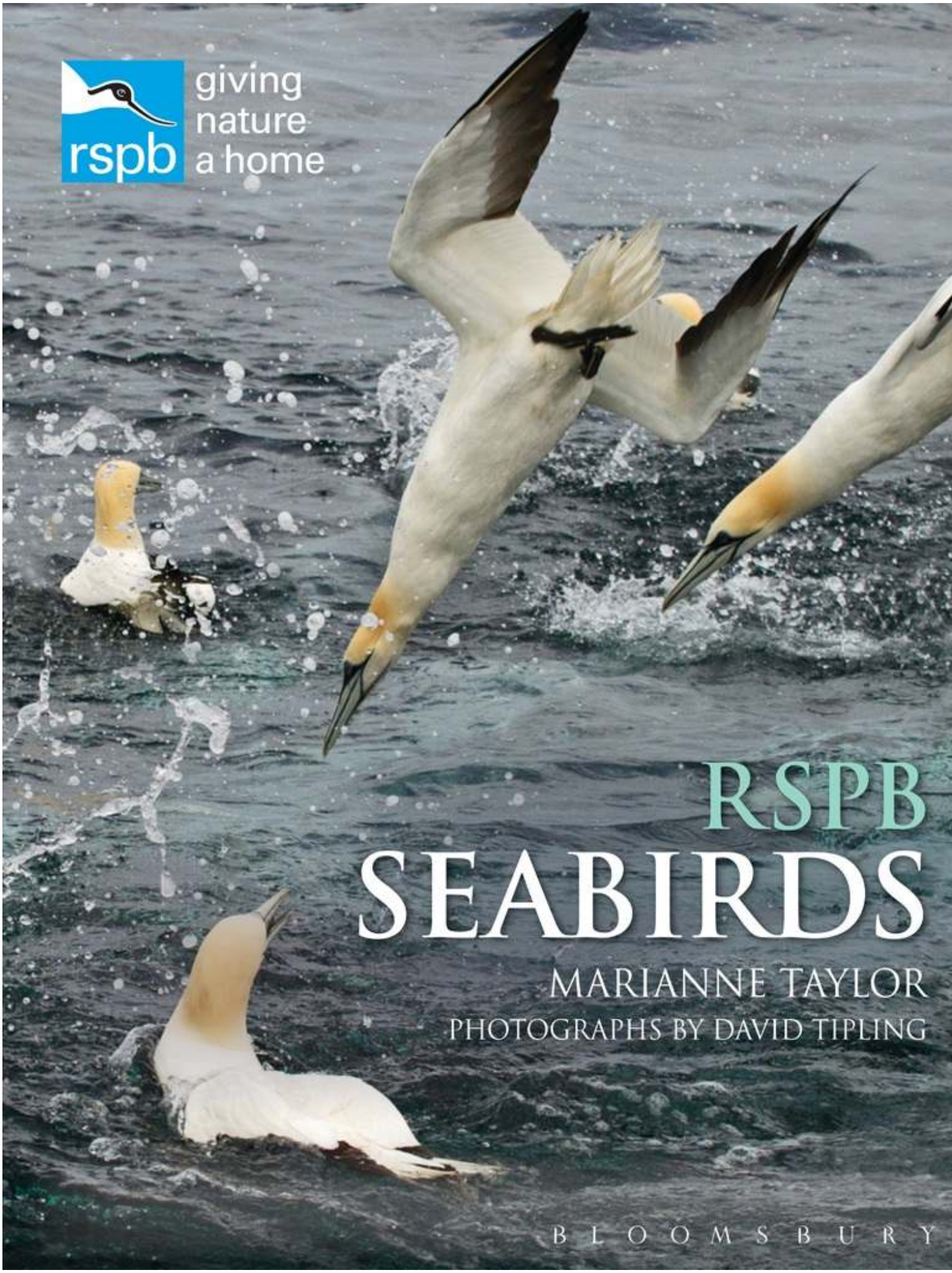
rspb
giving
nature
a home
RSPB
SEABIRDS
MARIANNE TAYLOR
PHOTOGRAPHS BY DAVID TIPLING
BLOOMSBURY

giving nature a home

# RSPB SEABIRDS

Marianne Taylor
Photographs by David Tipling

BLOOMSBURY
LONDON • NEW DELHI • NEW YORK • SYDNEY


The RSPB is the country's largest nature conservation charity, inspiring everyone to give nature a home so that birds and wildlife can thrive again.

