

# The Sussex Bird Report



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# THE SUSSEX BIRD REPORT

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Recorder: A. J. Prater

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## CONTENTS

	Page
Contributors and Acknowledgements	2
Classified Records	5
Ringling in Sussex in 1982	61
The Breeding Distribution and Status of the Redstart in East and West Sussex	64
Woodland Birds of the West Sussex Weald	69
Inland Observations of Cormorants in Sussex	74
Bird Communities and Farming Trends on the Downs and Weald at Plumpton	81
Brent Goose Feeding Patterns for Chichester Harbour 1982/83	87
The Birds of Iping Common	88

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### Society Breeding Surveys:

During 1982 the Society organised a breeding survey of the Redstart in Sussex. The organiser was J. W. Houghton and a list of the observers contributing appears in the paper reporting the results on page 64. With this survey a survey of breeding Wood Warblers, also organised by J. W. Houghton, was started. S. W. M. Hughes organised the Breeding Waders of Wet Meadows survey, reported under Lapwing, Redshank and Snipe in the systematic list, as part of a national survey. This completed 3 years of study of Redshank and Snipe in our major marshes. Observers contributing in 1982 were: A. Dawnay, R. D. M. Edgar, B. F. Forbes, M. J. Helps, S. P. Hittings, S. W. M. Hughes, R. C. Knight, R. M. Lord, J. N. McKeivie, C. E. Messer, L. W. Osborne, D. J. Pankhurst, A. J. Prater, P. W. Rouse, M. Shrubbs, D. Sneller, J. Willsher, P. J. Wilson.

### National Surveys:

*Winter Atlas:* Further good coverage was obtained in Sussex for the second year of this major survey. The county organisers are R. M. Lord, 10 Horsefield

Road, Selsey for West Sussex and M. I. Banks, 23 Saltings Way, Upper Beeding, Steyning for East Sussex.

**Heronry Census:** This long-standing census is now organised by Dr. A. B. Watson, 83 Buckingham Road, Shoreham-by-Sea. All known heronries were visited and the observers are shown in the systematic list account.

**Wildfowl Counts:** The counts in Sussex are organised by D. W. Codd, 12 Broome Close, Horsham, who has made the counts available to the Society for this Report. Counters and the areas covered were:

Adur Levels, P. J. Clay; Alexandra Park, Hastings, Miss C. A. Taylor; Amberley/Pulborough, A. Baker, Mrs. G. Marriott, J. Reaney, Arun Valley, T. J. Wilson; Ardingly Res., N. Argent; Arlington Res., J. Wiltsher; Barcombe Mills Res., D. C. Lang; Bewl Bridge Res., P. C. Bancroft; Burton Ponds, J. N. McKelvie; Chichester GP, C. R. Janman; Chichester & Pagham Harbours, listed under estuary counts below; Cuckmere Haven/Seven Sisters, P. J. Luffingham; Darwell Res., R. Harris; Glindale Levels, D. R. Coda; Home Farm Pond, G. E. Tomalin; Knapp Lake, Mr. & Mrs. A. Simpson; Pett Level, P. Rouse; Petworth Park, D. Sneller; Pevensey Levels, under estuary counts; Powder Mill Res., K. Blackman; Rye Harbour, R. C. Knight; Swanbourne Lake, D. R. Park; Warnham Mill Pond, D. W. Codd; Weir Wood Res., M. Horsfall; Wildfowl Trust, Arundel, A. Dawney.

**Estuary Counts:** The BTO/RSPB/NCC 'Birds of Estuaries Enquiry' was carried out between July 1982 and May 1983. These counts were organised by A. J. Prater, 4 Church Street, Shoreham-by-Sea, West Sussex. Counters were: F. Banks, R. Batchelor, D. Bates, P. F. Bonham, P. Clement, A. de Potter, R. D. M. Edgar, Mrs. J. H. M. Edom, F. J. Forbes, G. Gowllett, B. Haddon, M. P. Hall, S. G. Hamilton, M. J. W. Hay, N. Hemsley, S. P. Hitchings, D. Kindersley, A. R. Kitson, R. C. Knight, I. Kraunsook, Mr. and Mrs. O. Lougharne, R. M. Lord, B. A. E. Marr, Mrs. G. D. Marriott, K. Maycock, C. Mayhead, L. Mayhead, J. McTear, C. E. Messer, Mrs. M. Millner, K. Noble, D. Oknes, D. A. Parmenter, T. W. Parmenter, Mrs. N. Petrie-Hay, A. J. Prater, J. Reaney, P. W. Rouse, R. J. Sandison, R. J. Senior, M. Shrubbs, D. Smith, G. Smith, M. P. Sutherland, M. Wellfar, R. Williamson, P. J. Wilson.

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We are grateful for summaries of detailed observations at Selsey Bill from O. Mitchell, Beachy Head from J. F. Cooper and R. K. Haggard and Rye Harbour from R. C. Knight and also to R. Leverton for his continued work in maintaining detailed records of ringing in the county. We must also thank Miss J. V. Stacey for her continued and invaluable help in maintaining the Society's files.

The Systematic List was compiled by A. J. Prater with help from the following, to whom go Tony's grateful thanks: R. D. M. Edgar (marshland birds); R. J. Fairbank (divers, scarcer migrants, hirundines, thrushes); C. J. Fox (sea ducks); J. W. Houghton (heathland birds); S. W. M. Hughes (inland wildfowl); C. R. Janman (auks, misc. sea-birds); R. Leverton (tits and associates); B. A. E. Marr (skuas, terns); Dr. J. A. Newnham (gulls, Nightingale); K. Noble (wagtails, larks, buntings); M. J. Rogers (rails, woodland birds); R. J. Sandison (owls); M. Shrubbs (raptors); G. E. Tomalin (*Sylvia* warblers); P. C. Turner (finches); Dr. A. B. Watson (Heron). The list was typed by Mrs. M. Millner.

## CLASSIFIED RECORDS FOR 1982

by A. J. Prater

This list covers all species in Categories A and C of the British Ornithologists' Union check list. Records of birds ringed have not been cross-referenced to the summary of bird-ringing. The sea-watch tables (pages 34-37) and breeding count tables (pages 52-53) should be read in conjunction with the summaries for individual species in the following list. The traditional report on the water and wildfowl counts has been discontinued so that much more information can be incorporated within the individual species' accounts.

The following abbreviations are used in the List as standard practice. E, W, N, S, etc., cardinal points of the compass; GP, gravel pits; LNR, Local Nature Reserve; NR, Nature Reserve; NNR, National Nature Reserve; Res., Reservoir; SSSI, a declared site of Special Scientific Interest; SF, sewage farm or works; WFT, Wildfowl Trust; Hbr, Harbour; ha, hectares; Km, kilometres. Amberley is used to cover the whole of Amberley Wild Brooks and Waltham Brooks. The reference to the latest standard account of Sussex birds is abbreviated: Shrubbs 1979 (Shrubbs, M. 1979. *The birds of Sussex, their present status*. Phillimore, Chichester).

The following species were recorded commonly in Sussex during 1982 but the information has not been incorporated into the List:—Pheasant *Phasianus colchicus*, Grey Partridge *Perdix perdix*, Wood Pigeon *Columba palumbus*, Starling *Sturnus vulgaris*, Rook *Corvus frugilegus*, and House Sparrow *Passer domesticus*. Details on these species are still required. **ESCAPES:**—The usual range of escapes was recorded. Full details of these are kept in the Society's files. Records are still required.

**NOTE, SWANS, GEESE, DUCKS and WADERS.** Readers should remember that the tables presented for all main species have been compiled from the monthly 'Wildfowl Counts' for the Wildfowl Trust and the 'Birds of Estuaries Enquiry' for the British Trust for Ornithology. The counts were made once per month and therefore the tables do not show the peak monthly figure but present a more meaningful co-ordinated count. The 'Wildfowl Counts' were made on 17 Jan., 14 Feb., 14 Mar., 12 Sept., 17 Oct., 14 Nov., 12 Dec. 1982 and 16 Jan., 13 Feb. and 13 Mar. 1983. The 'Birds of Estuaries Enquiry' counts were made on 23 Jan., 13 Feb., 13 Mar., 19 Sept., 16 Oct., 13 Nov., 4 Dec. 1982 and 15 Jan., 12 Feb. and 19 Mar. 1983.

1. **RED-THROATED DIVER (*Gavia stellata*):**—In Jan. widely reported along the coast until about 24th. In Rye Bay 100 or more were present and most often off Pett Level, with a maximum of 169 on 24th. Up to 55 were recorded from Goring until 13 Jan. and 38 off Shoreham Beach on 15th probably involved the same birds. Inland 3 individuals were reported from Bewl Bridge Res. between 29 Jan. and 14 Feb., 1 at Weir Wood Res. from 7-19 Feb. and singles at Arlington Res. on 9 and 26-27 Feb. Fewer than usual were identified on spring passage (see Diver species). One present off Selsey Bill on 31 July and 1 Aug. was unusual.

One passed E off Widewater, Lancing on 19 Sept. but only 6 were seen in Oct. and Nov. and 17 in Dec., including 8 off Pett Level on 27th.

2. **BLACK-THROATED DIVER (*G. arctica*):**—In Jan. 24 were reported, being 1 at Norman's Bay on 1st; 2 off Pett Level and 13 E from Selsey Bill on 3rd with singles there on 9th and 23rd and at Bewl Bridge Res. on 6th. At Widewater, 1-2 were present from 9-15th with 1 at Brighton Marina on 13th and another off Pett Level on 24th. In Feb. singles were noted in Pagham Harbour on 4th; Bewl Bridge Res. on 14-15th and at Brighton Marina on 25-26th, the latter being oiled. Spring passage was recorded between 7 Mar. and 31 May with 35 birds being identified (see Diver species).

One off Selsey Bill on 19 June (BJ, CMJ, CRJ) was most unusual. At the end of the year 4 were reported; at Bewl Bridge Res. on 4-5 Nov., Bognor on 23rd, Rye Harbour on 25th and Church Norton on 5 Dec.

3. **GREAT NORTHERN DIVER (*G. immer*):**—A good year for this species with 1 at Rye Harbour on 23 Jan. and, possibly the same, found dead at Camber on 31st (per RCK). Several were reported in spring (see Diver species). At the end of the year 1 W off Selsey

Bill on 1 Nov. (BJ, CMJ) may have been that seen in Chichester Harbour on 4 Dec. (ARK, MPS), 27th and 29th (JMC, KBW). One in Pagham Harbour on 13 Nov. (RJF, MK) was seen again on 22nd and was presumably the same individual there on 21 Dec. (EDL) and at Selsey Bill on 26th (BJ, CMJ, PJ). One was reported from Pett Level on 21 Nov. (PWR) and Rye Harbour on 25th (per RCK).

**DIVER SPECIES (*Gavia sp.*):**—Large numbers, probably *G. stellata*, were reported in early Jan. with 86 E off Selsey Bill, 107 E off Worthing and 29 E off Brighton Marina on 3rd; 134 E off Worthing on 12th and 108 E off Selsey Bill on 16th.

Easterly spring passage was noted from late Feb. to late May and is tabulated; see also tables, pages 34-37.

	<i>G. stellata</i>	<i>G. arcica</i>	<i>G. immer</i>	<i>G. species</i>
Selsey Bill.....	4	15	1	217
Worthing.....	3	—	—	175
Brighton Marina.....	6	5	2	157
Beachy Head.....	1	14	2	392
Other sites.....	15	1	3	40

Birds considered to be *immer* were reported as follows: Newhaven on 8 Apr., Selsey Beachy Head on 16th, Goring (2 E) and Brighton Marina on 11 May and Beachy Head on 31st. The high percentage of divers identified away from the main sea-watching sites is interesting. At the end of the year only 9 unidentified divers were reported away from Selsey Bill (60 W; 21 E) and Worthing (72 W; 51 E).

**6. LITTLE GREBE (*Tachybaptus ruficollis*):**—Maximum numbers at the principal wintering sites are tabulated. Numbers at the Cuckmere in the latter months were very low.

	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.
Lower Cuckmere valley.....	40	12	4	2	—	3	—
Pagham Hbr.....	35	34	38	1	11	25	24
Chichester GP.....	30	23	13	31	19	17	20
Rye Hbr.....	12	21	30	33	15	28	18
Bewl Bridge Res.....	26	15	6	5	15	15	15
Chichester Hbr.....	17	9	8	12	3	21	19
Widewater.....	18	12	13	—	1	18	14
Weir Wood Res.....	2	1	1	13	10	1	1

In Jan-Feb. up to 6 also reported from R. Adur at Shoreham and 5 at Newhaven Tidemills, while maxima of 8 were seen on the Ouse at Southsea, at Newhaven and the Crumbles at the year's end.

During the breeding season 45-50 pairs were reported as follows:

Westbourne.....	1	Chichester GP.....	10-11	Weir Wood Res.....	2*
Stubbmerc.....	1*	Forest Mere.....	3	Fen Place Mill.....	2,3
Aldworth Ponds.....	2-3*	Cooks Pond, Milland.....	1*	Gravelly Manor.....	1
Chidmere.....	1*	Burton Pond.....	—	Pett Pools.....	1
Thorney Island.....	1	Chingford Pond.....	—	Rye Harbour.....	12-14
Pagham Hbr.....	4	Newells Pond.....	1		

At Rye Harbour by June 9 pairs had raised only 2 young, however c.20 were reared during Aug. and Sept. from second broods; similarly at Chichester GP no young were seen before the end of July after which 8 pairs succeeded in rearing 18 young. At both sites the failure of early broods may have been due to interference by Coots. One wonders why this species attempts to nest before July! Of the 8-9 pairs at waters marked \*, 1 failed and the others reared a total of 10 young.

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

	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.
Weir Wood Res.....	23	42	50	42	47	25	7
Chichester Hbr.....	22	11	9	3	4	7	35
Pagham Hbr.....	7	5	5	15	18	20	11
Darwell Res.....	—	7	1	10	18	13	8
Bewl Bridge Res.....	5	17	16	15	15	11	9
Rye Bay.....	28	nc	nc	nc	nc	nc	nc

In Jan. and Feb. and the year's end, records of 1-15 were also distributed along the

coastline, the most recorded being 18 off Widewater on 15 Jan. Single birds (possibly the same) were reported on the R. Arun at Amberley on 14 Jan. and at Arundel on 28 Jan.

No reports received for several potential breeding sites but 52-55 breeding pairs recorded as follows:

Chichester GP.....	6-7	Warnham Mill Pond.....	1*	Fen Place Mill.....	1
Burton Pond.....	1*	Knepp Lake.....	2-3	Eridge Park.....	1
Petworth Park Lake.....	2*	Weir Wood Res.....	22	Pett Pools.....	2
Lurgashall Mill Pond.....	1	Bewl Bridge Res.....	7	Crumbles GP.....	1
Shillingee Mill Pond.....	1-2	Darwell Res.....	1*	Rye Hbr.....	3

Three summered in Chichester Harbour and 3-5 in Pagham Harbour. Breeding success was poor; pairs at waters marked \* were unsuccessful. At Weir Wood Res. adult numbers peaked at 82 in both Apr. and June; 22 nests were visible in early May and a total of 35 were built during the season — only 5 were successful due to falling water levels and only 3 young were reared. At Chichester GP, of the 13 pairs present in Apr., only 6-7 remained in May-June and 3 pairs raised 7 young. At Rye Harbour one of 3 pairs was successful, raising 3 young. Elsewhere 14-16 pairs reared 13 young.

**8. RED-NECKED GREBE (*P. grisegetta*):**—Another excellent year for this species, monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
8	4	3	2	—	—	—	—	8	11	2	4

The 2 seen off Newhaven in Dec. 1981 (see *SxBR*, 34:7) remained until 10 Jan. Singles were scattered along the coast from Langney Point to Selsey Bill in the early part of the year with 1 remaining at Weir Wood Res. from 8 Feb. to 28 Apr. In Mar. 1 was seen in Chichester Harbour and 1 was present off Widewater in early Apr.

In the autumn 1 was seen at Pett Level on 12 Sept. closely followed by 1 at Church Norton on 13th, where numbers increased to 4 on 25th when 2 were seen at Langney Point. One was present at Brooklands, Worthing from 29 Sept-5 Oct. At Church Norton numbers peaked at 7 on 4 Oct. but only 2 remained in that area by 19th. Three were seen at Langney Point on 10 Oct., 1 to 31st. At the end of the year 1 was present on Bewl Bridge Res. from 11-18 Nov. and from 9 Dec. into 1983. Singles were noted from Church Norton/Selsey Bill to 21 Dec. and at Rye Harbour on 6th and Chichester Harbour on 28 Dec.

**9. SLAVONIAN GREBE (*P. auritus*):**—Monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
38	11	9	5	—	1	—	—	1	9	8	8

In the early part of the year most records were from the W of the county with 12 in Chichester Harbour and up to 12 off Church Norton in Jan. Four were off Worthing on 15 Jan. and 4 off Pett Level on 23rd. Inland 1 was present on a settled water tank at Holywell Pumping Station, Horsted Keynes from 16-23 Jan.; 1 at Chichester GP on 23rd and 3 at Bewl Bridge Res. on 30 Jan. Numbers at Church Norton dwindled through Feb. with only 1 present on 27 Mar., remaining until 10 Apr. Two were recorded off Worthing on 3 Apr. and on 18th singles were seen at Brighton Marina and Langney Point.

One present on Weir Wood Res. from 13-28 June (NJD, DJWS) was most unusual and well south of its normal breeding range. In Sept. 1 was reported from Church Norton (NGM) where the species was present from 5 Oct. with 6 there on 30th and then 5 until the end of the year. Two were in Chichester Harbour during Nov., 1 remaining to the end of the year. Inland 2 were present at Barcombe Mills Res. on 16 Oct. and 1 at Weir Wood Res. from 2-15 Nov. Two were off Goring on 30 Dec.

**10. BLACK-NECKED GREBE (*P. nigricollis*):**—Monthly totals were:

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

In Jan. singles seen at Langney Point on 10th and Chichester GP from 17-24th and, possibly the same, from 6-11 Mar. During the spring 3 were identified off Worthing on 31 Mar., 5 and 19 Apr. At Chichester GP 1 was recorded on 7-8 Aug. with (possibly) another on 30th. On 29 Aug. singles were present at Rye Harbour and Langney Point (to 30th). One at Weir Wood Res. on 23 Oct. remained until 1 Nov. bringing the year's total to 10.

12. **FULMAR** (*Fulmarus glacialis*):—During the early months the species was reported from most of the usual cliff localities. Although a full census was not undertaken, the following breeding season reports were received: Brighton Marina to Portobello, 15 present; 7 possible nesting sites; Rottingdean 15; Saltdean 4 pairs; Beachy Head 25; Fairlight to Cliff End, Pett, 9 sites.

Numbers seen during sea-watches were small, e.g. at Selsey Bill 46 E and 187 W were recorded between 6 Mar. and 31 May, whilst the peak at Brighton Marina was 46 E in 5½ hours on 28 Mar. The latest autumn record came from Worthing beach on 30 Sept. A very early return to nesting ledges occurred at Newhaven with 1 on 28 Nov. and 3 there the following day.

15. **CORY'S SHEARWATER** (*Calonectris diomedea*):—1981. One flew W off Worthing on 3 May (CJF, JAN). This was the fifth county record and the second for the spring; it has been accepted by *British Birds*.

17. **SOOTY SHEARWATER** (*Puffinus griseus*):—An unusual total of 5 recorded, all from Selsey Bill, with singles W on 24 Sept. (PJ, EL), 26 Sept. (CRJ, MJ, RML), 3 W on 16 Oct. (OM, RES) and 1 E on 19 Dec. (PJ), a very late date.

18. **MANX SHEARWATER** (*P. puffinus*):—Three W off Widewater on 29 Apr. were the first of the year. In May 1 W off Worthing on 3rd; 1 E off Beachy Head on 11th and 11 E off Selsey Bill on 12th. With the exception of 1 W off Langney Point on 27 Sept., all autumn records were from the west of the county, with singles W off Worthing on 7 Sept. and E on 24th when 4 flew W off Selsey Bill. Singles flew W off Ferring on 7 Sept. on 28th, Selsey Bill on 2 Oct., with 4 W there on 16th, 1 W on 17th and 2 E on 8 Nov.

A bird considered to show the characteristics of the Balearic race *P. p. mauritanicus* was recorded flying W off Goring on 23 May (GE).

23. **LEACH'S PETREL** (*Oceanodroma leucorhoa*):—Singles 1 Km off Brighton on 12 Sept. (PCP) and at Bewl Bridge Res. on 23 Sept. (AHL, MJP) were the first to be seen since 1966.

25. **GANNET** (*Sula bassana*):—Recorded in each month of the year. Selsey Bill observations were as follows:

	Jan-Feb.	Mar-May	June-July	Aug.	Sept.	Oct.	Nov.	Dec.
Passing E.....	12	124	7	13	34	11	6	3
Passing W.....	18	153	8	39	82	170	36	14

Movements were again predominantly westerly (71%) with only 29% passing east, which agrees closely with the two previous years. In contrast, spring movements from Brighton Marina, 62 E and 8 W, and Beachy Head, 178 E and 51 W, showed a more easterly bias.

At Worthing beach, between 5 Aug. and 31 Dec. a total of 245 W and 42 E was recorded, reflecting a westerly bias in the second half of the year.

26. **CORMORANT** (*Phalacrocorax carbo*):—A summary of the use of inland roosts appears on page 74. Knowledge of the location of the county's coastal nocturnal roosts remains fragmentary and interpretation of numbers observed is difficult. Roost details are required urgently.

The tree roost at South Stoke involved 123 N over Arundel at dusk on 23 Jan. and the pre-roost gathering on Bognor Pier was 72 on 30 Nov. The roost site of birds regularly passing W at dawn at Hove is not known: these peaked at 77 on 8 Feb. and 74 on 30 Nov.; 50 E at Brighton Marina in the afternoon of 21 Feb. may have involved birds returning to roost, indicating the site is well to the east.

Other significant concentrations were an unusually large peak of 83 at Rye Harbour on 17 Oct.; 61 in Chichester Harbour on 13 Mar. and 55 there by 23 Oct.; 30 roosted at Southwick Power Station on 17 Jan. and 17 were on pylons over the R. Ouse at Lewes. Up to 6 regularly roosted during the day on the cliffs at Saltdean/Portobello up to Mar.

27. **SHAG** (*P. aristotelis*):—1981.—A bird found dead at Bewl Bridge Res. on 4 Mar. 1981 had been ringed as a nestling on Isle of May, Fife 18 July 1979.

1982.—A total of about 32 were recorded as follows:

Jan.	Feb.	Mar.	May	Aug.	Sept.	Oct.
8	7	1	3	4	9	1

Following the records from Bewl Bridge Res. in late 1981 (5xBR, 34:8) 2 there on 17 Jan. increased to 5 by 20th and 6 on 29th, all were adults. All other records came from the coast. In Feb. there were 4 off Widewater on 14th and 2 at Brighton Marina on 28th. A party of 4 offshore at Selsey Bill on 28 Sept. departed E. The last was 1 E of Pett on 10 Oct. The Jan. total includes the only fatality reported, an oiled individual found at Bracklesham Bay on 31st.

30. **BITTERN** (*Botaurus stellaris*):—There were records at 9 sites in the first part of the year. The singles on the R. Arun at Horsham on 10 Jan., Arundel WFT to 16 Mar., and at Chichester GP on 27 Jan., 6 Feb. and 20 Feb. were probably remnants of the Dec. 1981 influx. The other observations were all made in Jan. and were singles at Rye Harbour Sewer on 6th, Littlehampton West Beach on 7th, Newhaven Tidemills on 11th, Duncton Trout Farm on 13th, Ardingly Res. on 14th and Amberley on 30th. One at Chichester GP on 13 June (BJ, CMJ) was only the second record for this month since 1947.

At the end of the year there were records from Weir Wood Res. on 27 Nov. and 21 Dec., from Rye Harbour on 28 Nov. and 20 Dec. and Arundel WFT from 20 Dec.

35. **SQUACCO HERON** (*Ardeola ralloides*):—One at Mannings Heath 16 to 19 June (RH) was the fourth for Sussex and the first since 1951. It has been accepted by *British Birds*.

37. **LITTLE EGRET** (*Egretta garzetta*):—One at Weir Wood Res. on 8-9 May (NJD, JWH *et al.*). This record has been accepted by *British Birds*.

39. **HERON** (*Ardea cinerea*):—All known heronies were counted, and nests in the certainly and probably occupied categories totalled 221 (220 in 1981) as follows: Fishbourne, 18 (ETR); Pagham, 3 (RML); Parham, 32 (AI); Henfield, 19 (ABW); Firle, 43 (ABW); Knepp, 13 (A & IS); Eridge, 14 (JWH); Priesthaves, 2 (LG); Westham, 2 (LG); Warling, two heronies, 6 & 8 (LG); Pevensey, 2 (LG); Pett Level, 3 (CHD); Leasam, 54 (CFG, EMC, HARC); Weir Wood Res. (new this year), 2 or 3 (JESC).

There were scattered records throughout Sussex in suitable habitat, and a few records of birds coasting or coming in from the sea during March-May. Groups are usually recorded in Aug-Sept., maximum this year being Thorney 25, Weir Wood Res. 27 and Rye 17, but also 25 at Rye in Jan.

40. **PURPLE HERON** (*A. purpurea*):—1981.—An adult at Pagham Harbour on 11 Apr. (RSK).

1982.—One near Arundel on 31 July (KBT) and an adult flew over the promenade at Bognor Regis on 30 Aug. (EDL). These records have been accepted by *British Birds*.

42. **WHITE STORK** (*Ciconia ciconia*):—Sightings of 1 on the Pevensey Levels on 23 Apr. (RKH) and of 1 drifting W over Shoreham on 24 Apr. (SRA, JD, JAN *et al.*) may relate to the same individual. A single was seen near Arundel on 9 June (ECMH). All three have been accepted by *British Birds*.

44. **SPOONBILL** (*Platalea leucorodia*):—There were three records for the year: an immature at Rye Harbour on 22 Apr. (RCK), a colour-ringed adult in the Cuckmere Haven on 19-22 May (LGC, RDME, PJW *et al.*), and an adult at Rye Harbour on 14, 15, 29 June and 1 July (RCK).

46. **MUTE SWAN** (*Cygnus olor*).—In the early months 55 at Amberley on 21 Jan., 60 at North Stoke on 28 Jan., 55 in Chichester Harbour on 23 Jan. and 150 on Pevensey Levels on 13 Feb. Widespread in the breeding season but several breeding pairs known to have failed. Non-breeding birds reported included 35 at Rye, 35 at Amberley, 40 at Pevensey and 30 at Glynde. At Petworth Park, where the species is unusual, 11 were feeding on the partially drained lake on 14 June. In the autumn 114 were counted in the Arun valley between Pulborough and Amberley on 17 Oct. Later there were 73 in Chichester Harbour on 13 Nov. and 51 on Horse Eye Level on 31 Dec.

47. **BEWICK'S SWAN** (*C. columbianus*).—Maximum counts in the Arun valley, between Pulborough and Arundel, were 57 (including 14 immatures) on 28 Jan.; 67 on 8 Feb. and 102 at Waltham Brooks on 8 Mar. Thereafter only 2 at Waltham Brooks on 13 Mar. but an unknown number heard flying NE over West Chilton on 15 Mar. Elsewhere 5 flew up the Adur valley on 10 Jan.; singles at Rye Harbour on 11 Jan. and Pagham Harbour on 23 Jan.; 7 at Lavant and 8 SE over Rye on 24 Jan. In Feb. 6 at Glynde and 24 on Wet Level, E Rother on the 15th.

In the autumn the first recorded were 6 at Greattham on 6 Oct. Numbers in the Arun valley increased to 62 (including 10 immatures) by 29 Oct. Maximum counts between Pulborough and Lyminster were: 80 on 28 Nov.; and 86 (including 14 immatures) on 27 Dec. Elsewhere the only record was of 4 adults plus 4 immatures in the Cuckmere on 8-9 Nov.

48. **WHOOPEE SWAN** (*C. cygnus*).—Following the unusual number of records for the end of 1981, only two records: a single bird, on the R. Arun at Arundel on 10 Jan. and a family party of 2 adults plus 2 immatures at Glynde on 20 Jan.

49. **BEAN GOOSE** (*Anser fabalis*).—A party of 5 at Pagham Harbour on 18 Dec. (MJWH, EDL, KM) was seen when unusually large numbers were scattered over E England.

50. **PINK-FOOTED GOOSE** (*A. brachyrhynchus*).—A party of 5 at Amberley between 14 and 19 Jan. (BFF, OM) were probably wild birds, as may have been 5, later 6, on Pett Levels between 4 and 7 Dec. (KB, CHD, PWR). Of doubtful origin were singles on the Ouse at Lewes with Chinese Geese on 18 Mar. and from 14 Apr. to end of the year with Canada Geese at Bewl Bridge Res.

51. **WHITE-FRONTED GOOSE** (*A. albifrons*).—Singles at Pevensey and Rye Harbour on 1 Jan. were the only birds remaining from the Dec. 1981 influx. However, from the end of the first week of Jan. numbers increased rapidly to reach peak counts between 10th and 20th. Approximately 150 birds were in the county at this time, mostly in 4 loose groups. The largest was at Selsey where 4 on 13 Jan. rose to 60 on 16th and dropped to 22 by the 21st. A flock of 46-60 moved between the Lower Cuckmere, Pevensey Levels, Glynde Levels and Arlington Res. between 6 and 24 Jan. At Rye Harbour and Pett Levels there were 30-35 between 10 and 16 Jan., while at Amberley between 6 and 13 were present from 3 to 30 Jan. Movements noted elsewhere were 9 E at Cuckfield on 14th Jan. and 33 E at High Salvington on 18 Jan. No birds were seen in Feb. and 7 possibly of this species moved E past Brighton Marina on 7 Mar.

The first autumn migrants probably of this species were 50 W at St. Leonards on 25 Oct., afterwards 55 moved W at Langney Point on 7 Nov. In Dec. movements were 12 over Arundel WFT on 2nd, 6 NE at Rye on 12th, and 35 E there on 28th, 45 ENE at Rottingdean on 17th, 77 E at Goring on 25th and 8 W off the Crumbles on 29th. The only birds on the ground were singles at Barcombe Res. on 12 Dec. and Pagham Harbour on 18 Dec.; 2 were at Amberley from 27 Dec. into 1983.

53. **GREYLAG GOOSE** (*A. anser*).—Very few seen early in the year, only 14 at Amberley in Jan. and 3 at Rye Harbour and Weir Wood Res. were regular. At Amberley one pair reared 6 young and 16 apparently non-breeding birds were present in mid-May. A pair behaved as though territorial at Bewl Bridge Res. between 14 Mar. and 25 Apr. In Petworth Park there were 3 on 14 June.

More birds were present late in the year, particularly in Dec. when 24 were at Amberley, 15 at Weir Wood and 11 at Pagham on 5 Dec. An exceptionally large flock of 65 was on Glynde Levels also on 5 Dec.

Although most birds probably have feral origins, several small groups moving along the coast may relate to continental birds, for example 4 N at Cuckmere Haven on 20 Mar., 1 E Southwick on 17 Apr., 6 SW at Rye Harbour on 27 Oct., 6 W Norman's Bay on 8 Nov. and 4 E off Worthing on 2 Dec.

54. **SNOW GOOSE** (*A. caerulescens*).—Two white phase birds were feeding with Brent Geese at Bosham between 11 Jan. and 1 Feb.; a blue phase at Chichester GP on 15 Aug. and 11 Sept.; at Bewl Bridge Res. a white phase was present 19 Aug.-13 Sept. and a blue phase 9 Sept.-13 Dec. Escapes can not be ruled out.

55. **CANADA GOOSE** (*Branta canadensis*).—The autumn flock at Petworth Park totalled 267 on 12 Sept. This and other autumn and winter maxima reported from the principal localities (detailed below) suggest increases in the Arun valley/Petworth population and that using Arlington Res. following slight reductions in 1981. Hard weather movements at both ends of the year brought additional birds to the Arun valley, elsewhere winter numbers were much the same as last year.

	Jan.	Feb.	Sept.	Oct.	Nov.	Dec.
Bewl Bridge Res.	215	88	1000	500	188	187
Arun valley	412	75	73	85	86	542
Arlington Res.	370	60	500	500	nc	400
Barcombe Res.	114	58	nc	120	230	220
Rye Hbr.	76	72	100+	194	101	80
Chichester GP	135	150	169	96	36	80
Weir Wood Res.	157	70	121	155	nc	85

Widely scattered during the breeding season, the numbers of young reared were: Petworth Park 73 (number of pairs unknown); Rye 58 by 11 pairs; Chichester GP 35 by 7 pairs; Glynde 25 (pairs unknown); Bewl Bridge Res. 25 by 4 pairs and Weir Wood Res. 14 by 6 pairs. Elsewhere 18 pairs known to have nested, 4 failed and 14 reared 68 young.

56. **BARNACLE GOOSE** (*B. leucopsis*).—Once again the picture was confused by many groups of 1-6 birds associating mainly with Canada Geese, although occasionally in the west of the county, with Brent Geese. Most of these were probably escapes from the many wildfowl collections which allow birds to fly free. The flock of 7-9 frequenting the area bounded by Chichester Harbour, Chichester GP and Pagham Harbour up to 4 Apr. were left over from Dec. 1981; their origin is uncertain. However, 28 at Pett Level on 4 and 5 Dec. are more likely to have been of wild stock.

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

	1982			1983		
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.
County totals	11406	6707	2455	6	549+	9144
Chichester Hbr.	8571	4682	2431	6	508+	7842
Pagham Hbr.	1800	773	5	—	39	700
Bracklesham Bay	1000	1250	nc	—	—	563

During Jan. numbers were slightly higher than expected after a bad breeding season. This was probably due to the cold weather which also brought several farmland feeding records: at the Cuckmere up to 12 remained to 7 Feb., at Pett Level up to 9 until 19 Jan., and 2 at Pevensey Levels on 1 Jan. and Amberley on 28 Feb. Numbers dropped rapidly in Feb. and coastal passage was fairly low e.g. 1,108 E at Brighton Marina and 1,095 E at Worthing, see tables, pages 34-37. One was at Chidham in June.

The autumn movement started slowly on 30 Sept. belying what was to come. The first major passage was on 23-24 Oct. when 2,986 passed Worthing, almost half of the 6,267 seen moving W here in the autumn. The first inland records were 1 S at Upper Beeding on 1 Nov. when birds were heard at night over Amberley. A massive movement started on 5 Nov. with 220 W at Bewl Bridge Res., but this was just a glimpse of what was to come the following day. A strong SE wind with heavy cloud and rain led to an unprecedented passage inland, as well as many on the coast. From 0830 flocks of up to 175 at Bewl Bridge

Res. and up to 140 at Weir Wood Res. passed between S and SW. In the morning 775 passed the former and during the whole day 532 were counted at the latter. Elsewhere flocks totalling 150 went S over Arlington Res., 205 moved S down the R. Adur at Upper Beeding, 110 S over Ovingdean and 125 went S down the R. Ouse at Newhaven. On the coast records included 1,733 W at Worthing and 1,120 W at Bognor. At Beachy Head, Newhaven, Brighton Marina and Selsey Bill birds were seen heading S and SW. This was part of a dramatic movement throughout E. England when, for example, 30,000 passed Lowestoft, Suffolk. During the next ten days the tail-end of this passage was evident at Bewl Bridge Res. with a further 312 S, including 70 on 9 Nov. and flocks of 103 and 120 on 13 Nov. Elsewhere 31 moved up and then down the R. Adur between Shoreham and Henfield on 11 Dec. and 34 were at Piddinghoe on 16 Dec.

Up to 17 fed in the Cuckmere and up to 60 at Pett Level at the end of the year. Occasional other birds were seen but in Chichester Harbour record numbers were present from late Nov. The results of feeding studies are summarised on page 87.

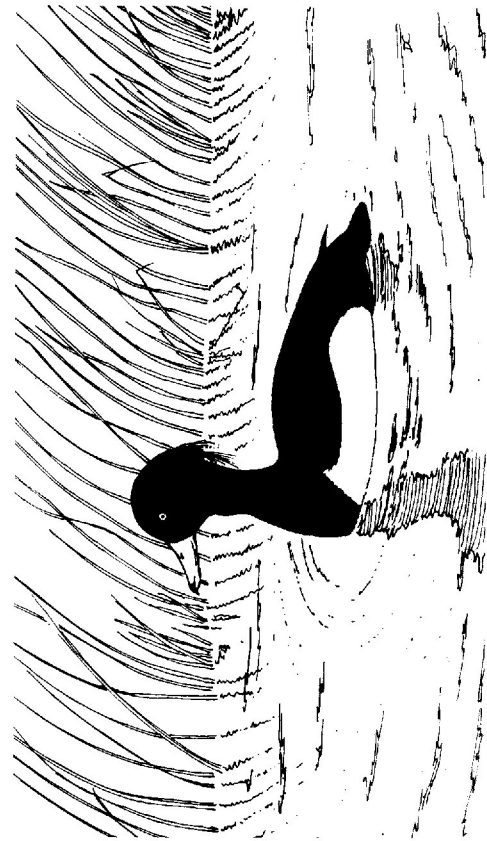
Pale-bellied birds of the race *B. b. hrota* were 1 at Pagham Harbour up to 10 Apr. and 2 (1 dead) at Glynde Levels on 13 Mar. At Pett Level up to 17 were seen 10-31 Jan., these probably included 11 W at Rye Harbour on 23 Jan. One passed E over Worthing and later Widewater on 18 Jan. At the end of the year 1 at Cuckmere on 9 Dec. and at Sidlesham from 20-31 Dec. may relate to the same bird.

