

A newsletter for supporters of the NEST RECORD SCHEME, forming part of the BTO's Integrated Population Monitoring programme funded by a partnership of the British Trust for Ornithology and the Joint Nature Conservation Committee (on behalf of English Nature, Scottish Natural Heritage, the Countryside Council for Wales, and the Environment & Heritage Service in Northern Ireland).

- \*\* In this issue we provide important information on:
- IPMR the new home inputting program for nest recorders.
- Foot and mouth disease how this affects nest recorders.
- Constant Nest Monitoring Plots pilot work to begin on the new scheme.
- In addition we have included a number of new features we hope you will like,
  - including a spotlight on nesting Garden Warbler.

### **Red Alert!**

#### The state of the UK's Nest Record Scheme

 $2^{000}$  proved to be a worrying season in a number of ways for the Nest Record Scheme, of primary concern being an alarming fall in the number of nest records received. By mid March a total of only 27,502 nest records had been sent in, compared with over 36,700 at the same time the previous year. This was similarly matched by a substantial fall in the number of observers participating in the scheme, down from 461 to 420, a drop of some 9%. We fully appreciate that

nest recording will be difficult this year due to restrictions imposed by Foot and Mouth disease and that the number of records coming in may well be down again. However we just hope that this is a temporary glitch and that things will be back to normal in 2002. The value of your nest records is greater than ever, and we would like to thank all those who took part in the Scheme in 2000.



# IPMR Update – Computerise your records

After pilot testing by a number of volunteers to whom we are very grateful), the new **'Integrated Population Monitoring Reporter'** (IPMR) will be running live this year, so we are keen for as many nest recorders as possible to use the new system for the 2001 season. We are also hugely grateful to BTO member, ringer and volunteer Mark Cubitt for creating IPMR over the course of several years.

#### **Reasons for using IPMR**

- 1 IPMR enables you as the nest recorder to keep a permanent record of the nest record data you have collected, for research purposes, own interest, etc.
- 2 IPMR produces 'neat' printed reports of your results for the year and to help plan your nest visiting schedule efficiently.
- 3 IPMR dramatically reduces the BTO's data input costs.
- 4 For those recorders working a particular study area, inputting your observations through IPMR will become quicker than filling in Nest Record Cards.
- 5 For ringers, it produces an effective system for linking your ringing and nest record data.

To summarize, IPMR will enable the BTO to handle and process a much greater number of nest records, providing more raw material for understanding changes in the abundance of Britain's birds. All you need to do to get started, is download the system from the Internet (off the BTO's web site). If this is not possible, we can send you a copy of the system on CD-Rom. For this and any other queries about IPMR, please do not hesitate to contact me at the Nunnery.

#### System Requirements

At least a P120 machine At least 16 MB of RAM At least 40 MB of hard disk IPMR will run on either Windows 3.11, 95, 98, NT4 or ME.

For more information on IPMR and to download the software log onto the BTO Web site at *http://bnt1/BTOWeb/index.htm.* 

To load the IPMR software...

Select	Ringing
Select	Ringing Software
Select	Integrated Population Monitoring
	Reporter (IPMR).

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Mike Raven, Nest Records Officer

# Year 2000 Breeding Season Report

#### by David Glue

### Stalwart nest recorders defy the elements

Fittingly, the Millennium Year breeding season was an interesting, if challenging one, for BTO Nest Recorders. Constantly see-sawing temperatures, regular heavy showers, and fluctuating water levels, promoted lush vegetation growth, making nest-finding and relocation a difficult task, and checking of nest boxes by ladders an arduous chore at times. Initially, persistent late spring downpours saturated nests and chilled broods among many herons and wildfowl, some coastal waders and seabirds, tits and open-nesting passerines, causing localized heavy losses. Thereafter, an unsettled, if somewhat warmer and sunnier summer than expected, helped certain multibrooded songbirds reliant upon ground and aerial invertebrate foods to part redress early losses. Suitably, Year 2000 was a record-breaking one for Sea Eagle, Red Kite and Mediterranean Gull, among other colourful flagship species, in modern times.

Overall, the year maintained the recent trend towards climatic warming in Britain, temperatures for each month being near to, or above, the long term average. Yet, for a broad range of species, it was another modest breeding season in terms of young reared. For certain resident insectivores this run of poor years extends back for five years. Nest Recorders from different quarters of the country described key features of the season variously as: 'fine start by Raven and Merlin but pipits fail to perform' (Denbigh); 'spring floods washed out coastal gulls, Lapwing and Sand Martin' (Lancs.); 'Buzzard and Red Kite continue to expand and do well' (North Scotland); ' heavy downpours and cool winds in late May hit fledgling tits and many Pied Fly broods' (mid Devon); 'wicked gales in mid June played havoc among tern and auk colonies' (Grampian); 'ground-feeding Robin, Starling and Dunnock raise repeat spring broods' (Bucks) and, 'waders, duck and harriers flourish after a poor start' (Western Isles and Orkney).



Artwork by Richard Allen

# Millennium warmth prompts early nesting among Raven and Robin

A comfortably mild and bright late autumn 1999, with lengthy frost-free spells extending through to late November, enabled a scattering of grebes, doves, hirundines and thrushes to fledge final broods. This helped, in small fashion, to part compensate for a poor breeding season in 1999, when relatively small numbers of young were reared by many resident insectivores and seedeaters, and certain summer migrants. A blast of freezing polar air, giving penetrating ground frosts around the time of the Winter Solstice, effectively terminated all nesting operations for 1999. Nonetheless, the UK generally experienced another relatively mild, cyclonic, turbulent and wet winter in 1999/2000. It was largely snow and frost-free, enhancing the survival prospects of resident birds.

New Year 2000 kicked off in positive fashion, temperatures topping 10°C in the first week. This prompted strong song output among Crossbill, Robin, Song Thrush, nest site claiming by tits. Peregrine and Ring-necked Parakeet, and some spectacular displays by Raven, Golden Eagle and Goldeneye. Not surprisingly, by the close of January came reports of clutches started by Mallard, Collared Dove and Feral Pigeon. Less expected, were instances noted of Grey Heron, Great Crested Grebe and Barn Owl egg-laying. Equally unexpected was nesting undertaken by Moorhen, Blackbird and House Sparrow in builtup areas where they enjoy a warm micro-climate created by Man's activities. Not unexpectedly, most such premature activity was nullified by cold northwesterly winds and freezing fog over the final week.

# Waders and woodlark among winners in spring breeding stock-take

February was also remarkably mild, with temperatures 3°C above average by day in many regions, some record-breaking sunshine amounts, and a scarcity of frosts. Not unexpectedly, with vegetation advanced 2-3 weeks by St Valentine's Day, premature nesting activity was noted widely. Early clutches were started by Little Grebe, Long-eared Owl, Wren, Mistle Thrush and Woodlark, while broods of Tawny Owl, Woodpigeon, Robin and Blackbird were ready for ringing by the close of the month. Regular heavy showers took the edge off a positive start to the breeding season. However, these helped to raise water levels, creating some new wetland nesting cover, quickly exploited in parts by welcome additional pairs of Mute Swan, Bittern, Black-tailed Godwit, Lapwing and Water Rail



Artwork by David Thelwell

In March, much early promise was sustained during an initial three week spell of largely settled, dry, sunny and mild weather (Northwest parts excepted). Encouraging cases of breeding range expansion were shown by Buzzard, Red Kite, Gadwall, Mandarin, Pintail, Nuthatch and Stonechat, among others. Particularly prompt cases of egg-laying were noted for Peregrine, Cormorant, Egyptian Goose, Woodcock and Woodlark during the third week, while some healthy broods of Dipper, Robin, Mistle Thrush and Long-tailed Tit were observed free-flying by the month's end. Spring looked well set at this point, but it is dangerous to pre-judge Nature's fickle moods - as had proved the case in the two previous springs.

# Late spring chill hits tits, flycatchers and Redstarts

Sadly, for a third consecutive April, many early breeding season progeny perished during adverse spells of weather. Initially, in the first week, an intense depression swept thundery downpours to southern parts on 3<sup>rd</sup> and 4<sup>th</sup> (the coldest days of the year thus far in parts). Thereafter, a bitterly cold northerly air stream swept sleet, hail and eventually snow from the Highlands to south coastal counties. In winter-

like conditions, well-grown broods of Grey Heron, plovers, Robin, chats and thrushes were chilled, growth rates checked, and many perished. High winds took their toll of fledgling Tawny Owl, Rook, Carrion Crow and doves nesting in trees. Ongoing uncomfortable sunless days, with night frosts and persistent heavy showers, contributing towards the wettest April for 250 years in places, continued to play havoc. The inclement conditions checked food supplies and nesting operations among tits, thrushes and finches, holding back the arrival of many spring migrants. Rapidly rising water tables were safely combated by many incubating Mute Swan and grebes, but independent cygnets, goslings and ducklings were often saturated and drowned. Many coastal gull and waders, alongside local populations of Water Rail and Bearded Tit were washed out.

