Sabine's Gulls in western France and southern Britain

Norman Elkins and Pierre Yésou

ABSTRACT  Meteorological factors determining the arrival of Sabine's Gulls Larus sabini in western France and southern Britain are described. The largest coastal and inland concentrations are associated with very deep depressions moving across or to the north of the Bay of Biscay and the western approaches of the English Channel, although flocks at sea and off coasts in western France are also recorded in settled weather. This pattern indicates a late-summer and autumn feeding area in Biscay much closer inshore than was formerly acknowledged. The majority appear to be adults. The increasing frequency of large concentrations in the last 20 years may reflect an increase in the number of competent observers and/or the gull population using the Bay of Biscay. Data also suggest that there has been an increasing incidence of deep depressions over the region, and hence of southwesterly or westerly gales. The presence of large numbers on the French coast may on some occasions, however, be linked to temporary oceanographic episodes, particularly the warming of waters which lead to planktonic blooms.
The occurrence ashore of rare gulls is often due to displacement by strong winds (e.g. Elkins 1987). In western Europe, this has always been held to be true of the Sabine’s Gull *Larus sabini*, a pelagic migrant. Until the 1950s, its wintering area was thought to be mainly north of 50°N, with some found in the Gulf of Gascony (Fisher & Lockley 1954). Since then, the winter quarters of the Atlantic migrant population have been located in the Benguela Current upwelling off southern Africa (Mayaud 1965; Lambert 1967). In the Bay of Biscay, where the species has been known as a migrant since the last century (Mayaud 1961), they are present from July to December. Early records are from the third week of July, with the species becoming regular from 20th August onward. Only a few remain after October (Yésou 1993; Recorbet 1996). Autumn passage is observed over the shipping lanes in western Biscay and southwards off the coast of western Iberia (e.g. Bourne 1965).

From time to time, unusually large numbers occur on the coasts of France and Britain. Harrison (1985) suggested that a major staging area, probably involving several thousand individuals, exists west of Belle-Île off the coast of northwest France, although his reference is suspect (W. R. P. Bourne in litt.). Prior to the 1970s, an autumn total of 75 in the whole of Britain was considered exceptional, and in the 1990s annual totals have been only slightly higher (Fraser *et al.* 1997). Coverage by observers along the Biscay coast of France is much less complete than in Britain, so that influxes there may have been missed in the past. Substantial numbers have, however, been recorded in both countries in recent years. It is the purpose of this paper to relate the results of an investigation into the meteorological aspects of these influxes, and to discuss the immediate source of the birds. We have also taken the opportunity to place on general record recent unpublished French observations of the species.

**Methods**

Ornithological literature was searched to identify the major autumn influxes and coastal concentrations in Britain and France during the 20 years 1977-96. All concentrations of 100 or more Sabine’s Gulls at one site on the same date were considered, but smaller concentrations were also noted. Daily weather charts for the months of August, September and October for the same period were scrutinised, and the incidence of severe gales identified. Especially important was the passage of deep depressions eastwards or northeastwards across the area bounded by latitudes 52°N and 47°N, and longitudes 10°W and 5°W. Deep depressions were defined as those with central pressures at or below 985 hPa (1 hectoPascal = 1 millibar). Such depressions are very rare so far south in the North Atlantic in summer and autumn, and may be spawned from tropical storms in the western sector of the Ocean. Depressions of this depth invariably create very powerful winds, and it is these which are of note when considering displaced seabirds. The approximate duration of associated gales from directions conducive to coastal concentrations of seabirds was also noted.

Night-time illumination levels were derived from a computer programme developed from work by Turton & Stone (1989).
Results

A total of 12 occasions on which deep depressions crossed the prescribed area occurred in the two decades, at least four of which could be directly related to previous tropical storms (i.e. extra-tropical depressions as opposed to the normal polar depressions, see table 1). Monthly totals were nil in August, four in September and eight in October. Less-powerful storms, related to deep but more-distant depressions, were noted on a further 12 occasions: one in August, two in September and nine in October. The stormiest autumn during the period was in 1993. The severe gales associated with the majority of these systems lasted less than 24 hours (table 1).

Table 1. Details of deep depressions (central pressure less than 985 hPa) crossing Biscay, Celtic Sea and western English Channel in August, September and October, 1977-96.
Entries in bold associated with Sabine’s Gulls Larus sabini.
D = polar depression; ET = extra-tropical depression.
E = England, FR = France, CI = Channel Islands.
As a rough guide, mean wind speed at time of gust = \( \frac{2}{3} \) of gust speed.