**Cat. C. EGYPTIAN GOOSE (*Alopochen aegyptiaca*):**—Singles were at Amberley on 30 Jan. and Bewl Bridge Res. on 5 Apr.

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

County totals	1982			1983		
	Jan.	Feb.	Mar.	Dec.	Nov.	Jan.
Chichester Hbr.	5103	4502	2882	210	167+	2711
Pagham Hbr.	4242*	3788	2401	185	106+	2255
Rye Hbr.	665	576	435	20	42	398
	122	84	20	5	1	61
						21
						35

\*Correction of the figure in *SxBR*, 34:56.



The severe weather early in 1982 pushed more birds into Sussex than in any year since the winter of 1971/72; the main influx occurred in Chichester Harbour for numbers in Pagham Harbour were average. In the smaller estuaries maxima of 50 at Newhaven, 34 on the Adur and 22 in the Cuckmere were slightly above average. During spring and autumn movements small numbers were seen widely inland but coastal passage was unremarkable. The Nov. and Dec. counts returned to more usual levels.

The many non-breeding, summering birds always complicate the assessment of nesting pairs, e.g. up to 20 were on Glynde Levels and 40 in the Aldsworth/Stubbmere/Walderton area but only 1 pair bred in each area. Single pairs at Brede Levels, Iping and Waltham Brooks were not proved to breed. Approximate maxima of ducklings observed were:

Rye Harbour	21♂	Glynde Levels	9♂	West Chidham	91♂
Pett Level	11♂	Chichester GP	11♂	Thorney	19♂
Cuckmere Haven	18♂	Pagham Hbr.	90♂	Aldsworth	5♂
♂ fledged	□	downy chicks			

**63. MANDARIN (*Aix galericulata*):**—In Jan. and Feb. the only flocks reported were of 9 at Swanbourne Lake and 8 at Friars Gate. On 1 June 6 drakes with several ducks and 20 young present on Swanbourne Lake; breeding was also proven at Weir Wood (1 pair) and Possingworth Park (2 pairs) where up to 9 had been seen in May. Also reported during the breeding season from Buchan Park, Hogstolt Hill, Harry's Wood, Tilgate Wood, Slaugham Furnace Pond, Ardingly Res., Lindfield Pond and Eridge Park. At the end of the year reports included flocks of 17 at Eridge Park and 12 at Lurgashall Mill Pond.

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

County totals	1982			1983		
	Jan.	Feb.	Mar.	Dec.	Nov.	Jan.
Arlington Res.	5811	3207	1847	203	363	2249
Amberley	2200	1500	1000	—	—	400
Glynde Levels	895	63	138	—	45	314
Chichester Hbr.	120	850	320	150	230	320
Pagham Hbr.	774	128	144	71	79	693
Cuckmere valley	503	64	1	60	12	130
	147	—	14	—	56	108
						329
						173
						26

The Jan. total was approximately double that reported in 1981, being similar to the cold weather counts of Jan. and Feb. 1979. Additional counts included 3,300 at Arlington Res. on 31 Jan.; 2,500 at Glynde on 20 Jan.; 2,000+ at Pagham Harbour on 12 and 16 Jan.; 500+ at Rye on 11 Jan. and 511 at Bewl Bridge Res. on 1 Feb. On 1 Apr. 150 were still at Glynde; a pair was present from 30 Mar. to 5 Apr. at Rye Harbour, and a drake there until 21 May, but no proof of breeding; at Waltham Brooks, a drake was seen on 23 May and a duck on 29 May.

Two at Thorney on the early date of 24 July and 4 at Rye Harbour on 12 Aug. Regular at Rye after 8 Sept.; 1 at Waltham Brooks on 9 Sept. and thereafter small numbers were widely scattered along the coast. At the end of the year additional counts included 380 at Bewl Bridge Res. on 8 Dec.; 600 at Waltham Brooks on 6 Dec. and 460 in the Cuckmere valley on 23 Dec. Unusually, records were also received from Burton Pond, West Lavington and Bepton.

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

County totals	1982			1983		
	Jan.	Feb.	Mar.	Dec.	Nov.	Jan.
Swanbourne Lake	228	114	67	64	52	177
Arundel WFT	134	34	4	nc	28	43
Chichester Hbr.	31	38	52	49	44	61
Bewl Bridge Res.	26	27	—	—	61	24
Chichester GP	7	1	1	13	4	11
	7	4	6	—	4	5
						12
						nc
						nc

At the beginning of the year high counts continued to reflect the cold weather influx seen in Dec. 1981. Other counts included 20 at Waltham Brooks on 17 Jan. and lesser numbers from the R. Adur at Shoreham, Burton Pond, Parham Park, Barcombe Res., Southcote, Crumbles, Alexandra Park, Wadhurst Park and Rye Harbour.



During the breeding season 1-2 pairs in the Arun valley between North Stoke and South Stoke; 2 drakes and a duck at Waltham Brooks on 12 May and 6 there on 6 July; and a pair at Rye throughout the spring and summer but there was no evidence of breeding. At Bewl Bridge Res. 10 were present on 5 Aug., thereafter numbers fluctuated, peaking at 66 on 7 Nov. At Swanbourne the peak was 94 on 15 Dec. Also reported at the end of the year from the R. Adur at Henfield and Shoreham, Knepp Lake, Weir Wood Res., Arlington Res., Darwell Res., Crumbles and Powdermill Res.

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

	1982		1983		1984	
	Jan.	Feb.	Dec.	Jan.	Feb.	Mar.
County totals	5701	2650	873	3688	3763	1009
Chichester Hbr.	1709	1315	265	3688	3763	1009
Ambertley	846	392	147	73	387	198
Glynde Levels	35	320	120	46	37	80
Pagham Hbr.	188	303	48	106	514	257
Ambertley-Arundel	203	199	46	nc	76	219
Chichester GP	160	48	19	2	87	251
Pevensy Levels	160	90	38	2	68	110
						85
						130
						52

The Jan. 1982 total was above average but not as high as Jan. 1981. Other counts at the beginning of the year included 425 on the Adur Levels on 3 Jan. and c. 700 at Waltham Brooks on 9 Feb. Breeding was proven only at Waltham Brooks and Forest Mere although May-July records were received from Sidlesham, Chichester GP, Aldsworth, Weir Wood Res., Pett Level, Brede valley and Rye Harbour. At the end of the year there were 180 at Arundel WFT and 251 at Chichester GP on 26 Dec.

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

	1982		1983		1984	
	Jan.	Feb.	Dec.	Jan.	Feb.	Mar.
County totals	5333	2718	1632	4478	3993	1838
Arlington Res.	800	25	4	150	340	200
Arundel WFT	415	350	453	428	543	502
Bewl Bridge Res.	244	133	113	650	533	628
Chichester Hbr.	543	346	235	336	223	449
Chichester GP	487	219	35	32	89	127
Pagham Hbr.	93	72	67	210	165	269
Rye Hbr.	409	288	35	350	70	130
Darwell Res.	383	75	25	122	82	356
Swanbourne Lake	353	179	90	nc	89	80
Alexandra Park	332	233	140	122	141	205
						259
						213
						233
						98

The Jan. 1982 counts were similar to those in Jan. 1981, being well above average. At Sidlesham Ferry a brood of 14 seen on 3 Apr. had been reduced to 3 the next day. At Bewl Bridge Res. 17 broods totalling 88 young were seen; at Weir Wood Res. 13 broods totalling 98 young; at Buchan Park 6 young fledged despite the loss of the duck at about 21 days. A late brood of 2, approximately 1-2 weeks old, were seen at The Crescent, Brighton on 28 Oct.

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

	1982		1983		1984	
	Jan.	Feb.	Dec.	Jan.	Feb.	Mar.
County totals	438	137	31	431	387	214
Pagham Hbr.	300	2	—	188	251	82
Chichester Hbr.	135	125	25	139	190	113
Ambertley	—	6	4	47	15	13
						7

The unusually high numbers present in Dec. 1981 were still present in Jan. 1982. Other counts included 18 at Waltham Brooks on 26 Jan.; 14 at Glynde on 15 Feb. and 12 on the Adur Levels on 20 Feb. Lesser numbers were reported, unusually from Knepp Lake and Littleton. Spring seawatches included records of 3 E at Goring on 11 May at Seaford at 10.18, i.e. averaging c. 30 MPH. Summer records were of a female at Thorney on 24 July and 3 at Rye on 4 Aug., 2 of which remained until 20 Aug.

In the autumn, 1 at Steadham sand pit from 5-16 Sept. Return passage at Bewl Bridge Res. was first noted 6 Sept. and 14 there on 3 and 14 Oct. At the coast 29 W off Worthing on 6 dates between 16 Oct. and 27 Dec. and 11 E and 20 W at Selsey Bill on 4 dates between 12 Sept. and 4 Dec. At Chidham 44 had gathered by 29 Oct. At the end of the year numbers again high; other records included 25 at Bewl Bridge Res. on 6 Nov., 250 at Pagham Harbour on 12 Dec. and small numbers at the less regular sites of Bepton, Chichester GP and Adur valley.

73. **GARGANEY** (*A. querquedula*):—First records for the year were of a drake inside Brighton Marina on 23 Mar. and 4 E there on 24 Mar. Drakes also seen at Pett Pools on 28-31 Mar. and at Sidlesham Ferry on 29 Mar. Apr. records included a pair in the Lower Cuckmere valley on 1 Apr., a drake at Sidlesham Ferry on 3-4 Apr. and 1 at Rye Harbour from 9-24 Apr. Further records of singles at Rye on 16 May, Sidlesham on 19 and 31 May and 1 E at Brighton on 31 May.

A pair was reported from a possible breeding site in East Sussex. Elsewhere 1-3 drakes at Rye in June, numbers increasing there to 3-4 in July-Aug., when birds also seen on Pett Pools. Inland 2 at Weir Wood Res. on 5 Sept.; 2 at Bewl Bridge Res. on 3-5 Sept. and single drakes there on 11 and 25 Sept. The last seen was a duck on Pilsey Island on 17 Oct.

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

	1982		1983		1984	
	Jan.	Feb.	Dec.	Jan.	Feb.	Mar.
County totals	356	154	115	36	97	135
Chichester GP	143	12	25	4	2	4
Rye Hbr.	45	19	11	10	8	15
Arundel WFT	44	48	23	12	16	28
Ambertley	37	5	8	1	14	8
Pevensy Levels	38	—	12	—	16	—
Pett Level	3	—	1	8	25	30
Pagham Hbr.	15	13	3	2	17	19
						20
						16
						10
						17

Numbers in Jan. 1982 were about average. Additional counts included c. 150 at Waltham Brooks on 21 Jan., 83 at Chichester GP on 17 Jan., 85 at Rye Harbour on 23 Feb., 36 at Crumbles on 9 Jan. and 30 at Sidlesham Ferry on 1 Jan. Small numbers at Aldsworth and Knepp Lake were unusual.

In the breeding season 6 pairs at Sidlesham, one of which bred successfully. Breeding was suspected by 1 pair at Waltham Brooks and pairs were present at Aldsworth, Glynde Levels 2 pairs, Pett Level 1 pair; Rye Harbour a pair plus 1 drake.

At Rye 28 had returned by the end of July, and 8 were at Bewl Bridge Res. on 20 Aug. At the end of the year counts included 36 at Sidlesham Ferry on 11 Nov.; 30 at Rye early Nov.; 25 at Burton Pond on 20 Nov.; 30 at Coombe Haven on 11 Dec. and at Arlington Res. on 23 Dec. Lesser numbers were, unusually, reported from Steadham sand pit, Petworth Park, Tilgate Lake and Knepp Lake.

76. **RED-CRESTED POCHARD** (*Netta rufina*):—Single females were seen at Weir Wood Res. on 7-29 Mar., and on 13 Nov.; at Chichester GP on 7-15 Aug. and Bewl Bridge Res. on 20 Nov. A male was at Scotney Court GP on 9 Oct. Escapes cannot be ruled out.

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

	1982		1983		1984	
	Jan.	Feb.	Dec.	Jan.	Feb.	Mar.
County totals	1347	834	294	797	979	988
Chichester GP	138	184	68	84	417	358
Arundel WFT	386	372	92	39	114	229
Rye Hbr.	110	59	25	15	71	126
Bewl Bridge Res.	177	14	3	27	77	88
Weir Wood Res.	85	105	32	2	70	119
Pevensy Levels	120	5	7	32	90	119
						40
						120
						18
						10

Following the unusually high counts at the end of 1981, numbers reverted to average in Jan. and Feb. Additional counts included 94 at Crumbles on 23 Jan. and 90 at Arlington Res. on 18 Jan.

In the breeding season, on 20 June 22 drakes and 4 ducks at Chichester GP, one pair raising 6 young, and at Bewl Bridge Res. 3 drakes and 1 duck, the latter nesting unsuccessfully on a floating island. By 25 July 12 had returned to the Crumbles and 3 to Weir Wood Res.

At the end of the year counts were about average; additional counts included 165 at Bewl Bridge Res. on 30 Oct., 63 at Scotney Court GP on 7 Nov. and 143 at Weir Wood Res. on 31 Dec.

78. **RING-NECKED DUCK** (*A. collaris*):—A first-winter male was recorded from Chichester GP from 4 Dec. to the end of the year (RSK, ARK, MPS *et al.*). This record, the first for the county of this North American duck, has been accepted by *British Birds*.

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

	1982											
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Mar.	
County totals	1259	1060	1090	657	919	1122	1121	1256	604	640		
Chichester GP	333	299	322	222	326	408	337	386	nc	nc		
Arundel WFI	146	216	200	123	160	135	222	239	174	210		
Bewl Bridge Res.	134	53	149	138	161	191	200	132	62	75		
Rye Hbr.	148	69	39	25	27	55	71	85	68	75		
Swanbourne Lake	80	90	130	38	90	101	55	99	78	75		
Weir Wood Res.	101	37	8	1	41	22	11	19	14			
Cuckmere valley						5	37	43	12			

The above average numbers at the end of 1981 were still present in Jan. 1982 but had returned to normal in Feb. Elsewhere in the early months there were up to 96 at the Crumbles, 60 at Barcombe Res. and 62 at Burton/Chingford Ponds. Small numbers wintered on the rivers, e.g. on the R. Arun 3 at Greattham from 14 Jan. and throughout Feb. and 6-18 at Bury from 14-21 Jan.; on the R. Adur 5 at Small Dole from 17 Jan-20 Feb. and up to 10 in Jan. at Cuckoo Corner; 6 at Coombe Haven throughout Jan. and Feb. In Apr. 162 were still at Weir Wood Res. on 10th and 233 at Chichester GP on 25th.

Poorly recorded during the breeding season. Successful breeding as follows: Chichester GP a maximum of 75 young from 15-21 broods; Rye 20 young from 8-9 pairs; Aldsworth Ponds 20 young from 3 pairs and at Weir Wood 25 young from 3 pairs. Elsewhere single pairs seen with young as follows: Thorney Deep — 4, Forest Mere — 2, Gravetye Manor — 3, Wiston Pond — 7. At Bewl Bridge of 19 pairs, 4 laid eggs on floating islands, one only 12 metres from a sitting Pochard — all nests were deserted. At Pagham Harbour 4 were present on 10 July.

At the end of the year numbers were again above average. Additional counts included a peak of 137 at Weir Wood Res. on 20 Nov., 141 at the Crumbles on 4 Dec., 139 at Rye Harbour on 28th, 70 at Burton Ponds on 30th and 67 at Swanbourne Lake on 12th.

81. **SCAUP** (*A. marina*):—Monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	8	5	2				2	1	3	6	12

The bulk of the records refer to a few wintering birds at Pagham, Widewater and Thorney/Chidham in the early months and Brooklands, Widewater and Pett Pools at the end of the year.

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

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
64	43	*	*	*	31	4	23	32	34	63	120

\*Mar-May could not be estimated — see below.

A large flock assembled off Selsey Bill during the spring, as has been the pattern in recent years. First noted were 85 on 6 Mar., increasing to 140 on 23-24th and 134 still present on 11 Apr. Numbers declined to 20 by 3 May and only 5 remained until the end of the month. The presence of this flock makes passage at Selsey difficult to assess, although 165 E were reported. Other sites recorded a good spring passage, possibly due partly to dispersal of the Selsey flock. At Worthing a record total of 372 passed E with a maximum

of 184 on 18 Apr. There were 153 E at Brighton Marina including also 76 on 18 Apr. and 202 E at Beachy Head (c.f. 56 in 1981 and 45 in 1980) where the peak was 65 on 5 May; see also tables on pages 34-37.

On 25 June 23 moved E at Brighton Marina but only 4 individuals were seen in July. Aug. records came from 3 sites including 8 off Pett on 29th. Relatively small numbers were present until 4 Dec. when 63 W at Worthing and 121 W at Selsey Bill were noted. By the end of the year the Selsey flock had reached 80.

86. **LONG-TAILED DUCK** (*Clangula hyemalis*):—Approximate monthly totals at coastal and inland localities are tabulated separately:

	Jan.	Feb.	Mar.	Apr.	May	Oct.	Nov.	Dec.
Coastal	2	0	2	0	1	4	7	3
Inland	0	0	0	0	0	0	0	7

The last recorded at the beginning of the year was a summer plumage male flying E off Selsey Bill and, 80 minutes later, Brighton Marina on 11 May, a very late date. The first autumn bird was at Pagham Lagoon on 24 Oct. The birds wintering inland at the end of the year were at Bewl Bridge Res. (3), Weir Wood Res. (2) and Chichester GP (2).

87. **COMMON SCOTER** (*Melanitta nigra*):—During Jan. 250 were seen offshore at Selsey Bill on 1st, while 100+ were present off Pett Level and 70 off Rye.

The spring passage in the west was even worse than 1981. At Selsey Bill numbers (1,527 E) were well down, while Worthing recorded the smallest number (1,816 E) since 1977. In the east there were 3,372 E at Brighton Marina and 4,023 E at Beachy Head, a slight improvement on 1981. Of the few good days, 4 Apr. produced maxima of 305 at Worthing, 504 at Brighton Marina and 886 at Beachy Head, well illustrating that higher numbers are seen further to the east. For further details see tables on pages 34-37.

Summer records came from several localities including 57 E on 9 July at Brighton Marina. Few movements were seen in the autumn and winter, e.g. 279 E and 175 W at Selsey Bill. A raft of 250 off Rye was recorded in Oct., it increased to 1,000 in Nov. and was 900 strong in Dec.

Inland there were two records of singles at Douster Pond, Crawley on 8 Oct. and Weir Wood Res. on 6 Nov.

89. **VELVET SCOTER** (*M. fusca*):—At Selsey Bill Jan. records were 1 E on 1st, 4 E on 7th, 2 E on 16th; at Widewater 3 passed W on 5th and 3 E on 11th. The Pett maximum in Jan. was 2 and an oiled male was caught at Rye on 31st.

Spring passage records were fewer than 1981, see tables, pages 34-37. Totals E at Selsey Bill were 57, at Worthing 19, at Brighton Marina 64 and at Beachy Head only 18. The peak day was 5 Apr. with 36, 14 and 32 at the first three sites, surprisingly none was seen at Beachy Head. There were 4 on the sea at Rye on 30 May.

Autumn records involving single birds came from several sites. On 6 Nov. Selsey Bill recorded 4 E and 6 W and Worthing had 14 E and 2 W. On 5 Dec. 32 passed E off Pett, and 14 were on the sea there on 29 Dec.

91. **GOLDENEYE** (*Bucephala clangula*):—The Jan. and Feb. coastal counts produced totals of 93 and 45 respectively, compared with 105 and 86 in 1981. As usual the majority were in Chichester Harbour where 75 were seen on 23 Jan. Inland maxima in Feb-Mar. were 16 at Chichester GP, 10 at Weir Wood Res., and 8 at Rye Harbour and Bewl Bridge Res. During the cold weather several were on rivers, including 4 at Ford on the R. Arun on 23 Jan.

Spring passage records came from Brighton Marina with 3 E on 28 Mar. and 2 E on 29 Mar. The last wintering birds were 5 at Bewl Bridge Res. on 8 Apr. and 2 at Rye Harbour on 19 Apr. One at Sidlesham Ferry on 31 May was particularly late.

A single at Rye Harbour on 16 July provided a very early record, as did 1 at Barcombe Res. on 11 Aug. After 7 E at Worthing on 6 Nov. there was a steady increase throughout the month with records coming from 7 other sites. On 4 Dec. the wildfowl counts produced 48 on the coast, 44 in Chichester Harbour. Dec. records inland included peaks of 4 at Bewl Bridge Res., 3 at Weir Wood Res. and 2 at Barcombe Res.

93. **SMIEW** (*Mergus albellus*):—As in 1981 many records for Bewl Bridge Res. with up to 3 drakes and 8 redheads present from 6 Jan. to 14 Feb. At Pagham Lagoon the 3 redheads present at the end of 1981 were still present in mid-Jan., and 4 were seen there on 16-17 Jan. At Chichester GP 1-3 present from 3-31 Jan., with 1 in Chichester Harbour on 23 Jan. At Rye 4 redheads on 17 Jan. and 2 on 24 Jan. Elsewhere the redhead present at Alexandra Park, Hastings at the end of 1981 was still there on 10 Jan.; two others at Crumbles on 17 Jan.; 3 at Ardingly Res. on 16 Jan.; 2 at Weir Wood Res. on 13 Jan.; 1 at Petworth Park from 1-3 Jan. and 2 at Barcombe Res. on 5 Feb. At the end of the year 1 at Darwell Res. on 12 Dec. was the only record.

94. **RED-BREADED MERGANSER** (*M. serrator*):—The wildfowl counts in Jan., Feb. and Mar. were 49, 54 and 85. Mar. numbers were swollen by passage birds. The Jan.-Feb. totals at Selsey Bill were 98 E and 24 W and at Worthing 115 E and 10 W; the true migration of this species remains difficult to assess as wintering birds confuse the issue. One redhead at Bewl Bridge Res. on 6 Jan. and another on Weir Wood Res. on 2 Feb. were the only inland records.

Spring passage was moderate with totals of 506 E at Selsey Bill, 211 E off Worthing, 72 E at Brighton Marina and 127 E at Beachy Head. The daily maximum was 40 E at Selsey Bill on 4 Apr.; see also tables, pages 34-37.

An unusual record was a pair in moult at Stakes Island on 2 July, remaining in the area until 27 Aug. One in Thorney Channel on 4 Sept. was the first autumn record, but it was not until Oct. that a general increase was reported from many areas. An influx on 6 Nov. was part of a much larger movement of wildfowl (see Brent Goose, page 11). The most startling record was of 13 at Bewl Bridge Res. looking very nervous and shortly afterwards a flock of 60 in V formation flew S at 400 feet. The movement was also seen on the coast with 95 W and 15 E at Selsey Bill and 31 W at Worthing. In Nov. about 56 were recorded along the coast and 76 in Dec.

95. **GOOSANDER** (*M. merganser*):—Recorded until 2 Apr. and from 6 Nov., monthly totals being:

Jan.	Feb.	Mar.	Apr.	Nov.	Dec.
19	10	8	2	13	2

Birds were unusually widespread in Jan., when records included birds on the Arun and Adur rivers and at Coombe Haven. At the end of the year there were 12 at Weir Wood Res. on 6 Nov.; see also Red-breasted Merganser.

**Cat. C. RUDDY DUCK** (*Oxyura jamaicensis*):—More Jan. and Feb. records than in previous years. At Chichester GP regularly up to 11, and a maximum of 16 there on 17 Jan. However in Feb. only one record of a single on 28th. At the Crumbles 1-6 regularly in Jan. but 19 on 23rd. Other coastal records included females at Pett Pools and Camber on 2 Jan.; a pair on Pagham Lagoon 15-17 Jan. and 1 on 4 and 9 Feb.; a drake at Hove Lagoon on 16-19 Jan. and 4-5 at Rye Harbour on 23-24 Jan. Inland, single ducks at Bewl Bridge Res. and Weir Wood Res. for much of Jan. and 2 pairs at the latter site from 27 Jan. to 2 Feb.; 2 ducks at Barcombe Res. from 17 Jan. to 6 Feb.; singles at Arlington Res. 24-28 Jan., 5 there on 1 Feb. and a pair on 10-14 Feb. At Arundel WFT 2 on 17 Jan. and 3 on 20 Jan. and 14 Feb. Single birds also reported from the R. Arun at Greatham on 14 Jan. and Cuckmere on 22 Jan.

In the breeding season one pair seen with 3 young at Chichester GP in Aug. Another pair displaying at Pett Pools on 20 May were not seen after the end of June. A lone female was reported from Weir Wood Res. on 31 Aug. In the autumn 2 females returned to Weir Wood Res. on 6 Oct. and remained for much of Nov. but only one present on 4 Dec.; one female first seen at Bewl Bridge Res. on 17 Oct. remained until the end of the year, whilst 5 were seen at Arlington Res. on 6 Nov., 1 at the Arundel WFT on 12 Dec.; and 2 pairs at Barcombe Res. on 28 Dec.

97. **HONEY BUZZARD** (*Pernis apivorus*):—One drifting N in central Sussex on 3 June (MPS).

99. **RED KITE** (*Milvus milvus*):—One at Beachy Head on 28 Mar. (MLC, BWS *et al.*).

103. **MARSH HARRIER** (*Circus aeruginosus*):—A total of 15-16 individuals recorded, all females/immatures. Monthly totals were:

Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
3	5	1	1	2	5	0	0	1

The excellent spring movement was noted from 9 Apr. to 10 June, when there was 1 at Glynde. One stayed in the Selsey/Sidlesham area from 30 July to 14 Aug., when there were 2, and one at Pett/Rye from 6-10 Sept.; otherwise all these birds passed straight through. One at Sidlesham and Thorney on 4 Dec. was the first for this month since 1947.

104. **HEN HARRIER** (*C. cyaneus*):—Another excellent year, with a total of 49-53 recorded. Monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	Sept.	Oct.	Nov.	Dec.
Males	7	4	5	3	1	0	2	3
Ring-tails	20	16	7	11	3	2	6	10

Sufficient records were received for the early months to make a detailed mapping analysis worthwhile. This revealed a very interesting pattern, with 9 clearly defined clusters of records, apparently indicating different groups of birds. These groups were as follows:

**Chichester Harbour.** One adult male and 2 ring-tails. The records indicated that these birds were ranging over c.4,600 ha of territory, some of it estuarine.

**Selsey Peninsula.** A maximum of 1 adult male and 5 ring-tails. Approximate known range 3,100 ha, some estuarine.

**Amberley marshes.** A maximum of 1 adult male and 3 ring-tails. Approximate known range 4,600 ha, partly river valley and partly downland farmland.

**Midhurst area.** A maximum of 3 ring-tails. Certainly ranging from Ambersham to Iping Commons.

**Ouse valley and Downs.** A maximum of 1 adult male and 1 ring-tail. Approximate known range 8,000 ha, partly in the Ouse valley S of Lewes and partly downland farmland, mainly to W. Possibly more birds involved and records of ring-tails at Barcombe and Isfield perhaps related to this group.

**Cuckmere/Lullington/Beachy Head.** A maximum of 1 adult male and 2 ring-tails. Approximate known range 4,100 ha but records from Glynde Levels and Arlington seem related to this group.

**Ashdown Forest.** Maximum of 2 adult males and 2 ring-tails. Approximate known range 4,000 ha but records from Sheffield Park (flying N) and Weir Wood Res. are probably related to this group, indicating a larger range.

**Pevensley Levels.** A maximum of 2 adult males and 2 ring-tails. Approximate known range 3,600 ha.

**Pett/Rye Harbour.** Two ring-tails.

The distribution of 29+ records for the last 3 months virtually repeated this grouping and all these areas are traditional ones for the species in Sussex but the extent to which different groups contain duplicates through birds moving about is not known. In general, however, the species' distribution showed a clear correlation with coastal farmland and marshes, river valleys and heathland; it was very noticeable for the early months that most downland records radiated out from the river valleys, although this has not always been so. Altogether the records indicate that an exact estimate of the number wintering in Sussex is a very feasible exercise.

105. **MONTAGU'S HARRIER** (*C. pygargus*):—A juvenile on the Downs behind Worthing on 14 Aug. (RSK).

108. **SPARROWHAWK** (*Accipiter nisus*):—The volume of records received makes it abundantly clear that this is now a numerous raptor in Sussex and a full analysis of the records for the past 25 years is now in progress for publication in the 1983 *SxBR*. Meantime it is worth stressing once again how valuable studies of densities in defined areas would be in monitoring this important species.

As usual all records were plotted on 1 inch *O.S.* maps and, in 1982, 45% of the sites recorded was occupied both during and outside the breeding season. On the reasonable assumption, therefore, that the species is firmly resident, a total of 141 occupied sites was recorded, of which 98 were known to be occupied in the breeding season. Density calculations indicate little significant change in status over the last four years but almost certainly underestimate numbers.

The casual nature of these observations is confirmed by the paucity of proven breeding reports—15 pairs, of which 13 raised 38+ young, making it an excellent breeding season. A feature of the observations is the number of Sparrowhawks now established in suburban areas. Birds were noted regularly on the outskirts of, or in, Arundel, Bognor, Steyning, Shoreham, Worthing, Eastbourne, Brighton and once in Hastings.

The species is now so well-established along the coast-line that migrants are difficult to determine. Singles arrived from the sea at Selsey Bill, however, on 6 Apr. and 6 May. Other records there and elsewhere could easily have related to local birds.

See also the paper on woodland birds on page 69 for a very useful indication of density in West Sussex woodlands.

109. **BUZZARD** (*Buteo buteo*):—As is usual the records make little clear pattern. Birds were resident for at least part of the year in 3 areas of the Downs and 2 areas in central Sussex but there was no evidence of breeding. Four were apparently released in Ashdown Forest in September and may have accounted for some records in the later months. There appeared to be a small influx in January, when 4 were seen along the coast. Monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	2	3	4	4	5	2	3	9	1	2	2

110. **ROUGH-LEGGED BUZZARD** (*B. lagopus*):—One flew up the Arun valley on 14 Feb. (AI, CI).

113. **OSPREY** (*Pandion haliaetus*):—The best year for the species in the county, with a total of about 16 recorded. One spent much of June at Ardingly Res., otherwise spring passage was observed from 19 Apr. to 30 May and autumn passage from 15 Aug. to 8 Nov., when there was 1 at Pagham Harbour. Monthly totals were:

Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	3	1	0	4	5	2	1

115. **KESTREL** (*Falco tinnunculus*):—See *SxBR* 33 & 34 for recent assessments of status. All records for 1982 were mapped and little evidence of any change in status was revealed, except that Kestrels are clearly more numerous in NW Sussex than suggested in *SxBR*. 34:16. Records here indicated a density of at least one breeding pair per 863 ha. It was another good season, 27 pairs being known to rear 59+ young, an average brood size of 2.18+.

Altogether birds were located in 136 sites in the breeding season, 79 of them qualifying as occupied territories (a minimum of 3 records Apr-Aug.). Only 37% of these sites, however, were also noted as holding birds outside the breeding season and studying the records for the area Lewes-Newhaven-Bexhill-Herstmonceux-Lewes particularly, suggested the presence of a significant number of autumn or winter visitors. The records for NW Sussex also suggested a wider distribution in winter than the breeding season. It is not certain, however, how complete the breeding season records are or if this simply represents local movements by breeding birds.

No autumn gathering of more than 9 birds was noted (Castle Hill 12 Sept. and 3 Oct.). As usual a few migrants at the coast, with 5 arrivals between 10 Apr. and 1 May and 1 arrival and 3 departures between 22 Sept. and 11 Nov.

118. **MERLIN** (*F. columbarius*):—Recorded until 12 Apr. and from 22 Sept. Records from Rye/Pett, Pevensey Levels, the Cuckmere, Worthing Downs and around Chichester Harbour suggested that at least 4 were wintering on or near the coast in the early months;

at the end of the year 2 or 3 were present. The remaining birds moved quickly through apparently, although this is a difficult species to keep track of. Monthly totals were:

Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
6	4	4	1	2	8	4	3

119. **HOBBY** (*F. subbuteo*):—Seven pairs were proved to breed, rearing not less than 11 young. Another good year for migrants at the coast, which were recorded from 26 Apr. to 12 June and 15 Aug. to 9 Oct. Monthly totals for migrants were:

Apr.	May	June	Aug.	Sept.	Oct.
4	10	2	8	5	4

123. **PEREGRINE** (*F. peregrinus*):—Single birds in the Cuckmere on 13 Feb. and at Seaford on 3 Sept. (DC, PIW) were the only acceptable records.

*Cat. C.* **GOLDEN PHEASANT** (*Chrysolophus pictus*):—Counts in defined areas revealed 3 pairs at West Dean Woods and 11 pairs at Kingley Vale NNR.

*Cat. C.* **LADY AMHERST'S PHEASANT** (*C. amherstiae*):—One at Herstmonceux Castle on 1 July.

129. **RED-LEGGED PARTRIDGE** (*Alectoris rufa*):—Two rather strange incidents were reported from the coast—on 12 Apr. 1 flew along the shore and settled on the sea at Shoreham, remaining to drift away on the tide, whilst on 24th 1 flew along the tideline at Selsey Bill and settled on the beach.

131. **QUAIL** (*Coturnix coturnix*):—Although sometimes recorded in winter, 1 at Graftham Common on the early date of 1 Apr. (EMPS) may have been a migrant. During the breeding season reported from 8 downland localities but at only one was the bird present for more than one day.

136. **WATER RAIL** (*Rallus aquaticus*):—Approximate monthly totals for the year were as follows:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Birds.....	36	22	14	7	5	1	1	1	3	14	13
Localities.....	23	11	9	6	3	1	1	1	3	7	6

The largest winter gathering observed was of 7 at Chingford Pond in Feb. In May pairs were present at 3 sites and an empty nest was found at another. Also in May 1 was found dead in a garden shed at Kingley Green. The June-Aug. records came from 3 further sites, one being of a juvenile. Late in the year Arundel WFT had an estimated 20 birds.

142. **MOORHEN** (*Gallinula chloropus*):—Although the species has been increasingly well reported, more information is required on its seasonal distribution through regular monthly counts at well-populated sites. Additionally methodically acquired breeding season data will prove most useful in land-use studies.

Breeding season counts received included 5 pairs at Buchan Park (70 ha); 6 pairs R. Arun, Swan Bridge, Pulborough to Houghton Bridge (13 Km); 7 pairs Cuckmere valley Arlington Res. to Exceat (7.5 Km); 20 pairs Brede Levels (935 ha); and 32-40 individuals on Pett Level (260 ha).

Seasonal counts at selected sites were as follows:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chichester Hbr. ....	149	197	103	nc	nc	13+	19	22	30+	74	50
Pagham Hbr. ....	154	56	76	nc	nc	5+	3+	45	51	—	32
Chichester GP .....	75	108	74	18	10	16	51	36	32	100	88
Rye Hbr. ....	15	50	48	nc	nc	60	3	10	10	10	28
Pett Level .....	62	36	58	nc	nc	43	64	60	62	48	72

Unusually, 7 wintered on the saltwater site of Brighton Marina, 1 remaining until 23 Mar.

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

	Jan-Mar.	Oct-Dec.	Jan-Mar.	Oct-Dec.
Chichester GP	1507	1510	90	15
Chichester Hbr.	615	155	63	32
Archingly Res.	370	95	56	86
Bewl Bridge Res.	1100	1158	264	250
Waltham Brooks	50	nc	450	100
Cuckmere	70	50	1380	221
Arlington Res.	275	30	355	150

Numbers in Jan-Feb. were greatly inflated by the effects of the cold spell. Counts at 6 principal sites dropped from 3,709 in Feb. to 1,765 in Mar. Elsewhere the weather in Jan. showed its effect by bringing 60 to Brooklands Boating Lake, Worthing; 221 to Arundel WFT and 200 to Barlavington Lakes. Saltwater sites attracted up to 51 at Widewater and 5 at Brighton Marina.

146. **CRANE** (*Grus grus*):—Single first-winter birds were recorded from the Pevensey Levels on 11 Jan. (PJW) and the Lewes Brooks from 11 to 20 Apr. (DKB, JMD, DCL *et al.*). Both have been accepted by *British Birds*.

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

	1982		1983	
	Jan.	Feb.	Jan.	Feb.
County totals	2457	1286	2515	1813
Chichester Hbr.	1544	650	1323	1137
Hbr.	350	236	400	370
Pagham Hbr.	303	147	342	200
Climping	158	206	164	198

Other small but regular groups winter along the coastline and maximum counts were Bracklesham Bay, 15; Goring, 10; Rottingdean area, 19; Newhaven Tidemills, 30 (these last two may relate to the same birds) and Bulverhythe, 10.

