes 1932 as the start of its nesting history in Sussex. Prior to these dates it was known largely as a spring and autumn migrant in very small numbers but a few August sightings back to as early as 1883 were possibly indicative of breeding in the county, being rather too early for passage.

The 1932 record heralded a period of sporadic nesting in Sussex, and it was not until the early 40s that the bird appeared to establish itself. Since that time the majority of breeding records have been in the coastal towns in the east of the county, with the largest numbers occurring in the immediate post-war years e.g. 7 pairs in 1947; 10 pairs plus an additional 9 singing males in 1948. Since then, however, the population has fluctuated at a level below 5 pairs, with some of the highest numbers in the last five years: 5 pairs in 1973; 4 pairs plus 1 singing male in 1975; 3 pairs plus 5 singing males in 1976. During this latter period nesting pairs have been largely associated with buildings in urban areas, industrial complexes, power-stations and occasionally cliffs, whereas the upsurge in the post-war years was almost certainly a product of the nesting opportunities offered by bombed sites.

Information gathered in the early and mid 70s suggested that the breeding population of Britain was in the order of 60-70 pairs and further that it was probably under-recorded, so in 1977 the British Trust for Ornithology organised a national breeding survey. In Sussex a comprehensive search was made in towns and their environs where the species has bred, or been suspected of breeding, in the past. This revealed only 2 pairs nesting successfully (both in the Brighton area), a possible breeding pair on the cliffs east of Hastings, and 2 unmated singing males, again in the Brighton area. In view of the attention given to Black Redstarts in 1977 it is surprising that so few were found, but Sussex was not an exception, for the decline, according to the B.T.O., was reflected nationally.

Acknowledgements

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THE BREEDING DISTRIBUTION AND STATUS OF THE NIGHTJAR IN EAST AND WEST SUSSEX

by S. W. M. HUGHES, J. W. HOUGHTON and F. W. BLAKE

The Nightjar *Caprimulgus europaeus* is distributed widely, though locally, throughout England, Wales and Ireland and almost everywhere breeding numbers are considered to be decreasing (British Ornithological Union, 1971). There is evidence that this decline had already started in most areas by 1930 (Parslow, 1973) and the last national enquiry in 1957 and 1958 confirmed that it was still continuing (Stafford, 1962). At that time Sussex was one of only seven counties, all in southern England, in which the species was described as common and in which no change in status could be detected over the previous 10 years.

Since the late 1950s the species is thought to have decreased locally in Sussex and des Forges and Harber (1963) concluded that, although numbers vary considerably from year to year, there had perhaps been a further general decrease in the county. More recently the Sussex Ornithological Society has encouraged the reporting of all records of this species and a detailed picture of present day distribution has been built up over a ten year period (1967-1976). In no year has more than a small number of sites been reported on, thus it has been impossible to estimate the size of the breeding population. It was decided therefore that in 1977 a thorough census should be made in East and West Sussex.

METHOD

As the success of a census of this type depends on good coverage of all suitable habitat, this was arranged by SWMH and JWH on a personal basis with specific observers. All sites known to have supported birds some time in the previous five years were to be visited as a first priority. Other sites, from which the species had been reported in the last ten years, were to be a second priority. Where observer effort allowed, other apparently suitable areas were to be visited, even if birds had never been recorded there previously. Additionally FWB took on a roving support role to visit important areas in West Sussex, where existing arrangements seemed likely to be inadequate.

The main immigration of Nightjars into Sussex takes place during the first half of May. However, as the movement lasts into the first week of June (des Forges and Harber, 1963), observers were asked to concentrate their efforts during the period June-August. It was suggested that the most satisfactory method of finding Nightjars was to locate churring birds, these being males. Suspected breeding, based solely on churring males, was to be confirmed wherever possible by at least two visits to establish continued presence in the area. Observers were asked to submit records on a standard form, giving the date(s) of observation(s), a six figure Ordnance Survey map reference for each bird found, habitat details for each location and any other relevant information. Additional records, either submitted in the normal way direct to the Society's Hon. Recorder, or obtained from information provided in connection with the site register scheme of the British Trust for Ornithology have also been used.

Throughout this paper the term *occupied territory* is used as the basic unit of population and is here defined as the presence of a pair, a churring male, display, nests or young. Active searching for nests was discouraged because of the danger of disturbance.

COVERAGE

The weather in June, 1977 was cold and wet and made searching for Nightjars not only unpleasant but often unrewarding. Fortunately the weather improved in July and August. The delay in starting the census meant that the original request that all records of churring males be confirmed by more than one visit, could not be insisted on as it would have seriously limited the overall coverage. Furthermore

because of the indifferent weather several visits had to be made to some areas to ensure that birds had not been overlooked, and to other important areas to check the accuracy of counts. This limited the effort available for searching some marginal habitats.