In late April and the first half of May regular winds from the southern and eastern sectors brought welcome warmth, temperatures climbing to a very pleasant 28°C by 14<sup>th</sup> May. The elements favoured the safe return of variable numbers of summer visitors, locally buoyant study populations of Wheatear, Swallow, Blackcap and Chiffchaff enjoying some early nesting successes. Elsewhere, Cuckoo, Turtle Dove, Spotted Flycatcher and Yellow Wagtail were absent from some long-term study sites. Thereafter, nesting operations were not helped by unsettled weather in late May, squally showers and cool days chilling young and resulting in widespread heavy partial and complete brood losses among many tits, Pied Flycatcher and Redstart. In the wettest May since 1993 in parts, stream and lakeside Blackheaded Gull, Kingfisher, wagtails and Sand Martin endured repeated losses.

### Successful scarce raptors and waterfowl brighten a dull June

The warmest June since 1992 in many parts, a cooler Scotland excepted, was punctuated by damaging cool episodes, when many birds

struggled. Song output from migrants was invariably intense and truncated, to the general frustration of nest recorders and census workers. Prolonged torrential downpours in the first week, with dramatic flooding in Northern England, swamped coastal seabirds, including auks, sea duck and terns. Severe gales from an 'autumnal' Atlantic depression tracked across Northern Scotland on 12/13<sup>th</sup>, destroying some machair shorebird and passerine young, forest gamebirds and finches, moorland raptors and pipits. Finally, an intense short-lived hot spell from 17-19<sup>th</sup>, temperatures reaching 33-34°C in central parts, helped to boost modest supplies of invertebrate foods for crests, flycatchers, woodpeckers and warblers, battling to satisfy demands of well grown young. Reports of staggered egg laying, smaller than normal broods, and hyper-active predators added to an unproductive sequence of seasons for certain insectivorous birds.

Success stories involving a range of scarce species helped to brighten a downbeat picture. Recent greatly increased wintering populations of Little Egret and Mediterranean Gull were translated into the highest numbers yet to breed in the UK. Again, Spoonbills engaged in nesting operations. Sea Eagles raised 12 young from eight active nests, matching the 1999 output. Encouragingly, key populations of Hen Harrier on Orkney, Black Grouse in North Pennines and Corncrake on the Western Isles, all increased in



Artwork by Kim Franklin

strength. To the annoyance of some students, excessively destructive predators, including pine marten, Great Spotted Woodpecker, fox and weasel, caused locally heavy losses among Tawny Owl, Pied Flycatcher, Ring Ouzel and Blue Tit populations respectively. Shamefully, clutches and broods of Sea Eagle, Golden Eagle, Goshawk and Peregrine fell victim to human interference.

# A few chats, hirundines and warblers defy the unsettled summer

Somewhat cool, changeable, showery conditions spilled over into the first half of July, when daily temperatures 1.7°C below average had a mixed impact. Study populations of leaf and scrub warblers (notably Willow Warbler and Blackcap), Linnet, Yellowhammer and Tree Sparrow performed somewhat poorly overall, nesting activities fading markedly in the dullest summer in the southeast since 1987. A range of species countered the negative picture. Ground feeding Starling, Robin and thrushes were regularly double brooded; similarly, Greenfinch and Goldfinch in suburbia. A sunnier and warmer second half to July helped Hobby, Swift and acrocephalus warblers, among others, to rear broods, if invariably from replacement clutches. By now, Great Crested Grebe, Stone Curlew, Little Ringed Plover and Swallow were reported as raising second sets of young.

Welcome heat at times in August, the warmest such month since 1987 with temperatures 1.5°C above average, helped in part to boost a somewhat dismal summer for certain breeding birds, but frequent thundery troughs of low pressure accompanied by heavy showers kept most late nesting activity low key. Some Dunnock, Wren and House Martin eventually fledged second broods, Robin, Blackbird, Stonechat and Swallow third sets of young, instances among Song Thrush, Collared Dove and Stock Dove of yet more. But these were very much the exceptions, aided by a brief spell of hot and humid Indian summer weather early in September. We await with great interest the annual analysis of your keenly and painstakingly collected Year 2000 Nest Records Cards to accurately quantify the overall picture.

### Nest Record Landmarks in 2000

Several species reached notable high points in their nest recording history, with J. Kemp sending in the 25,000<sup>th</sup> Lapwing nest history and B. Standley locating the nests of another challenging ground nester, the 8,000<sup>th</sup> Skylark. The Louch and Thompson team found the 3,000th Chiffchaff nest and the 2,000<sup>th</sup> Garden Warbler. Other species topping the 2,000 mark were Turtle Dove, courtesy of A. Ward and Sand Martin from R. Smith. Finally, J. Brain found the Nest Record Scheme's 500<sup>th</sup> Golden Eagle nest.

Certain species were also extremely well represented within the scheme, particularly the birds of prey, with several card totals approximating 10% of their respective national populations. Honey Buzzard, Goshawk, Hen Harrier, Merlin, Hobby, Barn Owl and Roseate Tern all fell into this category.

# **Top Recorders for 2000**

Many nest recorders send in just one or two records for their patch or concentrate on particular species, all of which provides important spread to the geographical and habitat coverage of the Nest Record Scheme. However, some of these people develop their nest finding activities into an all-consuming passion and it is to these recorders that we pay tribute here.

Amongst many of these were some 34 groups who submitted 24% of the year 2000 total and included various bird observatories, ringing groups and other conservation organisations. Major contributions came from the Merseyside Ringing Group (984 cards), Birklands Ringing Group (507), Bristol Natural History Society (322), Calf of Man Bird Observatory (316) and East Dales Ringing Group (304). We would like to thank all of these groups that took part in the Scheme last year. However it was from some of the individual and pairs of recorders that amazing numbers of records were received, as shown by the nest recorders' 'TOP TEN' for 2000.

1 <sup>st</sup>	J.E.A. Brook & R.C. Cooke	Warwickshire	1,204 Cards
2 <sup>nd</sup>	Bob Danson	Lancashire	747 Cards
3 <sup>rd</sup>	David Warden	Avon	705 Cards
4 <sup>th</sup>	R.W. and M.M. Grainger	County Durham	622 Cards
5 <sup>th</sup>	Max Meadows	Essex	474 Cards
6 <sup>th</sup>	Ron Louch & Dave Thompson	Oxfordshire	448 Cards
7 <sup>th</sup>	John Walshe	Suffolk	436 Cards
8 <sup>th</sup>	Ian Hutchison	Tayside	379 Cards
9 <sup>th</sup>	Paul Holness	Norfolk	365 Cards
10 <sup>th</sup>	Bob Swann	Highlands	337 Cards

Most of the Nest Cards submitted contained more than one visit, these being the most prized and valuable data we receive, since it is from 'multi-visit' cards that we can analyse first laying dates and assess overall success and failure rates of different species. Two of the observers also recorded over 50 species, with top team Brook and Cooke finding the nests of 83 species and the Graingers with an impressive 59 species. Many other recorders made significant contributions towards the data sets of particular species, most notably:

Buzzard (J.Driver and R.Swann), Lapwing and Redshank (J.Kemp), Turtle Dove (S.Murphy), Barn Owl (N.Lewis), Tawny Owl (J.Massie), Sand Martin (Bob Smith), Swallow (P.Holness, Prof. D.Norman and I.Rendall), Tree Pipit (N.Burton), Pied Wagtail (P.Holness), Whinchat (M.Laurence), Wheatear (D.Fulton), Blackbird (A.Ward), Ring Ouzel (I.Burfield), Song Thrush (R. & M. Grainger and A.Ward), Dipper (M.Holmes and J.Lewis), Dunnock, Chiffchaff and Bullfinch (R.Louch & D.Thompson), Reed Warbler (D.Warden, P.Watts and N.Westwood), Raven (J.Driver), House Sparrow (R.Jenkins), Tree Sparrow (R.Danson and M.Netherwood), Yellowhammer (J.Hart and C.Macleod).

# Changes in Species Composition over the past 40 years

The top two species for 2000 were again 'Nest Box users', and overall there was very little change in the top five from the 1990s average. However Tree Sparrow re-appeared in the top ten, as did Eider, primarily due to a small number of recorders concentrating their efforts on these species.

It is interesting to compare the current Top Ten species with those of the 1960s. Definite changes have occurred in both the composition of species and of the types of nests found.