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Duration (days)</th>
<th>Type</th>
<th>Maximum gust (kph) in onshore winds</th>
<th>Country affected by onshore gales</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>19th Sept</td>
<td>1</td>
<td>D</td>
<td>120 (E), 130 (FR)</td>
<td>E,FR</td>
</tr>
<tr>
<td>1982</td>
<td>13th Oct</td>
<td>1</td>
<td>D</td>
<td>115 (FR)</td>
<td>FR</td>
</tr>
<tr>
<td>1986</td>
<td>20th Oct</td>
<td>1</td>
<td>D</td>
<td>104 (CI)</td>
<td>E,FR</td>
</tr>
<tr>
<td>1987</td>
<td>15th Oct</td>
<td>1</td>
<td>D</td>
<td>180 (E), 158 (CI), 194 (FR)</td>
<td>E,FR</td>
</tr>
<tr>
<td>1989</td>
<td>28th Oct</td>
<td>1</td>
<td>D</td>
<td>162 (E)</td>
<td>E,FR</td>
</tr>
<tr>
<td>1991</td>
<td>28th Sept</td>
<td>1</td>
<td>D</td>
<td>133 (FR)</td>
<td>FR</td>
</tr>
<tr>
<td>1993</td>
<td>13th Sept</td>
<td>2</td>
<td>ET</td>
<td>159 (FR)</td>
<td>FR</td>
</tr>
<tr>
<td>1993</td>
<td>1st Oct</td>
<td>1</td>
<td>D</td>
<td>108 (FR)</td>
<td>FR</td>
</tr>
<tr>
<td>1993</td>
<td>5th Oct</td>
<td>1</td>
<td>D</td>
<td>100 (FR)</td>
<td>FR</td>
</tr>
<tr>
<td>1994</td>
<td>22nd Oct</td>
<td>1</td>
<td>D</td>
<td>&lt; 100 (E,FR)</td>
<td>E,FR</td>
</tr>
<tr>
<td>1995</td>
<td>7th Sept</td>
<td>1</td>
<td>ET</td>
<td>148 (FR)</td>
<td>FR</td>
</tr>
<tr>
<td>1996</td>
<td>28th Oct</td>
<td>1</td>
<td>ET</td>
<td>130 (E)</td>
<td>E</td>
</tr>
</tbody>
</table>

Records associated with deep depressions

1983

A very deep depression moved northeast across western Ireland, with its associated westerly gales affecting the Southwest Approaches on 2nd September. Winds gusted to 120 kph, with 100 Sabine’s Gulls recorded at St Ives, Cornwall, on 3rd September (table 2). A further 200 or more were noted in Britain that autumn.

1987

This event, in which over 300 Sabine’s Gulls were recorded from 16th October, has been well documented (Hume & Christie 1989), and was the result of the infamous storm that devastated southern England, the Channel Islands and northern France (see fig. 1). While considerably smaller than some French influxes, it was remarkable in British terms, especially as the gulls moved far inland. The pattern of occurrence of Sabine’s Gulls (and of Grey
Table 2. Concentrations of 100 or more Sabine’s Gulls *Larus sabini* ashore in Britain and France, 1977-96. Gale-related influxes are shown in bold.

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Number</th>
<th>Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>9th Sept</td>
<td>240</td>
<td>Les Sables d’Olonne, Vendée</td>
</tr>
<tr>
<td>1980</td>
<td>13th Sept</td>
<td>120-140</td>
<td>Les Sables d’Olonne</td>
</tr>
<tr>
<td>1983</td>
<td>3rd Sept</td>
<td>100</td>
<td><em>St Ives, Cornwall</em></td>
</tr>
<tr>
<td>1984</td>
<td>15th Sept</td>
<td>700+</td>
<td>Vilaine estuary, Morbihan</td>
</tr>
<tr>
<td>1984</td>
<td>16th Sept</td>
<td>1,220</td>
<td>Vilaine estuary</td>
</tr>
<tr>
<td>1984</td>
<td>7th Oct</td>
<td>100</td>
<td>Île Dumet, Morbihan</td>
</tr>
<tr>
<td>1985</td>
<td>11th Sept</td>
<td>130</td>
<td>Vilaine estuary</td>
</tr>
<tr>
<td>1985</td>
<td>13th Sept</td>
<td>600</td>
<td>Vilaine estuary</td>
</tr>
<tr>
<td>1987</td>
<td>11th Sept</td>
<td>250</td>
<td>Vilaine estuary</td>
</tr>
<tr>
<td>1987</td>
<td>16th-18th Oct</td>
<td>300+</td>
<td>S and E England</td>
</tr>
<tr>
<td>1993</td>
<td>13th-15th Sept</td>
<td>2,000+</td>
<td>W France</td>
</tr>
<tr>
<td>1995</td>
<td>7th Sept</td>
<td>850+</td>
<td><em>Les Sables d’Olonne</em></td>
</tr>
<tr>
<td>1995</td>
<td>11th Sept</td>
<td>150</td>
<td>Hoedic, Morbihan</td>
</tr>
<tr>
<td>1995</td>
<td>20th Sept</td>
<td>200</td>
<td>Vilaine estuary</td>
</tr>
</tbody>
</table>

