

The
Sussex
Bird Report

1971



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THE SUSSEX BIRD REPORT

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Cover drawing of *Barn Owl* by Ian Willis

Published October, 1972

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THE SUSSEX ORNITHOLOGICAL SOCIETY

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Programme: B. A. E. Marr (*Chairman*), C. E. Hope, Miss V. Newton

The above list of Council Officers and Members shows all holding office at the 30th June, 1972.

HON. SECRETARY'S REPORT

1971 has been a year of significant change throughout the Society's activities, one such change has been the slowing down of the rapid increase in membership of recent years. We hope that this trend is not repeated in 1972 and that the welcome increase in awareness of Sussex wildlife is maintained.

The Officers and Council of the Society during 1971 were Guy Mountfort (President), Dr. M. Hollings (Vice-President), Mr. D. G. Chelmitck (Hon. Secretary), Mr. C. F. Helyer (Hon. Assistant Secretary), Mr. R. E. Goddard (Hon. Treasurer), Mr. M. Shrubbs (Hon. Recorder), Mr. S. W. M. Hughes (Hon. Assistant Recorder), Mr. S. Bayliss Smith (Hon. Editor), and Messrs. C. G. des Forges, C. M. James, B. A. E. Marr, R. J. Sandison, J. B. Whitby and Dr. A. B. Watson.

In December, owing to ill-health, Mr. Goddard had to resign the post of Hon. Treasurer, which he had held from the Society's inception. It is with great regret that we have now to report the sad news of his death on July 1st, 1972. An obituary appears on page 5.

The Council is fortunate that it has been able to find a willing successor in Mr. Arthur Cooke, of Rottingdean, and will be proposing him for election as Honorary Treasurer at the Tenth Annual General Meeting, notice of which accompanies this report. Mr. Cooke had in fact been working with Mr. Goddard for some time and is fully conversant with the task he is taking on. The Council extends its thanks to Mr. Cooke and wishes him every success.

The Society's unofficial helpers have once again contributed enormously to the smooth running of the Society's work throughout the year. The Council wishes to express its thanks to Mr. D. J. Taylor (Membership Secretary), Miss Veronica Newton (Meetings Secretary and Mr. C. E. Hope (Field Outings Secretary), as well as to Mrs. Iris Simpson, Mrs. Cynthia Murphy and Mrs. Norma Petrie-Hay for help in typing, also Miss J. V. Stacey for much help in routine handling of records. We also thank Mr. T. Palmer for packing and posting the literature sent out during the year. Finally we should like to thank Mr. R. Pidgeon who took over the job of Publicity Officer last year. Certainly the Society's representation in the Press has greatly improved since Mr. Pidgeon's appointment and we wish him further success for 1972, especially as he is moving back to Sussex after a short absence.

The Council is pleased to report a surplus of £372 arising from the accounts for the year ended 31st December, 1971, compared with £255 for 1970. The Film Show profit could not be ascertained before the accounts were completed but the profit is likely to be similar to that of 1970.

The subscription for 1973 will therefore remain the same as at the Society's inception in 1962.

The income tax recovered on deeds of covenant has risen by 50% compared with 1970, but this is still small in relation to the total membership. It is again asked that any further members, who feel able to execute deeds of covenant, may help our Society in this most valuable way.

"Change for the better" was the theme of the Junior Section for 1971. Its Secretary, Mr. W. Merritt, started a membership drive which increased numbers to an all-time peak of 65. It is particularly significant that some Sussex schools have shown an interest in this aspect of the Society's work and we hope that this membership drive has done more to encourage interest in wildlife than merely to increase membership of our Society. The Society would like to extend its thanks to Mr. R. Greenhalf for producing the membership poster for the

Junior Section which attracted so much interest earlier in the year. Unfortunately Mr. Greenhalf suffered a serious road accident during the year but we are glad to say that he is now fully recovered.

The scientific policy of the Society remained largely unchanged in 1971. Full support continued to be given to the B.T.O. Atlas enquiry. Members will by now be very familiar with the aim of this and the Society hopes that by the end of 1972, the last year of the survey, the county will be well covered.

The programme of wader and wildfowl counts in Chichester and Pagham Harbours started in 1964 continued and the results contributed to the B.T.O. Estuaries Enquiry. Counts in Chichester Harbour were extended to include the Haying Island shore by arrangement with the Hampshire Field Club. Further counts were also made along the whole coastline and commenced at Rye Harbour at the end of the year.

The only other breeding survey organised by the Society was of the Stonechat, but, on completion of the Atlas project, we intend to expand these activities once again. Plans are also being made to expand the Society's survey work in the winter months.

The volume of information available in the records continues to increase, and part of the Recorder's time has been taken up in supplying information to other organisations, for example—to the West Sussex County Council on the importance to birds of Pagham Harbour. This, of course, impinges on conservation and is probably the most important use to which the records can be put. Work has also started on a new Birds of Sussex which will enable much information not used in the Annual Bird Report to be published.

The Society's indoor meetings totalled eight during the year, one of which was a combined meeting with the Horsham Natural History Society. Variety is always the key note of our indoor meetings with talks and films on such wide ranging subjects as B.T.O. ringing research and wildlife of the Antarctic. Unfortunately attendance at meetings has not been as high as we would have hoped and we certainly look forward to seeing more people in the future. One meeting where attendance was not a disappointment was our annual film show at the Dome, Brighton. The Society arrange a joint showing with the R.S.P.B. of their latest colour films "Kites Are Flying" and "The Lonely Level." The showing was something of an experiment in that a performance was held in the afternoon and another in the evening. Both these showings were very well attended and the Society hopes to repeat the exercise in future years. One slight disappointment was that only a small number of school children were present at the afternoon performance. In connection with indoor meetings in general, these have been very capably arranged by Miss Veronica Newton and with specific regard to the film show, we would like to thank Mr. and Mrs. M. Cahill and their band of helpers for making the day such a success.

Unlike the indoor meetings, attendance on field outings has continued to increase. Once more efficiently arranged by Mr. C. Hope, the aim has been to visit as many major habitats as possible. Perhaps the most successful trip was the coach outing to Stodmarsh Nature Reserve in Kent. A party of 42 saw such interesting species as Little Egret, Marsh Harrier, Savi's Warbler and Bearded Tits. All told, field meetings produced a total of 125 species and helped many of our beginners to become far more proficient in their hobby.

Although there is never any shortage of members on field meetings, finding leaders is always a problem and the Society would like to thank all those who gave their time to lead these outings. Unfortunately Mr. Hope has announced that he will be giving up the post of Field Outing Secretary in 1972. We thank

him especially for all the work he has done and hope that we can find a successor to maintain the high standard of organisation achieved. Finally we would like to thank Mr. and Mrs. A. Simpson for so admirably organising the successful coach trip to Stodmarsh.

As always the Society's newsletters have proved enjoyable reading and have maintained the important link with our membership throughout the county. Once again we would like to thank Mr. Ian Willis for providing us with so many fine illustrations as well as for the front cover of the 1970 Bird Report. Our thanks also to Mr. Mike Cahill for providing the photograph of the Wilson's Phalarope seen at Pagham in the autumn.

One notable absence from the list of officers for 1971 was that of Hon. Conservation Officer, Mr. David Lang. It is unfortunate that the Society has been unable to find a suitable successor to Mr. Lang. However Mr. Chelmitck has been persevering in this field with the invaluable and tireless help of Mr. W. Merritt. We are very pleased to report that the Society's winter flooding scheme at Glynde Reach proved a great success in its first year. Not only were duck populations maintained in the area but the farmer reported that grazing in the spring was unaffected by the flooding. The scheme is again operating successfully. Mr. Lang has agreed to write an article on the scheme with a view to its application in other areas.

Rye Harbour must always come high on the list of the Society's conservation projects. 1971 saw many new developments at Rye which the Society assisted in a financial or advisory capacity. A team of eight helpers was present over Easter clearing vegetation and building up the islands to improve the habitat for the Common Tern. The efforts were once again to no avail as none of these birds bred on the reserve for the second year running. Mr. David Flumm continued as warden for 1971 and once more maintained the goodwill of local residents, so vital in an area such as Rye. Unfortunately he will not be seeking re-appointment in 1972 and we wish him every success for the future. The Council was pleased that Mr. J. B. Whitby, of Eastbourne, agreed to succeed Mr. Lang on the Rye Harbour Management Committee.

Two projects in the Cuckmere Valley for which the Society has made recommendations are the Seven Sisters Country Park and Arington Reservoir. The Society has been advising the Eastbourne Water Company on the planting of the area around the reservoir and is hoping to position some offshore floating islands to attract breeding birds.

Floating islands are the subject of our limited success at Chichester Gravel Pits, where after many years we have obtained permission to have islands on some of the pits. Perhaps at last something can be done to improve the breeding success of nesting Great Crested Grebes in this area.

Officers of the Society have been appointed to the new Management Committee for the Pagham Harbour Local Nature Reserve, which has been set up by the West Sussex County Council. A warden is to be appointed for the summer months. The Society is making a financial contribution to the running of the reserve from its Conservation Fund.

An exciting project for 1972 still in the planning stage is the possibility of carrying out some management work to increase the diversity and interest of a large reed bed, in the east of the county. This work involves local schools, a most satisfactory development, since the dual benefit may be had of interesting the young in active conservation and maintaining reed bed habitat which is sadly declining throughout the county.

As mentioned at the beginning of this report, 1971 has been a year of

change for the Society. We hope that 1972, our tenth anniversary year, will show a continued growth of the Society's influence and activity. As time goes on the Society's role in providing information and in education increases, and more can be achieved in the future if this growth is maintained. This can only be done with the help of each member and if you feel you can help the Society in any way, we would be most grateful. You will then not just be enjoying your hobby but helping to conserve some of the diversity and variety of Sussex wildlife for generations to come.

OBITUARY: ERIC GODDARD

Eric Goddard, until a few months ago the Honorary Treasurer of the Society, from its inception ten years ago, died on July 1st at the age of 57. In the past two years he had suffered from severe ill-health, and had spent much of this time in hospital.

Born in Brighton, where his father was an Inspector of Taxes, Eric was educated at Brighton College, and soon after qualifying as a Chartered Accountant in 1939 entered the Royal Navy, rising to the rank of Lieutenant Commander by the end of the war. He started his own practice on leaving the Navy, at North West House near Brighton's Clock Tower, and in 1947 joined forces with another practising Accountant and with an old school-friend to form the partnership of Graves, Goddard & Horton Stephens, at Pavilion Parade, immediately opposite the Royal Pavilion, where the firm still practises.

Eric had a lifelong interest in birds, and was an enthusiastic member of The Shoreham Ornithological Society for several years, being on their Council for a long period. It was at their meetings that I first met him, and thus started a close and strengthening friendship with him and his family which I have always appreciated; many happy and amusing evenings were spent in their company at their Dyke Close home in Hove or, more recently, at their lovely new house near Storrington.

At the end of 1961, when we were casting our net for officers for the proposed county ornithological society, we naturally turned to the Shoreham Ornithological society, and Eric, as a Chartered Accountant, seemed the ideal man for Treasurer. We were delighted when he accepted the invitation, and thus began a very happy ten-year association with this Society, as its first Honorary Treasurer.

His work for the Society has been inestimable. He will be remembered principally as the Chancellor who beat inflation; what other society can claim that their subscription has not risen in (now) well over ten years? But overall he helped in so many ways, above and beyond the duties of guarding our finances, which he did so well. From the outset he helped with numerous administrative and secretarial duties, and his home or office were always at our disposal for meetings, formal or informal. He served on our Programme Committee for many years; he led numerous and regular Field Outings; he had a term as Chairman of the Council; and he introduced many of the Society's meetings, including one of the early Annual General Meetings where he not only took the place of the Secretary, who was absent through illness, but had previously written the Report of the Council for him! His wisdom and sound judgement were in frequent demand, but he could so ably temper and lighten even the gravest situation with his irrepressible sense of fun. It was a real pleasure to work with him, and as a youthful and at times over-zealous Secretary, I learned much from him.

Eric's interest in ornithology derived from the sheer pleasure of just watching birds and appreciating them as birds; not for him the long drive after a rarity, or the quasi-scientific approach to the subject feigned by some. He liked nothing better than describing the antics of the Robin which daily used to come through the kitchen window at Dyke Close and steal mealworms from his fingers, or telling me about his days out to favourite haunts such as East Head or Pagham, "Chi Pits", or Thorney. He was as excited as we all are when a rarity came into his field of view, but was otherwise very contented in spending the day, often in company with his wife, just pottering about seeing what he could find, and meeting old friends, both birds and bird watchers.

His idea of the perfect holiday was to take a cottage at Clew or Blakeney on the north Norfolk coast in late autumn for two or three weeks, and to see what he could find among the migrants along that lovely and remote part of the coast. His very readable accounts in the Annual Reports of the Shoreham Ornithological Society show how rewarding these holidays were.

Eric's grave illness two years ago would have been too much for most men, but he amazed his doctors and the hospital staff by making a remarkable recovery which was nothing short of miraculous. He was able to resume part-time work, and appreciate again driving, another of his enthusiasms, and birding. The Council of the Society realised the difficulty of his continuing as Treasurer and very reluctantly accepted his resignation at the end of 1971, after ten years. It was so sad that someone with such a zest for life should not have been able to continue to enjoy his hobbies for longer, and such a cruel twist of fate that he died on the very day of his younger daughter's wedding.

Eric will be remembered with great affection and respect by all who knew him. Above all, he was a true gentleman, with a personality and sense of humour that will be sadly missed; how often he could brighten up the dullest of days. We offer our greatest sympathy to his wife and daughters in their sad loss.

B.A.E.M.

CONTRIBUTORS AND ACKNOWLEDGEMENTS, 1971

We are grateful to the following observers for records, and we also wish to thank all those observers who helped with the Society's breeding surveys—their names are marked with an asterisk.

K. G. Adsett	Cmdr. Bird	P. Clements
R. E. Alderton	Miss R. Bird	J. A. Cocks
M. S. Arnott	J. Bodle	Dr. L. A. Collins
*J. Ashbee	B. T. Bolton	*A. J. Cooke
K. Ashbee	Miss P. M. Bond	J. F. Cooper
Mrs. A. S. Ashby	Mrs. M. R. Bonham	Mr. and Mrs. Cottrill
J. T. A. Bagley	P. F. Bonham	Miss D. Courthope
Col. G. Baker	R. Box	T. J. Cowan
*P. C. Bance	T. N. Buttle	J. Coward
C. J. R. Barfield	*Mrs. A. Cahill	*G. F. Coxon
L. C. Barkham	*M. Cahill	*A. P. D. Cramb
J. R. Barnes	E. Carden	Miss E. Croom
Mrs. J. Barton	Mrs. E. Champion	Rev. J. H. K. Dagger
*R. A. Bachelor	Mrs. M. E. Charlwood	T. P. Dale
Beachy Head Ringing Station	R. H. Charlwood	P. D. Daughtrey
R. P. Begbie	P. Chasteaufeuf	M. Davies
C. L. Berge-Coupland	*D. G. Chelmeick	P. G. Davis
R. M. Billings	Mr. and Mrs. D. E. Chittenden	M. J. Dawson
*E. S. Binns		P. A. Deacon

G. des Forges	*S. W. M. Hughes	Miss L. M. Ponsobly
Miss W. E. Dickson	W. D. Hyde	R. F. Porter
W. S. Dingwall	*R. J. B. Jackson	A. Quinn
B. Dobson	Mrs. B. James	Mrs. M. E. Reader
F. W. Dougharty	C. M. James	*S. W. Rickards
J. Driver	P. James	Dr. E. T. Roberts
Dungness Bird Observatory	M. A. Jennings	H. P. K. Robinson
A. Dymond	*Miss M. M. Jennings	M. C. Robinson
*Mrs. J. H. M. Edom	J. H. Johns	J. E. Robson
Mrs. M. Elliott	R. L. K. Jolliffe	*M. J. Rogers
A. J. Endean	L. R. Keen	*T. H. Rose
Dr. E. A. R. Ennion	R. S. Kelly	Miss K. Rosher
R. J. Fairbank	J. de R. Kent	Mrs. A. Ross
J. D. M. Farwell	Kent Ornithological Society	S. J. R. Rumsey
*Brig. J. Favell	A. R. Kitson	H. W. Rudd
B. W. Finch	T. Klein	*R. J. Sandison
*D. S. Flumm	*E. J. Knott	Mrs. E. Saxby
B. F. Forbes	J. P. Knowles	*M. J. Scott-Ham
F. J. Forbes	R. J. Lanaway	F. Severs
J. P. Foster	D. C. Lang	B. J. Short
Dr. G. M. Francis	Miss E. A. Leach	*M. Shirubb
I. M. Frenguelli	D. B. Lee	Mrs. A. F. Simmons
S. J. M. Gantlett	M. P. LeGrys	F. C. Simmons
Mrs. D. V. Gardner-Lewis	A. D. Lelliott	Miss Simpson
R. E. Goddard	P. G. Leonard	A. Simpson
L. Gover	D. E. Lester	Mrs. J. M. Simpson
T. Gravett	N. Lewis	D. Smith
P. J. Greenhalf	N. A. G. Lord	R. Sover
R. Greenhalf	C. D. Lowmass	D. Sore
D. Grimwood	Miss V. E. Lyon	Miss B. Spencer
R. L. Guild	E. A. M. McAlpine	Miss J. V. Stacey
K. R. W. Hackett	M. G. McDonald	Dr. J. Stafford
E. C. M. Haes	*J. N. McKelvie	F. M. D. Stanton
R. K. Haggard	W. W. McVittie	Mrs. M. E. Stanton
Miss L. Hardman	H. D. Marcuse	A. Steer
Mrs. H. Hartnell	B. A. E. Marr	D. C. Stoodley
D. H. Harvey	Mr. J. Mason	G. A. Sutton
F. J. Hawkins	W. Merritt	J. B. Tatum
R. F. Haynes	E. Messer	D. J. Taylor
O. G. Hayward	C. E. Metcalf	*C. F. Tebbutt
*C. F. Helyer	B. Metcalf	S. J. Teideman
Miss J. D. Henry	K. A. F. Miles	M. W. Thompson
*K. J. Herber	R. G. Millington	G. Tilbury
J. A. Hicks	Miss F. E. Moore	E. E. Tomalin
Dr. P. Y. Hicks	K. Neale	K. Verrall
Rev. H. M. Hill	A. E. Nealon	C. M. Veysey
H. W. Hiscok	D. L. Nelson	Mrs. B. Vine
A. J. Holcombe	Miss M. G. Newman	G. R. Waldron
*Dr. M. Hollings	M. E. Nolan	P. C. Waring
C. E. Hope	A. L. Norman	D. Washington
M. Hope	D. B. Nye	Dr. A. B. Watson
M. J. Horsfall	D. E. Ongley	B. Whitby
J. W. Houghton	J. Parkhurst	*Miss W. P. White
Miss R. J. Dawson	T. Parmenter	J. A. Wigzell
Mrs. M. A. Hughes	Dr. A. N. Peach	R. Williamson
	C. P. Peet	I. R. Willis
	R. T. Pepper	P. S. Wilmshurst
	G. Philcox	C. D. V. Wilson
	Maj. W. W. A. Phillips	P. J. Wilson
	H. Pilbeam	Mrs. V. A. Wilson
		J. E. Yarborough
		M. M. Yorwerth

Regular observations of migration were made at Beachy Head by J. F. Cooper, M. E. Nolan, A. Quinn, M. J. Rogers and a number of other observers. Detailed summaries of the records were supplied by J. F. Cooper, M. J. Rogers, and M. C. Robinson; a most helpful service in compiling the Report. D. S. Flumm also supplied another detailed report of the birds at the Rye Harbour L.N.R., which has proved similarly valuable in preparing the Report.

Once again the Recorder wishes to place on record his very considerable appreciation of the enormous amount of work Miss J. V. Stacey has tackled with the routine entering of records. Without her prompt and efficient handling of this laborious task it would not be possible to publish this annual Bird Report. We also wish to thank P. J. Wilson for preparing the Ringing Report once again, and Mrs. N. Petrie Hay for much help with routine typing during the year.

BREEDING SURVEYS

The only Society breeding survey in 1971 was of the Stonechat, organised by S. W. M. Hughes. Further surveys are planned for the future.

B.T.O. NATIONAL CENSUS OF HERONRIES

All the Sussex Heronries were visited in 1971 for this census, as they have been annually since it began. We are grateful to the following observers for their assistance:—

J. Ashbee (Leasham), C. F. Helyer (Henfield), J. A. Hicks (Glynleigh, Pricesthaws, Westham), A. K. Hughes (Farrham), D. C. Lang (Glynde, Fittle), J. Pelling (Fishbourne), Maj. W. W. A. Phillips (Pagham), F. C. Simmonds (Wartling).

B.T.O. ATLAS

Dr. A. B. Watson continued to organise this project in the county. By the time this Report is published the survey will be finished, but if anyone has outstanding records please send them *at once* to Dr. A. B. Watson, 83 Buckingham Road, Shoreham.

ESTUARY COUNTS

These counts (formerly wader counts) were continued in Chichester and Pagham Harbours and started at Rye Harbour. Counts were also made along the whole coast in December, 1971 and January, 1972. Counts were organised by M. Shrubbs, and at Rye by J. P. McTear. All records have been sent to the B.T.O. and a full report starts on page 50. Here we wish to thank all the counters for their hard work and valued help. Counters were:—

R. Batchelor, D. G. Chelmick, E. B. Cottam, Mrs. J. H. M. Edom, D. S. Flumm, B. F. Forbes, F. J. Forbes, M. J. Helps, Dr. M. Hollings, C. E. Hope, S. W. M. Hughes, W. D. Hyde, Mr. and Mrs. C. M. James, R. J. B. Jackson, A. Kitson, J. P. Knowles, Dr. R. M. Leaney, J. P. McTear, B. A. E. Marr, C. E. Messer, Mrs. N. E. Petrie-Hay, R. F. Porter, S. Potter, S. Richardson, R. J. Sandison, M. Shrubbs, A. Simpson, Mrs. I. Simpson, D. Steventon, R. Williamson, I. R. Willis.

Finally we wish to thank Mrs. J. H. M. Edom and Mr. and Mrs. M. Cahill for taking counters out in their boats on a number of occasions. These expeditions provided much valuable data, some of which could not be gathered from the shore. Mrs. Edom also used her boat to make counts at an island roost. The help of these maritime members is greatly appreciated.

WILDFOWL COUNTS

R. Batchelor, 11 The Byeways, Scaford, took over the organisation of the National Wildfowl Counts from J. W. Clark during the year. We are grateful to the organiser for making the records available to the Society.

Counters were:—

D. R. Coda (Glynde Levels), A. J. Cooke (Cuckmere Valley), J. Fowler (Chichester G.P.), C. M. James (Warnham Mill Pond, Knepp Lake), D. C. Lang (Barcombe Res.), J. P. McTear (Rye Harbour, Pett Level), Miss V. Maxse (Burton Pond), C. E. Messer (Amberley/Puborough Marshes), H. Mildenhall (Arlington Res.), D. R. Park (Swanbourne Lake, Fatching Pond), J. Reaney (Darwell Res.), C. F. Tebbutt (Weirwood Res.), Dr. A. B. Watson (Bramber).

CLASSIFIED RECORDS FOR 1971

Recoveries of birds ringed have not been cross-referenced to the ringing report. The wild-fowl tabulation and the report on the estuary counts should be read in conjunction with the notes under individual species of waterfowl and waders for a complete picture.

Abbreviations: "G.P."—gravel pits. "S.F."—sewage farm. "E.", "W.", etc.—cardinal points of the compass are intended only to give a general direction unless the context indicates otherwise. In particular this applies to birds going up or down Channel and which are referred to as flying E. or W. "s/p," "w/p,"—summer or winter plumage. "c/"—clutch size in nest found. "Brit. B."—British Birds (Rarities Committee). "LNR"—Local Nature Reserve. "SxBR"—Sussex Bird Report.

Definition: "Days watching"—the number of days in which watching was done in an area; the number of hours' observation of visible migration may also be shown in brackets.

Initials: Observers' initials are given only with more unusual occurrences, except in the case of rare breeding species.

1. **BLACK-THROATED DIVER (*Gavia arctica*)**.—One off Langney Point on Jan. 1st (MJR) and single birds at Chichester G.P. from Jan. 26th to Feb. 10th (many obs.), Newhaven on Mar. 6th (AJC), in Chichester Harbour on Nov. 14th (MC, BAEM, IRW) and flying W. off Langney Point on the 17th (MJR). See also spring diver passage under diver species below.

2. **GREAT NORTHERN DIVER (*G. immer*)**.—One in s/p off the Cuckmere on Apr. 18th (PIW) and another off Beachy Head on May 22nd (JFC). See also spring diver passage under diver species below.

4. **RED-THROATED DIVER (*G. stellata*)**.—Few recorded. There were birds scattered along the whole coast at both ends of the year but 5 off the Midrips on Dec. 28th was the largest party seen; most records were of single birds. Inland records were of single birds at Chichester G.P. from Jan. 22nd to Feb. 10th and at Arlington Res. from Apr. 9th to May 8th. See also spring diver passage under diver species below and the table of oiled birds on page 61.

DIVER SPECIES (*Gavia* sp.).—Some large spring movements were recorded at Beachy Head, the only locality at which regular sea-watching was carried out. A total of c.345 divers was recorded there between Feb. 7th and the end of May, with most movement in the period end March to late May, when c.325 were noted as flying E. The largest movement was 102 E. on May 5th in 13 hours' watching but a total of 152 flew E. over May 4th-6th during 24 hours watching. Thirty-one birds were positively identified, 19 *arctica*, 2 *immer* and 10 *stellata*. In addition 20 birds considered to be *arctica* flew E. on Mar. 28th (BAEM, IRW) and 90% of the movement of May 5th was similarly identified (MJR *et al*).

In the autumn very little movement was noted. Thus MJR saw only 11 divers off Langney Point in 55 hours watching between Aug. 3rd and Dec. 26th.

5. **GREAT CRESTED GREBE** (*Podiceps cristatus*).—The largest winter concentration reported at the coast in the early months was 76 off Roedean on Feb. 6th. At the end of the year 40 off Pett Level on Nov. 22nd and 30 off Roedean between the 23rd and the end of the year were the largest groups. Otherwise there were many records of single birds or small groups for the entire coastline at both ends of the year.

Inland birds were noted wintering at 7 localities, with the greatest numbers at Chichester G.P., maximum 24 on Feb. 8th, and Weir Wood Res. where there were 20 in January and February and 30-40 from October to December; between Mar. 6th and 20th there were 40 there, which suggests some passage. Otherwise no more than 7 together were noted on any inland water in winter when the species may be more widely distributed inland than the records show.

The breeding population continues to remain fairly stable and pairs were recorded as follows:

BREEDING PAIRS, 1971		
Locality	No. of pairs	No. of pairs
Chichester G.P.	20	Rye Harbour G.P.
Burton Park	2	Shillingee Park
Warnham Mill Pond	2	Lurgashall Pond
Hammer Pond	0	Petworth Park
Birchen Bridge	0	Furnace Wood
Barnhouse Pond	0	Pett Level

Breeding success was again quite good, 23 pairs being seen with a total of 47 young. Two pairs were known to have failed.

There were several summer records at the coast, including up to 11 in Chichester Harbour in May and June. Non-breeding birds were also seen at Slaughham Place, Arlington Res. and Rye Harbour LNR during the summer. See corrections to 1970 Report on page 47.

6. **RED-NECKED GREBE** (*P. griseigena*).—The bird in Chichester Harbour noted in the 1970 Report was last seen on Mar. 13th (BAEM, MS *et al*) and there was one at Arlington Res. on Jan. 17th (PIW). Single birds off Beachy Head on Apr. 4th, 13th, 22nd (flying E.) and May 4th (AQ, MJR, PJW *et al*) and one flying E. off Selsey Bill on May 1st (RFP).

In the second half of the year single birds off Church Norton on Aug. 23rd (SJMGM, RGM), in Chichester Harbour on Sept. 12th and 17th (JHME), off Church Norton on Nov. 13th (PGL) and Worthing on the 28th (CMV).

7. **SLAVONIAN GREBE** (*P. auritus*).—In January and February there was one at the Cuckmere and up to 8 off Church Norton and there were 10 in Chichester Harbour on Jan. 30th. Two at Chichester G.P. on Feb. 14th.

Considerable numbers were seen along the coast between early March and May 7th. About 70 were noted in all, mainly off Church Norton with a maximum of c.20 on Mar. 31st, and Beachy Head with maxima of 17 on Apr. 13th and 12 on the 22nd, only 2 or 3 being seen between these dates.