Approximately 44 pairs attempted to breed in the county, the largest number yet recorded. Half nested in the Rye Harbour SSSI and breeding success was reasonable with 12-15 young reared out of the 22-23 pairs. The North Point area supported a further 6-7 pairs. This large increase appears to be associated with added success within the area electrically fenced to protect Little Terns. Success was average at Pagham Harbour where 11 pairs raised 8 young, and in Chichester Harbour where 2 pairs reared 1 young. At Pett Level 1-2 pairs did not remain to breed successfully.

The spring movement was concentrated into April and May with respectively 131 and 82 E off Worthing and 169 and 90 off Brighton Marina. Inland the species is scarce so 39 were birds heard over Lewes at night on 25 Mar., 2 at Bewl Bridge Res. on 30 May, a single there on 6 Sept. and 1 at Weir Wood Res. on 29 July.

153. **AVOCET** (*Recurvirostra avosetta*):—Up to 4 birds spent the early months at Pagham Harbour; their departure was difficult to determine as it merged into spring passage. This totalled 28 birds between 24 Mar. and 5 June, with the main movement involving parties of 7, 11 and 3 passing E along the coast between 11 and 29 May; see also sea-watch tables on pages 34-37.

Autumn passage started with singles on the R. Adur on 5 July and at Pett Level on 19 July and 3-6 Aug. A lone bird W at Selsey Bill on 6 Nov. and 11 in Pagham Harbour on 9 Nov. preceded the largest movement yet seen in the county on 2 Dec. On this day a flock of 54 went W at Selsey Bill, 3 passed E off Worthing and c.40 briefly settled on the sea off Newhaven, were disturbed by a ferry-boat and circled off towards the Cuckmere Haven. It would appear that the two larger flocks were different although the Worthing sighting may relate to those at Newhaven. The following day 9 went W over Chichester Harbour and on 5 Dec. 12 passed S at Pagham Harbour; this left 6 birds wintering at the latter site.

154. **STONE CURLEW** (*Burhinus oedienemus*):—This species' decline in the county continues. One flying N over Lancing on 24 June (BFF) was the sole record.

**PRATINCOLE SP.** (*Gilareola* sp.):—1981: An unspecified bird at Church Norton on 7 Oct. (SB, DHH) was probably the Black-winged Pratincole seen later at Sidlesham Ferry on 14 Oct. (SxBR 34:18). It has been accepted by *British Birds*.

158. **LITTLE RINGED PLOVER** (*Charadrius dubius*):—Passage birds were recorded as follows:

Mar.	Apr.	May	July	Aug.	Sept.
1	10	4	16	19	3

Spring passage was noted from 28 Mar. until 18 May from 4 coastal and 4 inland localities; all records were of single birds. Autumn passage extended from 4 July until 30 Sept. and most birds were recorded from Sidlesham Ferry (up to 7), Waltham Brooks (up to 4) and Pett Pools (up to 4). Elsewhere records of singles were scattered along the coast and in 5 inland localities.

Breeding records were received from 3 sites, with 1 pair at each, a welcome improvement on recent years. Four well-grown young were seen at one on 13 June.

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

	1982		1983	
	Jan.	Feb.	Jan.	Feb.
County totals	664	533	698	787
Chichester Hbr.	207	197	219	364
Pagham Hbr.	53	175	110	178
R. Adur	200	74	nc	100
Goring	143	60	106	156
Climping	12	1	0	72

At Goring the roost site became fragmented during the winter and some birds may have been missed. Other smaller wintering concentrations were at Newhaven, maximum of 35, and Brighton Marina, 17 in Jan. and 23 in Dec.; in late winter the Cuckmere Haven had 27. At Rye Harbour breeding birds mostly returned in March.

During the breeding season the large total of 95 pairs was reported. Rye Harbour LNR had 36 and North Point 10 pairs. Breeding success at the former was good with 35-40 fledging—one fledgling per pair is regarded as a good average. There were 2 pairs on the Crumbles, 3 in both the Cuckmere Haven and Newhaven Tidemills and 2 at Brighton Marina, where they appear to have become established in this site first used in 1981. Four pairs were found at Widewater, where only 2 young fledged. 1 failed at S Lancing and 2 pairs were on Selsey West Fields. The 4 pairs in Chichester Harbour were probably successful, while at Pagham Harbour the 28 pairs reared the moderate total of 20 young to the flying stage. On 18 May three birds were displaying on the Downs at Steyning but they were not subsequently recorded.

During Aug. and Sept. small numbers were recorded at most reservoirs, while at Pett Pools there were maxima of 18 on 15 Aug. and 17 on 29 Aug. At this time there was a considerable movement of birds through the main estuaries with 473 in Chichester Harbour, 330 on the Adur, 119 at Rye Harbour and 73 in the Cuckmere Haven.

161. **KENTISH PLOVER** (*C. alexandrinus*):—The Goring individual of 1981 (SxBR 34:18) was last seen on 15 Mar. (JAN *et al.*). One at West Wittering on 13 Feb. was considered to be different (AJP). A juvenile was at Rye Harbour on 25 July (per RCK). One on the River Adur at Shoreham on 8 Nov. (KN) was not seen subsequently, leaving one to speculate whether it might have been the Goring bird attempting a second winter in West Sussex.

163. **DOTTEREL** (*C. morinellus*):—The five individuals recorded this year appeared within a day of each other, four near Balsdean on 9-10 Sept. (GAS) and 1 on the Downs at Steyning on 10th (ARK).

165. **GOLDEN PLOVER** (*Pluvialis apricaria*):—Numbers at the main coastal sites were:

	1982			1983		
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.
County totals.....	1384	1420	2063	70	268+	2580
Chichester Hbr.....	763	605	130	10	23+	390
Pevensy Levels.....	500	560	1200	60	150	800
Pagham Hbr.....	1	54	43	0	0	706
Pett Levels.....	120	200	350	0	—	424
Rye Hbr.....	—	1	340	0	95	260

1982 was a relatively poor year with only two flocks of 1,000 recorded. A small cold weather movement early in the year brought 10 to the Lower Cuckmere on 8 Jan., an area where the species is uncommon. The next day 20 went S over Crowborough and 300 W with Lapwings over Pett Levels; 21 were also at Amberley. The spring migration was again well marked, with the species concentrated into a few sites. At North Point, Rye numbers built up from 340 on 21 Mar. to 500 on 24 Mar. but decreased to 140 on 2 Apr. The Bracklesham Bay flock steadily decreased from its peak of 700 on 13 Mar. to 350 on 28 Mar. but 220 were still present on 10 Apr. The Pevensy Level flock peaked at 1,200 late in Mar. this year and 400 remained into early Apr. The latest spring records were singles in Chichester Harbour on 28 Apr. and a very late bird in partial summer plumage on 26 May at Glynde Levels.

No birds were recorded in summer. On 24 July the first 7 returned to Chichester Harbour, followed by 2 at Pagham Harbour on 26 July. In Aug. numbers at these sites increased to 99 and 18 respectively, but it was not until Sept. that the species was reported elsewhere. At West Chiltington 100 on 5 Sept. was unusual. However, even after the main influx in late Oct. numbers remained small, no doubt influenced by the mild weather; an influx in the west took place on 30-31 Dec. with 1,041 at Pagham Harbour and at least 800 around Chichester Harbour.

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

	1982			1983		
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.
County totals.....	1678	2446	2132	1862	1190+	3263
Chichester Hbr.....	716	1666	1359	1443	847+	2648
Pagham Hbr.....	643	588	720	417	321	522
Goring.....	190	104	12	nc	nc	60
Climping.....	45	—	—	—	—	—
Pett Levels.....	60	80	40	—	9	32

Early in the year numbers were average although 15 on 2 Jan. on R. Adur was unusually large. The Feb. influx into Chichester Harbour mirrored a slightly later peak in 1981 and shows that the county regularly receives a share of a movement seen mainly in W Britain.

The spring passage was fairly good, with 103 E at Selsey Bill, 350 E at Worthing and 201 E at Brighton Marina, for details see pages 34-37. Most movement took place between 17 Apr. and 14 May with the peak day on 11 May when 171 passed E off Worthing and 160 went by Brighton Marina including a flock of 80 seen at both sites. On this day one was at Waltham Brooks. The only June records were of singles at Rye Harbour on the 4th and Newhaven on the 6th.

In Chichester Harbour 13 returning birds were present on 24 July, after which numbers increased rapidly there and 843 were counted on 21 Aug. The counts of 2,648 at Chichester Harbour on 13 Nov. and the county total of 3,263 seen that month were county records. These large numbers follow a very successful breeding season for waterfowl in the Soviet Union, where all British Grey Plovers breed.

169. **LAPWING** (*Vanellus vanellus*):—All coastal sites had relatively small numbers during the cold weather of the first half of Jan., only 4,761 being counted on 23 Jan. This was partly due to a strong movement on 8/9 Jan. when 2,310 moved S at Upper Beeding in 3½ hrs., 1,600 SE in 2 hrs. at Selsey Bill, 1,000+ W at Pett and 591 S and W at Goring. The return was not seen, but by 13 Feb. the same coastal sites had 17,446 birds; there were also 2,000 at Amberley on 9 Feb., and 700 on Glynde Levels.

As part of the Wet Meadows Wader Survey estimates of the numbers of breeding pairs were made in most of the main marsh areas. Altogether 399 pairs were counted on

4,992 ha of marsh, an average density of 1 pair per 12.5 ha. The numbers in some areas were surprisingly low and perhaps indicate a dramatic decline in the breeding population coincidental with drainage and changes in agricultural activities. The counts for the most important areas were:

Pagham Harbour and area.....	51-53	Arun valley.....	148
Bracklesham Bay.....	42-49	Cuckmere valley.....	5
Adur Levels.....	1	Brede valley.....	24
Lewes Levels.....	5	Pett Level.....	20
Glynde Level.....	20	Rye Harbour SSSI.....	69

Post breeding concentrations were recorded from late June. There was a steady build-up through the autumn with a sharp increase in late Oct/Nov. At this time flocks totalling 2,000-2,500 were around Chichester Harbour, on the Adur Valley south of Henfield, on Pevensy Levels and in the Rye/Pett area; 1,500 were at Gatwick on 18 Nov., 1,770 at Pagham Harbour and 1,700 in the Lower Cuckmere on 4 Dec. A further six sites had flocks of 500-1,200 birds at this time. Late Dec. saw a very substantial movement; 2,500 were at Amberley on 16th, 1,300 passed W over Weir Wood Res. in 30 mins. on 18 Dec. but the main numbers were seen on the 25-30 Dec. Then 800 were at Barcombe Res., 2,600 on the Lewes Levels and a visit to Pevensy Levels on 29 Dec. revealed "enormous numbers, impossible for one person to count" (MJH), but probably 20,000 or more were present.

170. **KNOT** (*Calidris canutus*):—This is the most restricted of the more frequent waders and only at Chichester Harbour was it recorded regularly, see below:

	1982			1983		
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.
County totals.....	27	410	6	35	+	196
Chichester Hbr.....	—	—	—	—	—	—
Pagham Hbr.....	—	—	—	—	—	—
Goring.....	—	—	—	—	—	—

Numbers were very low this year. At Pagham Harbour 28 on 21 Feb. was the only winter record; singles were recorded on three winter dates at Rye Harbour and once on R. Adur.

Spring passage of African wintering birds was moderate with 93 E at Worthing, 81 E at Brighton Marina and 67 E at Selsey Bill. The main movement took place on the 13 May when 47 passed the last two sites yet 64 were seen at Worthing. In Pagham Harbour 17 were present on 31 May, three remaining for the summer; very small numbers stopped briefly at other coastal sites. The return migration was most evident at Pett Pools where an extraordinary movement of 500 passed W on 15 Aug., 15 were present on 16th and 1-3 until 23 Sept. (See also Bar-tailed Godwit page 28). In Pagham Harbour there were 45 on 27 Aug., 16 on 8 Sept., and the last was one on 19 Oct. Inland 2 were at Bewl Bridge Res. on 11 Sept. and one at Arlington Res. on 23 Sept.

171. **SANDERLING** (*C. alba*):—The numbers at the main coastal sites were:

	1982			1983		
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.
County totals.....	565	509	584	322	82+	820
Chichester Hbr.....	109	87	204	311	60+	422
Climping.....	220	198	219	5	22	338
Rye Hbr.....	65	83	21	—	—	60
Goring.....	150	120	132	nc	nc	40

Although only found at a few major sites, the numbers at each varied considerably, no doubt due to the changes in roost areas over short periods. This was the case in Chichester Harbour where at least three different roosts are known, and occupation depends on disturbance and weather patterns. On occasions in winter, small numbers of up to 12 were found at Pagham Harbour, Pett Levels and Pevensy Bay. On 11 Apr. 250 were still present in Chichester Harbour.

The spring passage was quite good with 276 E at Selsey Bill, 581 E at Worthing, although only 83 were seen at Brighton Marina. Small numbers were recorded in Apr. but over 80% of sightings were in May, mostly confined to the 10-20th; peak movements at Worthing were 75 on the 11th and 130 on the 14th, while at Selsey Bill 46 were seen on 13 May. Very small numbers were present from 21 July to 23 Aug. at most coastal bays and lagoons, but after that recorded only at the main wintering sites.

175. **LITTLE STINT** (*C. minuta*):—Although recorded in every month, which is unusual, a poor showing, surprising in a year which brought 3 new Asiatic waders to Britain, although none, alas, to Sussex. The approximate monthly totals were as follows:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2	1	1	4	5	1	5	7	11	6	2	1

One was seen at West Wittering on 1 Jan. and 1 on the R. Adur at Shoreham from 15 Jan. to 28 Mar. Both these may have been birds seen in late 1981 (*S&BR*, 34:20).

Spring passage was noted from 10 Apr. to 18 May and the total of 9 birds was above average; one was seen at Sidlesham Ferry on 13 June. In the autumn noted from 6 July until 7 Nov. but not more than 27 birds were involved, with 3 at Pett Pools from 3-7 Sept. and 3 at Sidlesham Ferry on 7th as the largest parties. One was wintering on the Adur at Shoreham at the year's end.

179. **TEMMINCK'S STINT** (*C. temminckii*):—In spring 1 was seen at Sidlesham Ferry on 13 May (RDME, AJP) with another there on 27-28th (BJ, CMJ, RML *et al*). A juvenile was present at Pett Pools on 3-4 Aug. (CHD, PWR, PJW *et al*) with another reported from Rye Harbour on 15-17 Aug. (per RCK).

180. **PECTORAL SANDPIPER** (*C. melanotos*):—A juvenile present on Chichester GP on 7-11 Sept. (CRJ *et al*) maintained the now near annual appearance of this North American wader.

182. **CURLEW SANDPIPER** (*C. ferruginea*):—As with Little Stint, a poor year for this species. The approximate monthly totals were as follows:

Apr.	May	June	July	Aug.	Sept.	Oct.
1	1	1	7	18	14	3

In the first part of the year singles were seen at Shoreham on 3 Apr., the Cuckmere on 16-18 May and Church Norton on 11 June.

On autumn passage noted from 18 July until 13 Oct., with a total of c.30 recorded, mainly along the coast but there were reports from Arlington Res. and Weir Wood Res. The largest parties were 10 at Rye on 15 Aug. and 6 at Pett Pools during 11-13 Sept.

183. **PURPLE SANDPIPER** (*C. maritima*):—The numbers wintering at the main sites in the county are presented below:

County totals	Jan.	Feb.	Mar.	Oct.	Nov.	Dec.
Newhaven Hbr.	59	67	61	14	44	69
Pevensy Bay	35	37	37	4	27	33
Littlehampton Hbr.	6	14	7	7	6	17
Fairlight	12	10	6	2	9	11
Adur Hbr.	nc	nc	10	nc	nc	nc
Brighton Marina	5	2	1	—	1	2

These are the highest numbers yet recorded in the county even when lacking details from the Hastings/Fairlight/Pett area. The increase was spread fairly evenly over the regular sites as well as the new one of the Adur Harbour. The spring departure in early April was rapid with only 12 left in the county after the 5th. The last were 2 at Selsey Bill on 4 May.

The return was very late, with the first W at Bognor Regis on 28 Sept. A small general arrival took place in late Oct. at Littlehampton on 16th, Newhaven on 22nd, Pagham Harbour on 25th and Pevensy Bay on 30th. One passed E at Selsey on 7 Nov. and 6 went W at Bognor on 16 Nov.

184. **DUNLIN** (*C. alpina*):—Low numbers at the main western harbours were recorded during and after the cold weather in Jan. but the winter 1982/83 provided a dramatic contrast. Nov. was the first time since the middle 1970s that over 30,000 had been counted in Chichester Harbour. This was due to the very good breeding season in the USSR of our wintering birds. Despite this large number, other sites had relatively low numbers. The wader counts were:

County totals	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1982	2193	15657	6051	544	1668+	32147	32142	32145	14056	5354
1983	14892	12264	3309	27	310+	30084	27751	25785	9193	2798
Chichester Hbr.	2911	1075	1710	350	1153	1052	2218	4314	2006	1623
R. Adur	1570	750	350	36	nc	450	1200	1130	1300	60
Goring	850	360	180	nc	22	142	270	75	416	250
Rye Hbr.	395	600	85	nc	33	106	210	12	399	73
Pevensy Bay	280	350	300	65	80	200	250	310	180	350

The spring emigration was well illustrated by counts on the R. Adur and Goring where on 13 Mar. 530 were found, but only 8 were left seven days later. A passage flock of 40 on the Glynde Levels on 3 Mar. included a male uttering its beautiful tremulous song. The only June record was of a single all month at Rye Harbour. The autumn passage was uneventful although 52 on Pagham Harbour on 5 July had increased to 240 by the 17th. The species was seen widely over inland and coastal sites between 18 July and 23 Sept., but 60 on the Lewes Brooks on 30 Dec. was unusual.

188. **RUFF** (*Philomachus pugnax*):—The low numbers at the nocturnal roost at Sidlesham Ferry of late 1981 (*S&BR*, 34:21) doubled during Jan., and doubled again to peak at 300 on 13 Feb. A survey of the fields between Pagham and Earmley on this day revealed 280 birds and subsequently 300 were seen at the Ferry Pool. A few birds were present in May when 1-3, mostly males in summer plumage, were seen until the 27th. The approximate monthly totals were:

County totals	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1982	141	302	31	12	17	—	54	50	30	48	156	355
Pagham/Bracklesham	140	300	1	8	7	—	45	33	21	45	156	355
All other sites	1	2	30	4	10	—	9	17	9	3	—	—

The autumn passage started at Pagham Harbour on 3 July where numbers reached 45 by the end of the month. Small numbers were scattered elsewhere but by late Oct. all records came from the Pagham/Bracklesham area. Here of 156 at roost on 13 Nov., four had white heads. The 355 on 5 Dec. involved 197 around Pagham Harbour and 158 at Bracklesham Bay.

189. **JACK SNIFE** (*Lymnocyptes minutus*):—Records were received from 14 localities of which 6 were inland. Numbers were relatively large in the cold weather of Jan. when they were seen at ten sites. Only the Crumbles with 6 and Rye Harbour with 2 on 30 Jan. had more than a single bird. The monthly distribution of records was:

Number of birds	Jan.	Feb.	Mar.	Oct.	Nov.	Dec.
1982	16	1	4	5	8	5
Total localities	10	1	4	3	4	4

The last records were singles on 24 Mar. at Pagham Harbour and 27 Mar. on the Crumbles, while these two sites also had early birds on 16 Oct. and 31 Oct. respectively, and there were 2 at Arundel WFT on 20th.

190. **SNIFE** (*Gallinago gallinago*):—The year opened with very large numbers in the county. On the weekend of 9-10 Jan. 3,460 were reported with concentrations of 1,000 on the Adur Levels and the Pevensy Levels. Elsewhere 500 were at Pett Levels, 300 in the Cuckmere Haven and 295 around Chichester Harbour. Several records came from areas where the species had not been seen before, including 10 from a small meltwater area on the normally dry Downs at Ashcombe on 14 Jan. By Feb. numbers had fallen back with only 1,182 noted; on the 13th 450 were on the Pevensy Levels and 400 at Pett Levels. No spring gatherings were seen.

Although its effect may have been aggravated by the severe winter conditions, the dry spring was disastrous for the breeding population. In the Waders of Wet Meadows Survey a total of only 18 pairs was finally counted on 4,992 ha of marsh, although 10 areas had held a total of 112 drumming birds in the second half of April, many of which would probably have stayed to breed in a more normal spring. In areas covered in this and the

Society Survey for 1980/81 a decline of 66% was found. The results are summarised in the table, with the figures for 1980/81 in brackets.

Bracklesham Bay	0	(1)	Cuckmere valley	2	(0)
West Sx. Rother	2-3	(8)	Pett Level	0	(0)
Arun valley	7	(32)	Breda Levels	2	(4)
Adur Levels	1	(2)	Rye Harbour SSSI	0	(0)
Ouse valley	0	(1)	Barcombe Res.	0	(1)
Glynde Levels	3	(5)	Arlington Res.	0	(1)

In Dec. 12 flocks of 30+ were reported, totalling a respectable 2,273 birds. Most were 535 on the Adur Levels, 400 at Pett Levels, 224 at Arundel WFT, 500 on Pevensy Levels and 100-150 at Chichester Harbour, Climping, Cuckmere Haven, Pagham Harbour and Rodmell.

**194. WOODCOCK (*Scolopax rusticola*).**—Severe weather in Jan. produced more records than usual particularly during 10th-17th; many were singles at unusual coastal sites but maxima were 10 at Cissbury, 8 at South Chidham and 7 at Wepham Wood. Between Sept. and Dec. small numbers were seen at only 17 sites.

During the breeding season reported from 52 sites which involved 94 birds; most were 5 at Stanstead Forest and Wiggonholt Common, and 4 at the Bluebell Railway, Buchan Park, Iping Common and Wakehurst Place.

**195. BLACK-TAILED GODWIT (*Limosa limosa*).**—The low numbers present on the two western harbours at the end of 1981 were maintained through Jan. and Feb. but were supplemented by a flock in Bracklesham Bay. The monthly counts were:

	1982			1983		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
County totals	686	603	997	1512	489+	2232
Chichester Hbr.	266	229	201	1330	416+	1360
Pagham Hbr.	240	234	546	182	73	32
Bracklesham Bay				nc	nc	840
& Pagham Fields	180	140	250	nc	nc	840

Away from these sites 4 were on Wallham Brooks on 25 Mar. Spring passage brought 3 to Rye on 5 Apr., a further 4 were here on 20 Apr. and 18 on 16 May. Singles E past Selsey Bill on 16 Apr. and W off Worthing on the 26th were the only seawatch records. One stopped at Weir Wood Res. on 18 Apr. and a single was at an E Sussex site on 12 June although it was not thought to be on territory. Many birds remained at Pagham Harbour through May, maximum 47 on 15th. and June, maximum 31 on 29th.

Autumn arrivals had swelled the Stilesdam Ferry flock to 80 by 3 July and 130 by the end of the month; 139 were in Chichester Harbour on 24 July. Singles were at Small Dole on 16 July, Pett Levels on 23 July and Weir Wood Res. on 3 Aug. Between 8 and 19 Sept. up to 31 were at Chichester GP, but passage away from the main sites ceased with a single at Pett Level on 23 Sept.

On the coast exceptional numbers were in Chichester Harbour in Sept. and Nov. But the low numbers at Pagham Harbour in Nov. were due to flocks of 400 on grass at Bracklesham on 21st and 440 regularly seen on a ploughed field at South Mundham. On 11 Dec. 865 were seen feeding in a tight flock on flooded grassland in Chichester Harbour.

**196. BAR-TAILED GODWIT (*L. lapponica*).**—Very few are found away from Chichester Harbour as shown by the wader counts:

	1982			1983		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
County totals	756	224	110	537	350+	848
Chichester Hbr.	732	219	100	439	325+	820
Pagham Hbr.	20	3	10	96	25	28

The spring passage is detailed in tables on pages 34-37. More birds were seen than in 1981 but numbers were average. Totals passing E were 2,085 at Selsey Bill, 4,919 at Worthing, but only 1,503 at Brighton Marina and 1,587 at Beachy Head. About 60% passed Worthing during 22-27 Apr. with a peak of 1,193 on the latter date. During the passage small numbers stopped off at six sites with 50 at Pagham Harbour on 25 Apr. One

spent June at Rye Harbour and 45 present in Chichester Harbour in May dwindled to 27 through June.

A scattering were seen at six coastal sites from 21 July but 437 were in Chichester Harbour on 24 July. Autumn passage is rarely seen, so 352 W past Pett Pools, where an additional 30 were resting, and 55 SW over Chichester GP on 15 Aug., were exceptional. There was 1 at Chichester GP on 11 Sept.

**198. WHIMBREL (*Numenius phaeopus*).**—The first for the year was at Rye Harbour on 5 Apr., afterwards spring migrants were seen at seven inland and seven coastal wetlands. Inland the largest flocks were 36 on 24 Apr. and 31 on 27 Apr. at Arundel; 41 were at Pagham Harbour on 20 Apr. Of particular interest was the documentation of a nocturnal roost gathering at Rye Harbour; this increased from 60 on 23 Apr. to a peak of 240 on 1 May, afterwards halving by the 7th, and dropping to 50 by the 9th and 17 by the 15th. Only one other major roost gathering has been identified and documented before in Britain, this is on Stert Island in the Severn Estuary (see Prater, 1981: *Estuary Birds*, Poyser, p. 374/5). Seawatchers had variable success, a record 883E at Worthing, a reasonable 408 E at Brighton Marina, but poor 222 E at Beachy Head and 175 E at Selsey Bill. Full details are in the tables on pages 34-37. The last spring birds were 7 at West Chidham on 7 June.

The first in autumn were 2 at Bognor on 28 June after which they were at eight coastal and four inland sites. The Rye Harbour roost peaked at 37 on 5 Aug.; the largest numbers were in the western harbours, with 40 at Pagham Harbour and 103 in Chichester Harbour on 24 July; numbers here declined to 51 on 21 Aug. Inland 18 alighted at Weir Wood Res. on 15 Aug. from 2 flocks of 350-400 otherwise unidentified waders flying SW; see also Bar-Tailed Godwit. The only October records were one on Sleyning Downs on 3rd and 2 W at Bognor on 6th; one in Chichester Harbour on 13 Nov. was the last.

**199. CURLEW (*N. arquata*).**—Recorded throughout the year in several sites; the main wader count figures were:

	1982			1983		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
County totals	1817	2433	1802	3446	1756+	2546
Chichester Hbr.	921	1207	1078	2652	1251+	1796
Pett Levels	400	600	300	260	120	210
Pagham Hbr.	265	503	391	508	209	350
Rye Hbr.	106	7	13	nc	175	78
Bracklesham Bay	95	100	nc	nc	101	51

After an average first winter period, recorded from nine inland sites during the characteristically very extended spring passage; quite large flocks of 30 were seen moving NE at Bewl Bridge Res. on 26 Apr. and at Amberley on 28 Apr. Birds were heard calling in Ashdown Forest during the breeding season, but breeding was not proven.

Returning birds were seen from late June when there were 4 W at Selsey Bill on 27th and 34 at Rye Harbour on 30th. Generally fewer were seen than in the spring, but the 2,652 in Chichester Harbour on 19 Sept. is the largest concentration yet seen in the county.

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

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	5	3	3	4	4	1	14	16	14	3	6	3

All records up to early Apr. were from the two western harbours but there was no sign of a spring influx. The typical early return passage brought 10 to Chichester Harbour on 5 July and singles to Bewl Bridge Res. on 6th and Cuckmere Haven on the 12th. However, numbers were very low compared with recent years with only 8 at Chichester Harbour on 21 Aug. and a single in Sept. Birds were at eight sites in Aug. and six in Sept. when there were 3 at Bewl Bridge Res. on the 3rd and a single flew past Littlehampton on the 15th. Again Nov. and Dec. records were from the western harbours.



202. **REDSHANK** (*T. totanus*):—The results of the wader counts were:

	1982			1983						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
County totals.....	2119	2312	2187	3904	1402+	2602	2112	3497	1832	1377
Chichester Hbr. ....	1399	1645	1595	3405	956+	2024	1680	2516	1000	927
Pagham Hbr. ....	318	220	389	362	220	349	206	686	420	259
R. Adur.....	231	128	60	57	nc	90	100	116	300	43
Rye Hbr.....	103	201	78	nc	175	78	60	72	52	48

Winter numbers were similar to 1981, maintaining their rather high level. Away from the main sites, peaks of 33 were in Cuckmere Haven, 30 on Pett Levels and 22 at Newhaven. Breeding birds, as always, started to move inland during Jan. so small numbers were seen at most of the wet meadows.

In the Waders of Wet Meadows Survey 123 pairs were counted on 4,992 ha of marsh. The results show a 14% decline compared to the Society survey of 1980/81, very largely in the Adur and Ouse. Some areas, e.g. Glynde Levels and Rye Harbour, noted significant increases. These changes seem largely due to the very dry conditions. Results for the main marsh areas are summarised in the table, with the 1980/81 figures in brackets:

Pagham Harbour area	11-13	(20)	Glynde Levels	6-7	(2)
Bricklesham Bay	11-12		Cuckmere valley	1	(2)
Arun valley	56	(69)**	Pett Level	1	(0)
West Sx. Rother	5	(9)	Brede Levels	4	(3)
Adur Levels	1	(10)	Rye Harbour SSSI	23	(12)
Ouse valley	2	(16)			

\*S to Arundel  
\*\*S to Littlehampton

The autumn increase was noted generally between 29 June and 5 July; 300 were at Pagham Harbour by the 4th. On 24 July 1,684 were in Chichester Harbour and this increased to 2,222 by 21 Aug. Most birds had withdrawn from inland sites by Oct. but, unusually, 29 at Glynde Levels on 3 Oct. and 61 on Lewes Levels on 30 Dec. were seen.

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

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
County totals.....	4	7	9	8	9	2	106	166	97	17	26	6
Chichester Hbr.....	2	6	6	3	1	1	89	122	60	10	23	3

In Jan. and Feb. all records came from the two western harbours except 1 heard at Arlington Res. on 21 Jan. The spring passage was uneventful; singles went E at Worthing on 26 Apr. and Selsey Bill on 10 May; up to 3 were at Waltham Brooks in late May. By 24 July 89 were already in Chichester Harbour, and 122 were present on 21 Aug.; by then birds were present at 13 sites, 6 inland. Migration included 1 W at Bognor on 11 July, 10 W at Pett on 1 Aug., 22 W on 15 Aug. (see comments under Bar-tailed Godwit, p.28) and 1 W at Cissbury on 22 Aug. In Nov. and Dec. records again mainly came from the western harbours, with singles at Weir Wood Res. on 6 Nov. and Amberley on 18 Dec.

208. **GREEN SANDPIPER** (*T. ochropus*):—Recorded throughout the county in similar numbers to 1981 with the following approximate monthly totals:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
County totals.....	13	5	5	26	3	9	55	71	49	16	4	12

Again, as with every year since 1970, the month of May somewhat surprisingly provided the fewest records of this species. The July-Oct. total of 159 and the annual total of 236 indicate that the continuing upward trend since 1975 seems to be levelling out (SxBR. 33:29 and 34:23). All records during the first 6 months of the year were widely scattered and involved 1 or 2 birds, the exceptions being 7 at Small Dole and 3 at Langton Green on 12 Apr. and 5 in the Cuckmere on 18 Apr.

In autumn no significant arrivals were noted, most peaks coinciding with weekends. The largest concentrations were 8 at Waltham Brooks on 20 July; 9 at one locality in Chichester Harbour on 25th; 12 on Pevensy Levels in Aug.; 7 at Darwell Res. on 22 Aug. and 8 at Chichester GP on 19 Sept. One present near Lewes from mid-Aug. to early Oct. indicates how long birds may remain off passage. At the end of the year all records again referred to widely distributed ones and twos.

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

	Apr.	May	June	July	Aug.	Sept.	Oct.
County totals.....	—	4	2	14	11	2	—

One was reported from Waltham Brooks on 29 May with 4 there on 30th. In June 1 was present at Siddlesham Ferry from 9-11th while another was seen at Glynde on 10th. Return passage was noted from 2 July, an early date, until 21 Sept., with a total of c.21 birds recorded, a third of them at Pett Pools. Elsewhere birds were widely scattered at coastal and inland localities.

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

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
County totals.....	3	—	1	22	64	12	137	187	41	16	1	5

Overwintering individuals were present at Widewater from late 1981 to 13 Jan. (SxBR. 34:24); Littlehampton on 9-10 Jan.; and the Rother on 17th and 23rd.

The first migrants were recorded at Arlington Res. on 27 Mar. and Arundel WFT from 4 Apr., but none was then seen until the last week of Apr. when small numbers were widely spaced along the coast; most were 10 on R. Arun at Arundel on 29th. In May records steadily increased to mid-month with 9 at Brighton Marina on 11th and 10 at Langney Point on 15th. The last spring bird was at Rye Harbour on 2 June.

Two were at Bewl Bridge Res. on 21 June and 6 at Pevensy on 30th but autumn passage did not gather momentum until the latter half of July when good numbers were recorded with 10 on the R. Ouse on 22nd, 10 in Chichester Harbour on 23rd, 10 at Pagham Harbour, 14 at Weir Wood Res. and 8 at Pett Pools on 29th and 18 on the R. Adur and 7 at Rye Harbour on 31st. Passage remained heavy during the first 3 weeks of Aug. with maximum counts of 20 in Chichester Harbour on 4th and 27 at Rye Harbour on 22nd. Relatively few were seen after this, 6 at each of Chichester GP and Pett Pools on 30 Sept. being notable. Late records came from Selsey Bill on 22 Oct., the Cuckmere on 17 Nov., Siddlesham Ferry on 5 Dec. Around Christmas, singles were seen at Chichester Harbour, Barcombe Mills Res., Piddinghoe and the Cuckmere, the last 3 sightings possibly relating to a single individual.

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

	1982			1983						
	Jan.	Feb.	Mar.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
County totals.....	464	894	924	644	688+	995	686	817	362	680
Pagham Hbr.....	253	448	475	220	149	192	166	130	72	162
Chichester Hbr.....	21	135	36	47	118+	384	102	217	48	126
Pett Level.....	80	250	250	80	200	200	200	280	60	200
Pevensy Bay.....	110	60	190	280	220	190	210	180	140	160

The very large totals present in Feb. and Mar. due to record numbers at Pagham Harbour and a large concentration at Pett Levels, and again in Nov., are the largest yet recorded from the county. The reason for this increase remains uncertain. The Pevensy Bay flock embraces two roost areas, at Langney Point and at Bulverhythe/Glyne Gap. On 1 Oct. the latter had 260 birds and the former had 60 on 31st.

Spring gatherings noted were 200 at Chichester Harbour on 28 Mar., 200+ at Rye Harbour in early May and 160 at Pett Levels in Apr. Coastal passage was light with 39 E at Selsey Bill and 40 E at Worthing. All June records came from Rye Harbour where 5 were present all month, with a peak of 9 on the 5th. Autumn peaks of 126 were at Chichester Harbour and 147 at Pett Levels on 21 Aug., 180 at Rye Harbour on 8 Aug. dwindled as the Pett Level flock increased.

215. **RED-NECKED PHALAROPE** (*Phalaropus lobatus*):—1981:—One was briefly observed at Langney Point on 19 Sept. (RKH).

216. **GREY PHALAROPE** (*P. fulicarius*):—1981:—One flew E off Widewater on 15 Nov. (RJF).

1982:—Late Sept. brought several to the Sussex coast, but in nowhere near the numbers of 1981. Two flew E off Widewater on 24th (CFW). 1 was seen at Brighton Marina on 27th (RSK, NAGL) with 1 at Brooklands, Worthing remaining from 28 Sept-1 Oct. (JAN, KN *et al*) while another was recorded at the Cuckmere on 30 Sept. (LL, RL, WBM). At Brooklands a second individual was seen on 17 Oct. (JAN, CJF, BRC) with 1 at Goring on 11 Dec. (JAN).

217. **POMARINE SKUA** (*Stercorarius pomarinus*):—A total of at least 92 in spring was fewer than in 1980 (197) and 1981 (163). There were two Apr. records; one passed E off Selsey Bill and Goring on 17th and one E off Brighton Marina on 29th. Between 7 and 15 May a total of approximately 90 moved E between Selsey Bill (10), Goring/Worthing (18), Widewater (16), Brighton Marina (22) and Beachy Head (71). Largest flocks were of 14 on the sea off Beachy Head on 9th, flying off E, and 14 E at Worthing on 13th, 13 of which were seen off Widewater 13 minutes later and off Brighton Marina 16 minutes after that; a further 34 minutes later 24 passed E at Beachy Head and this group probably included the well-watched flock. See tables on pages 34-37 for full details.

The only autumn record was one W off Selsey Bill on 24 Sept.

218. **ARCTIC SKUA** (*S. parasitica*):—First recorded on 31 Mar. when 3 E and 5 W off Goring. Between 3 Apr. and 15 May recorded passing eastwards off Selsey Bill (85), Goring/Worthing (67), Southwick (11), Brighton Marina (31) and Beachy Head (95), with a further 5 birds off other parts of the coast. Approximately 151 birds were involved. Peaks were on 2 May (10 off Goring/Worthing and 25 off Beachy Head); 3rd (9 off Selsey Bill and 11 off Goring/Worthing) and 9th (20 off Beachy Head); see also tables on pages 34-37. Analysis of colour-phases of birds off Selsey Bill showed that 51% were dark-phase, 48% light-phase and 1% intermediate.