Despite the difficulties presented by the weather returns were received from 86 observers (29 in East Sussex and 57 in West Sussex). The observer coverage was certainly much better than had ever been achieved previously. No site of major importance i.e. known to have supported more than five territories in a previous year was missed. Furthermore only one priority site was not visited and it is unlikely that this would have held more than two territories.

In some parts of West Sussex the coverage was exceptionally good and produced occasional birds in unexpected locations and with hindsight one wonders whether more intensive coverage in a few other areas, particularly in the heavily wooded north west of the county may have produced more records of this type.

NUMBER AND DISTRIBUTION OF OCCUPIED TERRITORIES

Although in the past details have often been published concerning breeding locations, it is now considered to be in the best interest of the species that such information should not be freely available. Nevertheless, the detailed results of the 1977 census will be lodged with the Hon. Recorder for future research and conservation purposes. For the same reason it has been considered prudent not to provide the customary tetrad (2 x 2 km squares) map to illustrate the breeding distribution. Alternatively, the number and distribution of occupied territories are shown using the 10 kilometre square (2,500 acres) of the national grid, as this is now a well established unit for county ornithological surveys of this type and is particularly suitable for future comparative work.

East Sussex

A total of 36 occupied territories was found. The species was basically confined to four areas. The most important of these was the Ashdown Forest district and the adjacent coniferous woodlands in which there were 15 occupied territories (c.42%) of the East Sussex total. A further 13 were found in the south east of the county in the general area between Herstmonceux, Battle, Bodle Street and Broadoak, while another four occupied territories, a relic of a much larger population in former years, were found in the predominantly conifer but now middle stage commercial woodlands between Heathfield and Battle. There was one record for an area between the Downs and the coast and another was reported from the Downs themselves.

West Sussex

A total of 153 occupied territories was found and the approximate distribution of these is shown in figure 1. In contrast to the scant distribution in East Sussex it is clear that the species is still relatively widespread, albeit somewhat local. Numbers vary considerably in different areas with totals of 27 and 40 occupied territories being reported in SU 81 and SU 91 respectively, compared with less than 10 in four squares and none in 12 others. The distribution in 1977 was confined to the woodlands on the chalk west of the River Arun, the woodlands, heaths and commons on the greensand in the north west and across the middle of the county. In the extreme north there was a small population on the forest ridges in the general area of Horsham, Crawley, Bolney and Handcross. It is noteworthy that in 1977, despite much searching, none was found south of the Downs, nor were any reported from the woodlands on the wealden clay.

BREEDING HABITATS

Although in Britain the Nightjar is typically a bird of dry sandy heaths with scattered trees, nationally it occurs in a wide variety of other habitats varying from sand dunes and open shingle to a great variety of woodland habitats. Habitat details

were requested as part of the 1977 census with a view to determining the relative importance of each basic type in East and West Sussex.

Any classification of habitats, must of necessity be rather arbitrary, particularly when describing woodland areas which, except for plantations, are rarely of uniform composition. The classification adopted in Table 1 is intended to describe only the major features of the territory. In most instances the boundaries of a territory comprised completely different habitats. For example a territory over recently felled clear woodland, may be bordered on one or more sides by open/dense, young/mature, deciduous/coniferous/mixed woodland, plantations of varying ages or possibly arable land.

Habitat details were supplied for 177 of the 189 occupied territories found during the census. These have been classified into the six categories listed in Table 1 below, which also gives the breakdown of the total number for both counties.

TABLE 1. NIGHTJAR BREEDING HABITATS IN EAST AND WEST SUSSEX

Habitat	Number of occupied territories	
	East Sussex	West Sussex
Conifer plantations	13	56
Open heath/common with scattered trees	11	35
Recently felled areas	1	20
Chestnut coppice/or chestnut and other coppicing	5	13
Deciduous, open woodland and woodland edge	4	6
Miscellaneous	2	11
TOTAL	36	141

East Sussex

Young conifer plantation was the most important habitat supporting 13 (c.36%) occupied territories, but open heathland was almost equally important with 11 (c.31%) territories and will probably be more so in the coming years (see later). The five occupied territories found in deciduous woodlands were traditional sites where the species had been present for many years. Coppiced areas, predominantly chestnut, accounted for five territories, and surprisingly only single pairs were reported from both recently felled woodlands and from commons.