One at Thorney Deepes on July 15th (BAEM). Otherwise not recorded in the second half of the year before Oct. 16th, off Church Norton. Numbers there rose to a maximum of 50 on Dec. 11th (BAEM, IRW), the largest concentration yet noted in the county. Very few noted elsewhere but there was one at Arlington Res. on Nov. 22nd.

8. **BLACK-NECKED GREBE** (*P. nigricollis*).—One in Chichester Harbour during January and one in s/p off Church Norton on Apr. 2nd. In the autumn one at Rye Harbour LNR from Aug. 27th to Sept. 15th and 2 there from Sept. 28th to 30th. One at Arlington Res. on Oct. 11th.

9. **LITTLE GREBE** (*P. ruficollis*).—The main winter concentrations recorded were as follows: Chichester Harbour, up to 40 from January to March and 45 in November and December; Pagham Lagoon, a maximum of 30 in October declining to 6 by the end of December, although 15 in the Harbour in November and December were perhaps part of this group; Cuckmere, a maximum of 20 between January and March and 30-40 from October to December; Rye Harbour G.P., up to 26 in November and December. Otherwise there were totals of 10 in 3 coastal and 17 in 6 inland localities in the early months and 45 in 9 inland localities at the end of the year.

A total of 22 breeding pairs was recorded as follows: Chichester G.P., one; Clayton (TQ315139), one; Stedham sandpit, one; Fen Place Mill Pond, 2; Wakehurst Place, one; Weir Wood Res., 2; Swanbourne Lake, one; Aldsworth Ponds, 2; Chidmere Pond, one; Rye Harbour LNR, 10. Breeding success was again quite good, 14 pairs being seen with 36 young.

In addition there were breeding season reports from Church Norton, Burton Park, Coolham and Glyndebourne.

16. **MANX SHEARWATER** (*Puffinus puffinus*).—Very few records. One showing the characters of the race *puffinus* off Beachy Head on Apr. 24th (DCL, MJR). One showing the characters of the race *mauretanicus* off Pagham Harbour on July 12th (JVS) and perhaps the same bird very close in off Selsey Bill on the 25th (BAEM).

21. **SOOTY SHEARWATER** (*P. griseus*).—Single birds flew W. off Langney Point on Aug. 3rd (MJR) and Beachy Head on the 28th (JFC, DEL, KV).

26. **FULMAR** (*Fulmarus glacialis*).—First recorded on Jan. 24th, at Beachy Head, and up to 50 were present there during the spring and summer. There was also a movement of 100 W. there on Apr. 17th. Elsewhere 4-6 pairs summered around the cliffs just west of Newhaven and prospecting birds were also noted at Roedean, Seaford Head, the Seven Sisters and St. Leonards. Breeding has still to be proved. One E. off Rye on Sept. 16th was the last recorded.

27. **GANNET** (*Sula bassana*).—Four flew W. off Langney Point over Jan. 7th/8th. The only sizeable movement recorded during the year was 50 E. off Selsey Bill and 60 likewise off Beachy Head on Apr. 24th. Otherwise birds were seen offshore in small numbers from March to November.

28. **CORMORANT** (*Phalacrocorax carbo*).—Records came from the whole coast and from 9 inland localities. The table below summarises the records by months. It is incomplete but is designed to give some measure of the species abundance.

Coast	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Inland	68	17	88	47	46	6	10	16	35	97	98	57
	106	65	9	1	0	0	0	1	0	9	17	16

In addition up to 100 were present in Rye Bay and the Rother estuary between October and December.

The Arundel Park roost held a maximum of c.60 birds on Jan. 23rd and another inland roost was found on an electricity pylon in the Adur Levels at both ends of the year.

29. **SHAG** (*P. aristotelis*).—One at Rye Harbour LNR on Mar. 14th and one in Seaford Bay on Apr. 4th. Nine flew W. off Beachy Head on Apr. 25th and there were 4 there on May 8th and one on the 16th.

In the autumn single birds off Beachy Head on Aug. 17th and Oct. 11th, 2 off Langney Point on Sept. 17th and one off the Midrips on the 30th. In December singles off Worthing on the 6th and in Seaford Bay on the 11th.

30. **HERON** (*Ardea cinerea*).—All known Heronries were visited except Eridge. The numbers of occupied nests recorded were: Old Park Wood, Fishbourne, 22 plus 3 probably occupied; Pagham, 5; Parham, 43 plus 5 probably occupied; Henfield, 6 plus 2 probably occupied; Firle, 37; Priesthaves, 6 plus 4 probably occupied; Westham, 2; Warling, 5 plus 2 probably occupied; Leasam, 32. There were none at Glynde or Glyndle and both these colonies now seem to be extinct. The total of 158 occupied nests plus 16 probably occupied shows virtually no change compared with 1970; see also additions to the 1970 Report on page 47.

As usual there were records indicating migration at or near the coast in spring and autumn, which are summarised below:

	Mar.	Apr.	May	June	July	Aug.	Sept.
Arrivals ..			1	1	1	1	1
Departures ..							1
East		2	1	1	5		8
West							3

37. **LITTLE BITTERN** (*Ixobrychus minutus*).—A male at Shipley, near Horsham, from Apr. 23rd to May 2nd was seen by many observers. One at Pagham on May 9th (DS). These records have been accepted by *Brit. B.*

38. **BITTERN** (*Botaurus stellaris*).—One at Shoreham on Jan. 2nd (FS). One at Chichester G.P. from Jan. 3rd to 30th (BF, GEM, RJS). One at Filsham on Mar. 7th (JAH).

See also additions to the 1970 Report on page 47.

40. **WHITE STORK** (*Ciconia ciconia*).—One between Bury and Pulborough on June 15th (KGA, MMJ). This record has been accepted by *Brit. B.*

42. **SPOONBILL** (*Platalea leucorodia*).—An adult feeding in the shallows off Worthing beach on Sept. 2nd departed W. (CMV), a somewhat unusual locality. Single immatures at Rye Harbour LNR on Sept. 6th (DSF, SR) and around Pagham Harbour from Oct. 30th to Nov. 5th (many obs.).

Ducks.—The table below sets out the peak winter counts of the regular and common species at 12 principal wintering areas in the county. The intention now is to report on a complete winter rather than the parts of two winters occurring in a calendar year. This presentation should make the figures more meaningful. This table covers two winters since the early 1971 figures have not been published previously, but future tables will deal with one winter only. The areas are all the most important ones at which regular counts are made, but, in future, it is intended, if the figures are available, to include the Adur Levels and Arlington Res., which the records show as holding sizeable numbers of ducks. Regular counts from each area would be most welcome.

The totals given should be viewed with caution. While they must give some measure of total population they take no account of any movement between localities which may occur. Thus the largest numbers at the coast may occur in severe frost, when birds are driven out of inland marshes. The totals, however, make a convenient annual index for comparing years and showing trends.

All the records available to the Society have been used in compiling the table and the following species accounts in the systematic list are confined to records outside its scope. Unless otherwise indicated all records refer to 1971.

PEAK WINTER POPULATIONS OF DUCK, 1970/71 AND 1971/72 AT SELECTED LOCALITIES

Locality	Mallard		Teal		Wigeon		Pintail		Shoveler		Tufted		Pochard	
	70/71	71/72	70/71	71/72	70/71	71/72	70/71	71/72	70/71	71/72	70/71	71/72	70/71	71/72
Chichester Harbour	240	255	185	435	1140	1120	112	50	0	0	15	25	29	5
Chichester G.P.	430	240	125	25	22	20	6	100	90	96	290	275	330	465
Pagham Harbour	350	200	350	280	1000	300	28	75	33	0	25	14	0	0
Burton Pond	60	12	0	0	0	4	10	0	4	0	80	50	40	35
Amberley/Pulborough	100	230	1000	200	1320	1000	15	10	22	125	4	0	4	0
Knepp	50	350	3	9	280	205	0	0	10	4	6	15	10	250
Weir Wood Res.	285	250	130	85	100	50	3	2	0	0	60	85	80	100
Barcombe Res.	700	200	95	35	1800	625	10	4	32	7	60	65	45	40
Glynde Levels	200	140	500	220	800	1250	8	6	40	30	8	0	0	0
Cuckmere	255	170	300	45	80	25	1	0	5	0	25	6	10	0
Darwell Res.	160	80	25	35	100	32	0	2	0	2	55	95	50	90
Rye Harbour	350	400	60	200	150	150	18	5	0	5	55	120	110	465
ANNUAL INDEX	3180	2525	2775	1570	6790	4780	210	255	235	270	685	750	698	1450

45. **MALLARD** (*Anas platyrhynchos*).—See table for winter populations. In addition there were counts of over 500 at Arlington Res. at both ends of 1971 and c.500 off Clymping on Feb. 21st.

Breeding counts received were of 10 broods totalling 44 young on Aldsworth Ponds and 12 totalling 97 at Rye Harbour LNR. Another 7 broods totalling 35 young were reported elsewhere. These figures indicate a much better breeding season than in 1970.

46. **TEAL** (*A. crecca*).—See table for winter populations. In addition there were 150 at Polegate and 100 in the Adur Levels on Jan. 10th, 1971, and 150 at Pebsham on Mar. 7th, 1971.

Spring passage at Beachy Head totalled 82 E. between Mar. 14th and Apr. 14th with a peak of 42 on Mar. 31st. Although reported from 10 areas in the breeding season, breeding, by single pairs, was proved only at TQ286326, Warnham Mill Pond and the Midrips. The other reports came from Sidlesham Ferry, Burton Park, Lindfield, Shoreham, Weir Wood Res., Arlington Res. and Rye Harbour LNR.

47. **GARGANEY** (*A. quevedula*).—Four at Glynde on Feb. 27th (BWF) were the first recorded and spring passage was noted until about May 24th; most occurred in April. Autumn passage was noted from late July until Sept. 14th. Records included 12 at Rye Harbour LNR on Aug. 21st, the largest party noted during the year. Monthly totals were:

Mar.	Apr.	May	June	July	Aug.	Sept.
10	22	9	3	1	16	2
9	9	9	28	3		

No breeding was reported but birds were seen in June in one locality.

49. **GADWALL** (*A. strepera*).—There were records for every month, approximate monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	15	8	11	5	3	1	16	2	11	37	33

At the beginning of the year 7 at Barcombe Res. on Jan. 11th and up to 10 at Chichester G.P. in January and February were the largest parties. The spring records include a total of 6 flying E. off Beachy Head between Mar. 31st and May 5th and the August records include a party of 12 at Weir Wood Res. on the 24th. At the end of the year only about 6 were wintering at Chichester G.P. in marked contrast to other recent winters, but up to 25 were present at Rye Harbour LNR.

50. **WIGEON** (*A. penelope*).—See table for winter populations. In addition there were 350 in the Adur Levels on Jan. 26th, 1971.

52. **PINTAIL** (*A. acuta*).—See table for winter populations. In addition there were 11 at Arlington Res. on Jan. 22nd, 1971, and 28 in the Adur Levels on the 26th.

53. **SHOVELER** (*A. clypeata*).—See table for winter populations. No other significant winter numbers noted.

A large spring passage noted at Beachy Head, with a total of 206 flying E. on 13 dates between Mar. 14th and May 6th, peak 135 E. on Mar. 31st. Off-shore passage off Hampshire was much smaller, although the peak movement was also noted on March 31st.

Breeding was not proved anywhere, although there were breeding season records from 6 localities.

54. **RED-CRESTED POCHARD** (*Netta rufina*).—Three, 2 males and a female, at Arlington Res. on May 30th (PIW) and a drake at Rye Harbour on Oct. 14th (JA). It is not known whether these were escapes.

55. **SCAUP** (*Aythya marila*).—In the early months present at Rye Harbour LNR until Apr. 14th with maximum counts of 46 in January, 58 in February and 31 in March. Elsewhere there were 5 at the Cuckmere on Jan. 3rd, 15 in Normans Bay on the 15th and singles at Pett Level in January and February and Paghams Harbour in February and March. Nine flew E. off Beachy Head on Mar. 30th and there were 2 at the Midrips on Apr. 17th.

In the latter half of the year there were 3 males at Rye Harbour LNR on July 8th (DSF) and one flew E. off Langney Point on Aug. 3rd (MJR). Otherwise not recorded before November when there were 2 at Arlington Res. from the 7th to Dec. 8th and a maximum of 52 at Rye Harbour LNR on Nov. 22nd.

56. **TUFTED DUCK** (*A. fuligula*).—See table for winter populations. In addition a total of 130 was recorded in 7 other localities in the winter of 1970/71 and 60 in 3 in the winter of 1971/72.

A total of 48 breeding pairs was reported and some further increase is suggested by the counts at Aldsworth Ponds, Chichester G.P., Burton Park and Rye Harbour LNR, all of which were the highest so far found. Breeding success was fair, with 4 pairs, and Beeding Brooks were new sites. Breeding success was fair. Once again there was a marked preponderance of males among the non-breeding population.

BREEDING OR RESIDENT PAIRS IN 1971

Locality	Pairs present	Pairs bred	Maximum young recorded
Aldsworth Ponds	c.20 birds	5	32
Chichester G.P.	75 birds	17	88
Swanbourne Lake	5 birds	?	0
Burton Ponds	6	6	all successful
Birchen Bridge	1	0	0
Warnham Mill Pond	6 birds	?	0
Ilford Brooks	1	0	0
Weir Wood Res.	25 males	0	5
Maresfield	3	0	0
Darwell Res.	1	1	7
Rye Harbour LNR	20	11	50
West Harting Pond	10 birds	?	0
Petworth Park	4	4	13
Knepp	1	0	0
Beeding Brooks	1	0	2
Pond Leigh	2 plus 2 males	0	0
Glynde Reach	1	1	successful
Wakehurst Place	1	1	6

57. **POCHARD** (*A. ferrina*).—See table for winter populations. In addition there were peak counts at Arlington Res. of c.100 in the winter of 1970/71 and c.200 in the winter of 1971/72. Fifty-six at Brooklands, Worthing, on Jan. 4th, 1971, and 53 at Warnham Mill Pond on Feb. 28th were the only other significant winter counts noted.

There were June records, involving a total of 17 birds, from Chichester G.P., Burton Park and Weir Wood Res. Despite birds summering regularly none has been found breeding since 1960, although the species breeds in Hampshire (20 pairs in 1971), and in Kent.

60. **GOLDENEYE** (*Bucephala clangula*).—In the winter of 1970/71 the maximum count in Chichester Harbour was 225 on Jan. 16th, including 47 adult males. In the winter of 1971/72 the maximum count there was 133 on Feb. 7th. The count on Jan. 16th, 1971, was the highest ever noted in the county. For full details of these estuary counts see page 50.

Elsewhere in 1971 few were recorded, with totals of 13 at the coast and 15 inland between January and April and only 8 at the coast and 4 inland at the end of the year.

61. **LONG-TAILED DUCK** (*Clangula hyemalis*).—The party of 5 in Chichester Harbour noted in the 1970 Report was last seen on Mar. 13th but there was an oiled bird there on May 4th. Elsewhere there were single birds at Paghams Harbour on Jan. 3rd and 9th, Chichester G.P. from the 29th to May 4th, Pett Level on Jan. 11th and 21st and Rye Harbour G.P. on the 17th. In the spring a total of 6 was recorded flying E. along the coast between Apr. 20th and May 6th.

At the end of the year one at Rye Harbour G.P. on Nov. 28th, and two there in December were the only records. See also additions to the 1970 Report on page 47.

62. **VELVET SCOTER** (*Melanitta fusca*).—At the beginning of the year the only records were one off Pagham on Jan. 28th and 3 there on Mar. 28th. Very little spring passage; a total of 7 only flew E. off Beachy Head, between Mar. 28th and Apr. 22nd.

Singles flew E. off Beachy Head on Sept. 11th and Oct. 27th, 4 likewise off Selsey Bill on Oct. 16th and one off Langney Point on the 25th. Otherwise at the end of the year there were 2 off Church Norton on Nov. 13th and a flock of 47 in Normans Bay on Dec. 17th, the largest number seen together in Sussex since 1958.

64. **COMMON SCOTER** (*M. nigra*).—Few wintering in Rye Bay, with maximum counts of 200 in January and December. Elsewhere 78 off Newhaven on Feb. 18th and 145 in Normans Bay on Dec. 7th were the only sizeable winter flocks reported and fewer than 10 were noted in any other locality. There were 3 inland records, singles at Hailsham on Jan. 17th and Arlington Res. on Feb. 9th, possibly the same bird, and 2 at Arlington Res. on Apr. 12th.

There was a large spring passage, with a total of 14,280 flying E. off Beachy Head in 33 days watching between Feb. 21st and June 2nd. The largest movements were 2,400 E. on Apr. 2nd, 1,205 on the 13th, 1,180 on the 20th, 4,500 on the 22nd, 705 on May 4th and 685 on the 5th. Peak movements off the Isle of Wight were also noted on Apr. 2nd and 20th, but passage off Hampshire was generally much smaller, particularly in the Solent. On May 23rd 550 flew E. off Rye. Only 6 were noted in June but a few records in early July suggested summering. No large autumn movements were noted.

67. **EIDER** (*Somateria mollissima*).—Recorded in every month except June and July. Approximate monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	Aug.	Sept.	Oct.	Nov.	Dec.
5	47	13	7	43	2	4	32	152	20

Birds were noted along the whole coast and the largest winter parties were c.40 off Church Norton on Feb. 13th, 26 off the Midrips on Oct. 25th increasing to 72 by Nov. 14th and c.60 off Church Norton on Nov. 20th and 21st. The table includes a total of 49 flying E. off Beachy Head on 5 dates between Mar. 14th and May 5th.

69. **RED-BREADED MERGANSER** (*Mergus serrator*).—In the winter of 1970/71 the maximum count in Chichester Harbour was 46 on Dec. 3rd and in Pagham Harbour it was 20 on Jan. 26th; neither of these figures was recorded by a set count. In the winter of 1971/72 the maxima were 97 in Chichester Harbour on Dec. 4th and 15 in Pagham Harbour on Nov. 21st. See page 50 for the detailed estuary counts. There were also substantial numbers off Ferring/Worthing in each winter, with maximum counts of 30 on Feb. 1st, 1971, and 60 on Dec. 30th, 1971.

Elsewhere in 1971 few were recorded except on spring passage but there were inland records at Chichester G.P. on Feb. 4th, 5th and 7th, Arlington Res. on Mar. 7th and Weir Wood Res. on Dec. 12th.

Spring passage at Beachy Head was noted between Mar. 30th and May 27th, with a total of 560 flying E. in 21 days; the main movement of 350 E. occurred over Apr. 12th-14th. This coincided with the peak passage off Hampshire, but the Beachy Head movement was twice as large as that noted in Hants.

There were several summer records. One summered in Chichester Harbour and there was one at Rye Harbour LNR from July 1st to 31st, with 3 flying offshore there on the 18th. One off Selsey Bill on the 24th and 25th. Otherwise the first autumn record was on Aug. 24th but hardly any autumn passage was observed; MJR recorded only 7 flying W. off Langney Point in 30 days (62hrs) watching between July 19th and Dec. 26th.

70. **GOOSANDER** (*M. merganser*).—A total of c.30 birds was recorded during the year. In the early months recorded until Mar. 31st and the first autumn record was for Nov. 16th. Monthly totals were:

Jan.	Feb.	Mar.	Nov.	Dec.
6	7	8	10	10

Four together in Chichester Harbour on Dec. 4th (DSF) was the largest party.

See also corrections to the 1970 Report on page 47.

71. **SMEW** (*M. albellus*).—One to three at Chichester G.P. until Mar. 7th, with 4 on Feb. 27th (many obs.); these birds may have visited Chichester Harbour at times, see page 56. One at Pagham on Jan. 1st and 6th (WWAP, JR), 3 at Piddinghoe on the 12th (MJR) and one at the Cuckmere from the 10th to 17th (AJC). One at Church Norton on Mar. 5th (MS). At the end of the year one at Arlington Res. on Nov. 23rd and 2 on the 24th (BF).

73. **SHELDUCK** (*Tadorna tadorna*).—In the winter of 1970/71 the maximum count in Chichester Harbour was 3,430 on Feb. 13th and in Pagham Harbour was 830 on the same date. In the winter of 1971/72 the maxima were 3,740 in Chichester Harbour on Feb. 12th and 820 in Pagham Harbour on Jan. 30th.

See the estuary counts on page 50 for full details. Records from both Sussex and Hampshire indicated a maximum total population of c.8,150 along the Solent coasts from Pagham to Hurst.

Elsewhere there was the usual scatter of inland records and small parties wintering at Newhaven Tidemills, the Cuckmere and the Rye/Midrips area in both winters, but the highest count was 40 at the Midrips on Jan. 15th, 1971.

Breeding counts in 1971 were as follows: Chichester Harbour, a total of 244 young in June and July with an average brood size of about 8; Pagham Harbour, no counts; Chichester G.P., 2 pairs bred; Rye Harbour LNR, 5 pairs reared 51 young. In addition single pairs bred successfully in Parham Park and at the Cuckmere.

75. **GREY LAG GOOSE** (*Anser anser*).—Single birds at Barcombe Res. on Jan. 17th (DCL, MS) and Weir Wood Res. on Feb. 7th and 9th (PCB, DW). The latter very tame and probably an escape. Two at Rye on Mar. 7th (RB) and one at the Midrips from Apr. 7th to 13th (KOS). Seven flew E. off Beachy Head on Mar. 28th (RS, KV), one did so on the 30th (MJR) and 8 did so on Oct. 15th (JFC, KV).

76. **WHITE-FRONTED GOOSE** (*A. albifrons*).—Very few records. One at Pagham on Jan. 4th and 7th and one, perhaps the same, at Chichester G.P. on the 29th; 20 at Pagham on the 28th. Three at Weir Wood Res. on Feb. 10th and 11th. One at Pagham on Dec. 29th.

78. **PINK-FOOTED GOOSE** (*A. brachyrhynchus*).—Eight flew SW. over Arlington Res. on Jan. 17th (PJW) and 2 flew E. off Beachy Head on the 31st (JFC). Seven flew E. off Beachy Head on Mar. 30th (MJR).

79. **BEAN GOOSE** (*A. arvensis*).—Three at Pagham from Jan. 2nd to 7th (JVS, MS, SJT).

GREY GOOSE SPECIES.—Twelve flew S. down the Arun then turned W. along the coast on Jan. 9th and 4 flew S. over Rustington on the 27th.

Twenty flew round Pagham Harbour on Oct. 25th, one flew E. off Beachy Head on the 27th and 4 over Camber on Dec. 28th.

80. **BRENT GOOSE** (*Brantha bernicla*).—All records refer to the race *bernicla*. In the winter of 1970/71 the maximum count in Chichester Harbour was 3,295 on Feb. 13th, in Pagham Harbour the maximum was 98 on Feb. 28th. The Chichester Harbour count was a record and coincided with a record count of 4,080 in Langstone Harbour, making a total of over 7,000 in the whole area. In the winter of 1971/72 the maxima were 3,060 in Chichester Harbour on Jan. 30th and 80 in Pagham Harbour on Feb. 12th. Full details of these estuary counts appear on page 50. Records for Sussex and Hants. show a population of 8,000 birds along the Solent coasts from Pagham to Hurst in February.

Other 1971 records involve the usual E. passage offshore in the spring. Thus at Beachy Head 490 flew E. on 16 days between Mar. 14th and Apr. 22nd, with peaks of 52 on Mar. 14th, 50 on Apr. 2nd and 76 on Apr. 14th. There were also some very interesting reports of N.E. movement inland over King's Vale, Earham and West Chiltington during the same period, involving several hundred birds. One at the Midrips on May 9th.

The first autumn record was of 2 in Chichester Harbour on Sept. 15th (JS), a very early date, but numbers were very low there until November, when they rose very rapidly coinciding with a fairly marked coastal passage. See also addition to the 1970 Report.

82. **CANADA GOOSE** (*B. canadensis*).—An account of the introduction, recent history and current status of this species will appear in the 1972 Report.

Successful breeding was recorded as follows: 2 pairs at St. Julians, Coolham, and Plashett Park; single pairs at Burton Park, Warnham Park, Bury St. Austens farm, Rudgwick, Cooks farm, Nuthurst, Barnhouse Pond, Fen Place Mill Lake, Turners Hill, Pond Leigh and Rye Harbour LNR. A total of 50 goslings were noted at the above sites and, in addition, c.40 were raised at Petworth Park.

85. **WHOOPER SWAN** (*Cygnus cygnus*).—Two in the Adur Levels on Nov. 13th (WM), a very early date.

86. **BEWICK'S SWAN** (*C. bewickii*).—The Amberley flock was present until Feb. 27th, with maximum counts of 21 in January and 24 in February; only 4 juveniles were seen. At the end of the year birds were present from Nov. 14th, when there were 13, and the maximum count was 40 on Dec. 19th; up to 9 juveniles were noted.

Elsewhere in the early months there were 8 near Steyning on Jan. 10th, 3 at Arlington Res. from the 15th to 24th and 11 there on Mar. 7th and 8th.

At the end of the year 5 at Rye Harbour LNR on Oct. 30th (DSF) and 9 on Dec. 12th; the October record is only the second such record for the county. Two flew N. at Beachy Head on Nov. 12th and one with a yellow leg ring was on the village pond at Rottingdean on the 12th and 13th (AJC, VN), perhaps an escape. Five at Sidlesham Ferry on Dec. 29th.

91. **BUZZARD** (*Buteo buteo*).—Birds or pairs were resident in 7 areas during the year although breeding was nowhere proved. One was found dead on a game-keeper's gibbet at Rusper on May 9th, and another on a gibbet in the Midhurst area in mid-Sept.

The only record suggestive of spring passage was one flying SE. over Burgess Hill on Mar. 27th. In the autumn a total of about 7 recorded at the coast between Sept. 11th and 23rd were presumably migrants.

92. **ROUGH-LEGGED BUZZARD** (*B. lagopus*).—The bird in the Rye area reported in the 1970 Report was last seen on Apr. 1st (JA, DSF).

93. **SPARROWHAWK** (*Accipiter nisus*).—Although breeding was only proved for 4 pairs (one rearing 5 young), a total of 20 pairs or resident birds was located and there were casual breeding season reports from a further 10 sites. In addition there were winter reports from another 11 localities. The species is clearly maintaining its numbers.

There were a few spring records suggesting migration; at Beachy Head there were 3 records between Mar. 20th and Apr. 11th and one arrived from the S. at Newhaven on Apr. 26th. In the autumn reported on 6 dates at Beachy Head between Aug. 15th and Nov. 7th, records including 2 departing S. on Oct. 9th. Elsewhere along the coast 3 records between Sept. 25th and Nov. 28th may have referred to migrants.

95. **RED KITE** (*Milvus milvus*). One flying S. over the Downs behind Worth- ing on Nov. 26th (MAJ).

98. **HONEY BUZZARD** (*Pernis apivorus*).—One arrived from the S. at Beachy Head on May 9th (PC, MCR, MJR), a very early date.

Another good autumn for the species. In August there were singles at Rye Harbour LNR on the 16th and 24th, both of which departed W. (DSF), and near Church Norton on the 26th (JRSH). In September singles at Beachy Head on the 6th (RFP, IRW) and 16th and 17th (JFC, NAGL, RFP, IRW).

99. **MARSH HARRIER** (*Circus aeruginosus*).—One at Church Norton on Apr. 9th (RGM) and one flying W. at Rottingdean on Apr. 25th (AJC). In May one at Pevensy Levels on the 16th (DEL), 2 at Midrips on the 22nd and one on the 23rd and 29th (KOS). One picked up in Houghton Forest on June 14th had been dead for about 3 weeks (WWAP, SWR).

One at Beachy Head on Sept. 5th and 6th (many obs.). All birds were females except that of June 14th, which was probably a sub-adult male.

100. **HEN HARRIER** (*C. cyaneus*).—Between 25 and 30 individuals recorded during the year, records are summarised under localities. Sidlesham, single ring-tails on Jan. 5th and Nov. 19th; Burton Down, one on Dec. 30th; Amberley Wildbrooks, a male and a ring-tail in January, the latter remaining until Apr. 13th; Downs between the rivers Arun and Adur, 2 ring-tails until Apr. 5th and certainly 4, possibly 6, birds, including 2 males, from Oct. 27th to the end of the year; Ashdown Forest, a male and a ring-tail from Oct. 25th to Dec. 19th; Glynde Levels, single ringtails from Apr. 3rd to 11th and Nov. 12th to Dec. 13th and a male on Nov. 17th; Downs from the Cuckmere to Eastbourne and the Cuckmere valley, 3 ringtails and one or 2 males until Apr. 2nd, a ring-tail on Nov. 12th, at Beachy Head, and a male in December; Rye Harbour LNR, a male on Apr. 14th; The Midrips, single ring-tails on Jan. 15th and from Apr. 12th to 16th.

102. **MONTAGU'S HARRIER** (*C. pygargus*).—A male in Ashdown Forest on May 18th (PCB). A ring-tail at Beachy Head on Aug. 22nd flew out to sea next day (many obs.).