By buying this book you are helping to fund The RSPB's conservation work.

If you would like to know more about the RSPB, visit the website at www.rspb.org.uk, write to The RSPB, The Lodge, Sandy, Bedfordshire, SG19 2DL, or call 01767 680551.

# Contents

Every summer, our sea cliffs play host to some of the most important seabird colonies in the world.

# Introduction

Imagine sitting in a small boat on calm water. Masses of Gannets wheel overhead, huge and angeli treading air with hardly a flicker of their white, black-tipped wings. As you watch one, it til downwards, folds in those long wings and, drawing them right back to turn itself into a spear, dives a headlong, high-speed vertical plunge, punching a neat hole in the water and throwing up a plume white spray. You watch its vapour trail of bubbles twist and turn as it chases after a fish. All aroun you others are doing the same, almost close enough but much too fast to touch. Later, you wait on grassy island slope through the long summer evening as rafts of Manx Shearwaters gather offshor the warm evening light flushing their white chests rosy. As darkness falls they head for land; sudden they are everywhere, blundering past you to their burrows, shouting to their chicks underground, t cacophony of their bizarre voices growing as the night takes over, until you are alone in an alie soundscape.

The people of our island nation have long drawn inspiration from the sea. Its richness, power a mystery infuse our identity, and many of us also have a special respect and affection for the birds th make their living as seafarers. Like the sea itself, seabirds seem to have a special wildness a freedom compared with even the most elusive land birds, and yet are among the easiest of all our bir to observe at close quarters, offering wildlife-watching experiences of incredible intensity.

Compared with many countries in mainland Europe, the UK and Ireland have a rather spars impoverished wildlife population. The great mammalian predators of our forests are long gone, a many of the mainland's plants and small animals simply never reached us. Due to our dense huma population true wilderness is hard to find. However, turn away from the land, look to the sea, a suddenly we are punching well above our weight in terms of wildness.

Great Britain has about 18,000km of coastline. Add Ireland's coastline and that is another near 2,800km. The hundreds of smaller islands all around our coastline almost double this total. Along th great length of coastline there are beaches of boulder, shell and stone; sheer chalk and granite cliff softly crumbling slopes of sandstone and mud; dunes anchored by marram grass into towering cresto ridges; estuarine mudflats and saltmarshes, and seaside towns of every character. All of these provid habitats for wildlife, as of course does the open sea itself.

Our seabirds, perhaps more than any other animals, have a foot in both worlds, needing dry land nest and rear their young, but relying on the sea for their foraging. Every detail of their anatomy, fro the colours of their plumage to the structure of their bones, speaks of adaptation to a life in intima association with the open sea, and their behaviour is no less specialised. Most seabirds are intellige and long lived, many form pair bonds that can endure for decades, while two of our seabirds – t Arctic Tern, which breeds here, and the Sooty Shearwater, which is a regular visitor to British coasts are extreme long-distance travellers, each regularly flying 65,000km or more in a year.

The British Isles are of global importance for their breeding seabirds. It includes more than half t world's entire breeding populations of three species – the Manx Shearwater, Gannet and Great Sku Of the remaining 22 seabird species that regularly breed around our coasts, 18 in Britain and eight Ireland have internationally important populations. Outside the breeding season, the seas around t British Isles support huge numbers of other seabird species that breed inland or on coasts elsewhere.

