The Story of the Isle of May National Nature Reserve

2nd edition

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The Story of the Isle of May National Nature Reserve

The Isle of May National Nature Reserve (NNR) lies on the east coast of Scotland, in the entrance of the Firth of Forth. For its small size it has a tremendous variety of wildlife and is renowned for its rich bird life, seals and reefs. During the summer months the cliffs on the Isle of May are home to spectacular seabird colonies, and in the autumn the second largest Atlantic grey seal colony in eastern Britain breeds on 'the May', as it is known locally. In the spring and autumn the island is an important site for migrant birds passing to and from their breeding grounds. The island has an impressive cultural history stretching back thousands of years.

The Isle of May is one of over fifty NNRs in Scotland. Scotland's NNRs are places where some of the best examples of Scotland’s wildlife and habitats are carefully managed. Whilst nature always comes first on NNRs, they also offer special opportunities for people to enjoy and find out about the richness of our natural heritage.

The Reserve Story provides information on the Reserve and its management. It briefly describes the wildlife and habitats found on the Reserve, why they are special in both international and national and terms, a brief history of the island before it became a Reserve, and management of wildlife, people and property on the Reserve to the present day.

For the latest news read the Isle of May NNR blog or for information on visiting see the NNR website.
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Location map
1  Introduction to the Isle of May NNR

The Isle of May NNR lies at the mouth of the Firth of Forth about 8 kilometres (km) southeast of Anstruther in Fife and 17km northeast of North Berwick in Lothian. The island is characterised by a low lying and rocky eastern coast, and a west coast dominated by high cliffs. Although only 57 hectares (ha), it is of national and international importance for its seabird and seal colonies.

From April to July the cliffs are covered with breeding kittiwakes, razorbills, guillemots and shags. Inland thousands of burrow-nesting puffins can be seen; eider ducks are abundant and there are usually breeding terns. Grey seals can be seen all year round, but there are many more in the autumn when they give birth to their pups.

The Isle of May is so important for wildlife that it is protected by both European and national legislation. It is included in the European network of Natura 2000 sites as a Special Protection Area (SPA) for ten bird species and is a Special Area of Conservation (SAC) for breeding grey seals and rocky reefs. Six of the SPA bird features and the grey seals are also protected under national legislation as features of a Site of Special Scientific Interest (SSSI). Three additional bird species – eider, purple sandstone and turnstones and maritime cliffs are also notified features of the SSSI. The designations and notified features are listed in Table 1.

The Isle of May has a long maritime and ecclesiastical history. A number of the structures on the island are designated as either ancient monuments or listed buildings. These are noted in Table 2.

Table 1: Protected areas and features on the Isle of May.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Protected Area</th>
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</thead>
<tbody>
<tr>
<td>Arctic tern (Sterna paradisaea), breeding</td>
<td>Forth Islands SPA</td>
</tr>
<tr>
<td>Common tern (Sterna hirundo), breeding</td>
<td>Forth Islands SPA</td>
</tr>
<tr>
<td>Cormorant (Phalacrocorax carbo), breeding</td>
<td>Forth Islands SPA</td>
</tr>
<tr>
<td>Eider (Somateria mollissima), breeding</td>
<td>Isle of May SSSI</td>
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<tr>
<td>Fulmar (Fulmarus glacialis), breeding</td>
<td>Forth Islands SPA</td>
</tr>
<tr>
<td>Guillemot (Uria aalge), breeding</td>
<td>Forth Islands SPA, Isle of May SSSI</td>
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<tr>
<td>Herring gull (Larus argentatus), breeding</td>
<td>Forth Islands SPA</td>
</tr>
<tr>
<td>Kittiwake (Rissa tridactyla), breeding</td>
<td>Forth Islands SPA, Isle of May SSSI</td>
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<tr>
<td>Lesser black-backed gull (Larus fuscus), breeding</td>
<td>Forth Islands SPA</td>
</tr>
<tr>
<td>Puffin (Fratercula arctica), breeding</td>
<td>Forth Islands SPA, Isle of May SSSI</td>
</tr>
<tr>
<td>Razorbill (Alca torda), breeding</td>
<td>Forth Islands SPA</td>
</tr>
</tbody>
</table>
Roseate tern (Sterna dougallii), breeding  | Forth Islands SPA  
Sandwich tern (Sterna sandvicensis), breeding  | Forth Islands SPA  
Seabird assemblage, breeding  | Forth Islands SPA  
Seabird colony, breeding  | Isle of May SSSI  
Shag (Phalacrocorax aristotelis), breeding  | Forth Islands SPA  
Purple sandpiper (Calidris maritima), non-breeding  | Isle of May SSSI  
Turnstone (Arenaria interpres), non-breeding  | Isle of May SSSI  
Maritime cliff  | Isle of May SAC  
Reefs  | Isle of May SAC  
Grey seal (Halichoerus grypus)  | Isle of May SAC  