HARRIER SPECIES.—Single unidentified harriers, either *cyaneus* or *pygargus*, were recorded as follows: Apr. 29th, Woodingdean; Sept. 13th, Clympting; Oct. 2nd, Arlington; Oct. 22nd, Iford Hill.

103. **OSPREY** (*Pandion haliaetus*).—Four recorded between Apr. 25th and 29th as follows: one between Beachy Head and the Cuckmere on Apr. 25th arrived from the sea in the early morning (many obs.); one at Weir Wood Res. from the 25th to 29th (PCB, JER, DJT); one over Southwick on the 26th (HWH); one flying W. at Ferring on the 27th (BF, FJF). There was also one at Copthorne on May 13th and 14th (DW).

In the autumn at least 7, possibly as many as 11, were recorded as follows: Selsey Peninsula, one in Pagham Harbour from Aug. 20th to Sept. 19th, with 2 on Sept. 16th (many obs.); the second may have been the bird recorded at intervals in Chichester Harbour between Aug. 24th and Oct. 10th (many obs.). One at West Wittering on Nov. 14th (IMF), an exceptionally late date, may have been a different bird. Another flew SW. over Sidlesham and apparently departed out to sea on Sept. 8th (MS). Burton Park, one on Aug. 28th (ES-E); Beachy Head, single birds on Sept. 6th, 7th, 11th and 12th (many obs.); all but the third were moving W. but only one bird may be involved. Ashdown Forest, one flying SW. on Sept. 12th (MJH); Cuckmere, one on Oct. 22nd (AJC). Records from Sussex and Hants. show that between six and ten individuals were seen along the Solent from Pagham to Hurst between Aug. 11th and Nov. 14th.

104. **HOBBY** (*Falco subbuteo*).—Breeding by single pairs was established in 3 sites and 2 of these pairs successfully raised a total of 4 or 5 young; one pair was robbed. In addition there were casual breeding season reports from 7 other sites.

At the coast there were 4 records of spring arrival between Apr. 12th, at the Midrips (KOS), and May 15th; the Midrips record is the earliest for the county. In the autumn singles noted at Beachy Head on 6 dates between Sept. 6th and 26th, which may not all have been different birds, and 4 records from other localities between the 11th and 16th which probably refer to passage birds.

105. **PEREGRINE** (*F. peregrinus*).—One present in the Glynde area until Mar. 8th (many obs.) and one in the Cuckmere valley on Jan. 21st, Mar. 21st and Apr. 16th (AJC, PJW, VAW). One at Beachy Head on Apr. 18th (JFC, RKH).

In the latter half of the year the only records were one flying out SE. at Seaford Head on Sept. 11th (MJR) and one at Littleington on Oct. 5th (AJC).

107. **MERLIN** (*F. columbarius*).—In the early months single birds at Alfriston on Jan. 1st, Mar. 12th and Apr. 3rd, the Midrips on Jan. 15th and Apr. 12th, Rye Harbour on Jan. 17th, Beachy Head on Feb. 21st, which departed W. out to sea, and 28th and Glynde on Feb. 27th. Perhaps only 5 birds were involved in these records.

At the end of the year there were single birds at Rye Harbour LNR on Sept. 7th, 11th and 14th, Beachy Head on the 19th and 21st and Oct. 5th and 10th, Southwick Hill on Sept. 22nd, Sidlesham on Sept. 25th and Oct. 11th, near Horsham on Oct. 2nd, Alfriston on Oct. 15th and Dec. 17th, Lower Berkwick on Dec. 26th and the Midrips on the 28th. Some of these records probably refer to the same individuals and a total of 11-12 seems most likely to be involved. The lack of November records is unusual.

110. **KESTREL** (*F. tinnunculus*).—A more successful breeding season than 1970. Twenty pairs were known to have raised 42 young and another 10 nests with young were found but brood size not obtained. In addition there were very widespread reports of birds present during the breeding season and it is clear that little major change in status has occurred since the 1964-67 breeding survey, despite local fluctuations.

The only record of spring migration was one arriving at Beachy Head on Apr. 21st. In the autumn singles flew out to sea there on Aug. 15th and Oct. 14th and another did so at Rye on Sept. 25th.

115. **RED-LEGGED PARTRIDGE** (*Alcotaris rufa*).—Reference in previous SxBRs to large numbers on the Downs behind Worthing should be deleted. Close examination has shown these birds in fact to be Rock Partridges (*A. graeca*) of which substantial numbers have been released in the area. There are reports that as many as 2,000 birds are involved. All records of Partridges with red legs between the Arun and Adur rivers must be regarded as suspect for the time being and observers are asked to examine any birds they see with great care, to ensure correct identification. It is clearly important to discover how far these Rock Partridges have, or will, spread.

117. **QUAIL** (*Coturnix coturnix*).—One at Beachy Head on May 2nd. Between late May and late August a total of 14 recorded calling on the Downs behind Worthing and Brighton and singles at Oving, West Chilington and Lullington. Records included 8 or 9 in the Steep Down area on July 26th (MH); only one was heard there a week later.

120. **WATER RAIL** (*Rallus aquaticus*).—The only report likely to indicate breeding came from Thorney Island, although there were April records involving 8 birds in 6 potential breeding sites; passage, however, regularly continues into late April.

Otherwise the usual scatter of autumn and winter records, involving some 45 individuals. One at Beachy Head on Sept. 5th was an early migrant and 5 were noted at the Rye Harbour LNR between the 9th and 21st.

121. **SPOTTED CRAKE** (*Porzana porzana*).—An unusual number of records. One at Hampden Park on Jan. 3rd (RKH, RS). One at Milton Street on Apr. 28th (VAW). One calling in a potentially suitable breeding locality between Apr. 28th and May 4th could not be found subsequently, but another was found in a different area in June. One at Littleington on Dec. 4th (PJW).

125. **CORNCRAKE** (*Crex crex*).—One near Cissbury on July 1st (FS). What was probably this bird was reported to BF as killed by a tractor not far away during the harvest.

127. **COOT** (*Fulica atra*).—Monthly maxima at stated localities are tabulated, although very incomplete.

	Jan.	Feb.	Mar.	Oct.	Nov.	Dec.
Chichester Harbour	720	1560	520	60	2335	725
Chichester G.P.	500	500		110	140	145
Pagham Lagoons			25			
Swanbourne Lake	200	20				
Weir Wood Res.	200					
Piddington Pond	150	35				
Arlington Res.			20	4	5	30
Pett Level Res.	30	30		5	60	8
Bett Level	220					75
Rye Harbour	230					

Waders

As in past years a series of wader counts was made in Chichester and Pagham Harbours during 1971. In addition regular counts were started at Rye Harbour during the year. The results are tabulated on pages 52-59. The systematic list is largely confined to records outside the scope of these tables, which should be consulted in conjunction with the list. As with ducks the wader section now reports on a winter rather than the parts of two winters occurring in a calendar year for the main wintering species. This change is designed to make information easier to extract for a series of winters and this Report covers both winters 1970/71 and 1971/72; future Reports will deal with one winter.

In the following notes on waders all records refer to 1971 unless otherwise stated.

131. **OYSTERCATCHER** (*Haematopus ostralegus*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours. Elsewhere the only sizeable flocks were noted at Clymping, where there were 55 on Mar. 30th and 30 on Dec. 19th. Spring passage at Beachy Head totalled 37 E. on 8 dates between Mar. 30th and May 9th.

A total of 14 pairs bred as follows: Chichester Harbour, 3 nests c/2 found in June, at least one was successful; Rye Harbour LNR, 5 pairs all failed, probably owing to the attention of Corvidae; Northpoint Beach, Rye, 4 pairs laid a total of 30 eggs before being able to rear 7 young; Midrips, 2 pairs. No reports were received from Pagham Harbour.

133. **LAPWING** (*Vanellus vanellus*).—In the early months 700 at Thorney Island on Feb. 13th was the largest flock count made and the only others sent in were of 100-150 in Beeding Brooks until early March and similar numbers at Newhaven Tidemills and Exceat in early February. But see also wader counts pages 52-59.

The only systematic breeding counts received were for the Downs behind Worthing, where a density of 1.3 pairs per square KM was noted, and Rye, where 76 pairs bred in the local marshes, including 45 on the LNR; heavy spring rain there caused a high chick mortality.

Large post breeding flocks reported were of 300 at the Cuckmere on June 15th, 1,000 on Broomhill Level on the 23rd, 100 at Maresfield on July 4th and similar numbers on Beeding Brooks on the 27th. Numerous smaller flocks were reported and some movement was noted at Woodingdean and the Midrips in early June.

There were again substantial flocks present in December, with a total of c.3,300 in the Rye area during the month, 2,500 on Amberley Wildbrooks on the 5th and c.2,000 on Pevensey Levels on the 28th. Flocks totalling c.2,500 were also noted in 4 other places in the first ten days of the month.

134. **RINGED PLOVER** (*Charadrius hiaticula*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours.

Twenty to thirty were wintering in the Newhaven/Cuckmere area in each winter 1970/71 and 1971/72 and the maximum counts at Shoreham were 85 on Jan. 2nd, 1971, and 130 on Dec. 19th, 1971. There were 60 at Ferring in December, 1971, and 50 in January, 1972.

In 1971 a complete breeding count was not made but 4 pairs bred at Portslade, 18 did so at the Rye Harbour LNR, 6 at Northpoint Beach, Rye, and 9 at the Midrips. In addition single pairs bred at Chichester Harbour and Newhaven Tidemills and breeding occurred at Pagham Harbour and Chichester G.P. where no proper counts were made. Breeding success was generally good.

In the autumn there were peak counts of 60 at the Cuckmere on Aug. 15th and 100 at Shoreham on Sept. 9th.

135. **LITTLE RINGED PLOVER** (*C. dabius*).—A marked increase in records. Spring passage was noted between Apr. 6th and May 11th, involving 12 birds. Records included 2 at Cackle Street, near Nutley, on Apr. 15th (WM).

Three pairs bred, two of which were successful. Autumn passage was noted between Aug. 2nd and Oct. 3rd, involving 16 birds. Records included 7 at Arlington Res. on Aug. 6th (MJR).

136. **KENTISH PLOVER** (*C. alexandrinus*).—An unusual number of records, mainly in the spring when there was a female at Newhaven Tidemills from Apr. 6th to 10th (many obs.), one at the Midrips on the 9th and 10th, a pair on the 12th and one on May 8th and 9th (many obs.), a male at the Cuckmere on Apr. 16th and 17th (BWF, PJW, VAW) and one on Pilsey Island on May 2nd (JPK). In the autumn one at Rye Harbour LNR on July 1st and 27th (DSF).

139. **GREY PLOVER** (*Pluvialis squatarola*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours.

Elsewhere 40 at Ferring on Dec. 19th was the only significant flock reported. On May 6th 97 flew E. off Beachy Head, an unusually large movement, which was also observed in the Solent.

140. **GOLDEN PLOVER** (*P. apricarius*).—Counts at Winchelsea Marsh recorded the following monthly maxima: Jan. 70, Mar. 250, Apr. 120, Oct. 300, Dec. 600. Few other counts received but the species was clearly scarce at the end of the year. However maxima of 500 were noted at East Head, West Wittering and Pagham in the early months and there were 300 at Bracklesham on Apr. 9th, 100 at Pevensey Levels on Mar. 5th and 300 there on Dec. 28th.

142. **DOTTEREL** (*Eudromias morinellus*).—A flock of 11 in full s/p. on Iford Hill from May 19th to 22nd, with 4 still present on the 23rd (MCR, PJW, VAW et al). This is the largest party noted in the county for a very long time.

143. **TURNSTONE** (*Arenaria interpres*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours.

The wintering population from Langney Point to Rye Harbour in the early months rose from c.150 in December, 1970, to c.320 in January and February. At the end of the year there were c.155 present, but only 60 were counted on Jan. 15th, 1972. An easterly movement through the Solent between Apr. 1st and May 13th was not observed off Beachy Head.

There were singles at Arlington Res. on Aug. 18th and 31st (MJR, PJW), inland records are unusual.

145. **SNIFE** (*Gallinago gallinago*).—Few winter counts received and the only sizeable flocks reported were 250 on Beeding Brooks and c.100 on the Rickney part of Pevensey Levels in January, c.135 at Glynde Reach and Level in March and 75 at Winchelsea Marsh on Dec. 30th. See also wader counts pages 52-59.

No breeding census was made although breeding birds were noted in the Arun and Adur valleys and Glynde Levels. There were also breeding season records for Coates Common, Lindfield, Ashdown Forest and Maresfield.

147. **JACK SNIFE** (*Lymnecryptes minimus*).—Recorded in the early months until Apr. 12th, with a late migrant at Rye Harbour LNR on May 6th (DSF). There were 5 together at Brooklands, Worthing, on Jan. 4th and 5th. First recorded in the autumn on Sept. 30th, at Rye, but most records were for November. Monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	Sept.	Oct.	Nov.	Dec.
12	2	3	2	1	1	1	9	2

148. **WOODCOCK** (*Scolopax rusticola*).—Widespread breeding season records of roding birds received, involving 61 birds in 35 localities. Very few winter reports at either end of the year.

150. **CURLEW** (*Numenius arquata*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours. The only count received from Pett for the early months was 80 on Jan. 17th and there were 250 there on Dec. 28th. However a total count of the Pett/Rye area on Jan. 15th, 1972, recorded 800 birds. A moderate easterly passage through the Solent in April and May was not observed along the Sussex coast.

Successful breeding was recorded from Ashdown Forest where birds were present in 2 or 3 areas.

151. **WHIMBREL** (*N. phaeopus*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours.

First recorded on Mar. 23rd at Chidham (JHME). A fairly large E. passage noted off Beachy Head between Apr. 6th and mid May, involving 365 birds; 109 E. on Apr. 22nd was the largest movement. On May 4th 120 flew E. off Ferring. Much larger easterly movements involving c.1,200 birds were noted off Hants. during the same period. Ten in Pagham Harbour on June 6th.

Autumn passage was first noted on July 1st and continued until Oct. 9th but no outstanding flocks were seen. Inland there were singles flying S. at Arlington Res. on Aug. 1st and 16th and 5 flying SW. over Weir Wood Res. on the 30th.

154. **BLACK-TAILED GODWIT** (*Limosa limosa*).—See pages 52-59 for detailed counts at Chichester, Pagham and Rye Harbours. Inland records were of singles flying N. at Arlington Res. on Apr. 12th and 14th, one at Chichester G.P. on Aug. 15th and up to 8 there from Sept. 18th to the end of the year. Records from Sussex and Hants. indicate a total population of c.1,000 birds along the Solent coasts from Pagham to Hurst in December.

155. **BAR-TAILED GODWIT** (*L. lapponica*).—See pages 52-59 for detailed counts at Chichester, Pagham and Rye Harbours. There was a very large up-Channel passage in the spring, with a total of 4,310 flying E. off Beachy Head on 15 dates between Apr. 15th and June 2nd; peak, 3,350 over Apr. 25th/26th. In the same period there were some interesting records from Arlington Res., where 4 flew N. on Apr. 12th, 2 were present on the 24th and a flock of 200 flew N. on May 3rd (MJR, PJW); inland records of this species are very unusual. Off Hants. there was no very outstanding movement over Apr. 25th/26th, peak movements occurring on 21st and 30th.

156. **GREEN SANDPIPER** (*Tringa ochropus*).—Recorded in every month. Wintering birds were noted at West Harting Pond, Buxted and near Forest Row in the early months and at Chichester G.P., Lewes Brooks, Glynde Levels, Pevensey Levels at each end of the year. The start of spring passage was impossible to determine but 8 at the Midrips on Apr. 13th (KOS) was an unusually large party for the spring. Autumn passage started in mid June and peaked in August, although there was no clear peak during that month. Monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	8	7	15	4	12	30	69	40	15	13	9

157. **WOOD SANDPIPER** (*T. glareola*).—One at Rye on Apr. 22nd (JA). In the autumn a total of 19 between July 19th and Sept. 28th, mainly at the coast, but there were inland records from Chichester G.P., Weir Wood Res. and Arlington Res.

159. **COMMON SANDPIPER** (*T. hypoleucos*).—The only winter record was of one at Manhood End on Feb. 27th. Spring passage was noted from Apr. 6th to June 7th, although there was no very marked peak. Autumn passage was noted June 21st to Nov. 29th. Most passage was in August and the peak of 127 birds occurred in the first week. An almost daily watch at Arlington Res. recorded c.68 birds between July 12th and Oct. 14th, with peaks of 9 on July 31st and 19 on Aug. 30th. Monthly totals for the whole county were:

Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
29	31	5	87	286	85	8	4

161. **REDSHANK** (*T. totanus*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours. Elsewhere in the winter 1970/71 there were wintering flocks of 70-100 at Shoreham, c.50 at Newhaven Tidemills and 30 at the Cuckmere; in the winter 1971/72 there were 70-100 at Shoreham, c.30 at Tidemills and c.10 at the Cuckmere. Records from Sussex and Hants. indicate a total of c.2,500 along the Solent from Pagham to Hurst in December.

Breeding counts in 1971 were as follows: Chichester Harbour, 10 pairs total in 3 localities, not a complete count; Adur valley, 10 pairs north to Henfield; Iford Brooks, 3 pairs; Rye marshes, 28 pairs, including 20 on the LNR; Midrips, 26 pairs, a marked increase since the 1967 survey, although numbers there have always tended to fluctuate widely. There were probably also 6-8 pairs on Glynde Level and birds were recorded in the breeding season as usual, round Pagham Harbour, in the Arun valley, the Cuckmere, on Pevensey Levels and at Coates Common.

162. **SPOTTED REDSHANK** (*T. erythropus*).—Recorded in each month except May. There were winter records for Newhaven Tidemills and Glynde for the early months, Rye Harbour LNR for the end of the year and Chichester and Pagham Harbours for both. What spring passage there was fell between Mar. 1st, when a wired bird was found dead at Partridge Green (AS, IMS), and June 13th; the lack of May records seems rather unusual. Autumn passage occurred from June 28th with a peak in early August; 32 at Thorney Deepes on Aug. 8th was the highest count. Monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2	2	5	8	0	14	30	38	27	17	3	3

164. **LESSER YELLOWLEGS** (*T. flavipes*).—One at Weir Wood Res. on Sept. 11th and 12th (PC, DTH). This record has been accepted by Brit. B. and is the fifth for Sussex.

265. **GREENSHANK** (*T. nebularia*).—One or two were wintering in Chichester Harbour in the early months. Spring passage was noted from Apr. 15th to June 5th, records including 11 coming in from the sea at Beachy Head on May 13th. Autumn passage was noted from July 3rd to Dec. 4th, but outside the western harbours was very poor. In particular there were many fewer inland records than usual. Counts in Chichester Harbour, however, were very high and the September peak of 135 birds on the 5th was the highest count yet recorded there. Monthly totals for the whole county were:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2	1	2	10	31	2	11	114	164	119	62	3

169. **KNOT** (*Calidris canutus*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours. On May 6th 213 flew E. off Beachy Head, an unusually large movement. One at Arlington Res. on Sept. 4th (MJR), inland records are unusual.

170. **PURPLE SANDPIPER** (*C. maritima*).—About 90 were recorded at each end of the year, more than twice as many than in 1970. The main localities were as follows: Littlehampton/Clymington, 16-18 present until at least Mar. 27th and 15 on Nov. 14th; Ferring, no reports before March when 16-17 up to Apr. 21st. Two on Nov. 25th increased to 15 on Dec. 9th but 4 only on 10th. Newhaven, present until at least Apr. 15th, with 33-34 until the end of March. At the end of the year present from Nov. 8th and a maximum count of 24 in December. Bexhill-Midrips, 14 at Fairlight on Mar. 13th was the only substantial count in the early months; a total of 36 on Dec. 19th. One or 2 also present at Pagham at each end of the year and at Shoreham in the early months. One at Langney Point on Mar. 7th.

171. **LITTLE STINT** (*C. minuta*).—One at Thorney Island on Jan. 10th and one or 2 round Pagham Harbour up to Mar. 16th. Rather more spring records than usual, involving a total of 10 birds between Apr. 5th and May 25th; 7 of these were seen at the Midrips between May 16th and 24th. In the autumn a total of 19 between July 10th and Sept. 30th, all at the coast but for one at Arlington Res. from Sept. 12th to 15th, with 2 on the 14th.

173. **TEMMINCK'S STINT** (*C. temminckii*).—Two at Rye Harbour LNR from July 26th to 28th, with one on the 29th (JA, KA, DSF).

178. **DUNLIN** (*C. alpina*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours. Elsewhere in the winter 1970/71 there were c.400 wintering at Ferring, 750 at Shoreham and 200 at Newhaven Tidemills. In the winter 1971/72 700 at Ferring on Dec. 19th had declined to 400 in January and 1,150 at Shoreham on December 19th had declined to 450 in January; these December counts were unusually high. C.50 were present at Newhaven Tidemills. Records for Sussex and Hants. show a total of c.58,000 along the Solent coasts from Pagham to Hurst in December.

As usual there was a few inland records in 1971, including one floating up the Arun at Amberley on driftwood on July 13th.

179. **CURLEW SANDPIPER** (*C. ferruginea*).—More spring records than usual. At Sidlesham Ferry a total of 6 or 7 between Apr. 17th and May 23rd, including a party of 5 on May 2nd. Singles at the Midrips on May 20th and from June 4th to 13th (KOS).

In the autumn a total of 40 recorded between July 29th and Oct. 15th, with 18 at Sidlesham Ferry on Aug. 1st as the largest party. All records were for the coast except for singles at Arlington Res. on Aug. 17th and Chichester G.P. on Sept. 20th.

181. **SANDERLING** (*C. alba*).—See pages 52-59 for detailed counts in Chichester, Pagham and Rye Harbours. Elsewhere in the winter 1970/71 there were c.300 wintering at Clymington and there were 400 at Ferring on Mar. 1st. In the winter of 1971/72 there were 400 wintering at Clymington and 80 at Ferring. One at Arlington Res. on Aug. 12th and 16th (MJR), inland records are rare in Sussex.

184. **RUFF** (*Philomachus pugnax*).—Recorded in every month, monthly totals being:

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
32	77	60	35	9	4	12	21	12	33	100	144

The largest flocks were 60 at Bracklesham on Feb. 22nd (MS), 100 at Chidham on Nov. 21st (DSF) and 80 at Sidlesham Ferry on Dec. 11th (MS).

185. **AVOCET** (*Recurvirostra avosetta*).—An exceptional number reported, nearly all on spring passage; none after June 20th. Records are summarised under localities. Between January and March 5 wintered at Pagham/Sidlesham Ferry (see SXBR 1970) one remaining until May 14th; another 5 passed through the area between Mar. 9th and June 6th. At Rye Harbour there were 13 between Apr. 5th and June 16th, including parties of 6 on May 5th and 5 on June 13th. At the Midrips a total of 13 passed through between Apr. 7th and June 20th, including a party of 6 on May 16th. Somewhat surprisingly the dates show no link with the Rye birds. At Beachy Head 23 flew E. on Apr. 13th (MCR), 23 again (1) flew E. on the 14th (MCR) and 11 did so on May 5th (NAGL, MCR, MJR). These are extraordinary numbers for such a movement which was not recorded at any of the Hants. sea-watching points. There was also one at the Cuckmere on June 6th. The year's total of 94 is the highest ever recorded, the previous best being 70 in 1968.

187. **GREY PHALAROPE** (*Phalaropus fulicarius*).—One at the Cuckmere from Dec. 19th to 26th (RB, DEL).

WILSON'S PHALAROPE (*P. tricolor*).—One at Arlington Res. on Sept. 25th (PL, RAS) moved to the Cuckmere on the 26th and 27th (JRSF, TG, LG, AEN) and to Pagham Harbour from the 29th to Oct. 6th (AS, IMS *et al*). These records have been accepted by Brit. B. and all refer to the same bird. It was the first ever to be recorded in Sussex but unfortunately it was shot on the last date. The corpse was left lying in the pool it normally frequented, a piece of unbelievably mindless vandalism. It proved to be an adult female and is preserved in the Bognor Natural History Museum.

189. **STONE CURLEW** (*Burhinus oedanicus*).—Recorded in 8 downland areas between mid April and mid October; breeding was proved in one. The records are very incomplete and 3 of these reports may refer to autumn passage rather than local birds.

One at the Midrips on May 4th.

193. **ARCTIC SKUA** (*Stercorarius parasiticus*).—First recorded on Apr. 14th, off Goring. Regular spring sea-watching was confined to Beachy Head where a total of 63 flew E. on 12 dates between Apr. 17th and June 1st, peak 25 on May 5th. Elsewhere a total of 16 recorded along the coast during the same period. Single birds off Worthing on June 3rd and Church Norton on the 22nd.

A poor autumn passage with a total of only 39 recorded between Aug. 16th and Nov. 2nd. No more than 3 were seen on any date.

194. **GREAT SKUA** (*S. skua*).—Single birds were picked up dead at Pagham on Jan. 24th (oiled), and the Midrips on the 31st (WWAP, KOS).

On spring passage a total of 11 flew E. along the coast between Apr. 12th and May 3rd, and one was terrorising the resident Herring Gulls at Peacehaven Cliffs from May 19th to 23rd.

In the autumn 2 E. off Langney Point on Sept. 4th, one W. off Beachy Head on the 5th and one offshore there on the 17th.

195. **POMARINE SKUA** (*S. pomarinus*).—The spring of 1971 was unique in producing larger movements of this species than of Arctic Skuas. Most were seen at Beachy Head where the remarkable total of 85 flew E. between Apr. 21st and May 13th as follows: Apr. 21st one, May 5th 65, May 6th one, May 13th 18 in one party (NAGL, MCR, MJR, PJW). It seems characteristic of this species to move in parties and the movement of May 5th included a party of 23 and 2 of 9, besides several smaller parties. This movement coincided with the peak passage of Arctic Skuas (qv) and is by far the largest skua movement yet recorded in Sussex. There were also records off Selsey Bill and Rye that day but the same birds were almost certainly involved; for example 21 passed Selsey Bill some 2-3 hours before the 23 passed Beachy Head. Curiously, this movement was not observed off Hants., where only 4 Pomarine Skuas were observed throughout the spring.

In the autumn an immature flew W. off Langney Point on Aug. 14th (MJR) and an adult likewise off Beachy Head on Sept. 4th (JFC).

198. **GREAT BLACK-BACKED GULL** (*Larus marinus*).—The monthly maxima at Rye Harbour LNR were: Apr. 100, May 250 (immatures), June 250, but 80 only in the latter half, July 400, Aug. 500, Sept. 400, Nov. 400, Dec. 500. Other flocks counts were of 320 at Shoreham on Jan. 3rd, 125 at the Cuckmere on Feb. 1st and 200 on Nov. 22nd, c.275 at Bulverhythe on Feb. 2nd, c.225 on Sept. 9th, 100 on Nov. 14th and c.500 on the 29th, 50 at Newhaven Tidemills on Sept. 15th, 30 at Southwick on Sept. 21st and 400 on Winchelsea marsh in December.

199. **LESSER BLACK-BACKED GULL** (*L. fuscus*).—In winter recorded only at Weir Wood Res. where there were up to 10 in January and 20 in December.

Large flocks reported were 100 at Rye Harbour on Mar. 14th, 300 at Chichester G.P. on July 24th, 100 at Rye Harbour LNR on Aug. 21st, 50 at Burton Down on Sept. 8th and 80 on Nov. 3rd and 250 at Beachy Head at the end of September. The only sizeable movement noted was of 300 E. off Rye Harbour on Apr. 10th.

200. **HERRING GULL** (*L. argentatus*).—The monthly maxima recorded at Rye Harbour LNR were: Apr. 300, May 300, June 400, July 400, Aug. 500, Sept. 400; the birds in May, June and July were mostly immatures.

At Rye Harbour LNR 84 pairs attempted to breed and 9 pairs did so at Northpoint Beach, Rye. Control measures at both places were very successful. Elsewhere breeding was noted as usual on houses in St. Leonard's, and also on the roof of a Brighton hotel. No counts were made of the cliff colonies.

Three yellow-legged birds at the Cuckmere on May 2nd (PJW). Yellow legs are characteristic of both Scandinavian and Mediterranean races.

201. **COMMON GULL** (*L. canus*).—Large flocks reported were 250 at Weir Wood Res. on Jan. 19th, which were possibly storm-driven as 50-60 was the usual number, 1,000+ at Ovingdean on Feb. 6th and a similar number at Cadborough throughout the month.

There was a very large spring passage through the Rye area, with a peak count of 10,000+ at the LNR over Apr. 10th-12th; the birds moved on very rapidly, probably E. There was an autumn peak there of c.1,000 on Aug. 21st and there were 200 at Southwick on Sept. 21st and Nov. 29th and 200 at Duncton on Sept. 23rd.