In June off Selsey Bill there were single birds on 7th and 12th, and 2 different birds flew E on 14th; 1 flew E off Pett Level on 3rd. The only July record was of 1 in Chichester Harbour on 11th. In autumn between 4 Sept. and 21 Nov. seen regularly off the coast, mostly passing W. Totals at Langney Point were 10 W; at Worthing 24 W and 19 E with a peak of 12 E on 16 Oct.; and at Selsey Bill 55 W and 10 E; peaks being 25 W on 24 Sept. and 20 W on 16 Oct. Off Beachy Head an exceptional movement on 17 Oct. totalled 43 E in 90 minutes. Away from these points, a total of 22 seen, which included 3 flying up Pagham Harbour on 19 Sept., 1 flying W over gardens at Aldwick, Bognor on 19 Oct., and, most unusual, a juvenile picked up alive at Burwash on 4 Oct. It was released at Bewl Bridge Res. next day.

220. **GREAT SKUA** (*S. skua*):—Winter records were 1 E off Selsey Bill on 4 Jan. and 2 E off Goring on 7th. The approximate monthly distribution of birds was:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2	—	—	9	4	—	—	—	4	11	1	6

Easterly spring passage was poor, totalling 13 between the first off Worthing and 2 off Beachy Head on 3 Apr. and the last 2 off Beachy Head on 15 May. See tables on pages 34-37 for details.

In the autumn recorded at Beachy Head between 12 Sept. and 27 Oct. the largest movement being 4 E on 17 Oct.; 1 off Newhaven from a ferry 8 Km out on 27 Oct.; off Worthing/Goring where 5 W and 2 E; off Selsey Bill where 5 W and 1 E; and an unusual inland record of one at Bewl Bridge Res. on 16 Sept. In Nov. 1 E off Selsey Bill on 21st, and in Dec. a total of 4 E and 2 W off Worthing on five dates between 2nd and 30th.

222. **MEDITERRANEAN GULL** (*Larus melanocephalus*):—Another good year with 29 individuals reported, comprising 9 first year birds, 4 sub-adults and 16 adults. Minimum monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4	1	3	7	3	4	3	1	2	4	3	3

The only birds which over-wintered were adults at Goring and Widewater. Spring coastal records fell between 30 Mar. and 12 May with 6, all immatures, noted between 24-26 Apr. at Widewater, Seaford and Beachy Head. Away from the shore an adult was

seen at Arundel on 21 Mar. There were more summer records than usual with at least 3 individuals, including an adult pair, at Rye between 29 May and 29 June.

Apart from an adult at Pett Level between 1 July and 28 Oct. and a first year at intervals at Shoreham between 7 Sept. and 3 Nov., the remaining autumn and winter records were of singles noted for short periods mainly at coastal locations. A sub-adult at Arundel WFT on 12 July, a second year at Arlington Res. on 26 Oct. and an adult at Chichester GP on 5 Dec. were the only inland records.

225. **LITTLE GULL** (*L. minutus*):—After remarkably high numbers in late Dec. 1981 (5xBR, 34:29) only 3 were recorded on the E Sussex coast in early Jan. A single at Brighton Marina on 22 Jan., one found dead at Rye on 24 Jan. and a party of 8 adults E at Worthing on 3 Feb. complete the winter records.

During spring, singles recorded on 6 Mar. at Rye and Barcombe Mill Res. then at Thorney on 7 Mar., but thereafter none until an adult at Chichester GP on 2 Apr. At this last site different individuals were noted on at least 7 dates, and with 4 at Arlington Res. on 6 Apr., singles at Ardingly Res. on 18 Apr. and at Weir Wood Res. on 3 May comprise an unusually high number of inland records. However, most were recorded along the coast between 4 Apr. and 5 June where the regular sea-watching sites all recorded a peak during SE winds on 11 May (see sea-watch tables on pages 34-37 for further details). An immature at Rye Harbour between 11-12 June and 2-6 July, and an adult at Church Norton on 13 July were the only summer records.

Between 12 Aug. and 25 Sept. only 5 were noted but thereafter periods of strong onshore winds produced records along the entire length of coast with maxima of 9 at Rye on 4 Oct., 11 W at Worthing on 17 Oct. and 7 on Pett Pools on 7 Nov. Inland records included singles at Weir Wood Res. on 24 Oct.; at Chichester GP on 13 Nov.; and 8 at Bewl Bridge Res. on 7 Nov. Singles on 4 dates at Selsey Bill were the only Dec. records. The minimum monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	8	3	32	99	3	2	4	29	38	42	4

228. **BLACK-HEADED GULL** (*L. ridibundus*):—There was no co-ordinated roost count in 1982, but the usual inland roosts were noted at Weir Wood, Arlington, Darwell and Bewl Bridge Reservoirs; the last contained 12,000 birds on 26 Jan. After the main exodus of wintering gulls in mid-Mar. flocks were noted passing offshore particularly at Worthing where 3,569 E and 307 W were logged between 26 Mar-31 May with a maximum of 629 E on 20 Apr.

On 13 May the Stakes Island colony in Chichester Harbour had 1,480 nests containing 3,569 eggs and 20 chicks. Unfortunately flooding thwarted these and most second clutches, resulting in only c.100 young fledging. At Rye 20 pairs raised 7 young and the summer roost of immatures reached a peak of 400 on 21 May.

Poor breeding success may have accounted for the early return of adults to the coast as shown by 305 at Selsey Bill on 8 July and 1,000 at W Worthing on 9 July. No other notable counts were recorded during the early autumn until c.30,000 W at Goring in 2 hours on 14 Oct. Roost counts later in the year were sporadic, 18,000 at Bognor on 10 Nov. was the largest count.

A better appraisal of the winter population of this and other gull species should result from the synchronised count in early 1983.

233. **COMMON GULL** (*L. canus*):—The largest counts during the winter were at Rottingdean with 520 on 28 Jan. and 600 on 17 Feb., and at Mountfield where 1,000 were following a plough on 26 Feb. Higher numbers were noted in early spring when 10,000 counted at Camber on 15 Mar. and 3,000 roosted at Worthing on 7 Apr. Spring coastal movement of predominantly immatures was noted at several sites with peaks of 132 E at Selsey Bill on 16 Apr., 189 E (from a total of 774 E) at Worthing on 23 Apr. and a total of 573 E at Southwick between 9 Apr-9 May.

Records from Rye suggest the adults returned on the typical date of 12 July but thereafter the only large count was 4,000 at Bognor on 10 Nov.

Species	MARCH		APRIL		MAY		Wind	Hours Watching	Date
	Count	Wind	Count	Wind	Count	Wind			
Divers (all)	53	4	14	3	5	3	SSE	2 1/4	6
Great Goose	70	18	—	24	—	8	SE	6 1/4	4
Elder	7	5	97	22	184	4	ESE	6	5
Common Scoter	6	305	248	35	104	6	ESE	6 1/4	5
Grey Plover	—	1	—	3	—	2	SE	—	—
Sanderling	—	—	—	8	—	—	SE	—	—
Bar-tailed Godwit	—	2	32	128	80	884	SE	—	—
Whimbrel	—	—	—	41	55	88	SE	—	—
Pomarine Skua	—	—	—	1	—	—	SE	—	—
Arctic Skua	—	—	—	4	—	—	SE	—	—
Little Gull	—	—	—	1	—	—	SE	—	—
Arctic Skua	—	—	—	1	—	—	SE	—	—
Little Gull	—	—	—	1	—	—	SE	—	—
Sandwich Tern	—	3	318	99	36	106	ESE	—	—
Common/Arctic Tern	—	—	7	22	—	18	ESE	—	—
Black Tern	—	—	—	—	—	—	ESE	—	—
Auk sp.	—	—	—	—	—	—	ESE	—	—

SELECTED SEA-WATCH DETAILS, SHOREHAM/WORTHING, SPRING 1982

Species	MARCH		APRIL		MAY		Wind	Hours Watching	Date
	Count	Wind	Count	Wind	Count	Wind			
Divers (all)	15	10	1	2	1	8	S	6 1/2	27
Great Goose	5	18	—	5	—	—	E	4	4
Common Scoter	361	138	8	49	24	5	ENE	2	16
Velvet Scoter	—	3	—	—	—	—	ENE	2	20
Red-breasted Merganser	10	40	10	17	32	—	NE	11 1/2	25
Grey Plover	—	—	—	—	—	—	NE	6	26
Sanderling	—	—	—	—	—	—	NE	6	26
Bar-tailed Godwit	—	—	—	—	—	—	NE	6	26
Whimbrel	—	—	—	—	—	—	NE	6	26
Pomarine Skua	—	—	—	—	—	—	NE	6	26
Arctic Skua	—	—	—	—	—	—	NE	6	26
Great Skua	—	—	—	—	—	—	NE	6	26
Little Gull	—	—	—	—	—	—	NE	6	26
Sandwich Tern	—	217	135	94	73	75	NE	11 1/2	25
Common/Arctic Tern	—	—	3	25	1	18	NE	11 1/2	25
Black Tern	—	—	—	—	—	—	NE	11 1/2	25

SELECTED SEA-WATCH DETAILS, SELSEY BILL, SPRING 1982

Species	MARCH		APRIL		MAY		Wind	Hours Watching	Date
	Count	Wind	Count	Wind	Count	Wind			
Divers (all)	1	2	3	1	2	1	S	7 1/2	14
Great Goose	—	—	—	—	—	—	E	4	13
Common Scoter	—	—	—	—	—	—	ENE	4	13
Velvet Scoter	—	—	—	—	—	—	ENE	4	13
Red-breasted Merganser	—	—	—	—	—	—	ENE	4	13
Grey Plover	—	—	—	—	—	—	ENE	4	13
Sanderling	—	—	—	—	—	—	ENE	4	13
Bar-tailed Godwit	—	—	—	—	—	—	ENE	4	13
Whimbrel	—	—	—	—	—	—	ENE	4	13
Pomarine Skua	—	—	—	—	—	—	ENE	4	13
Arctic Skua	—	—	—	—	—	—	ENE	4	13
Great Skua	—	—	—	—	—	—	ENE	4	13
Little Gull	—	—	—	—	—	—	ENE	4	13
Sandwich Tern	—	—	—	—	—	—	ENE	4	13
Common/Arctic Tern	—	—	—	—	—	—	ENE	4	13
Black Tern	—	—	—	—	—	—	ENE	4	13
Auk sp.	—	—	—	—	—	—	ENE	4	13

**SELECTED SEA-WATCH DETAILS, BEACHY HEAD, SPRING 1982**

Birds	Count	Wind	Hours Watching	Date																							
					MARCH				APRIL				MAY				JUNE										
Divers (all)	32	E	3½	27	SE	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Black Tern	1	E	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Common Scoter	517	SE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Elder	44	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Bar-tailed Godwit	17	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Grey Plover	6	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Avocet	1	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Red-breasted Merganser	33	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Grey Plover	17	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Bar-tailed Godwit	6	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Whimbrel	1	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Pomarine Skua	1	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Arctic Skua	1	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Great Skua	2	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Little Gull	2	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Sandwich Tern	3	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Common/Arctic Tern	243	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Black Tern	1	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3
Auk Sp.	1	ESE	3¾	27	E	3	3¾	10	6	7½	10½	2¾	9	4¾	3½	7	14½	14½	2	15	21	25	1	5	8	1	3

**SELECTED SEA-WATCH DETAILS, BRIGHTON MARINA, SPRING 1982**

Birds	Count	Wind	Hours Watching	Date																							
					MARCH				APRIL				MAY														
Divers (all)	8	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Black Tern	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Common Scoter	428	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Elder	17	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Bar-tailed Godwit	5	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Whimbrel	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Pomarine Skua	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Arctic Skua	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Great Skua	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Little Gull	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Sandwich Tern	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Common/Arctic Tern	313	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Black Tern	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31
Auk Sp.	1	C	6	27	C	1	5½	6	7½	6¾	4¾	2	7	4½	7	26	1	2	8	9	10	11	12	13	14	15	31

234. **LESSER BLACK-BACKED GULL** (*L. fuscus*):—The largest winter count was 18 at Weir Wood Res. on 1 Jan. At Rye and Camber spring passage was recorded between late Feb. and May with Mar. being the best month when 10-30 were regularly noted. Both the British (*L. f. graellsii*) and the Scandinavian (*L. f. fuscus*) races were involved, but by Apr. the darker Scandinavian race predominated. At Worthing 102 E during Apr. were all Scandinavian, the peaks of 29 E on 4 Apr. and 41 E on 5 Apr. coinciding with the peak at Selsey Bill of 34 E on 4 Apr.

There were few summer and early autumn records, thereafter 51 at Bognor on 16 Sept. and 70 there on 10 Nov. were the only notable coastal records. At Chichester GP the regular flock attained a maximum of 81 (mainly Scandinavian) on 13 Nov. Once again, however, the main concentration at the end of the year was in the north of the county; 320 N over Ruspur on 3 Oct. and counts at Colgate refuse tip of 150 on 14 Oct. and 65 on 6 Dec.

235. **HERRING GULL** (*L. argentatus*):—Winter counts included 1,500 at Brighton Marina on 22 Jan., 350 at Saltdean on 14 Jan. and 400 at Bewl Bridge Res. on 19 Jan. A winter movement at Selsey Bill involved 230 W in 3 hours on 16 Jan.

Breeding records came from Rye (53 pairs), Cliff End (38 pairs) and St. Leonards (3 pairs); a full survey of the breeding population is planned for 1983. The only notable counts late in the year were 150 at Camber on 6 Oct., 250 near Cissbury on 5 Nov., 165 at Colgate refuse tip on 12 Dec. and 560 at Shoreham on 16 Dec.

A further small increase in the number of yellow-legged individuals was apparent; most were considered to be *L. a. michahellis* and were noted mainly on the Selsey Peninsula and in the Adur valley. The maximum count of 68 at Shoreham on 29 July confirms the Adur valley as the main location in Britain (*British Birds* 76:192-194). The minimum monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1	—	1	—	4	86	16	75	14	32	1

236. **ICELAND GULL** (*L. glaucoideus*):—The first winter bird at Rye on 20 Feb. (BAEM) and at Pett Level on 21 Feb. (CHD, PWR) was the first since 1972; another first year was seen at Beachy Head on 4-5 Apr. (JFC, RDM, AQ *et al.*)

237. **GLAUCOUS GULL** (*L. hyperboreus*):—1981 Correction. The bird on 20 Apr. was at Birding Gap not Langney Point.

1982 The first spring record was of a first year at Beachy Head on 21 Feb. (RHC, RDM). In the E of the county there followed a string of birds of this age at Rye Harbour on 15 Mar. (per RCK), Seaford Head on 17 Apr. (RFP), and the Crumbles between 15 May and 20 June (JFC, DC *et al.*). The last constitutes the first June record for the county. It is possible all relate to the same individual but a second year E at Brighton Marina on 23 Apr. was different as was another first year at Selsey Bill between 8 and 19 Apr. (PJ *et al.*)

A first summer bird on the Crumbles on 15 Aug. (JFC, DC) may have been the late spring individual. A first winter was at Shoreham on 29 Oct. and 6 Nov. (KN, SPH, ARK) and may have been the same bird which was seen mostly at Selsey Bill, but also at Paghham and Bognor, from 21 Nov. to the end of the year (TPM *et al.*). Finally another first winter was at Pett Level on 27 Dec. (PWR) and a second winter at Langney Point on 29 Dec. (AT).

238. **GREAT BLACK-BACKED GULL** (*L. marinus*):—At both ends of the year the largest counts were from the Adur estuary with 440 on 16 Jan., 320 on 3 Feb., 50 on 8 Aug., 200 on 12 Sept., 610 on 11 Nov. and 510 on 12 Dec. Other traditional sites also recorded good numbers; at the Cuckmere Haven 100 on 27 Jan. and 125 on 13 Dec.; at Rye 70 on 30 May, 185 on 28 July which increased to 430 on 31 Oct. Possibly the same birds were counted at Camber where 400 were noted on 6 Oct. and likewise at Bulverhythe 70 on 1 Oct. which increased to 250 on 31 Oct. This species is unusual far from the coast therefore a count of 230 at Glynde Reach on 26 Dec. is noteworthy. Other inland counts were 33 at Colgate refuse tip on 6 Dec., 30 at Cowdray Park on 12 Dec. and 19 at Darwell Res. on 28 Dec.

240. **KITTIWAKE** (*Rissa tridactyla*):—Recorded throughout the year with small coastal movements noted at several localities. The largest recorded winter movements were 93 E and 26 W from Goring on 7 Jan., 53 off Portland on the same day and 61 E at Brighton on 21 Feb. All sea-watching stations recorded small numbers regularly in spring (Mar-May); at Selsey 88 E and 73 W, at Worthing 102 E and 164 W, and from Brighton Marina 370 E were the log totals.

The Newhaven colony continued to prosper, the count of 350 nests on 22 May being a further increase.

Between mid-Aug. and Dec. Selsey Bill observers recorded a total of 496 W and 326 E whereas at Worthing 502 W and 199 E were logged. Both sites noted peak movements during strong onshore winds on 16 Oct. (305 W and 12 E at Selsey, 100 W and 54 E at Worthing) and 21 Nov. (108 W and 159 E at Selsey Bill, 125 W and 20 E at Worthing).

Singles were seen inland at Bewl Bridge Res. on 13 Apr. and at Arlington Res. on 6 Apr. and 26 Sept.

243. **CASPIAN TERN** (*Sterna caspia*):—1981: One seen 10 Km off Shoreham on 28 July (MPH) has been accepted by *British Birds*.

245. **SANDWICH TERN** (*S. sandwicensis*):—One at Shoreham Harbour from 23-31 Jan. was the sixth wintering record for the county. Easterly spring passage occurred from 24 Mar. to 6 June, in fairly normal strength; totals at the main localities, with peaks in brackets, were: Selsey Bill—2302 (217 on 4 Apr.); Worthing—3669 (378 on 4 Apr.); Brighton Marina—1803 (313 on 4 Apr.); and Beachy Head—1882 (388 on 2 May). For details see tables on pages 34-37. On 15 Apr. one was found dead in a field near R. Arun at Horsham.

At the Chichester Harbour breeding site the first birds appeared on 3 Apr. There were only half as many breeding pairs as in recent years, and only 42 nests were counted, with 72 eggs. Tidal flooding destroyed all but 9 nests, those which were on built-up shingle, from which only 9 young were reared. There was no attempt to re-lay, and failed nesting adults departed. At Rye Harbour, as in previous years, breeding behaviour was noted in June, when 51 present on 1st, dropping to 5-10 for most of the rest of that month; in July first juvenile appeared (with 3 adults) on 9th, then 1-3 daily until 24th, when 8 present. On 15 July an adult was feeding a juvenile in the Brighton Marina car park.

Autumn numbers at Rye Harbour fell gradually from 56 on 1 Aug. until the end of Sept., and in Oct. there were 2 on 4th and 5 on 10th as the last ones. Coastal passage was small, Worthing recording 355 W on 40 days between 12 Aug. and 30 Oct., and Selsey Bill 364 W between 1 Aug. and 30 Oct., the Selsey peak being 64 W on 25 Sept. Inland records were of 2 at Bewl Bridge Res. on 17 Aug.; 2 flying W over Cissbury Ring on 10 Sept.; and at Weir Wood Res. 2 on 26 Aug., 3 on 31st and 17 flying SW in the evening of 19 Sept.

246. **ROSEATE TERN** (*S. dougallii*):—Similar spring numbers to 1980 and 1981, with easterly movements of 2 off Selsey Bill on 2 May and singles off Worthing on 12th, Widewater on 13th, Brighton Marina on 17th and Selsey Bill on 19th with 2 more on 31st.

At Rye Harbour there was a pair on 14 May and adults on 11 and 14 June, 24 July and 7 Aug. One at Pett Level Pools on 28 Aug. was the last. The frequency of sightings in this area is probably partly a result of regular breeding at the RSPB's Dungeness reserve.

247. **COMMON TERN** (*S. hirundo*):—In Chichester Harbour the first birds arrived on 24 Apr., with the main arrival in mid-May, settling after tidal flooding from 23rd-25th. The two colonies contained 49 nests (7 on the artificial structure built for them) and 109 eggs on 8 July, but partial flooding on 23-24 July caused a 50% loss, and finally only c.30 young were reared. Two further pairs reared 3 young in a nearby locality. At Chichester GP two arrived on 4 Apr. On the Society's rafts probably 14 pairs bred, with 21 eggs laid on each of the two rafts; 17 young flew but 3 were found dead. The first record at Rye Harbour was on 18 Apr., up to 210 were present by 16 May; 85 pairs nested, the first chick flying on 27 June, but serious predation, including a badger, reduced the final breeding success to a mere 12-15 young.

Autumn birds included a number passing over Weir Wood Res., where on 15 Aug. 63 in three flocks passed S/SW in the early morning and a further 5 in the afternoon (see also Whimbrel on page 29); on 29th 16 passed S; and on 12 Sept. up to 109 were present (see also Common/Arctic Tern). The last recorded was one at Rye Harbour on 7 Nov.

**248. ARCTIC TERN (*S. paradisaea*):**—The only spring identification was of 3 E at Widewater on 11 May. Autumn records were 1 off Littlehampton on 27 July; 2 at Chichester GP on 25 Aug.; 8 in Chichester Harbour on 19 Sept. and an immature at Shoreham Harbour on 27th; and two immatures at Ardingly Res. on 29 Sept. and 1 on 1 Oct.

**247/248. COMMON/ARCTIC TERN (*S. hirundo/paradisaea*):**—Spring passage occurred between 3 Apr. and 5 June but was very light. Selsey Bill recorded a total of 2034 E (peak 317 on 5 May); Worthing 1939 (peak 724 on 15 May); Brighton Marina 2025 (peak 456 on 13 May); and Beachy Head 4276 (peak 1264 on 15 May). The main movements are detailed in the tables on pages 34-37. On 12 May 22 flew E over Goodwood House.

In June 18 W off Selsey Bill on 27th, and 17 W on 4 July. Autumn passage was generally light. At Weir Wood Res. (see also Common Tern) 40 flew SW on 15 Aug., 21 on 22nd, 94 on 29th, and flocks of 58 and 24 on 12 Sept. when 27 were present. The last recorded was one at Darwell Res. on 17 Oct.

**251. LITTLE TERN (*S. albigrons*):**—First in spring were 2 in Chichester Harbour on 9 Apr., and by 10th birds had appeared at Selsey Bill, Pagham Harbour and Rye Harbour LNR. Easterly passage totals at the main localities between 10 Apr. and 31 May were: Selsey Bill—618 (peak 56 on 3 May); Worthing—448 (peak 152 on 11 May); Brighton Marina—104 (peak 39 on 11 May); and Beachy Head—111 (peak 51 on 11 May). For full details see tables on pages 34-37. The Selsey Bill total, despite careful recording, may have been affected by feeding birds from Pagham Harbour, as 154 were also recorded flying W.

In Chichester Harbour 17 nests were located in two sites above the level of the July tidal flooding, and c. 16 young reared; 4 nests were on the artificial structure provided. In the third site an influx of c. 100 birds, including 5 juveniles, occurred from 25 July to 3 Aug. At Pagham Harbour 60 pairs nested but raised only 15 young. At Rye Harbour LNR 49 pairs nested, rearing 50 young.

Autumn passage was uneventful up to 28 Sept., with only one record after that, one off Selsey Bill on 20 Oct. which was driven off by an Arctic Skua.

**253. BLACK TERN (*Chlidonias niger*):**—1981 Correction:—The record of one at Bewl Bridge Res. on 8 Apr. should be deleted.

**1982:**—Spring passage occurred between 2 and 31 May. At the main localities, totals of birds passing E/NE were 42 at Selsey Bill, 59 at Worthing, 35 at Widewater, 10 at Brighton Marina, and 15 at Beachy Head. Peak was on 12th, with 14 at Selsey Bill, 30 at Worthing, 26 at Widewater and 4 at Seaford. See table on pages 34-37 for full details. At Rye Harbour there were 3 on 6th and 1 on 7th; and between 11th and 13th up to 14 at Chichester GP, 2 at Sidlesham Ferry, and on 11th 4 flying E over fields at Church Norton.

June records were 1 E off Brighton Marina on 4th; 1 in Pagham Harbour from 9th to 27th; and 1 in Chichester Harbour from 20th to 2 July, also in July were up to 4 at Rye Harbour from 18th to 31st, and 1 at Church Norton on 28th.

Autumn coastal passage at Worthing totalled 29 W and 2 E between 17 Aug. and 3 Oct., but only 4 W and 2 E at Selsey Bill, with the last on 4 Oct. In Aug. some 22 were recorded elsewhere, mostly along the coast and on reservoirs and gravel pits; in Sept. about 65; and in Oct. approximately 42 until 25th.

**255. GUILLEMOT (*Uria aalge*):**—Records from the coast were:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Dead.....	10	3	2	—	—	—	—	—	—	—	—	—
Oiled.....	18	3	1	—	—	—	—	—	—	—	—	—
Dead and oiled.....	35	5	2	—	—	—	—	—	—	—	—	—
Others.....	c1500	12	1	8	2	3	5	—	1	—	1	3

Unusually high numbers were recorded during Jan. The influx was first noted at Newhaven, where there were 20 on the 2nd, followed by 20 at Beachy Head on the 3rd and 65 at Widewater on 7th. At Pett an unprecedented movement of 1,200+ flying E in 1½ hrs. on the 9th occurred during strong S winds and snow showers. Another 25 E were logged there in 1½ hrs. on the following day, when there were 10 at Seaford Bay and at Selsey Bill. Nine were seen off Worthing Pier on 11th, 50 off Shoreham Beach on 16th, whilst numbers at Brighton Marina reached a maximum of 60 on the 24th. Thereafter numbers dwindled to an average county showing for Feb.

RCK reports that of 35 picked up dead, Cliff End-Jury's Gap on 31 Jan., most were oiled, the worst oiling incident for some years. See also Auk species.

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

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Dead.....	4	1	—	—	—	—	—	—	—	—	—	1
Oiled.....	1	2	—	—	—	—	—	—	—	—	—	—
Dead and oiled.....	5	3	—	—	—	—	—	—	—	—	—	—
Others.....	8	3	—	6	15	2	—	—	1	3	—	2

It is interesting to note that the Jan. influx of Guillemots into the county did not also involve unusually large numbers of this species. See also Auk species.

**259. BLACK GUILLEMOT (*Cepphus grylle*):**—One in winter plumage was seen feeding off Gasworks Beach, Portslade, on 7 Jan. (SRA).

**260. LITTLE AUK (*Alle alle*):**—One inside Brighton Marina on 14 Feb. (MK, NAGL et al).

**261. PUFFIN (*Fratercula arctica*):**—Two flying E at Beachy Head on 11 May (PC, TWP), was the only record.

**AUK SPECIES:**—Spring passage of unidentified auks at Selsey Bill totalled 29 E and 74 W during Mar-May, with a clear peak of 50 W on 11 May. At Beachy Head 57 were recorded moving E during May. See also tables, pages 34-37.

Monthly totals for the Worthing coast were as follows:

	Jan/Feb.	Mar.	Apr.	May	Sept/Dec.
Passing E.....	221	4	7	29	17
Passing W.....	30	19	1	19	38

In contrast to 1981 (Sx Br. 34:33) very few were noted at the end of the year.

**Cat. C. RING-NECKED PARAKEET (*Psittacula krameri*):**—Throughout the year up to 4 were at Hollingbury Woods area, Brighton, with 7 on 12 Sept. Singles were at Selsey Bill on 5-6 Sept. and Beachy Head on 30 Sept.

**264. STOCK DOVE (*Columba oenas*):**—In Mar. a pair was reported regularly in a small central Brighton garden. Breeding season counts from defined areas appear in the tables on pages 52-53. In the W. Sussex woodland survey they were found in 34 of 40 woods examined. At Housedean Farm, Lewes, nesting took place in the grate of a disused bothy and at Ashcombe Farm incubation was noted at the late date of 21 Sept.

Feeding flocks of up to 180, and totalling 847 were reported from 12 coastal and downland localities during Aug-Dec. including 150 at a Chichester Harbour site as early as 14 Sept. and 50 at Beachy head on 14 Aug. These early gatherings, the lack of similar reports from the Weald and no indication of visible immigration in Oct-Nov. tend to suggest that these flocks may relate to indigenous populations gathering on the main grain growing areas of the county at harvest.

**266. COLLARED DOVE (*Streptopelia decaocto*):**—At the Rye Harbour grain store 100 were noted in Jan. and Dec., 200+ in Nov. and even 40-55 in Mar-May. Also in Mar. were 50 at Shoreham Sanctuary where some annual decline was reported. On 29 Apr. two recently fledged juveniles were seen near Lewes. Autumn and winter flocks included 121

at Coombe's Farm, Lancing, 200 at Cocking, 130 at South Ambersham and 22-60, totalling 394 at 10 other localities. On 22 Sept. one was seen persistently foraging through rotting seaweed at Bognor.

267. **TURTLE DOVE** (*S. turtur*):—First in spring were at Rye Harbour on 24 Apr., St. Leonard's Forest on 26th and Pagham Harbour and Lewes on 29th. The species was apparently widespread by 10 May.

Details of breeding season counts from defined areas appear in the tables on pages 52-53. No records were received from north of a line from Rogate to Ebernoe, Horsham, Blackboys, Crowborough. At Selsey, incubation was noted on the late date of 21 Aug. and 2 newly fledged young on 11 Sept. In the nearby fields up to 49 had gathered by 12 Sept. Last for the year were singles at Beachy Head on 11 Oct. and Rye Harbour on 27th.

271. **CUCKOO** (*Cuculus canorus*):—An early bird flew in from the sea at Goring on 27 Mar. Singles were at Fernhurst on 8 Apr., Bewl Bridge Res. on 9th, Blackdown on 10th, Arundel WFT on 11th, and Horney Common, Cissbury, and Haywards Heath on 12th. By 24 Apr. the species was widespread.

Midsummer reports were few, but included a rufous individual at Horse Eye Level on 1 June, and a juvenile in a Duncock nest at Castle Hill. Flying young were noted from mid-July, with a maximum of at least 5 at Ashcombe, Lewes on 31st. A few juveniles were reported in Aug. and last records came from Rye Harbour on 11 Sept., unusually an adult, and Ashcombe on 13th.

274. **BARN OWL** (*Tyto alba*):—Although records were again widespread, these unfortunately indicated a decline in the numbers of known breeding pairs from 18 in 1981 to 14, in singles present in the breeding season from 31 to 20 and in young raised from 18 to 12. Probable breeding pairs improved by two to six and isolated winter records increased from 17 to 28. An albino bird was seen near Southbourne on 7 Mar. (PC). The Bosham nest-box pair again raised young and two roadside deaths were reported.

279. **LITTLE OWL** (*Athene noctua*):—The number of known breeding pairs fell from the 1981 figure of 41, to 32, otherwise the improvement recorded last year was maintained. Probable breeding pairs remained static at 18, singles increased from 37 to 45 and winter only records from 14 to 25; 21 young were raised, a decrease of two. At West Chiltington three pairs bred on 60 ha whilst three new rabbit burrow sites were reported (SxBR 33: 40).

280. **TAWNY OWL** (*Strix aluco*):—The 24 pairs known to have bred and 27 pairs that probably bred, compared unfavourably with the 75 pairs or calling birds recorded last year, whilst the number of young raised plummeted by 12 to only 9, compared with 34 in 1980. Breeding localities involved fell in proportion to 42, as against 55 in 1981. The totals of 21 breeding season singles and 15 isolated winter records both showed only slight increases. Coverage was decidedly lower but whether the declines are correlated is difficult to assess without a determined survey.

281. **LONG-EARED OWL** (*Asio otus*):—In the early months birds wintered at five sites but comprised only a maximum of 10 birds. Three at one site in the west of the county were last recorded on 7 Mar. Four were in three central, including two downland, sites; birds were last seen on 7 Mar., 21 Mar. and 17 Apr. Three more were at the last site in the east of the county, leaving on 2 Mar. The only summer record was on the eastern downs on 16 May when one bird was heard 'hooting'.

Probable migrants were seen near Bewl Bridge Res. in Oct. and at Hastings on 2 Dec. A maximum of 5 birds were wintering late in the year at four sites including one at a regular downland site not occupied earlier in the year; arrival dates at three areas were 29 Oct., 28 Nov. and 4 Dec.

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

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	20	16	19	3	—	1	—	4	38	27	26

A return to more normal numbers after 2 poor years (SxBR, 33:41, 34:35). As always seen in small numbers at many sites. The Jan. total includes 8 at Rye Harbour SSSI and 5 there in Feb. The last spring bird was seen at North Point on 11 May. The July bird was found dead beneath powerlines at Rye on the 29th. In the autumn the first was at Pagham Harbour on 6 Sept. followed by one at Castle Hill NNR on 16 Sept.; after early Oct. seen in many areas. In Oct., 11 were roosting at Beachy Head on the 9th with 6 present the following day.

284. **NIGHTJAR** (*Caprimulgus europaeus*):—The first for the year was on 20 May near Patching and the last at Woods Mill on 3 Oct. Although there was no organised survey work in 1982, random records were received indicating the presence of at least 47 pairs or churring males from 20 localities. Where comparisons are possible with previous data, numbers appeared to be stable. Reports were received from six new or previously abandoned sites (4 in West Sussex and 2 in East Sussex).

Two corrections are needed to the paper in SxBR 34:75-78. In the caption to figure 1 1980 should read 1981 and, in the discussion, tetrad should read 10 km square.

289. **SWIFT** (*Apus apus*):—First recorded on 25 Apr. at Widewater, followed by singles on 26 Apr. at Durrington, 27 Apr. at Rye and 28 Apr. at Chichester GP and Selsey Bill. A widespread arrival took place during the first week of May when substantial movements were recorded e.g. 74 N at Selsey Bill and 98 N at Worthing on the 3rd, 145 N at Selsey Bill on the 4th and 400 W in 10 minutes at West Chiltington on the 7th. Few large gatherings were seen but N-NW winds on 13 June brought 1,500-2,000 over Friston Forest, thousands over Selsey and 2,000 at Church Norton.

At a Brighton colony birds arrived on 5 May and screaming started on 9 May. Departure from breeding colonies was during the night 2-3 Aug. at Storrington and East Grinstead and on 7 Aug. at Mannings Heath. Autumn passage continued late with up to 10 birds at 10 sites during 1-10 Oct. The last records were singles on 18 Oct. at Fairlight, 6 Nov. at Selsey Bill (DH, BJ, CNJ), and 10 Nov. at Gatwick (MJS-H); the last 2 are the latest county records.

291. **ALPINE SWIFT** (*A. melba*):—Two records; one at Rye harbour LNR on 9 Apr. arrived from the S and departed E (GLC, NJC *et al*) and one flying up to the façade of the Hotel Metropole, Brighton on 14 Apr. (KN). Both have been accepted by *British Birds*; and are the two earliest yet seen.

293. **KINGFISHER** (*Alcedo atthis*):—Despite recent requests for all records, even fewer have been recorded than in recent years with continued comments on the scarcity of this species.

During Jan. and Feb. about 17 were at 11 coastal and 6 inland sites. In the breeding season birds were present at only some 20 potential breeding sites, and breeding was proved, or strongly suspected, by 8 pairs at 7 sites. Three pairs each had 2 broods, and one second brood was of 7 young successfully fledged.

In the last two months of the year some 23 birds were at 10 coastal and 13 inland sites. All records at any season are urgently required.

297. **HOOPOE** (*Upupa epops*):—One at Beachy Head on 10 May was the only record. It is unlikely that fewer have ever been seen in Sussex in one year.

298. **WRYNECK** (*Jynx torquilla*):—1981:—One near Nutley on 12 Sept. brings that year's total to 25.

1982:—For the third year running there were no spring records. In a very poor autumn only 3 were seen, all in Sept., at Denne Park, Horsham on 15th, Sidlesham Ferry from 26 Sept-5 Oct. and Beachy Head on 30th. It is as long ago as 1962 when fewer were seen in autumn in Sussex; there were 2 that year, with 1 in spring.

300. **GREEN WOODPECKER** (*Picus viridis*):—During the breeding season 89 pairs or single birds were reported from sites throughout the county (c.f. 92 in 1979). The woodland survey in W. Sussex found them in 27 of 40 woods examined. The 20-year programme for the assessment of this species' distribution continues and all records, particularly from defined areas, are still required.

On a lighter note, how one came to tumble down a house chimney in Uckfield in Aug. (happily restored to the wild none the worse) remains a mystery. Presumably it could not have been smoke-bathing but perhaps the round black orifice was mistaken for a more natural and comfortable haven!

302. **GREAT SPOTTED WOODPECKER** (*Dendrocoptes major*):—Breeding season counts were of 2 pairs on 60 ha at West Chiltington, 5 at Buchan Park (70 ha), 6 on 250 ha between East Grinstead and Weir Wood Res., 5 along the 8 Km of the Bluebell Railway and 9 in 34 Km of random counts in the NW of the county. The woodland survey in W. Sussex found them in 38 of 40 woods examined. A 20-year study of the distribution of this species continues.