	2000		1990's average		1960's average	
Ranking	Species	Cards	Species	Cards	Species	Cards
1	BLUTI	3,188	BLUTI	4,028	BLABI	3,460
2	GRETI	2,454	GRETI	2,580	SONTH	2,176
3	SWALL	1,678	PIEFL	1,848	DUNNO	877
4	BLABI	1,270	SWALL	1,845	LINNE	793
5	PHEFL	924	BLABI	1,693	SWALL	786
6	REEWA	783	LAPWI	867	BLUTI	628
7	WOODP	672	WOODP	807	MOORH	461
8	TRESP	607	SONTH	732	WOODP	421
9	SONTH	539	COOT	692	TRESP	402
10	EDER	515	REEWA	<b>5</b> 02	CHAFF	378

NB: Colony sheet species have been excluded

Back in the 1960s a large proportion of the Nest Record Cards received at the BTO were for those typical hedgerow and scrub nesting species, including many of the thrushes, warblers and finches. Nest-box based recording schemes in plots of woodland were relatively rare and the use of boxes in gardens more unusual than today. Consequently the proportion of records for most tits, owls and flycatchers is much higher now.



While deciining quantities of Blackbird, Song Thrush and Dunnock records may be partly due to population declines, it is also possible that the old nest finding skills which harked back to egg collecting days of the 1950s are now gradually disappearing as these highly skilled field ornithologists retire from the scheme. Concentrated studies by individuals on particular species provide some compensation for this loss, but are not a substitute for the large number of 'hedgerow' nest records that came in from a wide spectrum of observers across the country. Perhaps there is a need to encourage new generations into the art of nest finding by training workshops, field courses or through a system of "mentoring" by experienced fieldworkers. We would welcome any comments and suggestions on this topic.

## **More Records Please**

In an ideal world we would receive at least 150 cards each year for those species monitored by the BTO's 'Integrated Population Monitoring' (IPM) programme. However with many IPM species the nests are either, hard to find, inaccessible or very thin on the ground. The first list contains those species for which data is in very short supply, and on which we are desperate for you, our 'nest finders' to concentrate your efforts. Some of these will pose quite a challenge ...

#### 1 Priority species:

Common Sandpiper Curlew Snipe Nightjar Little Owl Great Spotted Woodpecker Skylark Tree Pipit Whinchat Ring Ouzel Sedge Warbler Garden Warbler WoodWarbler Marsh Tit Treecreeper Goldfinch Yellowhammer Reed Bunting Corn Bunting

#### 2 Not so desperate, but still sadly short of the effective monitoring target:

Sparrowhawk	Wheatear	Chiffchaff
Redshank	Mistle Thrush	Nuthatch
Grey Wagtail	Whitethroat	Bullfinch
Stonechat	Blackcap	

#### 3 Species not covered by the IPM but for which the BTO would appreciate more records:

Little Grebe	Green Woodpecker	Goldcrest
Woodcock	Rock Pipit	Willow Tit
Turtle Dove	Yellow Wagtail	Hawfinch
Short-eared Owl	Nightingale	Twite
Cuckoo	Grasshopper Warbler	
Lesser Spotted Woodpecker	Lesser Whitethroat	

Species	pre-99	1999	2000	Total	
Red-throated Diver	2.245	74	9	2.328	
Black-throated Diver	202	5	4	211	
Little Grebe	2,237	68	63	2.368	
Great-crested Grebe	3,441	92	83	3,616	
Slavonian Grebe	181	1	5	187	
Black-necked Grebe	30	-	-	30	
Fulmar	5,833	268	133	6,234	
Manx Shearwater	288	48	2	338	
Leach's Petrel	7	-	-	7	
Storm Petrel	81	7	4	92	
Gannet	33	-	-	33	
Cormorant	1,801	105	16	1,922	
Shag	9,422	1,558	470	11,450	
Bittern	38	-	1	39	
Grey Heron	5,950	339	684	6,973	
Mute Swan	5,449	154	135	5,738	e de taños de perso Altra
Whooper Swan	10	3	2	15	
Greylag Goose	616	29	18	663	
Snow Goose	8	-	-	8	
Barnacle Goose	32	4	6	42	
Canada Goose	3,397	130	133	3,660	
Egyptian Goose	71	11	7	89	
Shelduck	305	7	3	315	
Mandarin	395	19	10	424	
Wigeon	177	6	1	184	
Gadwall	131	6	6	143	
Teal	224	-	3	227	
Mallard	8,301	144	130	8,575	
Pintail	23	-	-	23	
Garganey	9	-	-	9	
Shoveler	164	10	9	183	
Pochard	142	6	7	155	
Tufted Duck	1,186	32	19	1,237	
Eider	5,315	778	903	6,996	
Common Scoter	43	-	-	43	
Goldeneye	208	3	4	215	
Red-breasted Merganser	270	5	2	277	
Goosander	283	2	3	288	
Ruddy Duck	122	16	5	143	
Honey Buzzard	30	10	13	53	
Red Kite	33	9	13	55	
Marsh Harrier	54	5	5	64	
Hen Harrier	1,517	41	48	1,606	
Montagu's Harrier	53	-	-	53	

#### Species Totals for Nest Record Scheme

Species	pre-99	1999	2000	Total	
Goshawk	626	54	63	743	
Sparrowhawk	5,120	67	63	5,250	
Buzzard	4,992	219	212	5,423	
Golden Eagle	482	16	18	516	
Osprey	67	4	1	72	
Kestrel	6,806	189	157	7,152	
Merlin	3,055	147	111	3,313	
Hobby	641	61	58	760	
Peregrine	2,450	77	73	2,600	
Red Grouse	831	5	1	837	
Ptarmigan	131	-	-	131	
Black Grouse	73	4	1	78	
Capercaillie	80	2	1	83	
Red-legged Partridge	456	4	-	460	
Grey Partridge	834	7	1	842	
Quail	14	-	-	14	
Pheasant	2,108	25	13	2,146	
Golden Pheasant	6	-	-	6	
Lady Amherst's Pheasant	1	-	-	1	
Water Rail	86	1	1	88	
Corncrake	30	-	-	30	
Moorhen	21,294	412	375	22,081	
Coot	15,786	554	468	16,808	
Oystercatcher	14,832	361	227	15,420	
Avocet	583	26	27	636	
Stone Curlew	430	-	-	430	
Little Ringed Plover	1,931	87	67	2,085	
Ringed Plover	8,929	149	76	9,154	
Dotterel	251	-	-	251	
Golden Plover	862	5	7	874	
Lapwing for the second states of the second states	24,252	498	283	25,033	
Dunlin	550	1	2	553	
Snipe	1,691	23	26	1,740	
Woodcock	628	6	4	638	
Black-tailed Godwit	30	-	-	30	
Whimbrel	60	-	-	60	
Curiew	2,898	30	15	2,943	
Redshank	2,505	92	94	2,691	
Greenshank	159	-	-	159	
Common Sandpiper	1,461	20	<b>.10</b>	1,491	
Red-necked Phalarope	167	-	-	167	
Arctic Skua	361	-	1	362	
Great Skua	400	-	-	400	
Black-headed Gull	9,561	45	36	9,642	