202. **GLAUCOUS GULL** (*L. hyperboreus*).—An adult at Hove from Jan. 24th to Mar. 21st (many obs.). An adult again there from Oct. 16th to the end of the year and an immature with it on Dec. 9th (IRW *et al*). Elsewhere one W. off Rottingdean on Oct. 6th (AJC), an adult at Worthing on Nov. 16th and an immature there on Dec. 12th (JIF) and an immature at Newhaven on the 17th (AJC). Possibly all the records for the end of the year refer to the same 2 birds.

205. **MEDITERRANEAN GULL** (*L. melanocephalus*).—Records are given under localities. Hove, one from Jan. 10th to Feb. 19th, a different bird on Feb. 14th and one from Nov. 12th to the end of the year. Sidlesham Ferry, singles on Mar. 11th and Dec. 27th. Chichester G.P., one on Sept. 13th. Rye Harbour LNR, 2 on May 24th and different birds on June 15th and Sept. 20th. All birds were adults except for one at Rye on May 24th.

207. **LITTLE GULL** (*L. minutus*).—In January and February there were records from the Pagham/Selsey area and Pett Level. There was another very large spring passage, with a total of c.60 recorded between Apr. 13th and June 17th. Records included a party of 12 at Thorney on Apr. 13th (HMH) and a total of 22 through the Rye Harbour LNR between Apr. 23rd and June 17th.

There was none in July and autumn passage was noted from Aug. 16th to Nov. 12th, involving c.25 birds. There were inland records for Chichester G.P. and Arlington Res. Approximate monthly totals were:

Jan.	2	Feb.	2	Mar.	0	Apr.	33	May	6	June	0	July	5	Aug.	18	Sept.	6	Oct.	3	Nov.	0	Dec.	0
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208. **BLACK-HEADED GULL** (*L. ridibundus*).—Counts at a roost at Weir Wood Res. recorded 1,800 on Jan. 12th and 2,800 on the 26th, 1,600 on Nov. 23rd and 2,800 on Dec. 21st. The spring peak at Rye Harbour LNR was 4,000 on Apr. 4th and numbers declined very rapidly during the month. In the autumn there were c.10,000 there on Sept. 15th.

Breeding counts were: Chichester Harbour, 4 nests in June; Rye Harbour LNR, 315 pairs, control measures were very successful.

209. **SABINE'S GULL** (*L. sabini*).—One at Sidlesham Ferry on Dec. 27th departed W. (BF, FJF, CEM), the second December record for the county.

211. **KITTIWAKE** (*Rissa tridactyla*).—A rather poor year for the species. The only sizeable flocks reported were 110 at Rye Harbour LNR on June 19th and 115 there on July 1st, 100 off Beachy Head on Sept. 16th and 17th and 200 E. there on Oct. 15th.

Inland one at Arlington Res. on Feb. 25th was dead next day (MJR), 2 there from Sept. 1st to 3rd (PJW) and one at Weir Wood Res. on Nov. 9th (PCB).

212. **BLACK TERN** (*Chlidonias niger*).—Spring passage was recorded between Apr. 19th and June 16th, involving a total of c.130 birds. No large movements were seen, the highest counts being 11 E. off Beachy Head on May 5th, 14 at Chichester G.P. on the 6th, 16 at the Midrips on the 30th and 9 off Worthing on June 4th. In Hants. much larger coasting movements were noted in the Solent, including 90 E. off Hurst on May 6th.

Another good autumn passage with c.190 recorded between July 7th and Oct. 24th. Most movement occurred between Aug. 20th and 31st, when c.130 were reported; the highest counts were 23 at Rye Harbour LNR and 42 W. off Langney Point on Aug. 20th.

213. **WHITE-WINGED BLACK TERN** (*C. leucopterus*).—An adult at Rye Harbour LNR on Aug. 23rd (JA, DSF) and an immature at Arlington Res. on the 24th (MJR). These records have been accepted by *Brit. B.*

216. **CASPIAN TERN** (*Hydroprogne ischegrava*).—Singles off Worthing on May 16th (KW) and Selsey Bill on the 31st (PAD). These records have been accepted by *Brit. B.*

217. **COMMON TERN** (*Sterna hirundo*).—At least 92 pairs bred at Northpoint Beach, Rye, rearing c.125 young. In the Chichester Harbour colony 41 nests containing 96 eggs in June. A pair resident at Chichester G.P. throughout May and June was not proved to breed.

COMMON/ARCTIC TERN (*S. hirundo/paradisaea*).—First recorded on Apr. 6th off Newhaven. At Beachy Head a total of 2,620 moved E. between Apr. 11th and the end of May, with peaks of 550 on Apr. 26th, 590 on May 6th and 650 on the 23rd. These numbers and peaks agree well with those noted along the Hants. coast.

In the autumn 950 were recorded there between Aug. 9th and Oct. 16th and the peak count at the Rye Harbour LNR was 360 on Aug. 26th. The last recorded was one off the Midrips on Oct. 25th.

219. **ROSEATE TERN** (*S. dougalli*).—One flew E. off Worthing on Apr. 26th (CMV), an early date. Four flew E. off Lancing on May 14th and 2 off Lancing and Worthing from May 17th to 24th and July 2nd (BF, FJF). Singles at Rye Harbour LNR on July 10th and 20th (DSF, BAEM). One off Beachy Head on Aug. 24th (JFC).

222. **LITTLE TERN** (*S. albigrons*).—First recorded on Apr. 14th off Ferring. A much more marked spring passage than usual; off Ferring a total of 185 flew E. in 9 days (19hrs.) watching up to May 25th and at Beachy Head a total of 265 flew E. between Apr. 19th and the end of May, peaks 95 on May 5th and 75 on the 7th, large movements for this species. Neither of these movements were observed in the Solent where peak passage occurred in late April.

Although a total of c.92 pairs attempted to breed it was a very unsuccessful year. Breeding was recorded as follows: Chichester Harbour, 60+ adults and 25 nests containing 44 eggs and 3 young on June 7th; high tides over June 15th-19th caused heavy losses and only about 20 young were finally reared (JHKD). Pagharn Harbour, c.30 pairs tried to breed but were subjected to constant human harassment and predation; by mid July only 10-15 pairs remained and no more than 10 young were eventually reared (JVS, MS). Rye Harbour, a total of 10 pairs bred but only one young reared; predation by Corvidae appeared to be the cause of failure. About 25 non-breeding adults were also present (DSF). Midrips, 26 pairs completely failed to rear young (KOS); the cause of failure was not recorded. None apparently bred at the Crumbles although there were 10 there on May 2nd. A pair resident at Chichester G.P. was not proved to breed.

In the autumn a total of 57 flew W. off Worthing on 6 dates between Aug. 11th and 31st and the last recorded was one off Beachy Head on Sept. 25th.

223. **SANDWICH TERN** (*S. sandwichensis*).—One over Southwick Harbour on Feb. 13th (GAS). Otherwise first recorded on Mar. 27th off Ferring. Spring passage off Beachy Head totalled 2,880 E. between Mar. 31st and the end of May, peaks 484 on Apr. 21st and 680 on the 22nd. These records agree well with Hants. sea-watching points.

The most extensive autumn movement was noted off Worthing, with a total of 605 W. on 8 dates between Aug. 11th and 31st. There was one at Arlington Res. on Sept. 8th and 2 at Weir Wood Res. on the 19th. The last recorded were 20 in Emsworth channel on Oct. 12th.

224. **RAZORBILL** (*Alca torda*).—See tables of oiled birds on page 61.

226. **LITTLE AUK** (*Plautus alle*).—One in the channel at Itchenor on Nov. 4th (JHME). One killed by a car on the A27 at Fontwell on the 6th (JS).

227. **GUILLEMOT** (*Uria aalge*).—See tables of oiled birds on page 61.

230. **PUFFIN** (*Fratercula arctica*).—A storm-driven bird picked up at Blackdown, near Haslemere, on Oct. 14th (TK).

AUK SPECIES.—No significant movements noted during the year except for 36 flying E. off Beachy Head on May 6th.

232. **STOCK DOVE** (*Columba oenas*).—A substantial increase in the size of the winter flocks reported, flocks of 50 or more being noted in 4 areas as follows: Rye Harbour LNR, 70 in January and November; Chidham, c.240 in November and December; Chantconbury, 250 on Dec. 24th; Bignor Hill, 150 on Dec. 30th. These are the largest flocks to be seen since before 1965.

There were breeding season reports from 39 localities. The species is clearly well established in parts of central Sussex; thus c.15 pairs were found in 4 localities in 10K.M. square TQ22. There were also flocks of c.30 at Iford Brooks and Iford Hill in May, most of which birds were probably breeding locally. Other summer flocks were 27 at Shermanbury and 25 at the Cuckmere in May.

234. **WOOD PIGEON** (*C. palumbus*).—Some autumn movement noted at Beachy Head, with 80 arriving from the sea on Nov. 6th and 200 on the 7th. On the 8th there were c.2,000 in the area.

235. **TURKLE DOVE** (*Streptopelia turtur*).—Recorded from Apr. 17th to Nov. 6th.

236. **COLLARED DOVE** (*S. decacota*).—Recorded from 12 new localities during the year, so the species continues to spread. New breeding season localities were Chidham, Maresfield, Wivelsfield, Bignor, Birdham and Friston; breeding was proved at Chidham and Birdham. Otherwise new sites were noted for winter only, at Isfield, Petworth, Mannings Heath, Fletching, Fulking and Battle.

The only flocks of 50 or more reported were 200+ at Church Norton on Mar. 14th and c.100 wintering at Burgess Hill at the end of the year. This probably understates the true position.

237. **CUCKOO** (*Cuculus canorus*).—Recorded from Apr. 3rd to Oct. 18th, when there was an immature at Sidlesham (MS).

Owl species.—Please note that all records are urgently required for both breeding season and the winter.

241. **BARN OWL** (*Tyto alba*).—Records were received from a total of 78 localities well distributed over the county. Of these birds were recorded at 47 in the breeding season. Breeding was not often proved, most records being chance reports, but 14 nests were found, one with 6 eggs on July 4th failed, but the others were successful.

Despite the lack of systematic records, which are always difficult to obtain for owls, this species is clearly re-establishing itself in Sussex and the records for the past 4 years show a genuine increase in numbers each year.

246. **LITTLE OWL** (*Athene noctua*).—An increase in the number of reports, with birds recorded from a total of 90 localities. As with Barn Owl these were widely distributed over the county. Sixty-six of these localities were found occupied during the breeding season and 14 nests were found. Of these 9 were followed up and all were successful, producing a total of 14 young.

Some systematic counts of this species would be particularly useful as it may be declining.

247. **TAWNY OWL** (*Strix aluco*).—Continues to be widely recorded with reports from some 90 localities in 1971, mainly for the breeding season. Selected counts only can be given here, as follows. There were at least 8 bird/pairs resident in the large area of woodland comprising Houghton Forest, Rewell Wood and Paines Wood and 6 in Arundel Forest, Patching. Four pairs were resident in 300 acres at West Chilmington, 7 territories were known in three quarters of Slinfold parish, 10 birds were calling regularly within a circle of 1½ miles radius round Mannings Heath village and there were 5 pairs in the Horsham Urban District.

Successful breeding was recorded by 10 pairs of which 7 were known to have reared a total of 18 young. One brood of 3 young in Crawley Town Centre were just able to fly on Mar. 30th (NTP), an extraordinarily early date.

248. **LONG-EARED OWL** (*Asto otus*).—One in a roost of Short-eared Owls at Sidlesham on Mar. 16th and 27th (WWAP) and one at Beachy Head on Apr. 18th (MJH, MCR). A successful breeding pair was found.

249. **SHORT-EARED OWL** (*A. flammeus*).—C.34 recorded between Jan. 1st and May 18th, when there was one at Rye, and c.23 recorded Sept. 15th and the end of the year. As usual records were confined to coastal areas (32 birds), the Downs (8 birds) and the river valleys and levels (17 birds). The largest numbers recorded together were 6 at Sidlesham on Feb. 11th, 6 at Rye Harbour on the 21st and 5 in the Cissbury/Chanctonbury area on Oct. 1st. Monthly totals were:

Jan.	Feb.	Mar.	Apr.	May	Sept.	Oct.	Nov.	Dec.
12	18	12	9	3	3	6	8	12

252. **NIGHTJAR** (*Caprimulgus europaeus*).—Recorded from May 8th to Sept. 14th. During the breeding season 45 pairs or singing males were reported from 23 localities; over 20 localities from which the species has been reported in recent years were not visited, so this figure is a considerable under-estimate of total numbers. All breeding season records are urgently needed.

255. **SWIFT** (*Apus apus*).—First recorded on Apr. 21st at Slinfold but, despite a number of scattered arrivals between then and about May 12th, the bulk of the breeding population was late; the spring peak at Rye Harbour LNR was 400 on May 23th. There were considerable numbers there in June, with a maximum count of 860 on the 17th.

The peak of autumn passage occurred in early August, with 550 S. at Beachy Head on the 2nd, and 700 at Rye Harbour LNR and a gathering of several thousands over Pulborough Brooks on the 8th. There were many more September records than usual, including 26 flying W. at Beachy Head on the 15th and about 10 more between the 20th and 30th; the last were singles at Beachy Head on Oct. 1st and Seaford Head on the 13th (MJR).

Counts of screaming parties at breeding sites were as follows:

Rottingdean	12	Crawley (Pound Hill)	24	Brighton, Queens Park and Kempdown	16
Nyctemher	20-24	Aldbourne	24	Hove, Carlisle Road	12
Slinfold	12	Rodwell	28	St. Mary's Hospital,	16
Itchenor	4	St. Michael's, Southwick	6-8	Chichester	16

258. **KINGFISHER** (*Alcedo atthis*).—There were breeding season reports from 30 localities. Only 5 pairs were proved to breed but several other definite pairs were seen and it is reasonable to suppose that most of the birds seen were, in fact, breeding. Inland in the winter there were records from 14 more localities, which were suitable for breeding.

A total of 20 birds noted at the coast during the winter months.

261. **HOOPOE** (*Upupa epops*).—In April single birds at Saltdean on the 7th, Nyewood, Harting, from the 10th to 12th and near Eastbourne on the 28th. In addition 3 apparently different individuals were noted around Arundel Forest, Patching, between the 21st and May 12th. Elsewhere in May one at Rye Harbour LNR on the 3rd and one near Lewes on the 18th.

One at Patcham on Aug. 27th was the only autumn record.

262. **GREEN WOODPECKER** (*Picus viridis*).—More widely reported than in 1970 with records from at least 130 localities. The species is clearly generally distributed but is still absent from some parts of the coastal plain where breeding occurred before 1963.

Selected counts are: 2-3 pairs at Ambersham Common; 2 pairs at Coates Common; 2-3 pairs on 300 acres at West Chiltington; 6 pairs in Slinfold parish; 4 pairs in St. Leonard's Forest; 4 pairs between Westmeston and Offham along the foot of the Downs; 3 pairs in 35 acres of woodland at Wych Cross.

263. **GREAT SPOTTED WOODPECKER** (*Dendrocopos major*).—Recorded from about 80 areas, mainly in the breeding season. Selected counts are: 2-3 pairs at Coates Common; 4 pairs on 300 acres at West Chiltington; 7 pairs in Slinfold parish and 5 in Horsham Urban District.

264. **LESSER SPOTTED WOODPECKER** (*D. minor*).—A welcome and substantial increase in reports, with birds noted in 47 localities during the year, mainly the breeding season. This must give a more accurate picture of status than previous SxBRs and the records particularly show a wide distribution in central Sussex, although it is everywhere scarcer than the previous 2 species.

265. **WRYNECK** (*Jynx torquilla*).—In the spring singles at the Midrips on Apr. 12th and Chichester G.P. on May 5th.

In the autumn 23 recorded between Aug. 20th and Oct. 2nd, including a total of 17 at Beachy Head.

271. **WOODLARK** (*Lullula arborea*).—Five pairs or singing males found at 4 sites in West Sussex during the breeding season.

In the autumn 2 at Thorney Island on Sept. 4th, one at Langney Point on the 15th, one at Beachy Head on Oct. 5th and 6th and one flying W. near Cissbury on Nov. 14th.

272. **SKYLARK** (*Alauda arvensis*).—In a complete census of Ashdown Forest PCB located 57 singing males or pairs. There were also 18 males/pairs on 3 square Km of Downland at Chantconbury, 8 on 2 at Cissbury and 6 pairs on 100 acres of farmland at West Chiltington.

273. **SHORELARK** (*Eremophila alpestris*).—At least one at Camber until Mar. 14th (WM, DBO), see also SxBR 1970. One at Newhaven Tidemills on Nov. 1st (AJC), one at Camber on Dec. 12th (DBO) and one at the Midrips on the 28th (KOS).

274. **SWALLOW** (*Hirundo rustica*).—First recorded on Mar. 12th at Horsham but arrival was not more general until about Apr. 10th. The largest spring movement was 400 E. at Rye Harbour on May 14th. A number of reports suggested that, at least locally, breeding numbers were below average. Ten nests at Plumpton produced 28 young, an average brood size of 2.8; 6 nests were successful (RJI).

In the autumn the peak count at Beachy Head was c.55,000 over Sept. 13th/14th and c.15,000 flew E. there on the 19th. There were c.6,000-7,000 at the Litlington roost on Oct. 2nd. The last recorded was one at Church Norton on Nov. 28th.

275. **RED-RUMPED SWALLOW** (*H. daurica*).—One at Litlington on May 4th (PJW). This record, which is the third for Sussex, has been accepted by Brit. B.

276. **HOUSE MARTIN** (*Delichon urbica*).—First reported on Apr. 4th at Chichester G.P. and Burton Ponds; then none until the 12th, with one at the Midrips and a gradual build-up in the second half of April. No large movements were noted in the spring.

In the autumn the peak count at Beachy Head was c.45,000 over Sept. 13th/14th and 9,500 flew W. there on the 15th. Elsewhere 3,000 flying SE. at Rye Harbour on Sept. 14th and c.500 at West Chiltington on Oct. 22nd. The last recorded were 2 at Rottingdean on Nov. 24th.

Counts of occupied nests were as follows:

Rottingdean	10	Rodmell	5	Ripe	75
Copthorne	20	Pevensy Bay	51	Udimore	12
Pagham (King's Beach)	26	Lindfield	33	Winchelsea	6
Mile Oak	22	Slinfold	9	Ringer	170
Mummings Heath	21	Horsham	57	Plumpton College	240
Bells Yew Green	35	on one farmhouse		Rye Harbour village	7
Icklesham	182	on one farmhouse			

Three pairs nested in Station Road, Portslade, three-quarters of a mile from the gasworks, which ceased work in April. See also page 47 for an additional 1970 count.

Of thirteen localities counted in both 1970 and 1971, one showed no change, 9 in central and western areas showed a mean decline of 15% in occupied nests, whereas 3 in the extreme east of the county showed a mean increase of 32%. Autumn roosting in reed beds was recorded in Hants. in 1970/71 and might be looked for in Sussex.

277. **SAND MARTIN** (*Riparia riparia*).—First recorded on Apr. 3rd at Chichester G.P. and the Cuckmere. The largest spring count was 500-600 at Chichester G.P. on Apr. 25th. The only breeding counts received were of 250 occupied nest burrows in Hassocks sandpit, 60 in Streat sandpit and 27 at Rye Harbour. A pair bred in a stream bank at Buxted, a natural site!

The peak autumn movement occurred in the first half of September, with counts at Rye Harbour LNR totalling c.20,000 in the first week and 3,000 on the 14th and, at Beachy Head 4,500 E. between the 11th and 19th. The last recorded were one at Church Norton on Nov. 13th and 2 W. at Beachy Head on the 14th.

278. **GOLDEN ORIOLE** (*Oriolus oriolus*).—A male at Beachy Head on May 17th (MCR).

281. **HOODED CROW** (*Corvus corone cornix*).—Rather more records than usual. There were one or two at the Cuckmere (see SxBR 1970) until Jan. 25th and one there on Apr. 3rd and 6th (many obs.). Single birds at the Midrips on Apr. 12th (DSF), Sidlesham on May 31st (SJT) and Patcham the same day (MJD).

At the end of the year one between Cissbury and Chantconbury from Nov. 6th to 14th (BF, FJF, CEM), one at the Cuckmere from Nov. 9th to Dec. 10th, with 2 on the latter date (AJC *et al*) and 2 or 3 at Pebsham from Nov. 14th to Dec. 5th (TNB, JAH, RKH, RS).

282. **ROOK** (*C. frugilegus*).—This species is now the subject of a Society survey and information about Rookeries is urgently needed.

In 1971 counts of rookeries were received as follows: Pagham parish, 75 nests in 4 colonies. Four 1970 sites were abandoned and this figure represents a 60% decrease. Rottingdean/Ovingdean/Woodingdean, 174 nests in 6 colonies, very similar to 1970; Slinfold, 87 nests in 2 colonies; Winchelsea/Peasmarsh/Iden/Rye, 430 nests in 5 colonies. One colony counted in 1969 not included but the figure indicates a 17% decrease compared to 1969.

288. **GREAT TIT** (*Parus major*).—Five nests at Plumpton produced 14 young, an average brood size of 2.8; only 2 nests were successful (RJL). At Wych Cross breeding success was also poor, 4 out of 9 nests failing and 2 more being only partially successful. The wet weather in June was thought to be the cause.

289. **BLUE TIT** (*P. caeruleus*).—Seven nests at Plumpton produced 36 young, an average brood size of 5.1; 6 nests were successful (RJL). At Wych Cross breeding success was rather poor, 2 out of 5 nests failing completely.

290. **COAL TIT** (*P. ater*).—One showing the characters of the race *ater* at Beachy Head on Oct. 4th.

293. **WILLOW TIT** (*P. montanus*).—Fifteen in the north part of Friston Forest on Jan. 31st. Recorded in the breeding season from 22 sites, 4 of which were in Slinfold parish. The species may be much under-recorded.

294. **LONG-TAILED TIT** (*Aegithalos caedatus*).—Very widely reported and the number of post-breeding and winter parties recorded suggest some increase. Altogether these totalled c.500 birds in 48 parties; compare with similar random reports in 1970. Records included a party of 50 + at Newells Rough on Oct. 31st.

There were 5 pairs in 35 acres of woodland at Wych Cross, 5 along one mile of disused railway at Slinfold and 7 in Bignor Wood, Billingshurst. Of 6 nests at Cattlestone Farm, West Chiltonington, 4 failed.

295. **BEARDED TIT** (*Panurus biarmicus*).—Resident in one area throughout the year but no evidence of breeding. A considerable autumn influx was first noted on Oct. 15th, when 7 flew NW. from Ditchling Common pond and 4, out of 6 present, did likewise from Pond Leigh. In November and December there were reports of parties of up to 17 from 9 localities. Altogether a total of about 75 birds was involved. An unusual locality was Fen Place Mill Lake, with 4 on Nov. 14th (JWH).

296. **NUTHATCH** (*Sitta europea*).—Single birds at Winchelsea Beach on Jan. 17th and Rye Harbour LNR on Sept. 20th were in unusual localities.

299. **WREN** (*Troglodytes troglodytes*).—Five nests at Plumpton produced a total of 14 young, an average brood size of 2.8; 3 nests were successful (RJL).

301. **MISTLE THRUSH** (*Turdus viscivorus*).—Flocks of 36 in Parham Park on Sept. 1st, 35 at Beachy Head on Oct. 12th and 70 in Rewell Wood on Nov. 21st seem large for this species.

302. **FIELDFARE** (*T. pilaris*).—Rather more widespread between January and March than in the 2 previous years, with flocks of 100 or more noted in 15 localities; the largest were 750 at Camber on Jan. 3rd, 800 at West Chiltonington on the 22nd and 500 near Steyning on the 26th. In April records included 800 at Bells Yew Green on the 1st and c.1,000 at Laughton on the 3rd. The last recorded was one at Beachy Head on May 2nd.

In the autumn first recorded at Beachy Head on Sept. 23rd but there was no general arrival before mid-October. In November and December the species appeared scarce; only 3 sizeable flocks were reported, 300 at Findon on Nov. 7th, 200 at Dragons Green on Nov. 14th and 500 W. at Watersfield on the 22nd.

303. **SONG THRUSH** (*T. philomelos*).—The Plumpton results indicate a very poor breeding season: 34 nests, of which only 8 were successful, produced only 23 young, an average brood size of 0.65 (RJL). There were 300 at Camber on Jan. 3rd and the autumn peak at Beachy Head was 100 on Oct. 10th.

304. **REDWING** (*T. iliacus*).—Less numerous than Fieldfare at both ends of the year and scarce in November and December. Between January and March flocks of 100 or more were noted only 5 times, with c.1,200 at Camber on Jan. 3rd as by far the largest. No marked spring passage was noted and one at Beachy Head on May 2nd was the last.

In the autumn first recorded on Sept. 24th at Beachy Head, where the peak count was 350 on Oct. 25th. Two hundred flying N. over Sidlesham on Oct. 14th was the only other large flock noted at the end of the year.

307. **RING OUZEL** (*T. torquatus*).—One at the Cuckmere on Mar. 7th (PJW), a very early date. Otherwise a total of 17 in the spring between Mar. 30th and May 4th.

In the autumn recorded from Aug. 30th to Nov. 6th at Beachy Head but passage there was poor, with 36 on Oct. 10th as the only large count. Elsewhere in the same period only about 10 were seen.

308. **BLACKBIRD** (*T. merula*).—At Plumpton 67 nests produced 84 young, an average brood size of 1.25; 28 nests were successful, an improvement compared with 1970 (RJL).

There were 250 at Camber on Jan. 3rd.

311. **WHEATEAR** (*Oenanthe oenanthe*).—First recorded on Feb. 21 on Beeding Brooks (JD). A poor spring passage, the highest counts being 22 at Selsey Bill on Mar. 31st, 16 at Beachy Head on Apr. 15th and 19 at Rye Harbour LNR on the 20th.

Breeding records were received as follows: Cissbury/Chanctonbury, one pair bred; Rye Harbour LNR, 6 pairs produced 17 young; Midrips, at least one successful pair. In addition there were birds at Newhaven Tidemills on June 8th and Pilsey Island on the 17th and juveniles were seen at Sullington Hill on July 5th, Beachy Head on the 18th and Pagham on the 19th.

Autumn passage was noted at Beachy Head from early August to Oct. 24th, with very large movements between Aug. 17th and 23rd, involving c.500 on Aug 17th, c.100 on the 20th and c.250 on the 23rd when the peak count of 100 was made at Rye Harbour LNR. Movements of a similar scale were also noted along the Hants. coast at this time. There were 4 November records, the last being at Crowlink on the 19th.

317. **STONECHAT** (*Saxicola torquata*).—In January and February c.14 wintering birds were recorded from 9 localities. Although some decline in observer coverage is probable there seems little doubt that the population in the early months was considerably less than in recent years.

Autumn passage at Beachy Head reached a peak of 60 birds on Oct. 15th. In December c.26 were found wintering at 14 sites along the coast and the Downs.

BREEDING SURVEY

Breeding pairs or singing males were recorded as follows: Iping Common, one; Ambersham Common, one; Rewell Wood, one; Ashdown Forest, 14, a complete census; Chalvey Common, one; Mile Oak, one; Seaford Head, 2; Jevington, 2; Crowlink to Holywell (Beachy Head), 9; Bexhill, one. Negative results were recorded for Chapel Common, Iron Hill, Blackdown, Pound Common, Hat Hill, St. Leonard's Forest, Ditchling Common and the Downs between the rivers Arun and Cuckmere. Although a few sites in the NW. of the county and coastal sites between Rottingdean and the Seven Sisters were not covered thoroughly, the results indicate a substantial decline in the breeding population in 1971.

318. **WHINCHAT** (*S. rubetra*).—Spring passage noted from Apr. 14th to May 18th, with 10 at Beachy Head on Apr. 25th and 10 at Sidlesham Ferry on the 29th as the highest counts. None bred.

Autumn passage was noted from Aug. 6th to Oct. 28th, with peaks at Beachy Head of 300 on Aug. 17th, an exceptional number, and 60 on Sept. 11th, 12th and 18th.

320. **REDSTART** (*Phoenicurus phoenicurus*).—First recorded on Apr. 14th at Beachy Head. Thereafter a steady influx along the entire coast. One at Beachy Head on June 11th. Breeding pairs or singing males were recorded as follows: Graffham Down, 2; Coates Common, one; St. Leonard's Forest, 4; Brantridge Forest, 2; The Warren, one; Ashdown Forest, 2; Brede High Wood, one.

Autumn passage was noted at Beachy Head from Aug. 21st to Oct. 17th, with a peak of 30 on Sept. 19th.