## A WILDERNESS OF WATER

The Atlantic Ocean surrounds us on all sides and extends across more than 20 per cent of the world surface. Marine life around the British coastline is both plentiful and diverse. The North Sea suppor one of the world's richest and most important fisheries, and the mackerel, cod, whiting and plaice th

the boats bring in each day are a tiny part of a huge ecological web, representing thousands of gene
across the full sweep of biological life. Seabirds prey not only on fish of an array of species, but
squid, crustaceans, like copepods and shrimp, seabed-dwelling molluscs, such as mussels, the floati
or washed-up bodies of dead sea mammals and, in some cases, each other. Some, such as the storm
petrels, are specialists at picking floating prey from the surface, while others are deep divers – th
Razorbill can propel itself to depths of 120m. The most adaptable eaters are the large gulls, which ca
catch fish quite proficiently but (in seaside towns at least) are just as likely to lunch on the contents
a ripped-open bin bag, or a Cornish pasty expertly swiped from an unsuspecting tourist's hand.

Most seabirds are strong flyers. Several of the long-winged species use a specialised 'shearin
flight, whereby they utilise air currents generated by wave motion to glide with minimal energ
expenditure. One way or another they can travel huge distances as they forage. Because their feedi
grounds are so clearly separated from their nest-sites, they have little need for territoriality and on
defend the immediate areas around their nests from intruders. Most therefore breed in large colonie
enjoying the many advantages of communal living. To visit one of these 'seabird cities' at the peak
the breeding season is to experience a sensory assault the equal of any wildlife 'spectacular' on Earth

When breeding is over for the year, most of our seabirds abandon their colonies completely, an
may travel thousands of kilometres away to exploit more favourable feeding grounds in the southe
hemisphere. In the autumn exposed headlands around the coast of the British Isles become meccas f
birdwatchers, who brave inclement weather to observe seabirds passing offshore, sometimes in hug
numbers, on their southbound journeys.

Sealife vastly outweighs life on land, in both number and variety. Exploration and study of th
underwater world is more difficult for us than surveying life on dry land, but it is an undertaking
crucial importance, because pollution, overfishing, climate change and physical damage to reefs an
other inshore habitats are all harming sealife across the globe. Seabirds are key indicators of the sta
of play in marine ecosystems, because unlike most sealife they are highly visible to us, their breedi
habits make their populations relatively easy to monitor and their position as high-level predato
makes them early casualties in any incipient ecological collapse. When most or all chicks in an auk
tern colony die of starvation, this is a clear indication that prey species such as sandeels a
undergoing a population collapse or a radical change in distribution – or both.

The Fulmar is a miniature cousin of the albatrosses, and like them travels thousands of sea-miles over its long life.

# CONSERVATION OF SEABIRDS AND THEIR HABITATS

All wild birds in Britain are protected by law. It is illegal to kill them or destroy their nests. The legislation that protects them is the Wildlife and Countryside Act 1981 and its associated amendments. According to an additional layer of protection (Schedule 1 listing) it is illegal to disturb rarer breeding birds in any way while they are nesting. Several species discussed in this book are protected in this category – all species of divers, the rare grebes, Scaup, Common Scoter, Leach's Storm-petrel, Mediterranean Gull, and Little and Roseate Terns. A few bird species may be destroyed under a general licence (which need not be applied for) if they are causing serious danger to public health or safety – this includes certain common species of gulls.

In 1969–70 a full census of Britain's seabird populations was organised by a charitable organisation called the Seabird Group, in a project known as Operation Seafarer. A follow-up census, the Seabird Colony Register, was arranged by the Seabird Group and the Nature Conservation Committee, now the Joint Nature Conservation Committee (JNCC), and took place between 1985 and 1988. The most recent full census was Seabird 2000, again spearheaded by the JNCC, which gathered data from 1998 to 2002 and employed some new detection methods (using playback at nocturnal petrel and shear water colonies to see whether burrows were in use) to obtain the most accurate data so far. Results from these three projects give a clear picture of changes in breeding seabird populations. The JNCC has an ongoing Seabird Monitoring Programme, and plans to begin the next full census in 2015 or 2016.