Table 2 Listed buildings and scheduled monuments on the Isle of May

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Light And Cottages</td>
<td>Listed building</td>
<td>C(s)</td>
</tr>
<tr>
<td>South Horn</td>
<td>Listed building</td>
<td>C(s)</td>
</tr>
<tr>
<td>Isle Of May Lighthouse</td>
<td>Listed building</td>
<td>B</td>
</tr>
<tr>
<td>Fluke Street Former Coal Store And Stable Block</td>
<td>Listed building</td>
<td>B</td>
</tr>
<tr>
<td>The Beacon, Former Lighthouse</td>
<td>Listed building</td>
<td>B</td>
</tr>
<tr>
<td>North Horn</td>
<td>Listed building</td>
<td>C(s)</td>
</tr>
<tr>
<td>Priory</td>
<td>Scheduled monument</td>
<td>Ecclesiastical</td>
</tr>
<tr>
<td>Lighthouse</td>
<td>Scheduled monument</td>
<td>Industrial</td>
</tr>
</tbody>
</table>

Looking west across the Firth of Forth to the Isle of May
2 Natural and Cultural Heritage of the Isle of May NNR

Rugged cliffs, lined with ledges and crevices dominate the west coast and make ideal nesting sites for thousands of seabirds. On the east coast, the scenery is less dramatic, with grassy banks sloping from the western cliffs towards the rocky and broken eastern shore. The grassy top of the island is home to thousands of puffin burrows. In the summer, over 200,000 birds breed on the island while in the autumn the fourth largest breeding grey seal colony in the UK is found here.

Climate

The local climate is similar to much of the eastern seaboard of Scotland but with an average rainfall of only 56cm, lower than in either Fife or East Lothian. The prevailing winds are westerly, but prolonged spells of easterly winds occur annually and gales are especially likely between October and February. Temperatures are uniform throughout the year, with a difference of only 9° centigrade between the January and July means.

Geology

The Isle of May is around 1.5 km long and 0.5 km wide, with an area of about 57 ha at high tide. The island has a tidal fall of about 4.5 metres, and at low tide a considerable extra area of rock is exposed.

The island is composed entirely of a volcanic greenstone or olivine-dolerite sill that dips gently in a north easterly direction and is crossed by a series of trough-like faults of varying depths. Many of the fault lines running roughly east - west across the island have been eroded to form steep gullies or geos, and there is a fine series of rock stacks, arches and caves along the west cliffs. Angels Stack, rising to just over 30 metres, and the Mill Door, a large natural arch mid way along the west coast, are particularly impressive features.

The highest cliffs on the west side reach up to 45 metres and from here the land tilts, with a grass topped plateau sloping steadily down to the eastern shore. Only the pebble beach of Pilgrims Haven and the two small beaches of shell sand, Kirkhaven and Silver Sands, break the rocky eastern shoreline. At high tide the northern section of the May, called Rona, is cut off from the main island. The south part of the island has traces of a raised beach.

Flora and Fauna

The Birds on the Isle of May NNR

For many people it is the birds that make the May particularly special. In all over 285 species have been recorded but it is the thirteen species of breeding seabirds for which it is internationally important. The island provides a safe haven for many of these species. Compared to a site on the mainland there is very little disturbance and it is free from predators such as foxes and rats.
At the height of the breeding season the May is home to an amazing 200,000 seabirds, including guillemots, razorbills, puffins, kittiwake, shags and fulmars.

Guillemots on the seabird cliffs

From the foot of the cliffs to the island top the birds follow a pattern common to many large seabird colonies – on the lowest slopes the shags build nests, above them the gregarious guillemots breed alongside their close relative the razorbill, with fulmar and kittiwakes in the upper sections. Puffins breed in burrows at the top of the cliff and on the grassland areas around the island. The two main tern colonies breed close to the Beacon and at Kirkhaven.

Numbers of all the seabird species fluctuate from year to year and sometimes quite dramatically; this can be due to poor weather and/or lack of fish supplies. The main fish species in the seabirds’ diet are sandeels, herring and sprats. There are serious concerns about the impact of reduced fish supplies on the survival of the seabirds.

The link between fish stocks and seabirds is the focus for an intensive study being carried out on the island which started in 2000.
Breeding birds

Guillemots and razorbills

The high cliffs on the west of the island hold vast ‘bird cities’ - dense colonies of guillemots nesting on narrow ledges. Over 20,000 birds can be seen here during the summer. In amongst the guillemots are several thousand (currently around 3,800) of their close relative, the razorbill.