West Sussex

As in East Sussex, young conifer plantation was found to be the most important habitat for the species, accounting for 56 (40%) of the total occupied territories in the county. The number of birds still found on the remaining heaths was reassuring and the importance of clear felled areas was demonstrated. The numbers of birds on commons in open deciduous woodland and woodland edge habitats were less than expected, but the use of chestnut coppice plantations was more widespread than had been anticipated. The miscellaneous territories included three in disused gravel/sand pits, one in a young beech plantation, four in mixed beech and pine plantations and three on the edge of mature Scots pine woodland.

DISCUSSION

Changes in distribution

Walpole-Bond (1938) summarised the distribution and status of the Nightjar in Sussex in the late 1930s as being "Confined to certain spots and often shunning the most likely haunts". Nevertheless he concluded that the species was "A fairly common visitor and that it was decidedly common in a few favoured areas". Such a generalised summary could be said to be equally true today, but reading between the lines of the other more detailed information provided by Walpole-Bond (see below) and comparing it with the distribution during the last 10 years, as determined by the Society, it is clear that substantial changes have taken place and the species is now much more localised.

Walpole-Bond described the chief breeding areas as being "North of the South Downs and elsewhere in the interior and north of the county, particularly in the real forest areas and on the commons and other 'barrens' abounding in heath and bracken". He also referred to breeding in the coombes on open downland, in smaller sheltered woodlands on the southern slopes and in the vales intersecting the Downs. A few nested on the shingle beaches at Rye, Eastbourne and possibly at Pagham, but there was none in the sand dunes at Camber.

Considered in its full context Walpole-Bond's phrase "North of the South Downs" probably relates to the West Sussex commons and woodlands, immediately north of the Downs on the greensand belt, an area which is still very important for the species. His "barrens abounding in heather and bracken" probably relates to the Ashdown Forest area in East Sussex, the continued importance of which has already been mentioned. The beaches have not been used since the war, while the virtual disappearance from open downland has occurred much more recently, one territory having been found in East Sussex in 1977 and the last reported in West Sussex being at Steyning in 1969 and Cissbury in 1974 and 1975. The last breeding record south of the Downs in West Sussex was in 1975 but one territory was found in East Sussex in 1977. Other important changes include the present day absence from the woodlands on the Wealden clay in West Sussex from which the species was last recorded in 1970. There has been a marked contraction in the distribution in the woodlands of the high weald in both counties and a similar picture emerges for the two major blocks of woodland on the East Sussex sandstones. On the credit side it seems likely that distribution in the downland forests of West Sussex is now more widespread than in the 1930s. These forests have supported a substantial population for the last 15 years and possibly longer.

Changes in habitat

Most of the changes in distribution can be correlated with changes in habitat. It is clear (Table 1) that young conifer plantations now constitute the most important breeding habitat in both counties. Such plantations have certainly been responsible for the increased distribution on the western downs and they have also played an important role in maintaining a population on the forest ridges in both counties. Furthermore they have provided some degree of continuity in the population on the greensand as the original heathland habitat has become more fragmented. Unfortunately the usefulness of the habitat is shortlived. Numbers decrease as the thicket stage is approached so that ultimately only the occasional pair remain to nest on a quiet fire break or some other adjacent open area.

Oak and hazel woodland was considered by Walpole-Bond to be a prime habitat for the species in the 1930s. Even in the 1950s the habitat was still important (Stafford, 1962), but little unfragmented woodland of this type now remains in either county, most of it having been replaced by conifers. This process was started and completed earlier in East than in West Sussex and whereas in the 1950s and 1960s several of these new conifer woodlands on the lower lying areas of wealden clay supported the species, most are now too dense. The same is true of a few wooded areas south of the downs in West Sussex, which supported a small population for approximately 10 years after reafforestation.

The present day use of chestnut coppice plantation appears to be a natural extension of the earlier use of hazel in the 1930s. Rather surprisingly, observers have paid little attention to this habitat in post war years and it is difficult to assess its real importance for the species particularly as it is often closely associated with conifer plantations. Walpole-Bond also mentions the attractiveness of recently thinned areas and refers obliquely to more severe clearing, the effects of which may have been nearer to the "clear fell" treatment practised in modern forestry. Such areas, particularly in the midst of large stands of mature woodland, may become increasingly important as breeding habitat.

The absence from the beaches in both counties can be no surprise to anyone in view of present day human disturbance but the virtual absence from open downland

in both counties is more difficult to understand. Much gorse and hawthorn scrub was removed during the war years but some suitable habitat still exists. Perhaps as with some other traditional habitats the areas available are now too fragmented to sustain more than an occasional pair.