321. **BLACK REDSTART** (*P. ochruros*).—In the early months birds were wintering at Selsey Bill (2), Shoreham Harbour, Saltdean and Newhaven. Spring passage was noted from Mar. 6th to the end of April involving c.45 birds; 12 at Beachy Head on Apr. 4th was the highest count.

A pair bred at Brighton but no other breeding season information was received. Autumn passage seemed to be confined to October, when c.25 birds were seen; 8 at Beachy Head on the 24th was the highest count. In December there were singles at Church Norton, Shoreham Harbour and Newhaven.

322. **NIGHTINGALE** (*Luscinia megarhynchos*).—First recorded on Apr. 15th at Swanbourne Lake, Beachy Head and Rye. Selected counts of singing males are: Woodmancoate, 12; Coates Common, 5; West Chilmington, 12 in a circle one mile radius of Cattlestone Farm; Lullington Heath, 8; Pond Leigh, 4; Alfriston, 4. In addition there were 39 other singing males recorded from 24 localities.

One at Beachy Head on Sept. 20th was the last recorded.

324. **BLUETHROAT** (*Cyanosylvia svecica*).—Single females at the Cuckmere on Apr. 30th (PJW) and Hove on May 27th (RSK). In the autumn one on the Downs above Brighton on Sept. 5th (GAS), one at Exceat on Sept. 16th (PJW), one at Beachy Head on Oct. 2nd (PC) and one at Sidlesham Ferry from the 2nd to 7th (many obs.).

325. **ROBIN** (*Erithacus rubecula*).—Seven nests at Plumpton produced 25 young, an average brood size of 3.6; 6 nests were successful, a much better percentage than in 1970 (RJI).

Of 45 at Beachy Head on Apr. 6th many appeared to be of the Continental race *rubecula* and there were 15 similar birds at Rye Harbour LNR the same day. Birds showing the characters of this race were also noted at Beachy Head on 7 dates between Oct. 4th and Nov. 1st.

327. **GRASSHOPPER WARBLER** (*Locustella naevia*).—One at Beachy Head on Apr. 15th was the first recorded and one there on Oct. 15th was the last.

During the breeding season c.84 singing males were noted in 35 localities. Selected counts are: Charlton Forest, 8; Cissbury, 5; Newells Rough, 4; Nuthurst, 4; Worthlodge Forest, 4; Cuckfield Park, 4. Two pairs bred on 90 acres at Cattlestone Farm, West Chilmington.

333. **REED WARBLER** (*Acrocephalus scirpaceus*).—First recorded on Apr. 19th at Rye Harbour LNR but no large numbers were noted on spring passage. Breeding counts received were as follows: Thorney Deepes, 9 singing males; South Stoke, 6 pairs; Shoreham Airfield, 4 singing males; Pond Leigh, 6 pairs; Pevensey Levels, 11 singing males in 2 miles of roadside dyke between Rickney and New Bridge, and 8 in 1½ miles between Pevensey and Middle Bridge. A pair still had young in the nest at Litlington on Sept. 5th (PJW).

CRG ringed a total of 304 at Chichester G.P., mainly in the autumn and the autumn peak at Beachy Head was 30 on Aug. 26th. A late bird there on Oct. 24th was the last recorded.

334. **MARSH WARBLER** (*A. palustris*).—One singing and seen at Woodingdean on June 21st (NAGL).

337. **SEDGE WARBLER** (*A. schoenobaenus*).—First recorded on Apr. 13th at Chichester G.P. Breeding season counts of singing males were received as follows: Thorney Deepes, 4; Chidmere, 3; Chidham Peninsular, 3; South Stoke, 8; Shoreham Airfield, 4; Pevensey Levels, 5 in 2 miles of roadside dyke between Rickney and New Bridge, 2 in 1½ miles between Pevensey and Middle Bridge and 8 in 300 yards on Manxney Level.

CRG ringed a total of 1,181 at Chichester G.P., mainly juveniles on autumn passage. The last recorded was one at Beachy Head on Oct. 15th.

338. **AQUATIC WARBLER** (*A. paludicola*).—One trapped at Litlington on Sept. 12th (PJW, VAW). This record has been accepted by Brit. B.

343. **BLACKCAP** (*Sylvia atricapilla*).—Winter records were of single birds at Bexhill on Jan. 2nd and 3rd, Pulborough on the 29th and 2 at Mannings Heath from Dec. 3rd to 14th. Otherwise recorded from Mar. 29th to Nov. 12th. There were no large spring falls but the autumn peak at Beachy Head was 160 on Sept. 17th.

346. **GARDEN WARBLER** (*S. horin*).—Recorded from Apr. 23rd to Nov. 3rd, when there was a very late bird at Beachy Head. No large numbers were not on spring passage but some increase in the breeding population was noted. The autumn peaks at Beachy Head were 60 on Aug. 16th and 50 on Sept. 11th

347. **WHITETHROAT** (*S. communis*).—First recorded on Apr. 15th at Pagham. The spring peaks at Beachy Head were 120 on May 5th and 80 on the 9th; once again some increase was noted.

Some selected breeding counts made are as follows: Lancing Ring, 10 singing males; Southwick Hill, 9 singing males; Lullington Heath, 12 pairs on 155 acres; Ashdown Forest, 20 singing males, a complete census (PCB). In general numbers do not yet appear to have recovered to the pre-1969 level, except in a few localities, e.g., the Downs round Woodingdean. Sample breeding counts of this species would be very valuable.

The autumn peaks at Beachy Head were 150 on Aug. 1st and 100 on Sept. 12th. The last recorded was one there on Oct. 9th. By comparison passage totals recorded in Hants. were very small.

348. **LESSER WHITETHROAT** (*S. curruca*).—First recorded on Apr. 15th at Rye Harbour LNR. Few seen on spring passage. Few breeding season reports received but there were records from 17 localities; only one pair bred on Lullington Heath (compare Whitethroat).

The autumn peak at Beachy Head was 110 on Sept. 19th, a high count. The last recorded was one at Duncton on Oct. 5th.

352. **DARTFORD WARBLER** (*S. undata*).—There were reports from 4 areas and the records indicate a total breeding population of 12-14 pairs. A cold snap in January had apparently eliminated the birds from one site. One at Church Norton on Oct. 26th (CMV).

354. **WILLOW WARBLER** (*Phylloscopus trochilus*).—First recorded on Apr. 2nd at Chichester G.P. Woodland counts in St. Leonard's Forest showed a 20% drop in the breeding population compared to 1970 and declines were also noted at Wadhurst and Mayfield. See also under Willow Warbler/Chiffchaff.

356. **CHIFFCHAFF** (*P. collybita*).—There were winter records from Chichester G.P. at both ends of the year and from Wych Cross in February and Cissbury in December. Otherwise first and last dates were Mar. 8th and Nov. 28th. See also under Willow Warbler/Chiffchaff.

WILLOW WARBLER/CHIFFCHAFF.—General migration data for both species are placed under this head. Peak spring counts at Beachy Head were 75 on Apr. 15th, 195 on the 19th and 80 on the 28th and May 3rd. The big arrival on Apr. 19th was very widespread and c.120 were counted at both Pagham Harbour and Rye Harbour LNR. Even larger numbers were noted along the Hants. coast. Willow Warblers predominated on each date.

In the autumn there were peaks of 250 at Beachy Head on Aug. 12th, all apparently Willow Warblers, and 300 on Sept. 11th, apparently mainly Chiffchaffs.

357. **WOOD WARBLER** (*P. sibilatrix*).—One at Coney Hill, Brighton, on Apr. 30th was the first recorded and there was a late migrant at Beachy Head on May 16th (TB, JFC, RS). In the breeding season 16 singing males were reported from 10 localities, mainly around St. Leonard's and Ashdown Forests.

There were no autumn records at Beachy Head but single birds were seen at Rye Harbour on July 20th and Coney Hill, Brighton, on Aug. 20th.

360. **YELLOW-BROWED WARBLER** (*P. inornatus*).—One at Church Norton on Apr. 12th (RJS), the first spring record for the county. One at Beachy Head on Oct. 31st (BAEM).

364. **GOLDCREST** (*Regulus regulus*).—Records generally showed the species to be very numerous and widespread in 1971. Migration data only are detailed here. At Beachy Head the spring passage peak was 60 on Mar. 29th. An exceptionally large autumn passage was noted in several localities and the peaks of 200 at Beachy Head on Oct. 7th and 250 on the 29th were far higher than in any previous autumn.

365. **FIRECREST** (*R. ignicapillus*).—Single birds at Rackham Woods on Jan. 1st and Runcton from Feb. 14th to 28th may have wintered. Spring passage was noted from Mar. 4th to May 17th, with a total of c.37 recorded; 6 at Beachy Head on Apr. 4th was the highest count.

A poor autumn passage by the standards of recent years was noted from Sept. 8th to Nov. 12th with a total of c.34 recorded; 6 at Beachy Head on Oct. 29th was the highest count. In December there was one at Chichester G.P. on the 2nd and Shoreham on the 11th.

366. **SPOTTED FLYCATCHER** (*Muscipapa striata*).—First recorded on Apr. 20th at Beachy Head. Not more than 4 together noted on spring passage. Among breeding season reports was a count of 9 pairs in one square mile at Washington.

Autumn passage was noted until Oct. 3rd. Peak counts at Beachy Head were 37 on Aug. 23rd and 25 on Sept 16th, when there were also 23 at Church Norton and 20 at Worthing. The peak count at Rye Harbour LNR was 21 on Sept. 2nd.

368. **PIED FLYCATCHER** (*Ficedula hypoleuca*).—On spring passage a total of 8 recorded between Apr. 16th and May 4th. Autumn passage totalled about 72 birds between Aug. 16th and Sept. 26th; the peak counts at Beachy Head were 30 on Aug. 23rd and 12 on Sept. 16th.

371. **DUNNOCK** (*Prunella modularis*).—Sixteen nests at Plumpton produced 18 young, an average brood size of 1.1; 6 nests were successful (R.J.L.).

373. **MEADOW PIPIT** (*Anthus pratensis*).—Spring arrivals from the S. totalled 210 at Beachy Head between Mar. 27th and Apr. 19th, and 90 at Rye Harbour on 3 dates in April. On Ashdown Forest a complete breeding census recorded 49 pairs or singing males (PCB).

The largest autumn movements at Beachy Head were noted between Sept. 19th and Oct. 15th, with 350 E. on Sept. 19th and 120 E. on Oct. 4th as the peak counts. At Rye Harbour LNR the peak count was c.400 from Sept. 22nd to 30th.

374. **RICHARD'S PIPIT** (*A. novaeseelandiae*).—See page 47 for 2 additional 1970 records.

375. **TAWNY PIPIT** (*A. campestris*).—One at Rye Harbour LNR from Sept. 6th to 9th (DSF, SR *et al*) and one at Beachy Head on the 23rd (RFP, IRW *et al*). These records have been accepted by *Brit. B.*

376. **THREE PIPIT** (*A. trivialis*).—First recorded on Apr. 11th in St. Leonard's Forest and at Rye. No large numbers noted on spring passage.

A detailed account of the breeding distribution and status of this species during the period 1967-1970 is given on pages 75-76. In 1971 142 singing males or pairs were reported from 23 localities. Selected counts are: Iping Common, 9; Ambersham Common, 14; St. Leonard's Forest, 11; Ashdown Forest, 67, a complete census of the open areas (PCB).

Autumn passage at Beachy Head was poor and the peak count was 80 on Aug. 16th. One there on Oct. 24th was the last seen.

379. **ROCK PIPIT** (*A. spinoletta*).—Appeared to be much scarcer along the coast than usual in winter. In the early months there were 6 at Rye Harbour and c.10 in the Cuckmere Valley and there were up to 10 along the coast between Saltdean and Shoreham at both ends of the year. Otherwise not more than one to 3 in any locality. No breeding census was made but breeding was proved at Saltdean.

One showing the characters of the race *littoralis* at Selsey Bill on Mar. 27th and 28th (MJH). Three showing the characters of the races *pinoletta* at Sidlesham Ferry on Apr. 12th (MS) and similar birds at Arlington Res. on Oct. 15th and the Cuckmere on Nov. 8th (MJR).

380. **PIED WAGTAIL** (*Motacilla alba*).—Several roosts were recorded. C.40 were roosting in a tree near Eastbourne Station at each end of the year. There was a small roost of c.20 in reeds at Amberley Wildbrooks in July and, in November, c.50 were roosting at Marehill S.F., Pulborough, and c.140 in an old barge moored in the channel at Itchenor.

In the autumn a total of 140 flew W. at Beachy Head between Oct. 10th and 24th but regular watching at Arlington Res. showed more movement in August and September, with a peak count of 40 on Sept. 2nd; few were seen in October.

A total of 5 showing the characters of the race *alba* was noted between Feb. 7th and Apr. 20th, one at Newhaven on Sept. 8th and 3 at Weir Wood Res. on Oct. 5th.

381. **GREY WAGTAIL** (*M. cinerea*).—The 1971 breeding season records are tabulated below:

River system	Number of occupied territories in which	
	Breeding proved	Breeding probable
West Rother	0	1
Arun	2	5
Adur	1	3
Medway	7	1
Ouse	15	9
East Rother	0	2
TOTAL	26	21

In addition there was a pair and fledged young at Thorney Deepes on June 28th (JHME) which may not have bred there. There were no records for the Mole, Chichester, Eden, Hastings or Cuckmere river systems. Birds were recorded at 8 sites not recorded in the 1967-69 survey, which were Shermanbury, Fletching, Waldron Down, Uckfield Mill, Parham, Bells Yew Green (2) and TO471235 Maresfield; all these were within 3KM of a known winter site (see SxBR 1969, p. 76). In the Haywards Heath area 11 out of 26 nests under observation failed; 54 pulli were ringed from the other 15, of which 17 certainly fledged (WM). A pullus ringed on May 3rd, 1970, at Cowfold, was picked up dead at Kimbridge, Hants., 85 KM west, on Dec. 23rd.

Wintering records were received from 37 sites involving 53 birds. Seventeen of these sites were not recorded in the 1967-69 survey, of which 10 were within 3KM of a known breeding site.

Passage was similar to 1970, with a total of 55 at Beachy Head in the autumn until Oct. 10th. At Rye Harbour LNR there were totals of 39 E., 8 W., 3 S. and 18 in the area between Aug. 28th and Sept. 30th.

W. Merritt, who is continuing his study of this species in the county, found the precise map references given for breeding and wintering sites by observers most useful and would be most grateful if observers could continue to supply these with all records.

382. **YELLOW WAGTAIL** (*M. flava*).—First recorded on Mar. 23rd at Sharp-thorne but no large numbers were noted on spring passage. No complete breeding census was made but 9 pairs bred at Rye Harbour LNR and 2 pairs bred on Pett Level. Breeding was also proved on Brede Level besides the usual breeding areas further west. A pair may have bred at Chichester G.P. Breeding success at Rye was poor owing to the wet weather in June.

The largest autumn movements were noted at Rye Harbour LNR with peak counts of 400 on Aug. 24th, 270 on the 30th, 500 S. on Sept. 3rd and counts of 300 on the 4th, 500 on the 7th and then c.300 until the middle of the month, when numbers fell to about 15-20. Elsewhere 100 at Arlington Res. on Sept. 9th was the highest count. One at Beachy Head on Nov. 7th was the last recorded.

383. **WAXWING** (*Bombycilla garrulus*).—A number of records from the Three Bridges and Crawley area between Jan. 6th and Apr. 5th. The highest counts were 30 at Ifield from Jan. 6th to 9th (CEH) and 20 at Three Bridges on Feb. 21st (GRW) and there were still 12 at Furnace Green on Apr. 5th (HMH). The records suggest very strongly that all records refer to the one big party which brook up and wintered in scattered groups round the area. There were also 2 at Roman Wood, Slinfold, on Jan. 16th (ES), one in Slinfold village on the 25th and 26th (SWMH) and apparently reliable information of 3 at East Grinstead in the last week of February (CFT).

384. **GREAT GREY SHRIKE** (*Lanius excubitor*).—Birds overwintered at Worthing rubbish tip until Mar. 9th (BFF, FJF, CEM), St. Leonard's Forest until Mar. 9th (SWMH, GET), Glynde until Mar. 13th (many obs.) and Beachy Head until Apr. 12th (many obs.); one at Paradise Wood, near Eastbourne, on Apr. 18th may have been the Beachy Head bird (MJH). Other records in the early months were of single birds near Southeaston on Jan. 1st and 8th (JTAB, MJH), Ashdown Forest on the 13th and 14th (CFT), Uckfield on the 17th (JAC), Ditchling Common on Feb. 3rd (JAW) and Bishopstone on Mar. 16th (PAW).

396. **TWITE** (*A. flavirostris*).—Monthly totals were:

Jan.	Feb.	Mar.	Oct.	Nov.	Dec.
65	13	2	200	30	240

The largest flocks were 30 at Sidlesham Ferry on Jan. 27th and, at the end of the year, 70 at the Cuckmere on Oct. 24th, 30 at Newhaven on the 30th, 37 at Chidham on Dec. 4th and a maximum of 100 at Northpoint Beach, Rye, on the 6th; 50 at Camber on Dec. 15th were perhaps parts of the same flock. Eight at Beddingham, near Lewes, on Dec. 28th (CB).

397. **REDPOLL** (*A. flammea*).—Rather more numerous than usual in the early months. The largest parties were c.50 at Mannings Heath on Jan. 24th and c.30 at Darwell on Feb. 14th. Smaller parties were reported from 17 other widely scattered areas. Some spring movement was noted at the coast between Apr. 14th and May 5th.

During the breeding season pairs or singing males were reported as follows: Ashdown Forest, 9; St. Leonard's Forest, 1; Haywards Heath, 1; Bayham, 1; Brightling, 2.

A substantial autumn passage at Beachy Head involved at least 2,220 birds, with a peak count of 250 on Oct. 10th. Winter parties were reported from 12 localities at the end of the year, 25 at Crabbett Park on Nov. 20th and similar numbers at Copthorne on the 6th being the largest parties.

404. **CROSSBILL** (*Loxia curvirostra*).—Two at Wadhurst on June 18th (PCB) was the only record.

407. **CHAFFINCH** (*Fringilla coelebs*).—On Apr. 11th 610 flew E. at Rye. Seven nests at Plumpton produced 12 young, an average brood size of 1.7; only 4 nests were successful, a much poorer season than 1970 (R.J.L.).

In the autumn a very large movement occurred on Oct. 14th with c.4,000 arriving from the S. at Beachy Head in 2 hours.

408. **BRAMBLING** (*F. montifringilla*).—As appears usual winter parties were scarce and small, the only sizeable one being of 30 at Chidham on Dec. 4th. Little spring passage was seen and one at Beachy Head on Apr. 16th was the last.

In the autumn first recorded on Oct. 4th at Beachy Head and a very large arrival of c.500 there on Nov. 10th.

409. **YELLOWHAMMER** (*Emberiza citrinella*).—The population on the Downs around Southwick Hill was estimated at 24 pairs on May 12th; on Aug. 17th c.45 were counted in a 7-mile walk in the same area, of which c.30 were immature.

Three sizeable flocks were reported, of 120 at Beachy Head on Sept. 11th, 90 between Cissbury and Chantconbury on Nov. 13th and 120 at Arlington Res. on Dec. 29th.

At the end of the year one at Beachy Head from Oct. 6th to Dec. 31st and additional birds there on Oct. 31st (2) and Nov. 20th (many obs.). Elsewhere one on Revensley Levels on Oct. 10th (M.J.H.) and one at Glynde from Nov. 19th (A.J.C., JR *et al.*).

388. **RED-BACKED SHRIKE** (*L. collurio*).—Single birds at Hope Gap on Aug. 24th (RB), trapped at Beachy Head on the 29th and seen there on Sept. 5th, 6th and 7th (many obs.).

391. **HAWFINCH** (*Coccothraustes coccothraustes*).—Present at Kingly Vale, Danny Park, Friston Forest, Wadhurst, Uckfield and Chelwood Vachery during the breeding season. Almost certainly the species is greatly under-recorded.

Other records were of single birds at Seaford on Aug. 9th, the Cuckmere on Oct. 1st, Pond Leigh on Nov. 6th and 3 at Chantry Hill on Oct. 30th and 2 near Cissbury on Dec. 5th.

392. **GREENFINCH** (*Carduelis chloris*).—Large winter flocks were noted as follows: Camber, 350 on Jan. 3rd and 150 on Dec. 15th; Rye Harbour LNR, 400 on Oct. 25th increasing to c.1,000 by Dec. 13th; Cissbury/Chantconbury, 300-350 in November and December; Chidham, 250 on Dec. 4th; Cuckmere, 100-200 in late December.

At Plumpton 19 nests produced 53 young, an average brood size of 2.8; 12 nests were successful, a far higher success rate than in 1970 (R.J.L.).

393. **GOLDFINCH** (*C. carduelis*).—Very few apparently winter and no winter flocks of more than 20 were reported. The peak spring movement at Rye was 55 E. on Apr. 15th but a total of 100 moved E. there on 11 dates in May. Twelve nests at Plumpton produced 19 young, an average brood size of 1.6; 5 nests were successful (R.J.L.).

Autumn passage at Beachy Head was concentrated between Sept. 25th and Oct. 26th, with c.1,200 on Sept. 25th and 1,150 on Oct. 24th as the highest counts. During October there were numerous reports of flocks of up to 250 elsewhere.

394. **SISKIN** (*C. spinus*).—In the early months recorded from 18 localities, the largest parties being c.50 at Horsham on Jan. 3rd, 30 at Earham on Mar. 1st, c.250 at Warmingcamp of Mar. 21st and 29th and a maximum of c.80 in Rewell Wood on Apr. 12th. Spring passage at Rye Harbour LNR totalled 79 E. between Apr. 11th and 27th and 15 arrived from the S. at Beachy Head on Apr. 14th and 2 on May 2nd.

Autumn passage at Beachy Head totalled 165 W. between Sept. 25th and Nov. 8th and there were 40 at Litlington on Oct. 6th. At the end of the year wintering parties were noted in 12 areas; the average flock size was 15 but there were c.50 at Horsham on Nov. 21st.

395. **LINNET** (*Acanthis cannabina*).—The only winter flocks reported were 600 at Chidham on Nov. 21st and 250 there on Dec. 4th. But large numbers were also present in the Cissbury/Chantconbury area and it seems probable that winter flocks are under-recorded; counts would be most welcome. Spring passage at Beachy Head totalled 1,300 S-N. and 1,150 W. between Apr. 11th and 22nd.

Sixteen nests at Plumpton produced 24 young, an average brood size of 1.5; 6 nests were successful, another poor season (R.J.L.). During autumn passage the peak count at Beachy Head was 3,000 on Oct. 15th.

410. **CORN BUNTING** (*E. calandra*).—Sixty at Rye Harbour LNR on Apr. 18th. Breeding season records came from about 16 localities—all but one, Furnace Green, on or south of the Downs. Selected counts, of singing males, are: 22 from Southwick Hill to Fulking Hill; 7 on 250 acres of Downland above Plumpton; 6 on 2 square KM of Downland at Cissbury and 7 on 3 at Lee Farm/Wepham Down. In addition a flock of 55 was seen at Challey Common on Aug. 9th.

Some substantial autumn and winter roosts were recorded as follows: Beachy Head, 200 on Sept. 11th; Southwick Hill, 60 on Sept. 25th; Hope Gap, 80 on the 26th; Pevensey Levels, up to 30 in December; Camber, a maximum of 120 on Dec. 12th.

415. **CIRL BUNTING** (*E. cirrus*).—A marked decrease in the Cuckmere Valley after hard weather in January, but, in the breeding season, there were still 12 pairs between Milton Street and the sea. Elsewhere there were breeding season reports from Steyning, the Lewes area, Bishopstone and Beachy Head. This species is now the subject of a Society breeding survey and all records are requested.

416. **ORTOLAN BUNTING** (*E. hortulana*).—Two at Beachy Head on Aug. 25th and 26th (JFC, DEL).

421. **REED BUNTING** (*E. schoeniclus*).—The note on the ecological expansion of this species in the 1970 SxBR prompted several observers to pay special attention to nesting in atypical habitats. Rather surprisingly nesting in coniferous plantations was only reported from one new site, at Plummers Plain, just outside the area surveyed in 1970. At Albourne 9 singing males were located in farmland and also one at Slinfold. At Sidlesham the species nests regularly in clover fields and 2 nests were found in standing barley. One singing male was located on the edge of mature silver birch woodland in St. Leonard's Forest and there was one on the Downs at Woodingdean on June 12th.

Three observers commented on the increase in Ashdown Forest and a complete survey of the open areas recorded 23 singing males, of which more than half were holding territory in dry bracken or heather-covered areas (PCB); 6 were found in similar habitat on Challey Common.

An expected avalanche of reports of the species feeding in gardens in the winter did not materialise. Records were received from 4 sites in the Housham Urban District, 3 sites in Crawley New Town and from Roffey, Lindfield and Hollingdean, Brighton. The numbers noted were usually less than 5 but a party of 13 was recorded in one Housham garden on Feb. 23rd and smaller numbers continued to visit this garden until Apr. 26th. Records were also received of birds visiting gardens near water meadows at Arundel, Pulborough, Beeding, Rodmell, Eastbourne and St. Leonard's-on-Sea.

A flock of c.120 was present on Ashdown Forest on Nov. 20th.

422. **LAPLAND BUNTING** (*Calcurius lapponicus*).—Single birds at Beachy Head on Nov. 3rd (PC) and the Midrips on the 14th (KOS). Two at Camber on Dec. 15th (DBO) and one at Normans Bay on the 17th (SIJR).

423. **SNOW BUNTING** (*Plectrophenax nivalis*).—In the early months recorded only at Camber, with maxima of 50 on Jan. 2nd and 11 on Feb. 22nd, and the Midrips, with one on Mar. 14th.

In the autumn 2 at Ovingdean on Oct. 14th were the first recorded and a total of 65 were reported from then until the end of the year, mainly in December. Thirty-five at Rye Harbour LNR and a maximum of 23 at Camber in December were the highest counts. All records were for the coast.

425. **TREE SPARROW** (*Passer montanus*).—In January and February flocks of between 50 and 150 were noted at Chichester G.P., Amberley Wildbrooks, Goring, Cissbury/Chanctonbury, Rowfant and Weir Wood Res. C.100 pairs were reported in the breeding season from 38 widely scattered localities. These were often single pairs but selected counts of colonies are: West Chiltington, 11-12 pairs on 80 acres; Lower Beeding, 5 pairs; Twineham, 10 pairs; Hurst-pierpoint S.F., 4 pairs; Glynde Level, 6-8 pairs; Woodingdean, 5 pairs; Cadborough, 7 pairs; Udimore, 4 pairs; Rye Harbour LNR, 6 pairs. All breeding season records of this species would be most welcome.

Autumn passage at Beachy Head involved c.3,725 birds, from Sept. 21st, including 2,900 W. between Oct. 10th and 26th. Substantial flocks were noted elsewhere in the same period.

Large winter flocks in December were 200 at Chidham on the 4th, 75 at Harrow Hill on the 5th, 75 at Sidlesham on the 14th and c.100 at Coney Hill, Brighton, on the 27th.

ADDITIONS AND CORRECTIONS TO THE 1970 REPORT

5. **GREAT CRESTED GREBE**.—Two pairs bred at Pond Leigh, not one as stated.

30. **HERON**.—There were 6 nests occupied at Eridge Park, plus 2 probably occupied. Thus only Firlie was not counted and the 1970 total was 128-133 occupied nests.

38. **BITTERN**.—On June 23rd JAW obtained good views of one on Pett Level.

61. **LONG-TAILED DUCK**.—Two flew W. off Selsey Bill on Nov. 15th.

70. **GOOSANDER**.—There was only one at Weir Wood Res. on Dec. 20th, not 2 as stated.

80. **BRENT GOOSE**.—On Nov. 15th 174 flew W. off Selsey Bill in one and a half hours.

276. **HOUSE MARTIN**.—An additional breeding count: there were 76 occupied nests in Crowborough and a marked decrease was noted in the centre of this town.

374. **RICHARD'S PIPIT**.—Single birds at Bexhill on Oct. 9th and 16th (MCR, SR *et al*). These records have been accepted by *Brit. B.*

SUMMARY OF BIRD RINGING IN SUSSEX, 1971

Compiled by P. J. WILSON

A total of 14,998 birds of 89 species were ringed in 1971, compared with 14,861 in 1970 and 12,554 in 1969.

Interesting birds ringed included an Aquatic Warbler by P. J. Wilson and 584 Waders in Chichester Harbour, all trapped in one night. These were 545 Dunlin, 19 Redshank, 16 Grey Plover, 3 Knot and a Curlew. The catch included 6 Dunlin controls, 5 of which were ringed in Sweden and Finland, which illustrates the potential awaiting enterprising ringers.

