

SKOMER ISLAND

An information booklet

This booklet was the first comprehensive set of information provided for visitors in the 1980s

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INTRODUCTION

Skomer was purchased in 1959 by a joint agreement between the Nature Conservancy and the West Wales Naturalists' Trust. It was declared a National Nature Reserve on 15 June 1959, and is managed by the Trust who lease the island from the Conservancy. A warden is resident from early March to the end of October. There are no permanent inhabitants.

Skomer is open to the public each day except Mondays (Bank Holidays excepted) between 10.00 and 18.00 hours. The island boat crosses (weather permitting) from Martinshaven (SM761091), a small beach near the village of Marloes. A landing fee is payable on arrival at the island.

In the interests of the breeding seabirds, dogs are prohibited on Skomer.

Visitors are reminded that the cliffs of Skomer can be hazardous, but by adhering to the footpaths no danger should be encountered. Admittance to Skomer is entirely at the risk of the visitor. The West Wales Naturalists' Trust can accept no responsibility for any mishap or accident whatsoever, whether it be suffered on the island, during the sea crossing, or when embarking or disembarking from the boat. No toilet facilities or refreshments are available on Skomer.

A series of footpaths cross the island (see map inside front cover) and by following these disturbance and damage to the seabird colonies is minimised. These safe routes enable the visitor to reach all vantage points. The Warden or one of his assistants meets each boat and will be able to advise on points of interest and how best to spend the time ashore. By following the Country Code those who come to Skomer can help the West Wales Naturalists' Trust maintain and protect the wildlife of the island.

We hope that you enjoy your visit and will return again.

D. Saunders

DESCRIPTION

Skomer lies at the southern end of the beautiful St. Bride's Bay, Pembrokeshire, with no land to the south-west to protect the island from Atlantic gales and swell. The climate is extremely mild, the rainfall is little more than 75 cm, and weather changeable with frequent gales and hardly any frost.

In extent Skomer is 292 hectares if we include detached rocks such as the Garland Stone, the Mew Stone and the Pig Stone. It is principally a tableland 60 metres above sea-level intersected by a series of ridges one of which near the centre forms the highest point at 75 metres. There are a number of excellent springs several of which feed the main streams which flow through the North and South Stream valleys. There are small man-made ponds in the upper reaches



Skomer North Haven and wardens house.

D. Saunders

of both valleys and in the fields to the west of the farm, but only the North Pond retains water in dry summers.

At one point the island is nearly intersected by the sea, where a narrow neck of soft sedimentary rock precariously joins the igneous masses of the main structures. This isthmus is only 4 metres wide and 24 metres high, and at high spring tides its walls are washed by the sea, which at high water is several inches higher on the south side than the north. The force with which the sea rushes through the clefts about the island is plain on the east side where the small island of Middleholm (9 hectares) is separated from Skomer by the shallow strait of Little Sound which at low tide is only 73 metres wide — a comparatively recent separation

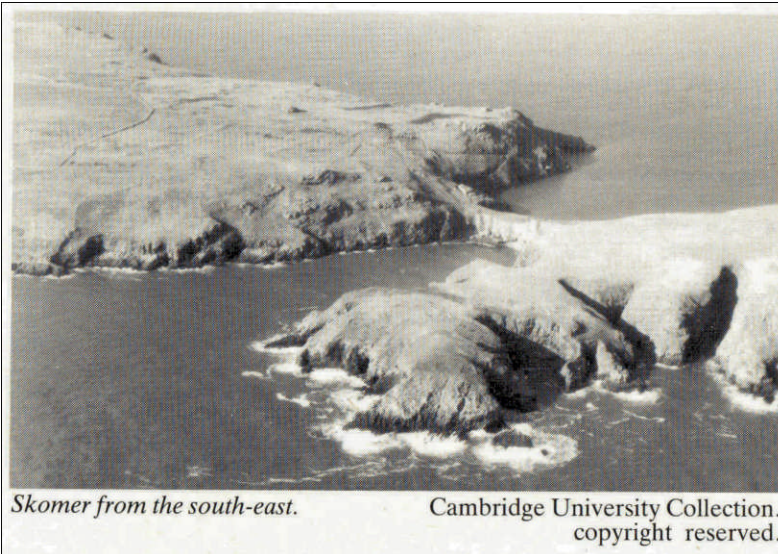
of some few thousand years.

Eastwards again of Middleholm and separating it from the mainland of Pembrokeshire is Jack Sound, 550 metres wide at its narrowest part and full of rocks, but safe enough for the passage of small steamers under a local pilot. In these sounds the tide runs most swiftly at high and low water, the current exceeding six knots at spring tides.

GEOLOGY

The rocks of Skomer form part of the Skomer Volcanic Group. This Group outcrops over a distance of over 40 km. from Grassholm Island and the Smalls in the west, through Skomer Island, Midland Island, and the Marloes Peninsula to St. Ishmaels in the east. Until quite recently the Group was thought to be of Lower Ordovician age but the discovery of poorly preserved ostracods on Midland Island in sediments of the same age as beds found at the Mew Stone on Skomer, indicates a late Ordovician or, more likely, a Silurian age for this lower part of the Group. The presence of the brachiopod *Eocoelia hemispherica* in a higher (and younger) part of the Group at Renney's Slip on the mainland shows that these latter rocks are undoubtedly of Lower Silurian (early Upper Llandovery) age. Thus the rocks of Skomer are probably of Lower Silurian age and formed during a period of time between about 420 and 430 million years ago.

The geological map shows that Skomer is composed predominantly of volcanic rocks which are largely lava flows but with associated ash beds. The total thickness of volcanics is 760m. Sediments interbedded with the volcanics have a total thickness of 140m. Most of the lavas are basic and of dark basaltic type, but many of the basalt flows show an alteration of calcic to sodic feldspar. Many other varieties of volcanic rock occur including mugearites, trachytes, soda-trachytes and soda-rhyolites. The pyroclastic rocks include rhyolitic tuffs and a rhyolitic ignimbrite containing typical flattened fragments. Pyroclastic rocks are rarely associated with the basic lavas and so it would appear that the eruptions of the more mobile basic lavas were not explosive, and that the volcanoes built were low cones of the "shield" type. The acid rhyolitic flows, on the other hand, were probably extruded as viscous steep sided domes, and the associated pyroclastics indicate accompanying explosive activity.



The sediments include poorly sorted conglomerates, cross-bedded sandstones, and red oxidised silstones. Except for the Midland Island occurrence no other fossils have been found and the sediments appear to have accumulated mainly on land in fresh water pools, in stream channels, and as alluvial cones on the flanks of the contemporaneous volcanoes.

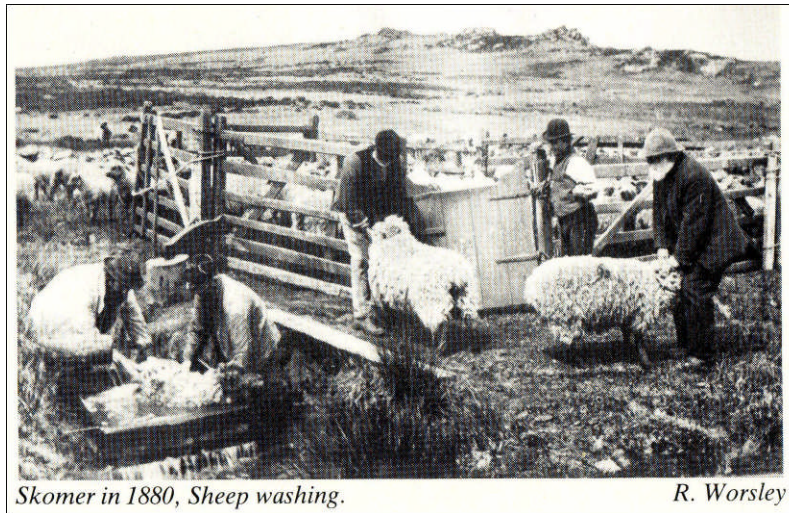
The Group as a whole dips towards the south at angles of up to 40°. The rocks therefore, become progressively younger southwards beginning with the oldest rhyolite flows of the Garland Stone and ending with Skomer's youngest rocks, the rhyolite flows of the Mew Stone.

The table-like surface of much of Skomer lies at about 60 metres O.D. and is part of a platform cut by the sea in pre-glacial, Pliocene times (2-7 million years B.P.). Similar platforms extend over much of Pembrokeshire but it is not known whether these platforms owe their origin to a much higher Pliocene sea level or a post-formational up-warping of the sea floor.