Guillemots favour broad, exposed ledges while the razorbills prefer crevices and corners of ledges. Both lay an individual egg directly onto the rock. About 5% of the guillemot population on the Isle of May are bridled, meaning they have a fine white line around their eye. The further north you travel the higher the proportion of bridled guillemots you find in a population.

The Forth Islands SPA is home to just over 3% of the UK population of guillemots and about 2.7% of the population of razorbills. The tables below show the breeding success of guillemots and razorbills on the Isle of May from 1990 to 2014.

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Footnote - The figures given for the Forth Islands Special Protection Area (SPA) date from 1991 when the SPA was first proposed. These have not been reviewed since.
Guillemots

Counts of individuals and estimated pairs of guillemot on the Isle of May, 1990-2014

Razorbills

Counts of individuals and estimated pairs of Razorbill on the Isle of May, 1990-2014
The Story of the Isle of May National Nature Reserve

Puffins

Perhaps the most easily recognised of the seabirds found on the May are the puffins which nest on the cliff tops and flatter parts of the island. Here the soil depth is sufficient to allow them to build burrows or more commonly to occupy old rabbit burrows. Amazingly, puffin numbers have increased from a mere handful in 1959 to an estimated 68,000 active puffin burrows on the May in 2002 but since then have dropped to about 46,000 pairs at the last 2 population surveys in 2008/9 and 2013.

The initial increase in numbers was believed to be the result of large migration from other colonies, notably the Farne Islands in Northumberland and the population grew at about 10% a year until the population crash. The reason for the crash was a big drop in the number of adult puffins surviving the winters of 2006/7 and 2007/8.

The Atlantic puffin breeds throughout the North Atlantic and Arctic oceans with strongholds in Iceland and Norway. Around 10% of the world population breed in Britain and Ireland, where it is the second most abundant seabird. There are 21 sites, including the Forth Islands, in the UK Natura SPA suite for puffins. The Forth Islands SPA holds nearly 5% of the UK population, with a significant portion of this population being found on the May with smaller puffin populations on the islands of Fidra and Craigleath, on the south side of the Forth Estuary.
Terns

Terns used to breed in vast numbers on the May. In the 1940s at the height of their population over 5,000 common, 500 Arctic, 1,500 sandwich terns and 15 roseate terns bred on the island. Tern numbers declined in subsequent years and they were largely absent from the island during the 1970s.

In the early 1980s terns returned to the May and re-established themselves. They have generally been increasing in numbers since, although numbers fluctuate dramatically and are difficult to predict.

Terns are a fickle species and it is hard to tell where they will breed from year to year. For example the tern population completely disappeared from the May in 1998. In 2001 there were 140 pairs of common tern, 900 pairs of Arctic tern and 500 pairs of sandwich tern; in 2005 there were no breeding sandwich terns and only 609 Arctic and 65 common terns. In 2006, the terns had a very poor season with only 17 chicks fledging from the island’s colony of over 600 pairs. 2014 was a very productive year with 415 pairs of terns (400 arctic, 15 common) producing a peak fledged count of 273, the highest total since recording started in 1995.

All of the tern species on the May are notified as part of the Forth Islands SPA. The
SPA supports over 6% of the common terns, 1% of the arctic terns, less than 1% of the sandwich terns in the UK, and 15% of the limited UK population of roseate terns.

**Arctic, 'commic', common and sandwich tern**

![Graph showing counted number of nests of Arctic, Common, "Commic" and Sandwich Terns, Isle of May, 1990-2014]

**Kittiwake**

Twenty-five years ago there were around 8,000 pairs of kittiwakes nesting on the island but in 2014 this was down to just 2,464 pairs. Kittiwakes are some of the best indicators of the health of the surrounding sea as they are very sensitive to changes in fish stocks so this overall decline is of great concern. But in 2014 the kittiwake had one of its most productive years since recording began on the Isle of May with an average of 1.17 chicks produced per breeding pair which shows that it isn’t all bad news.

**Gulls**

There is an assemblage of lesser black-backed, herring and greater black-backed gulls on the May. Herring and lesser black-backed gulls did not breed on the island until 1907 and 1930 respectively. However, by the 1970s there were over 17,000 gull nests on the island. Due to concern over the impacts that these greatly increased gull populations would have on the ecology of the island controls were set up. These included the culling of over 45,500 gulls between 1972 and 1986 and the maintenance of a substantial gull free area from 1987 onwards. The 2014 counts show a population of herring gulls increasing while lesser black-backed gulls are showing a recent decrease.
Great black-backed gulls first bred in 1962, increasing to four pairs by 1971. The population was exterminated during the gull cull, but has since gradually increased with to 51 pairs in 2014.