Phalaropes *Phalaropus fulicarius* which were also displaced in unusual numbers) suggests, however, that the gales themselves were not the cause of displacement while the birds were at sea. Surface winds over Biscay around the depression were not particularly strong early on 15th October. The first reports of violent winds occurred off northwest Spain from midday, with these gales extending across Biscay and northwest France as the depression deepened to below 960 hPa and moved northeastwards. There was a distinct

![Fig. 1. Synoptic chart for 12.00 UT on 15th October 1987.](image-url)
dearth of reports of Sabine's Gulls from France ('a few tens' were reported from the tip of Brittany, the only area in France close to the depression track). This suggested that they moved with the eye of the storm, remaining over the sea until the landfall of the depression centred on the Dorset coast early on 16th. It is likely that the gulls began to settle out over the coast and were overtaken by the very powerful west-to-southwest winds to the rear of the depression (gusting to 145 kph inland, and maintaining a steady 130 kph at an altitude of 500 m). These winds then carried them across southern and central England. The geographical distribution of observations on 16th and 17th (see figs. 1 & 2 in Fraser & Ryan 1994) showed a swathe of reports from Dorset to Essex and Cambridgeshire, corresponding almost exactly to the horizontal trajectory (not the direction) of the airflow during the first few hours from the gulls' landfall on 16th. This is supported by the paucity of records in the extreme southeast and southwest of England. The Southeast (East Sussex and Kent) was too far south to receive birds from Dorset, despite suffering winds as severe as other locations in southern England, and the Southwest was on the 'wrong' side of the depression. Observations on 16th from a southwest-bound vessel near Land's End revealed no Sabine's Gulls and relatively few other seabirds (W. R. P. Bourne in litt.), of which there were only small numbers inland in the days following the storm. The weekend's birdwatching activity on 17th and 18th coincided with the birds' return towards the Atlantic, with the vast majority having departed by 20th.

1993

This autumn saw the largest-ever coastal influx in Europe, when at least 2,000 Sabine's Gulls were reported on the French Atlantic coast between southern Brittany and the Gironde from 13th September (Desrnots & Yésou 1994). Ex-hurricane 'Floyd', reinvigorated as an extra-tropical depression, passed slowly east into Brittany on 13th with a central pressure of 968 hPa (fig. 2). Winds gusted to 159 kph at Belle-Île, but, as the depression moved along the Channel Coast of northern France, filling slowly, the severe westerly gales veered northwest and abated. In Vendée, at least 1,600 Sabine's Gulls were counted on the afternoon of 13th, with 800 in the vicinity of les Sables d'Olonne alone, and several occurred well inland during the next few days. Only 130 Sabine's Gulls were recorded in Britain during the whole season between mid August and early October. Unlike the 1987 event, it appears that the birds were drifted in the prolonged gales rather than moving in the eye of the storm. No gale-induced Sabine's Gull influx of any size had been recorded in France since September 1930, when westerly gales associated with a deep polar depression over Britain carried large numbers onto the Atlantic coast, particularly in Gironde (Mayaud 1931).

1995

This meteorological situation was almost a mirror image of that in 1993. The dying hurricane 'Iris' was reinvigorated into a rapidly deepening depression on 6th September, passing north of Brittany on 7th with a central pressure of less
than 972 hPa. It moved up the English Channel, weakening steadily, with severe southwest-to-west gales battering western France. A wind speed of 148 kph was recorded at the tip of Brittany. Most of the sightings were from Vendée, where over 850 Sabine’s Gulls were counted at Les Sables d’Olonne on 7th. These birds arrived around midday, at the height of the storm, and reached a peak in the evening. A rapid decrease in the wind overnight allowed all but a few to return to sea. Sabine’s Gulls were also reported from other sites, especially in Morbihan (Desmots & Yésou 1996). Again, few were recorded in Britain from this storm.