SELECTED LIST OF RECOVERIES REPORTED IN 1971

Key to symbols and terms
(Ring numbers are omitted)

Age	Manner of Recovery
pull.—nestling or chick, <i>not yet flying</i>	v—caught or trapped and released with ring
juv.—young, <i>able to fly freely</i>	+—shot or killed by man
1st W—bird in its first winter	o—found dead or dying
fg.—full grown (age uncertain)	()—caught or trapped alive and not released or released but with ring removed
ad.—adult, at least one year old	/?—method of recovery unknown
1Y.—first year bird in the plumage assumed at its first (post juvenile) moult	
PJ—post juvenile; free flying bird definitely not juvenile but not certainly in an older age group	

Sex

♂—male
♀—female

Distance

The distance is given in kilometres and directions are approximate

BIRDS RINGED IN SUSSEX

Mute Swan	1st W	21.02.65	Eastbourne (DAS)
	x (wires)	15.03.71	Appledore, Kent. 45km. NE.
Kestrel	F.G.	06.10.71	Beachy Head (BHRG)
	x	27.11.71	Merken, West Flanders, Belgium
Song Thrush	FG	25.09.65	Beachy Head (BHRG)
	v	01.06.71	Didcot, Berks. 135km. NW.
Blackbird	1y ♂	18.10.70	Beachy Head (BHRG)
	+	31.10.70	St. Aubin-du-Medoc, (Gironde), France
Stonechat	fg ♂	25.10.70	Litlington (PJW)
	x	10.05.71	Kilafors, Sweden
Robin	Juv ♂	20.09.69	Beachy Head (BHRG)
	()	25.11.70	Benameji, (Cordoba), Spain
	Juv x	01.08.70	Litlington (PJW)
	x	13.03.71	Hugleville-en-Caux, Totes, France
	PJ	10.08.69	Beachy Head (BHRG)
	x	04.01.71	Carrelas, Estarreja, Portugal

Reed Warbler	1y	15.09.70	Beachy Head (BHRG)
	v	12.08.71	Norton Place, Hemswell, Lincs. 305km. NNW.
	1y	23.08.71	Chichester G.P. (CRG)
		(1971)	Prado, Brada, Portugal
	1y	05.08.64	Chichester G.P.
	/?/	?08.68	Portugal
	1y	05.08.68	Chichester G.P. (CRG)
	/?/	?08.68	(Not reported until 1972)
	fg	12.07.67	Corimba (Beira Littoral), Portugal
	v	26.03.71	(Not reported until 1972)
			Shoreham (JAN)
			Inezgane, Morocco

There were also controls from Surrey, Sussex, Berks, Hants., Heris. and Kent.

Sedge Warbler	ad	29.08.70	Litlington (PJW)
	v	07.05.71	Knutsford, Cheshire. 335km. NW.
	1Y	11.09.70	Chichester G.P. (CRG)
	v	30.07.71	Low Hauxley, Northumberland. 505km. N.
Blackcap	1Y ♂	29.08.66	Beachy Head (BHRG)
	v	21.11.71	Strathvaich, Garve, Ross-shire. 835km. NNW.
			A very late date for a Scottish bird.
Garden Warbler	fg	16.09.70	Beachy Head (BHRG)
	v	16.07.71	Hanen, Jongeren, Belgium
Lesser Whitethroat	1y	06.09.70	Litlington (PJW)
	+	08.04.71	Rumyah, Brummana, Lebanon
Willow Warbler	1y	11.08.68	Beachy Head (BHRG)
	x	24.04.70	Cradley, Malvern, Worcs. 145m. NW.
Chiffchaff	fg	28.09.70	Beachy Head (BHRG)
	v	30.04.71	Calf of Man. 500km. NW.
Spotted Flycatcher	1R	03.09.68	Beachy Head (BHRG)
	v	24.05.70	Oye Plage, (Pas de Calais), France
Bullfinch	fg	24.10.70	Beachy Head (BHRG)
	x	08.06.71	Epping, Essex. 105km. N.
Goldfinch	Juv	03.08.71	Beachy Head (BHRG)
	()	24.10.71	Montreuil, St. Denis, (Seine), France

BIRDS RINGED ELSEWHERE AND RECOVERED IN SUSSEX

Storm Petrel	fg	30.06.69	Skokholm, Pemsb.
	x	27.09.71	Pilsa Island, Chichester Harbour
Dunlin			The following birds were all controlled on Hayling Island, Chichester Harbour, on 20.11.71.
	ad	11.07.64	Othenby, Oland, Sweden
	Juv	22.08.67	Skamor, Malmohus, Sweden
	PJ	08.07.68	Niemi, Lahiti, Hame, Finland
	Juv	08.09.68	Shettisham, Norfolk
	Juv	23.09.69	Othenby, Oland, Sweden
	Juv	11.09.70	Othenby, Oland, Sweden
Common Tern	Juv	14.07.71	Needs Oar, Beaulieu, Hants.
	v	23.08.71	Chichester G.P. (CRG). 45km. ENE.

Swallow	1Y v	31.08.70 24.09.71	Norton Place, Hemswell, Lines. Chichester G.P. (CRG).	295km. S.
Sand Martin	1Y v	16.09.71 22.09.71	Madely, Ironbridge, Salop Chichester G.P. (CRG).	235km. SE.
Reed Warbler	? v	24.07.71 19.08.71	Hornsea Mere, Yorks. Chichester G.P. (CRG).	350km. SSW.
Sedge Warbler	1Y v	25.08.71 11.09.71	Hornsea Mere, Yorks. Chichester G.P. (CRG).	350km. SSW.
	1Y v	11.07.71 02.08.71	Shotton, Flint Chichester G.P. (CRG).	305km. SSE.
	1Y v	03.08.71 12.08.71	Shotton, Flint Chichester G.P. (RG).	305km. SSE.
Willow Warbler	pull v	13.06.71 29.07.71	Coate Reservoir, Swindon, Wilts. Chichester G.P. (CRG).	101km. SE.
	juv v	13.06.71 06.08.71	Bryn, Lancs. Plumpton (RUL).	340km. SSE.
Yellow Wagtail	juv v	07.08.70 29.08.70	Mucking, Essex Beachy Head (BHRG).	85km. S.

ESTUARY COUNTS OF WADERS AND WILDFOWL IN SUSSEX FROM OCTOBER, 1970, TO MARCH, 1972

By M. SHRUBB

Chichester and Pagham Harbours

The programme of wader and waterfowl counts in Chichester and Pagham Harbours was continued throughout 1971 and into 1972. This is now the longest standing Society survey, having been started in December, 1963. The methods used and wader roosts counted are described in SxBR 1965, 53, and 1968, 70. In addition the counts were expanded in late 1971 as described below. As reported elsewhere the intention with this and future reports is to give the results of counts for a complete winter, rather than the parts of two winters which occur in a calendar year. The figures presented in this way are easier to follow and facilitate annual comparisons. This report covers the two winters 1970/71 and 1971/72 as the figures for early 1971 have not yet been published. Future reports will deal with the winter preceding the publication of the Annual Report.

The results of the counts are set out in Tables 1 and 2. The figures for Chichester Harbour for the winter of 1971/72 show a considerable increase in the number of waders recorded, compared to previous winters: Dunlin, for example, reached a peak of 22,000 in December, compared with 15,650, the previous highest count. This increase is a direct result of including the Hayling shore in the counts. There are four important wader roosts there, at Tournesbury, the Oyster Beds area, Church Farm and Northney. These combined accounted for an average of 40% of the total waders recorded. Of particular interest is the number of Bar-tailed Godwit found. This species had apparently declined very markedly in recent winters but it is now clear that the main roost of the

species had moved, since 1968, from Pilsey Island to Tournesbury, where the peak count in 1971/72 was 1,200 out of a total of 1,535 on Jan. 30th. In fact a short comparison of this winter's figures with those published in the Hampshire Bird Report and Birds of Hampshire and Isle of Wight suggests that these Hayling roosts may have increased in importance quite recently. By agreement with Hampshire we now treat this part of the Harbour as in Sussex for the purposes of estuary counts.

Some of the waders using the Hayling roosts come over from Langstone Harbour, but numbers are usually impossible to assess accurately. Tables 1(B) and 2 therefore include results of counts made in Langstone Harbour, by courtesy of Messrs. D. F. Billett and B. W. Renyard. A comparison between these neighbouring estuaries shows some interesting differences. In particular the numbers of surface-feeding duck and Brent Geese were higher in Langstone Harbour, where there are beds of *Zostera marina*, but Chichester Harbour held far more Shelduck and Goldeneye. The count of 225 of the latter on Jan. 16th was a record but may not be very unusual; it was made from a boat, which may be the best way of making accurate counts of this species. The wader population of Chichester was also larger but to an extent this must simply be a function of greater size. The numbers of some species, for example Bar-tailed Godwit, were proportionally much higher however, although the peak count of 24,000 Dunlin in Langstone Harbour on Feb. 12th, 1972, was higher than the Chichester peak.

The counts on Jan. 16th, Feb. 13th, Mar. 13th and Nov. 21st, 1971, and Jan. 15th and Feb. 12th, 1972, were made simultaneously, on the same tide, in each harbour, and we now intend to synchronise our counts like this whenever possible. It is particularly valuable to acquire total figures of the Brent Goose population of the whole area. This peaked at a record 7,374 (see Table 2) in the winter of 1970/71. Numbers were lower in the following winter but still very high in view of the very low numbers of first-year birds present, less than 1% of the flocks checked.

Some other changes were made in the organisation of the counts during 1971. Counters in Chichester Harbour are now recording wader roost sites, feeding areas and resting areas of wildfowl, flight lines and similar information on outline maps, which are already yielding information on the importance of certain parts of the harbour to different groups. These maps also help to eliminate duplicated counts from the figures. Two counts monthly were also tried from November, 1971 to March, 1972, although the count of Mar. 18th had to be cancelled in Chichester Harbour. This was a successful experiment which we hope to repeat; in the event the counts on Nov. 21st, Dec. 19th and Jan. 15th were badly affected by poor weather. As in 1970 no summer counts were attempted.

Finally in early 1972 the Council of the Society decided to employ a professional ecologist to make a vegetation survey of Chichester Harbour. This work is being carried out by Mrs. R. M. Tittensor and includes the preparation of a detailed distribution map of the *spartina* and *enteromorpha* in the harbour, plus any other important plant groups. The entire survey is expected to take a year to complete and results will be reported at a later date.

Coastline Counts

No count along the whole Sussex coastline was made in the winter of 1970/71 but 2 were done in 1971/72, on Dec. 19th and Jan. 15th. The weather was poor on both days but shocking on Dec. 19th, when a SE. gale and horizontal rain

TABLE I(A). WADER COUNT TOTALS IN WEST

Species	18 Oct.		15 Nov.		13 Dec.		10 Jan.	
	Chir.	Pag.	Chir.	Pag.	Chir.	Pag.	Chir.	Pag.
Oystercatcher	760	220	585	?	745	280	520	285
Lapwing	265	105	380	90	590	270	350	?
Ringed Plover	30	460	30	12	12	110	160	105
Grey Plover	135	185	70	35	30	200	13	200
Golden Plover	1	0	250	4	1	0	200	0
Turnstone	235	180	15	?	20	85	45	85
Snipe	0	2	155	5	180	8	67	0
Jack Snipe	0	0	1	0	1	0	1	0
Curlew	110	415	110	?	250	100	220	37*
Whimbrel	0	2	0	0	0	0	0	0
Black-tailed Godwit	90	55	200	25	30	160	120	260
Bar-tailed Godwit	130	5	85	1	495	8	555	8
Green Sandpiper	0	0	0	0	0	0	0	0
Wood Sandpiper	0	0	0	0	0	0	0	0
Common Sandpiper	0	0	0	0	0	0	0	0
Redshank	665	570	530	90	620	195	290	175
Spotted Redshank	1	1	0	0	0	0	0	0
Greenshank	50	2	10	0	4	0	2	0
Knot	4	0	20	0	0	1	110	0
Purple Sandpiper	0	0	0	0	0	0	0	0
Little Stint	2	0	0	0	0	0	0	0
Dunlin	10,000	1,840	6,000	?	11,200	1,900	11,300	2,325
Curlew Sandpiper	9	0	0	0	0	0	0	0
Sanderling	560	50	105	0	85	0	120	0
Ruff	0	0	0	0	0	0	12	0
Avocet	0	0	0	0	0	1	0	3

NOTE: Chir.—Chichester Harbour, Pag.—Pagham Harbour
 A. ? indicates that the species was present but not counted; nc indicates no count
 * There were 600 Curlew in Pagham Harbour on Jan. 24th; up to 250 Black-tailed Godwits in Chichester Harbour on Feb. 13th and Mar. 13th and 300 Knot there on Feb. 14th.

SUSSEX FROM OCTOBER, 1970, to SEPTEMBER, 1971

Species	28 Feb.		28 Mar.		25 Apr.		8 Aug.		5 Sept.	
	Chir.	Pag.	Chir.	Pag.	Chir.	Pag.	Chir.	Pag.	Chir.	Pag.
Oystercatcher	580	255	315	205	310	160	?	130	615	nc
Lapwing	300	45	15	2	10	20	850	20	695	nc
Ringed Plover	75	60	30	35	40	75	120	170	410	nc
Grey Plover	480	40	230	250	130	150	600	0	215	nc
Golden Plover	25	110	0	0	0	0	70	0	5	nc
Turnstone	205	17	100	40	90	40	4	30	155	nc
Snipe	75	13	105	2	12	0	7	0	15	nc
Jack Snipe	0	0	0	0	0	0	0	0	0	nc
Curlew	370	275	370	335	80	13	120	100	525	nc
Whimbrel	0	0	0	0	60	28	150	50	30	nc
Black-tailed Godwit	115*	435	110*	380	25	300	355	75	5	nc
Bar-tailed Godwit	185	2	55	35	65	2	350	4	140	nc
Green Sandpiper	0	0	0	0	0	0	7	0	10	nc
Wood Sandpiper	0	0	0	0	0	0	6	0	1	nc
Common Sandpiper	0	0	0	0	3	2	35	3	6	nc
Redshank	705	240	955	180	115	25	3,260	80	4,110	nc
Spotted Redshank	0	1	0	1	0	0	32	0	15	nc
Greenshank	1	0	1	0	2	0	75	0	135	nc
Knot	40*	0	4	1	2	0	1	0	2	nc
Purple Sandpiper	1	0	0	1	0	0	0	0	0	nc
Little Stint	0	1	0	0	0	0	0	0	0	nc
Dunlin	10,950	865	4,585	510	2,740	1,600	?	50	1,850	nc
Curlew Sandpiper	0	0	0	0	0	0	0	0	0	nc
Sanderling	105	0	415	70	320	0	?	0	500	nc
Ruff	0	0	0	0	0	0	4	0	3	nc
Avocet	0	?	0	2	0	0	0	0	0	nc

TABLE 1(B). WADER COUNT TOTALS IN WEST SUSSEX AND

EAST HAMPSHIRE FROM OCTOBER, 1971, TO MARCH, 1972

Species	3 Oct.		6 Nov.		21 Nov.*		4 Dec.		19 Dec.*		15 Jan.		30 Jan.		12 Feb.		4 Mar.		18 Mar.						
	Chir.	Pag.	Chir.	Pag.	Chir.	Pag.	Chir.	Pag.	Chir.	Pag.	Lang.	Chir.	Pag.	Chir.	Pag.	Lang.	Chir.	Pag.	Lang.	Chir.	Pag.				
Oystercatcher	840	145	520	180	800	360	nc	555	275	860	210	?	700	540	100	260	nc	670	140	125	80	400	nc	75	
Lapwing	305	35	410	?	?	315	nc	940	240	300	385	?	0	875	110	645	nc	0	1,015	45	240	25	0	nc	25
Ringed Plover	595	180	90	310	310	80	nc	360	120	110	70	?	100	45	11	20	nc	100	135	10	35	20	30	nc	20
Grey Plover	445	145	365	45	195	285	nc	655	185	170	285	?	100	225	50	430	nc	90	455	55	380	115	85	nc	170
Golden Plover	30	0	395	0	0	730	nc	455	1	0	110	0	0	20	0	445	nc	0	125	0	275	1	0	nc	1
Turnstone	350	185	100	40	125	65	nc	155	65	35	25	7	25	95	40	10	nc	20	185	50	?	?	13	nc	300
Snipe	65	0	90	0	40	70	nc	115	1	230	80	?	200	75	2	75	nc	230	75	0	95	1	50	nc	1
Jack Snipe	0	0	1	0	0	1	nc	0	0	4	0	0	1	3	0	0	nc	2	1	0	0	0	1	nc	0
Curlew	1,410	95	720	30	650	355	nc	450	35	400	105	?	600	150	35	1,220	nc	475	995	55	1,010	25	600	nc	220
Whimbrel	1	1	0	0	0	0	nc	0	0	0	0	0	0	0	0	0	nc	0	0	0	0	0	0	nc	0
Black-tailed Godwit	245*	120	240	0	300	435	nc	460	30	145	640	?	500	240	20	215	nc	500	60	0	140	160	400	nc	340
Bar-tailed Godwit	655	1	465	0	120	525	nc	800	2	50	165	?	250	885	0	1,535	nc	10	620	0	1,170	0	1	nc	1
Common Sandpiper	0	0	2	0	0	0	nc	0	0	0	0	0	0	0	0	0	nc	0	0	0	0	0	0	nc	0
Redshank	2,800	325	1,435	?	880	930	nc	1,820	130	500	730	20	600	875	325	795	nc	700	875	20	1,615	120	100	nc	115
Spotted Redshank	9	1	1	0	0	0	nc	1	0	0	0	0	0	1	0	0	nc	0	0	0	0	0	0	nc	1
Greenshank	100	8	60	0	0	2	nc	3	0	0	0	0	1	2	0	2	nc	0	0	0	1	0	0	nc	1
Knot	20	0	85	0	300	390	nc	1,205	0	90	105	?	350	25	0	150	nc	16	250	0	?	0	0	nc	2
Purple Sandpiper	0	0	0	0	0	0	nc	0	0	0	0	0	0	0	0	0	nc	0	0	0	0	0	0	nc	7
Little Stint	0	0	0	0	0	0	nc	0	0	0	0	0	0	0	0	0	nc	0	1	0	0	0	0	nc	0
Dunlin	6,000	305	12,970	1,020	15,000	19,000	nc	22,000	3,800	12,300	14,120	250	20,000	21,200	3,950	19,120	nc	24,000	14,725	1,350	18,900	310	5,000	nc	2,050
Sanderling	265	0	30	30	0	70	nc	300	0	0	20	?	0	30	0	?	nc	0	260	0	?	0	0	nc	100
Ruff	3	0	5	0	0	100	nc	65	0	0	0	0	15	4	0	2	nc	15	0	0	0	0	1	nc	0
Wilson's Phalarope	0	1	0	0	0	0	nc	0	0	0	0	0	0	0	0	0	nc	0	0	0	0	0	0	nc	0
Avocet	0	0	0	0	0	0	nc	0	0	0	0	0	0	0	3	0	nc	0	0	0	0	0	0	nc	0

NOTE: Chir.—Chichester Harbour, Pag.—Pagham Harbour, Lang.—Langstone Harbour
A ? indicates that the species was present but not counted; nc indicates no count
* The Langstone Harbour counts in November and December were made on the 20th and 18th respectively
The counts in Pagham Harbour on Dec. 19th was abandoned due to stinking weather, which also affected the Chichester Harbour count
* There were 550 Black-tailed Godwits at Chidham on Oct. 23rd

TABLE 2. WILDFOWL COUNT TABLES IN WEST SUSSEX AND

Species	16/1/71			13/2/71			13/3/71			21/11/71		
	Lang.	Chir.	Lang.	Chir.	Pag.	Lang.	Chir.	Lang.	Chir.	Lang.	Chir.	
Great Crested Grebe	?	8	12	2	1	7	16	83	0			
Red-necked Grebe	0	0	0	0	0	0	1	0	0			
Slavonian Grebe	0	0	0	0	8	0	0	0	0			
Black-necked Grebe	0	0	0	0	0	0	0	15	0			
Little Grebe	0	34	0	6	3	0	40	?	30			
Mallard	20	60	30	100	185	30	30	0	145			
Teal	800	60	200	185	6	40	55	750	255			
Gadwall	0	0	0	0	0	0	0	0	0			
Wigeon	1,100	1,030	500	325	30	40	205	1,150	160			
Pintail	75	110	40	80	28	110	75	12	0			
Shoveler	26	0	60	0	0	5	0	4	0			
Tufted Duck	0	0	0	0	28	0	6	0	12			
Pochard	11	0	0	0	5	0	0	0	0			
Goldeneye	85	225	50	65	3	50	70	80	16			
Long-tailed Duck	0	5	0	0	0	0	5	0	0			
Eider	0	0	0	0	25	0	0	0	2			
Merganser	?	15	5	0	1	10	16	8	55			
Goosander	0	0	0	0	1	0	0	0	0			
Sniew	0	3	0	0	0	0	0	0	0			
Shelduck	1,450	2,550	1,975	3,430	830	670	2,770	540	635			
Brent Goose	3,870	3,095	4,080	3,295	80	2,850	2,900	2,190	950			
Canada Goose	0	0	0	13	0	0	10	0	0			
Mute Swan	0	45	0	125	6	0	120	0	75			
Bewick's Swan	0	0	0	0	0	0	0	6	0			
Coot	0	720	0	1,560	0	0	520	0	2,335			

NOTE: Lang.—Langstone Harbour. Chir.—Chichester Harbour. Pag.—Pagham Harbour
 A ? indicates that the species was present but not counted.
 The November and December counts in Langstone Harbour were made on the 20th and 18th respectively
 Bad weather affected the counts in Chichester and Pagham Harbours in Dec., 1971, and Jan., 1972. The
 Pagham figures given are therefore for Dec. 4th and Jan. 30th, the only complete wildfowl counts achieved there
 in the winter of 1971/72.

EAST HAMPSHIRE FOR THE WINTERS 1970/71 AND 1971/72

Species	18/19/12/71			15/1/72			12/2/72			18/3/72		
	Lang.	Chir.	Pag.	Lang.	Chir.	Pag.	Lang.	Chir.	Pag.	Lang.	Chir.	Pag.
Great Crested Grebe	83	2	(7)	30	17	(0)	29	25	0	29	nc	0
Red-necked Grebe	0	0		0	0		0	0	0	0	nc	0
Slavonian Grebe	0	0	(40)	0	6	(?)	0	4	?	1	nc	?
Black-necked Grebe	20	0	?	?	0		8	0	0	3	nc	0
Little Grebe	0	2	(15)	0	9	(0)	0	18	?	0	nc	?
Mallard	12	90	(120)	20	105	(200)	17	175	?	20	nc	8
Teal	500	270	(40)	550	315	(40)	400	235	?	100	nc	?
Gadwall	0	0		4	0		10	0	0	0	nc	0
Wigeon	635	460	(180)	660	590	(300)	600	555	?	75	nc	?
Pintail	20	35	(30)	42	20	(75)	105	130	?	40	nc	?
Shoveler	23	0		50	2		20	0	0	12	nc	0
Tufted Duck	0	45	(14)	0	4	(6)	0	65	?	0	nc	?
Pochard	0	0		0	2		0	16	0	0	nc	0
Goldeneye	100	?	(2)	120	26		70	55	?	45	nc	?
Long-tailed Duck	0	0		0	0		0	0	0	0	nc	0
Eider	0	1		0	1	(2)	0	4	?	0	nc	20
Merganser	29	?	(4)	36	45	(1)	19	55	?	22	nc	?
Goosander	0	0		0	0		0	0	0	0	nc	0
Sniew	0	0		0	0		0	0	0	0	nc	0
Shelduck	400	915	(540)	1,215	2,690	(820)	2,950	3,740	250+	905	nc	700
Brent Goose	3,245	880	(80)	3,340	3,080	(80)	3,730	2,375	80	2,960	nc	0
Canada Goose	0	0		0	0		0	0	0	0	nc	0
Mute Swan	0	100		0	70		0	50	0	0	nc	0
Bewick's Swan	0	0		0	0		0	0	0	0	nc	0
Coot	0	615		0	550		0	1,155	0	0	nc	0

TABLE 4. SUSSEX COASTLINE COUNT, JANUARY 15th, 1972

Species	Chichester Harbour	Pagham Harbour	Climping	Goring/Ferring	Shoreham	Newhaven/Cuckmere	Pevensey Bay	Bexhill/Bulverhythe	Pett Level	Rye/Midrips	Approx. Total
Oystercatcher	540	100	120	0	0	0	0	0	0	180	940
Lapwing	875	110	0	0	0	600	0	0	0	130	1,715
Ringed Plover	17	11	0	50	30	22	0	0	0	4	164
Grey Plover	225	50	0	6	0	0	0	0	0	13	294
Golden Plover	18	0	0	0	0	0	500	0	0	0	518
Turnstone	95	41	22	0	0	0	22	28	0	20	238
Snipe	75	2	0	0	0	0	0	0	0	6	83
Jack Snipe	3	0	0	0	0	0	0	0	0	0	3
Curlew	150	36	0	0	0	2	0	0	600	200	988
Black-tailed Godwit	240	20	0	0	0	0	0	0	0	0	260
Bar-tailed Godwit	885	0	0	0	0	0	0	0	0	0	885
Redshank	875	324	3	0	65	25	0	0	0	10	1,302
Spotted Redshank	1	0	0	0	0	0	0	0	0	1	2
Greenshank	2	0	0	0	0	0	0	0	0	0	2
Knot	24	0	0	0	0	0	0	0	0	0	24
Purple Sandpiper	0	0	2	0	0	25	0	0	0	0	27
Dunlin	21,200	3,950	0	400	450	65	0	0	0	110	26,175
Sanderling	52	0	408	80	0	0	0	0	0	15	535
Ruff	4	0	0	0	0	0	0	0	0	0	4
TOTALS	25,292	4,644	555	536	748	22	528	600	689	34,149	

rendered counting impossible in many places, for example Pagham Harbour. Thus the figures are low on both dates.

Nevertheless the counts were worthwhile and some interesting points emerged, such as the high Dunlin figures at Goring and Shoreham on Dec. 19th and the excellent Sanderling count at Climping in January.

The figures are given in Tables 3 and 4 and demonstrate once again the prime importance of the western harbours as wader resorts along the 100 miles of Sussex coast.

Rye Harbour

In the autumn of 1971 J. P. McTear and others started regular wader counts in this locality, always an interesting one for the group and quite an important one. This is not a large area of tidal mud such as Chichester and Pagham Harbours, but comprises a small area of tidal mud in the Rother estuary, a large area of sand exposed offshore at low tide and a series of wet gravel pits. Part of the area is an LNR and regular wader counts have been made by the Warden from April to September. Thus we can now give a complete series of figures for the area. These are presented in Table 5 and show an interesting variety of species, more in fact than the western harbours. Numbers are not outstanding, but the area is the only one outside the western harbours regularly holding any numbers of waders along the Sussex coast.