Numbers: Short term variations and long term trends

Mention has already been made of the considerable variations in numbers that may occur from year to year. 1976 was considered by many local observers to have been an exceptionally good year. It is however debatable whether the numbers were in fact very much higher than usual. It seems probable that due to the exceptional summer weather, the birds were more vocal and therefore more easily located and counted. Conversely there is the possibility that the 1977 census results were artificially low due to the poor weather. We believe that the numbers reported during 1977 were in fact as accurate as can be obtained in a census of this type, as many observers made special efforts to confirm their counts particularly in the larger and more important areas.

Annual variations make short term assessments of population trends difficult. However the records in the Society's files for the last 10-15 years support local subjective impressions that there has been a drastic decline in numbers in East Sussex during the last decade. The overall situation in West Sussex is less clear cut but certainly the evidence from those few areas which have been well documented and in which the habitat has remained undisturbed also suggests a decline. Regrettably it is not possible to make even an approximate assessment of the size of the population in the 1930s and a direct comparison is ruled out. However it can be assumed, with some certainty, that the present day more localised distribution must have been accompanied by a considerable decrease in numbers.

Factors possibly associated with a decline

The cause of the long term decline, on a national basis, is unknown and our recent observations in East and West Sussex offer no explanation or new hypothesis. The several possible contributing factors have been listed briefly (Sharrock, 1976) e.g. felling of traditional woodland sites, loss of heathland to building and forestry and human disturbance. All correlations with climatic change which might affect food supplies have been discounted, as have pesticides, which at worst may only have exacerbated a decline, which was already well established before the 1950s. The point has also been made that whereas many moorland and commonland species have benefitted from afforestation the Nightjar has done little more than maintain numbers locally by using the new plantations.

The pattern of decline in East Sussex, where in 1977 birds were found in only 36 sites and were absent from 42 other apparently suitable areas, appears to be similar to that reported from other parts of the country. Although many traditional sites have been lost the species has continued to decline in those remaining sites which have been undisturbed. Conifer plantations are still important locally but in 1977 no birds were found in this habitat in some areas where it had been used extensively less than 10 years previously. Both characteristics of decline are well illustrated in the north east on the forest ridges, in a district which comprises several habitats, e.g. Eridge Park (open woodland), Limekiln, Park and Hornshurst Woods (conifer plantations) and Broadwater Forest where mature pines have been felled and replanted giving at least seven suitable sites. This district supported at least 14 territories in the 1960s but none in 1977.

The importance of the classic heathland sites, which for their total area hold a disproportionately high percentage of the East Sussex population, cannot be overestimated. If the species is to have any possibility of overcoming the factors affecting it so adversely elsewhere and reversing the decline, it would appear essential that it maintains a foothold in this prime habitat. However an area such as Ashdown Forest is not without its pressures, as increasing numbers of people use it