Spreads of boulder clay on the mainland and on nearby Skokholm, along with erratic boulders originating in Northern Britain found on Skomer and Skokholm, indicate that Skomer was over-ridden by the "Irish Sea" glacier during Pleistocene times. There has been no noticeable erosional effect and the ice is assumed to have attained no great thickness.

The post-glacial rise in sea level has created the island of Skomer while the destructive action of the sea continues to be particularly effective in creating caves and bays along planes of weakness, specially faults e.g. the tunnel cave near Little Sound known as The Lantern. Midland Island has become separated by such marine erosion, and the isolation of The Neck represents a stage in the same process.

HISTORY



In his work on the archaeology of Skomer, published in *Archaeologia Cambrensis* (1950), Professor W. E. Grimes shows that there is considerable evidence of human occupation of the island in the Iron Age, probably during the first century B.C. There is an extensive series of early field-systems, with huts and enclosures associated with them. South Castle, a promontory fort of The Neck, may well have been the stronghold of the first farmers of Skomer.

Remains of these huts and enclosures are seen along the paths from High Cliff to The Wick. Below the rock ridge are traces of narrow fields divided by banks and walls; their northern ends are stone-faced lynchets-steps formed as a result of soil-creep due to cultivation. In the shelter of the rock outcrops there is a series of hut sites. An oval hut in the north-east corner of a rectangular yard is particularly conspicuous. To the north of this site is a round mound which has every appearance of being a barrow. There were also concentrated settlements above Skomer Head and in the area between the North Stream and the Garland Stone, and scattered remains are to be seen elsewhere.

Nothing is known of the island in the Dark Ages. It is likely that it was visited by the Norsemen, who named it Skalmey, probably referring to its cloven shape. By the eighteenth century it was known as Skomer.

The earliest reference to Skomer is found in a valuation of the estates of Aylmer de Valence, Earl of Pembroke, after his death in 1324. Skomer, along with Middleholm and Skokholm, was gained by that family as a result of the conquest of the adjoining mainland by Roger du Montgomery and his Norman followers in 1093, but they were frequently held by the king who seized them on the treason of one or other of the earls. As part of the manor of St. Ishmael, accounts for the revenue obtained from the three islands cover from 1324 to 1545 with breaks.

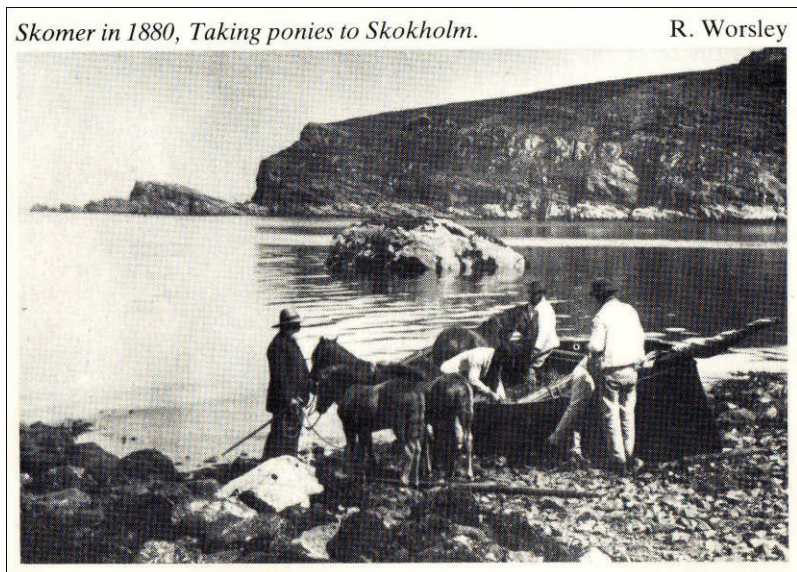
Rabbits, which were first recorded in Wales in 1282 and which had been introduced to the islands by 1300, were the principal product, and a normal season's catch of 2,000-3,000 yielded from £11 to £14. "Carcases and skins of rabbits caught in the islands of Schalmey, Schokholm and Middleholm, Michaelmas 1325 to January 1326," realised £13/12/-, and the expenses consisted of the "stipend of 3 ferreters, 12/3; salt for the aforesaid rabbit carcases, thread for rabbit nets, boards, nails and cord used for the boat in the said islands, 3/2." That the rabbit-catchers largely lived on their catch is indicated by the consumption by two ferreters, in 1387-88, of 540 rabbits, while their two ferrets consumed 262 carcases, but they also took 21/2 quarters of barley with them and hired cooking utensils. In that year, and again in 1391-93 and 1404-05, there are items of 2/- shown for the "repair of a house on the island of Scalmei, and of another house on the island of Skokholm for the said ferreters as well as for the storing of rabbits." The scanty remains of a building on The Neck may have been such a "house" on Skomer.

The islands do not appear to have had a settled occupation during the medieval period. Leland says that they were not inhabited in his day and this is confirmed by George Owen (1603), who says that they "serve onely for feeding sheep, kyne, oxen, horses, mares, and great store of coneyes." The pasturage of the islands, he states, "was valued to 55/-, and the coneyes to £14/5/-." "Game" occurs in two accounts; it was valued at 6/8 in 1387-88 and, in 1452-53, the "farm of birds, etc.," was let to Philip Meyler for 2/-, but other times it is valued at nothing "because no birds were bagged."

In 1522, Skomer was leased to John Wogan, of Boulston, and William Wogan, of Milton, but later in that century it formed part of the vast estates of Sir John Perrot, Lord Deputy of Ireland and reputed illegitimate son of Henry VIII, probably born at Haroldstone, near Haverfordwest, who died in the Tower of London in 1592, before sentence of death for treason could be carried out.

Skomer, like other islands, appears to have remained uncultivated for many centuries: they were simply occupied in winter by ferreters and, in summer, sheep and cattle were grazed and the seabirds exploited. It is believed that the farmhouse, now roofless, was built in the early part of the eighteenth century, and it was improved and enlarged from time to time.

The enclosure of the central area of the island is likely to have taken place by 1800, and new farm buildings were erected in 1843 by Charles Philipps, of St. Bride's, who then owned the island; a tablet high in the wall of the roofless



barn bears his initials and the date, W.C.A.P. 1843. He also improved the quay at North Haven so as to import limestone and culm. The limestone was burned in the limekilns — the remains of one forms a shelter above the landing place and the other stands complete further up the slope surrounded in spring by narcissi — and the lime was spread on the land as a fertiliser.

During the nineteenth century, the island was farmed extensively and its produce exported. In 1848, it was leased to Edward Robinson, a Londoner who had studied farming in East Anglia, and he farmed the island until he was succeeded, in 1861, by his son-in-law, Captain Vaughan Palmer Davies. Captain Davies was the son of a local farmer, but he had taken to the sea

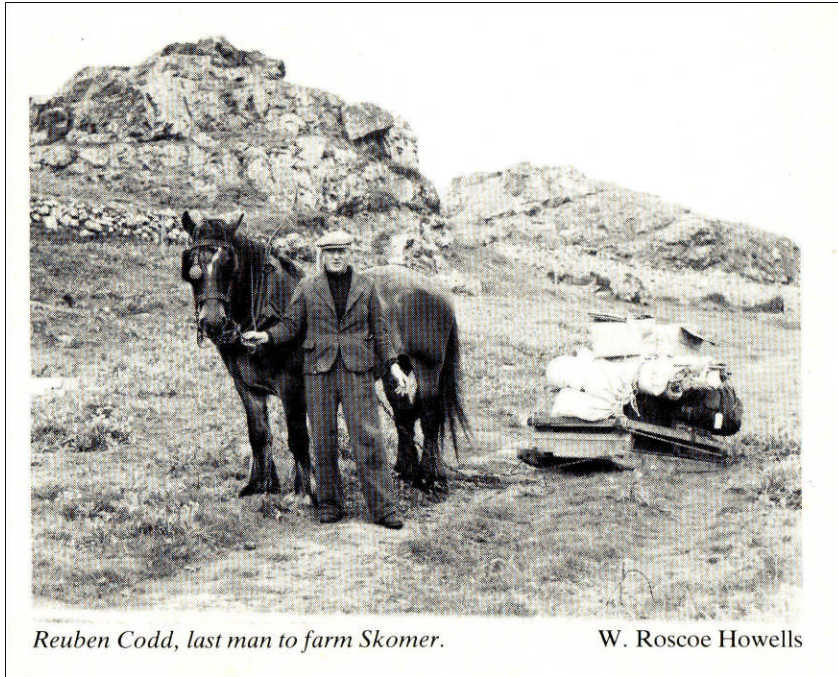
and had skippered a sailing ship trading between Calcutta, Bombay and Hong Kong. He became well known as a breeder of horses and grower of seed corn, which was much in demand as far afield as Northampton. The corn was threshed by means of a "horse-course" mechanism, remains of which are to be seen near the farm buildings.