303. **LESSER SPOTTED WOODPECKER** (*D. minor*):—During the breeding season the species was reported from 33 localities and it was estimated that 4 pairs were in approximately 250 ha N of Weir Wood Res. The woodland survey in W. Sussex found them in 14 of 40 woods examined. Some 19 further localities featured the species during the winter.

310. **WOODLARK** (*Lullula arborea*):—The only records were of 2 together on the beach at Church Norton, 9-11 Jan. (many observers) and 14 feeding in a cereal field in the northwest on 21 and 22 Nov. (AJ, PT); the latter were probably from a Hampshire breeding area.

311. **SKYLARK** (*Alauda arvensis*):—Cold weather movements were reported between 9 and 11 Jan., the largest number being 405 W or SW at Goring beach on 9th, 425 N in one hour at Brighton Marina and 1,500 W in one hour at Crowborough on 11th. By contrast, a steady eastward movement of about 100 birds per hour took place over Buchan Park, Crawley, on 17-18 Jan. A flock of about 500 was in winter wheat near Lewes on 13-14 Feb.

In the breeding season there were 9 territories between Arlington Res. and the railway, and 23 pairs on Pulborough Brooks. Counts in defined areas are shown on pages 52-53.

Some westerly movement was seen in Oct. and Nov., principally in mid-Oct.; e.g. 100 W at Beachy Head on 9th, 22 W at Bognor and 32 W at Bracklesham on 10th, and 140 W in 45 minutes at Bewl Bridge Res. on 17th. At the end of the year the larger flocks in Nov. were 400 at Cissbury and 226 at Selsey, and in Dec. 230 on Pevensy Levels.

313. **SAND MARTIN** (*Riparia riparia*):—First in spring was 1 at Chichester GP on 15 Mar. with singles at Arundel WFT on 17th and Arlington Res. on 21st. Ones and twos arrived at 5 widely scattered localities on 27th and 41 were at Chichester GP on 29th with similar numbers at many places in early Apr. Detailed breeding season reports were received from 4 localities: West Heath Common, 55 pairs; Steadham Common, 20 pairs; Coates Common, 100 pairs; and Rye 20 pairs at 2 sites.

Up to 1,000 were seen at Rye Harbour in mid-July but no large gatherings were then noted before late Aug. with 5,000 roosting at Pett Pools on 29th, 500 at Arlington Res. on 8 Sept. and 1,000 W at Beachy head on 11th. Small numbers were present throughout Oct. with 1 at Chichester GP on 6 Nov. and 3 at Rye on 24 Nov., a late date.

314. **SWALLOW** (*Hirundo rustica*):—First recorded on 1 Apr. with singles at Sidlesham Ferry and the Cuckmere; by 5th a further 11 had been seen at 8 widely scattered localities. Arrivals continued well into May with peaks of 500 at Arlington Res. on 6 May and 192 N at Selsey Bill and 43 N at Brighton Marina on 11th.

The breeding season was unexceptional. Large departures began in early Sept., with maximum counts of 2,700 at Selsey Bill on 5th and 3,000 W per hour at Beachy head on

11th, and continued well into Oct., e.g. 2,000 at Beachy Head on 10th. Nov. records were widespread, the last being 2 at Selsey Bill on 27th and 1 at Pett Pools on 28th.

316. **HOUSE MARTIN** (*Delichon urbica*):—First reported at Rottingdean on 30 Mar. with 3 further scattered singles in early Apr. On 7 Apr. 3 were present at Chichester GP and 7 at Arlington Res. and the species was widespread by 10th. The largest concentration of the spring was 300 at Bewl Bridge Res. on 30 Apr. but arrivals continued into May with 96 N at Selsey Bill and 40 N at Brighton Marina on 11th (c.f. Swallow).

At Maynards Green 48 nests were successful, 12 out of 25 being double brooded.

Autumn passage was good with large numbers seen from mid-Aug., e.g. 1,000 at Bewl Bridge Res. on 18 Aug., 6 Sept. and 3 Oct. On 11 Sept. 5,000 moved S at Selsey Bill and 7,000 W per hour at Beachy Head; 1,000 were seen on a (large) Brighton roof on 17 Sept.; 5,100 passed E at Ferring on 30th with 2,500 there on 8 Oct. and 1,000 at Beachy Head on 14th. Nov. records were widespread with 10 individuals at 5 localities in the last week. The last for the year were 3 at Brighton Marina, 1 at Moullescoomb and 1 at Fontwell on 1 Dec., the last remaining until 3rd.

318. **TAWNY PIPIT** (*Anthus campestris*):—1980:—One at Littlehampton West Beach on 3 Sept. (RG). This brings the year's total to a record 13.

1981:—Five records. Singles were noted flying W over Selsey Bill on 31 Aug. (BAEM), at Roedean on 6 Sept. (NAGL), on Pett Level on 12 Sept. (PJG, PIH *et al.*) at Beachy Head on 26 Sept. (PJA, MS-S) and Pagham Harbour on 3-4 Oct. (JA, ACM, MT *et al.*). All records have been accepted by *British Birds*.

320. **TREE PIPIT** (*A. trivialis*):—First recorded at Buchan Park on 6 Apr. but as in recent years, very few, no more than 12, migrants noted on the coast. During the breeding season, widespread random reports suggested the presence of up to 157 pairs or singing males (118 in 1981). These fragmentary reports do not reflect the true breeding status of this species.

Autumn passage involving up to 250 birds was first noted on 9 Aug. at Haring Down and finally at Pett Level and Selsey Bill on 10 Oct. Peak counts came from Cissbury where 120 in total were noted in passage during Aug. and Sept.

322. **MEADOW PIPIT** (*A. pratensis*):—Again reported as scarce in the early months (SxBR. 34:57) at Rye Harbour and also on the E Sussex Downs, with 40 on 5 Jan. at Widewater being the largest count. Spring migration started in mid-Mar. with peaks at Selsey Bill of 140 on 27 Mar. and 99 on 29 Mar., and on 3 Apr. 100 at Brighton Marina, 250 Seaford Head—Cuckmere and 100 at Newhaven.

Breeding season counts from defined areas are on pages 52-53. Other larger counts included Cuckmere (Exceat-Arlington), 12 pairs; Amberley Wild Brooks (Greatham-Houghton), 43 pairs; Pulborough Brooks, 11 pairs; Pagham Harbour, 15 pairs; Ham Marsh, Sidlesham, 6-9 pairs and Bewl Bridge Res., 20 pairs.

Autumn passage lasted from Sept. to early Nov. with the peak in late Sept/early Oct. with 200-300 birds recorded at each of the following sites: on the Downs at Cissbury and Castle Hill; on the coast at Pett, Beachy Head, Brighton, Littlehampton, Bognor and Selsey. Inland movements were recorded at Buchan Park. Numbers declined at the end of the year, the largest flocks being 25 in the Cuckmere in Nov. and in Dec. 30 at Rye, 43 roosting at Iping Common and 226 roosting at Chailey Common.

324. **ROCK PIPIT** (*A. spinoletta*):—Counts in Jan/Feb. were rather low, the maxima being 10 at Widewater, 12 at Cuckmere Haven, 13 at Worthing Beach and 20 at Rye Harbour. No records were received for May-Sept!

Probable immigration in Oct. produced 7 at Brighton Marina and up to 15 at Bognor and also at West Beach, Selsey. Inland records of the British race *petrosus* were 1 at Bewl Bridge Res. on 14 Oct. and 3 on 30 Dec. at Arlington Res.

Accepted records of birds of the Continental races *spinoletta* (Water Pipit) or *littoralis* (Scandinavian Rock Pipit), with characteristics closest to *spinoletta*, were more frequent than usual. One was at Sidlesham Ferry from 10 Feb. to 14 Apr. and again from 29 Oct. to



16 Dec. with perhaps the same individual at Pagham North Wall on 7 Mar. Singles were at Widewater on 22 Feb., 30 Mar. and 1 Apr.; the Cuckmere on 22 Feb. and up to 3 at Barcombe Mills Res. from 21 Nov. into 1983.

335. **YELLOW WAGTAIL** (*Motacilla flava*):—The first singletons reached Birling Gap, Worthing beach and Selsey, on 4 Apr. On the next day 2 flew over Brighton Marina and 2 were at Rye Harbour; the 6th brought singles near Normans Bay and at Arlington Res., and by 10th there were 10 on Horse Eye Levels. At Selsey Bill 66 arrived between 4 Apr. and 13 May with a peak of 13 N on 25 Apr.

Breeding season counts, compared with those of 1980 and 1981, showed stability at Pulborough and Amberley Wild Brooks, 40 pairs, and Glynde Levels, 10 pairs. There were declines in the Adur valley N of Upper Beeding from 4 to 2 pairs, Pett Level from 11 to 8 pairs, Brede valley from 28 to 15 pairs. Happily there were increases in the Cuckmere valley from 2 to 5 pairs, and probably at Rye Harbour from 26 to about 30 pairs.

By 15 Aug. 80 had already gathered at the Crumbles, but passage was most pronounced in the last week of the month. Peak numbers flying W at Bognor were 62 on 23rd, 107 on 28th, 42 on 29th, and at Littlehampton, 75 on 24th. The largest gatherings were at Beachy Head with at least 250 on 25th and 200 on 29th; on the Downs near Steyning, 84 on 28th; on the same day 83 were at Selsey and 70 at Pett. A roost near Bramber held a maximum of 58 on 29th. In Sept. there were 120 at Cissbury on 4th, 100 in the Cuckmere and 75 at Pevensey on 9th, 76 at Selsey on 10th, and 150 at Beachy Head on 11th. On 19 Sept. about 50 were roosting by the R. Arun at Ford. The last few were at Selsey and Pett on 9 Oct., and at Cliff End, Bognor, and Ferring, on 10th.

A male showing the characteristics of one of the races *cinereocapilla* or *thumbergi* was at Pett Pools on 7 and 20 May. Birds showing the characters of the Blue-headed Wagtail, *M. f. flava*, were at Horse Eye Level on 10 and 25 Apr., Arlington Res. on 13 Apr. (2) and 8 May. Rye Harbour on 16-17 May, and a pair on 18th, and Widewater on 10 Aug.

327. **GREY WAGTAIL** (*M. cinerea*):—In Jan. and Feb. reported from 4 coastal and 12 inland localities, mostly as single birds; 10 roosted with Pied Wagtails at Cuckfield Golf Links 8-14 Jan. There was no clear evidence of spring passage.

In the breeding season, pairs were reported from only 25 sites—this may merely reflect less coverage. Absence was noted from one traditional site.

A single bird was at Selsey Bill on 10 July. A small passage was noted on the coast and at Cissbury from late Aug. into Oct. Roughly twice as many moved W as E. Most records were of single birds, but 6 flew E at Widewater, and 7 E, 1 W at Bognor, on 16 Sept.; there were 6 at Beachy Head on 18th and 7 on 19th. In Nov. and Dec., the species was reported from 9 coastal and 19 inland sites.

328. **PIED WAGTAIL** (*M. alba*):—Winter roosts documented were of 100 by Eastbourne Station and 95 at Cuckfield golf links in Jan. and 40 in Marsham recorded in Feb. Other pre-roost gatherings noted were 43 at Sinfold in Feb., 30 at Ambersham and 40-50 at Woodcote during Feb./Mar. An indication of severe weather was 52 feeding on the beach at Worthing on 23 Jan. Later in the year a Bramber roost peaked at 137 on 29 Aug. and 70 roosting at E. Grinstead in Sept. had fallen to 30 by Dec.; 140 used a reedbed at Southsea on 26 Dec. There was a pre-roost gathering of 70+ at Mannings Heath on 8-9 Dec. and 51 fed in a *brassica* field at Rowfant on 16 Dec.

Seventeen birds showing the characteristics of the White Wagtail, *M. a. alba*, were seen between 2 Apr. and 9 May, mostly in coastal localities. All were singles except for 3 on 13 Apr. at Arlington Res. and 2 on Thorney on 11 Apr. One was at Pett Pools on 7 Sept.

329. **WAXWING** (*Bombycilla garrulus*):—One at Roffey on 13 Jan. (JGTH, CHH).

331. **WREN** (*Troglodytes troglodytes*):—Counts of numbers breeding in defined areas are shown on pages 52-53. At some sites e.g. Sullington Warren, Buchan Park, Horney Common, the severe weather early in the year resulted in noticeable decreases. At Selsey Bill a small influx was noted on 23 Oct.

333. **DUNNOCK** (*Prunella modularis*):—Counts of numbers breeding in defined areas are shown on pages 52-53.

336. **ROBIN** (*Erithacus rubecula*):—Counts of numbers breeding in defined areas are shown on pages 52-53.

338. **NIGHTINGALE** (*Luscinia megarhynchos*):—First recorded in spring at Lullington and Blatthington on 16 Apr.; in song at Pett on 18 Apr. and at Crouch Common Reserve on 19 Apr. One arriving from the sea at Brighton on 19 Apr. was the only other record before an apparent widespread arrival on 25 Apr.

During the breeding season only 83 singing birds were recorded from 38 tetrad; such incomplete data allow no comparison with previous years.

At least 31 were recorded during the autumn, the majority, as usual, at Beachy Head with peaks of 6 and 5 on the typical dates of 14 Aug. and 22 Aug. respectively, although at least 7 were calling in Ecclesbourne Glen on 9 Sept. The last were noted at Littlehampton on 17 Sept. and at Belle Tout on 18 Sept.

342. **BLACK REDSTART** (*Phoenicurus ochruros*):—A good year for the species despite no evidence of breeding; the approximate monthly totals were as follows:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
18	8	21	18	4	3	—	1	—	51	68	22

All wintering individuals were recorded along the coast between Selsey Bill and Eastbourne with up to 7 seen in the Shoreham area in Jan. Fewer were seen in Feb. but several remained into Mar. including one at Brighton Marina until 22nd, thus clouding the arrival of spring migrants, the first of which may have been as late as 16th, at Durrington. All migrants were seen along the coast, with the exception of 1 at Steyning on 4 Apr., and most were recorded during 24 Mar-3 Apr., 4 were present at Church Norton on 27 Mar. and 4 at Beachy Head on 28th. Apart from 3 at Beachy Head on 11 Apr. only scattered singles were recorded after 3 Apr., the last at Selsey Bill on 26th. Isolated singing males were present at four sites from mid-May to early June but no other evidence of breeding was reported. On 15 June a female was seen at Rye Harbour.

After an early migrant at Beachy Head on 29 Aug. none were seen until 17 Oct. when singles were noted at Ferring and Newhaven. Autumn passage was particularly heavy in late Oct/early Nov. with peak counts of 8 at Beachy Head on 31 Oct. and 12 at Selsey Bill on 1 Nov.; most other records came from coastal localities. Most had left by mid-Nov. but a further 13 were seen in the last week of Nov. including 5 at Selsey Bill on 27th. All Dec. records were coastal apart from singles at Crawley on 17th and Barcombe Mills Res. to 28th. Up to 5 were at Shoreham Beach during the month.

343. **REDSTART** (*P. phoenicurus*):—Earliest reports were from Belle Tout and Selsey Bill on 10 Apr.; by 8 May 42 had been recorded widely along the coast between Beachy Head and Chichester Harbour. The species was subject to a breeding season survey during 1982, the results of which appear on page 64.

First autumn movement was noted at Birling Gap and Beachy Head on 24 July and reports all along the coast indicate a total passage of up to 500 birds. Peak counts were at Beachy Head and Cissbury where 70 and 120 respectively were noted during the autumn. The last for the year was a very late female at Chatley Common on 27 Nov.

344. **WHINCHAT** (*Saxicola rubetra*):—Recorded as follows:

Apr.	May	June	July	Aug.	Sept.	Oct.
15	14	—	1	22	34	70

Recorded in spring from 18 Apr., when singles arrived at Selsey Bill and nearby Church Norton, until 7 May, with only 29 in this period including 6 at Selsey Bill on 29 Apr. No breeding seasons reports were received.

An early autumn migrant appeared at Sidlesham Ferry on 6 July but none was then seen for another month. In the second half of Aug. return passage was fully under way with an influx on 28th when records included 10 at Selsey Bill, 26 at Steyning, 10 at Castle

Hill, 8 at Crowlink, 20 at Beachy Head and 30 at Pett Level with 40 on Downs behind Brighton on 29th. Good numbers were present throughout Sept. but a count of 100 at Beachy Head on 10th was not reflected elsewhere and no other notable arrivals were apparent. At least 50 were still present at the end of the month and a late influx occurred on 30th, bringing 15 to West Beach, Littlehampton, 10 on East Brighton GC, 20 at Beachy Head and 13 elsewhere. Only 12 were seen after this, the last being singles at Birling and Roffey and 2 at Pett Level on 23rd.

345. **STONECHAT** (*S. torquata*):—Up until mid-Mar. 36 birds were reported from the coast, levels and river valleys, and there was a female at Bewl Bridge Res. on 14 Feb. Random breeding season records are as follows (\* indicates number of young):

Selsey .....	1 (6*)	Ashdown Forest .....	9 (1*)
Stedham Common .....	1	Whitbread Hollow .....	1
Iping Common .....	2 (4*)	Belle Tout—Birling Gap .....	3 (2*)
Ambersham Common .....	1	Birling Gap—Cuckmere .....	1 (2*)
Littlehampton .....	1 (2*)	West Crowlink .....	1 (1*)
Shoreham Airport .....	1	Jewington .....	1 (2*)
Chalvey Common .....	3 (1*)		

The total of 26 compares with 29 in 1981, but 6 further single birds were reported from likely breeding habitats. The species does not appear to have recovered after recent hard winters.

Reports from the Downs, estuaries and coasts in Sept. and Oct. indicated the presence of 40 and 46 birds, respectively, no doubt reflecting autumn dispersal and perhaps migration as numbers fell to 23 in Nov. and 17 in Dec. Perhaps reflecting the mild winter several birds were present on Ashdown Forest and near Crawley until Dec.

346. **WHEATEAR** (*Oenanthe oenanthe*):—First recorded on 14 Mar. with singles at Selsey Bill and Ferring. Scattered singles were then seen until 27th when the first influx of the spring occurred with 16 at Pagham Harbour, 10 at Goring, 7 at Beachy Head, 9 at Langney Point and 14 elsewhere. A further arrival on 2-3 Apr. brought 20 to Selsey Bill, 30 to Worthing, 16 at Shoreham Beach, 13 at Brighton Marina, 15 at Beachy Head and 20 elsewhere. None were then seen until late Apr. with 12 at Pagham Harbour and 12 at Brighton Marina on 29th; few were seen after this.

During the breeding season 12 pairs at Rye Harbour raised 20 young and 3 pairs nested at Pett. None was reported from Langney Point or from the Downs. An early juvenile was seen at Church Norton on 11 July.

Autumn passage started in late July with 3 at Beachy Head and 2 at Sompting on 25th but was unexceptional until there were 120 at Selsey Bill, 60 at Steyning, 30 at Crowlink, 62 at Beachy Head and 40 at Pett Level on 28 Aug. and 31 at Shoreham and 47 on Downs behind Brighton on 29th (c.f. Whinchat). Numbers soon decreased and although present throughout Sept. in good numbers, e.g. 38 at Brighton Raccourse on 15th, no major movements were noted. On 3 Oct. 40 were seen at East Brighton GC and a further 25 between Shoreham and Beachy Head but few were recorded after this despite 13 at Pett Level on 9th and 8 at East Brighton GC on 27th. Scattered individuals were still being found in late Oct. and as many as 18 were recorded in Nov., mostly in the first two weeks but one was seen at Chichester Harbour on 20th, one at Littlehampton on 2 Dec. with one surviving at Shoreham Fort from 27 Nov. into 1983. While most unusual, this is not unprecedented, there are at least 3 previous late Dec. records for Sussex, 2 in Jan. and one which wintered near Camber in 1960-61.

359. **RING OUZEL** (*Turdus torquatus*):—A very poor year for this species, the first of only five spring records were at Cissbury and Beachy Head on 5 Apr. with singles at the latter on 9th and 24th and at Balsdean on 23rd.

One was seen at Beachy Head on 29 Sept. but no further records came until 3 there on 9 Oct. rising to 9 on 14th. Elsewhere singles were found at Cissbury, Swanborough, South Heighton, Fairlight and Pett with 4 on the Downs W of Lewes on 14th and 2 there on 22nd. The last was at Beachy Head on 31 Oct.

360. **BLACKBIRD** (*T. merula*):—Details of breeding season counts from defined areas are given in the tables on pages 52-53. At Ashcombe a first winter female trapped during cold weather weighed 88 gm on 13 Jan., by 25th it had increased its weight to 108 gm. Autumn passage at Ashcombe was very poor, only 52 being ringed during Oct-Dec. (c.f. 192 in 1981). Other counts included 40 at Beachy Head on 19 Sept.; 33 at Darwell Res. on 12 Dec. and 59 in 2 Km at High Salvington on 23rd.

364. **FIELDFARE** (*T. pilaris*):—In early Jan. large flocks were recorded, including 400 at Rogate and 600 at nearby Chithurst; 350 in Arun valley; 350 near Fulking; 300 at Barcombe Res. and 2,000 on Pevensy Levels; 716 flew W at Worthing during 8-10 Jan. when 200 arrived to feed in two small holly trees in Hastings. After this numbers were unexceptional with 250 at Wivelisfield on 6 Feb. and Fairgate on 6 Mar. being the highest counts. There were still 30 at Bewl Bridge Res. on 20 Apr. but only 2 were seen in May, at Woods Mill on 2nd and Bognor on 28th.

After one at Church Norton on 16 Sept. none was then seen until mid-Oct. when widespread arrivals were noted. By 28 Oct. 350 were present at a winter roost on Ashdown Forest. Winter numbers were generally poor, the largest flocks being 370 at Rudwick and up to 1,000 on the Adur Levels in mid-Dec.

365. **SONG THRUSH** (*T. philomelos*):—Details of breeding season counts from defined areas are given on pages 52-53. Late autumn passage at Ashcombe was very poor (less than half normal) with very few first year and 'continental' birds trapped.

366. **REDWING** (*T. iliacus*):—After 1,000 on Pevensy Levels on 1 Jan. numbers were generally poor, 200 at Vines Cross on 28 Feb. being the largest flock. Spring movements were well below normal, the last being seen in Friston Forest on 16 Apr.

After an early individual at Hove on 11 Sept. none was recorded until early Oct. and the species was widely reported in small numbers, from mid-month. Winter numbers were again poor, the highest count 300 near West Chiltington on 29 Dec.

367. **MISTLE THRUSH** (*T. viscivorus*):—Details of breeding season counts from defined areas are given on pages 52-53. In an unexceptional year the largest gatherings reported were 33 at Greatham on 22 July; 32 near Slimfold on 4 Oct. and 32 at Blackdown in a 4½ hours 'Atlas count' on 28 Nov. Visible passage was recorded at Bognor with 4 W over sea there on 22 Sept. and 1 W on 24 Oct.

369. **CETTI'S WARBLER** (*Cettia cetti*):—1981.—One at Littlehampton on 19 Sept. (RG).

1982.—The overwintering bird at Pett Pools (SxBR. 34:41) was last seen on 28 Feb. (KB, CHD). Up to 3 were at Arundel WFT until 8 Mar. (RMB *et al*). In the breeding season two single singing birds were present in the south central and eastern parts of the county, but there was no evidence of breeding.

A single bird was at Pett Pools from 23 Sept. to the end of the year (KB, CHD) and up to 3 at Arundel WFT from 28 Sept. to 31 Dec. (RMB *et al*). Another was near Arlington Res. on 17 and 19 Oct. (JW).

373. **GRASSHOPPER WARBLER** (*Locustella naevia*):—First heard at Arundel WFT on 21 Apr. and at Selsey on 24 Apr. The only other coastal reports until mid-May were from Church Norton, Littlehampton and Beachy Head. There were 18 breeding season records (22 in 1981) mainly from the southern half of the county, especially the Downs and river valleys. Return passage involving 8 birds was noted between 1 Aug. and 3 Oct. mainly along the coast.

378. **SEDGE WARBLER** (*Acrocephalus schoenobaenus*):—The first were at Arundel WFT on 6 Apr. and Chichester GP on 7 Apr. followed by birds on the 9th at Rye Harbour, Normans Bay and inland at Weir Wood Res., and 3 at Church Norton on the 10th. By 25 Apr. 22 were in song at Chichester GP.

Breeding season counts are detailed on pages 52-53. Other larger counts were Cuckmere (Exceat-Arlington), 23 males; Lower Ouse, 9 males; R. Arun (South Stoke-

Houghton Bridge), 18 males and (Houghton Bridge-Greatham Bridge), 32 males; Selsey West Fields, 7 pairs.

At the two ringing sites in the Cuckmere 23 adults and 128 first year birds were trapped in July and Aug. Passage at Beachy Head commenced on 1 Aug. but only 13 were trapped during the autumn as against a yearly average of c.50 over the previous 22 years. Numbers elsewhere were also very low with maxima of 12 on 7 Aug. and 11 on 11 Aug. at Selsey West Fields and 8 at Bewl Bridge Res. on 1 Sept. The only Oct. records were of one near Crawley on 4th and at Beachy Head on 9th.

382. **REED WARBLER** (*A. scirpaceus*):—The first of the year on 9 Apr. at Chichester GP equalled the previous earliest record (1966, Selsey Bill). The next were singles at Arundel WFT on 19th and Pett Level on 22nd. By 28 Apr. at last 60 were estimated singing at Arundel WFT.

Breeding season counts are detailed on pages 52-53; other records included Cuckmere (Exceat-Berwick), 10 males and R. Arun (South Stoke-Houghton Bridge), 6 males. On Horse Eye Level one was singing from a powerline 30 feet above the ground.

At two ringing sites in the Cuckmere 72 adults and 184 first year birds were trapped in July and Aug. Passage at Beachy Head commenced on 31 July with maxima of 25 on 28 Aug. and 15 on 1 Oct. Late Oct. records were of singles at Pett Level on 23rd, Beachy Head on 24th and Rye Harbour on 27th.

388. **MELODIUS WARBLER** (*Hippolais polyglotta*):—Three autumn records of singles; at Sidlesham Ferry on 10 Aug. (BJ, CMI, PJ), at Selsey West Fields on 10-14 Sept. (MEJ, RES, AW *et al*) and Beachy Head on 2-3 Oct. (CFW, AQ, MEN *et al*). This is the best showing since 1962.

389. **DARTFORD WARBLER** (*Sylvia undata*):—One migrant at Beachy Head on 5 and 10 Oct. (CFW, NJD *et al*). No birds were seen at the 1981 breeding site after the severe winter.

396. **BARRED WARBLER** (*S. nisoria*):—Three singles were reported from Beachy Head: on 6 Sept. (CFW), 13 Sept. (CFW) and one trapped on 30 Sept. (RDME, MIB). These continued the good run of sightings in the 1980's.

397. **LESSER WHITETHROAT** (*S. curruca*):—First for the year were singles at Parham on 14 Apr. and Pagham on 22nd, followed by scattered records until a more general arrival during the first two weeks of May. Breeding season reports of 1-7 pairs came from 35 localities, the species being scarce again in the north of the county. At Ashcombe Bottom, Lewes, good numbers of adults were ringed but breeding success apparently poor with proportionately few juveniles in contrast to Whitethroat and Blackcap. Details of counts from defined areas appear in the tables on pages 52-53.

Autumn passage was widely reported from many coastal and several downland areas from late July until late Sept. At Beachy Head 121 were ringed, a 21% increase *c.f.* 1981. Maxima here were 200 on 28 and 29 Aug., and 150 on 5 Sept., while at Littlehampton 6 were counted on 23 Aug., at Pagham 9 on 26 Aug., at Selsey Bill 9 on 28 Aug. and at Rye Harbour 15 on 9 Sept. Inland, the peak at Moulscroomb was 36 on 11 Aug., at Steyning 32 on 28 Aug. and at Cissbury 64 on 9 Sept. Several Oct. stragglers were reported, with a final single at Beachy Head on the 14th.

398. **WHITETHROAT** (*S. communis*):—First recorded in spring at Rye Harbour and Whitbread Hollow on 9 Apr., at Newhaven on 10 Apr. and at Cissbury Ring and Weir Wood Res. on 12th. During the breeding season the species was very widely reported and often numerous throughout the county. In downland and scrub at Ashcombe Bottom, 47 juveniles were ringed (*c.f.* 17 in 1981 and 54 in 1980). Details of counts from defined areas appear in tables on pages 52-53.

Autumn passage from late July to mid-Sept. at Beachy Head produced maxima of 250 on 14 Aug. and 5 Sept. and 200 on 29 Aug. Here numbers ringed increased enormously

from 88 in 1981 to 197. Elsewhere there was a maximum count of 108 at Cissbury on 19 Aug., while smaller peaks fell at Selsey on 31 July and 21 Aug., Littlehampton on 25 Aug., Pagham on 26 Aug., Moulscroomb and Steyning on 28 Aug., and Rye Harbour on 9 Sept. The last for the year were singles at Cuckmere Haven on 3 Oct., Beachy Head on 11 Oct. and an extremely late bird at Arlington on 13 Nov. (JW).

399. **GARDEN WARBLER** (*S. borin*):—First in spring were singles at Worthing Golf Course on 20 Apr. and at Weir Wood Res. and Pagham Harbour on 21st. Then followed scattered Apr. records with the main arrivals during the first half of May.

Breeding season reports of 1-8 pairs came from some 40 localities throughout the county, additionally, the W. Sussex woodland survey found them in 32 of 40 woods examined. At Ashcombe Bottom, in downland scrub, a remarkable resurgence was noted, with 13 adults and 5 juveniles ringed (*c.f.* no birds in 1981 and 19 adults, 8 juveniles in 1979/80); the possible explanation was an abundance of moth caterpillars. Details of counts from defined areas appear in the tables on pages 52-53.

Return passage was noted from mid-Aug. to early Oct. at many places on coast, downs, levels and near reservoirs, with generally only 1-3 birds at a time. Only at Beachy Head were daily totals in double figures recorded, the peak there being 60 on 8 Aug. Numbers ringed here were 31% higher than in 1981 (122 *c.f.* 93). Last for the year were singles at Beachy Head and Shoreham Sanctuary on 9 Oct. and 5 at Beachy Head on 13th.

400. **BLACKCAP** (*S. atricapilla*):—From Jan. to mid-Mar. 28 wintering birds were reported from 8 coastal and 8 inland localities. The first presumed migrants arrived in early Apr. and by late Apr. the species was widespread. In the breeding season it was very widely reported from mainly inland localities. The W. Sussex woodland survey found them in 37 of 40 woods examined. In contrast to 1981, observers in the central part of the county, particularly around Lewes, found the species very abundant, whilst at Ashcombe Bottom the best ever breeding season was experienced with 18 adults and 49 juveniles ringed (*c.f.* 10 juveniles in 1981 and 30 in 1980). See also tables pages 52-53.

Autumn passage at Beachy Head produced maxima of 400 on 9 Sept., 200 on 22 Sept. and 300 on 30 Sept. Numbers ringed here were only 6% higher than in 1981 (758 *c.f.* 714). Peak numbers at Cissbury were 97 on 9 Sept., at Moulscroomb 21 on 10 Sept. and at Belle Tout 100+ on 30 Sept. Smaller counts occurred at many coastal localities from late July right through to mid-Nov. A total of 19 probably wintering individuals was reported from mid-Nov. onwards from 5 coastal and 6 inland areas.

404. **YELLOW-BROWED WARBLER** (*Phylloscopus inornatus*):—One at Littlehampton West Beach on 30 Oct. (PAR).

408. **WOOD WARBLER** (*P. sibilatrix*):—The first spring record was from Sidlesham Ferry on 9 Apr. and by 17 May at least a further 14 migrants were located mainly at coastal sites. Initial survey work in 1982 found more birds than usual in suitable breeding habitat, 17 in West and 27 in East Sussex. A larger percentage than normal remained suggesting breeding, and 7 definite pairs were located with breeding proved in at least three sites. This species is to be the subject of a national breeding survey in 1984.

In the autumn 8 were recorded in passage mainly on the coast, but one was at Bewl Bridge Res. on 7 Sept. which was the last for the year.

409. **CHIFFCHAFF** (*P. collybita*):—Up to 3 wintering individuals were at Church Norton during Jan. and 1 was seen at a Worthing garden on 6 Jan. and 10 Feb. The first Mar. arrivals were a little late with single males at Chichester GP, Pagham Harbour, Arlington Res., and Pett Level on 11th followed by 8 at various localities on 13th. The main arrival was not until 27th when 37 were reported throughout the county. Thereafter the species became widespread though the bulk arrivals were, as so often, delayed by low temperatures during Apr. Details of breeding season counts from defined areas appear in the tables on pages 52-53.

Systematic Counts of breeding pairs or territorial males	Sullington Warren (JNMK)																				
	West Dean Woods (RW) deciduous woodland (12.1 ha)	Kingley Vale NNR (RW) yew, mixed wood, grassland (57.9 ha)	Kingley Vale NNR, exm. (RW) mixed woodland, scrub (60.0 ha)	Adur Levels (AJP) permanent pasture (55 ha)	Buchan Park (RAC) mixed mature woodland (70 ha)	Plumpton Estate mixed downland, wealden farm (400 ha)	Lullington Heath NNR (ALB) downland with scrub (156 ha)	Sullington Warren (JNMK) mixed woodland/scrub (35 ha)	West Chillington (FWD) wealden farm with copses (30 ha)	Bluebell Railway (MJM) railway scrub (8 Km)	Dower House Farm, Blackboys (PCT) 4 mixed woods (20 ha)										
Stock Dove	0	0	0	0	2	7	0	—	4	—	—	—	—	—	—	—	—	—	—	—	—
Turtle Dove	0	0	3	1	0	5	3	—	4	6-10	1	—	—	—	—	—	—	—	—	—	—
Skylark	0	1	0	31	0	16	5	—	3	6-10	—	—	—	—	—	—	—	—	—	—	—
Meadow Pipit	0	0	0	30	0	3	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wren	4	14	18	1	57	38	9	9	—	33-55	25	—	—	—	—	—	—	—	—	—	10-15
Duncock	4	11	11	2	8	34	19	6	—	2-15	7-8	—	—	—	—	—	—	—	—	—	—
Robin	10	42	35	0	33	43	9	16	—	27-48	24-25	—	—	—	—	—	—	—	—	—	—
Blackbird	5	27	27	12	15	109	18	—	—	28-45	15	—	—	—	—	—	—	—	—	—	—
Song Thrush	3	5	4	1	2	31	4	—	—	11-26	2-3	—	—	—	—	—	—	—	—	—	—
Mistle Thrush	2	2	0	0	2	11	2	—	—	11-16	1	—	—	—	—	—	—	—	—	—	—
Sedge Warbler	0	0	0	27	0	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Reed Warbler	0	0	0	37	0	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lesser Whitethroat	0	3	3	1	0	3	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whitethroat	2	7	9	0	0	30	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Garden Warbler	4	2	0	0	3-6	6	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blackcap	4	4	7	0	3	18	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chiffchaff	3	2	5	0	5	12	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Willow Warbler	10	20	21	0	25	62	31	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Goldcrest	1	8	9	0	15	8	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spotted Flycatcher	0	0	0	0	0	4	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Long-tailed Tit	2	1	1	0	3	7	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Marsh Tit	2	3	5	0	0	5	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blue Tit	8	2	1	1	27	38	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Tit	10	14	8	1	28	33	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Treecreeper	1	0	0	0	10	2	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Jay	1	2	2	0	3	6	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Magpie	0	3	4	1	0	20	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chaffinch	13	21	24	7	33	89	31	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Greenfinch	1	0	0	6	2	10	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bullfinch	1	3	5	0	0	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellowhammer	0	5	4	4	4	51	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTE: These are based on Common Birds Censuses; Sullington Warren is a partial CBC.

NOTE: These are based on techniques other than CBCs.

Autumn passage at Beachy Head featured counts of 140 on 18 Sept., 120-130 on 22-23rd and 200 on 30th, with 50 there on 3-10 Oct. On the Downs at Cissbury 202 were counted on 9 Sept. but only 40 were found on 10th. In Nov., up to 3 were reported from 14, mainly coastal, localities on 12 dates including 3 at Beachy Head on 13th and at least 5 at Chichester GP on 21st. Six were still at the latter on 5 Dec., 3 remaining to at least 26th whilst at Church Norton up to 3 were regularly noted until the end of the year. Elsewhere 11 individuals were reported during Dec. from 10 coastal localities, with one at Crawley on 1st.

410. **WILLOW WARBLER** (*P. trochilus*):—First in spring were one at Pagham Harbour and 3 in the Cuckmere on 1 Apr. and the species was widespread by 10th. Further major arrivals took place on or about 15-16th, 20-21st and 2-3 May. At Brighton Marina 16 were seen to arrive in 2½ hours on that morning of 23 Apr. and 10 in 1½ hours on that of 29th. Details of breeding season counts from defined areas appear in the tables on pages 52-53.

In autumn the first peak at Beachy Head was of 500 on 1 Aug. and on 9th, 50 were noted at Rye Harbour and 113 at Cissbury. On 14th further peak counts occurred at Selsey West Fields (66), Beachy Head (400) and Cissbury (174) but on 19th, 194 were at Cissbury. On 28th, 100 were at Beachy Head and a season's maximum of 67 at Steyning. Only small numbers were seen anywhere thereafter and the last to be identified were 2 at Lancing and 1 at Beachy Head on 3 Oct. and further singles at the latter on 11th and 31st.