TABLE 3. SUSSEX COASTLINE COUNT, DECEMBER 19th, 1971

Species	Chichester Harbour	Pagham Harbour	Climping	Goring/Ferring	Shoreham	Newhaven/Cuckmere	Pevensey Bay	Bexhill/Bulverhythe	Rye/Midrips	Approx. Total
Oystercatcher	210	?	33	15	0	1	0	0	20	279
Lapwing	385	?	0	0	0	400	0	0	180	965
Ringed Plover	70	?	0	60	130	30	0	0	4	294
Grey Plover	295	?	0	0	0	0	0	0	0	335
Golden Plover	110	?	0	0	0	0	0	0	0	110
Turnstone	27	?	?	2	0	2	8	43	110	199
Common Snipe	82	?	0	0	0	0	0	0	30	112
Curlew	105	?	0	0	0	22	0	0	60	187
Black-tailed Godwit	640	?	0	0	0	0	0	0	0	640
Bar-tailed Godwit	165	?	0	0	0	0	0	0	0	165
Redshank	730	20	?	6	100	35	1	0	6	898
Knot	105	?	?	0	0	0	0	0	0	105
Purple Sandpiper	0	?	?	2	0	25	0	16	20	63
Dunlin	14,120	250	?	700	1,150	85	0	0	30	16,335
Sanderling	0	?	34	80	0	0	0	0	0	134
Ruff	0	?	0	0	0	0	0	0	0	0
Grey Phalarope	0	?	0	0	0	1	0	0	0	1
TOTALS	17,064	?	?	905	1,380	599	9	59	460	20,820

TABLE 5. MONTHLY WADER COUNT TOTALS AT RYE HARBOUR APRIL, 1971, TO MARCH, 1972

Species	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Oystercatcher	150	150	120	200	215	300	300	125	120	80	145	165
Lapwing	250	120	145	100	350	700	40	35	20	11	105	185
Ringed Plover	35	60	60	100	90	80	6	5	4	6	8	9
Little Ringed Plover	0	0	0	1	0	0	0	0	0	0	0	0
Grey Plover	7	8	1	0	1	11	11	0	0	13	50	17
Golden Plover	95	75	0	0	3	4	9	0	0	0	0	0
Turnstone	14	0	0	0	5	20	4	1	3	4	2	1
Jack Snipe	1	1	0	0	0	0	0	0	0	0	0	0
Curlew	90	6	6	25	300	400	20	85	60	230	65	15
Whimbrel	45	50	1	8	9	9	1	0	0	0	0	0
Black-tailed Godwit	4	6	1	12	7	1	0	0	0	0	0	0
Bar-tailed Godwit	640*	75	1	3	10	3	7	12	2	9	0	0
Green Sandpiper	0	1	0	4	9	4	0	0	0	0	0	0
Wood Sandpiper	0	1	0	2	1	3	0	0	0	0	0	0
Common Sandpiper	0	1	0	20	30	25	0	0	0	0	0	0
Redshank	25	150	180	100	70	30	15	20	25	35	35	35
Spotted Redshank	0	0	1	3	8	7	0	0	0	0	1	0
Greenshank	10	40	5	2	3	8	7	12	0	0	0	0
Knot	0	0	0	0	2	2	0	0	0	0	0	0
Little Stint	0	0	0	0	0	0	0	0	0	0	0	0
Temminck's Stint	0	0	0	0	0	0	0	0	0	0	0	0
Dunlin	80	50	6	210	210	45	9	20	60	35	80	40
Curlew Sandpiper	0	0	0	5	3	3	54	16	48	90	10	0
Sanderling	10	0	1	0	0	0	5	0	0	0	0	0
Ruff	1	0	5	0	0	0	0	0	0	0	0	0
Avocet	0	0	0	0	0	0	0	0	0	0	0	0

* Total includes an off-shore movement.

OILED BIRDS IN SUSSEX IN 1971 AND JANUARY TO JUNE, 1972

By R. F. PORTER and M. SHRUBB

This year we have changed our method of presentation of the Oiled Birds Survey report so as to incorporate the whole of the 1971/72 winter; we have, of course, also included the counts for the first half of 1971 which have not yet been published. The reason for this change is that the winter months are the worst for birds becoming oiled, due to the greater number of species swimming and diving offshore. It seems logical therefore to present the results in a way that makes future comparisons possible. It will also mean that the results are more topical.

The table shows details of all oiled birds and unoiled sea-birds found dead, that were reported during the period. The number of dead birds found in the first six months of 1971 and 1972 was lower than for the corresponding periods in 1969 and 1970. As in previous years auks formed a high proportion of the total number of oiled birds found, with proportionally more in the first half of 1972 (83%) than the corresponding period of 1971 (35%).

The number of dead but unoiled birds found in both years (12% of the total figure) was a slight increase over the 1970 count, although well below the national average. Most of these were gulls. Of the duck species Common Scoter was the worst affected; 20% of the total of oiled birds found in 1971 were of this species. In the first half of 1972 the figure was only 5%.

The table was compiled by using the results of observers working for the RSPB/BTO/Seabird Group Beached Bird Survey, and we hope that by publishing this we can encourage others to join in and support the scheme which basically requires observers to make counts along a two or three mile stretch of beach (more if they can manage it) during five or six set dates during the winter months. At the moment only about half the total Sussex coastline is counted regularly, and anyone who feels they can help should write to the National Organiser, Beached Bird Survey, C. J. Bibby, RSPB, The Lodge, Sandy, Bedfordshire.

We would like to thank the following for supplying records: Miss M. A. Ash, *D. Ashton, H. Bagnell-Oakeley, *R. M. Billings, *M. J. Boells, *K. Cawte, L. Collins, *A. J. Cooke, *Miss G. M. Copeland, M. Corfe, *B. K. Cruttenden, *M. J. Eales, D. S. Flumm, *P. S. Heath, A. R. Kitson, *J. P. Knowles, *B. A. E. Marr, *E. J. McNeill, *W. W. A. Phillips, *R. F. Porter, R. L. Porter, *P. A. Power, Mrs. W. L. Scott, *M. Shrubbs, D. C. Stoodley, E. G. Spiers, *H. J. Townson, *Mrs. M. Whitehead, *P. Whitehead, *I. R. Willis.

*Denotes counter for RSPB/BTO/Seabird Group Beached Bird Survey.

OILED BIRDS IN SUSSEX, JANUARY, 1971-MARCH, 1972

ALL RECORDS Jan.-June, 1971	oiled non-oiled		ALL RECORDS 6/7 March, 1971 (59m. covered)	oiled non-oiled		National Survey 25/26 Sept., 1971 34 miles	oiled non-oiled		27/28 Nov., 1971 34 miles	oiled non-oiled		29/30 Jan., 1972 42 miles	oiled non-oiled		26/27 Feb., 1972 37 miles	oiled non-oiled		25/26 Mar., 1972 32 miles	oiled non-oiled		
	dead	oiled		dead	oiled		dead	oiled		dead	oiled		dead	oiled		dead	oiled		dead	oiled	
121	1	33	49	1	21	5	2	6	1	83	4	38	5	9	1	1	1	1	1	1	1
Red-throated Diver	1																				
Diver sp.	1																				
Black-necked Grebe	2																				
Slavonian Grebe	1																				
Grebe sp.	1																				
Gannet	1																				
Cormorant	1																				
Shelduck	1																				
Teal	1																				
Common Scoter	25	1	15	1	2	3	1	1	1	3	1	1	1	2	1	1	1	1	1	1	1
Velvet Scoter	1																				
Long-tailed Duck	1																				
Coot	1																				
Great Skua	1																				
Black-headed Gull	16	1	3	12	9	5	1	1	1	5	1	1	1	2	1	1	1	1	1	1	1
All other gulls	23	11	9	9	9	12	1	1	1	12	2	2	2	4	2	2	2	2	2	2	2
Common Tern	13	1	8	8	8	8	2	2	2	8	2	2	2	4	2	2	2	2	2	2	2
Razorbill	1																				
Gull sp.	1																				
Auk sp.	1																				
TOTALS	121	33	49	21	5	2	6	1	83	4	38	5	9	1	1	1	1	1	1	1	1

RYE HARBOUR LOCAL NATURE RESERVE

By D S. FLUMM

The East Sussex County Council's "Coastal Preservation and Development Report," published in 1965, included proposals to encourage the establishment of a Nature Reserve on the west side of the Rother, as recommended by the Sussex Naturalists Trust.

This area lying in the extreme S.E. corner of Sussex comprises the 1,792 acres of land bounded by the Rother to the east, the sea, and the Rye-Winchester Beach road, notified by the Nature Conservancy as a site of special scientific interest in 1965.

On 3rd April, 1970, an area of 209 acres of shingle beach belonging to the Kent River Authority was declared a Local Nature Reserve, under the National Parks and Access in the Countryside Act, 1949. So, at last, after years of frustration, negotiation and discussion, what had been a dream became a reality.

The scheme really got off the ground during late 1969 and early 1970 when we were offered a furnished cottage in the heart of the proposed reserve that would be suitable for a resident warden. With generous contributions from the East Sussex County Council and Battle Rural District Council, the Sussex Naturalists Trust, the Sussex Ornithological Society, the World Wildlife Fund and from various private sources, it was now possible to appoint a seasonal warden to cover the April-September periods each year at a salary of £30 per month. This was increased to £40 for the 1971 season. I was appointed as the Reserve's first warden, and I moved into residence at 2 Watch Cottage on 15th March, 1970. My period of employment for the two seasons covered twelve months: 15th March-30th September, 1970, and 1st April-30th September, 1971.

The reasons for establishing a Nature Reserve here are obvious. It is important to appreciate that shingle beaches are a relatively scarce kind of habitat in Europe, so that conservation of our remaining areas of more or less undisturbed shingle assumes a more than local significance. Taking into account the planned development of the Crumbles that lie to the east of Eastbourne, this area will shortly contain the best remaining example of this particular habitat anywhere in the county. Birds that favour the seclusion of this terrain are everywhere in evidence. A walk along the concrete road from Rye Harbour to Winchelsea Beach in the breeding season guarantees a sighting of such species as Ringed Plover, Oystercatcher and Wheatear. Eight pairs of Wheatears now breed here in a variety of drain pipes, tins and boxes concealed in the shingles specifically for that purpose. This is a species that breeds so rarely in Sussex now that we hope all 75 pipes and tins will be occupied in future years. There are also several pairs of nesting Redshanks and Oystercatchers, and the Ringed Plover density is high: there are about 18 pairs of breeding birds. Little Terns breed in one or two fast-diminishing colonies. The 'ternery pool' on Nook Beach is the Reserve's most favoured spot for tern and wader species on migration. Almost anything may turn up here—and usually does!

Alternatively, a walk along the public footpath between Rye Harbour and Winchelsea Beach, through 'Harbour Farm', would take you along the edge of the 'Narrow Pits'. This is a large expanse of water where Great Crested Grebe, Little Grebe, Mallard and Tufted Ducks are breeding. There will be occasional sightings of Teal, Gadwall and Shoveler; Reed and Sedge Warblers, Reed Buntings, Moorhens and Coots are also in residence, and there are the inevitable colonies of Herring and Black-headed Gulls. The concrete island

behind the warden's cottage also has up to 40 pairs of Herring Gulls breeding there.

The whole area, with its sprinkling of bushes and fences, is full of interest during the spring and autumn passage. Flycatchers, chais and warblers are abundant then, and the fields seem crowded with Wheatears and Yellow Wagtails. On September days up to 1,000 'Flava' Wagtails may be seen, and, during my two seasons in residence, Red-backed Shrikes, Wrynecks, Wood Warblers and many Firecrests have been observed at this season. Perhaps the best time to visit the 'Narrow Pits' is in winter or in early spring. Ducks of very many species congregate there in their hundreds. Occasionally Goosander, Smew, Long-tailed Duck and Slavonian or Black-necked Grebe occur, as do Black-and-Red-throated Divers. Rye Bay frequently holds large concentrations of the latter, together with hundreds of Common Scoter and considerable numbers of Great Crested Grebes.

If on foot, and prepared for a fairly long walk, the visitor is recommended to continue round the S.W. end of the Narrow Pits, past the cottage, and up to Camber Castle along the footpath to Rye. This will take him along part of the Castle Pits and across fields which, in the early summer, hold breeding Lapwings (up to 70 pairs in the whole area) and Yellow Wagtails (some 7 pairs). The walk here will also take him through some overgrown allotments at the corners of the gravel pits. These I refer to simply as 'The Wood'—the largest area of a woodland-type habitat in the Reserve environs. In the spring and autumn, migrant warblers, flycatchers and 'crests' are all concentrated into this one area. Considering its small size it is surprising to find Green Woodpeckers, Treecreepers and other woodland species breeding here.

The area to the north of the castle and west of the Castle Pits is developed over marine and river alluvium. The fields are sheep grazed. In contrast, the rest of the permanent grassland lies on stabilised shingle, and as such represents one of the most extensive areas of this kind of habitat in Britain. This pasture has not received fertiliser and selective weed-killer treatment, and is of particular interest, supporting a grassland type of unusual floristic composition, meadow barley being particularly abundant. Numerous freshwater and brackish ditches drain the fields and support a rich and interesting fauna and flora including several local or scarce species.

This year 166 species of birds were recorded on the Reserve. Of the 158 species recorded last year 15 were not subsequently recorded this season, but an additional 23 new species were added to the Reserve 'List', bringing the grand total for the two seasons to 181 species—a very high figure for anywhere in this part of the country. Some of the more unusual species have been: Black-necked Grebes (4), Spoonbills (4), Grey-lag Geese (2), Rough-legged and Honey Buzzards (2), Common Buzzard, Hen Harrier, Montagu's Harrier, Hobby, Merlin, Red-footed Falcon, Bittern, Little Ringed Plover (5), Kentish Plover (1-2), Temminck's Stints (2), Avocets (19), Pomarine Skuas (9), Mediterranean Gulls (4), Little Gulls and Black Terns in scores, Red-necked Phalarope, Roseate Terns (4), White-winged Black Tern, Owls of several species, Wryneck, Hoopoe, Wood Warbler, Richard's Pipit (2), Tawny Pipits (2-3), Red-backed Shrike, Black-headed Bunting.

Since taking up the post of Warden, under the Sussex Naturalists Trust, on the 15th March, 1970, my duties have been many and varied. Basically they have been: (1) to act as Warden of the area of the Rye Harbour Local Nature Reserve, and, in particular, to safeguard nesting terns; (2) to record the occurrence of species within the Reserve, and for this purpose to keep a log book, and to record therein all matters of interest affecting the Reserve; (3) to

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The scheme really got off the ground during late 1969 and early 1970 when we were offered a furnished cottage in the heart of the proposed reserve that would be suitable for a resident warden. With generous contributions from the East Sussex County Council and Battle Rural District Council, the Sussex Naturalists Trust, the Sussex Ornithological Society, the World Wildlife Fund and from various private sources, it was now possible to appoint a seasonal warden to cover the April-September periods each year at a salary of £30 per month. This was increased to £40 for the 1971 season. I was appointed as the Reserve's first warden, and I moved into residence at 2 Watch Cottage on 15th March, 1970. My period of employment for the two seasons covered twelve months: 15th March-30th September, 1970, and 1st April-30th September, 1971.

The reasons for establishing a Nature Reserve here are obvious. It is important to appreciate that shingle beaches are a relatively scarce kind of habitat in Europe, so that conservation of our remaining areas of more or less undisturbed shingle assumes a more than local significance. Taking into account the planned development of the Crumbles that lie to the east of Eastbourne, this area will shortly contain the best remaining example of this particular habitat anywhere in the county. Birds that favour the seclusion of this terrain are everywhere in evidence. A walk along the concrete road from Rye Harbour to Winchelsea Beach in the breeding season guarantees a sighting of such species as Ringed Plover, Oystercatcher and Wheatear. Eight pairs of Wheatears now breed here in a variety of drain pipes, tins and boxes concealed in the shingles specifically for that purpose. This is a species that breeds so rarely in Sussex now that we hope all 75 pipes and tins will be occupied in future years. There are also several pairs of nesting Redshanks and Oystercatchers, and the Ringed Plover density is high: there are about 18 pairs of breeding birds. Little Terns breed in one or two fast-diminishing colonies. The 'ternery pool' on Nook Beach is the Reserve's most favoured spot for tern and wader species on migration. Almost anything may turn up here—and usually does!

Alternatively, a walk along the public footpath between Rye Harbour and Winchelsea Beach, through 'Harbour Farm', would take you along the edge of the 'Narrow Pits'. This is a large expanse of water where Great Crested Grebe, Little Grebe, Mallard and Tufted Ducks are breeding. There will be occasional sightings of Teal, Gadwall and Shoveler; Reed and Sedge Warblers, Reed Buntings, Moorhens and Coots are also in residence, and there are the inevitable colonies of Herring and Black-headed Gulls. The concrete island

behind the warden's cottage also has up to 40 pairs of Herring Gulls breeding there.

The whole area, with its sprinkling of bushes and fences, is full of interest during the spring and autumn passage. Flycatchers, chats and warblers are abundant then, and the fields seem crowded with Wheatears and Yellow Wagtails. On September days up to 1,000 'Flava' Wagtails may be seen, and, during my two seasons in residence, Red-backed Shrikes, Wrynecks, Wood Warblers and many Firecrests have been observed at this season. Perhaps the best time to visit the 'Narrow Pits' is in winter or in early spring. Ducks of very many species congregate there in their hundreds. Occasionally Goosander, Smew, Long-tailed Duck and Slavonian or Black-necked Grebe occur, as do Black- and Red-throated Divers. Rye Bay frequently holds large concentrations of the latter, together with hundreds of Common Scoter and considerable numbers of Great Crested Grebes.

If on foot, and prepared for a fairly long walk, the visitor is recommended to continue round the S.W. end of the Narrow Pits, past the cottage, and up to Camber Castle along the footpath to Rye. This will take him along part of the Castle Pits and across fields which, in the early summer, hold breeding Lapwings (up to 70 pairs in the whole area) and Yellow Wagtails (some 7 pairs). The walk here will also take him through some overgrown allotments at the corners of the gravel pits. These I refer to simply as 'The Wood'—the largest area of a woodland-type habitat in the Reserve environs. In the spring and autumn, migrant warblers, flycatchers and 'crests' are all concentrated into this one area. Considering its small size it is surprising to find Green Woodpeckers, Treecreepers and other woodland species breeding here.

The area to the north of the castle and west of the Castle Pits is developed over marine and river alluvium. The fields are sheep grazed. In contrast, the rest of the permanent grassland lies on stabilised shingle, and as such represents one of the most extensive areas of this kind of habitat in Britain. This pasture has not received fertiliser and selective weed-killer treatment, and is of particular interest, supporting a grassland type of unusual floristic composition, meadow barley being particularly abundant. Numerous freshwater and brackish ditches drain the fields and support a rich and interesting fauna and flora including several local or scarce species.

This year 166 species of birds were recorded on the Reserve. Of the 158 species recorded last year 15 were not subsequently recorded this season, but an additional 23 new species were added to the Reserve 'List', bringing the grand total for the two seasons to 181 species—a very high figure for anywhere in this part of the country. Some of the more unusual species have been: Black-necked Grebes (4), Spoonbills (4), Grey-lag Geese (2), Rough-legged and Honey Buzzards (2), Common Buzzard, Hen Harrier, Montagu's Harrier, Hobby, Merlin, Red-footed Falcon, Bittern, Little Ringed Plover (5), Kentish Plover (1-2), Temminck's Stint (2), Avocets (19), Pomarine Skuas (9), Mediterranean Gulls (4), Little Gulls and Black Terns in scores, Red-necked Phalarope, Roseate Terns (4), White-winged Black Tern, Owls of several species, Wryneck, Hoopoe, Wood Warbler, Richard's Pipit (2), Tawny Pipit (2-3), Red-backed Shrike, Black-headed Bunting.

Since taking up the post of Warden, under the Sussex Naturalists Trust, on the 15th March, 1970, my duties have been many and varied. Basically they have been: (1) to act as Warden of the area of the Rye Harbour Local Nature Reserve, and, in particular, to safeguard nesting terns; (2) to record the occurrence of species within the Reserve, and for this purpose to keep a log book, and to record therein all matters of interest affecting the Reserve; (3) to

live at 2 Watch Cottage, and to organise volunteer assistance with wardening and recording, and to accommodate for this purpose those wishing to stay with me; (4) to make such contact as is possible with the owners and occupiers of other lands in the area proposed as a Nature Reserve, and to make records as set out in (2); (5) such other duties as may be assigned by the S.N.T. This I have tried to do to the best of my ability.

Most of my efforts have been concentrated on trying to revive the fast-diminishing colony of Common Terns. It will be recalled that this colony, at one time very flourishing, has declined alarmingly during the past few years. This has been mainly due to small boys collecting their eggs. My task, therefore, was obvious, although I had not envisaged the problems which were to follow, occasioned, not by human beings, but by other birds!

To give a complete picture of the problems to be faced regarding Common Tern protection and Black-headed Gull control, it is necessary to analyse the results for each year as follows:

1970

A working week-end was organised over Easter, 1970, and in the weeks that followed I was very busy building new islands at the Nook Beach pool on which the terns could nest. By mid-April, after many hundreds of sacks of shingle had been ferried across by boat and emptied to form this new archipelago, seven islands had been built. The islands, completely lacking in vegetation and at a safe distance from the shore, appeared ideal for nesting terns.

Scarcely had the terns arrived, however, when Black-headed Gulls discovered the islands and found them much to their liking. On 22nd April 11 gull nests were removed, but from then on their numbers increased, and they finally pushed out the four pairs of Common Terns that had started nesting. By the 31st May no less than 1,800 gull nests and 400 eggs had been removed. On one day alone 192 nests and 60 eggs were taken, and yet, within two hours nests were being re-made and eggs re-laid. Various methods employed to distract the gulls from nesting all failed. As a result not one pair of Common Terns raised young on the Reserve in 1970.

During the winter that followed and right up to the time when I began work again on 1st April, 1971, the Kent River Authority, acting at our suggestion, had directed a 'causeway' between the main Nook Beach pool and a smaller pool nearby, thus enlarging the expanse of water and producing a new island some distance from the Black-headed Gull colony.

1971

Different tactics were to be employed this year. If we could keep the Black-headed Gull colony in its present position undisturbed, then the chances of keeping them off this new island seemed good. Under instructions from the R.S.P.B. every gull egg was injected with formalin. By using this method the parent birds were relatively undisturbed, and the formalin kept the eggs firm and in good condition for a long period of time. Altogether, about 880 gull eggs were injected during the summer (725 Black-headed) none of which hatched. A survey was made of 50 marked Black-headed Gull nests and the results sent to the R.S.P.B., but this was interrupted in mid-June when heavy rain almost completely flooded out the nests. The gulls, however, did not seem to mind, and they continued sitting.

It is a pity that such drastic measures have to be taken against one species to protect another. It is an incontestable fact, however, that gulls have become so numerous and so successful as a species, thanks to their adaptability to the

human environment (e.g. urban rubbish dumps as feeding grounds) that unless something is done to curb their numbers, vulnerable species such as the Rye Harbour terns will be lost altogether. Sentimentality cannot over-ride a common-sense attitude to conservation policy today.

Another Easter working week-end was organised when fifteen volunteers helped put up fences and long over-due notice boards. Three large E.S.C.C. notices were erected at the main footpath areas adjoining the Reserve; and 12 additional smaller notices were suitably placed along the perimeter of the Reserve. Several Little Tern notices were also erected. These requested the public to keep off the nesting area during the breeding season.

200 fence posts were driven in around the Nook Beach pool and the 'Flat Beach' area. Baler twine was used as a boundary definition in both areas, with an additional short stretch of barbed wire at the pool. The result was extremely encouraging. Whereas, last year, holidaymakers from Rye Harbour caravan site were picnicking almost amidst the Little Tern colony, this year there was virtually no trouble at all. In 1970 a major problem was keeping people off the Reserve in the breeding season, especially holidaymakers from the caravan site. These still present quite a threat, especially youngsters in their late teens who disregard notices and walk across to the pool, or trample over the shingles where there are nesting birds. These are not local people but holidaymakers, the worst of whom seem deliberately to be looking for trouble. On the whole, the public has been quite amenable to requests not to trespass when the reason has been explained to them.

The people living at Winchelsea Beach end are a good distance away from any particularly good breeding localities, and are, therefore, no threat. A lot of trouble was experienced in my first year from people who came down from Rye Harbour to the sea at the harbour mouth. To the right of this area a large area of shingle known as the Flat Beach holds breeding Little Terns, Redshank, Oystercatcher and Ringed Plover. It was on this 'dogs' training ground' that Little Terns deserted many of their nests last year. Only one chick was produced from seven nests in 1970.

It was with great relief therefore, when we finished erecting the fence to enclose this area, that we found the beach free of people. Local residents at Rye Harbour who have helped me in endless ways throughout my stay on the Reserve, were not in the least bit upset at having to take their dogs elsewhere. Instead, they congratulated us on the work we had done.

It was a pity the Little Terns did not show a similar appreciation. Instead they made a suicidal attempt to breed on a narrow stretch of beach, relatively unprotected, at the opposite end of the Reserve. Needless to say they were unsuccessful. Six pairs of birds again produced only one chick. Man was not wholly to blame, though, being near the main beach road, disturbance from visitors was heavy. An abundance of 'Corvids' in the area may well have accounted for several clutches. In June, when all the Little Tern pairs had eggs, I frequently watched large parties of the crow family scanning the beach. I know of one instance, at least, of crows taking a Ringed Plover's brood.

The Little Tern must be the most vulnerable of all our nesting sea birds. Too often they nest 'in the wrong places'! Man cannot take the whole blame. At Dungeness, only a few miles away from Rye, the Warden reported no young this year from at least 40 pairs. And pressure from humans was far less acute there. If we can protect the Little Terns that we still have with us, we should, in my view, be doing more for the protection of the breeding birds of this county than by trying to persuade the Common Terns to come back.

Most of Easter, however, was again spent on the 'ternery pool'. It took

most of three days to lay down polythene sacks a few inches below the surface of our new island to prevent plant growth, using only the shingle present on the island to cover these sacks; the island, therefore remained the same height, i.e., a few inches above water level. We also lowered the height of a nearby island in the hope of distracting gulls and attracting terns. By the time we had finished, both the islands looked ideal for nesting terns. Throughout the whole of April and May one could see up to 25 Little Terns, several Sandwich, a few Arctic, and many more Common Terns on this new island: they loved it! Even Black Terns and Little Gulls used it as a resting place. Despite heavy rain throughout June, when the vegetation elsewhere was so much in evidence (including our so-called vegetation-free archipelago built the previous year) the new island remained bare except for one part only which we had purposely left for some plants to grow, to give shelter to any tern chicks that might appreciate such a provision.

It was therefore astonishing to find that everything 'disappeared' in early June! For some reason not a single tern remained to nest. Perhaps more surprising was the fact that no gulls nested on our wonderful island either! At the end of April three pairs of 'shock-resistant' Herring Gulls had nests on the island, but even they deserted. The reason for this sudden demoralisation is perhaps not as mysterious as it seems. The island was a favourite roosting place for the bigger gulls. Every night from mid-May onwards, Great Black-backed Gulls and Herring Gulls used to descend on the island in flocks numbering anything up to 150 birds: it is not surprising that there were no terns around when these formidable characters put in their appearance. I feel this can be the only reason. The habitat is ideal for terns. This island is just the right height. It lacks vegetation, and is a fair distance from the shore. Furthermore there has been no human disturbance.

So far, to give an idea of the work and the problems with which one is faced on a Reserve such as this, I have written of little apart from the Common Terns. Although this is only one aspect of the work, it has been by far my most important concern. Unless strict protection is given to the few sites where they nest we may lose them as a breeding species in the county of Sussex.

Many of the Rye Harbour birds have moved to a colony at Northpoint Beach (E. of the Rother and outside the reserve area), and have been doing well there (along with some of the birds from Dungeness) in the last few years. Every day during the summer I or my 'assistant wardens' watched the colony, with particular attention at weekends. But unfortunately, once gravel extraction has ceased there, this colony is doomed, and the terns must be induced to return to Nook Beach before that happens. This will be a great tragedy as the colony at Northpoint seems to increase every year; 92 pairs raised 125 young there this season.

Within the Reserve, with the exception of the terns, breeding has been very successful in both seasons. Most Ringed Plover pairs brought off young, as did Lapwing and Redshank, though young Oystercatchers were scarce. Yellow Wagtails and Partridges did very well. There are 10 pairs of the latter on the Reserve though oddly no Red-legs. Little Grebes are on all the gravel pits and two of the 3-4 pairs of Great Crested have produced young. In 1970 four pairs of Canada Geese raised 11 young, but only one pair out of three produced any goslings this year. Duck generally seem to be increasing. Two or three pairs of Kestrels frequent the area: Skylarks and Meadow Pipits breed in every field, while Linnets seem to be in every gorse bush! The reed beds are alive with Reed and Sedge Warblers; and the local Marsh Frog (*Rana ridibunda*) introduced to Romney Marsh in 1935 is extremely common, especially noticeable at dusk and more audible at 1 o'clock in the morning!

Many people have stayed during my two seasons at 2 Watch Cottage, but many more are desperately needed, especially during the main holiday periods.

Visitors to the Reserve will appreciate how important it is to keep to the footpaths and off private ground; to keep their dogs on leads; and to comply with any of the landowners' requests. Without this joint co-operation the Reserve could not exist. Visitors who wish to stay at 2 Watch Cottage should write to Mrs G. H. Blattman, The Watch House, The Point, Rye Harbour, and not to the Warden. Those who do so and may wish to drive up to the cottage may enter only along the road from Winchelsea Beach to the west. Visitors not staying at the cottage may not take their cars to it.

The Warden's cottage comprises a living room, kitchen (gas cooker) and two bedrooms. Three visitors, in addition to the Warden, can be accommodated in reasonable comfort. Owing to its isolated situation no main water, drainage or electricity is available. Those wishing to stay should write well in advance to ensure safe booking. Visitors are also requested to bring their own food: the nearest shops are approximately 1½ miles away. The overnight fee is 40p per night, to be paid to the Warden on arrival.

As already stated, much time and effort has been put into the pool on Nook Beach, but the area of the Castle and Narrow Pits is much vaster. There is so much that could be done, given money, time and permission. At the present time the Castle Pits hold more motor boats and water skiers than breeding birds in the summer months. With the loss of large areas of inland wetlands resulting from land reclamation and drainage schemes, new areas of open water like these are fast acquiring a special ecological significance. In East Kent, for instance, similar areas of open pools and reed swamps have already attracted such rare species as Bittern and Bearded Tit. With careful and planned management and the absence of disturbance, the lagoon complex at Rye could eventually represent one of the most exciting wildlife reserves in South-east England. Long-term management of the lagoon would need to take into account the desirability of establishing a large area of deep open water for wildfowl, an area of shallow water with shingle islands, and a large area of reed beds and open pools.