After having been owned by the Phillips family for over two centuries, Skomer was purchased in 1897 by Lord Kensington. Farming was now in the hands of William Jones of Treehill, near Marloes, who already augmented his income by taking paying guests on Skomer. One of his most frequent visitors was Robert Drane, the eminent Cardiff naturalist, who 'discovered' the Skomer Vole.

The Neales, also of Cardiff, took the lease in 1905, and in a family which included seven sons, it is perhaps not surprising that the sporting aspects were maintained. They employed a gamekeeper, one of whose children was christened in the farmhouse kitchen. Information on the seabird colonies had now become widespread and as a result of increased disturbance both photography and general visiting was prohibited by the Neales in 1909. It is timely to remind ourselves that such pressures have by no means only occurred in recent years.

In 1922 the island once again changed hands when it was purchased by Walter Sturt, a retired dentist from Exeter, who promptly moved in with his wife and daughter Betty. Over the next few years the farm house was improved by the addition of modern amenities, while the daffodil and narcissi which today delight the visitor in early spring date from the same period.

In 1930 Betty Sturt married Reuben Codd, youngest son of a well known Marloes family, and it was now that the last farming took place on Skomer. During the inter-war years agriculture throughout the country was at a low ebb and on Skomer was restricted to the grazing of sheep and cattle. In 1947 and 1948 more extensive efforts were made including



Reuben Codd, last man to farm Skomer.

W. Roscoe Howells

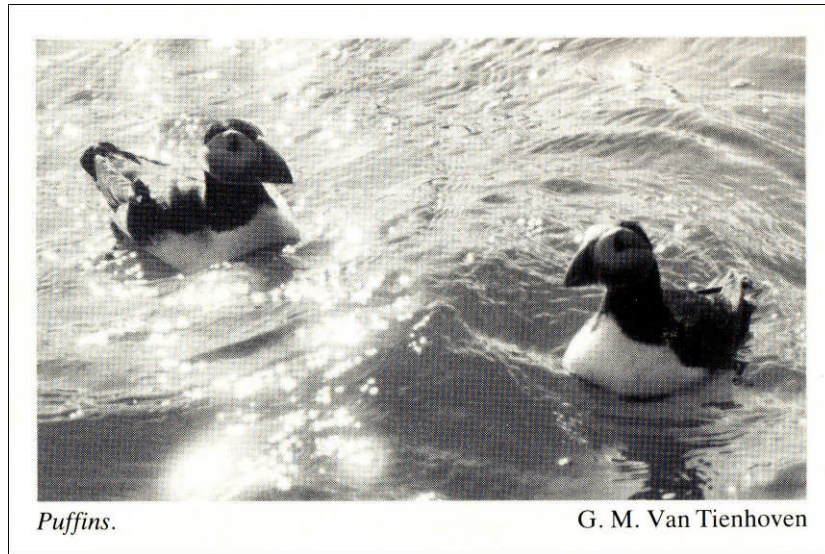
the cultivation of early potatoes, despite the difficulties of transporting such a crop to the mainland markets. However, time was not on the side of farming on Skomer for in 1949 Walter Sturt died there, and a year later the island was sold to Leonard Lee, a Midlands industrialist. Unfortunately, the farmhouse was badly damaged during a severe storm in 1954 and rapidly deteriorated into complete ruin except for one small section which is still in use as simple accommodation for members of the West Wales Naturalists' Trust.

Through the years the island's natural history had continued to attract much interest, and in 1946 the West Wales Field Society (now the West Wales Naturalists' Trust)

made a detailed survey. During the 1950s Reuben Codd, now living at Martinshaven, acted as the island's custodian and provided a boat service for the many naturalists and others who were visiting the area in increasing numbers.

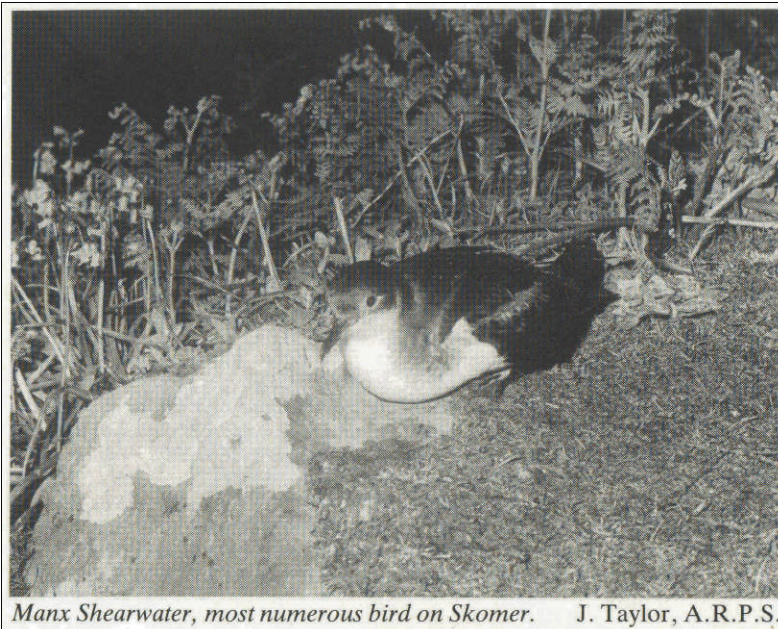
The last change in ownership took place in 1959 when the island was acquired by the Nature Conservancy as a National Nature Reserve. In the same year the warden's bungalow was built overlooking the North Haven landing area. Part of the bungalow contains accommodation and laboratory facilities for visiting research workers.

BIRDS



Skomer is one of the most important seabird sites in southern Britain. No visitor to Skomer can fail to be impressed by the large number of burrows, in places the ground seems honeycombed by them. Many will be occupied by Rabbits, on the cliff slopes they will be used by Puffins, but the majority provide a nesting site for the Manx Shearwater, most numerous of all the birds which frequent Skomer. It is estimated that as many as 100,000 pairs of this remarkable bird nest on the island. Unfortunately for a day visitor the chances of seeing one are rather remote, the Shearwater is only active on the island after dark, spending the day either in its burrow or out at sea, usually well clear of land.

The first Shearwaters arrive on Skomer during late February. Their nocturnal activity is accompanied by a great chorus of rather unearthly screams and chuckling calls, both by in-flying birds, and those on or under the ground. Calling is most intense on dark nights with poor visibility, on bright moonlit nights it is much diminished. When on the ground the Shearwater is rather ungainly, often having to scramble many yards before taking off. Because of this it falls easy prey at dawn to marauding Great Black-backed Gulls who are also quite capable of hunting on reasonably clear nights.



Despite such problems the Manx Shearwater has a lengthy breeding season, and it will be late August before the first young birds leave, and there will be stragglers well into October. On departure the birds make a very rapid journey south some 6,000 miles through the Atlantic to their wintering area off the coast of Brazil, Uruguay and northern Argentina. Extensive

studies over many years have revealed other interesting acts in the life history of this extraordinary bird. It rarely breeds before it is six years of age, while some live to be at least thirty. The incubation period lasts for approximately 51 days, with each adult sitting on average for six days before being relieved. Chicks remain in the burrow for some ten weeks before their departure.

Also nocturnal, but even more elusive, is the British Storm-petrel which nests in rock crevices and other small holes. Are its numbers on Skomer to be measured in hundreds or thousands? Even the scientists cannot yet provide the answer.

The third member of the petrel family on Skomer is much easier to locate. This is the cliff nesting Fulmar which arrived in the 1940s; now there are over 200 occupied sites and the birds' loud chuckling calls can be heard from many of the cliffs. It is one of the earliest seabirds to take up a nesting territory, the birds being present in January, although breeding will not commence until May.

Of all the birds that visit Skomer the Puffin is, without question, the one which most people hope to see. Even before landing some will have been observed on the sea, or flying past the boat. They return to Skomer about the beginning of April and a single egg is laid about the end of the month. Some 42 days will elapse before this hatches, the first indication of which is when adults are seen flying into the colony carrying beak loads of small fish, usually sand-eels. About six are brought back at a time, held cross-ways in the bill. Are they caught in one movement, or singly, and if so, how is each held? These are questions as yet unanswered by the marine ornithologist.

The large gulls, and also Jackdaws, are adept at giving chase to fish-carrying Puffins who often drop their catch in alarm before reaching the safety of the burrow. Such predation continues right through the fledging period but despite the difficulties most chicks will flourish, and after 47 days or so underground will make their way, usually at dusk, to the cliff edge and leave the island. The adults will remain for a week or two after this, but by mid-August the colonies will be deserted and the tremendous activity of the past weeks over for another summer. The next months, indeed until the following March, will be spent well out at sea, probably widely dispersed through the North Atlantic, with at least some birds moving to its western sector. Others move south and will enter the Mediterranean.