In the UK a programme is underway at the time of writing to identify and protect a network of key sites at sea that are regularly used by high numbers and varied species of seabird. Measures to safeguard these Marine Special Protection Areas include limiting disturbance and pollution risk, by regulating – or in some cases banning – shipping and developments such as wind farms.

The northern hemisphere's answer to the penguins, auks like the Black Guillemot are consummate underwater swimmers but have not (quite) given up the other use of their wings.

## WHAT MAKES A SEABIRD?

Many birds make use of coastal habitats, either sporadically or habitually. Visit a quiet beach i winter and you may see Skylarks, Linnets and Meadow Pipits, birds of open countryside, pickin through the tideline debris, alongside small birds more closely associated with the coast, such Shore Larks and Rock Pipits. At the water's edge waders like Sanderlings and Bar-tailed Godwi search the wet sand for burrowing worms and other prey as the tide retreats. Birds of prey such Merlins and Peregrines are attracted to these gatherings. The latter species also nests on sea cliffs, do Ravens, Rock Doves, Kestrels and Jackdaws. It is not that unusual to see freshwater-breedin wildfowl like Mute Swans and Wigeons swimming on calm seas, and Kingfishers often head for th coast in winter when inland waters freeze over, to fish around estuaries. However, the number species that routinely find their food either in the sea or floating on it is rather smaller.

The species defined in this book as 'true seabirds' are not casual visitors to the coastline, but a obliged by their biology to forage for most if not all of their food out at sea, at least during the no breeding season, if not all year round. For a few of these species (the Cormorant and certain gulls part of the population has become secondarily adapted to a life based mainly or entirely inlan usually as a result of human-made environmental changes. However, they are still regarded seabirds and a significant proportion of their population retains a sea-based lifestyle.

Healthy undersea ecosystems are key to our holding on to iconic fish-eating seabirds like the Puffin.

# ABOUT THIS BOOK

This book describes all seabirds that occur, or have occurred, around the British and Irish coastlines. is structured along taxonomic lines, so related species are grouped together. Each chapter focuses on particular group of breeding species, and begins with detailed accounts of species within that group. addition to our breeding species, a number of other seabirds have been recorded off British and/ Irish coasts. Some are regular visitors, passing our shores on their annual migrations. Others a wanderers from much further away, and have been recorded only once or a few times. These birds a covered with briefer accounts at the end of the relevant chapters. The species described in this boo are representatives of the following taxonomic groups.

| **Order** | **Family** |
|---|---|
| Anseriformes | Anatidae (ducks, geese, swans) |
| Gaviiformes | Gaviidae (divers) |
| Podicipediformes | Podicipedidae (grebes) |
| Procellariiformes | Procellariidae (shearwaters and Fulmar) |
| | Diomedeidae (albatrosses) |
| | Hydrobatidae (storm-petrels) |
| Suliformes | Fregatidae (frigatebirds) |
| | Sulidae (gannets and boobies) |
| | Phalacrocoracidae (cormorants and shags) |
| Phaethontiformes | Phaethontidae (tropicbirds) |
| Charadriiformes | Phalaropodidae (phalaropes) |
| | Scolopacidae (waders) |
| | Laridae (gulls) |
| | Stercorariidae (skuas) |
| | Sternidae (terns) |
| | Alcidae (auks) |

# FAME

Some of the data discussed in this book have come from the Future of the Atlantic Marine Environment (FAME) project, which at the time of writing is still ongoing. This large coordinated project is led in the UK by the RSPB and aims to build a much more complete picture of our understanding of seabird ecology in the Atlantic (including the North Sea) using a range of methods to study seabird behaviour, breeding success, foraging range and other aspects of their ecology. To find out more visit the project's website at www.fameproject.eu/en/

# Seaducks

**The family Anatidae includes the swans, geese and ducks – a group familiar and clear recognisable to most people. Most species in the group have distinctive broad, flattened bill sturdy legs, feet with webbing between the front three toes, stocky bodies and short, pointe wings that they beat rapidly in their often very fast flight. The majority breed and spend the winters on or alongside fresh water, although they may visit salty coastal lagoons and estuarie and some species even roost on the sea.**