**Herring and lesser black-backed gull.**

![Estimated nest totals for Herring and Lesser Black-backed Gull, Isle of May, 2014](image)

**Shags** - breed on the lower rocks and ledges and have the longest breeding period of any of the birds on the Isle of May; they can breed anytime from March through to October. Their numbers have been prone to collapses usually as a result of poor winter survival and in 2012 the number of pairs increased to 545 before dropping dramatically to 338 pairs in 2014.

**Fulmars** - first bred on the island in the 1930s. Several hundred fulmars nest on the island’s cliffs and slopes each year mainly on the west cliffs, although they are gradually colonising other areas of the island. Fulmars tend to have more space around them than the other cliff nesting birds, probably because they spit fish oil at anyone or anything that comes too close. After a couple of poor years, 2014 saw an improvement in the fortunes of these birds with 325 pairs nesting and also having the most productive year on record with 0.56 chicks produced per pair.

**Eider** - The eider population seems to have levelled out at approximately 900-1,000 pairs (975 pairs in 2014), having increased from an average of 500 pairs in the mid 1980’s to a peak of 1,141 pairs in 2001.
Eiders tend to nest on grassy areas or in the shelter of boulders. Their main food source is the beds of mussels found on the reefs below the western cliffs. In April and May, the shores of the island echo with the soft cooing of displaying males.

Other breeding birds on the island include oystercatcher, swallow, rock pipit, pied wagtail and shelduck.

Migrants and wintering birds

The island is famous for its bird observatory, the first in Scotland and after the Skokholm observatory in Pembrokeshire, only the second to be set up in the UK. The observatory was set up to study the numerous species which stopover on the island in the autumn and spring on their seasonal migrations. Less than 20 species breed on the island, but over 285 species have been identified as either over-wintering or passage birds on migration.

The island’s location on the east coast of Scotland is well placed for receiving migrants moving down the Scottish coast, as well as birds from Scandinavia who have been carried off track by easterly winds. The real interests for many keen bird watchers are the unusual species which turn up amongst the larger flocks of common migrants. Common migrants include pipits, thrushes and wagtails; recent rarities have included black-winged stilt, lanceolated warbler, white’s thrush, bridled tern and calandra lark, to name a few of the many recorded. Records on the island include a number of firsts for both Scotland and the UK.
During the winter months the island supports nationally important numbers of over wintering turnstones and purple sandpiper.

**Mammals on the Isle of May NNR**

Grey seals spend most of the year at sea, and may range widely in search of prey. They come ashore in autumn to form breeding colonies. The UK population represents about 40% of the world population and 95% of the EU population. The Isle of May is the second largest east coast breeding colony of grey seals in Scotland and the fifth largest breeding colony in the UK. With a total population size of about 4,000 animals it produces approximately 3,000 pups per year, contributing approximately 4.5% of annual UK pup production. Such large colonies are important in maintaining overall population size and are significant as sources of emigration to smaller or newly established groups. Grey seals are the third rarest species of seal in the world.

About a hundred grey seals live around the island all year, their numbers swelling dramatically when many more return to the island to pup and mate between late September and January. Breeding animals tend to return to the same site each year, often to within a few metres of where they pupped the year before. Cows produce their pups on the grassy tops or on sheltered shores above high water.

There are regular sightings of cetaceans in the Firth with regular sightings of minke whale and harbour porpoise throughout the summer and autumn months.

The Isle of May plays host to its own race of mouse. In 1982, 77 house mice were released on the May from Orkney as part of a research project in gene hybridisation with May house mice. At that time the May mouse population was estimated to be between 500 and 3,000. There have been no recent attempts to quantify population
size though there are certainly plenty on the island and numbers are controlled in all the buildings. Currently the University of Nottingham are developing a long-term project looking at genetic variation in the island mice.

Although rabbits have been present on the May since monks introduced them (first documented record was 1329), numbers have never been quantified. In the past rabbits were controlled to some extent by the lighthouse keepers and myxomatosis. Currently numbers are unchecked and limited only by the natural carrying capacity of the island and by myxomatosis which brought about population crashes in 2007 and 2013.

**Marine species**

Rocky reefs cover almost 80% of the shoreline of the May. The reefs are covered with mosaics of white encrusting barnacles, tufts of wrack and on the western cliffs, mussels. The rock surfaces and crevices harbour sea anemones, velvet and edible crabs. In sheltered pockets, knotted wrack blankets the shore.