Mediterranean Guil   7   -   4   11     Common Guil   5,011   146   39   5,196     Lesser Black-backed Guil   1,325   3,246   8   4,579     Herring Guil   5,956   971   176   7,103     Greater Black-backed Guil   2,655   763   11   3,430     Kittiwake   11,583   969   667   13,219     Sandwich Tern   1,813   -   1,813     Roseate Tern   726   -   35   761     Common Tern   5,906   373   260   6,539     Arctic Tern   8,467   429   470   9,366     Little Tern   5,376   172   203   5,751     Guillemot   1,110   -   1   1,111     Razorbill   1,023   148   55   1,225     Black Guillemot   1,431   -   9,111   5     Stock Dove   7,668   322   290   8,280 <t< th=""><th>Species</th><th>pre-99</th><th>1999</th><th>2000</th><th>Total</th><th></th></t<>	Species	pre-99	1999	2000	Total	
Common Gull   5,011   146   39   5,196     Lesser Black-backed Gull   1,325   3,246   8   4,579     Herring Gull   2,655   763   11   3,430     Greater Black-backed Gull   2,655   763   11   3,430     Kittiwake   11,583   969   667   13,219     Sandwich Tern   1,813   -   1,813   Roseate Tern   726     Common Tern   5,906   373   260   6,539     Arctic Tern   8,467   429   470   9,566     Little Tern   5,376   1223   148   55   1,225     Black Gullemot   1,411   -   29   1,460     Puffin   478   50   101   629     Rock Dove   511   -   511   526     Feral Pigeon   2,100   56   35   2,191     Stock Dove   7,668   322   29   8,280     Wood Pigeon   2,166   42	Mediterranean Guli	7	-	4	11	
Lesser Black-backed Gull 1,325 3,246 8 4,579 Herring Gull 5,956 971 176 7,103 Greater Black-backed Gull 2,655 763 11 3,430 Kittiwake 11,583 969 667 13,219 Sandwich Tern 1,813 1,813 Roseate Tern 726 - 35 761 Common Tern 5,906 373 260 6,539 Arctic Tern 8,467 429 470 9,366 Little Tern 5,376 172 203 5,751 Guillemot 1,110 - 1 1,111 Razorbill 1,023 148 55 1,226 Black Guillemot 1,431 - 29 1,460 Puffin 478 50 101 629 Rock Dove 511 511 Feral Pigeon 2,100 56 35 2,191 Stock Dove 7,668 322 290 8,280 Wood Pigeon 25,124 665 672 26,461 Collared Dove 1,946 8 53 2,007 Ring-necked Parakeet 48 48 Cuckoo 2,066 42 25 2,133 Barn Owl 4,623 413 446 5,482 Little Owl 7,17 6 5 728 Short-eared Owl 376 4 7 337 Nightjar 1,513 50 34 1,9391 Long-eared Owl 376 4 7 337 Nightjar 1,513 50 34 1,9391 Green Woodpecker 362 12 9 644 Wryneck 23 - 23 Sivert 1,220 59 47 1,326 Lesser Spotted Woodpecker 1,201 91 33 1,325 Swift 1,575 164 37 1,776 Kingfisher 623 12 9 644 Wryneck 23 - 23 Green Woodpecker 1,201 91 33 1,325 Swift 1,575 164 77 7 198 Woodlark 1,201 91 33 1,325 Swift 3,503 14 6,578 Susti 1,575 164 77 7 198 Woodlark 1,201 91 33 1,325 Swallow 50,923 1,831 1,678 54,432 House Martin 8,766 255 219 9,280 Tree Pipit 1,647 14 39 1,700 Meadow Pipit 9,178 146 75 9,399 Yellow watali 992 2 2 2 996	Common Gull	5,011	146	39	5,196	
Herring Gull 5,956 971 176 7,103   Greater Black-backed Gull 2,656 763 11 3,430   Kittiwake 11,583 969 667 13,219   Sandwich Tern 1,813 - 1,813   Roseate Tern 726 - 35 761   Common Tern 5,906 373 260 6,539   Arctic Tern 8,467 429 470 9,366   Little Tern 5,376 172 203 5,751   Guillemot 1,110 - 1 1,111   Razorbill 1,023 148 55 1,226   Black Guillemot 1,431 - 29 1,460   Puffin 478 50 101 629   Rock Dove 511 - 511   Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 2,124 665 672 2,461   Collared Dove 4,359 100 <td>Lesser Black-backed Gull</td> <td>1,325</td> <td>3,246</td> <td>8</td> <td>4,579</td> <td></td>	Lesser Black-backed Gull	1,325	3,246	8	4,579	
Greater Black-backed Gull   2,655   763   11   3,430     Klitiwake   11,583   969   667   13,219     Sandwich Tern   1,813   -   1,813   Roseate Tern   726   35   761     Common Tern   5,906   373   260   6,539   Arctic Tern   8,467   429   470   9,366     Little Tern   5,376   172   203   5,7751   Guillemot   1,110   1   1,111     Racrobill   1,023   148   55   1,226   Black Guillemot   1,431   29   1,460     Puffin   478   50   101   629   Rock Dove   5,111   -   511     Feral Pigeon   2,100   56   35   2,191   Stock Dove   7,668   322   290   8,280     Wood Pigeon   25,124   665   672   26,461   Colared Dove   1,946   8   53   2,007     Ring-necked Parakeet   48   -   48	Herring Gull	5,956	971	176	7,103	
Klittiwake 11,583 969 667 13,219   Sandwich Tern 1,813 - 1,813   Roseate Tern 726 - 35 761   Common Tern 5,906 373 260 6,539   Arctic Tern 8,467 429 470 9,366   Little Tern 5,376 172 203 5,751   Guillemot 1,110 - 1 1,111   Razorbill 1,023 148 55 1,226   Black Guillemot 1,431 - 29 1,460   Puffin 478 50 101 629   Rock Dove 511 - 511   Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 25,124 665 672 26,461   Collared Dove 1,946 8 53 2,007   Ring-necked Parakeet 48 - 48 -   Cuckoo 2,066 42 25	Greater Black-backed Gull	2,656	763	11	3,430	
Sandwich Tern 1,813 - 1,813   Roseate Tern 726 - 35 761   Common Tern 5,906 373 260 6,539   Arctic Tern 8,467 429 470 9,366   Little Tern 5,376 172 203 5,751   Guillemot 1,110 - 1 1,111   Razorbill 1,023 148 55 1,226   Black Guillemot 1,431 - 29 1,460   Puffin 478 50 101 629   Rock Dove 511 - - 511   Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 25,124 665 672 26,461   Collared Dove 1,946 53 2,007   Ring-necked Parakeet 48 - - 48   Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 413 446	Kittiwake	11,583	969	667	13,219	
Roseate Tern 726 - 35 761   Common Tern 5,906 373 260 6,539   Arctic Tern 8,467 429 470 9,366   Little Tern 5,376 172 203 5,751   Guillemot 1,110 - 1 1,111   Razorbill 1,023 148 55 1,226   Black Guillemot 1,431 - 29 1,460   Puffin 478 50 101 629   Rock Dove 511 - - 511   Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 25,124 665 672 26,461   Collared Dove 4,359 100 133 4,592   Turtle Dove 1,946 8 53 2,007   Ring-necked Parakeet 48 - - 48   Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 <	Sandwich Tern	1,813	-	-	1,813	
Common Tern   5,906   373   260   6,539     Arctic Tern   8,467   429   470   9,366     Little Tern   5,376   172   203   5,751     Guillemot   1,110   -   1   1,111     Razorbill   1,023   148   55   1,226     Black Guillemot   1,431   -   29   1,460     Puffin   478   50   101   629     Rock Dove   511   -   511   512     Feral Pigeon   2,100   56   35   2,191     Stock Dove   7,668   322   290   8,280     Wood Pigeon   25,124   665   672   26,461     Collared Dove   1,946   8   53   2,007     Ring-necked Parakeet   48   -   -   48     Cuckoo   2,066   42   25   2,133     Barn Owl   4,623   413   446   5,482     Little Owl	Roseate Tern	726	-	35	761	
Arctic Tern 8,467 429 470 9,366   Little Tern 5,376 172 203 5,751   Guillemot 1,110 - 1 1,111   Razorbill 1,023 148 55 1,226   Black Guillemot 1,431 - 29 1,460   Puffin 478 50 101 629   Rock Dove 511 - - 511   Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 25,124 665 672 26,461   Collared Dove 4,359 100 133 4,592   Turtle Dove 1,946 8 - - 48   Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 413 446 5,482   Little Owl 1,836 72 81 1,989   Tawny Owl 8,661 383 357 9,391   Long-eared Owl	Common Tern	5,906	373	260	6,539	
Little Tern 5,376 172 203 5,751 Guillemot 1,110 - 1 1,111 Razorbill 1,023 148 55 1,226 Black Guillemot 1,431 - 29 1,460 Puffin 478 50 101 629 Rock Dove 511 - 511 Feral Pigeon 2,100 56 35 2,191 Stock Dove 7,668 322 290 8,280 Wood Pigeon 25,124 665 672 26,461 Collared Dove 4,359 100 133 4,592 Turtle Dove 1,946 8 53 2,007 Ring-necked Parakeet 48 - 48 Cuckoo 2,066 42 25 2,133 Barn Owl 4,623 4413 446 5,462 Little Owl 1,836 72 81 1,989 Tawny Owl 8,651 383 357 9,391 Long-eared Owl 717 6 5 728 Short-eared Owl 376 4 7 387 Nightjar 1,575 164 37 1,776 Kingfisher 623 12 9 644 Wryneck 23 - 23 Green Woodpecker 363 12 16 391 Great Spotted Woodpecker 1,220 59 47 1,326 Lesser Spotted Woodpecker 1,846 7 7 198 Woodlark 1,201 91 33 1,325 Skylark 7,899 43 25 7,967 Sand Martin 1,541 81 293 1,915 Swallow 50,923 1,831 1,678 54,432 House Martin 8,766 295 219 9,280 Tree Pipit 1,647 14 39 1,700 Meadow Pipit 9,178 146 75 9,399 Yellow wagtail 992 2 2 9 96	Arctic Tern	8,467	429	470	9,366	
Guillemot 1,110 - 1 1,111   Razobill 1,023 148 55 1,226   Black Guillemot 1,431 - 29 1,460   Putfin 478 50 101 629   Rock Dove 511 - - 511   Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 25,124 665 672 26,461   Collared Dove 4,359 100 133 4,592   Turtle Dove 1,946 8 53 2,007   Ring-necked Parakeet 48 - 48   Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 413 446 5,482   Little Owl 1,835 72 81 1,989   Tawny Owl 8,651 383 357 9,391   Long-eared Owl 717 6 5 728   Short-eared Owl 717 6	Little Tern	5,376	172	203	5,751	
Razorbili 1,023 148 55 1,226   Black Guillemot 1,431 - 29 1,460   Puffin 478 50 101 629   Rock Dove 511 - - 511   Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 25,124 665 672 26,461   Collard Dove 4,359 100 133 4,592   Turtle Dove 1,946 8 53 2,007   Ring-necked Parakeet 48 - - 48   Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 413 446 5,482   Little Owl 1,836 72 81 1,989   Tawny Owl 8,651 383 357 9,391   Long-eared Owl 717 6 5 728   Short-eared Owl 376 4 7 387   Nightjar 1,513 50<	Guillemot	1,110	-	1	1,111	
Black Guillemot 1,431 - 29 1,460   Putfin 478 50 101 629   Rock Dove 511 - - 511   Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 25,124 665 672 26,461   Collared Dove 4,359 100 133 4,592   Turtle Dove 1,946 8 53 2,007   Ring-necked Parakeet 48 - - 48   Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 413 446 5,482   Little Owl 1,836 72 81 1,989   Tawny Owl 8,651 383 357 9,391   Long-eared Owl 717 6 5 728   Short-eared Owl 376 4 7 387   Nightjar 1,513 50 34 1,597   Swift 1,575 164 <td>Razorbill</td> <td>1,023</td> <td>148</td> <td>55</td> <td>1,226</td> <td></td>	Razorbill	1,023	148	55	1,226	
Puffin   478   50   101   629     Rock Dove   511   -   -   511     Feral Pigeon   2,100   56   35   2,191     Stock Dove   7,668   322   290   8,280     Wood Pigeon   25,124   665   672   26,461     Collared Dove   4,359   100   133   4,592     Turtle Dove   1,946   8   53   2,007     Ring-necked Parakeet   48   -   -   48     Cuckoo   2,066   42   25   2,133     Barn Owl   4,623   413   446   5,482     Little Owl   1,836   72   81   1,989     Tawny Owl   8,651   383   357   9,391     Long-eared Owl   717   6   5   728     Short-eared Owl   376   4   7   387     Nightjar   1,513   50   34   1,597     Swift   1,575	Black Guillemot	1,431	-	29	1,460	
Rock Dove   511   -   -   511     Feral Pigeon   2,100   56   35   2,191     Stock Dove   7,668   322   290   8,280     Wood Pigeon   25,124   665   672   25,461     Collared Dove   4,359   100   133   4,592     Turtle Dove   1,946   8   53   2,007     Ring-necked Parakeet   48   -   -   48     Cuckoo   2,066   42   25   2,133     Barn Owl   4,623   413   446   5,482     Little Owl   1,836   72   81   1,989     Tawny Owl   8,651   383   357   9,391     Long-eared Owl   717   6   5   728     Short-eared Owl   376   4   7   387     Swift   1,575   164   37   1,776     Kingfisher   623   12   9   644     Wryneck   23	Puffin	478	50	101	629	
Feral Pigeon 2,100 56 35 2,191   Stock Dove 7,668 322 290 8,280   Wood Pigeon 25,124 665 672 26,461   Collared Dove 4,359 100 133 4,592   Turtle Dove 1,946 8 53 2,007   Ring-necked Parakeet 48 - 48   Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 413 446 5,482   Little Owl 1,836 72 81 1,989   Tawny Owl 8,651 383 357 9,391   Long-eared Owl 717 6 5 728   Short-eared Owl 376 4 7 387   Nightjar 1,513 50 34 1,597   Swift 1,575 164 37 1,776   Kingfisher 623 12 9 644   Wryneck 23 - 23 25 7,967   Sentee Spotted Woodpecker 1,821	Rock Dove	511	-	-	511	
Stock Dove   7,668   322   290   8,280     Wood Pigeon   25,124   665   672   26,461     Collared Dove   4,359   100   133   4,592     Turtle Dove   1,946   8   53   2,007     Ring-necked Parakeet   48   -   -   48     Cuckoo   2,066   42   25   2,133     Barn Owl   4,623   413   446   5,482     Little Owl   1,836   72   81   1,989     Tawny Owl   8,651   383   357   9,391     Long-eared Owl   717   6   5   728     Short-eared Owl   716   4   7   387     Nightjar   1,513   50   34   1,597     Swift   1,575   164   37   1,776     Kingfisher   623   12   9   644     Wryneck   23   -   -   23     Grean Woodpecker   1,220 <td>Feral Pigeon</td> <td>2,100</td> <td>56</td> <td>35</td> <td>2.191</td> <td></td>	Feral Pigeon	2,100	56	35	2.191	
Wood Pigeon   25,124   665   672   26,461     Collared Dove   4,359   100   133   4,592     Turtle Dove   1,946   8   53   2,007     Ring-necked Parakeet   48   -   -   48     Cuckoo   2,066   42   25   2,133     Barn Owl   4,623   413   446   5,482     Little Owl   1,836   72   81   1,989     Tawny Owl   8,651   383   357   9,391     Long-eared Owl   717   6   5   728     Short-eared Owl   376   4   7   387     Nightjar   1,513   50   34   1,597     Swift   1,575   164   37   1,776     Kingfisher   623   12   9   644     Wryneck   23   -   23   25     Green Woodpecker   1,220   59   47   1,326     Lesser Spotted Woodpecker	Stock Dove	7.668	322	290	8.280	
Collared Dove   4,359   100   133   4,592     Turtle Dove   1,946   8   53   2,007     Ring-necked Parakeet   48   -   -   48     Cuckoo   2,066   42   25   2,133     Barn Owl   4,623   413   446   5,482     Little Owl   1,836   72   81   1,989     Tawny Owl   8,651   383   357   9,391     Long-eared Owl   717   6   5   728     Short-eared Owl   376   4   7   387     Nightjar   1,513   50   34   1,597     Swift   1,575   164   37   1,776     Kingfisher   623   12   9   644     Wryneck   23   -   -   23     Green Woodpecker   1,220   59   47   1,326     Lesser Spotted Woodpecker   1,220   59   47   1,325     Skylark   7,8	Wood Pigeon	25,124	665	672	26.461	
Turtle Dove1,9468532,007Ring-necked Parakeet4848Cuckoo2,06642252,133Barn Owl4,6234134465,482Little Owl1,83672811,989Tawny Owl8,6513833579,391Long-eared Owl71765728Short-eared Owl37647387Nightjar1,51350341,597Swift1,575164371,776Kingfisher623129644Wryneck2323Green Woodpecker1,22059471,326Lesser Spotted Woodpecker18477198Woodlark1,20191331,325Skylark7,89943257,967Sand Martin1,541812931,915Swallow50,9231,8311,67854,432House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail992222996	Collared Dove	4,359	100	133	4.592	
Ring-necked Parakeet 48 - - 48   Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 413 446 5,482   Little Owl 1,836 72 81 1,989   Tawny Owl 8,651 383 357 9,391   Long-eared Owl 717 6 5 728   Short-eared Owl 376 4 7 387   Nightjar 1,513 50 34 1,597   Swift 1,575 164 37 1,776   Kingfisher 623 12 9 644   Wryneck 23 - - 23   Green Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 184 7 7 198   Woodlark 1,201 91 33 1,325   Skylark 7,899 43 25 7,967   Sand Martin 1,541 81 293 1,915   Swallow 50,923 1,831	Turtle Dove	1,946	8	53	2.007	
Cuckoo 2,066 42 25 2,133   Barn Owl 4,623 413 446 5,482   Little Owl 1,836 72 81 1,989   Tawny Owl 8,651 383 357 9,391   Long-eared Owl 717 6 5 728   Short-eared Owl 376 4 7 387   Nightjar 1,513 50 34 1,597   Swift 1,575 164 37 1,776   Kingfisher 623 12 9 644   Wryneck 23 - - 23   Green Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 184 7 7 198   Woodlark 1,201 91 33 1,325   Skylark 7,899 43 25 7,967   Sand Martin 1,541 81 293 1,915   Swallow 50,923 1,6	Ring-necked Parakeet	48	-	-	48	
Barn Owl 4,623 413 446 5,482   Little Owl 1,836 72 81 1,989   Tawny Owl 8,651 383 357 9,391   Long-eared Owl 717 6 5 728   Short-eared Owl 376 4 7 387   Nightjar 1,513 50 34 1,597   Swift 1,575 164 37 1,776   Kingfisher 623 12 9 644   Wryneck 23 - 23 23   Green Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 184 7 7 198   Woodlark 1,201 91 33 1,325   Skylark 7,899 43 25 7,967   Sand Martin 1,541 81 293 1,915   Swallow 50,923 1,831 1,678 54,432   House Martin 8,766	Cuckoo	2,066	42	25	2.133	
Little Owl 1,836 72 81 1,989   Tawny Owl 8,651 383 357 9,391   Long-eared Owl 717 6 5 728   Short-eared Owl 376 4 7 387   Nightjar 1,513 50 34 1,597   Swift 1,575 164 37 1,776   Kingfisher 623 12 9 644   Wryneck 23 - 23 23   Green Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 184 7 7 198   Woodlark 1,201 91 33 1,325   Skylark 7,899 43 25 7,967   Sand Martin 1,541 81 293 1,915   Swallow 50,923 1,831 1,678 54,432   House Martin 8,766 295 219 9,280   Tree Pipit 1,647 14 39 1,700   Meadow Pipit 9,178	Barn Owl	4.623	413	446	5,482	
Tawny Owi8,6513833579,391Long-eared Owi71765728Short-eared Owi37647387Nightjar1,51350341,597Swift1,575164371,776Kingfisher623129644Wryneck2323Green Woodpecker3631216391Great Spotted Woodpecker1,22059471,326Lesser Spotted Woodpecker18477198Woodlark1,20191331,325Skylark7,89943257,967Sand Martin1,541812931,915Swallow50,9231,8311,67854,432House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail992222System99222996	Little Owl	1.836	72	81	1.989	
Long-eared Owl71765728Short-eared Owl37647387Nightjar1,51350341,597Swift1,575164371,776Kingfisher623129644Wryneck2323Green Woodpecker3631216391Great Spotted Woodpecker1,22059471,326Lesser Spotted Woodpecker18477198Woodlark1,20191331,325Skylark7,89943257,967Sand Martin1,541812931,915Swallow50,9231,8311,67854,432House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail992222Statian99222996	Tawny Owl	8.651	383	357	9.391	
Short-eared Owl 376 4 7 387   Nightjar 1,513 50 34 1,597   Swift 1,575 164 37 1,776   Kingfisher 623 12 9 644   Wryneck 23 - - 23   Green Woodpecker 363 12 16 391   Great Spotted Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 184 7 7 198   Woodlark 1,201 91 33 1,325   Skylark 7,899 43 25 7,967   Sand Martin 1,541 81 293 1,915   Swallow 50,923 1,831 1,678 54,432   House Martin 8,766 295 219 9,280   Tree Pipit 1,647 14 39 1,700   Meadow Pipit 9,178 146 75 9,399   Rock Pipit 765 17 11 793   Yellow wagtail 992	Long-eared Owl	717	6	5	728	
Nightjar1,51350341,597Swift1,575164371,776Kingfisher623129644Wryneck2323Green Woodpecker3631216391Great Spotted Woodpecker1,22059471,326Lesser Spotted Woodpecker18477198Woodlark1,20191331,325Skylark7,89943257,967Sand Martin1,541812931,915Swallow50,9231,8311,67854,432House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail992222	Short-eared Owl	376	4	7	387	
Swift 1,575 164 37 1,776   Kingfisher 623 12 9 644   Wryneck 23 - - 23   Green Woodpecker 363 12 16 391   Great Spotted Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 184 7 7 198   Woodlark 1,201 91 33 1,325   Skylark 7,899 43 25 7,967   Sand Martin 1,541 81 293 1,915   Swallow 50,923 1,831 1,678 54,432   House Martin 8,766 295 219 9,280   Tree Pipit 1,647 14 39 1,700   Meadow Pipit 9,178 146 75 9,399   Rock Pipit 765 17 11 793   Yellow wagtail 992 2 2 996	Nightjar	1,513	50	34	1.597	. Anges egi 128
Kingfisher 623 12 9 644   Wryneck 23 - - 23   Green Woodpecker 363 12 16 391   Great Spotted Woodpecker 1,220 59 47 1,326   Lesser Spotted Woodpecker 184 7 7 198   Woodlark 1,201 91 33 1,325   Skylark 7,899 43 25 7,967   Sand Martin 1,541 81 293 1,915   Swallow 50,923 1,831 1,678 54,432   House Martin 8,766 295 219 9,280   Tree Pipit 1,647 14 39 1,700   Meadow Pipit 9,178 146 75 9,399   Rock Pipit 765 17 11 793   Yellow wagtail 992 2 2 996	Swift	1.575	164	37	1.776	
Wryneck   23   -   -   23     Green Woodpecker   363   12   16   391     Great Spotted Woodpecker   1,220   59   47   1,326     Lesser Spotted Woodpecker   184   7   7   198     Woodlark   1,201   91   33   1,325     Skylark   7,899   43   25   7,967     Sand Martin   1,541   81   293   1,915     Swallow   50,923   1,831   1,678   54,432     House Martin   8,766   295   219   9,280     Tree Pipit   1,647   14   39   1,700     Meadow Pipit   9,178   146   75   9,399     Rock Pipit   765   17   11   793     Yellow wagtail   992   2   2   996	Kingfisher	623	12 <sup>11</sup>		644	
Green Woodpecker   363   12   16   391     Great Spotted Woodpecker   1,220   59   47   1,326     Lesser Spotted Woodpecker   184   7   7   198     Woodlark   1,201   91   33   1,325     Skylark   7,899   43   25   7,967     Sand Martin   1,541   81   293   1,915     Swallow   50,923   1,831   1,678   54,432     House Martin   8,766   295   219   9,280     Tree Pipit   1,647   14   39   1,700     Meadow Pipit   9,178   146   75   9,399     Rock Pipit   765   17   11   793     Yellow wagtail   992   2   2   996	Wryneck	23	-	-	23	an a
Great Spotted Woodpecker   1,220   59   47   1,326     Lesser Spotted Woodpecker   184   7   7   198     Woodlark   1,201   91   33   1,325     Skylark   7,899   43   25   7,967     Sand Martin   1,541   81   293   1,915     Swallow   50,923   1,831   1,678   54,432     House Martin   8,766   295   219   9,280     Tree Pipit   1,647   14   39   1,700     Meadow Pipit   9,178   146   75   9,399     Rock Pipit   765   17   11   793     Yellow wagtail   992   2   2   996	Green Woodpecker	363	12	16	391	
Lesser Spotted Woodpecker18477198Woodlark1,20191331,325Skylark7,89943257,967Sand Martin1,541812931,915Swallow50,9231,8311,67854,432House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail992222	Great Spotted Woodpecker	1.220	59	47	1.326	
Woodlark1,20191331,325Skylark7,89943257,967Sand Martin1,541812931,915Swallow50,9231,8311,67854,432House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail99222996	Lesser Spotted Woodpecker	184	7	7	198	
Skylark7,89943257,967Sand Martin1,541812931,915Swallow50,9231,8311,67854,432House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail99222996	Woodlark	1,201	91	33	1.325	1.1.1.1
Sand Martin1,541812931,915Swallow50,9231,8311,67854,432House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail99222996	Skylark	7.899	43	25	7.967	
Swallow   50,923   1,831   1,678   54,432     House Martin   8,766   295   219   9,280     Tree Pipit   1,647   14   39   1,700     Meadow Pipit   9,178   146   75   9,399     Rock Pipit   765   17   11   793     Yellow wagtail   992   2   2   996	Sand Martin	1.541	81	293	1,915	
House Martin8,7662952199,280Tree Pipit1,64714391,700Meadow Pipit9,178146759,399Rock Pipit7651711793Yellow wagtail99222996	Swallow	50,923	1.831	1,678	54.432	
Tree Pipit   1,647   14   39   1,700     Meadow Pipit   9,178   146   75   9,399     Rock Pipit   765   17   11   793     Yellow wagtail   992   2   2   996	House Martin	8,766	295	219	9.280	
Meadow Pipit   9,178   146   75   9,399     Rock Pipit   765   17   11   793     Yellow wagtail   992   2   2   996	Tree Pipit	1.647	14	39	1.700	
Rock Pipit   765   17   11   793     Yellow wagtail   992   2   2   996	Meadow Pipit	9.178	146	75	9.399	
Yellow wagtail 992 2 2 996	Rock Pipit	765	17	11	793	
	Yellow wagtail	992	2	2	996	