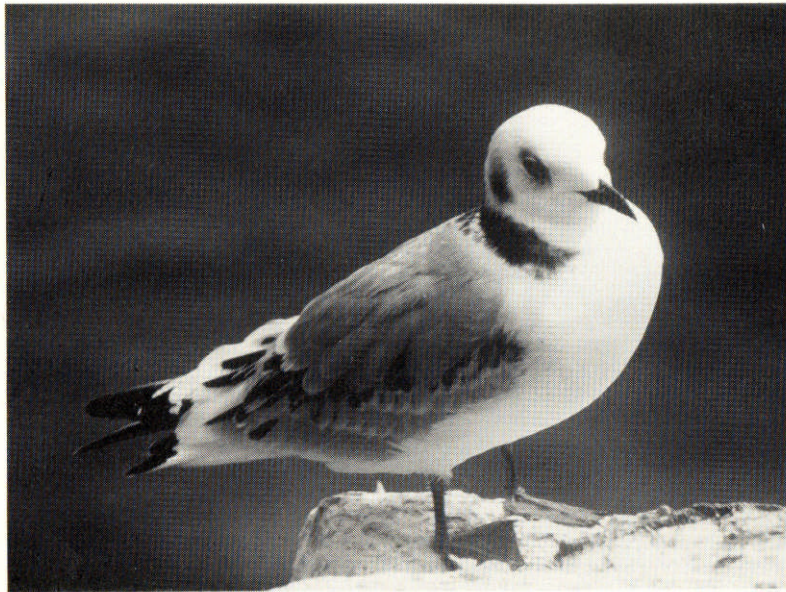
Some 6,500 pairs of Puffin nest on Skomer, though 30 years ago the number was about 50,000 pairs. They even nested in the old walls and rock outcrops towards the centre of the island, a few birds still clinging to these ancestral sites as recently as the early 1960s. Old photographs and the deserted colonies bear silent witness to the decline that has occurred, a decline one hastens to add not restricted to Skomer, but one which has occurred in most British Puffin colonies. Many explanations have been advanced as to the underlying reasons, probably a number of factors have played their part with changes in the marine environment affecting food supply being the main one. Certainly the decline seems to have halted at a time when decreasing sea-water temperatures leading to increases of some northern fish species are being noted.

Two relatives of the Puffin are the Razorbill and Guillemot, both have a short breeding season though some will be visiting the cliffs by mid-December. Spasmodic visits continue throughout the winter and early spring, indeed the birds will not remain continually at the colonies, until the eggs are laid about the beginning of May. Guillemots occupy open, and at times extremely narrow ledges; Razorbills prefer crevices and holes on more broken cliffs, holes under boulders, even the enlarged entrance to cliff top burrows.

Both species lay only a single egg and losses are high, perhaps not surprisingly in view of the sites chosen. Disturbance of the colonies is the main hazard and may result from visitors leaving the footpath, low flying aircraft, excessive noise from boat engines, even yacht sails flapping as the wind is lost under the shelter of the cliffs. Adult birds on such occasions will leave in great alarm, eggs and even small chicks often being knocked off the ledge or into crevices. Others may be taken by predatory gulls and Jackdaws.

Razorbill and Guillemot chicks leave the cliffs when they are between 18 and 21 days old. Unable to fly they flutter to the sea on partly developed wings, the descent being made shortly after dusk. Even at this early stage their plumage is waterproof and they can swim and dive expertly. They quickly move away from the island in company with their parents and complete the fledging period at sea. This departure means that by the beginning of August the colonies are again deserted, the ledges with their liberal coating of white droppings the only evidence of the bustling and at times extremely noisy colonies of seabirds that had recently been in occupation.

Another conspicuous occupant of the cliffs is the Kittiwake one of our smaller gulls, and certainly the most maritime. Some 2,200 pairs nest on Skomer where the main colony is that on The Wick. In May they can be seen gathering nest



Immature Kittiwake

Photograph by S. J. Sutcliffe

material from the damp flushes and springs around the cliffs, some even visiting the South Pond for this purpose. The young leave the nest during August, their diagonal black wing bar and neck collar giving them a most handsome appearance. A remarkable sight on Skomer in May is a large colony of Lesser Black-backed Gulls in the middle of an expanse of Bluebells, the white of the gulls contrasting with the vivid blue of the flowers. About 12,000 pairs nest, mainly in a series of colonies on the island plateau. The majority winter in Iberia and north-west Africa, returning to their breeding grounds during March. By contrast the closely related Herring Gull is mainly sedentary, though in winter it only uses the island as a roost. Most of the 1,000 pairs nest along the cliff slopes. Three eggs is

the normal clutch for both species, these are incubated for some four weeks, the chicks in their brown immature plumage fledge when about seven weeks of age.

Largest of the gulls is the Great Black-backed Gull of which about 80 pairs nest on Skomer; they can be seen to best advantage on the detached stacks of the Mew Stone and Garland Stone. This gull is a major predator on other seabirds, taking both adults and young. Some prey extensively on Rabbits while others are scavengers on the mainland.

Some 10 Shags nest on Skomer, most in rock crevices and holes on The Neck. Its larger relative, the Cormorant, normally only nests on the south side of the Mew Stone, in recent years up to 20 pairs having been present.



Oystercatcher at nest

Photograph by M. Alexander

About 70 pairs of Oystercatchers nest on Skomer, being fairly evenly distributed from the sea rocks and cliff slopes to the plateau. Their black and white plumage, long red bills and loud piping calls soon attract one's attention. Another wading bird which nests on Skomer is the Curlew. Some 14 pairs nest, mainly in the stream valleys and the central fields. In late summer a flock of several hundred may be present for some weeks before dispersing to their winter feeding grounds on nearby estuaries. Small numbers of Lapwings also nest, though rarely seem to be successful despite their never ceasing efforts to drive off the persistent attentions of the Crows and Jackdaws.

Rock Pipits confine themselves to the cliffs during the breeding season; there are about 30 pairs more or less evenly distributed round the perimeter of the island. Only after the young have fledged are they seen on the top of the island, trespassing on the ground occupied by the Meadow Pipit, of which about 50 pairs nest. Look out for the song flight of the latter species, it culminates in a rather splendid descent with wings half closed and inclined upwards. The melodious song-flight of the Skylark is also a conspicuous feature of Skomer during spring and summer. About 25 pairs nest, mainly in the grassy areas of the central

fields. Wheatears, one of the first summer visitors to arrive, are quite common; some 15 pairs nest, principally in Rabbit burrows and holes in the stone walls. They are easily recognised by their conspicuous white rumps.

The more sheltered areas of the stream valleys, and around the farmhouse, provide nesting sites for birds like the Pheasant, Wren, Blackbird, Stonechat, Sedge Warbler, Whitethroat, Dunnock, Pied Wagtail, Linnet and Reed Bunting. A pair of Robins has nested at the farm in recent years, while other species which have nested though not regularly include the Swallow, House Martin, Song Thrush, Spotted Flycatcher, and House Sparrow. Several pairs of Starlings usually nest around the ruined buildings while other pairs resort to cliff crevices.

Jackdaws are always to be seen around the cliffs; in 1946 there were only about 20 pairs nesting, now there are just over 200. They nest in burrows, rock crevices and boulder scree slopes, the main concentration of pairs being on the eastern sector of the island. Their main food consists of grassland invertebrates, supplemented by discarded or stolen food items from the seabird colonies. Despite what one might assume to be an abundant food supply, many Jackdaws from Skomer regularly forage on the mainland.

About 10 pairs of Carrion Crows nest, mostly on the top of old walls, rock out-crops and in the top of bramble bushes. There are usually four pairs of Ravens; these nest early and are rarely to be seen during the mid-summer months. An influx occurs in the early autumn when small flocks frequent the island.

A relative newcomer to the list of island breeding pairs is the Magpie, which first nested in 1967. Now there are some 6 pairs, all using dense bramble bushes as nesting sites.

The member of the crow family which most visitors hope to see is the Chough, of which between 40 and 50 pairs nest in Pembrokeshire. Up to three pairs nest on Skomer, using inaccessible cliff crevices, sometimes in the roof of caves. Their screaming calls, broad wings and of course the red bill and legs, make them easily identifiable. Their main food seems to be ants, beetles and other invertebrates, which are sought on the areas of exposed maritime grassland near to the cliff edge.