411. **GOLDCREST** (*Regulus regulus*):—In the early months, reported in low numbers only, with 4 at Rackham the highest of twenty scattered records. While at Rye and Bewl Bridge Res. it was considered badly affected by the cold winter, other observers found no sign of abnormal losses. Breeding season counts for defined areas are given on pages 52-53.

Several different observers provided gratifyingly similar estimates of autumn passage at Beachy Head; generally between 20 and 40 birds a day with peaks of 50 on 29 Sept. and 80 on 10 Oct.—lower than in most years. Elsewhere at the coast, peaks of around a dozen birds were noted at Rye, Pett Level and Brighton, but no more than 3 on ten dates in Oct. at Bognor. The highest Dec. count was of 43 at Iping Common.

412. **FIRECREST** (*R. ignicapillus*):—Outside breeding areas recorded as follows:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2	2	22	4	1	—	—	—	17	44	33	16

The wintering individual at Church Norton (SxBR. 34:46) was seen to mid-Feb., with 2 there on 12th. One was observed at Stanmer on 6 Jan. Spring passage was poor, the first migrants being 2 at Church Norton and 4 at Beachy Head on 13 Mar. After this scattered singles were recorded along the coast into early Apr. with 2 at Stanmer on 16 Mar. and 3 in the Cuckmere on 21st. In mid-Apr. singles were seen at Beachy Head, Hassocks and Stanmer. A late bird was at Beachy Head on 12 May.

A total of 11 singing males was recorded at four sites in W. Sussex. A pair was present throughout the summer at one site while the survey of W. Sussex woodland found three colonies of 2, 3 and 5 males; some females were probably present at these. For further details see page 69. This is by far the largest number yet recorded in the county but probably relates to better coverage rather than a sudden increase.

Return passage, which was exceptional both for the numbers and wide spread of records, was first noted at Beachy Head on 11 Sept. with up to 3 there later in the month; singles were scattered elsewhere. On 20 Sept. one was trapped on Downs W of Lewes and 3 were seen at West Beach, Littlehampton in late Sept. Early Oct. brought 6 to Beachy Head on 3rd but subsequent records were scarce until an arrival on 30th with 4 at West Beach; 1 at Goring; 2 in the Cuckmere; 16 at Beachy Head and 3 at Rye Harbour. On 31st 6 were seen at West Beach and one in a Hove garden while 3 were present at both Goring and Buchan Park, Crawley on 1 Nov. The species was well recorded throughout Nov. with the last at Beachy Head on 13th when 4 were at Church Norton, 2 remaining into 1983. Two appeared at Cissbury and Balcombe on 27th with singles at Runcton, Selsey, Stanmer and Lullington about then. In Dec. the species was much more numerous than usual with 2 at Chichester GP; 3 at Woods Mill on 17th; up to 3 in the Stanmer/Falmer area (one

remaining into 1983); 2 at Devils Dyke on 31st and singles at Runcton, West Beach, Shoreham and the usual Hove garden.

413. **SPOTTED FLYCATCHER** (*Muscivora striata*):—Not recorded in spring before 6 May when 3 arrived at Pagham Harbour, few other migrants were recorded with only 2 records coming from Beachy Head and one from Selsey.

Breeding season counts from defined areas appear in the tables on pages 52-53. At least 35 pairs were reported and of 17 regularly observed nests, 13 were successful, raising 31 young. Squirrels destroyed one nest and Magpies another.

Numbers were generally below average during post-breeding dispersal and autumn passage. Few notable gatherings were recorded during Aug. but in early Sept. 15 were seen at Moulsecoomb on 2nd; 60 at Cissbury on 3rd and 26 at Beachy Head on 4th. These quickly departed, however, and the rest of the month was unexceptional. Eleven were recorded in Oct. with 5 on 3rd along the coast and one at Darwell Res. The last of the year were at Moulsecoomb on 8th and 2 at Church Norton on 10 Oct.

414. **RED-BREASTED FLYCATCHER** (*Ficedula parva*):—One at Belle Tout, Beachy Head on 4 Sept. (CFW) was the first since 1977. It was earlier than most, but not present the following day.

416. **PIED FLYCATCHER** (*F. hypoleuca*):—1981:—One at Church Norton on 27 May was late and brought the spring total to 12.

1982:—A poor spring, first recorded at Itchenor on 20 Apr., with singles at Beachy Head on 22nd; Sidlesham Ferry on 29th and Church Norton and Birling on 2 May.

An early migrant arrived at Beachy Head on 1 Aug. with 2 there and one at Lancing on 8th but only 7 further singles were recorded along or near the coast during Aug. In Sept. 21 were seen at 11 localities with 2 at Beachy Head mid-month and 6 there on 13th. Apart from 2 at Bishopstone on 17th all other records were of single birds. In Oct. one lingered at Bognor to 5th and the last of the year was at Church Norton on 17th.

417. **BEARDED TIT** (*Panurus biarmicus*):—Three at Arundel WFT up to 8 Mar. and a single bird at Pett Pools from the beginning of the year until 6 Mar. were the only records for the first part of the year. In the autumn one was at Pett Pools on 20 July; from 19 Sept. to the end of the year a maximum of 6 were present here. At Pagham Harbour 6 were recorded from 9-21 Oct. and at Crowhurst, 18 on 30 Oct.

418. **LONG-TAILED TIT** (*Aegithalos caedatus*):—Flocks of 40 in Friston Forest on 1 Jan. and 36 at Darwell on 14 Feb. were unusually large, and may have represented 'clumping' in favourable habitats during and after the cold weather.

However, the belief that this species always suffers badly in severe winters was not upheld. All the evidence suggests that in spite of the record low temperatures, numbers in Sussex at least remain high. Increases were again reported from the Pett Level and Marsham areas, while breeding success everywhere appeared excellent. See also tables pages 52-53. An exceptional flock of 83 was counted at West Chiltington on 22 Sept., while 43 other autumn and winter flocks from other localities ranged from 4 to 30 birds, to give a high average of 13 per party. Likewise, 69 seen in 5 hours at Midhurst on 12 Dec. and 46 in 6.6 Km at Darwell on 28 Dec. confirmed that numbers stayed high to the end of the year.

419. **MARSH TIT** (*Parus palustris*):—This appears to be a very constant species in Sussex, being reported every year in the usual low numbers from the usual wide scatter of localities, with little evidence of any change or movement. A ringed individual at Crowborough was seen in every month of the year in the same garden.

In addition to breeding season counts on pages 52-53, the West Sussex Woodland Survey found them in all but one of 40 woods visited, see paper page 69.

In the winter, a count of 7 in Five Hundred Acre Wood, Ashdown Forest on 28 Dec. was the highest received.

420. **WILLOW TIT** (*P. montanus*):—In Buchan Park, Crawley, a pair present all winter was never seen away from the same territory, and later bred there. Similarly, in downland scrub at Ashcombe Bottom near Lewes, an elevation of 250-500, Willow tits together with Marsh tits stay put all winter, whereas nearly all Blue and Great tits move out. Records received from 26 other localities suggest this to be the general pattern.

At West Chiltington there were 2 pairs on 60 ha, at Buchan Park 1 pair on 70 ha and along the Bluebell Railway 1 pair in 8 Km. The West Sussex Woodland Survey found them in 7 of 25 woods around Crawley but only 1 of 15 in the far north-west of the county. Although widely distributed, there seem to be apparently suitable areas of Sussex where the species is absent, whereas Marsh Tit is present, as in the Crowborough area. Negative records for well-searched areas would be welcome. A possible extension in range was reported with several sightings from Moulscroomb Wild Park, on the outskirts of Brighton.

422. **COAL TIT** (*P. ater*):—Though the smallest of its genus, breeding season densities showed no signs of being affected by the previous hard winter. At Buchan Park, Crawley the 14 pairs in 70 ha was slightly above average. Breeding success at Possingworth Park was again excellent, and 5 pairs in boxes in 27 ha were all successful, fledging 44 young from 47 eggs, plus a further 13 young from two second broods. A lower density was found at Weir Wood Res., with only 6 pairs in 125 ha.

In the autumn and winter by far the highest numbers were reported from the Ashdown Forest, with 42 seen on 28 Nov. at the Isle of Thorns area.

423. **BLUE TIT** (*P. caeruleus*):—During the hard Jan. weather there were two reports of birds entering farm buildings to steal grain: at Sidlesham and at Ebernoe, where 50 were timed in and out through the broken window of a store in five minutes.

In the subsequent breeding season, nest box monitoring schemes suggested that while pairs were sometimes down by a third, e.g. 24 in 27 ha at Possingworth Park, fewer failures meant that numbers of young actually fledged was similar to the previous year. Breeding season counts in defined areas are given on pages 52-53.

424. **GREAT TIT** (*P. major*):—As with Blue Tit, the various nest box schemes reported pairs about average or only slightly down, and a generally successful breeding season, with markedly fewer failures among the 13 pairs at Possingworth Park especially. While clutch data is valuable, observers should note that incubating Great Tits may desert if disturbed. Though fledging success was good, numbers ringed at feeders in autumn at both East Grinstead and Friars Gate, Crowborough were well down, and although a heavy beechnut crop may have reduced attendance at peanuts, it was felt that numbers were genuinely low at the end of the year. See also tables pages 52-53.

425. **NUTHATCH** (*Sitta europea*):—Breeding season counts received were of 4 pairs on 60 ha at West Chiltington, 21 pairs in 250 ha N of Weir Wood Res., and 3 pairs nesting within and 1 just outside 70 ha of Buchan Park. Along the 8 Km of the Bluebell Railway, 3-7 pairs were located. The woodland survey of W. Sussex found the species in all 40 woods examined. Also reported were at least 2 pairs in Berwick Wood, Arlington, well south of recently known ranges, as were 2 birds in the Marsham valley, Pett Level on 14 Mar. The use of nestboxes reported from three sites.

427. **TREECREPER** (*Certhia familiaris*):—Numbers apparently remained high; an indication of the density this species can reach was provided by counts at Buchan Park, Crawley and Weir Wood Res. as detailed on pages 52-53.

There were more records from the coast than usual, with reports from Rye Harbour LNR at each end of the year, from Eastbourne and Brighton areas, and singles at Church Norton on 10 Apr. and at Bognor on 18 Oct.; 3 were trapped in autumn at Beachy Head.

432. **RED-BACKED SHRIKE** (*Lanius collurio*):—1981:—A juvenile was seen at West Beach, Littlehampton on 23 Sept. (RG).

1982:—A poor year with only two records. A spring male at Balselean on 17 May (GAS) and an autumn immature at Selsey Bill from 10-18 Oct. (DS, ES *et al*).

433. **LESSER GREY SHRIKE** (*L. minor*):—A male at Birling Gap, Beachy Head from 23-25 July (RE, BE, MK, NAGL *et al*). This has been accepted by *British Birds* and is the 5th for Sussex, the last being in 1973.

434. **GREAT GREY SHRIKE** (*L. excubitor*):—At the beginning of the year one was present in Ashdown Forest from 23 Jan-7 Mar. while another was on Ambersham Common from 15 Feb-28 Mar. An adult was seen at Goring on 15 Oct. but none was reported at the end of the year.

435. **WOODCHAT SHRIKE** (*L. senator*):—1981:—Correction. The bird at Beachy Head was on 31 May not 21st.

1982:—A female near St. Leonards on 20 June was still present at least to 21 Aug. (CAT *et al*). This has been accepted by *British Birds*.

436. **JAY** (*Garrulus glandarius*):—Although Shrub (1979) does refer to a return movement in the spring of 1958, evidence of widespread movements in Apr-May this year must be regarded as exceptional. On 18 Apr. one was seen at Rye Harbour, on 24th 9 flew SE over Worthing and on 27th a tired bird was found on open downland near Lewes. On 4 May one was seen at Mill Hill, Shoreham (the first for 8 years) and on 9th 6 NW were logged at Selsey Bill and on 12th there were 10 at Beachy Head. Selsey Bill saw 9 N on 13th, 3 came in from the sea at Beachy Head on 14th and 1 at Selsey Bill on 15th. Details of breeding season counts from defined areas appear in the tables on pages 52-53.

437. **MAGPIE** (*Pica pica*):—Breeding season reports were of 6 pairs on 30 ha at West Chiltington, perhaps 5-6 pairs on the 725 ha of Rye Harbour and 4 along the 8 Km of the Bluebell Railway; other counts appear on pages 52-53. A party of 8 at Ebernoe on 17 June was unexpected but winter gatherings of up to 40 were widely reported.

438. **JACKDAW** (*Corvus monedula*):—Rather unusually, immigrants were seen coming off the sea at Selsey Bill on 23 Apr. (2), 28th (5), 9 May (4) and at Beachy Head on 14 May (1).

442. **CARRION CROW** (*C. corone*):—A handful of immigrants was reported from Selsey Bill and Beachy Head during 22 Mar-17 Apr. Breeding season reports were of 4-5 pairs on the 70 ha of Buchan Park and 10-12 on the 725 ha of Rye Harbour. On 20 Jan. about 300 were reported gathered at Sompting rubbish tip and, on 12 Feb. 56 at a small sewage farm in TQ 33.

442b. **HOODED CROW** (*C. c. cornix*):—Singles were reported from Lullington Heath on 1 Jan., Newhaven on 8 Apr. and (arriving from S) Selsey Bill on 12 May. There are several past instances of birds of this race arriving here in Apr-May.

448. **TREE SPARROW** (*Passer montanus*):—Very few were reported in the early part of the year with only 158 at 15 localities during Jan-Mar., the largest flock being 50 at Pett Level in Jan. Ten were recorded at Selsey Bill on 4 dates between 10-18 May.

Breeding season reports were widely scattered, half referring to nestbox sites and in one, at Maynards Green, 3 broods were successfully raised.

Good numbers were seen at Beachy Head in Oct. with 40 there on 6th and 200 on 9th; 100 flew W at Pett Level on 23 Oct. Winter flocks included 50 at West Beach, Littlehampton on 11 Nov.; 55 at Truligh Hill on 28 Dec. and 250 at Bewl Bridge Res. on 31st.

451. **CHAFFINCH** (*Fringilla coelebs*):—Jan. flocks from 6 localities totalled 512, including 100 at Milland on 6th. In Feb. 925 were recorded (10 localities) including 125 at

Lurgashall on 14th and 120 at Rushlake Green on 13th. Breeding season counts are given on pages 52-53.

During the autumn 300 were at Cissbury on 20 Sept. with 300 at Storrington on 9 Oct. Strong NE passage was recorded at Pett Level between 20 and 28 Oct. (maximum 784 in 2½ hours on 20th and 272 in 20 minutes on 22nd); and at Hurst Green (300 NW on 21 Oct. and 600 NW on 24 Oct.). In Nov. 487 (4 localities) were recorded including 200 at Cissbury on 14th; and Dec.'s total of 1,300 (8 localities) included 680+ at Eridge Park on 31st.

452. **BRAMBLING** (*F. montifringilla*):—The Jan., Feb., Mar. and Apr. recorded totals were 134 (c.f. 61 in Dec. 1981), 37, 50 and 33 respectively. These figures include a flock of 20-40 feeding on peanuts in a Brighton garden from 1 Jan. to 8 Apr. This practice was also recorded in Arundel, Hurst Green and Sharpethorne. At Pett Level 10 E were recorded on 22 Mar. The last record was a male in song at Cissbury on 12 Apr.

During Oct., Nov. and Dec. only 4, 8 and 6 respectively were recorded.

453. **SERIN** (*Serinus serinus*):—A pair at Slinfold on 14 Apr. (SWMH). One flew N over Brighton Marina on 13 May (NAGL) and another was seen near Brighton on 26 Sept. (CEB). All three records have been accepted by *British Birds*.

455. **GREENFINCH** (*Carduelis chloris*):—During Jan., Feb. and Mar. only 62, 137 and 22 respectively were reported from only 5 localities. On 4 May c.40 were at Newhaven Tidemills. Breeding season counts are shown on pages 52-53.

At Rye Harbour 800-1,000 were present during Oct. declining to 300 in Nov. Westerly passage at Bognor, Bracklesham Bay, Selsey Bill and Worthing between 6 Oct. and 31 Oct. totalled 707. In Nov., apart from the Rye flock, 295 were recorded in 5 localities and, in Dec., a total of 508 in 7 localities, flock size ranging from 25 to 160, averaging 73.

456. **GOLDFINCH** (*C. carduelis*):—The Jan., Feb. and Mar. recorded totals were 65 (6 localities), 39 (3 localities) and 18 (2 localities) respectively; flocks ranged from 2 to 20, averaging 11.

During the autumn, maximum passage at Beachy Head was 2,300 W on 9-10 Oct. and 452 on 11 Nov. In Dec. 146 were recorded (7 localities); average flock size was 21, ranging from 3 to 50.

457. **SISKIN** (*C. spinus*):—The Jan. cold spell produced a high total of 889 (c.f. 393 in Dec. 1981) from 43 records with an average flock size of 9, ranging from 1 to 75. Feb. and Mar. totals dropped to 201 and 207 from 21 and 19 records respectively. On 6 Apr. 450 were at Buchan Park, with a further 123 from 7 other localities.

During the autumn was first recorded at Beachy Head and Bewl Bridge Res. on 3 Oct.; maximum passage was as follows: Cissbury 6 W on 9 Oct., 10 W on 16 Oct.; Buchan Park 10 W on 14 Oct.; Littlehampton 7 E on 23 Oct. Nov. and Dec. totals were 52 and 149 respectively. Feeding on peanuts was recorded from 13 sites from Jan. onwards.

458. **LINNET** (*C. cannabina*):—At the beginning of the year the species was only recorded at Darwell Res. and Rye Harbour, with a maximum of 15 on 16 Jan. at Rye. On 27 Mar. 9 N were recorded at Brighton Marina. Thereafter the Apr. passage included 72 N at Selsey Bill and 150 N at Beachy Head on 11th, 64 E at Worthing on 26th, terminating with a flock of 300 at Rye Harbour in late Apr.

Aug. and Sept. flock totals were 425 (5 localities) and 590 (4 localities) respectively. Maximum autumn passage was recorded on 9-10 Oct. with 3,600 W at Beachy Head and 310 W at Selsey Bill. During Nov. 100 were present at Rye, and 115 (4 localities) were recorded in Dec.

459. **TWITE** (*C. flavirostris*):—At the start of the year 3 on Rother Saltings and 4 at Rottingdean on 9 Jan. with 13 reported at the latter on 14th. Unusually 12 were reported from Litlington on 16 Jan. and 1 at Goring on 18th. All other records came from the

Shoreham area where up to 10 were regularly seen in Jan. and Feb. with 6 still there on 3 Apr.

At the end of the year recorded from 2 Nov. when 1 appeared on the R. Adur at Shoreham, with up to 12 there from 20th and 18 on 28 Dec. Away from Shoreham the only record was of 3 at Pagham Harbour on 2 Dec.

460. **REDPOLL** (*C. flammea*):—During the first 3 months recorded from up to 20 localities including the West Sussex Commons, the sandstone ridge in the north, the Weald and the coast at Pett. Total numbers are likely to have been up to 500. The largest flocks were 44 at Lynchmere on 22 Jan., 50 at Fletching in Jan. which remained until Feb., 80 at Buchan Park which rose to 140 by 9 Apr. and flocks of 20 and 30 at the end of Mar. at Ambersham. No spring coastal movement was noted.

In the breeding season 50 random reports were received of pairs or displaying males mainly from the north and north-east but also from the commons in the west of the county. In the W. Sussex woodland survey recorded from 13 of 40 woods examined.

Coastal movement principally at Pett, Beachy Head and Pagham involving fewer than 250 birds was noted from 14 Oct. to 31 Oct. Early winter flocks were reported from 15 widespread districts. Numbers feeding on alders at Fairlight built up to 300 by 5 Nov., while more than 50 were present in Market Hill in the south-east on 28 Oct. In the north 39 remained at Weir Wood Res. during Nov. and Dec. and there were 30 at Chailey Common on 29 Dec., while in the west 22 and 28 respectively were at Woolbeding and Cocking during Nov.

463. **CROSSBILL** (*Loxia curvirostra*):—1981.—A male and 2 immatures were seen at a W. Sussex site on 28 July (SL).

1982.—A flock of 5 at Forest Mere on 14 Mar. (PT) and a single bird observed in St. Leonards Forest on 27 Apr. (MPS) were the only records.

469. **BULLFINCH** (*Pyrrhula pyrrhula*):—The only large number reported was a flock of 20 feeding on blackberry seeds in Ashdown Forest on 1 and 31 Jan. Counts from defined areas in the breeding season are shown on pages 52-53. In the W Sussex woodland survey recorded from 33 of 40 woods examined.

470. **HAWFINCH** (*Coccothraustes coccothraustes*):—One or two were reported from Fernhurst for most of the year. In Jan. and Feb. singles were recorded from Slinfold, Cuckfield, Wakehurst Place, Ashdown Forest and, unusually, Lullington Heath. In Apr., 4 were seen at Elbernoe on 14th and one at Rudgwick on 4th where one was also present on 18 July. During the breeding season birds were recorded from 7 of 40 woods surveyed in W Sussex and 2 were recorded at Nuthurst and Wakehurst Place. At the end of the year the only record came from Cuckfield, on 20 Dec.

493. **LAPLAND BUNTING** (*Calcarius lapponicus*):—One was seen and heard flying over Bewl Bridge Res. on 4 Nov. (PCB), this is the first county record away from the coastal fringe. A female was present in the Lower Cuckmere on 13 Nov. (PJW).

494. **SNOW BUNTING** (*Plectrophenax nivalis*):—The wintering individuals at West Wittering and Shoreham remained until 30 Jan. and 30 Mar. respectively while the 2 at Pagham Harbour were joined by a third in mid-Jan., one remaining until 6 Feb. One was recorded at Langney Point on 9 Jan. and 5 were at Rye Harbour on 10th with singles there to 19th.

The first of the autumn arrived at Selsey Bill on 25-27 Sept. East Brighton GC was an unusual place for one from 5-7 Oct. while 2 were at Church Norton from 12th, with 4 there on 24th when one was seen at Pett Level. One flew E at Bognor on 10 Nov., as did one at Langney Point, and possibly the same at Pett Level on 13th. Up to 3 remained in the Pagham Harbour area to the end of the year.

496. **YELLOWHAMMER** (*Emberiza citrinella*):—During Jan., Feb. and Mar. records from 11 localities totalled 95, 153 and 56 respectively; flocks ranged up to 35 birds,

averaging 14. At the end of the year only 19 were recorded in Oct. with 178 in Nov. from 7 localities. However, in Dec. 657 were seen in 11 localities including 150-200 at Storrington and 180 at Eridge Park on 29th; the remaining 9 flocks averaged 34, ranging from 6 to 40. Counts of breeding birds from defined areas are detailed on pages 52-53. Other breeding season records included 23 territories on Iping Common, 2-3 pairs on Chailey Common and 5 males at Friars Gate, Crowborough.

497. **CIRL BUNTING** (*E. cirillus*):—The only breeding record was of a female carrying food at a traditional E Sussex site on 29 May (DEM). Three post-breeding birds were seen; a male at Bewl Bridge Res. on 16 Aug. (AHL) and a male plus another bird at a W Sussex wealden site on 21 Aug. (FWD).

499. **ORTOLAN BUNTING** (*E. hortulana*):—A single was seen on the Downs at Steyning on 29 Aug. (MPS).

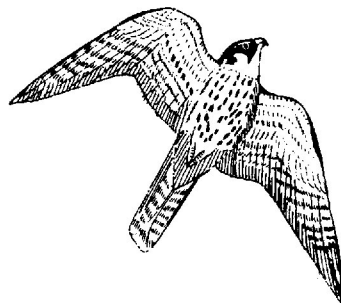
506. **REED BUNTING** (*E. schoeniclus*):—In the cold of early Jan. there were flocks of at least 50 at Paghams on 1st, and 100 at Shoreham on 10th; the largest gatherings in gardens were at Horsham, maximum 13 on 10th, and Roffey, maximum 7 on 9th-10th. In another Horsham garden, a peak of 20 was noted in Feb. There was some small evidence of spring and autumn movements, including maxima of 20 at the Crumbles on 27 Mar. and 9 Apr.

Counts of singing males in the breeding season included 27 on Amberley Wild Brooks, 4-6 on Pulborough Brooks, 10 between Houghton Bridge to South Stoke, about 15 at Rye Harbour, about 20 along the N of Weir Wood Res., 4 by Arlington Res., and 6 at Newhaven Tidemills. There were 19 territories on 55 ha of the Adur Levels.

Large numbers on Ashdown Forest late in the year included 115 at Isle of Thorns and 12 at Forest Hill Camp on 28 Nov., and a total of 211 in a 4½ hr Winter Atlas walk on 29 Dec.

510. **CORN BUNTING** (*Miliaria calandria*):—All records received were from the Downs or the coast, with few E of Eastbourne. Few were seen early in the year with maxima of 200 at Cissbury on 12 Jan., and roosting flocks of 55 at Rye Harbour on 17 Jan., 52 at Sidlesham on 20 Feb. and 45 at Arundel on 23 Jan.

Much larger numbers were seen later with peaks of 115 at Ferring Rife on 28 Aug., 100 at Shoreham on 25 Sept., 500 roosting at Strivens Reed Bed on 27 Dec., 240 at Cissbury on 28 Dec. and 120 at Firle Beacon on 29 Dec.



## RINGING IN SUSSEX IN 1982

### Key to symbols and terms

1	Pullus (nestling or chick not yet flying).				
2	Full-grown, but year of hatching quite unknown.				
3	Definitely hatched in current calendar year.				
4	Hatched before current calendar year, but exact year unknown.				
5	Definitely hatched last calendar year.				
6	Hatched before last calendar year, but exact year unknown.				

	Age				
x	Found dead or dying.				
+	Shot or killed by man.				
v	Controlled: caught and released by another ringer.				
w	Ring number read in the field.				

	Manner of recovery				
x	Found dead or dying.				
+	Shot or killed by man.				
v	Controlled: caught and released by another ringer.				
w	Ring number read in the field.				

	Sex				
♂	= male				
♀	= female				

Details were received of 17,721 birds of 95 species ringed by the thirty or so ringers operating in the county in 1982. Wet conditions reduced the activities of the Gull Study Group, allowing Blue Tit to regain its position as the most-ringed species, while the rarest bird was a Woodchat Shrike.

The 1981/82 winter was the severest since 1962/63, causing the usual fears for small resident passerines forced to endure record low temperatures. Ringing results are used to back up the evidence of observations and census work to see how far these fears were justified, and which species were most badly hit. Firstly, if the winter caused high mortality and a drop in population, fewer birds would be available for ringers to catch, and ringing totals would fall. Such data must be used with caution, and would be invalid for those species attracted to bait in large numbers during hard weather. The following table omits such instances:

### SUSSEX RINGING TOTALS FOR SELECTED SPECIES, 1980-82 (omitting nestlings)

	1980	1981	1982
Kingfisher.....	14	9	3
Pied Wagtail.....	167	222	148
Wren.....	258	300	205
Duncock.....	362	462	380
Robin.....	432	402	362
Song Thrush.....	274	374	286
Goldcrest.....	297	162	268
Long-tailed Tit.....	143	124	140
Treecreeper.....	37	23	45
Bullfinch.....	176	171	216

The first six species in the table have feeding methods which make them vulnerable to prolonged ice and snow cover, and all show a drop in 1982 from the level of the previous year. The remaining four birds, though including three species of a lower body weight than even the Wren, actually show increases, presumably because snow cover on the ground does not affect their specialised arboreal feeding techniques.

Secondly, ringing recoveries themselves should reveal any effects of the severe weather, either by increased mortality or by unusual movements. Several recoveries do indeed illustrate the mid-January crisis point. Woodcocks, which feed by probing in deep soft soil, must have suffered. Even an experienced old bird was found dead:

Woodcock 3 16.12.79 Ashcombe, Lewes (RL)  
x 14.01.82 Rewell Wood, Arundel 36 km W

Other birds entered buildings, a Duncock at Lewes ringed on exposed high downland being found dead in a village stable, while a Blackbird was caught in a garage; this bird suggesting also that Continental Blackbirds become less migratory after their first autumn:

Blackbird 3♀ 21.10.76 Beachy Head (BHRS)  
v 12.01.82 Linne, Limburg, Netherlands 401km E



Another Blackbird, wintering in sheltered farm woodland, was controlled on Bornholm in the spring, probably bound for Scandinavia:

*Blackbird*  
 3♀ 26.12.81 Ashcombe, Lewes (RL)  
 v 28.10.82 Ashcombe  
 v 21.04.82 Christianso, Bornholm, Denmark 1129km NE

Nationally such movements are commonplace, but virtually all other Sussex instances were associated with the cold winters of 1961 and 1963, suggesting that only in prolonged severe weather do Blackbirds from Scandinavia reach as far south as Sussex with any regularity.

Fieldfares arrived in large numbers in mid-Dec. 1981 (SxBR. 34:40), and when the second cold spell of cold weather commenced in Jan. 1982 huge movements were noted on the south coast, first westwards and then across the sea to the Channel Islands and NW France. Whereas in Britain apples were put out on lawns for these hungry Fieldfares, across the Channel otherwise-civilised Frenchmen went out to shoot them, so there is a ringing recovery to back up the visual evidence of the exodus:

*Fieldfare*  
 3♀ 28.12.81 Ashcombe, Lewes (RL)  
 + 13.01.82 Quettehou, Manche, France 168km SW

Because of their readiness to use nestboxes, and the ease with which they can be attracted to peanuts in winter, large numbers of Blue and Great Tits are ringed every year in Sussex. Normally they rarely travel far, but in 1982 several medium to long distance movements were reported, and it is tempting to relate these to the exceptionally cold winter:

*Great Tit*  
 1 20.05.81 Horsted Keynes (TWP)  
 v 13.03.82 Fairlight (SJRR) 51km SE  
*Blue Tit*  
 1 26.05.80 Bosham, Chichester (ETR)  
 v 14.03.82 East Grinstead (RES) 66km NE  
*Blue Tit*  
 1 22.05.81 Possingworth Park (RES)  
 x 22.05.82 Leicester 205km NW

The latter moved very far indeed for a British-bred bird. There is little firm evidence that the more migratory Continental Blue Tit often reaches Sussex, but the next bird is at least a possibility:

*Blue Tit*  
 3♀ 14.10.81 Sandwich Bay, Kent  
 v 08.03.82 Fairlight (SJRR) 68km SW

While the tits apparently moved randomly, that other peanut attender the Greenfinch produced many more recoveries reinforcing the strongly NE-SW orientation already commented on (SxBR. 33:69). There were six movements to or from Essex, ten involving Kent, two Bucks., and one each for Surrey, Herts. and Suffolk. This careful amassing of rather routine recoveries, while lacking the excitement of breaking new ground, is one of the most valuable contributions of ringing, enabling a reviewer to say with confidence what winter Greenfinches in Sussex are doing, rather than extrapolate uncertainly from one-off instances which may or may not be typical. Such is the case with Siskin—although 285 ringed was several times the normal, only the vaguest clue to their origin was provided by one controlled on its way back somewhere north:

*Siskin*  
 5♀ 28.02.82 Roffey, Horsham (CHH)  
 v 03.04.82 Telford, Salop. 233km NW

Finally, ringing suggests that though Continental Chaffinches do winter in Sussex, they are very much in the minority compared with the resident population—this was the first foreigner in eight years at the site:

*Chaffinch*  
 4♀ 02.11.80 St. Amands, Antwerpen, Belgium  
 v 07.01.82 Ashcombe, Lewes (RL) 297km W

Thus the weight of ringing evidence suggests that the 1981/82 winter, while having a noticeable effect on the fortunes and behaviour of many species, was far from catastrophic. Though the cold spells in Dec. and Jan. were severe, they came at a time when, judging by annual weight cycles, birds are physiologically most capable of surviving hard times, rather than near the end of the winter

when both fat reserves and food stocks are depleted. In contrast the cold of the 1962/63 winter was unbroken for much longer, and carried on well into March.

During the rest of 1982, many other good recoveries were notified. Ringing schemes of the Communist bloc are notoriously slow in returning details, but news eventually arrived of this Robin, apparently a first for Sussex:

*Robin*  
 3 23.09.80 Hel, Gdansk, Poland  
 x 27.03.81 Little Common, Bexhill (SJRR)

Spoonbills are annual on passage in Sussex, and a sighting of a ringed bird revealed its age and origin (very similar to one seen in 1979):

*Spoonbill*  
 1 05.07.78 Zwannenwater, Noord Holland, Netherlands  
 vv 20.05.82 Exceat, Seaford (PIW) 386km SW

Likewise another Canada Goose from Staffs. was controlled while moulting at Petworth, and with such mobility it is not surprising that the ringing study found ample evidence that attempts to transport these geese from areas where high numbers are causing problems achieves only a slight stirring of the population.

The major Gull Study project, now in its seventh year in Sussex, has reached the stage of filling in the finer details, with retrap data now the main interest. Nonetheless, recoveries were reported which extended in all directions the area from which our wintering gulls are known to come, two from the very far north being most worthy of mention:

*Black-headed Gull*  
 6 24.03.82 Sompting Tip (GSG)  
 x 01.07.82 Kierinka, Lappland, Finland 2326km NE  
*Greater Black-backed Gull*  
 10 12.11.81 Sompting Tip (GSG)  
 x 10.06.82 Honningsvåg, Finnmark, Norway 2619km NNE

Not all recoveries shed light on birds' movements. This Chiffchaff is thought to be only the second British-ringed to be found in Germany, but why it should be on Helgoland at the end of May is obscure:

*Chiffchaff*  
 2 07.09.80 Eastbourne (PH)  
 v 31.05.82 Helgoland, Germany 641km E

More predictable was the next, though all African recoveries of small passerines are few and noteworthy:

*Spotted Flycatcher*  
 3 03.09.80 Shorcham by Sea (JAN)  
 x 27.09.82 Ceuta, Spanish Morocco 1711km SSW

Far more Pied than Spotted Flycatchers have been found in Morocco, but rather few of this conspicuous species are found in Sussex even on autumn passage. Perhaps with its westerly distribution in Britain it migrates across the Bay of Biscay, and the following Sussex control may be atypical:

*Pied Flycatcher*  
 1 10.06.82 Okehampton, Devon  
 v 07.08.82 Beachy Head (BHRS) 299km E

October is the month when many partial migrants make autumn movements. Reed-bed roosts of Pied Wagtails build up rapidly at this time, and two controls showed that these are not formed merely of local birds:

*Pied Wagtail*  
 3 30.06.82 Pool-in-Wharfedale, Otley, W Yorks.  
 v 14.10.82 Shoreham by Sea (ABW) 353km SSE  
*Pied Wagtail*  
 3 29.09.82 Blaydon Pond, Tyne & Wear  
 v 13.10.82 Southsea, Lewes (MIB) 475km SSE

Less explicable was a Reed Bunting going northwards in autumn—curiously an almost identical recovery was reported in 1978:

*Reed Bunting*  
 4♂ 04.11.82 Shoreham by Sea (ABW)  
 v 13.11.82 Banbury, Oxon 154km NNW

Finally, Blackcaps wintering in Britain have long attracted attention; the habit is increasing, and in early 1982 ringing showed that at least six different individuals visited one garden in the favoured Patcham area of Brighton. Gradually the weight of evidence has built up that these are Continental visitors rather than British birds which have stayed behind, and this theory was given a tremendous boost by what was surely the most outstanding recovery of 1982:

*Blackcap*  
 3♂ 15.10.82 Revianen, Rogaland, Norway  
 x 17.12.82 Steyning (MH) 950km SSW

## THE BREEDING DISTRIBUTION AND STATUS OF THE REDSTART IN SUSSEX

by J. W. Houghton

In the breeding season the Redstart (*Phoenicurus phoenicurus*) is distributed widely throughout England, Wales and the Scottish mainland. It is only an occasional breeder in Ireland. The exceptions to this general pattern are Cornwall, where it is only a recent and rare colonist in the east, Lincolnshire, East Anglia and SE England, where it is a scarce and local nesting species (Sharrock, 1976). The British population fluctuates periodically and the Common Birds Census since 1962 shows that Redstarts recovered from a decline before 1940 to an estimated peak of 120,000 pairs in 1965 (Sharrock *op cit.*). The population collapsed to c.20,000 pairs by 1972, a catastrophe thought to be caused by failure of the rains during the late 1960s and early 1970s in the Sahel region south of the Sahara, where part of the Redstart population stops after crossing the desert on its return to winter quarters in West Africa (Winstanley *et al.*, 1974).