Species	pre-99	1999	2000	Total	
Grey Wagtail	5,561	117	103	5,781	
Pied Wagtail	9,234	209	180	9,623	
Dipper	9,375	158	186	9,719	
Wren	14,682	356	268	15,306	
Dunnock	29,466	244	244	29,954	
Robin	19,652	383	395	20,430	
Nightingale	455	6	3	464	
Black Redstart	151	11	4	166	
Redstart	6,156	136	98	6,390	
Whinchat	2,145	107	73	2,325	
Stonechat	2,964	191	67	3,222	
Wheatear	3,582	132	90	3,804	
Ring Ouzel	1,584	105	64	1,753	
Blackbird	126,078	1,333	1,270	128,681	
Fieldfare	7	-	-	7	
Song Thrush	72,052	595	539	73,186	
Redwing	113	-	2	115	
Mistle Thrush	7,697	99	97	7,893	
Cetti's Warbler	28	-	-	28	
Grasshopper Warbler	372	1	3	376	
Sedge Warbler	4,633	66	39	4,738	
Marsh Warbler	168	-	-	168	
Reed Warbler	12,917	763	783	14,463	
Dartford Warbler	453	8	16	477	
Lesser Whitethroat	838	10	9	857	
Whitethroat	5,844	59	69	5,972	
Garden Warbler	1,942	48	36	2,026	
Blackcap	3,306	90	80	3,476	
Wood Warbler	2,371	40	29	2,440	
Chiffchaff	2,846	77	111	3,034	
Willow Warbler	12,306	193	172	12,671	
Goldcrest	786	16	12	814	
Firecrest	9	-	-	9	
Spotted Flycatcher	10,498	148	125	10,771	
Pied Flyctacher	36,680	1,100	924	38,704	
Bearded Tit	152	50	-	202	
Long-tailed Tit	5,344	148	135	5,627	
Marsh Tit	1,365	49	26	1,440	
Willow Tit	454	7	8	469	
Crested Tit	389	14	19	422	
Coal Tit	5,071	101	111	5,283	
Blue Tit	84,054	3,844	3,188	91,086	
Great Tit	52,775	2,864	2,454	58,093	
Nuthatch	3,217	140	103	3,460	