The breeding birds include several pairs of Buzzards, a pair of Kestrels and normally several pairs of Short-eared Owls. The latter often hunt by day, while in the early spring their lofty display flights provide a particularly exciting opportunity for visitors to observe this fine bird. Peregrines are occasionally to be seen; will they return to nest before many years elapse? Perhaps their decline in numbers during the 1960s allowed both Stock Doves and Woodpigeons to colonise Skomer. The former first nested in 1963, now there are about 50 pairs. Wood Pigeons first nested in 1970 in a gorse bush, by 1976 there were about 30 pairs, many nesting on the ground.

The ponds of Skomer prove attractive to several species. There are normally several pairs of Moorhen and Mallard present, while Shelduck and Teal have also nested on occasions. The ponds, particularly the North Pond which was enlarged in 1965, come into their own during the late summer when passage waders call. The birds have included Ringed Plover, Green Sandpiper, Wood Sandpiper, Spotted Redshank, Little Stint, Ruff and Grey Phalarope. As the water level rises during the winter many ducks move in, the main species being Mallard, Teal, Wigeon and Shoveler. Even diving species like Pochard, Tufted Duck and Goldeneye have occasionally been observed.

Offshore islands are always good places at bird migration times. The visitor to Skomer in spring or autumn may see a good rush of migrants of many species on suitable days, especially with an east wind and early morning mist and drizzle, conditions which cause a 'fall' of birds to rest on the island until the weather clears. Most will be common species like the Chiffchaff, Willow Warbler, Whitethroat, Spotted Flycatcher and Redstart, while in the late autumn there will be massive movements of Skylarks, Starlings, Thrushes and Finches. Over the years many rare species have been recorded on Skomer; recently these have included the Spoonbill, Hobby, Great Skua, Little Gull, Black Tern, Alpine Swift, Hoopoe, Wryneck, Bluethroat, Melodious Warbler, Firecrest, Red-breasted Flycatcher, Richard's Pipit, Woodchat Shrike, Serin and Lapland Bunting. Some of the more unusual visitors are common mainland residents but infrequent on the island, like the Little Grebe, Tawny Owl, Green Woodpecker, Jay, Treecreeper and Bullfinch.

PLANTS

Although few rare plants are found on the island compared with the Pembrokeshire mainland, not many places can equal Skomer in May and early June for the sheer abundance and colour of its flowers. To see the interior carpeted with Bluebells and patched with Red Campion and the cliffs clothed with the pinks of Thrift and the whites of Sea Campion is an unforgettable experience for every visitor, whether botanist or not.

First to flower in spring are Lesser Celandines *Ranunculus ficaria*, Ground-ivy *Glechoma hederacea*, Primrose *Primula vulgaris* and Scurvy-grass *Cochlearia* spp.: form part of the Bracken *Pteridium aquilinum* society though they are not confined to it. The most extensive plant community on the island is dominated by Bracken with as its most regular associate. The Bracken provides dense shade in sheltered parts of the north and east, on dry valley slopes, and along the field walls. During the 18 years of high farming in the nineteenth century Bracken was confined to waste land and the foot of the field walls, but it is an invasive plant and is now spreading apace towards the centre of the fields by means of its underground rhizomes. The Bluebell *Endymion non-scriptus*, normally a woodland plant, also thrives in soil protected from summer drought by Bracken, and its strap-shaped leaves wither as the fronds mature. Many later flowering plants survive, though they may not thrive, in the shade of dense Bracken, especially Wood Sage *Teucrium scorodonia*, Common and Sheep's Sorrels *Rumex acetosa* and *R. acetosella* and the Common Bent *Agrostis tenuis*. Near the burrow entrances of Rabbits and birds, especially where there are Lesser Black-backed Gull colonies, patches of Common Ragwort *Senecio jacobea*, Common Nettles *Urtica dioica* and other weeds grow strongly in the well manured soil.

Inland pastures are composed principally of fescue grasses and bents mixed with low herbs, Common Ragwort, and scattered Spear and Marsh Thistles *Cirsium vulgare* and *C. palustre*. On Skomer Marsh Thistles are common in grassland as well as in marshy ground, and plants with white as well as the more usual purple flowers are frequent.

The short, dry, rabbit-nibbled pastures, so springy and pleasant to walk over, are broken by protusions of rocks, and on these only dwarf sun-loving and drought-resisting plants such as English Stonecrop *Sedum anglicum*, Heath Pearlwort *Sagina subulata*, Rock Sea-spurrey *Spergularia rupicola*, and, in a few places, Common Stork's-bill *Erodium cicutarium* can grow to brighten the otherwise barren ground and rocks. Tiny grey-green rosettes of the Buck's-horn Plantain *Plantago coronopus* are often abundant in such places. Outside the former farm boundary much of the high ground is dominated by the Heather *Calluna vulgaris* among which the yellow flowered Tormentil *Potentilla erecta* is conspicuous.

As the exposed south and west cliffs are approached all these inland plant communities give way to the salt and wind tolerant maritime grasslands which dominate a wide belt on the cliff-top, including the burrows of the best Puffin colonies. Thrift *Armeria maritima* is a common component of this grassland and along the cliff edge it often forms huge cushions as much as a yard in diameter and a foot high, and these frequently provide a roof over the entrances to Puffin burrows. When at the height of its flowering in May and early June it is a memorable sight. Thrift is not exclusively a cliff plant; it also grows abundantly on saltings where it is submerged for short periods by high tides and it occurs in a few places inland, mainly on mountain tops. Associated with the Thrift is Sea Campion *Silene maritima* which grows in low spreading tufts with grey-green leaves and white flowers, or hangs curtain-like on the cliff-face. Patches of the blue starlike flowers of the Spring Squill *Scala verna* are also a feature of the short cliff turf in May. In the mid-1970s a lot of these maritime grasslands changed markedly. The normally dominant mat of Red Fescue *Festuca rubra* disintegrated apparently succumbing to the combined impact of high Rabbit grazing, increased salt deposition during the stormy weather and the prolonged summer droughts. The bared areas were colonised by species immune to the attentions of Rabbits such as annuals like the red coloured Sheep's Sorrel and the white flowered Scentless Mayweed *Tripleurospermum maritimum* subsp. *maritimum* more usually found growing amongst the rock crevices of the sea-cliffs and Sea Campion. By the early 1980's the grasses had returned in all but the most exposed places. Yorkshire Fog, Common Bent and Red Fescue were covering the bared ground.

Other plants that grow from crevices in the rocks and on the steepest cliff slopes are Rock Sapphire *Crithmum maritimum* and Sea Beet *Beta vulgaris* subsp. *maritima* together with Thrift, Sea Campion and Rock Sea-spurrey. Sea Spleenwort *Asplenium marinum* is quite common, but it is easily overlooked as it often grows beneath an overhanging rock. It occurs also on the wall of the roofless outbuilding at the farm, and a few exceptionally fine plants may be seen in a fissure in the ground near the head of The Wick. On cliff slopes, for example opposite the Mew Stone and at Pigstone Bay where the soil is heavily manured by Puffins and gulls, an interesting variety of Buck's-horn Plantain var,

maritima grows. It has large fleshy green leaves with a few long teeth, and is very distinct in appearance even from well-grown plants of the typical form growing beside it.

Patches of very robust Red Campion *Silene dioica* with richly coloured pink flowers are a feature of the more sheltered northern cliff slopes and ledges in May and June, and Foxgloves *Digitalis purpurea* are sometimes abundant enough to make an outstanding display. Later, in the lush marshy areas of the valleys, Purple-loosestrife *Lythrum salicaria* and Meadowsweet *Filipendula ulmaria* are conspicuous amongst the abundant tussocks of Purple Moor-grass *Molinia caerulea*. Where the trail crosses the stream at point 3 there is a colony of Skullcap *Scutellaria galericulata*, and on wet marshland, often among Cross-leaved Heath *Erica tetralix*, the lesser Skullcap *S. minor* is rather common. The several small island ponds with their muddy margins support three plants that are scarce in West Wales but common in other parts of Britain. They are Lesser Marshwort *Apium inundatum*, Red Goosefoot *Chenopodium rubrum* and Shoreweed *Littorella uniflora*. Perhaps they were accidentally carried to Skomer by the visiting winter wildfowl? A recent addition to the 280 or so species of flowering plants and ferns of Skomer gives credence to the idea. In 1973 a visitor noticed a small patch of the Yellow-eyed-grass *Sisyrinchium californicum*, a native of North America, flourishing on the wet margins of a small spring. Its only other known locality in the British Isles is on the marshes of Wexford which also happens to be the first landfall on the Irish coast opposite Skomer. Is it far-fetched to imagine that it too was transported to the island by wildfowl?