During the period under review, there were a number of deep depressions west of the area that gave rise to severe south-to-southwesterly gales. This would theoretically drift any seabirds in northern Biscay onto the south-facing coasts of Ireland or Cornwall. Five such events were noted, but on no occasion was any increase of Sabine’s Gulls reported from coastal waters.

Outwith the period of this study, on 29th August 1997, a remarkable northwestward coastal passage was recorded at Les Sables d’Olonne into a strong WNW airstream associated with a deep depression over Britain. The strength of the winds was not particularly notable, gusting to 97 kph on Ouessant on 28th, and backing southwest on 29th in the circulation of a wave depression. The movement, which was estimated to be of several hundred on 28th and 29th, appeared to be more of a concentrated ‘fly-by’, perhaps of birds newly arrived in Biscay. Preliminary reports reveal that this autumn produced almost 1,000 Sabine’s Gulls off Ireland, with 347 off Co. Kerry on 29th August in light winds, suggesting that huge numbers must have been present in the region. Unusually high numbers were also noted in the North Sea in September, with passage through the Strait of Dover in October. Displacement by gales around northern Scotland seems likely to have occurred, in a manner similar to that of other pelagic seabirds.

Discussion

The small numbers of Sabine’s Gulls (no more than 25 at any one time) that occur in southwest England and southern Ireland are often associated with strong westerly or northwesterly winds. Most of these are ‘fly-bys’ of migrants. The 1982 storm did produce 30 or more near Les Sables d’Olonne, an unpublished record that recently came to light from a non-ornithological source (J. Moreau verbally). The events at sea and on the French coast in 1977, 1980, 1984, 1985, 1987, 1988 and 1989 (tables 2 & 3) were notable, however, in that they were not associated with any particularly strong winds. Indeed, many occurred during light winds of varying directions, often near ridges of high pressure. Some records were of Sabine’s Gulls roosting ashore, suggesting that flocks may sometimes feed nearer the coast than is generally believed (see Desmots & Yésou 1994). As southerly gales bring no coastal flocks to Britain or Ireland, most would appear to be concentrated off the French coast south of Brittany.

Bourne (1986) identified a seabird concentration (Great Shearwaters *Puffinus gravis*, Sooty Shearwaters *P. griseus*, Manx Shearwaters *P. puffinus*,...
100. Sabine's Gull *Larus sabini*, France, August 1997 (Frédéric Fiquet). The grey neck patch behind the black collar, the retained black-tipped tail feather, and the much-abraded white primary tips are indicative of first-summer plumage; it is uncommon for the grey hood to be so extensively developed at this age, and such an individual could easily be taken for a moulting adult when seen in normal seawatching conditions.

101. Adult Sabine's Gull *Larus sabini*, France, August 1997 (Frédéric Fiquet)
Northern Gannets Morus bassanus and occasional passing Grey Phalaropes) in late summer south of Brittany. The area concerned is along the ‘shelfbreak front’, a persistent line of upwelling created by a deep current impinging on the edge of the continental shelf. Although there have been no records of large numbers of Sabine’s Gulls in this area, French ornithologists have found that in coastal waters (up to 55 km from the coast) the frequency of Sabine’s Gulls from late August to mid October usually varies from 0.2 to 1.4 birds per hour at sea in central and northern Biscay (Yésou 1993; Recorbet 1996). Higher densities occur south and west of this area in mid Biscay over the continental shelf between 45°N and 46°30’N (A. Bertrand verbally; Burmeleau & Dubois 1985; G. Hémery in Recorbet 1996; PY pers. obs.). Over ten Sabine’s Gulls per hour have been regularly observed at sea in the area known as Rochebonne, 55 km west of La Rochelle, and farther south, with the highest numbers recorded in the 1980s (fig. 2 & table 3). The lack of three-figure records in the 1990s probably reflects the scarcity of pelagic trips to the right places, rather than decreasing densities.