Species	pre-99	1999	2000	Total	
Treecreeper	2,367	52	48	2.467	· · · · · · · · · · · · · · · · · · ·
Golden Oriole	41	-	-	41	
Red-backed Shrike	256	-	-	256	
Jay	1,505	19	17	1.541	
Magpie	7,506	107	128	7,741	
Chough	672	27	8	707	
Jackdaw	6,776	233	189	7,198	
Rook	12,811	585	262	13.658	
Carrion Crow	7,177	147	128	7.452	
Hooded Crow	1,115	9	5	1.129	naissa na 1937 (h.
Raven	3,365	173	154	3.692	
Starling	15,209	314	242	15.765	
House Sparrow	12,571	149	191	12.911	al she in th
Tree Sparrow	16,432	507	607	17.546	i na serie de la compañía de la comp
Chaffinch	21,630	323	318	22.271	
Greenfinch	13,708	120	146	13.974	
Goldfinch	3,092	30	51	3.173	
Siskin	82	3	•	85	and the state.
Linnet	27,081	252	223	27.556	din katika fi
Twite	855	6	•	861	aayaase oo dhihad
Redpoli	1,309	stan in <b>a</b> r		1324	
Common Crossbill	153	-	1	154	01.00 x740 (0974)
Bullfinch	5,442	90	129	5.661	
Hawfinch	190	-	3	193	
Snow Bunting	202	-	-	202	
Yellowhammer	7,136	122	248	7.506	r y iny ing
Cirl Bunting	255	•	-	255	en da li i i dalari
Reed Bunting	7,768	63	38	7.869	
Corn Bunting	898	9	12	919	
GRAND TOTAL :	1,137,549	36,710	27,433	1,201,692	