SEALS



Young Grey Seal

Photograph by M. Alexander

Grey seals are present around Skomer at all times of the year. During the summer months the numbers increase until a peak is reached in the autumn when as many as 150 animals may be present on some days. They can often be seen hauled out on outlying rocks at low tide and the rocks at the Garland Stone are regularly used for this purpose.

Although individual Grey Seals show variations in colour marking it is possible to distinguish the sex of most adults by the different colour patterns combined with the shape of the head. Males are dark brown or black with some paler markings on their undersides, they have broad heads with thick "Roman" noses and thick powerful necks which on the older animals often bear battle scars. Females have pale grey backs and pale undersides with dark spots, their necks and heads are slim and their noses are straight and pointed. These criteria however, can only provide a guide as there is some overlap in colour between the sexes, and some of the older females have "Roman" noses.

Up to 100 Grey Seal pups are born each year on Skomer beaches, making it after Ramsey, the second most important breeding site in South-west Britain. During September and October the females come ashore and give birth to a single pup weighing about 12.70 kg. (28 lbs.). The pup remains on the beach but the mother returns to the sea where she stays nearby. She hauls out at regular intervals, often in response to the pup cries, in order to feed it with milk which is twelve times as rich as that of a dairy cow. This milk enables the pup to gain weight very rapidly, often as much as 2.268 kg. (5 lbs.) a day. This rapid growth is very important as the mothers feed their pups for less than three weeks and then return to the open sea after mating with the bull. By this time the pup will weigh three times its birth weight and will be moulting the long white natal coat revealing a darker pelt similar to that of an adult beneath. Soon afterwards the pup will leave the beach and learn to feed itself, these young pups often wander considerable distances away from their place of birth. Marked pups from Pembrokeshire have been recovered in their first winter as far away as the north coast of Brittany, Spain and the south and west of Eire. During their first year of life the pups gain little weight after weaning although they increase in length. Yearling seals are often confused with new-born pups especially when their coats have been bleached by the sun, and with other young seals they can be seen with the adults at the Garland Stone haul out.

LAND MAMMALS

The land mammal fauna of Skomer is of interest for a number of reasons:-

- (i) It is impoverished, having only five species, excluding bats, compared with some 39 on the mainland. The five are the Skomer Vole, the long-tailed Field Mouse, the Rabbit, and the Common and Pygmy Shrews.
- (ii) The Skomer Vole, a race of the Bank Vole; is unique to the island.
- (iii) There are no predatory mammals like the Stoat, the Weasel, or the Fox on Skomer.

Without question the Skomer Vole has aroused the greatest interest amongst naturalists since it was first 'discovered' in 1897. It is a mouse-like animal with a blunt face, small eyes and ears, and a tail about half the length of the body. It is closely related to the Bank Vole found on the mainland with which it will inter-breed. However, its larger size, lighter colour and differences in its skull and dentition, are sufficient for it to be considered an island race or sub-species. No doubt if it remains isolated for a long enough period it will gradually evolve into a separate species.

Presumably the absence of ground predators enables the Skomer Vole to maintain high population densities, with peak numbers being reached by the early autumn. It is largely confined to those parts of the island where Bracken and Bluebells grow in profusion. Although quite active by day, particularly under the Bracken canopy of mid-summer, it is rarely seen by visitors to the island. It is very tame and can be handled with little risk of being bitten.

The Long-tailed Field Mouse is much the same size as the Skomer Vole, but it is of slender build with a long tail, large ears and prominent eyes. It also shows differences when compared with its mainland counterpart, being larger and showing much less variation in its coat colour especially in respect of its yellow chest patch. In one way however, it does differ, it bites. It is found all over the island, even on bare and exposed cliff slopes, but at low densities compared with the vole. There is evidence that the mice and voles avoid each other to some extent. Certainly in those areas where voles are most abundant, the catch of mice rises during the winter when the voles are less active on the surface.

The Common Shrew and Pygmy Shrew are similar in appearance, although the latter is much smaller. They both have dark grey fur, very small eyes and ears, long pointed noses with large whiskers, and a tail shorter than the body. No systematic work has been done on either species and careful investigations might well prove as interesting as those in progress on the vole and mouse.

How these four small mammals reached Skomer is a matter for conjecture. The most likely explanation seems to be that they were accidentally introduced by man, probably at a time when the transport of goods to and from the mainland was intensive. On the contrary, for the fifth member of the fauna, the Rabbit, there is no doubt concerning its arrival. As already related on page 9 they were introduced to the island during the early 14th century and proved an important source of revenue until the mid 1950s.

The Rabbit has also played a major role in respect of the island vegetation, at one time in conjunction with domestic stock, but now in the absence of these it is the sole grazing mammal. One wonders what the island looked like before its arrival. Some idea may be gained when the population drops dramatically due to myxomatosis. This first occurred on Skomer in 1955, while there was a further major epidemic ten years later. Since then there have been several outbreaks but of a much less intense nature, and the Rabbit population for the most part remains high. It has not been isolated in the same way as the other small mammals for domestic varieties have been introduced from time to time. As a result black animals are not infrequent, while albino, long-haired and white saddled individuals also occur.

Bats including the Greater Horseshoe Bat are occasionally seen during the summer months, although whether they are residents or wanderers from the mainland is not known.

DOLPHINS AND PORPOISES

It is not generally appreciated that no less than 24 species of whale, dolphin and porpoise have been recorded in British waters. Some are annual in occurrence, others are scarce visitors. Off Skomer the Common Porpoise may usually be located by the vigilant observer as it sports in the tide races, sometimes in Jack Sound itself. Other species seen in recent years include the Killer Whale and Risso's Dolphin, but pride of place must go to the Bottle-nosed Dolphin. One spent the summer of 1975 mainly in the Martinshaven area not infrequently following the island boat and providing visitors with superb swimming displays, sometimes at very close range.

REPTILES AND AMPHIBIANS

There are no Adders or Grass Snakes on Skomer. The only reptiles to occur are the Slow Worm, a nocturnal feeder on worms, beetles, slugs and other invertebrates, and the Common Lizard. The Palmate Newt may be found in most of the wells and ponds, to which in spring the Common Frog and Common Toad are attracted for spawning. The latter seems to be in especially large numbers, something only appreciated at night when they sit on the footpaths and other open areas. Nothing is known about any of these animals on Skomer, might they not show differences when compared with those on the mainland?

LAND INVERTEBRATES

Islands generally lack the rich variety of small terrestrial invertebrates which commonly occur on the mainland.

Detailed comparative studies between the fauna of Skomer and the adjacent mainland have yet to be made, but collections over the last 20 years or so have revealed a more diverse invertebrate fauna than might be expected. This must in part be due to the large size of Skomer, its varied topography and habitats, and its comparative closeness to the mainland.

With the exception of the colourful day-flying insects many invertebrates are inconspicuous. Furthermore their identification can present difficulties for all but the specialist. However the visitor to Skomer in high summer is sure to encounter a variety of butterflies and several moths.

To date 22 species of butterfly have been recorded, the most abundant being the 'Browns' including the Wall, Meadow Brown, Hedge Brown, Small Heath and the Grayling. During June and July the Dark Green Fritillary may be seen in the stream valleys, while on the more open slopes are the Small Copper and Common Blue. In some years many migrant butterflies pass through Skomer, chiefly Red Admirals, Small Tortoiseshells and Large Whites, but Painted Ladies may also occur in small numbers and occasionally Clouded Yellows.

At night moths may be attracted to lights and about 140 species have now been recorded. As with butterflies some will be migrants, in particular the Silver Y, and the 'micro moth,' the Rush Veneer *Nomophila noctuella*. Both may occur in large numbers and are quite active by day. In the late summer the Ragwort provides abundant food for the orange and black larvae of the Cinnabar Moth. The adult insect, a handsome black and red, may sometimes be seen weakly flying by day.

Bumblebees may normally be seen often visiting the many flowers that occur, although they are not infrequently seen in flight over the sea as they cross to and from the mainland. Six species are common, the Buff-tailed *Bombus terrestris*, the Large Red-tailed *B. lapidarius*, Small Earth *B. lucorum*, Small Garden *B. lucorum*, and the Brown-banded Carder Bee *B. humilis*. The closely related cuckoo-bees are similar in appearance to bumble-bees on which they are parasitic. The queens enter established nests of the appropriate species in early summer and their larvae are fed by the workers of their host. In late summer the males are often common on Skomer thistles, Common Knapweed, and Wood Sage. The most numerous species are the Hill Cuckoo Bee *Psithyrus rupestris*, parasitic on the Large Red-tailed Bumblebee; the Vestal Cuckoo-Bee *P. vestalis* parasitic on the Buff-tailed Bumblebee, and the Field Cuckoo Bee *P. campestris* parasitic on the Common Carder Bee. The first two resemble their host but the last does not.