The 1980 influx in French coastal waters involved a total of about 500 Sabine’s Gulls recorded in daily observations near Les Sables d’Olonne during 5th-18th September (see table 2). The area affected is usually characterised by cold coastal water, leading to thermal oceanographic fronts favourable to feeding Balearic Shearwaters Puffinus mauretanicus (Le Mao & Yésou 1993). During the summer of 1980, however, warmer water from southern Biscay invaded the area (Yésou 1982). Although there is no proof that this can explain the influx of Sabine’s Gulls, a relationship is suggested by events in the Vilaine estuary, where phytoplanktonic blooms linked to warm water have occurred simultaneously with high Sabine’s Gull numbers. For example, such a massive bloom appeared in the Vilaine estuary in 1984. Recorbet (1996) suggested that the presence of numerous Sabine’s Gulls (see table 2) was linked to that bloom, although there is no direct proof of such a linkage (e.g. the end of the bloom was characterised by an abundance of toxic algae, theoretically detrimental to most living organisms). Blooms still occur there almost annually, while associated large numbers of Sabine’s Gulls have not recurred in the last ten years. Any connection between the abundance of Sabine’s Gulls and oceanographic parameters cannot be certain owing to the lack of information on the gulls’ food and its distribution.

The sequence of meteorological events leading up to the influxes of 1987, 1993 and 1995 correlates very well with such concentrations noted in Biscay. Innumerable voyages by members of the Royal Naval Birdwatching Society and others have never found anything other than passing Sabine’s Gulls along the shipping routes (W. R. P. Bourne in litt.), but these routes are well away from coastal waters and the regions of upwelling along the ‘shelfbreak front’.

Figs. 1 & 2 (pages 389 & 394) show the tracks and positions of the depressions during the largest English and French influxes, as well as the areas in which the majority of Sabine’s Gulls were observed immediately after the strongest gales. In 1987 (fig. 1), the distribution of the gulls mirrored the track of the depression, and hardly affected France, lending credibility to the suggestion that their initial movement was in the eye of the depression, with
Fig. 2. Synoptic chart for 06.00 UT on 13th September 1993.
Dashed line = track of depression centre (x marks midday positions), 12th-13th Sept 1993
Horizontal shading = main areas of land-based records, 13th-14th Sept 1993
Dotted line = edge of continental shelf
1, 2, 3 = locations of Belle-Île, Vilaine estuary and Les Sables d'Olonne respectively
Angled shading = area of recently observed offshore concentrations

Table 3. Records of over 100 Sabine's Gulls Larus sabini off the French coast, 1977-96
(from Burneau & Dubois 1985; A. Bertrand & P.-P. Évrard in litt.; PY pers. obs.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Number</th>
<th>Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>6th Sept</td>
<td>150</td>
<td>off île d'Oleron, Charente-Maritime</td>
</tr>
<tr>
<td>1980</td>
<td>29th-30th Aug</td>
<td>2,000</td>
<td>55-90 km off Charente-Maritime &amp; Gironde</td>
</tr>
<tr>
<td>1980</td>
<td>17th Sept</td>
<td>854</td>
<td>75-90 km off Charente-Maritime</td>
</tr>
<tr>
<td>1988</td>
<td>31st Aug</td>
<td>144+</td>
<td>35-55 km off Vendée</td>
</tr>
<tr>
<td>1989</td>
<td>24th Sept</td>
<td>200</td>
<td>35-55 km off Vendée</td>
</tr>
</tbody>
</table>

dispersal inland afterwards being suddenly overtaken by the hurricane-force winds. This inland penetration was unprecedented. It is possible that the sudden change in their atmospheric environment as they attempted to stop at the coast took them unawares during the hours of darkness. They would have experienced a sudden transition from relative calm in the eye of the storm to the violent winds on its southern flank. Taking into account the date, time of day, cloud cover and moon phase, the light level was only 2 millilux at landfall (with sunrise 3½ hours later). This equates to the amount of light available on a moonless but starlit night, to which must be added a little ‘cultural’ lighting from any towns. Although the gulls would initially have been aware that they were over land, the effect of the minimal illumination would have been negated by the violent winds. They would, therefore, have been swept inland where they
later located such suitable resting places as reservoirs. In contrast, those in the 1993 event (fig. 2) were already weathering the gales while at sea, and therefore stopped when they reached the coast. PY recorded some tens of Sabine’s Gulls, accompanied by other pelagic species, moving westwards into the gale over the hinterland near Les Sables d’Olonne in the early morning of 13th September. This suggests the likelihood of a similar nocturnal inland displacement, during what was an even darker night (0.4 millilux). Coastal records were widespread, attesting to the extent of onshore gales. Fig. 2 also shows the sea area in which French ornithologists have located a considerable concentration of gulls in late summer. Comparison of the two synoptic situations and the pattern of records suggests that in 1993 the gulls were widely distributed in eastern Biscay, while in 1987 the origin of the gulls may have been much more concentrated, possibly over the shelf west of Brittany. With the 4½-week difference in timing between the two events, differences in location would be expected, and annual variations in population and feeding areas would be superimposed on these.