Cold waters from the Arctic that travel south into the North Sea influence the marine species that live around the Isle of May. The wolf fish, bottlebrush hydroid and the pink sea anemone are typical of these cold, northern waters. These species give the reefs around the Isle of May their distinctly northern character. Both the north and south ends of the island experience strong currents on the incoming and outgoing tide promoting the growth of filter feeders and soft corals on the walls and gullies in these areas.

To the north and south of Kirkhaven and all along the west side of the island, boulder slopes and rock shelves support crabs, lobsters, wrasse, conger eels, octopus, sea slugs, star fish, sea urchins, angler fish, lumpsuckers, and plumose anemones.

Forests of kelp plants shelter many other species, including fish, octopus and crabs. White lacy sea mats and sea firs cover the kelp fronds whilst feathery seaweeds grow on the upright stipes. Gobies swim amongst the plants and scorpion fish blend into the rock surface.

In the dimmer waters beyond the kelp forest, sea urchins graze the rocks, cuckoo and ballan wrasse patrol, orange and white dead man’s fingers cover the seabed and octopus and wolf fish are concealed between boulders. A carpet of brittlestars covers the cobble plains with large dahlia anemones and scallops scattered amongst them.

**Invertebrates on the Isle of May NNR**

A number of rare invertebrates have been recorded from the island, including the harvestman *Nelima sylvatica*, the isopod *Trichoicoides sari*, the water flea *Macrothix hirsuticornis* and the moths - northern dart and the northern rustic. Around 140 species of macro moth have been identified, with new records being added annually. The commonest butterflies on the May include the small
tortoiseshell, red admiral and peacock butterflies. 10 species are regularly seen on the island.

**Flora**

The cliffs are greatly influenced by salt spray; typical plants include salt tolerant thrift and sea plantain.

The island is covered in different types of maritime grasslands: cushions of thrift and lichens found in rock crevices; dense mats of sea spurrey, sea milkwort and scurvy grass where salt spray washes the island; and further from the shore extensive areas of sea campion and grasses such as fescue, meadow grass and bents.

The island has been noted for a number of interesting bryophyte and lichen communities including several rare or local species. The lichen flora is “in many ways comparable with that of upland regions of Western Britain” (Sheard and Ferry 1967). In July 2010 a British Lichen Society group visited and found of note *Ramalina polymorpha, Anaptychia ciliaris mamillata and Cladonia arbuscula*. The bryophyte flora includes western-oceanic species, notably *Frullania germana*.

The old ash heaps and enclosed gardens contain large stands of nettles, umbellifers and henbane. Trees and shrubs such as hazel, elder and sycamore have been planted to attract migratory birds in the spring and autumn.
The Cultural Heritage of the Isle of May NNR

The island has a colourful history associated with its chapel, lighthouses, medieval village, and military importance during the two world wars and significance as a site for bird and seal research. Ownership has changed many times over the centuries as interest waxed and waned, but now SNH as owner has obligations to care for certain buildings on the island. St Adrian's Chapel is a Scheduled Ancient Monument designated under the Ancient Monument and Archaeological Areas Act 1979. The Isle of May Lighthouse, former Coal Store and Stable Block (the Castle), Principal and Assistant Keepers Houses, The Beacon (former Lighthouse), the Low Light and Cottages, North and South Horns have all been included in the list of Buildings of Special Architectural or Historic Interest.

Summary

From the stunning seabird colonies to the rich underwater reefs, the Isle of May supports a tremendous wealth of wildlife. It also has a rich cultural history. The island is important on both a national and international scale.
3 History of the Isle of May

The Priory and Chapel - the island has a long written history, with records as far back as the foundation of its priory in the mid-twelfth century. Recent archaeological excavation of the chapel discovered pottery, flint arrowheads and a piece of stone axe which might have been made around 2000 BC during the Bronze Age. Medieval documents tell us the name of a holy man called Ethernan, who probably lived in the 7th century and may have established the first religious community on the island. In the 9th century records tell of a raid by Vikings who killed all the monks.

Excavations have revealed evidence of an 11th century church built over the site of a 6th century church that contained burial cairns. In 1145, David I founded a priory for nine Benedictine monks but by 1300 it had been demolished. However the island remained an important destination for pilgrimage. In 1549, after ownership of the island changed, the chapel was converted into a defended manor house.

The village - throughout the seventeenth century and well into the eighteenth there was a village on the May, the ruins of which were visible until the early 1900's. The last villager John Wishart died in 1730 and is buried on the island. The caves and bays on the island provided ample cover for extensive smuggling during the eighteenth century.