Associated with the freshwater streams and ponds we find insects such as caddisflies, dragonflies, and several small crustaceans including the Freshwater Shrimp *Gammarus pulex* and the Water Hog Louse *Asellus meridianus*. Suitable ponds for dragonflies are scarce, and most of the six species recorded are migrants and include the Four-spotted Libellula *Libellula quadrimaculata* and the Broad-bodied Libellula *L. depressa*. The largest area of freshwater, the North Pond is so heavily used by gulls as to greatly impoverish its freshwater flora and fauna, but the large leech *Haemopsis sanguisuga* thrives under these conditions.

The rock outcrops, stone walls and grassland habitats support many small animals, with three species of Grasshopper being most obvious when chirping on warm summer days. Hardly audible is the bright green Speckled Bush-cricket *Leptophyes punctatissima* which occurs mainly in the vicinity of North Haven. Among beetles of which over 200 have been recorded, the Seven-spot Ladybird *Coccinella septempunctata* and the Soldier Beetle *Rhagonycha fulva* are two of the most conspicuous, the latter may occur in particularly large numbers on flower heads in late summer. Dor beetles *Geotrupes* species may often be found lumbering along the footpaths, while examination of any bird or rabbit carcass usually reveals the handsome sexton beetles *Necrophorus* species. The Glow-worm *Lampyrus noctiluca* still occurs in some numbers on Skomer and provides a further attraction to the visitors who choose to stay on Skomer to look at the nocturnal seabirds. Other insect groups, notably the flies *Diptera*, bugs *Hemiptera* and Ants, Wasps and their allies *Hymenoptera* have yet to be studied. Perhaps rather surprisingly over 80 different spiders have been identified, an indication of what may be achieved in quite a short space of time by the enthusiast.

Slugs and snails are the most active in damp weather but compared with more calcareous areas the island is not a rich habitat for molluscs. The large black slug, *Anion ater* and the snail *Helix aspersa* are probably the most numerous, both wreak havoc in the Warden's garden.

Some small animals are almost certainly brought to Skomer by man. Building materials, farm supplies, and similar commodities can easily conceal small invertebrates. One of the eight species of Woodlice *Porcellio spinicornis* occurs only at the farmhouse, a characteristic habitat and strongly suggesting accidental introduction. Another woodlouse *Armadillidium puchellum* is of special interest because it is known from very few sites in Britain.

Many of the terrestrial invertebrates provide a food supply for the islands land birds. Just watch how the Skylarks, Jackdaws and Meadow Pipits hunt through the old fields and cliff-top grasslands. Even some seabirds benefit when in late summer the swarms of flying ants are speedily devoured by gulls. But it is also worth remembering that some invertebrates are highly specialised parasites living on or inside birds and mammals. Fleas, lice, ticks and various 'worms' may go unnoticed for much of the time but they all have their part to play in the complex inter-relationships between the species of the island.

SKOMER MARINE RESERVE

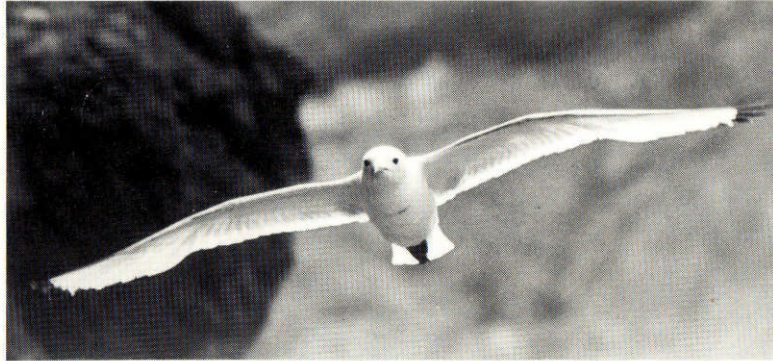
This exciting and pioneer venture was first proposed in 1971 by local naturalists and biologists, and in 1974 a Steering Committee was set up representing the following bodies: British Sub-Aqua Club, Field Studies Council, Nature Conservancy Council, Pembrokeshire Coast National Park Authority, South Wales Sea Fisheries Committee, Welsh Association of Sub-Aqua Clubs and West Wales Naturalists' Trust. The Steering Committee published a Management Plan in August 1976 and this was followed by the formation of a Management Committee. This includes representatives from those bodies represented on the Steering Committee together with the Marloes Community Council, Milford Haven Harbour Users Association, Preseli District Council, Welsh Water Authority and Welsh Anglers Council.

The Marine Reserve covers some 1,000 hectares (4 square miles) around Skomer and the Marloes peninsula east to High Point and Gateholm Stack. The main aim being the conservation of the sublittoral zone and for recreation, education and research where compatible. In the absence of any legal basis for the marine reserve success will depend upon the voluntary co-operation of all users as well as local residents.

The objectives and conduct guidelines for the reserve are set out in an information leaflet available either from the warden on Skomer, the information centre at Martinshaven, or by writing to the West Wales Naturalists' Trust, 7 Market Street, Haverfordwest, or the Scientific Secretary, Orielton Field Centre, Pembroke.

FURTHER READING

Unfortunately there is no recent handbook dealing with all aspects the natural history of Skomer. Published in 1950, and of course long out date in some aspects, the book *Island of Skomer* by R. M. Lockley a John Buxton is still a valuable source of information. More recently t books by Roscoe Howells, *Cliffs of Freedom* (1961) and *The Sou Between* (1968) provide a fascinating insight into the island's history. T journal *Nature in Wales* includes many papers and short notes concerni Skomer while the *Skokholm Bird Observatory Reports* from 1973 to 19 and the *Bulletins of the Friends of Skokholm and Skomer* include *Skomer Bird Report*.

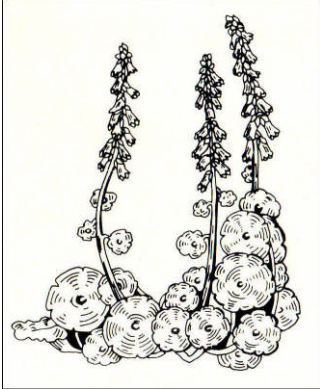


Kittiwake in flight.

J. Taylor, A.R.P.S.

2. HAROLD STONE:

This un-inscribed and unshaped monolith is of unknown origin although various theories have been ascribed to it. Slightly further down the track is a lime-kiln in a fine state of preservation, a relic of the prosperous island farming days of the last century. The lime stone and coal used were brought by coastal vessel to the North Haven landing beach and from there by horse and cart to the kiln; after firing the lime would have been spread on the open fields.



3. EAST FIELDS:

The vegetation in the first field is typical of the deeper soils and more sheltered areas on Skomer. In Spring there is a sheet of bluebells, replaced in early June by a luxuriant growth of Bracken. This is the main habitat of the Skomer Vole, a numerous though rarely seen small mammal unique to the island. In the next field cultivation ceased by 1948 and Bracken extensively encroached, this is now mown regularly in order to help maintain the open sward and contrasts with an unmanaged field immediately south of the track.

4. THE FARM: The history of the farmhouse is given on pages 11. However, the attention of visitors may be drawn to several points. The building still in use is the former cowshed, converted long ago into simple accommodation and now used by visitors to the island. Several pieces of farm equipment still remain at the rear of the

buildings, among them a Fordson tractor brought to Skomer in 1946. Another mechanised feature, although of much greater antiquity is the horse-course just beyond the south-west corner of the barn. Driven by horses, the shaft passed into the barn and operated machinery such as those for threshing and chaff making.

Look for bird migrants around the buildings in spring and the late summer. Flycatchers find the Black Poplar tree standing in the main yard particularly attractive, this is in fact, the only tree on the island.

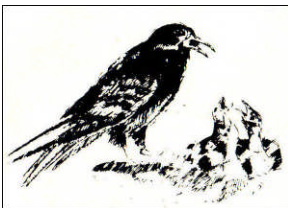


5 NORTH STREAM: The stream normally dries up by mid-summer, but as at Point 3, the vegetation is typical of damp places and here includes the Yellow Iris.

Curlew normally nest in the valley, their bubbling calls and display flights are easily heard and seen in spring and early summer. Another bird to look for is the Short-eared Owl. Several pairs normally nest on Skomer and regularly hunt by day at times doing so within a few yards of the footpath.

6. GARLAND STONE: At low tide the series of reefs at the eastern end of the Garland Stone form a favourite haul out of Grey Seals. On occasions up to 40 may be seen, their moaning calls being clearly heard at the cliff top.