The species in the subfamily Merginae are diving ducks, the majority of which can truly b classified as seabirds. They spend the entire non-breeding season offshore and feed on prey caught the water or pulled from the seabed. These birds are generally known as seaducks, with the mo highly adapted species being the eiders and the scoters. They are sturdy, powerfully built ducks th can dive to impressive depths (more than 40m in the case of the Common Eider). Unlike mo seabirds they propel themselves with their feet rather than their wings when swimming under water.

Some seaduck species, such as scoters, breed well inland by fresh water, others by sheltered coast bays. As with all wildfowl, young seaducks are very active and feed themselves from the first day their lives. They therefore benefit from having access to reliably calm and food-rich waters in whic to forage, as well as from more cover in which to shelter from predators. Outside the breeding seaso they are generally seen in large groups, and tend to stay close to areas with large mussel beds or oth concentrated food sources for the duration of the winter. Most seaducks are very rare on inland water although they may take shelter on large reservoirs, for example, following storms at sea.

Like their freshwater relatives, seaducks display sexual dimorphism, the males are more colourf or boldly patterned than the females. Courtship displays, which begin in midwinter, are ofte communal, with several drakes posturing vigorously and calling noisily to the females. Pairs for several weeks before the birds move on to their breeding grounds in spring, but the pair bond persis only until the female has laid her eggs. She incubates and rears the young alone (as the ducklings fe themselves they do not need the same level of parental care as other seabird chicks). Post-breedin the annual moult renders the adult ducks temporarily flightless as the primary and secondary feathe are replaced. This is not a serious handicap as they are back at sea when the moult begins an therefore have less need to fly. Males may assume a drabber ‘eclipse’ body plumage during the moul

With its superlative waterproofing and insulation, the Eider has little to fear from even the roughest seas.

# Eider

## *Somateria mollissima*

In winter Eiders are highly gregarious, feeding, resting and, as spring approaches, courting in flocks.

A large, solid and very distinctive bird, the Eider is probably our best-known seaduck. It is als arguably our most marine duck, as it breeds on the coast as well as wintering at sea. It famous as the source of eiderdown, the supremely soft and warm underlayer of plumage th the female plucks from her breast to use as nest lining, and this is still sustainably harveste at some breeding sites once the ducklings have hatched and left the nests. The specie scientific name references the pleasing properties of eiderdown – *somateria* means 'wool body' and *mollissima* is Latin for 'very soft'.

## INTRODUCTION

The Eider or Common Eider is a big, stocky and thick-necked duck with a distinctly 'Roman-nose profile, and cheek feathering that extends some way along the bill sides. These features give the bird unique facial look, which is apparent (given a close view) in all of its varied plumages. Females a uniformly mottled brown, while breeding drakes are boldly patterned in black and white with mint green patches on the neck and a beautiful pinkish wash on the otherwise white breast. Immatu (under three years) and eclipse-plumage drakes can show confusing intermediate patterns, often wi much black or very dark brown feathering.

This duck is a very strong swimmer and diver, its chunky proportions and subcutaneous fat (alon with its celebrated down) help it to stay warm when immersed in cold Arctic waters. Due to its sma wings and heavy body it has very high wing-loading, so it needs to expend a great deal of energy stay airborne. Its hard-flapping flight, powered by proportionately huge pectoral muscles, is extreme fast, approaching 80kph (making the Eider one of the world's fastest-flying birds).

The drake Eider is a handsome bird, with a very distinctive expression thanks to its high-set eyes and ‘long face’.