The lighthouses - in 1636 the first lighthouse in Scotland was built on the island. Ownership of the island regularly changed hands until 1814 when the Northern Lighthouse Board (NLB) acquired it. Robert Stevenson built the present lighthouse.
in 1816. Although it no longer owns the island, the Northern Lighthouse Board continues to own and operate the lighthouse – The Main Light.

**The First and Second World Wars** - during the First World War a signal station was built on the May to warn of enemy vessels in the Forth. German Zeppelins used to fix their bearings on the island before continuing up the Forth, but despite this the island had no guns to defend it.

Tensions in the 1930's prompted the Admiralty to occupy the May again. The island's prime role was to locate and identify all ships entering the Forth. Indicator loops that detected the magnetic field made by passing vessels were laid from the island across the Forth to the Fife and Lothian coasts, primarily to locate submarines. A number of concrete buildings and foundations associated with this work remain visible to this day.

**Seal research** - the Sea Mammal Research Unit from St Andrews University commenced work on the grey seal colony in 1982. In addition to various behavioural research projects, an annual population census is undertaken.

**Seabird research** - Sibbald compiled the earliest list of seabirds frequenting the island in 1710. Baxter and Rintoul made the first complete censuses in 1921 and 1924. Volunteers founded the Isle of May Bird Observatory in 1934 and it is now the oldest continuously run observatory in Britain. Bird migration has been studied here since 1907, with only short breaks during both World Wars, continues to this day. Trapping and recording is undertaken by members of the Isle of May Bird Observatory Trust.

Seabird research started on the Island in 1966 and has increased dramatically over the last 30 years. The Isle of May is one of the four strategic seabird-monitoring sites in Great Britain along with Fair Isle, Canna and Skomer. A range of Universities and research institutes undertake research and scientists from all over the world travel to the island to see this work undertaken.

**National Nature Reserve** – the island became a National Nature Reserve in 1956 when the then owners, the NLB, signed a Nature Reserve Agreement with the Nature Conservancy (NC). This arrangement continued until 1989 when the Nature Conservancy Council (NCC), (formerly the Nature Conservancy), purchased it from the NLB. In 1992 the NCC merged with the Countryside Commission to become SNH, who have owned and managed the island ever since.
4 Management of the Isle of May NNR

Over the years SNH has built up a good knowledge about the reserve and how to manage its wildlife. However, we cannot be complacent as there are always new challenges to be faced. This section tells the story of the reserve since it was established, and the Reserve Plan sets out our plans for the future.

Key Events in the story of The Isle of May NNR

A few of the highlights in chronological order

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1956</td>
<td>Nature Reserve Agreement signed between the Northern Lighthouse Board and the Nature Conservancy and the island became a National Nature Reserve</td>
</tr>
<tr>
<td>1966</td>
<td>Construction of the Mouse House for use as accommodation for researchers</td>
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<tr>
<td>1966</td>
<td>Seabird research started on the island</td>
</tr>
<tr>
<td>1972</td>
<td>Start of gull cull which ended in 1986</td>
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<tr>
<td>1982</td>
<td>Sea Mammal Research Unit commence research work on the grey seal colony</td>
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<tr>
<td>1989</td>
<td>NCC (now SNH) purchase the island from the Northern Lighthouse Board</td>
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<tr>
<td>1990</td>
<td>Refurbishment of Principal Keeper’s house as accommodation for researchers and staff</td>
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<tr>
<td>1991</td>
<td>Development of sandeel fishery on the Wee Bankie</td>
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<tr>
<td>1995</td>
<td>Refurbishment of Assistant Keeper’s house to provide further accommodation</td>
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<tr>
<td>2014</td>
<td>Completion and opening of new visitor centre built on the site of the old lighthouse coal store</td>
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The Management of the Natural Heritage on the Isle of May NNR

Our policy for NNRs requires that nature comes first, that best practice is adopted, and that where needed specialised management is used. To comply with the legislation for other designations like Natura 2000 (SPA and SAC) and the SSSIs, we must give priority to keeping the features (habitats and species) for which those sites are notified in favourable condition. For other habitats, species and earth science interests, management is undertaken as and when resources are available.

The habitats notified on the NNR are maritime grasslands, seabird cliff communities and rocky reefs. These do not require active management by SNH and are largely left to natural processes, although remedial action is taken if needed. The main challenge is trying to prevent those factors that arise out with the reserve from damaging the habitats on the Reserve, such as pollution at sea.