Ravens nest at several sites on Skomer and often soar along these north cliffs, their deep kronking calls having an almost boisterous quality. Look also for the rarest of the crows, the Chough. Slightly larger than the Jackdaw, its main distinguishing features are the red bill and legs and a screaming "chow" call note.



7. BULL HOLE: The area of brambles through which you pass at the foot of the slope usually has Stonechats, Whitethroats and Dunnocks breeding there. Less obvious inhabitants of the same area are the Magpie and Wood Pigeon. In the absence of trees both species use low bushes for nesting.

8 .PIGSTONE BAY: The vegetation here is mainly Sea Campion, its white flowers being at their best in May. Its prostrate mat-like habit enables the root system to remain moist in even the driest conditions. In one or two of the shady gullies Primroses can be seen, while on the cliff top, especially where the path turns north-west away from the coast, one should be able to find the blue-flowered Spring Squill. A

glance at its leaves and stem soon reveals its close relationship to the Bluebell. In Pigstone Bay there are almost always seals swimming or 'bottling' in the swell, even during rough weather. The term 'bottling' comes from the way a seal sleeps upright in the water, the head protruding above the surface resembles a floating bottle.



9 RABBIT EXCLOSURE:

As part of an investigation into the effects of Rabbit grazing on the vegetation a selection of areas has been fenced in order to exclude this animal. The largest exclosure here was fenced in 1973 and shows particularly well the changes one might expect if Rabbits were removed from the exposed maritime grasslands. By chance the transformation has been quite

dramatic. The combination of sustained Rabbit grazing with summer drought and salt water inundation during severe gales led to the complete death of the dense mat of Fescue grass outside the fence by 1975. The ungrazed and therefore more resilient Fescue grass within the enclosure survived the salt water and summer drought and its lush growth in the continued absence of the Rabbit now contrasts with the barren areas outside. Since 1976 colourful opportunist Plants, unpalatable to Rabbits, like Scentless Mayweed, Scarlet Pimpernel and Common Sorrel together with the coarse grass Yorkshire Fog have spread over most of the ground and provide a striking contrast with the vegetation in the large enclosure.



10 SKOMER HEAD:

This very exposed headland is frequently drenched by spray during stormy weather. The salt tolerant vegetation on the southern slope is mainly comprised of Thrift which flowers in pink profusion during May and June. Most of the plants have formed large cushions, where the fine leaves, closely matted together provide protection against both over grazing and excess desiccation during the summer months. If the weather is clear the small island of Grassholm may be seen some 6 1/2 miles to the West. This reserve of the Royal Society for the Protection of Birds contains the only colony of Gannets in Wales and in 1978 contained some 21,000 pairs. Some may be seen flying close to Skomer and are easily recognised by their large size, gleaming white plumage and black wing tips.

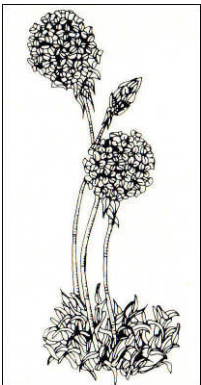
11. SOUTH PLAIN: A major feature of the vegetation of Skomer is the increasing amount of Bracken. Away to the right as you face north, the Heather has so far only been sparsely invaded by the Bracken. Close at hand the take-over is almost complete and the remains of dead and dying clumps of Heather may be seen.



12. WICK STREAM:

This stream flows from one of the several excellent springs on the island. Note the remains of the dams which, when in good repair would have divided the stream into a series of pools. It is not known whether these date from the Iron Age or medieval times.

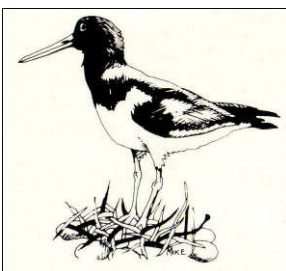
13. SOUTH RIDGE: Several rock ridges cross Skomer from east to west and provide a breeding ground for birds like the Oystercatcher, and Great Black-backed Gull. Also found in this habitat is the Wheatear, a summer migrant arriving in March and departing by early October. It nests in holes in the ground or in amongst rocks and old walls.



14. THE WICK: Words cannot adequately describe the magnificent panorama that unfolds as you approach this view point. The vertical 200 ft. cliff provides a home for the largest colonies of Kittiwakes and Guillemots on Skomer, together with smaller numbers of several other species. The air is full of their calls, and if the wind is in the right direction the smell of guano-caked ledges hangs heavy on the air.

Look carefully at the high crevice near the eastern end of the cliff. Several pairs of Fulmars are normally in residence, their stocky build and large dark eyes being easily noted. If you are fortunate one may pass by in flight. Observe the straight wings and how every upcurrent and draught along the cliff face is used to advantage. This bird has been aptly described as the "grey glider of the North Atlantic."

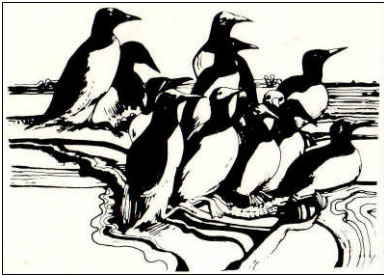
15. WICK VALLEY: This windswept area with mainly sparse vegetation allows one to see the traces of ancient walls, only the base stones of which now remain. Below the rock outcrop is a horse-shoe shaped hut site, one of about 40 that can be found on Skomer, and a reminder that even in Iron Age times men found the island an attractive place, though for different reasons from today's visitors.



16. MEW STONE: This magnificent stack dominates the southern coast line of Skomer. The stack was isolated as the softer sedimentary rocks between it and the main part of the island were eroded leaving the harder mass of a volcanic rhyolite flow. Each year up to 20 pairs of Cormorants nest on the western end of the stone. Most occupy the south side so that usually all one sees are the birds flying to and fro.

17. HIGH CLIFFS: Low down on the cliff the small gulls are Kittiwakes — you should be able to hear them excitedly calling their name. The higher ledges are occupied by Guillemots, while here and there, in crevices, the rather similar though darker plumaged

Razorbill may be observed. The Razorbill has a broader bill than the Guillemot and this can best be seen by looking at the birds swimming on the water below the cliffs.

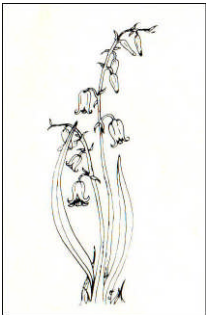


18 WELSH WAY:

The slopes above the Welsh Way enable one to view the large gulls at close range. Just below the path both Lesser Black-backed and Herring Gulls nest together. The former has a slate-grey back and wings and yellow legs, the latter having pale pink legs and a silver-grey back and wings. Occasionally they are joined by their larger relative the Great Black-backed Gull.

By mid June you can usually see their small downy chicks and from mid July onwards brown immature birds will be seen at all the gull colonies on Skomer.

Listen for their rather high-pitched squeaky voices in contrast to the querulous calls of their parents.



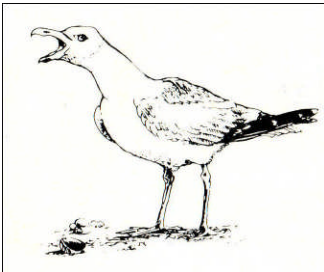
19 SOUTH STREAM VALLEY: The stream trickles to the sea in all but the driest weather. Look out for the plants of damp places and see how well they indicate the line of wet flushes on the northern slope. In early summer the white flower heads of Hemlock Water Dropwort, later the yellow of Common Fleabane, the lilac of the Water Mint and the purple of the Purple-loosestrife can all be seen.

20 CAPTAIN KITES: The rock outcrop provides a fine vantage point overlooking South Haven. On the far side can be seen several cave entrances, one of which is known as the Seal Hole where Grey Seals breed each autumn.

The part of the island to the east of South Haven is known as The Neck, visitors are not normally allowed there in order that the seabird colonies remain undisturbed.

21 NORTH POND:

In the shallow valley to the north is the largest pond on Skomer. This was extended in 1965 and provides nesting sites for birds like Mallard and Moorhen. By late summer the exposed mud attracts passing waders while in winter large numbers of duck, mainly Mallard, Teal and Wigeon find it a rich feeding area. The structure on the south bank of the pond is a hide for use by overnight visitors.



22 WEST FIELDS: You are now almost at the extreme west of the area once cultivated on Skomer. The boundary walls of the fields where arable crops were formerly grown are clearly visible. Now they provide homes for Wheatears and a pair or two of Little Owls, while Crows regularly build their nests on top of the walls. The fields in this area are used by large numbers of moulting gulls in the late summer, at this time the large amounts of feathers are clearly to be seen even if the birds have gone off to feed.

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