NB: a number of rare or sporadic breeders have also been recorded by the Scheme over the years, including: Pied-billed Grebe, Little Bittern, Night Heron (3), Spoonbill (3), Bar-headed Goose (3), Scaup, Chukar, Black-winged Stilt (2), Temminck's Stint, Purple Sandpiper (4), Ruff (4), Wood Sandpiper (2), Little Gull (3), Lesser Crested Tern (5), Snowy Owl (2), Hoopoe, Bluethroat, Savi's Warbler (4), Short-toed Treecreeper, Brambling (2), Serin, Parrot Crossbill (4) and Scarlet Rosefinch. A few records for some wildfowl species may relate to feral birds (eg Whooper Swan, Greylag Goose, Snow Goose, Barnacle Goose, and Mallard).

Species highlighted by shaded rows are those used within the BTO's Integrated Population Monitoring programme. The totals for pre-1999 and 1999 have changed since those printed in Nest Record *News* No 16 due to the addition of cards received at the BTO after March 2000.

### Featured Species: Garden Warbler Sylvia borin Borin by name, Boring by nature?

So what is interesting about the garden warbler? Its most striking physical feature, is the lack of any obvious feature! The Garden Warbler is a relatively common and widespread summer visitor to Britain, breeding throughout England, Wales and the southern half of Scotland. The population achieves highest densities in southern England, the Midlands and in Wales, with an estimated 200,000 territories occupied during the 1988-91 Atlas. However the nest records have only just exceeded the 2,000 mark in the year 2000, probably due to its skulking behaviour and tendency to nest in thick cover.

The preferred breeding habitat and song are quite similar to that of its more common, close relative, the Blackcap *Sylvia atricapilla*. However, the Garden Warbler can be found in lower scrub than the Blackcap, being less reliant on woodland.

The first of these long distance migrants usually turn up in southern England in the third and fourth weeks of April, with the bulk of birds returning to breeding sites during May. The adult male bird starts to proclaim its territory almost straight away and will sing at its best through May and early June, continuing into the first few days of July. Fortunately he will usually sing reasonably close to the nest, this most often being located in low scrub, with over half being found in bramble, and others favouring nettle and wild rose. Also note that some two-thirds of nests are located less than 60cm (2 feet) off the ground, with over 90% being under 120cm (4 feet).

The vast majority of clutches are first laid, between the second week of May and the second week of June, with the peak period in the third week of May. The 4 or 5 eggs are



Artwork by Brian Small

usually incubated for around 12 days, with young being present in the nest from late May until early August.

#### Hints for finding Garden Warbler nests:

- Start searching for nests in the first couple of weeks in May.
- Locate nests by watching singing males or adults feeding young.
- Look for nests below or close to where the adult male is singing, usually low in bramble, nettle or wild rose (ouch!). Various other sites can be used, including gorse, young conifers, bilberry, dead bracken and rough grass.
- The nest is usually positioned from just above ground level up to 1m high.
- Adults will use their scolding alarm calls when you are near the nest or fledglings, this sounding like two pebbles rubbed together.
- Beware! Males may build trial nests which are never used.
- Beware! Blackcaps can nest close-by; the nests and songs are quite similar.

G	Farden	Warbler	vs	Blackcap
A	Nestin	g Habits	Сс	mparison

	Garden Warbler	Blackcap
Nest Site Habitat		
Deciduous woodland	62%	76%
Scrub	25%	4%
Hedgerow	3%	5%
Usual first arrival	April (week 3)	April (week 1)
Nest Located in		
Bramble	53%	48%
Nettle	11%	9%
Hawthorn	4%	7%
Blackthorn	1%	3%
Elder	2%	6%
Rose	8%	4%
Nest Height		
0 to 1 feet	35%	17%
1 to 2 feet	32%	31%
2 to 3 feet	17%	24%
3 to 4 feet	10%	17%
4+ feet	6%	11%
Laying date range	Apr (wk 4) to Jul (wk 2)	Apr (wk 2) to Jul (wk 3)
Laying date peak	May (weeks 2-4)	May (weeks 1-3)

NB: All data taken from, Mason, F. (1995). The Blackcap. Hamlyn Species Guides or from the Nest Record Scheme.

### Work Done this Year

**Oracle Database:** During the preceding year, BTO staff have been working to load all the computerized data into the new Oracle Database. Over 400,000 nest records are now contained within the system, greatly enhancing ease of access and the ability to analyse the data quickly and more effectively. The new database supports a Microsoft Access front end, still in development, which will allow online data enquiries, reporting and data extraction. This year will see the final loading of all remaining habitat data in the system. Administration Database: Also under development over the past year, is the new Administration Database for the Nest Record Scheme. This will enable the BTO to manage more effectively the many batches of Nest Record Cards coming into HQ, keeping up-to-date name and address information and the ability to check who specialises on each species, again greatly aiding in the analysis of nest record data and in servicing data requests.

# New Trends from the Nest Record Scheme

The latest results from the Scheme derive from the analysis undertaken for the Web-based report 'Breeding Birds of the Wider Countryside 2000' *http://www.bto.org/birdtrends.* The BTO looked at trends over the past 30 years (1969-99) for 74 species, the key features of the results are described below.

Eight species showed significant declines in breeding performance that may be linked to their population declines. These are the subjects of alerts to the JNCC. The number of years on the NRS Alert list is provided in parenthesis:

**Reed Bunting** (9 years): Increasing egg-stage nest failure rates (from 11% to 36%) may be holding back the recovery of this species. Its population declined by 49% over the past 30 years.

**Linnet** (9 years): Increasing egg and young stage failure rates, which over the whole nesting cycle amounts to an increase from 39% to 53% failing before fledging. Linnet have declined by 59% over the past 30 years and detailed analysis has shown that the increase in egg-stage failure rates is sufficient to have caused the population decline.

**Moorhen** (8 years): Increased egg-stage failure rates (from 31% to 40%). This species has shown a population decline of 32% on farmland CBC plots and range contractions in the 1988-91 Breeding Bird Atlas. The species may be suffering from a decline in the quality of farm ponds and possible wider declines in the quality and quantity of wetland habitats on farms.