The key bird species on the Reserve include breeding birds such as guillemots, kittiwakes, shags, razorbills, puffins, eiders, lesser black backed gull and three species of tern. Various management measures are used to support their breeding colonies.
The Story of the Isle of May National Nature Reserve

Gull culls - by 1972, the herring gull population had increased to approximately 14,850 nests and the lesser black-backed gull population to approximately 2,500 nests. At that time there was great concern about the impact these greatly increased gull populations were having on other seabird species and on the ecology of the island, although clear direct links between increasing gull numbers and the fortunes of other seabirds were never established. Because of this concern, control measures were started, including the killing of over 45,500 gulls between 1972 and 1986. The culling of gulls ceased in 1986 when numbers were considered to have reached a level which was sustainable and unlikely to have a significant impact on the breeding success of other species on the island.

Gull free areas - in 1997 it was agreed that certain areas of the island would be maintained as “gull free” by removal of nests, to attempt to improve the productivity of terns on the May. This practice continues until the present day; With the gull population now increasing more gulls are trying to nest in the gull-free areas especially around Cross Park, the upper solar panels, St. Andrews Well and North Plateau. 19 clutches were removed in 2014.

In addition gulls nesting within metres of the tern colony at Kirkhaven also have their nests removed, with 24 clutches removed in 2014.

Terns and eiders – are both ground nesting, which makes them vulnerable to trampling. They can also be affected by natural events like bad weather and flooding. A lot of effort is spent trying to increase their chances of rearing young successfully.

Each year we put up temporary fences to prevent people stepping on or otherwise disturbing the nesting birds, and we put up notices asking people to stay on the paths through tern breeding grounds. We have experimented with other techniques too, like providing shelters such as wooden boxes to give cover for the tern chicks, fixing 6ft garden canes in the ground around tern nests as a defence against predatory gull and moving eggs to above the high water mark to avoid them being swept away.

Predatory gulls that specialise in eating tern chicks can make
a big difference to tern productivity, so each year a licence is obtained to remove a few individual tern specialist gulls.

In addition, dense areas of nettles are cleared around the main eider and tern breeding areas. This is because nettle stings can paralyse the chicks of both species, making them susceptible to predators.

These efforts make a difference. The breeding success of both terns and eiders has generally improved since we adopted these more active management measures in 1994. Nonetheless, there will always be poor years when natural factors like the weather take a toll and fewer young are raised.

**Monitoring** - we monitor seabird species as part of the management of the NNR and for reporting on the SPA qualifying species. The Centre for Ecology and Hydrology (CEH) carry out further seabird monitoring under contract to the Joint Nature Conservation Committee (JNCC). Results from this monitoring work are integral to JNCC’s national system of long term monitoring for seabird populations, as the island is one of four strategic monitoring sites in Great Britain.

Population monitoring of the cliff nesting seabirds, gulls, eiders and terns is carried out by SNH, while CEH monitor the breeding success, survival and food of auks, shags, fulmar and kittiwake.
 Reserve staff do vegetation monitoring. They also maintain a list of casual sightings of cetaceans and carry out some timed cetacean watches. Moth traps are set up on a regular basis to record species found on the island.

The results of all monitoring work are written up in the Isle of May Annual Report and records are submitted to the appropriate recorders.

**Research** - many research projects have been carried out since 1966 looking at the success and productivity of all the breeding seabirds on the May. Research that increases our knowledge and understanding of the Reserve is encouraged, but research that would harm the wildlife interests is not permitted. All research work requires a permit and a list of these is provided in the annual report.

**Management for People on the Isle of May NNR**

The Isle of May is a very popular Reserve, receiving about 10,800 visitors each year.

The tourist boats visit the island regularly during the season (early April - 30 September) and brings the majority of visitors to the island. Many private boats visit the May, including sailing boats and canoes.

Visitors include people from all walks of life with varying interests and expertise in natural history, including bird watchers, photographers, divers and educational groups. Visitors come from the local area, further afield in the UK and many are from outwith the UK.
The Isle of May has a range of facilities for visitors. In 2014 a new visitor centre was built on the site of the old lighthouse coal store while the old visitor centre was demolished. It frames a spectacular view of Kirkhaven and the North Sea while offering shelter, toilets and information for visitors to get the best out of their visit. There are a number of marked trails and viewpoints around the island. The South Horn and Washhouse are open as shelters and include some interpretation boards.

The new visitor centre

A programme of open days and weekends is held primarily to boost visitor numbers in the quieter times of the year, i.e. August and September. They are themed to allow visitors to find out more about a particular aspect of the island and include lighthouse open days, seal weekends, sea bird open days, art and living history weekends.