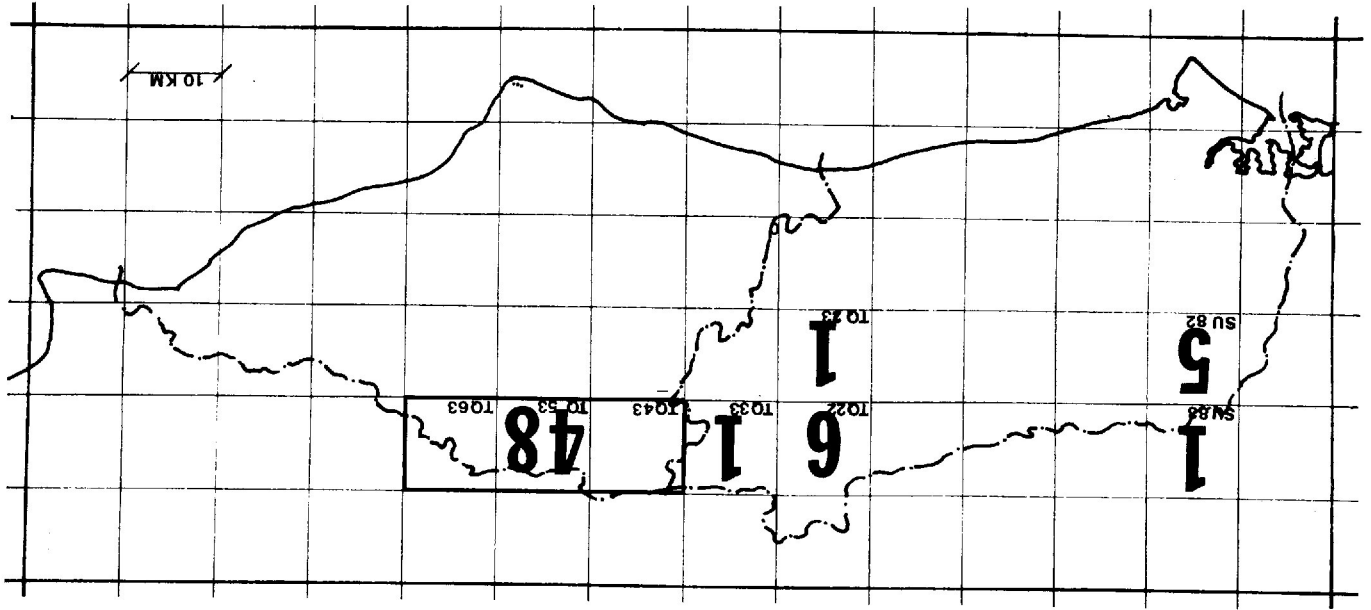
As a breeding species in Sussex the Redstart is scarce and very local. Walpole-Bond (1938) identified the only regular breeding areas as the north of the county on the sandstone ridge from the general area south of Tunbridge Wells through to Ashdown Forest and west to Balcombe, Tilgate and Worth Forests. The only other regular breeding site he gave was near Midhurst, but breeding was reported occasionally from Dallington, Netherfield, Bexhill-on-Sea, St. Leonards-on-Sea, Ashburnham, the Crumbles, Hollington, Firle and Lewes in East Sussex and Amberley, Bognor, Easebourne, Ferring, Goodwood, Hainaker, Parham, Harting, Lancing and Rake in West Sussex. Walpole-Bond considered the Redstart to be a candidate for a detailed survey but acknowledged the difficulties without many dedicated observers. A county survey was attempted between 1967 and 1969 but because of incomplete coverage and the serious decline evident by 1969 it was never fully documented. Nevertheless that partial survey and the current one define the same basic breeding distribution as described by Walpole-Bond. Since 1976 JWH and other observers in NE Sussex have built up a picture of the population there and the Society agreed that a full survey should be undertaken in 1982.

### METHOD AND COVERAGE

JWH contacted observers known to be interested in the species and other members were invited to participate. Observers were asked to search districts where Redstarts had been found in previous years and all likely habitat. In Britain Redstarts are invariably single-brooded (Buxton, 1950), normally return to their breeding sites by late April-early May and usually have fledged young by the end of June. So observers were asked to concentrate their efforts through these 2 months, recording singing or displaying males, females and young if seen and details of habitat. Return visits to occupied sites were requested but, in view of the paucity of observers and the potential area involved, a singing male is taken as a breeding pair in this paper.

Response from members was very poor, with no more than 20 observers taking part. Indifference was due, perhaps, to ignorance of the Redstart's song, the only sure method of locating males, and a lack of familiarity with the woodlands of N Sussex, where Redstart are most likely to be found. Nevertheless very good coverage was obtained. Conservation organisations in Sussex had commissioned an ecological survey of larger ancient woodlands in West Sussex through the Community Enterprise Programme (see page 69) and these records, together with reports from members, made it likely that full cover was obtained, particularly as field work in previous years had identified the major colonies in East Sussex.

Figure 1. The distribution of breeding Redstarts in Sussex in 1982. Records for TQ 43, 53 and 63 are combined to afford maximum protection for the species.



## RESULTS

### Distribution and numbers

As Redstarts are one of the rarer Sussex breeding birds and several of their breeding areas are on private land, distribution is mapped by 10 km squares rather than by the usual 2 x 2 km tetrad. During the survey 62 pairs or males holding territory were located, 14 in West Sussex and 48 in East Sussex as shown in figure 1.

### Breeding habitat

Probably the original nesting habitat of the Redstart was dry pine-clad heath, and nest sites holes in the ground and crevices in rocks, rather than holes in trees as favoured today (Siivonen, 1935). It is now more catholic in its choice of habitat, particularly in districts where it is locally common and it will also use nest-boxes. The male requires a song-perch and, contrary to the statement in Buxton (1950), a majority in Sussex sing from near the top of the tallest tree available, at 12 to 15 metres. The habitats recorded in 1982 in Sussex are listed in Table I. In East Sussex the favoured habitat is very old scattered beech, but in recent years several pairs have held territory in mature Scots pine. Sites are situated in old open deciduous woodland, the edge of conifer plantations and in damp river valleys with mixed deciduous and coniferous woodland. The understorey varies from bilberry, bramble, heather, bracken, fern, gorse, rhododendron and willow and birch scrub. No Redstarts were found in dense woodland, and the majority of pairs were found in loose colonies.

No clear habitat pattern emerged in West Sussex, other than all the birds found were in or near mature old woodland, with an understorey comprising heather, bracken, fern, birch scrub, hazel, hawthorn, alder and elder. One male held territory in fairly dense woodland and scrub. As shown in figure 1 the West Sussex population is fragmented and there is only 1 colony in the extreme west.

TABLE I. THE BREEDING HABITATS OF REDSTARTS IN SUSSEX IN 1982

	West Sussex	East Sussex	Total
Beech.....	1	27	28
Scots pine.....	2	14	16
Birch.....	0	6	6
Birch, oak, Scots pine.....	5	0	5
Oak.....	2	1	3
Alder.....	1	0	1
Beech/oak.....	2	0	2
Unclassified.....	1	0	1
Totals.....	14	48	62

## DISCUSSION

In common with other migrants, the Redstart population fluctuates over the years, and it is interesting to project trends for Sussex from the limited information we have. Walpole-Bond (1938) does not give figures and, in suggesting a detailed study, indicates that his researches were incomplete. Nonetheless, taking into account the number of places in N Sussex where he recorded Redstarts, and the occasional reports from other areas, it is unlikely that the known population was fewer than 100 pairs and, allowing for some undiscovered, the figure may have been of the order of 150 pairs.

However at the beginning of the twentieth century H. B. Alexander (1974) was active in the Tunbridge Wells district and in many of the now-favoured Sussex habitats he mentions finding the species at only 2 sites, and gives the impression that it was not quite so rare in West Kent; this is not so today, when

TABLE II. THE INCREASE IN BREEDING REDSTARTS IN EAST SUSSEX 1976 TO 1982

	1976	1977	1978	1979	1980	1981	1982
Colony A—upland beech/ oak woodland.....	2-3	6	8	8	9	7	10
Colony B—Heathland/beech Scots pine plantation.....	Incomplete Coverage	6	6	No count	15	10	22
Colony C—Beech/Scots pine.....		1	1	1	1	1	3
Colony D—Scots pine.....					9	7	10
Single pairs.....			15	9	34	26*	48
Totals.....	2-3	6	15	9	34	26*	48

\*Count undertaken in poor weather and thought to underestimate numbers.

the Kentish population is estimated at fewer than 20 pairs (Taylor, Davenport & Flegg, 1981).

The incomplete Sussex survey during 1967, 1968 and 1969 recorded 40 and 60 pairs respectively in 1967 and 1968 and showed them to be thinly distributed along the whole northern half of the county. Most were found on the commons between Midhurst north and west to the county border, in the forest complex between Horsham and Worth and from Ashdown Forest to the county boundary north of Wadhurst; the national decline outlined in the opening paragraph was mirrored in Sussex, for in 1969 only 22 pairs were found (Shrubbs, 1979). Shrubbs, whose assessment of the status of the Redstart in Sussex was based on records up to 1976, felt that there was no evidence of a recovery since 1969 but detailed field-work in East Sussex between 1976 and 1982, the results of which are set out in Table II, clearly indicate a recent upturn in the population and there is no lack of habitat to prevent further increase. The Redstart, however, suffers a mortality rate second only to the Robin (*Erithacus rubecula*) (Ruiter, 1941) and the basic causes of population fluctuations are likely to be found beyond our shores. Adverse conditions in Africa or a disaster on migration, would undoubtedly drastically reduce numbers in Sussex in line with national trends. Ruiter found through ringing in Holland in 1935/38 that 32% of males return to the same nesting site and, after allowing for the mortality rate of 62% for birds over 1 year, they are fairly loyal to a district. The build-up in the monitored population in NE Sussex thus probably reflects a succession of good breeding results allied to better survival on migration in recent years.

The only published references to Redstarts breeding colonially appear to be Ticehurst (1909) and Alexander (1974), when referring to Kentish birds. In East Sussex, especially, they also appear to be colonial, although the difference between locally common and colonial is a fine one. In both Kent and Sussex, however, as distinct from most other counties, Redstarts are decidedly uncommon and, where present, they are often in groups. In this paper a colony is defined as where several birds hold territory within 200/300 yards of one another and three quarters of the East Sussex population is found in such groups.

Bearing in mind the considerable woodland area still remaining in N Sussex and the Redstart's catholic choice of breeding habitat, it is likely that several pairs have been overlooked and it is reasonable to suggest a population of c.80 pairs in East Sussex. The species is extremely scarce in West Sussex and, even allowing for pairs missed, the total is probably no more than 20 pairs. The total county population could then be in the region of 100 pairs, on which basis it would be approaching the levels of the late 1920s and early 1930s.

The picture in Hampshire is quite different, particularly in the New Forest where Redstarts are common; in one 10 km square alone there the population is estimated at 400 pairs and the numbers for the whole Forest are put at over 1,000 pairs. The species is, however, more local in East Hampshire (Hampshire Bird Report, 1981).

In view of the encouraging trend for this species members of the Society are urged to report all breeding season records to the Recorder, to assist further monitoring. A further survey is recommended for the early 1990s, when it is hoped that many more observers would help.

#### SUMMARY

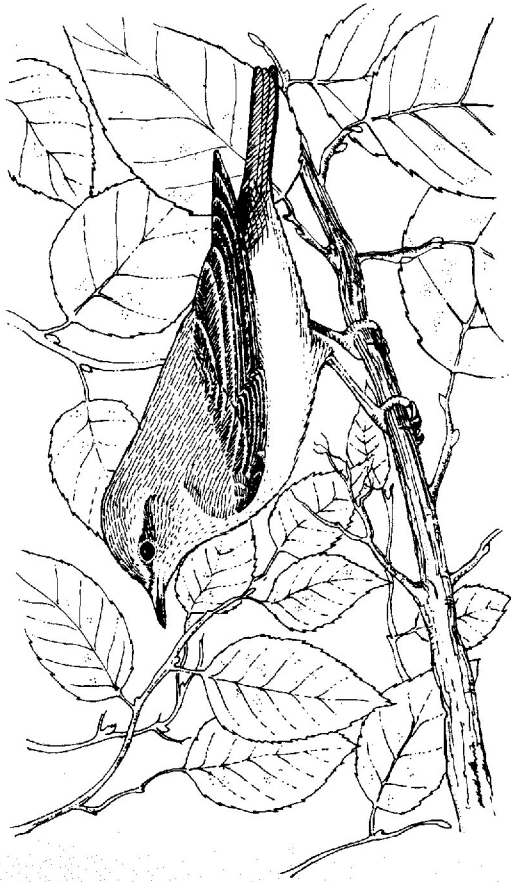
The results of a census of Redstarts (*Phoenicurus phoenicurus*) in Sussex are presented and discussed. Sixty-two breeding pairs were found (48 in East Sussex and 14 in West Sussex) on the sandstone ridge in East Sussex, the forests of N Sussex and the commons on the greensand in West Sussex. These are the species' traditional haunts. In view of the potential habitat available within these general areas it is considered that the county population could be as high as 100 pairs, which is comparable to the likely population in the 1920s and early 1930s. Whilst no habitat preference was discerned in West Sussex, the favoured breeding sites in East Sussex are old beech followed by mature Scots pine. Present field work indicates that the population is increasing but population levels are controlled by changes in winter quarters and the hazards of migration and numbers are liable to sudden declines. A further county survey is recommended in the early 1990s.

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#### WOODLAND BIRDS OF THE WEST SUSSEX WEALD

By C. E. Bealey and M. P. Sutherland

During the late 1970s and early 1980s, the Forestry Commission surveyed the woodlands of West Sussex. Looking at woodlands of 0.25 ha and above, the survey revealed that some 34,500 ha of woodland existed; this is 17.3% of the total land area, making the county one of the most heavily wooded in Britain. The total area comprised 18,500 ha of broadleaved trees, 8,400 ha of conifers, and 7,600 ha of scrub and coppice.

West Sussex has a long history of high forest and coppiced woodland management, but there was little known about the wildlife in these areas. The present study was part of a combined ornithological and botanical survey conducted by the Sussex Trust for Nature Conservation and the Royal Society for the Protection of Birds. It aimed to document plant and bird communities and to produce guidelines for the management of such areas for wildlife.

A detailed three volume report on the survey has been prepared and one copy has been deposited with the Sussex Ornithological Society.

#### METHODS

Two main sample areas were selected. One was in the north-west of the county approximately in a block bounded by the towns of Midhurst, Hillbrow, Haslemere and Northchapel. The second, eastern area was in the broad band of woodland south of Crawley, incorporating Worth and St. Leonards Forests and adjacent woodland blocks. All sample woods were selected on the criteria of being ancient or very old secondary woodlands of at least 10 ha in extent. The woods all lay on wealden clay, although in many there were some greensand outcrops.

Between the 19th April and 17th June we visited 40 woods (15 in the west, 25 in the east). Each wood was visited twice, with one visit in each half of the survey period. Two sets of ornithological data were obtained, firstly using a standard point count system (C. J. Bibby *in litt.*) and secondly by an estimate of the total number of pairs in each wood based on standard observations. In addition tree species and selected habitat features were also summarised.

## RESULTS

A total of over 1,800 ha were covered by the survey. Seventy-four species were recorded with a mean of 36.95 species per wood. Point counts revealed a mean density of  $865.1 \pm 233.9$  pairs per  $km^2$ , with a range of 500-1,400 pairs per  $km^2$ . These figures are in the lower part of the range of the very few published bird densities for deciduous woodland. Flegg and Bennett (1974), for example, found densities with a range of 1160-3170 pairs per  $km^2$  (mean 1905) in some rather atypical southern English woodlands.

TABLE 1. WOODLAND BIRD SPECIES RECORDED ON THE WEST SUSSEX WOODLAND SURVEY

Species	Mean Density Psr Per $km^2$	Species	Mean Density Psr Per $km^2$
Blue Tit	103.9	Garden Warbler	10.7
Chaffinch	90.8	Starling	10.5
Robin	74.4	Blackcap	10.3
Goldcrest	68.5	Carrion Crow	9.7
Great Tit	66.5	Magpie	8.7
Wren	55.1	Bullfinch	7.5
Coal Tit	52.5	Mistle Thrush	5.5
Blackbird	44.6	Duncock	5.3
Long-tailed Tit	32.2	Great Spotted Woodpecker	5.1
Willow Warbler	31.6	Stock Dove	4.7
Wood Pigeon	29.0	Jackdaw	3.4
Marsh Tit	23.3	Pheasant	3.0
Treecreeper	21.1	Spotted Flycatcher	2.6
Nuthatch	16.2	Tawny Owl	2.4
Jay	15.6	Yellowhammer	2.2
Song Thrush	13.0	Woodcock	1.8
Chiffchaff	11.1	Redpoll	1.6

Species whose densities were better estimated by standard observations:  
 Cuckoo 4.3, Turtle Dove 2.6, Green Woodpecker 2.5, Tree Pipit 2.5, Rook 1.8, Goldfinch 1.6, Sparrowhawk 1.2, Whitethroat 1.1, Lesser Spotted Woodpecker 0.9, Greenfinch 0.9, Linnet 0.8, Moorhen 0.7, Redstart 0.6, Firecrest 0.6, Kestrel 0.6, Willow Tit 0.5, Grey Wagtail 0.5, Hawfinch 0.4, Collared Dove 0.4, Nightingale 0.4, Wood Warbler 0.4, Mandarin Duck 0.1, Siskin <0.1, Little Owl <0.1, Nightjar <0.1, Tree Sparrow <0.1.

Table 1 shows the woodland bird species recorded on the survey. The main section of the table shows the more common species with densities calculated from point counts, while the less common species are shown with densities estimated from standard observations. These latter species occurred in point counts at such low numbers that this method probably tended to underestimate their true population sizes. The ten most common species comprised 72% of the total birds recorded in point samples and, apart from Goldcrest and Long-tailed Tit, are similar in order to published relative abundance figures for species in Sussex woods on clay and sandstone (Shrubbs, 1979). However, figures for several of the common species are below expectation when compared with published data on woodland bird densities (Sharrock, 1976). These include Wren, Blackbird and Song Thrush. Provisional analysis of recent Common Bird Census data (Marchant, 1983) indicates that many resident woodland species may have been badly affected by the 1981-82 winter. If this is the case, such population changes may have greatly influenced the low mean density figure shown above, particularly with species such as Wren and Blackbird constituting a large proportion of total woodland bird numbers. Several woodland species were particularly well represented in this survey, however, with Nuthatch, Treecreeper, Great Spotted Woodpecker and Marsh Tit all present at very high densities.

Some of the nationally or locally uncommon species are worth presenting here, together with a more detailed description of the habitat in which they were found.

### Lesser Spotted Woodpecker

Seventeen pairs were estimated in 14 woods, 15 of these pairs were found in the eastern study area in old woods with mature and over-mature oak stands often dominant. Some preference for nesting in dead birch trees was apparent although few birds were observed at the nest site. Areas which have recently been almost cleared of old woodland still had single pairs in remnant areas of deciduous woodland. Even though many pairs must have been missed on the survey, the density shown indicates that West Sussex probably still holds an important fraction of the total British population.

### Sparrowhawk

Twenty-one pairs were estimated, but the species was recorded in 22 woods in all. A preference was shown for relatively large areas of mature deciduous (usually oak) or mixed coniferous and deciduous woodland. Therefore a very much greater proportion of the larger and less intensively managed woods in the eastern area held pairs. This species is very difficult to observe in woodland owing to its secretive nature and although it was recorded in 55% of woods, it was probably present in many more. Recent upward trends in Sparrowhawk numbers (Marchant, 1980) suggest that heavily wooded areas of the county may be extremely important as reservoirs for birds re-colonising other areas.

### Firecrest

Three colonies, totalling at least 10 singing males, were found in 2 woods. The edges of mature spruce plantations seemed to be preferred, although birch and willow trees bordering these areas were often used for feeding purposes. In one locality a small colony was present in an open park-like area of mixed mature deciduous tree species and exotic conifers, including several Wellingtonias (*Sequoiadendron giganteum*) for which the birds showed some preference. The presence of singing males well into June probably meant that breeding occurred in at least two of the colonies.

The Rare Breeding Birds Panel (1983) note that after a trough in numbers in the late 1970s, the Firecrest had increased again to almost record numbers in 1981. Our discovery of colonies in West Sussex indicates that numbers have remained very high in 1982 as well.

### Hawfinch

Single pairs were estimated in or adjacent to 8 woods, 3 of which were in the east. In many woods the species was recorded only once, but was probably more widely present and in greater numbers. The survey started too late in the year to record this inconspicuous species whose main period of territorial activity usually occurs in March and early April. Most birds were present in woods where mature oak was dominant, or in oak with beech, often with hazel or rhododendron abundant in the shrub layer, and frequently associated with cherry. An important feature of these woods appeared to be a dense, fairly uniform tree canopy, providing cover for birds around the nest site. The only nest found was 6-7 metres high in a wych elm (*Ulmus glabra*).

### Redstart

Of 11 estimated pairs in 6 woods, 5 pairs were present in one wood in the west of the county. Mature, open woodland was preferred, with oak, birch and Scots pine as the most frequent tree species and with a sparse shrub layer usually present. Also, single pairs were present on woodland edges in the eastern study plot, where conditions mimicked open woodland habitat.

### Other Species

Other species of interest, such as Wood Warbler, were present in low numbers, indicating that high wealden forest is not their preferred habitat in

southern Britain. One slightly controversial species, the Willow Tit, was also present in very low numbers—at a ratio of 1:16 with its closest relative, the Marsh Tit. Only 9 pairs were estimated, all in damp areas with birch, willow or Alder frequent and usually with a dense shrub layer to about 3 metres in height. Pairs were usually situated along streams on woodland edges, confirming that this species is not a true woodland bird.

#### DISCUSSION

A striking feature of this survey was that very large areas of ancient or old secondary deciduous woodland were still under private ownership in West Sussex. Even if populations of woodland birds were very much down during the spring and summer of 1982, as seems very likely, the woodlands of West Sussex must be regarded as extremely important for these birds. Indeed, the highest species diversity figures (a component of both numbers of species and numbers of individuals within a wood), came from the mature, deciduous oak or mixed species woods with a history of mixed management regimes such as coppice-with-standards with high forest stands.

It was clear, however, that many of these privately-owned woods and woods under state ownership are seeing very fast and potentially damaging changes in management practices. The two main trends have been to clear-fell some of the oldest woodlands with long, stable management histories and re-plant either with conifers or a sweet chestnut coppice monoculture. Both remove the characteristic ancient deciduous woodland bird community. Young conifer plantations in the thicket stage, particularly where small stands of natural woodland have been left intact, do have an increased diversity of bird species associated with them, due to the influx of scrub and hedgerow species such as Willow Warbler, Yellowhammer and Whitethroat. However, this increase in diversity is very short-lived, and species numbers quickly drop when the pole stage is reached. As a result, deciduous woodland species have no habitat available to them or remain in very small remnant populations in small stands of broadleaf woodland, usually where felling had been uneconomical in the past.

The unsuitability of pure sweet chestnut coppice as a woodland bird habitat was also very apparent. Such a management regime occurs where old woodland has been felled and reverted to coppice, but without standards, or where this species has been planted. Sweet chestnut has very little secondary growth and few associated insect species (Southwood, 1961) and therefore both species numbers and numbers of individual birds were low in this type of monoculture.

There are pressures, such as labour costs, inflation and Capital Transfer Tax, on owners to make relatively short-term profits from their woodlands. There is a distinct danger, therefore, that suitable long-term management regimes which support diverse woodland fauna and flora may be sacrificed for monotonous conifer or coppice plantations. These have a low value in conservation terms and support, principally, the commonest, less demanding species or conifer specialists such as Goldcrest and Coal Tit.

With ever-decreasing areas of suitable woodland habitat in the south of Britain, the woods of West Sussex must be conserved and managed with a long-term view to provide not only a stable habitat for woodland bird populations, but also as a refuge for other woodland species.

#### SUMMARY

This survey of selected wealden woods in West Sussex revealed a mean bird density of 865 pairs per km<sup>2</sup>. This lowish figure was probably influenced by the preceding severe winter. Several woodland specialists, particularly the Nuthatch, Treecreeper, Great Spotted Woodpecker and Marsh Tit, were present in high densities. Quite substantial numbers of much scarcer species, such as Lesser Spotted Woodpecker, Hawfinch and Firecrest, were also found.

With the ever decreasing area of old deciduous woodland in Britain, the woods of West Sussex do form an important natural resource. It is important, therefore, that they are retained and managed in ways sympathetic with the needs of wildlife, while providing an economic return.

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## INLAND OBSERVATIONS ON CORMORANTS IN SUSSEX

by S. W. M. Hughes

Inland sightings of Cormorants *Phalacrocorax carbo* rarely fail to arouse interest, although the literature (e.g. Witherby *et al.*, 1938) suggests that the species has long visited inland waters. Indeed Bannerman (1951) concluded that, although uncommon inland, the species can be expected to visit any shallow fresh water habitat where there are fish to be found.

In recent years the species has become more common inland. It now breeds on inland lochs in Scotland, whilst further south considerable numbers come inland to feed and roost, mainly in winter but also to a lesser extent at other times of year (Ogilvie, 1981). This paper considers the inland status of the Cormorant in Sussex and associated aspects of behaviour, based on records received since 1950.

### INLAND FEEDING

#### Rivers

During October-March the tidal reaches of the rivers are fished regularly and there are a few records for April, May and September. Flooding on the inland levels can attract abnormal numbers, otherwise both the frequency of sightings and the numbers of birds involved decrease with increasing distance from the sea. Numbers vary considerably; typically reports are of singles, or loose parties of 2-6 birds restricted to 1-2 km of river. Occasionally larger numbers are distributed along the entire tidal length.

In recent years there has been an increase in records of birds flying up the river valleys well beyond the tidal reaches, for example to the Arun between Billingshurst and Horsham and the Western Rother between Fittleworth and Rogate. It had been assumed that these birds were following the rivers to inland waters, but single birds and occasionally small parties of up to 9 have now been reported fishing the narrow undisturbed stretches of the Rother between Petworth and Midhurst and the Arun near Rudgwick and Slinfold. Possibly similar quiet areas on the other river systems are also fished and such records would be very welcome.

It has been suggested that more birds come inland during storms at sea but most likely the state of the tide and movement of fish determine numbers and distribution. The average and maximum numbers reported for each river system during October-March are given in Table I.

TABLE I. NUMBERS OF CORMORANTS REPORTED FISHING RIVERS IN SUSSEX DURING OCTOBER-MARCH

River	Northern limits of Tidal Waters		Tidal		Non Tidal	
	Average	Max	Average	Max	Average	Max
Arun	6	20	1-2	9		
Western Rother	—	—	1-2	5		
Adur	9	23	1	3		
Ouse	7	20	1	1		
Cuckmere	12	21	1	2		
Eastern Rother	12	40	4	10		

The Eastern Rother and the Cuckmere appear to be particularly favoured, the figures given for the latter excluding birds (sometimes as many as 20) which 'dry out' on the banks of the lower reaches. The averages for the Arun are lower than might be expected, and this may be due to increased human and boating disturbance. Furthermore the maximum quoted for the Arun's tidal reaches was associated with the extensive flooding that occurred prior to the drainage schemes of the 1960s. Present day maxima are much lower.

A slightly different record of note, was a party of 60 on the Union Canal at Playden in December 1977. Occasional birds have also been reported fishing

smaller drainage channels and ditches on Amberley Wild Brooks, Bramber Levels and Horse Eye Levels.

#### Reservoirs and Gravel Pits

All the major reservoirs are visited regularly. Approximately 95% of records relate to October-March, but there are a few April and September records for each location. At Bewl Bridge Cormorants have been recorded in every month and at Weir Wood in all months except June. During October-March, 1-3 are normally present daily at any of the reservoirs. However, higher numbers do occur particularly in December-February and especially at Bewl Bridge, where they occasionally exceed 20. The average monthly maxima and the highest count for each water are given in Table II.

TABLE II. AVERAGE MONTHLY MAXIMA AND HIGHEST COUNTS OF CORMORANTS AT SUSSEX RESERVOIRS AND CHICHESTER GRAVEL PITS

Reservoir/ GP	First Recorded (year)	Average Monthly Maxima			Highest Count monthly/year				
		Oct.	Nov.	Dec.					
Darwell Res.	1954	2	3	4	3	11	Feb. 1954		
Barcombe Res.	1954	3	3	4	4	3	19	Feb. 1968	
Weir Wood Res.	1955	3	3	3	4	4	3	12	Feb. 1976
Arlington Res.	1971	2	3	5	3	3	3	12	Dec. 1975
Bewl Bridge Res.	1977	3	4	11	12	12	8	25	Jan. 1980
Ardingly Res.	1979	2	4	6	7	7	6	12	Jan. 1981
Chichester GP	—	5	9	17	23	20	17	66	Jan. 1961

Only the Chichester GP are included in this review as the other gravel pits in the county are right at the coast. Up to 1970 mid-winter maximum counts of 20-25 were not unusual at Chichester but by 1972 these were commonly 30-35 during January-March and 40-45 during October-November. Numbers continued to increase in the early 1970s and a maximum of 66 was recorded there on 10th January 1974. Since then there has been a steady decline and winter maxima of 20-25 are again more typical.

#### Other Inland Waters

Up to December 1981, 92 records had been received of Cormorants visiting small inland waters (Table III), the great majority during October-March. However there are 8 records for April, 3 for August and one for September. Quite exceptional are records of single birds at Maresfield Lake (1955) and Newells Pond (1951) in May and at Knepp Lake (1955) in June.

TABLE III. MISCELLANEOUS SUSSEX WATERS VISITED BY CORMORANTS 1950-1981

Shillingee Mill Pond	Birchen Bridge Pond	Woods Mill
Lurgashall Mill Pond	Slaugham Mill Pond	Wiston Pond
Petworth Park Lake	Newells Pond	Parham Park
Burton Mill Pond	Knepp Lake	Maresfield
Chingford Pond	Holmc Pond	Pittdown Pond
West Harting Pond	Bueham Park	Powdermill Res.
Warnham Mill Pond	Balcombe Pond	Mallydams Pond

Some of the waters visited are very small e.g. at Mallydams Wood, where 1 bird made regular visits in August 1974 to a pond of just over half an acre. Some of the numbers involved have also been surprising. Whilst most records have been of single birds there have been parties of 5 at Shillingee Mill Pond in January 1974 and at Petworth Park in January 1974 and February 1975. At Parham Park up to 6 were seen daily in January 1970, 8 in January 1973 and a remarkable 15 in August 1981; at Knepp Lake there were 6 in January 1957 and November 1976, 8 in March 1963 and January 1979 and 12 in February 1957.

The distribution of the waters listed in Table III suggests that the species is likely to be found on waters of any size anywhere in the county. Information

received from several water bailiffs suggests that regular watching of other small waters would show that many are visited and more frequently than our records suggest.

#### INLAND ROOSTS

Most Cormorants flying inland in Sussex do so to roost. All known coastal roosts are in the eastern third of the county and birds wintering at sea in the middle and west of the county fly up the Arun, Adur and Ouse each evening to roost on trees or electricity pylons.

#### Tree Roosts

Overnight roosts are mostly situated in the Arun Valley but since the winter of 1978-79 one has become established at Barcombe Reservoir. Tree roosting has also been reported from Chichester gravelpits, Ardingley Reservoir (max. 11 birds), Knepp Lake (max. 8), Petworth Park (max. 5) and Weir Wood Reservoir (max. 3). Whereas this habit is not infrequent at the first two sites, it is only very occasional at the latter sites and at none has it been confirmed that the birds actually remain overnight.

TABLE IV. TREE ROOSTS OF CORMORANTS IN THE ARUN AND WESTERN ROTHER VALLEYS

Location	First year reported	Last year recorded still used	Maximum number reported c.100
South Stoke.....	1950	still used	6
Fittleworth.....	1972	still used	3
Offham.....	1975	still used	5
Ambertley Brooks.....	1976	1979	15
Watersfield.....	1979	still used	17

Six roosts are known in the Arun Valley (Table IV). The original, at South Stoke, has been in continuous use since 1950 when up to 9 birds were present. In 1956 the highest count was 30 and by 1962 numbers had risen to 53. Few counts are available for the late 1960s but since 1970 more detailed records have been gathered and the annual maxima have been as follows:—

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
103	92	120	74	85	70	116	120	95	87	140+	130+

With these increasing numbers the number of sites used inevitably increased but none of the newer sites are as important as the original, which in 1950 comprised one tree but now involves many spread over c.500 metres.

The birds using the Arun Valley roosts often congregate on Bognor Pier before flying inland at dusk, sometimes singly, but frequently in parties of up to 50. Occasionally the majority leave in one party and counts of 130-140 have been reported. The last birds often arrive at South Stoke after nightfall. The return movement at daybreak takes place in a similar fashion. Some movements to and from these roosts also take place during the day. These usually involve single birds or groups of 2-3, but in the last few years parties of 6-8 have not been unusual.

The Arun tree roosts are used throughout much of the year with records for all months except June-August. The highest numbers have been reported at either end of the year but substantial numbers still use the roost in April and a few in May and the build-up starts again in September. The annual pattern differs from that of birds visiting the reservoirs as shown by the following monthly maxima.

Maximum Counts:	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Tree roosts (Arun Valley).....	110	107	103	75	17	—	—	—	82	70	120	140+
All Reservoirs.....	72	72	42	8	3	1	1	3	10	17	23	73

#### Pylon Perching and Roosts

Although at sea Cormorants commonly perch on any convenient object, natural or artefact, similar habits inland appear slightly incongruous. The earliest record available is of one perched on top of a pylon (21 metres), on the South Downs behind the Shoreham Cement Works, in October 1949 (diary of E. C. Bove). In 1967 the birds used the top of the large pylons (56 metres) at the Brighton Power Station at Portslade and this habit has continued sporadically. Although assumed, it is not clear if birds stay there overnight. In 1970 came reports of pylons being used in the Ouse Valley, near Lewes, and in 1972 from the Adur Valley at Bramber, where as many as 22 birds have been reported on a single pylon. In 1970 up to 16 birds were using the old railway embankment at Steyning for 'drying out' and roosting. Several were shot in 1970 and 1971 and this may have encouraged them to use the pylons.

Pylons are now used at 5 sites in the two valleys (Table V), and overnight roosting has been established for at least two sites. Elsewhere, there were reports in 1977, 1979, and 1981 of birds at the top of the large pylons crossing Pevensey Levels but information is lacking on the regularity with which this site is used. No tree or pylon roosts have been reported in the Cuckmere Valley but an exceptional 75 birds flew out to sea from the valley early on 29th October 1980.

TABLE V. LOCATION OF PYLON PERCHES AND ROOSTS OF CORMORANTS IN SUSSEX

Location	First year reported	Maximum number of birds reported
Coast	1967	36
Portslade.....	1977	10
TO 642077.....	1970	16
Lewes Brooks.....	1980	3
Piddinghoe.....	1980	15
Hamsay Church.....	1972	29
Bramber Brooks.....	1980	6
Stretham Bridge.....		

The time of year during which inland pylons are used is similar to that for tree roosts but the numbers involved at all such sites are probably less than 50. In comparison the numbers at the single coastal site at Portslade have frequently been in double figures and there are several reports of 25-36 during April and May. For completeness mention should also be made of the roost on the spire of Chichester cathedral, where 2-8 birds were seen regularly in August-November, 1973 and 1974, and details of which have been reported elsewhere (Hughes, 1975).

#### INLAND FLIGHTING AND OTHER MOVEMENTS

##### Flighting to roosts and feeding areas

Many birds using the Arun Valley cross the coast at the river mouth at Littlehampton and follow the river very closely. Some take a short cut and cross between the river mouth and Middleton-on-Sea and the occasional party has been seen as far west as Yapton suggesting a coastal crossing just to the east of Bognor. More unusual was a party of 30 coming inland over Worthing Beach and flying NW on the early date of 18 July 1981. Similar tactics are adopted at the other estuaries with the occasional exception, for example 12 flying in at Southwick and proceeding NW on the early date of 6 June 1981. These early dates suggest that roosts in the valleys may be used occasionally in June-August and further observations are required to clarify this.

The altitude at which birds fly inland varies considerably with the track taken. When taking short cuts across the coastal plain they are rarely below 300-400 feet. However direct approaches from the sea are frequently much lower, sometimes as low as 15-20 feet, the birds gradually climbing as they move inland; inland beyond roosts they travel higher, perhaps at 400-500 feet.



Typically these birds follow the exact course of the rivers although they could see short cuts to the upper reaches and inland waters. Having reached the interior they circle over a suitable water and if there is any disturbance return seawards immediately. If conditions are favourable they may visit several small waters in the area, expending considerable effort to climb to 300-400 feet between each water before much circling for inspection and then to lose height for a shallow gliding landing.

Until recently most observations suggested that birds followed the rivers to the sea as they arrived but it is now known that some probably return by more direct routes. For example at Slinfold, in November 1977 and February 1979, 2 and 9 birds respectively departed due S from the Arun where it flows east-west and at Midhurst in January 1977, 2, which had probably arrived via the Western Rother, circled high over the Severals prior to departing due south. Similarly birds feeding at some of the larger inland waters have direct flight lines to the nearest river valley. Thus birds are seen flying SE over Hurst Green and SW over Crowborough from Bewl Bridge and SW over West Chiltington from Knepp Lake. Regular observations at other waters would probably reveal similar movements. Nevertheless many, if not most, adhere very closely to the rivers and it is possible that, despite the height at which they fly, they are continuing to prospect for fish, rather than just using the river as a navigational aid to return to the coast.

#### Other Overland Movements

There are a few records of single birds flying so high that they were barely identifiable with the naked eye. How many others travel undetected in this way and the significance of these very high movements is not known.