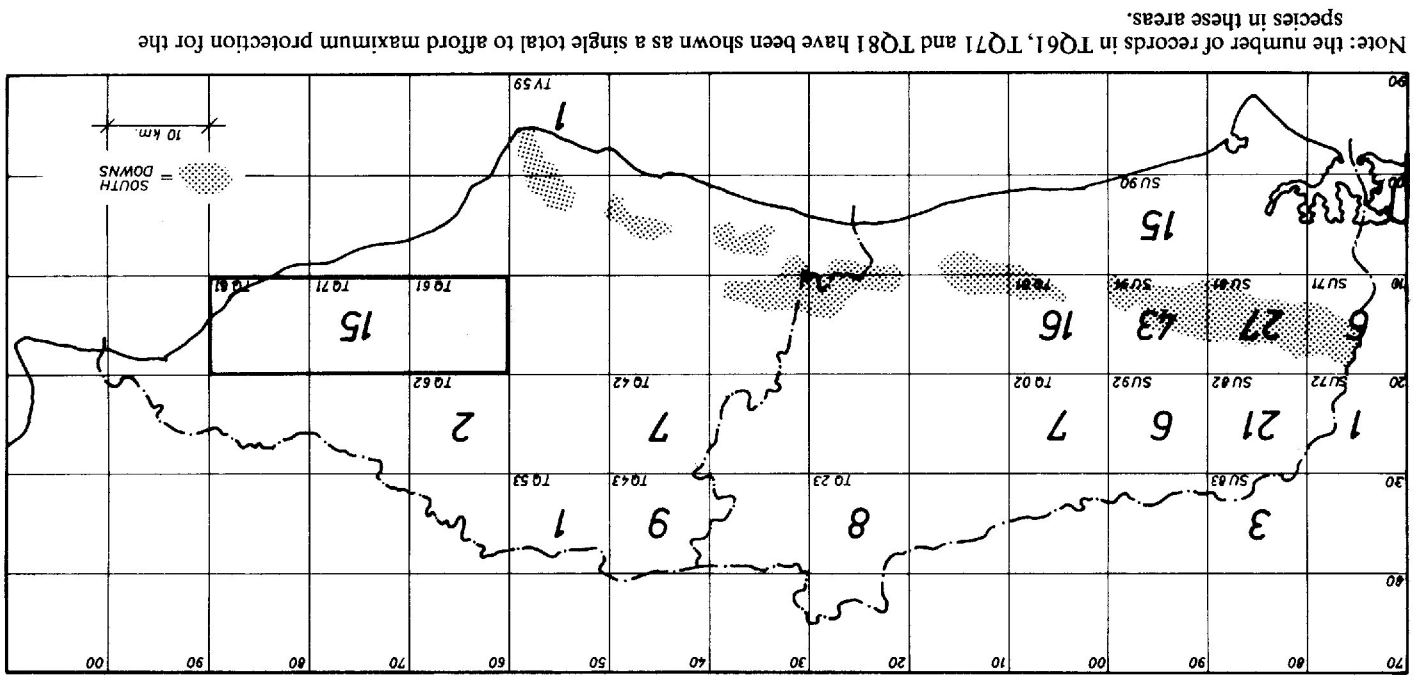


Fig. 1

for various recreational purposes. Serious fires devastated many suitable sites during the hot summers of 1975 and 1976. The fiercest fires eradicated the heather and the subsequent overgrowth of bracken may have rendered the areas unsuitable for the species. Paradoxically some burning is necessary to maintain the open character of this area. It was particularly disappointing in 1977 that no birds were found on other smaller areas of heath such as Chaille Common. Such areas are perhaps too fragmented now and provide too great an amenity for the ever growing and increasingly mobile population of south eastern England.

The rate of decline in numbers in West Sussex has been less dramatic and consequently it is difficult to assess accurately what is happening. Conifer plantations are clearly of major importance at the present time and it remains to be seen whether the species is gradually lost from this habitat as has happened in parts of East Sussex. Typical heathland habitat in West Sussex is very fragmented and is subjected to very heavy pressures. The vulnerability of such areas to fire was demonstrated all too clearly when 180 acres of heathland containing the highest density of territories in the county was destroyed in less than two hours in July, 1976.

Future monitoring and conservation

There is a very great need for a national census of the Nightjar and it is probable that this will be undertaken by the British Trust for Ornithology in the not too distant future. Meanwhile on the basis of the subjective information currently available for other counties it would appear likely that the population of West Sussex is sufficiently large to be of national importance. It is suggested that having obtained a full count in 1977 the population of a number of important sites should be monitored annually. A similar approach might also be adopted in selected areas in East Sussex in view of the critical level of the population. A second full census might be considered in both counties but the timing of this would require careful co-ordination with the proposed B.T.O. study.

There would appear to be little that can be done to actively conserve the Nightjar except perhaps to safeguard heathland habitat. This might involve some degree of scrub and bracken control but more important is reducing the risk of extensive fires. Restriction or discouragement of human access, as now being introduced on parts of Ashdown Forest may be of benefit. With regard to woodland habitats no action appears necessary as the continuing cycle of coppicing, or clearing and replanting should provide the requisite sites and thereby avoid available woodland habitat becoming a limiting factor.

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SUMMARY

The results of a census of the Nightjar *Caprimulgus europaeus* in East and West Sussex in 1977 are presented and discussed. In East Sussex 36 territories were found in four widely scattered areas. In West Sussex the species was more widely, albeit locally, distributed and a total of 153 territories were found. In East Sussex 13 (36%) territories were in conifer plantations and 11 (31%) were on heathland. In West Sussex 56 (40%) territories were in conifer plantations, 35 (25%) on heathland, 20 (14%) in recently felled areas and 13 (9%) in chestnut coppice woodland. Few were found in the traditional deciduous, open woodland and woodland edge habitats.

Considerable changes in distribution have occurred in both counties since the 1930s and it is likely that these have resulted in a decline in numbers, the exact extent of which cannot be determined. Information gathered during the last ten years suggest a slight decline in West Sussex, whilst in East Sussex what might have been a similar decline up to the mid 1960s seems now to have progressed into a rapid fall in numbers.

It is suggested that little can be done to actively conserve the species, with the exception of protecting heathland habitat. Further monitoring of the population in both counties is recommended.

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