## DISTRIBUTION, POPULATION AND HABITAT

This seaduck breeds around coastlines across much of northern Europe, including Svalbard, and Asi North America and Greenland. Its world population is estimated to be 3.1–3.8 million individual with about 30,000 pairs breeding around the British Isles. The wintering population is about 80,00 individuals, with visitors from north-east Europe joining the local breeding birds. Eiders breed Scotland, Northern Ireland and parts of northern England, and may be seen offshore anywhere arou the coast, but are more common further north. Small non-breeding flocks may be seen offshore summer, but the species is much more commonly seen in the open sea during winter.

Eiders nest on low, rocky coastlines in sheltered areas, especially on islands where their young ca be safe from mammalian predators. It is not unusual for them to nest in the proximity of Arctic Te colonies, where they benefit from the terns’ hyper-vigilance against predators. They spend the wint months offshore, often in sheltered bays and estuary mouths, close to good food supplies. It extremely rare to encounter wild Eiders inland. However, the species is rather popular in captiv wildfowl collections and such birds occasionally escape and may turn up anywhere.

# EXOTIC EIDERS

A family of Shetland Eiders.

There are four to six recognised subspecies of Eider worldwide. Our breeding birds are o the nominate subspecies *Somateria mollissima mollissima*. The subspecies *S. m. borealis* native to the High Arctic, has been recorded in British waters. Drakes of this form have distinctive bright orange-yellow bills, and frilly extended scapular ‘sails’, which are small bu often quite obvious given a clear view. Eiders that breed on the Shetlands are smaller than other UK Eiders and may belong to the subspecies *faeroensis* rather than *mollissima*.

Communal courtship is a chaotic and noisy business, with displaying, chases, scuffles and constant outraged-sounding 'ah-OOOH!' calls.

## BEHAVIOUR AND DIET

This is a very gregarious duck, usually encountered in flocks and quite often in gatherings of mo than 1,000, especially in winter. In the summer months birds that are too young to breed stay at sea smaller flocks. Flocks tend to stay closer inshore in calmer waters to rest in between feeding sessio (for example when high tide makes the seabed less easily accessible). When moving between feedi and resting spots they fly very low over the water in a series of long lines.

When actively feeding, groups of Eiders dive in waves, with certain birds acting as leaders to t rest. Studies of groups of females within flocks suggest that the birds that initiate feeding and serve leaders are usually those with the poorest body condition, and therefore presumably have the greate need to feed. Followers benefit from the leaders' eagerness as they can make more efficient dive heading directly to where the leaders have found food.

Eiders feed primarily on small marine animals found on the seabed, especially molluscs, s urchins and crabs. The single most popular prey is the Blue Mussel *Mytilus edulis*. To access a retrieve this prey, the ducks need to make long and deep dives. They are foot-propelled divers, li other diving ducks, although underwater footage shows that they may beat the half-closed wings at t start of the dive to assist in gaining depth more quickly. They can reach depths of 40m, althou typical foraging depths are around 10m. Once at the seabed, they use dabbling motions of the bill search for prey in the substrate. The prey is usually brought to the surface to be eaten; even quite lar and uncomfortable-looking items like spiky sea urchins can be swallowed in one go, although t birds usually bite and shake off the long legs and claws of spider crabs before swallowing the bodi Eiders may also feed in shallow water where they can access the seabed by upending or even ju immersing their heads, and in the shallows they may use their feet to dig into the seabed substrate.

winter they tend to seek out larger prey in order to reduce time spent under water, since diving colder water is more energetically expensive.

Digesting prey like mussels and sea urchins, which have very hard body parts, requires son serious internal processing. The gizzard of a bird, part of the stomach, is a very tough and muscul organ, with vigorous peristaltic action that in seaducks crushes up crustacean carapaces and mollu shells so that they can safely pass through the digestive tract. Very young ducklings stick to sof bodied prey such as amphipods.