The birds’ apparent lack of exhaustion highlights the fact that their involvement with the storm systems is confined to a very short time-scale. In both 1987 and 1995, this was less than 24 hours. Thus, Sabine’s Gull influxes cannot be compared with wrecks of seabirds in the accepted sense since, being an oceanic species, they seem physically able to tolerate such conditions. Table 2 shows that most French records occur from late August to mid-September, coinciding with the autumnal peak of the species in Britain (Dymond et al. 1989), so the 1987 influx was particularly late. Only in 1984 and 1987 were October influxes recorded, although 1996 brought a few. There were no significant Sabine’s Gull records in the storms of 1986, 1989 and 1994 (see table 1), which all occurred in late October, after the bulk of Sabine’s Gulls have departed from Biscay.

Relationship of other seabirds with Sabine’s Gulls and with similar storms

The association with Grey Phalaropes on several occasions may reflect the rather similar migration patterns of the two species, although many phalarope influxes have occurred without any accompanying Sabine’s Gulls. A small influx of phalaropes into Britain in late September 1957 (Sage & King 1959) took place during the passage east off southwest Ireland of a deep depression originating from hurricane ‘Carrie’. This depression was at its most intense approximately 1,000 km southwest of Cape Clear, Co. Cork, and generated severe gales over the western Bay of Biscay. The authors postulated, however, that the phalaropes had been swept along in the eye of the storm (similar to the 1987 Sabine’s Gull event, although clearly from a more westerly origin). Indeed, it is well known that seabirds often travel in the calm centres of tropical storms, occasionally being deposited inland and/or well outside their normal range (Elkins 1995). Another phalarope invasion occurred in autumn 1960, involving over 7,000 reported, mainly off southwest Ireland and southwest England (Ferguson-Lees & Williamson 1960); 21 years later, an estimated 1,000 occurred off Île d’Ouessant after a fast-moving wave depression crossed the area on 9th–10th October 1981. These events brought hardly any Sabine’s Gulls. An influx of Sabine’s Gulls in northwest France in
late September 1965 (on moderate southwesterly winds) was, however, associated with Grey Phalaropes (Ricard 1966). Leach's Storm-petrels *Oceanodroma leucorhoa* appeared in rather small numbers in 1987, but were somewhat more abundant in 1993. In the latter storm, hundreds of European Storm-petrels *Hydrobates pelagicus* were recorded, especially off Brittany. Skuas *Stercorarius/Catharacta* appeared in small numbers in both storms, but it would seem that the speed and track of the depressions described precluded the involvement of many of the pelagic seabird species which, at this time of the year, frequent waters farther out in the North Atlantic.

**Age of the birds**

Almost all the Sabine's Gulls in 1983, and 76% in 1987, were aged as adults. In 1993, the proportion of first-years was only 6%, and a sample in 1995 revealed 12% to be first-years. Similar low proportions of first-year birds were reported in the 1930 influx (10-12%: Mayaud 1931) and in the 1989 record in table 3 (7-10%). In the decade 1958-67, Sharrock (1971) showed that most Sabine's Gulls recorded in Britain and Ireland before mid September and after mid October seemed to be adults, while immatures predominated between these periods. The samples were, however, very small, and, as no major influxes occurred in his period of study, this pattern should be treated with caution. In addition, conditions often do not allow observers to distinguish between first-summer birds and full adults, especially those in moult. Age data must, therefore, be considered with care, as knowledge of moult and age-related plumages was in its infancy until the late 1970s. The subject has recently been addressed fully by Yèsou (1997).

**Acknowledgments**

We wish to thank all the seabird enthusiasts on both sides of the Channel for gathering the data. They are too numerous to mention, but their efforts are no less appreciated. We are also indebted to Didier Desmots, for assistance in gathering data over many years, and to Dr Bill Bourne and Rob Hume for their helpful comments, and for assistance with references and additional information. Special thanks are due to those French observers who contributed unpublished data, among them Alain Bertrand, Jean Chevallier, Philippe Dubois, Pierre-Paul Évrard and Jean-Philippe Siblet.

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