**Lapwing** (5 years): Increasing egg-stage failure rates (from 40% to 49%). National surveys of this species in England and Wales have showed

a 49% population decline between 1987 and 1998 and breeding performance has been identified as the main demographic driving force behind population declines.

**Ringed Plover** (4 years): Increased egg-stage failure rates (from 56% to 70%). The breeding population size of this species is not monitored annually by any scheme and thus the information from the NRS must be viewed with concern.

Willow Warbler (2 years): Increased chickstage failure rates (from 18% to 27%). This species has undergone a moderate population decline of 39% over the past 30 years. While previous work has shown that declines in survival rates were to blame, declining breeding performance and productivity may be having increasing significance.

Yellow Wagtail (NEW): Average brood size for Yellow Wagtails has declined from 4.85 to 4.40 chicks over the past 30 years. Although the annual sample sizes are relatively small, for this under-recorded species, the pattern of decline is quite clear. Yellow Wagtails have declined in abundance on Waterways Bird Survey plots by 81% since 1975 and the causes of this decline need urgently to be addressed.

**Red-throated Diver** (NEW): Egg-stage failure rates have increased from 13% to 42% since 1980. Although sample sizes are small, this is a species specially protected under the Wildlife and Countryside Act 1981 and is a species listed as having unfavourable conservation status in Europe.

### **Constant Nest Monitoring Plots**

The coming year will see the launch of an important new BTO pilot project intended to supplement the existing Nest Record Scheme by providing additional information on breeding success throughout the season and relationships between productivity and habitat. The existing Nest Record Scheme has provided, and will continue to provide, important information on UK bird populations, both on its own and as a component of the BTO's Integrated Population Monitoring programme. However, it is not possible to extract information from NRS data on one potentially very important component of breeding success, the number of breeding attempts that a pair makes in a season. Some features of the NRS, such as the tendency for recording effort to decrease towards the end of the summer, are also areas that need further attention.

The Constant Nest Monitoring programme is being developed as a way to achieve a more structured and standardized form of nest recording. The new scheme will run in parallel with the existing NRS, providing valuable extra information and calibration, as well as promoting local-scale projects within the overall national framework. It should complement the NRS in the same way that the Constant Effort Sites (CES) scheme complements ringing nationally. Interesting and important new research opportunities will arise involving, for example, comparisons of plots with different levels of predator pressure or of human disturbance.

The basic idea is that, for periods of a few years at least, nest recorders monitor the breeding attempts of one or more species on defined monitoring plots. The main differences from standard nest recording will be that the area covered (and its habitat) will be kept constant from year to year and that recording of search effort (eg number of hours in the field) and an approximate count of the number of pairs present of each study species would be required. An initial census of numbers is important because it will allow us to assess levels of coverage (i.e. the proportion of breeding pairs' nests found) and perhaps to relate breeding success to density. Ideally, recording would continue throughout the nesting season of a species but, in practice, information on the time spent recording through the season would be sufficient. Plots will have to be of at least the size of one territory, the idea being that all the breeding attempts of the pair concerned are monitored.

The details of the scheme we are proposing will be worked out during 2001, with a view to pilot Constant Nest Monitoring Plots (CNMPs) being established in spring 2002. The knowledge and experience of nest recorders will play a vital role in this process and we will be writing to a sample of contributors later this year to ask for advice and to discover whether any CNMPs are effectively already being operated within the Nest Record Scheme. We will send a questionnaire for this purpose; it will also be available on the BTO's website (*www.bto.org*). We would value any input from nest recorders, before or after the questionnaires are produced, especially from anyone who already carries out a CNMP-like study or who thinks they would be interested in taking on a pilot plot. Please contact Gavin Siriwardena or Mike Raven at BTO Thetford HQ.

# Foot and Mouth Disease Current Guidelines for Nest Recorders

The BTO is advising all ringers and nest recorders not to carry out fieldwork on farmland (and other restricted areas) at present. Severe restrictions are currently in place in the countryside to avoid the spread of foot-and-mouth disease in livestock. It is important that nest recorders do not undertake any action that could spread the disease. The BTO therefore advises nest recorders:

- 1 Not to undertake any fieldwork where restrictions are in place;
- 2 Actively seek confirmation that access is permitted, even in circumstances where access is normally permitted without referral to the landowner;
- 3 To follow all the safety instructions that landowners require, if access is permitted,
- 4 If in doubt, don't undertake the fieldwork.

Further restrictions apply to nest recorders operating in Ireland. There is particular concern to ensure that Foot and Mouth disease does not spread in Ireland, and to this effect stringent restrictions on countryside activities are now in place both in the Republic of Ireland and Northern Ireland. Nest recorders should not operate anywhere in the countryside while the crisis lasts. Effectively this means that nest recording must be confined to gardens (and elsewhere in urban and suburban areas with the landowner's permission), foreshore areas that are not accessed by traversing farmland, unstocked islands and other similar areas.

If you require further information about this, please contact the Nest Records Officer, Mike Raven at the BTO. Telephone: 01842 750050. Email: *mike.raven@bto.org*. Detailed information about the state of the outbreak and restrictions that are currently in place is available on the MAFF website *www.maff.gov.uk/animalh/diseases/fmd*. Please check the BTO website regularly for further announcements. We will update this advice as the situation develops. Thank you for your co-operation in helping to prevent any further spread of the disease.

### Writers & Artists

Calling all you budding or established nest recording writers and artists out there! I am hoping to gather both artwork, in the form of line drawings of birds, birds nests, etc or short articles of up to 700 words in length on the following subjects for future issues of **Nest Record** *News*.

- Nest recording over the years at a particular site
- Nesting habits of a particular species
- Nest finding tips on particular species or groups of species.

Please contact Mike Raven

**Contacts:** *Dr Humphrey Crick* heads up the NRS, leading on data analysis and can advise potential analysts on methodology; *Mike Raven* is the main point of contact for nest recorders and manages the NRS data archive; *Peter Beaven* helps with administration and data processing; *David Glue* summarises the progress of each season as it happens, for articles in BTO *News* and elsewhere; *Dr Gavin Siriwardena* is leading on the development of the Constant Nest Monitoring Plots.

### Bird Species Protected under the Wildlife and Countryside Act 1981

The species listed below are protected under the Wildlife and Countryside Act 1981 as amended by the Environmental Protection Act 1990. If you wish to consider visiting the nests of any of these species, write to Jez Blackburn, the Licensing Officer, at the BTO H $\Omega$  for a licence application form. No nest may be visited without prior approval.

The majority of licenses issued during the breeding season are renewals for the same workers who held the appropriate approval during the previous season. Newcomers to the Nest Record Scheme, or recorders who have never held such a licence before, can apply for the relevant approval through the BTO. However, it is necessary to provide two references from 'respected' ornithologists e.g. County Recorder, BTO Regional Representative, Bird Club Chairman, BTO Bird Ringer etc, or a letter of support from a study group – relevant to the species application being sought. Please note that applications must be received before the end of February to be given priority; and no renewal can be granted until a report form has been submitted (including nil returns) for the previous season.

#### List of Schedule 1 species

Avocet Bee-eater Bittern Bittern, Little Bluethroat Brambling Bunting, Cirl Bunting, Lapland Bunting, Snow Buzzard, Honey Chough Corncrake Crake, Spotted Crossbill, (all species) Curlew, Stone Diver, Black-throated Diver, Great Northern Diver. Red-throated Dotterel Duck, Long-tailed Eagle, Golden Eagle, White-tailed Falcon, Gyr Fieldfare Firecrest Garganey Goldeneve Godwit, Black-tailed

Goose, Greylag Goshawk Grebe, Black-necked Grebe, Slavonian Greenshank Gull, Little Gull, Mediterranean Harrier (all species) Heron, Purple Hobby Hoopoe Kingfisher Kite, Red Merlin Oriole, Golden Osprev Owl. Barn Owl, Snowy Peregrine Petrel, Leach's Phalarope, Red-necked Pintail Plover, Kentish Plover, Little Ringed Quail Redstart, Black Redwing Rosefinch, Scarlet

Ruff Sandpiper, Green Sandpiper, Purple Sandpiper, Wood Scaup Scoter, Common Scoter, Velvet Serin Shorelark Shrike, Red-backed Spoonbill Stilt, Black-winged Stint, Temminck's Swan, Bewick's Swan, Whooper Tern, Black Tern. Little Tern, Roseate Tit. Bearded Tit. Crested Treecreeper, Short-toed Warbler, Cetti's Warbler, Dartford Warbler, Marsh Warbler, Savi's Whimbrel Woodlark Wryneck

NB. A rarer breeding species than these may be added to the Schedule 1 list without warning, so if you find one, contact the BTO's Licensing Officer for clearance.

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