Among the more unusual inland records are a series of observations made on the Downs near Cissbury. From here single birds, and occasional parties of up to 4 have been seen flying N, E, S and W during the months August-February. Other downland observations have been made at Stump Bottom, Coney Hill, and Kithurst Hill, including 4 flying W at c.300 feet above the north escarpment, suggesting movement between the Adur and Arun Valleys. Evidence of similar movements between the Ouse and Adur is provided by 3 W over Ditchling in 1965, and between the Cuckmere and Ouse by parties of 4-6 over Ringmer and Laughton on three occasions between 1969-1976. However it should be stressed that these records are exceptional compared with the routine traffic up and down each valley. Finally 26 flying inland at Birling Gap, and proceeding E behind Beachy Head on 10th November 1975 was also unusual even if not a true inland movement in the context of this review.

#### DISCUSSION

Comparison of the standard accounts shows that the inland status of the Cormorant in Sussex has changed dramatically over the last 50 years. In the 1930s the species was said to be not uncommon on lakes some 3-4 miles from the coast but particularly scarce further inland, with only a few examples of 1-2 birds on waters at Ashburnham, Worth, Warnham, Harting, Petworth and near Petersfield (Walpole-Bond, 1938). In 1961 the species was regular on inland waters and small numbers were coming inland to roost (des Forges & Harber, 1963). During the last 20 years numbers have steadily increased, taking advantage of the new reservoirs, paying more frequent visits to smaller waters, and fishing almost the entire length of the rivers. Roosting movements have also developed; the numbers involved probably reflect the increased numbers wintering off the Sussex coast (Prater, 1981).

Similar developments have occurred in Kent and Hampshire. In Kent there were regular records on the Medway north of Rochester Bridge in 1941 and further inland at Halling by the early 1950s (Harrison 1953). More recently 15-20 have used the Medway at New Hythe or Leybourne and 30-50 have been reported regularly from the Stour between Stodmarsh and Westbere (Taylor, et

al., 1981). Elsewhere, the water at Hever has been visited regularly since the 1950s, and this and the recently constructed Bough Beech Reservoir frequently hold 20-30 birds. In Hampshire, Cohen (1963) first noted the species flying up the rivers in the early 1950s. By the late 1960s and early 1970s birds were reported on the Avon as far inland as Fordingbridge, the Test at Timbury and the Itchen at Winchester. However two seen in the north at Stratfield Saye, in 1969, were considered exceptional (Cohen and Taverner, 1972). Today the species is regular on the Itchen throughout the year and there are numerous records for the many inland waters on the Surrey/Hampshire border. Analysis of these latter records shows a distinct spring passage in April and a larger but more prolonged passage in August-October. As yet a similar passage cannot be detected for waters in the north of Sussex.

The national literature contains references to the use of inland artefacts as perches. Buildings and chimneys have been noted (Witherby et al., 1938; Fitter, 1949) but are very exceptional. More recently there have been notes of birds perched on electricity pylons and cables during overland movements in Somerset (Rabbits, 1976), and Gwent (Frou, 1980), and one remarkable record of 60 on an overhead cable in Norfolk (Couzens, 1981). Surprisingly there is no reference to birds using pylons as overnight roosts.

Future developments will probably depend on national population trends. Surprisingly little is known about overall population trends in the past, although the well-documented Firth of Forth/Farne Islands population has shown an annual increase of c.4% since 1905 (Cramp, et al., 1974). There is general agreement that the numbers wintering off the coasts of Sussex, Kent, and Hampshire have increased similarly. If this trend continues larger numbers can be expected to feed inland and roosting habits could become even more interesting. Many non-breeding birds now summer off the coast of Sussex and if these also increase the species can be expected to become more numerous inland during the spring and summer months.

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## BIRD COMMUNITIES AND FARMING TRENDS ON THE DOWNS AND WEALD AT PLUMPTON

by A. J. Prater

Following the successful survey in 1980 of wildlife on the West Sussex College of Agriculture's Brinsbury Estate, the Sussex Farming and Wildlife Advisory Group was invited to undertake a similar task at the farm of the East Sussex College of Agriculture, Plumpton, near Lewes. This survey took place during 1982 and the census of breeding birds was carried out by members of the Sussex Ornithological Society, as was the Brinsbury census (Prater 1982). A report is being prepared of the results of all studies.

The 400 ha farm has a considerable range of habitats as it extends from the wealden clay, lying at 55 metres above sea level, up onto the top of the South Downs at 200 metres above sea level. The area on chalk comprises three habitats. The largest is 66 ha of cereals—winter wheat (21 ha), winter barley (18 ha) and spring barley (27 ha); here, apart from an occasional bramble or gorse bush and a band of rough grass along the wire fences, there are no semi-natural features. Running north/south through the arable is the top of a coombe with an associated bronze-age settlement, where extensive and dense scrub (mainly elder, bramble and hawthorn) of 20 ha has developed around a central core of a beech plantation. The northern scarp slope of the Downs covers 58 ha and is grass, grazed by cattle, with substantial areas of invading hawthorn scrub. Along the base of the scarp is a thickish line of more mature trees.

The rest of the farm lies on wealden clay, although a narrow band of greensand passes through the northern fields. The main teaching and estate housing area covers 12 ha. Several copses, totalling 22 ha, lie within the farm. Generally they contain a few older oaks, but extensive clearance over the last century, and lack of management during the last twenty years has resulted in dense, tall, spindly, degenerate coppice with a heavy bramble ground cover. The rest of the 210 ha of the farm, once non-productive areas are removed, involves a mixed winter wheat (33 ha) and pasture/silage (153 ha) regime. All areas given for the different crops and the stock usage relates to the survey period; they will, of course, vary in different years. Like Brinsbury, because it is a teaching college, Plumpton includes some small-scale activities which would probably not be found on a typical commercial farm.



TABLE I. THE BIRDS (NUMBERS OF PAIRS) OF THE PLUMPTON AGRICULTURAL COLLEGE ESTATE. (The principal species are summarised by habitat, the scarcer species as totals for the whole estate).

Habitat area	Whole farm 400ha	Chalk arable 78ha	Chalk scrub 20ha	Scarp 58ha	Copses 22ha	Buildings 12ha	Farm-land 210ha
Blackbird	109	—	20	18	16	17	38
House Martin	92	—	—	—	—	92	—
Chaffinch	89	—	16	24	13	10	26
Willow Warbler	62	—	17	30	4	—	11
Starling	54	—	1	—	—	52	1
Yellowhammer	51	—	10	23	1	—	17
Robin	43	—	5	9	15	5	9
Blue Tit	38	—	3	6	11	3	15
Wren	38	—	3	11	9	3	12
Duncock	34	—	5	9	—	7	13
Great Tit	33	—	4	10	7	2	10
Song Thrush	31	—	5	4	5	9	8
Whitethroat	30	1	17	—	—	—	12
Wood Pigeon	23	—	4	10	7	1	1
Magpie	20	—	3	7	7	—	3
Blackcap	18	—	4	4	8	—	2
Skylark	16	4	—	4	—	—	8
Linnel	14	—	—	4	—	4	6
Corn Bunting	13	9	—	3	—	—	1
Chiffchaff	12	—	—	—	7	—	5
Collared Dove	11	—	—	—	—	9	2
Mistle Thrush	11	—	1	4	3	2	1
Greenfinch	10	—	—	1	1	5	3
Pheasant	10	—	4	4	4	1	1

Species recorded in small numbers—totals of pairs for the whole area:

8—Golderest; 7—Carrion Crow, Long-tailed Tit, Stock Dove; 6—Garden Warbler, Great Spotted Woodpecker, Jay, Swallow; 5—Goldfinch, Green Woodpecker, Marsh Tit, Turtle Dove; 4—Bullfinch, Cuckoo, Reed Bunting, Spotted Flycatcher; 3—Coal Tit, Jackdaw, Lesser Whitethroat, Mallard, Meadow Pipit, Pied Wagtail; 2—Grey Partridge, Kestrel, Nuthatch, Red-legged Partridge, Sparrowhawk, Tawny Owl, Treecreeper, Tree Sparrow, Willow Tit; 1—Little Owl, Moorhen, Nightingale.

## METHODS

The census was carried out between mid-April and early July, 1982 and followed the standard rules of the BTO's Common Birds Census. The estate was divided into eight separate plots which were covered by six individuals and two teams of two observers. Each plot was surveyed on seven or eight occasions. The analysis of the data also followed standard CBC rules (see Prater 1982).

The survey in 1982 followed a severe winter when substantial mortality of birds took place throughout Britain (Marchant 1983). Thus the numbers of many species recorded at Plumpton are likely to be considerably lower than if the survey had been carried out a year earlier. In order to compare this census with that of Brinsbury two years earlier and with other work carried out in the mid-1970s, all data have been corrected to a 1982 average figure. This was done by taking the national index for each species for the census year and multiplying it by the change estimated for the 1982 season. Full 1982 results are not yet available, but a preliminary estimate has been made available by the BTO.

## RESULTS

Table I presents the numbers of each species of which at least one territory was recorded on the farm. A total of 58 species held 990 territories and a further three species (Heron, Lapwing and Tree Pipit) were recorded. Most of the species found were expected, but there were some notable absentees,

particularly Lesser Spotted Woodpecker and Rook. The former does occur in some years, while a large colony of the latter lies immediately adjacent to, and the birds feed on, the farm.

Additionally, Table I shows the contribution of each of the six main habitat types towards the numbers of the commoner species of birds. The overall number of territories, number of species and densities are presented in Table II. One species, the House Sparrow, was not counted because of the great difficulty in identifying nest sites in the main building complex. There is little doubt that 50+, probably 100+ pairs, breed, and the absence of counts will affect significantly the total number of breeding birds.

TABLE II. CHARACTERISTICS OF TOTAL BIRD COMMUNITIES AT PLUMPTON IN RELATION TO PRINCIPAL HABITATS

Habitat	Area (ha)	No. pairs	Density/ km <sup>2</sup>	Total No. species	No. species forming 75% of community
Whole farm	400	990	247	58	15
Chalk arable	78	16	20	5	2
Chalk scrub	20	143	715	30	11
Scarp slope	58	210	362	52	11
Copses (Wealden)	22	141	641	31	12
Buildings	12	240	2000	23	5
Farmland (Wealden)	210	240	114	44	13

TABLE III. DENSITIES (per km<sup>2</sup>) OF PRINCIPAL SPECIES OF BIRDS FOUND IN CHALK SCRUBLAND

Species	Downs scrub (Plumpton) 20ha	Scarp (Plumpton) 58ha	Williamson (Herefordshire) 24ha	Morgan (Wiltshire) 60ha
Wren	15	19	33	9
Duncock	25	16	45	3
Robin	25	16	24	8
Blackbird	98	31	49	11
Song Thrush	25	7	15	1
Whitethroat	84	—	3	3
Blackcap	20	7	9	✓
Willow Warbler	84	52	113	53
Blue Tit	15	10	35	2
Great Tit	20	17	18	10
Magpie	15	12	26	11
Chaffinch	79	42	41	6
Yellowhammer	49	40	63	51

## DISCUSSION

It is always dangerous to generalise about the effects of habitat types and management on the bird populations present, particularly when looking at results from a single year or with only small areas involved. However, as we still lack a full understanding of the role of each in Sussex, every study carried out can make significant, if tentative, advances. The Plumpton Estate survey results should be treated with caution, although the scale of differences in bird density between the habitats should make us discuss seriously some of the implications.

The chalk of the South Downs is a major feature of the county and one which has received virtually no systematic survey by birdwatchers. This is in contrast to the intensive work of botanists, and lepidopterists in particular. For most other natural history interests, the value of the Downs lies in old herb-rich grassland, originally grazed intensively by sheep and rabbits (see Edgar in Shrubb 1979); there used to be a few birds, such as Wheatear and Stone Curlew, now virtually lost to the county, which were of considerable value in this habitat.

However, during the last twenty years there have been two very distinct trends in farming the Downs. Firstly, on the rolling top of the chalk, much of the grassland has been converted to winter cereal and this has happened at Plumpton. Secondly, the scarp slopes have been grazed less intensively, and less by sheep, with the result that extensive scrub invasion has followed.

Judging from the results of this survey with only 20 pairs/km<sup>2</sup> and only five species involved, birds are extremely scarce on the arable areas. Only Corn Bunting can be described as regular, and it appears that this species has managed to expand into and exploit this habitat. The total absence of Lapwing and the very low numbers of Skylarks, and of both Partridge species if no game-bird management is done, is apparently typical of the Downs in East Sussex and perhaps elsewhere. It is therefore certain that unless major changes occur, with some reversion to grassland and a movement back to spring cultivation, especially root crops, we shall not see re-colonisation by Stone Curlews and Wheatears and this habitat will continue as a virtual ornithological desert in the breeding season.

In contrast to this sad tale, the growth of scrub in areas on top of the Downs and on the scarp slopes, holds high populations of many species, see Tables I, II and III. While there are differences in detail in the bird communities between these two areas and in two other studies made of roughly similar habitats elsewhere in southern England (Morgan 1975, Williamson 1975) the general pattern of many Willow Warblers, Yellowhammers, Whitethroats, Chaffinches and *Sylvia* warblers, does clearly show. It is certain that at least twenty species of birds have benefited from scrub invasion. This is because it increases the structural diversity of the grass slopes and provides song posts and nest sites which were previously absent.

Provided there is some balance between open grassy areas, open and dense scrub and a few larger trees, a balance which will have to be maintained by active management, this scrub will continue to be of great value. In some areas the scrub is becoming very dense, while in others clearance to grassland, with the intention of introducing a sheep-grazing regime, is taking place. From a strictly ornithological point of view, neither trend is desirable, although if all aspects of nature conservation are considered, some conversion to herb-rich grassland is definitely beneficial. As with so many problems relating to land management, a balance is required.

TABLE IV DENSITIES (per km<sup>2</sup>) OF PRINCIPAL SPECIES OF BIRDS IN COPSES AT PLUMPTON AND BRINSBURY

Species	Brinsbury (corrected for 1982)	Plumpton
Great Spotted Woodpecker.....	20	18
Wren.....	118	42
Duncock.....	52	0
Robin.....	98	70
Blackbird.....	72	74
Song Thrush.....	27	23
Mistle Thrush.....	10	14
Blackcap.....	59	37
Chiffchaff.....	28	32
Willow Warbler.....	21	19
Goldcrest.....	12	9
Long-tailed Tit.....	48	9
Blue Tit.....	77	51
Great Tit.....	60	32
Nuthatch.....	17	9
Treecreeper.....	17	9
Jay.....	40	19
Magpie.....	10	32
Chaffinch.....	112	60

There are a number of small woodlands or copses on or adjacent to the Plumpton Estate. In this it is typical of much of the Weald, although in this part, the relatively few woodlands that remain tend to be of smaller size and further from their neighbours than those further north or, indeed, at Brinsbury. With these points in mind, a comparison was made of the birds in copses on the two estates. Table IV shows that in most species, densities range from broadly similar to considerably less at Plumpton than at Brinsbury. Some of the greatest differences lie with the commoner species (Wren, Chaffinch, most tits) with the result that overall bird density on Plumpton is much lower than at Brinsbury. However, it must be remembered that the Brinsbury density is less than the 1270 pairs/km<sup>2</sup> in Prater (1982) due to bird mortality during the severe weather in winter 1981/82; no correction factor can yet be applied to the total community as has been done for the densities of commoner individual species shown in Table IV. Indeed, the use of corrections for national changes in numbers of each species can only represent the average national effect of the cold winter. It is quite possible that Plumpton was more severely affected than other sites, with the dual result that numbers are artificially low, and there has been a withdrawal of species into their preferred habitats. This latter effect would lower numbers in hedgerows and maintain numbers in copses.

When individual woods are considered, their small size makes density calculations for each very tentative due to enormous edge effects associated with the technique of territory analysis. However, the calculations were made, and the three woods which recorded densities above the average of 641 pairs/km<sup>2</sup> all lay together geographically; they were Plumpton Wood, the copse to its north and Pig Wood. All have been opened up or partly managed during the fairly recent past. Fewest birds were in Oak/Sheepwash Wood and Brocks Wood, where very dense whips or degenerate coppice predominated around standards. Undoubtedly the reinstatement of a balanced management programme for these woodlands would be beneficial to birds, although this must involve the retention of most of the mature trees.

The wealden farmland itself, including the hedgerows, stream sides and small copses, was surprisingly very poor for birds with only 114 pairs/km<sup>2</sup>. Many of the hedgerows had been quite severely trimmed, replaced by wire fences or grown very spindly with little basal cover. It might be expected that these would play unimportant roles for the breeding birds, but even apparently good hedgerows had very few pairs. Perhaps past management has had a considerable effect, although the severe weather of the previous winter may have removed many of the residents, see comments made earlier. From several fields, two or three cuts for silage were obtained, made at approximately monthly intervals, starting at the end of May or early June. With such a small area involved, only an indication can be given of the effect of such intensive grass production. Two Skylark territories were involved in two fields, and Skylarks were recorded on six out of eight visits before the first cut, which in both cases took place on 28th May, while they were present on just one out of the next seven visits. This indicates that while birds may be recorded as holding territories, it is unlikely that successful breeding will take place under this type of cultivation.

As a result of this survey, we can be certain that a positive approach to the sympathetic management of scrub, hedges and woodland would improve this large estate for birds.

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## BRENT GOOSE FEEDING PATTERNS FOR CHICHESTER HARBOUR 1982/83

By A. J. Prater

The 1982 breeding season for Brent Geese was very successful, with the result that 50% of young were present in winter flocks. Inevitably, they came inland in large numbers and around Chichester Harbour record flocks were seen. Their numbers and distribution were monitored closely by Mrs. J. H. M. Edom, the Estuary Counters and myself, so we could assess the potential impact on winter cereal and grass growers. The birds came inland much earlier than recorded before, by the end of the first week of November at least 4,000 were counted. The table shows the percentage on each habitat type and total numbers counted; the figures during December-February, differ from the estuary counts (see p.11) being special, additional surveys.

	% of Brent Geese on Estuary	Grass	Winter Cereals	Total Numbers
16 Oct. ....	100.0	—	—	508+
13 Nov. ....	19.0	61.6	19.4	7842
11/12 Dec. ....	—	86.2	13.8	12470*
30/31 Dec. ....	1.7	80.1	18.2	9881
15/17 Jan. ....	14.3	70.2	15.4	9722
12 Feb. ....	30.9	68.9	0.2	10550
19 March ....	36.0	40.8	23.2	4537

\*This may be an over-estimate, due to flock movements during the count.

The Thorney sanctuary was again mown for the geese and numbers were at record levels with about 2100 regularly present and 2600 at the peak; approximately 21% of all Chichester Harbour's Brent Geese fed here.

## THE BIRDS OF IPING COMMON

by S. W. M. Hughes and Ann J. Griffiths

Iping Common Local Nature Reserve extends to 77 ha and forms part of the open heathland three miles west of Midhurst in West Sussex. Open heathland is a diminishing habitat in the south east of England. Usually, as here, it is registered Commonland and without direct management or the exercise of common rights it would gradually be overgrown by pine and birch. Such Commons are popular with local walkers and riders. Iping Common and the surrounding area has been notified by the Nature Conservancy Council as a Site of Special Scientific Interest since 1954 (revised 1980); over the years there have been problems of fire and unauthorised access by vehicles and caravans.

In recognition of the multiplicity of interests in the area the West Sussex County Council leased two areas in 1974 and later entered into an agreement over a further area to enable a major part of the Common to be managed as a Local Nature Reserve. The final designation of the site was achieved in 1977 but not before it suffered a major fire in late July 1976, leaving 69 ha scorched and badly burnt. This paper documents the birds of Iping Common as recorded over the last ten years, the immediate effects of the fire and the subsequent recovery of the breeding population.

### DESCRIPTION OF AREA AND METHODS

#### *Vegetation before the fire*

Most of the land lies over Folkestone sand beds, with a low-lying strip along the northern boundary over Sandgate beds. A ridge from east to west slopes gently to the south and more steeply to the north where there are a number of springs. The soils are derived from a coarse sand with much of the mineral content leached by rain over the centuries to form a 'hard-pan' at a depth of 4-18 in. A vegetation survey undertaken by King's College, London, in 1962 listed the major plant communities as woodland (dominated by birch and some pine); scrub (dominated by gorse); heather; bracken; grassland; bogs and ponds. Thus the Common then comprised a mosaic of habitat of differing ages and structure, as shown in figure 1a. The fire reduced these habitats to two small heather dominated areas, together with patches of birch and bracken, mainly around the perimeter of the site (figure 1b).

#### *Regeneration of vegetation after the fire*

Within a few days of the fire, purple moor-grass (*Molinia caerulea*), bracken (*Pteridium aquilinum*) and birch (*Betula sp.*) were shooting from the charred remains and by 1977 all trees and flowering plant species were regenerating. The species taking greatest advantage of the bare ground created by the fire was birch and many seedlings appeared by 1978. Although the plants have recolonised from seed or grown from the old rootstocks, the fire changed the physical and age structures of the communities, with young plants dominant and few associated lichens and bryophytes. Thus the areas unaffected by the fire, now support the only old plant communities. Subsequent management in the form of a mowing regime along fire breaks has superimposed additional variation in the heights of the stands and after 5 years this is beginning to be noticeably effective.

Contrary to previous belief, recent research by King's College has shown that bracken has spread by up to 25% since 1947, possibly in association with birch, the increase occurring in areas once heather dominated. The status of gorse has not been fully investigated but before the fire there were large areas around the car park and in the western part dominated by gorse (*Ulex europaeae*), the dwarf gorse (*U. minor*) being mixed with heather species elsewhere on the common. The fire considerably reduced the stands of *europaeae* but *minor* is regenerating well and may become more dominant than before the fire. A generalised map of the vegetation as it was in 1980 is given in figure 1c.

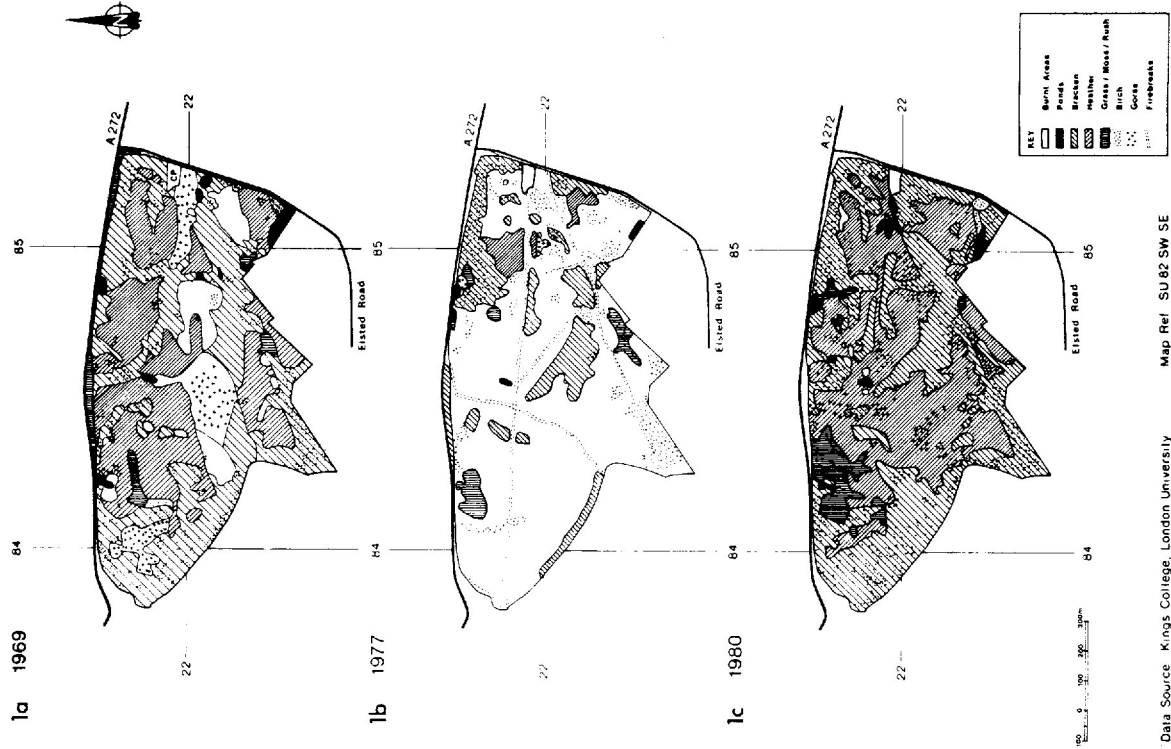


Figure 1. Iping Common Local Nature Reserve - Generalised Vegetation Maps

### Study Methods

Twelve two hour visits were made, spaced throughout the period between March 1973 and February 1976 to obtain a general assessment of bird species diversity. Three visits were planned for May-July 1976 to quantify the breeding populations of ten selected species, which were considered to be characteristic of the site. Only two visits were accomplished prior to the fire.

No visits were made for two months after the fire whilst a new study regime was being considered. Thereafter four visits were made between September 1976 and March 1977 to note the short term effects and starting in May 1977 a census, of the same ten species studied in 1976, was performed annually for 6 years. A standard walk, taking approximately two hours, and a mapping technique similar to that used for the British Trust for Ornithology's Common Bird Census was adopted. Between three and six counts were made annually. This was considered to be acceptable owing to the open terrain and the ease with which the chosen species could be located. Other species present were noted, but no attempt was made to map territories.

## RESULTS

### Breeding season diversity

Prior to the fire, breeding had either been proven or was considered highly probable for 29 species, and another 25 species breeding locally were feeding on

TABLE I. COMMON SPECIES BREEDING ON IPING COMMON

	1973-76	1977	1980	1982
Mallard.....	b	B	P	b
Moorhen.....		B		b
Woodpigeon.....	b	B	B	b
Turtle Dove.....	B	P	P	B
Nightjar.....	B	B	B	B
Green Woodpecker.....	B	P	P	P
Great Spotted Woodpecker.....	b	P	P	b
Skylark.....	B	B	B	B
Tree Pipit.....	B	B	B	B
Meadow Pipit.....	B	B	B	B
Wren.....	B	B	B	B
Duncock.....	B	P	P	b
Whitethroat.....	B	b	b	B
Willow Warbler.....	B	b	b	B
Goldcrest.....	P	P	P	P
Stonechat.....	B		B	B
Robin.....	B	b	B	B
Blackbird.....	B	b	B	B
Song Thrush.....	B	P	P	b
Mistle Thrush.....	B	P	P	b
Long-tailed Tit.....	B	B		P
Blue Tit.....	B	P	b	b
Great Tit.....	b	P	b	b
Tree Creeper.....	b	P	P	P
Yellowhammer.....	B	B	B	B
Redd Bunting.....	b	b	B	b
Chaffinch.....	b	P	b	b
Redpoll.....	b	P	B	B
Linnet.....	B		P	b
Bullfinch.....	b		P	b
Starling.....	B	b	B	B
Total breeding species (proved or probable).....	29	15	19	27
Other species recorded but not breeding.....	25	28	27	25

NOTES: B = breeding proved; b = breeding probable; P = present in the breeding season

the site. Details of the breeding species concerned are given in Table I, with similar details for the years 1977, 1980 and 1982 for comparison.

The short term effect of the fire was a drastic reduction in breeding species, from an average of 29 species between 1973/76 to 15 in 1977. Recovery was relatively slow and after 6 years the total number of breeding species had still not returned to pre-fire levels, with Green Woodpecker, Long-tailed Tit and Bullfinch still absent in 1982; possibly the last has been overlooked. Moorhen, which has bred in most years since the fire, may have been overlooked previously. Several of the species not breeding between 1977-1980 were very dependent on the higher scrub. This was almost totally destroyed and even now will take several years to reach its former state.

In the first few months after the fire the species' diversity and total numbers recorded feeding on the site were extremely low (Table II). However in 1977, although the number of species breeding was reduced by approximately 50%, the number using the site to feed was only slightly reduced from 54 to 43 species.

TABLE II. BIRD SPECIES FEEDING ON IPING COMMON BETWEEN SEPTEMBER 1976—MARCH 1977

Habitat	Species	12/9/76	1/11/76	16/1/77	12/3/77
Heather (burnt)	Common Partridge.....	0	0	0	3
	Skylark.....	0	7	0	0
	Stonechat.....	0	2	0	0
	Meadow Pipit.....	3	26	1	2
	Pied Wagtail.....	5	1	0	1
	Crow.....	3	5	2	1
	Wren.....	0	3	1	2
	Whitethroat.....	1	0	0	0
	Blue Tit.....	2	1	0	0
	Great Tit.....	1	0	0	0
Birch (scorched)	Greater Spotted Woodpecker.....	1	1	0	1
	Yellowhammer.....	0	2	0	3
	Siskin.....	0	16	0	0
	Robin.....	0	0	1	0
Car Park	Song Thrush.....	0	0	1	0

### Breeding season numbers

The results of the 1977-1982 breeding season censuses are given in Table III. Also included are the estimated figures for 1976 before the fire, for comparison. Eight of the 10 species returned to breed in 1977 but the total number of territories was 60% less than in 1976. The figures for 1978 were similar, with territory distribution determined by the area of unaffected habitat and regenerating birch and bracken. The remaining 2 species returned in 1979, when territories rose to 65% of pre-fire levels. These were finally attained in 1980, 4 years after the fire, and rose to 52% and 47% respectively above the pre-fire levels in 1981 and 1982.

The total destruction of the gorse, higher stands of heather and much of the low scrub resulted in the loss of Stonechat and Linnet, whilst Whitethroat was reduced to a single pair. Although the Stonechat returned in the third year, and two pairs were present in the fifth, the habitat is still marginal for the species, which has yet to find a regular nesting area. The Linnet was the last of the ten species to return to breed and the only one which, in 1982, had not recovered to its pre-fire level.

Ground nesting species recovered remarkably quickly. One pair of Meadow Pipits returned in 1977, maintaining the normal population. Tree Pipits, which were reduced by 60%, fully recovered after 3 years and Skylark and Yellowhammer, reduced by 62% and 40% respectively, after 4 years. In 1982 the populations of all 3 species were well above 1976 levels, the Tree Pipit,

up by 50%, probably finding the many patches of bare ground particularly attractive. However in 1982 there was evidence that the population had stabilised. In contrast the annual increase in Skylark and Yellowhammer populations continued and were higher by 137% and 42% respectively than 1976 levels. The Yellowhammer has benefited from the increase in young birch scrub which, alive or dead, provides excellent song posts, while the new low growth from the base of burnt trees provides good nesting cover. The small Reed Bunting population was unaffected by the fire and, during the study period, a remarkable total of 8 males held territory in one year, although at least 2 were probably unpaired.

TABLE III. NUMBERS OF OCCUPIED TERRITORIES OF TEN SELECTED BREEDING SPECIES ON IPING COMMON DURING THE 1976-1982 BREEDING SEASONS

	1976	1977	1978	1979	1980	1981	1982
Yellowhammer.....	15	9	8	10	15	20	23
Tree Pipit.....	10	4	6	10	12	15	15
Whitethroat.....	10	1	1	1	3	2	11
Skylark.....	8	3	5	8	13	18	19
Nightjar.....	6	2	3	4	4	5	5
Linnet.....	6	0	0	1	3	5	4
Reed Bunting.....	2	2	2	1	3	8	2
Meadow Pipit.....	1	2	1	1	2	1	1
Redpoll.....	1	1	1	2	3	3	6
Stonechat.....	1	0	0	1	1	2	2
Total.....	60	24	27	39	59	79	88

The recovery of the Nightjar has been slow. Initially this species probably benefited from the short-lived clearance at ground level and the clearance of bracken. A longer-term benefit has been the replacement of some established birch with a new woodland edge of young saplings. However the destruction of heather and the consequent lack of insect food has probably been the main factor controlling the rate of recovery.

#### Passage Birds and Winter Visitors

Thirteen species have been seen on passage or only during the winter months. Lesser Whitethroat and Grasshopper Warbler were both recorded once in the spring, whilst there were two records of Wheatear and three of Yellow Wagtail in the late summer. House Martins fed over the site in July-September, when Lapwing were reported occasionally, particularly in 1977 and 1978 when several areas of burnt heath were very damp. Single Herons were seen late in the year as were Black-headed and Common Gulls. In winter the birch scrub was used occasionally for refuge by large numbers of Fieldfares and Redwing, provided food for Siskins and a look out post for the occasional Great Grey Shrike; the latter species has not been reported since the fire.

#### DISCUSSION

If unchecked, the invasion of open heath by birch, pine or bracken eventually changes the character of an area causing the loss of the characteristic heathland species, although a greater diversity in the breeding bird community is noticed. The present day diversity on Iping Common, with c.50 species, is typical of a transition stage from pure lowland heath, which might reasonably be expected to support only 30-35 species, to scrub woodland. (Fuller, 1982).

The management plan, drawn up in 1977, set out, amongst other objectives, to conserve a balance between the various habitats, in order to perpetuate the species characteristic of heathland. This required the

maintenance of a woodland edge habitat, which is important for a diverse heathland bird community. The results reported in this paper suggest that the management undertaken to date has been very successful in meeting these objectives and the site is arguably better now than it has been for very many years. Diversity has been maintained, while numbers of the more typical heathland species are higher now than prior to the fire, although the heathland vegetation is still predominantly young in structure. The problem for the future will be to maintain this delicate balance without the intervention of more destructive fires. Thus the overall management plan was reaffirmed in 1982 and includes the maintenance of fire breaks, the control of pine and birch seedlings to preserve open heath, conservation of important bog areas and the control of bracken to stop it invading heath and grass dominated areas.

The speed the bird community recovered from the fire was most encouraging. Recovery of the typical heathland ground nesting species was obvious after three years and accomplished after four, while species requiring low herbage took four to five years. It has been gratifying to see the original pre-fire population levels of some species being exceeded and it is interesting to examine these findings in the context of national population trends (Marchant, 1982).

The rapid recovery of the Tree Pipit population has taken place during a period when the national population index is low. In contrast the Skylark and Yellowhammer recoveries have taken place when the national populations of both are buoyant. Most interesting was the peak in the Reed Bunting numbers on the Common in 1981 which followed a national increase (13%) in 1980. The slow recovery of the Linnet might reflect both the lack of suitable habitat and its low and still declining national trend. Similarly the recovery of the Whitethroat must also have been influenced by the continuing very low level of the national population. Finally the Redpoll, as a nesting species, has been spreading westward across Sussex since the early 1970's (Houghton, 1979). Although it has nested nearby since 1975, the numbers present on Iping Common indicate a definite local change in status, which has been encouraged by the stage of development of the birch scrub in two areas on the site.

The interest of this site is due in great part to the powers of natural regeneration and colonisation. The site management aimed at maintaining this interest, however, is due to the co-operation enjoyed between research workers, practical conservationists, amateur naturalists, local interest, voluntary helpers in all fields and the County Council working together to achieve nature conservation.

#### SUMMARY

The results of ten years observations on the birds of Iping Common are presented with particular reference to the effects of fire on ten important heathland and woodland edge species. In the first breeding season after the fire the diversity of breeding species was reduced by 50%. Of the ten species studied in detail two were lost completely whilst the total number of territories of the other eight was reduced by 60%. The subsequent recovery of all ten species is documented and discussed in the context of habitat recovery and management. The problems of future management are recognised and the continued need for co-operation between research workers, practical conservationists, amateur naturalists, local interests, voluntary helpers and the County Council is emphasised.

#### REFERENCES

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#### UNUSUAL RECORDS

All records of unusual species are considered by the Records Committee and it may be assumed that those published have been fully authenticated. Such reports should be submitted on separate sheets or on special forms available from the Recorder. Reports on rarities as defined by *British Birds* should be submitted on, or in the same format as, the forms obtainable from the Secretary to the Rarities Committee. The following list embodies those unusual species in Sussex for which descriptions are normally required. The Recorder may seek supportive evidence in the case of other species occurring under unusual circumstances. This list is not exclusive and any observer in doubt or needing advice on any species should send details accordingly:

Divers (except Red- and Black-throated on the coast)  
Grebes (other than Great Crested and Little)  
Shearwaters  
Storm and Leach's Petrels  
Shag  
Bittern  
Spoonbill  
Bewick's Swan (other than at Amberley Wild Brooks)  
Whooper Swan  
Bean and Pink-footed Geese  
Red-crested Pochard  
Long-tailed Duck  
Honey Buzzard  
Red Kite  
Marsh and Montagu's Harriers  
Goshawk  
Rough-legged Buzzard  
Osprey  
Peregrine  
Quail  
Spotted Crane  
Cormorant  
Stone Curlew  
Kentish Plover  
Dotterel  
Tomminck's Stint  
Pectoral Sandpiper  
Phalarope  
Pomarine Skua  
Mediterranean and Sabine's Gulls  
Iceland and Glaucous Gulls  
Roscate Tern  
Black Guillemot  
Little Auk  
Puffin  
Woodlark and Shore Lark  
Waxwing  
Dipper  
Bluthroat  
Warblers: Cetti's, Marsh, Icterine, Melodious, Barred, Yellow-browed  
Red-breasted Flycatcher  
Golden Oriole  
Red-backed Shrike  
Raven  
Crossbill  
Lapland and Oritolan Buntings

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