Of no less interest are the insect and plant communities that comprise the marginal habitats to these lagoons. Research work carried out during 1970 has resulted in several entomological discoveries that await publication in the appropriate scientific journals.

Persuading landowners to enter into reserve agreements is a rather lengthy business but the future looks full of promise. Much of the land around Camber Castle (involving several different owners) may soon be the subject of such agreements. Rye is a long-term project: its eventual aim is to give sanctuary status to the whole of the area between Rye-Winchelsea Beach and Rye Harbour as described in this report.

1972 should see many improvements being made to the Reserve. At the time of writing a wooden hide is being prepared at the Nook Beach pool, certainly the most exciting part of the Reserve for waders, gulls and terns. Bushes will also be planted nearby, and new notice boards depicting various species likely to be encountered will be erected.

Rye Harbour is surely one of the most beautiful of the wild places still left in Sussex. It has been difficult in a short paper to do full justice to an area that has so much to offer. I should like to express my warmest thanks to all who have helped me during my two seasons as Warden of the Reserve—especially to members of the S.O.S. and S.N.T., and, of course, to the local residents of the Rye Harbour neighbourhood, without whose help, encouragement and understanding my task would have been a much more arduous one.

THE BREEDING DISTRIBUTION AND STATUS OF THE TREE PIPIT IN SUSSEX

By S. W. M. HUGHES

INTRODUCTION

The status of the Tree Pipit (*Anthus trivialis*) in the British Isles was reviewed recently by Parslow (1967). He concluded that in Southern England, particularly the south east, the species had gradually declined, although locally it had benefited from the planting of young coniferous plantations. However, he also emphasised that most of the local information on which his assessment was based, was subjective and that indisputable evidence of a decline was available for only a few areas.

Detailed evidence was certainly lacking in Sussex. Some experienced observers thought that the Tree Pipit had declined in the localities for which they had special knowledge but were unable to support their opinions with numerical data. In 1967 therefore the Sussex Ornithological Society began a breeding survey of the species and this paper reports the results obtained and discusses their significance.

METHOD

With such a species complete coverage of the county in one year is impossible and the survey was therefore extended over four breeding seasons from 1967 to 1970, most effort in 1970 being concentrated in East Sussex.

Observers were asked initially to visit areas where the species had bred in the recent past and then to extend their search to other apparently suitable sites. It was suggested that the most satisfactory method of finding breeding Tree Pipts was to locate singing males. Suspected breeding based solely on singing males was to be confirmed whenever possible by at least two visits to establish continued presence in the area. Other evidence of breeding, e.g., birds carrying nest material or food, or the finding of nests was also requested, but active searching for nests was discouraged since the almost inevitable damage to surrounding herbage frequently results in increased predation of ground nesting species.

Throughout this paper the term *occupied territory* is used as the basic unit of population and it is here defined as the presence of a pair, a singing male or evidence of breeding, in a suitable breeding habitat during the second half of May to the end of July.

The Handbook (1938) refers to occasional breeding in early May, however immigration is known to continue in Sussex into the first week of May and sometimes later (Walpole-Bond 1938; des Forges & Harber 1963); furthermore the species commonly sings on migration. Thus records of singing males for the first half of May, or earlier, have been disregarded unless confirmed later in the season. The original request that all records of singing males should be confirmed, irrespective of date, could not be insisted on since it seriously limited the coverage possible in the time available.

COVERAGE

The coverage achieved is shown in Figure 1, where the county is divided into tetrads (2 x 2 Km. squares formed by the even-numbered lines of the National Grid). It can be seen that 70% of the entire county was visited at some time during the four breeding seasons. This coverage varied from thorough searches of well-wooded areas to brief visits to more open agricultural

areas which were subsequently declared unsuitable. Whilst it is highly probable that an occasional occupied territory was missed, particularly in the latter areas, it is very unlikely that any large area of potential Tree Pipit habitat was overlooked in the areas marked as covered. Of the 30% of the county not examined, more than one tenth consisted of unsuitable urban or suburban areas.

Coverage of West Sussex was almost complete except for a potentially interesting area north-west of Steyning. Although the extreme north-west of the county was visited frequently it proved difficult to cover thoroughly and numbers here may have been underestimated.

Coverage of East Sussex was generally less thorough. Failure to visit small areas to the west of Haywards Heath and north of Lewes was probably unimportant, but the poor coverage of the woodlands to the north and north-west of Battle and Hastings, particularly near Ashburnham, Netherfield and Brighton, has almost certainly resulted in an under-estimate of both distribution and numbers in that part of the county. It was also disappointing that coverage of the Kent border areas east of East Grimstead and north of the eastern River Rother was not achieved as very little is known of the ornithology of these areas.

DISTRIBUTION OF OCCUPIED TERRITORIES

The distribution of occupied territories located during the 1967-1970 breeding seasons is also illustrated in Figure 1 on a presence and absence basis per tetrad. The tetrad technique has been chosen since it is the most suitable scale to illustrate the scattered distribution of this species in Sussex.

Despite possible inaccuracies in the east of the county due to poor observer coverage it can be seen that it is only on the forest ridges of north central and north-east Sussex, Ashdown Forest and the woodlands and commons in the west and north-west of the county that the distribution has any degree of continuity. Elsewhere Tree Pipts are decidedly local, often being absent from apparently suitable areas. On the Downs the species has a limited distribution in the wooded areas in the west; east of the River Arun it is confined to the north escarpment gradually decreasing until it is almost absent from the Downs in East Sussex. No occupied territories were found on the coastal plain south of the Downs.

To examine the survey results in more detail it is convenient to divide the county on a roughly geographical basis into six regions, the numbers of occupied territories in each of these regions are given in Tables 2 to 6. No more than one third of the total occupied territories established during the four-year period was found in any one year and thus the counts given in the tables were either made in one year, or are an average of counts made in two or more years, or in the larger areas, e.g., Ashdown Forest, an estimate based on counts by several observers over the four-year period. The habitat used at each locality, if known, is indicated in the tables by an alphabetical code defined below in Table 1.

Table 1—Breeding habitats of the Tree Pipit in Sussex (1967-1970)

Habitat	Code used in Tables 2 to 6
Meadowland or rough pastures with wooded borders	a
Commons and heaths with scattered trees	b
Borders and open areas in deciduous woodlands	c
Young coniferous plantations with scattered larger trees or well wooded perimeters	d
Hillides and embankments with scattered trees or bushy areas	e
Recently coppiced chestnut or hazel	f

Locality	Habitat	Years Visited	No. of Occupied Terri-tories
Walderton	d	67	1
Stansed Park	d	67	2
Stonpit Bottom	d	67	2
Singleton Forest	d	68	3
Hacknall Copse	d	68, 69	2
Linchball Wood	d	67	5
Dunston Hill	d	70	1
Gratham Down	d	70	6
Heyshott Down	e	68	3
Pidding Hill	e	69	1
Kingley Vale	e	69	1
Goodwood	e	70	3
Rewell Wood	d	68	2
Houghton Forest	d	67, 70	2
Arundel Park	d	67, 70	2
Kirhurst to Washington	e	67, 69	5
Lancing Downs	e	67	1
Bedding Downs	e	70	1

Table 6. The South Downs.

Locality	Habitat	Years Visited	No. of Occupied Terri-tories
Hersimoncux Castle	d	68, 69	1
Arlington Woods	d	70	2
East Hoathly S. W.	d	69	2
Vert Wood, East Hoathly	d	70	1
Hawkhurst Common Wood	d	67-69	2
Posingworth Park	d	67-69	4
Frog Hole, Mayfield	d	70	4
Great Furness Wood	c	69	2
Ditchling Common	b	68, 69	2
Chingley Common	b	69	2
Shaves Wood, Poyrnings	d	69, 70	1
Brightling Area (3 sites)	d	70	1
Great Iwood, Rusbake Green	c	70	5
Sprayswood, Netherfield	d	69	1
Crowhurst Wood	d	69	6
Great Wood, Battle	d	68	4
Brede High Wood	-	70	1
Breadland Wood, Brede	f	70	1
Gate Cottage Area	f	68	2
Great Sowdens Wood, Udimore	f	70	1

Table 5. The Woodlands and Commons of Mid-Sussex and Central East Sussex.

Locality	Habitat	Years Visited	No. of Occupied Terri-tories
Ashdawn Forest	b	67-70	86+
Nap Wood	c	67	1
Becken Wood	c	68	1
Park Wood	c	68	1
Hornshurst Wood	c	67-69	6
Hotn Wood	c	67-69	4
Broadwater Forest	b	67-70	86+
High Beeches Forest	b	67	3
Holmush Forest	d	69	3
Newells Rough	d	67-70	3
Nailhurst (2 sites)	d	69-70	3
Southwater Forest	d	68, 70	1
Tilgate	d	67	2
Worth Forest/Old House Warren	d	67, 69, 70	3
Worth Lodge Forest	d	67-70	6
Worth Lodge	d	67-70	6
Rivers Wood	d	67	2
Fulling Mill	d	67	2
Ardingly	d	67	1
Horsted Keynes	c	67	1
Sheffield Forest	b	67	1

Table 4. Ashdawn Forest and the Forests and Woodlands of North-east Sussex.

Locality	Habitat	Years Visited	No. of Occupied Terri-tories
St. Leonards Forest	c, d	67-70	17
High Beeches Forest	b	69	3
Brantbridge Forest	b	67	2
Copthorne	b	67	3
Crabtree Park	b	69, 70	2
Bolney (3 sites)	d	67	1
Balcombe (3 sites)	d	67	4
Rivers Wood	d	67	2
Fulling Mill	d	67	1
Ardingly	d	67	1
Horsted Keynes	c	67	1
Sheffield Forest	b	67	1

Table 3. The Forests and Woodlands of North Central Sussex.

Locality	Habitat	Years Visited	No. of Occupied Terri-tories
Wearers Down	b	69	5
Chapel Common	b	69	4
Stanley Common/Iron Hill	b, d	69	2+
Linchmere Common/The Ridge	b	69	8
Marley Common	b	69	10
Blackdown	b, d	67-69	4
Pound Common	d	68	1
Henley Common	d	69	3
North Heath/North Common	d	68	2
Bexley Hill	d	68-70	5
Upperorton Common	b	68	1
Felworth Park	d	67, 68	3
Flixham Park	d, f	67, 68	6
Kirford (2 sites)	c, d	70	4
Iping Common	b	67, 68	3
Steadham Common	d	68	2
Midhurst Common	d	68	2
Cocking Park	d	67	2
Ambersham Common	b	67-70	10

Table 2. West Sussex Commons and Woodlands.

Locality	Habitat	Years Visited	No. of Occupied Terri-tories
Selham Common	d	67	1
Gratham Common	d	67	1
Crafton Common	d	67	1
Dunton Common	b	67-70	2
Lavington Common	b	67-70	2
Burton Park	d	67, 68	4
Coates Common	b	67, 68	2
Filesworth Common	b	67, 70	8
Hesworth Common	b	68	3
Wiggonholt Common	b	67, 70	3
Sullington Warren	d	69, 70	3
Kingpark Wood	d	68, 69	7
Birchfield Copse	d	68, 69	2
Aspark Wood	d	69	1
Faltinghurst Woods	d	69	6
The Haven/Okeshurst	d	69	7
Roman Wood	d	69	3
Gay Street Bridge	a	67-70	6

West Sussex Commons and Woodlands

The most important areas in this region are the commons, heaths and young conifer plantations along the Hampshire border from Weavers Down to Blackdown, and also those on the Greensand belt from Iping to Sullington Warren. In the former more than 30 occupied territories were found in about 650 acres and some were probably overlooked since parts of this area were difficult to cover adequately. The Greensand provides an almost continuous belt of Tree Pipit habitat from Iping to Fittleworth but as can be seen from Table 3 the population density varies considerably in different areas. It is highest on the open heath of Ambersham Common (one occupied territory per c.25 acres) and open birch woodland of Coates Common (one occupied territory per c.50 acres); in other areas there are only scattered pairs.

The other breeding localities in this region are mainly well separated areas of young coniferous plantations which, for example in the Plaistow, Loxwood, Billingshurst and Rowhook areas, are replacing many of the small deciduous woods. Although these plantations are widely scattered, collectively they provide breeding sites for a substantial population. Finally in this region there is a small, but apparently stable, population in well-wooded rough pasture at Broadford Bridge near West Chilington.

The Forests and Woodlands of North Central Sussex

During the last 25 years the extensive oak, beech and pine forests in the vicinity of Horsham, Crawley, East Grinstead, Handcross and Bolney have been largely felled and replanted with conifers. In some areas there has been a lengthy interim period during which birch scrub flourished and this proved very suitable for Tree Pipits. Such areas have now almost disappeared and most occupied territories in this region are in a few young plantations. Thus despite the vast acreage involved the total population of this region is relatively small.

St. Leonards Forest and a few small plantations in the surrounding area now support approximately 30 occupied territories and the group of forests south and south-east of Crawley about 35 occupied territories. There is evidence of a gradual decline in both these areas over the last 10 years as the open woodland has receded and the plantations matured; in St. Leonards Forest the number of occupied territories has dropped by at least 30% and although the forestry programme will continue to provide a number of new small plantations, it will probably be 20-30 years before any large-scale felling can be expected and thus a continuing decline in population seems inevitable.

Elsewhere in this region the species is confined to scattered pairs, mainly in young plantations near Balcombe, Bolney, Horsted Keynes, Ardingly and Shefford Park, and even smaller numbers to the north-east of Crawley in the Coptthorne and Crabbet Park areas.

Ashdown Forest and the Forests and Woodlands of North-east Sussex

Ashdown Forest contains the largest area of open heathland in Sussex and much of this, with its scattered pines and birch, is optimal habitat for Tree Pipits. It proved impossible to make a complete survey in one year, but the continued efforts of several observers over three years allowed an estimate of c.86 occupied territories for the entire area. Density is difficult to calculate. The Forest is c.7,000 acres in extent, which gives a density of one pair per 81 acres; but by no means all the Forest is suitable heathland. So the species is unevenly distributed

with much higher densities in favoured parts, as on the West Sussex commons. The Forest is the only area in Sussex where observers are content to describe the species as plentiful or common.

To the east of Ashdown Forest are three other areas which collectively form an important sub-region for the species. These are the woodlands east of Crowborough and north of Rotherfield which support about 12 occupied territories, and which are almost continuous with the extensive woodlands of the Warren and Broadwater Forest, south-west of Tunbridge Wells, where 18 occupied territories were found in the larger bracken-covered clearings. Further east still the woodlands in the Bayham area are suitable for Tree Pipits and it is probable that the number of occupied territories given in Table 4 for the woodlands of north-east Sussex is a considerable under-estimate of the true population.

The Woodlands and Commons of Mid-Sussex and Central East Sussex

Despite some lack of coverage it seems certain that Tree Pipits, although widely scattered, are nevertheless relatively uncommon in this region. It is not until the higher ground to the east is reached that there is any evidence of an established population. There is a small number of well-scattered occupied territories in the areas to the south of Cross-in-Hand and north of Heathfield and also further east in the heavily wooded areas surrounding Brightling, Dallington, and Rushlake Green. These areas and those to the north of Bexhill and Hastings, particularly in the vicinity of Netherfield, Battle, Brede and Beckley where a small number of occupied territories were found would almost certainly repay detailed study.

The South Downs

Despite the post-war reafforestation of the western end of the Downs the Tree Pipit is still a relatively uncommon breeding species. The few remaining young plantations support a relatively low density of occupied territories (e.g. 1 per 30 acres in Singleton Forest). In general the species appears to favour the northern side of the range often occurring on the steep slopes of the north escarpment. There are however three sites on the southern slopes in the extreme west at Stanstead, Kingley Vale N.N.R. and further east at Goodwood.

East of the River Arun the species is confined to the north escarpment, the occupied territories becoming fewer and more scattered as one proceeds eastwards. A search of the north escarpment between the Rivers Adur and Ouse revealed only one occupied territory, almost on the East Sussex county boundary. Several observers have confirmed that this species is not found on the Downs to the east of the River Ouse.

CURRENT BREEDING HABITATS

The information given in Tables 2 to 6 clearly shows the importance of young coniferous plantations as nesting habitat for the Tree Pipit in Sussex. Of the estimated number of 444 occupied territories found during the survey and for which details of habitat were provided, 47% were in young plantations. If the estimate for Ashdown Forest is not included in this calculation the figure becomes 54%.

According to Yapp (1962) this species moves into young conifer plantations as soon as the trees show above the grass or heather, at a height of 2 to 3 feet, but declines rapidly as soon as the thicket stage is reached and thus this habitat has only a limited life. This ecological adaptation, which has occurred to a greater or lesser extent throughout the British Isles, is not too surprising for the

species has always used similar habitats in the sub-alpine woodlands and the northern forests in Scandinavia (Voous, 1960). In these regions nesting also occurs amidst mature trees providing the canopy is open and there are patches of dry grass or heather, as well as amongst the younger plantations.

A further 42% of the occupied territories were found on heaths or commons with scattered trees, the traditional habitat for the species in southern England (Yapp, 1962). These territories together with those in young plantations therefore accounted for 89% of the total Sussex population. The remaining 11% comprised 5% on the borders or in open glades of deciduous woodlands; 4% on the grassy slopes of the north escarpment of the Downs; 1.5% in rough pastures with well-wooded perimeters and 0.5% in recently coppiced hazel and chestnut.

CHANGES IN DISTRIBUTION AND BREEDING HABITATS

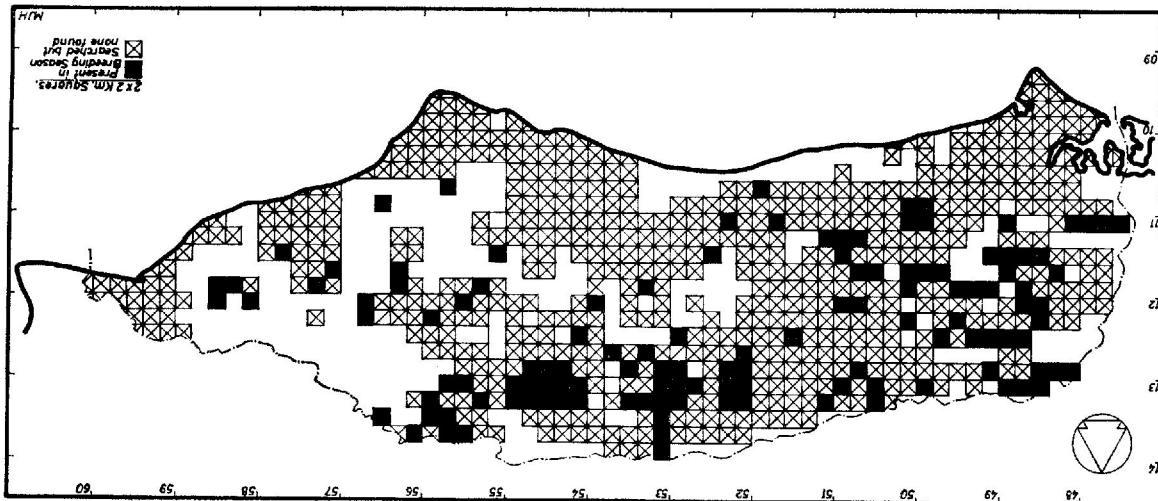
Walpole-Bond (1938) described the Sussex strongholds of the Tree Pipit as Ashdown Forest and some of the commons around Midhurst. He considered the species to be scarce on the Downs, even in the more suitable wooded areas in the west, and to be rare south of the Downs. Elsewhere the species was widely scattered in very small numbers. He also described the species' breeding habitats in Sussex as: glades and open woodlands, commons, parks, especially those rich in bracken, and railway embankments. More recently des Forges and Harber (1963) suggest an extension of range on the forest ridges in north central and north-east Sussex.

The results of the 1967-1970 survey show no striking changes in the geographical distribution (compare Figure 1 with Walpole-Bond's account) and confirm the extension of range on the forest ridges in north central and north-east Sussex where the species is now well established. However, the survey has shown that the Tree Pipit has undergone a major ecological adaptation. With 47% of occupied territories in young plantations only half the current population is now breeding in what was formerly considered typical habitat. This adaptation has enabled the species to maintain its distribution in its traditional areas and is probably also responsible for the improvement in distribution along the forest ridges and extensions of range on the western Downs and across the middle of the county. On the western Downs this colonisation is now past its peak and numbers are still decreasing. The same may be true of some of the East Sussex woodlands but there is insufficient evidence to be certain of this.

Walpole-Bond placed considerable emphasis on the predilection of the species for railway verges, embankments and cuttings, particularly those through the chalk. Although the latter were not inspected thoroughly during the survey, the cuttings between Crawley and Balcombe were visited with negative results. Tree Pipits were known to nest in such sites at Christ's Hospital in 1912 (F. J. Parkhurst per. comm.) and continued doing so in small numbers until the late 1950s (N. T. Fryer per. comm.). These observations are particularly interesting since neither observer can detect any change in the management that may have resulted in the species leaving the area.

Walpole-Bond does not mention nesting in well-wooded rough pastures, as currently occurs in the West Chilmington area. This habitat is utilised in other counties but is becoming increasingly rare as the cultivation of marginal farmland intensifies. The use of recently coppiced hazel or chestnut woodland also requires further investigation; although only recorded at three sites during this survey this habitat is also known to be used in the extreme north-west of the county (P. G. Davis per. comm.).

FIGURE 1. The Breeding Distribution of the Tree Pipit in Sussex (1967-1970).



BREEDING DENSITIES

Some breeding densities have already been quoted for specific areas in the regional reviews. Their value for comparative studies in future years, however, is limited, for in many areas the habitat will inevitably change. To overcome this problem breeding densities should be calculated for large areas of countryside. This minimises the importance of specific habitats since adverse trends in one area may be balanced by beneficial developments in another.

The 10 Km. square (2,500 acres) of the National Grid is a well-established unit and is a convenient area for county ornithological surveys of this type. Using this technique to express population densities has the disadvantage of dividing the population of a well-defined geographical area, e.g., Ashdown Forest, between two squares, thus showing a falsely low density for the actual locality; similarly the populations of two distinct areas, e.g., the north escarpment of the West Sussex Downs and West Sussex Commons are merged into one square. Nevertheless the method is still sufficiently sensitive to illustrate the varying densities of occupied territories found throughout the county during the survey and it has the overwhelming advantage of facilitating comparisons in future years. The technique is used in Figure 2 and it can be seen that although the woodlands in the west, north-west, north central and north-east Sussex each support a substantial number of territories, the densities in these areas are only a fraction of that in the Tree Pipits' stronghold in Ashdown Forest. This figure also shows the importance of the commons and woodlands to the south-west of Haslemere.

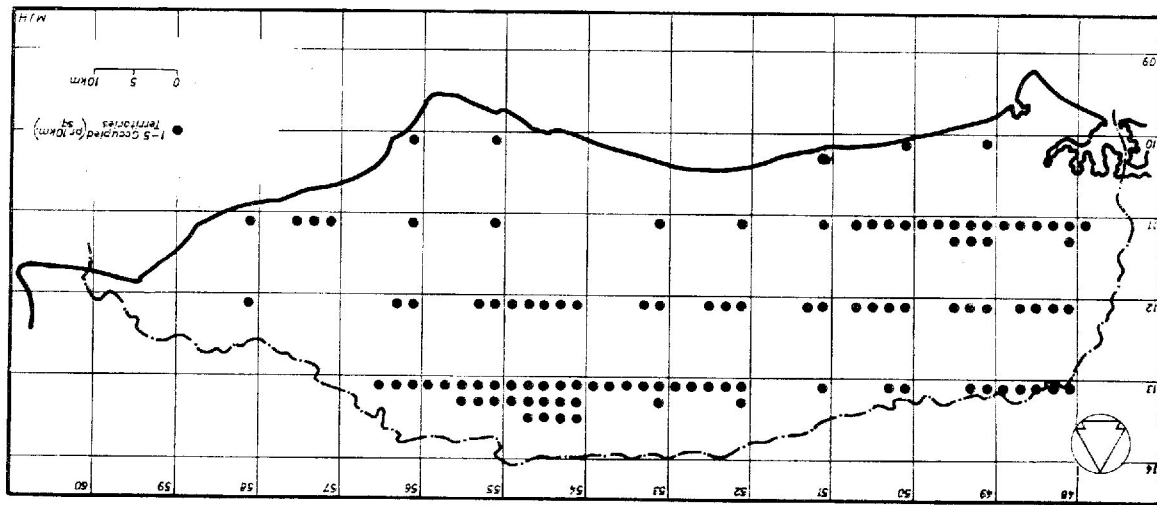
POPULATION ESTIMATES

The coverage of the county achieved in this survey has been estimated at 70% and a total of 449 occupied territories is shown in Tables 2 to 6. This figure is almost certainly an under-estimate, for an average has been quoted for all localities for which counts were available in more than one year and the figure quoted for Ashdown Forest is also considered to be a conservative estimate. Numbers could undoubtedly have been substantially higher with more extensive and thorough observer coverage in central and north-east Sussex; total coverage of the entire county might thus have revealed 600+ occupied territories.

In view of the importance of young coniferous plantations as a nesting habitat for the species it is interesting to calculate a hypothetical population figure based on the acreage of young plantations in Sussex in 1970. To do this the available habitat must be more accurately defined as plantations more than one year old but not more than four years. After four years Tree Pipits tend to move out to the perimeters of plantations and thus the total acreage can no longer be regarded as available nesting habitat.

The acreage of coniferous forests in Sussex in March, 1970, totalled 37,900, of which 7,400 acres were plantations conforming to the definition adopted above. A sample of seven such plantations in north-west Sussex, totalling 750 acres was found to support 49 occupied territories; individual densities varied from one per 8 acres of plantation to one per 35 acres with a mean density of 1 per 20 acres. Taking the mean density and extrapolating for the total acreage of available habitat gives a figure of 370 potential territories. If to this hypothetical figure is added the 237 occupied territories which have been found during the survey in other habitats, the final total is 607. This figure is remarkably similar to the figure arrived at by extrapolation of the survey results on a geographical basis.

FIGURE 2. Distribution and total number of occupied Tree Pipit territories (1967-1970).



CONCLUSIONS

This survey has shown that about half of the present-day Sussex population of Tree Pipits nest in young coniferous plantations. It is not possible to determine whether this ecological expansion has taken place of necessity or preference. Although many heaths and commons formerly used by the species have been reafforested, there are apparently suitable sites in deciduous woodlands that are not used and other habitats, e.g., railway embankments which have been deserted in recent years for no obvious reason.

Although the species appears to have taken full advantage of the abundance of the new nesting habitat, and has clearly benefited locally, it is nevertheless not known whether this adaptation has resulted in an overall increase in the county population. It may have compensated for adverse pressures on other habitats, but the lack of numerical data for former years makes it impossible to be sure of this.

It is now clear that the future of the species in Sussex will continue to be largely dependent on forestry activities, particularly since the populations still using heaths and commons are bound to experience increasing human pressures. A decline in forestry activities and disturbance elsewhere might be accompanied by the return of the species to some of the other habitats used formerly, but it is doubtful whether these sites are now sufficiently numerous to cope with anything more than a fraction of the existing population. A drop in population would therefore appear to be an almost inevitable consequence of any decline in the planting of new coniferous woodlands.

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SUMMARY

The results of a survey of the breeding distribution and status of the Tree Pipit (*Anthus trivialis*) in Sussex during the period 1967 to 1970 are presented and discussed.

Ashdown Forest remains the Sussex stronghold for the species and smaller but important populations were found on the commons and in the woodlands in the west and extreme north-west of the county and on the forest ridges of north central and north-east Sussex. A small population exists on the Downs in West Sussex but none was found on the coastal plain. Elsewhere the species was very local and nowhere numerous.

The current distribution shows little change from that reported in the late 1930s but there is some evidence of consolidation on the forest ridges in the north of the county. About half of all occupied territories were in young coniferous plantations which now replace heaths and commons as the main breeding habitat for the species in Sussex. Maintenance of its former distribution and the improved position in the north of the county appear to be directly related to this ecological expansion.

About 70% of the county was surveyed and an estimated 449 occupied territories were located. On this basis the entire county might support more than 600 territories. This figure correlates well with a hypothetical figure of 607 territories calculated on the acreage of young coniferous plantations existing in March, 1970, plus the territories found in other habitats during the survey.

With increasing pressures on its traditional habitats the future status of this species in Sussex will depend largely on continued forestry activity in the county.

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