## BREEDING

Eiders form pair bonds during the late winter, when in large mixed flocks. Adult drakes (those that a at least three years old) display communally, with several often surrounding a single female, eac rearing up in the water and tossing its head back repeatedly. The display is accompanied by distinctively fruity and comical 'aaah-ooo' call. Once the pair bond is formed the male remains clos to his mate for several weeks, and there is evidence that the protection of an attentive mate allov females to feed for longer, as they are not being distracted by the advances of other drakes. Since th female is able to access extra food, she is in better condition at the start of the breeding season tha she would be without the protection of the male, and consequently is more likely to be successful breeding. She may lose 40 per cent of her body weight over the duration of incubation, so preparatio is very important. By sticking close to his mate, the male also improves the chances of ensuring th he is the father of her brood – but his help is not required for the actual care of the eggs and duckling so once the eggs are laid he normally moves on and joins other males in flocks to resume the usu communal lifestyle.

Female Eiders can breed from the age of two years, and may live for more than 30 years. It is n unusual for adult females to make no breeding attempts in some years. This is quite a commo strategy in long-lived birds. Missing a year is most likely when a female is not in peak condition at th start of the breeding season. Opting not to nest (and thus avoiding all the physical stresses and risk that nesting entails) in that year gives the bird extra recovery time for the following year, and ma allow her to increase her overall lifetime reproductive potential. Females with low body condition a also more likely to abandon their newly hatched chicks than are those in peak condition – however, th young do at least stand a chance of survival, as they may be able to join another family.

The down that lines an Eider nest provides cushioning and superb insulation for the eggs.

Females nest in low, sheltered hollows close to calm seas, often among boulders or vegetatio They frequently form loose colonies, with just a few metres separating the nests. Bolder and mo experienced females tend to nest further from the shoreline than shyer birds – this willingness venture inland allows them to find more sheltered sites. The selected hollow is lined with eiderdow exceptionally soft and fluffy feathers that the female pulls from her breast and pats or treads in place. She lays her eggs (usually four or five, but can be up to eight) at daily intervals, but does n begin to incubate them until the clutch is close to complete. She continues to add down to the ne throughout the 25–28 days of incubation. The heat-holding properties of the down keep the egg sufficiently warm at times when the female has to leave the nest to feed. The eggshells are yellowis or greenish-brown to camouflage them from predators. Nevertheless, they are still highly vulnerab when unattended, and the female's breaks from incubation are few and brief. Her own camouflage superb, and she is likely to sit tight on the eggs until the last possible moment if a predator wande near the nest.

The Farne Islands in Northumberland are a good place to observe Eider nesting and family life.

Predators have already made significant inroads on this Eider crèche; the two females would originally have had eight or more ducklings between them.

Like the young of all ducks, the young are precocial – able to move freely and feed themselves ve soon after hatching. They have a coating of down in a camouflaged brown pattern, which quickly dri off once they are out of the egg, and in less than an hour they are strong enough to run and swim aft their mother. She leads them to the sea, a safer place for them than the land, although there are sti many dangers. The female does her best to guard them and drive away would-be predators – the lar gull species such as Herring and Great Black-backed Gulls present the most significant danger. Ofte several Eider families team up once on the water. By living in these crèches, all benefit from a larg 'attack force' – any predator may be set upon by multiple female Eiders, which will fearlessly launc themselves air-wards and attack a cruising gull or skua. The ducklings can also protect themselves b diving. However, predation rates may still be very high – in some areas more than 90 per cent ducklings are taken by gulls. Some individual gulls may be specialist predators of Eider duckling Some Eider populations in areas with few local gulls have much higher survival rates.

The young birds are most vulnerable to predation in their first two weeks of life. Ducklings a more likely to be taken in rough rather than calm weather, probably because it is more difficult f them to stay close to their mother in rough conditions. Small ducklings are also vulnerable to t direct consequences of bad weather – deaths from exposure are common. The ducklings becon significantly less vulnerable to both predation and the effects of bad weather once past two weeks age, and some of the females in the crèche group start to move away at this point. However, t ducklings still benefit from the protection of at least a few adults for another five or six weeks. Th are able to fly at about 65 days old, and thereafter both the youngsters of the year and the breedi females join flocks at sea. Young Eiders have, on average, a 33 per cent chance of surviving their fir year, but survival rates for adults are much higher.