All visitors to the island are provided with a reserve leaflet. They are also given a separate map with information about what they might see on the island. The map has information on how visitors can minimise their impact on the wildlife by taking responsible access. Examples include remaining on paths to reduce disturbance to breeding terns and both keeping a respectful distance and not staying in one location too long when taking pictures of birds.
There are two remote cameras on the May overlooking the seabird and seal colonies. The cameras are operated by the Scottish Seabird Centre in North Berwick and live images can be viewed at the centre. Visitors can control the cameras and footage can be seen on the Seabird Centre’s website.

**The Property**

Like every land manager, SNH has many responsibilities in managing the property. There are everyday maintenance projects on the Reserve to keep the land, buildings, tracks, signs, fences, ATV and equipment in good order. Checks are required to ensure that the property is safe for visitors and staff, in compliance with current Health and Safety legislation. This can include tasks like updating the Fire Plan, in case there is a fire on the Reserve. We also have to ensure that we take account of legislation such as the Disability Discrimination Act, and the Scottish Outdoor Access Code.

**The Land and Buildings**

Scottish Natural Heritage manages the NNR and owns the island except for the main lighthouse, the beacon, helipad, north and south jetties (under review) which are still owned by the Northern Lighthouse Board. We own twelve buildings on the island, all of which require maintenance and for us to ensure they are safe. Property takes a significant part of the annual budget and is very time consuming.

**The Visitor Centre** - built in 2014 as a purpose built sustainable building that enhances the visitor experience while fitting into the landscape.

**The Principal and Assistant Keepers Cottages** – were constructed in 1883 to accommodate extra staff needed to service the engines in the Generator Shed. These blocks were significantly renovated in the 1990’s to provide accommodation for researchers and island staff.

**Generator shed and Engine Rooms** - built in 1883, this block houses the SNH generator and battery room. The original engines and air compressors that were used by the NLB can still be seen in the engine room.

**The Low Light Cottage and Tower** - constructed in 1843, the cottage has been leased on a long-term basis to the Isle of May Bird Observatory since 1994.

**The Chapel** - managed by Fife Council and owned by SNH.

**The Beacon** - built in 1636, owned and maintained by the NLB.

**Main Lighthouse** - built in 1816, owned and maintained by the NLB.

**North and South Horns** - the North Horn was built in 1939 and the South Horn in 1886. Both are owned by SNH.

**Castle/Stable Block** – dating from circa 1816, this castellated building is currently used for storage, owned by SNH.
The Infrastructure on the Isle of May NNR

**Paths** - we maintain about 3.5 km of trails around the Reserve. Steps are repaired, surfacing patched and drains cleared each season to maintain them in good working order.

**Interpretive Panels** - there are interpretative panels in the Visitor Centre, in the South Horn, the Washhouse, near the Mainlight and Beacon and in and around the priory. A number of small bronze plaques are dotted around the landscape illustrating historical features of the island.

**SNH staff on the Isle of May**

There has been a Reserve Manager on the Isle of May since 1985; he/she is responsible for the day-to-day management of the Reserve. The post is based on the island between Easter and October each year, and in the SNH office in Cupar over the winter when various Reserve management and planning tasks are undertaken. The Reserve Manager works with a seasonal assistant. Both posts are managed by the SNH Operations Officer in Cupar, part of SNH’s Forth Area.

We employ contractors for larger tasks such as renovating, repairing and decorating buildings, and repairing walls. We offer two long-term volunteer placements for 10-12 weeks each season. They help with visitor numbers, tern monitoring and island maintenance. A number of other volunteers help out for shorter lengths of time and each year some SNH staff volunteer for a week to help set the island up at the start of the season.

**Summary**

The Isle of May is a place with exceptional natural and cultural heritage. It has many fascinating people stories and at peak seabird season it can be one of the best wildlife spectacles in Scotland. Our aim is quite simple; we want to make sure it stays that way. The challenge is to balance the protection and management of the wildlife on the Reserve with the management of visitors and presenting the island in a way that enlightens and educates them.
5 Document properties

References

The island has a wealth of cultural history. To find out more we would suggest the following texts as a starting point:


Peter Yeoman, Secrets of Fife’s Holy Island, published by Fife Regional Council

Photographs & maps

Photographs by David Pickett and Lorne Gill, Scottish Natural Heritage

Maps by Eleanor Charman, SNH.

Acknowledgments

The first edition (2007) of the Story of the Isle of May was been written by Therese Alampo (Reserve Manager) and Susan Luurtsema (Managed Sites Officer) and approved by Iain Rennick (Area Manager).

This second edition (2014) of the Story of the Isle of May has been edited by David Pickett (Reserve Manager), edited by Susan Luurtsema (Operations Officer – NNRs), and approved by Caroline Gallacher (Operations Officer - Forth).

Links

For information about Scotland’s National Nature Reserves and further information about the Isle of May NNR please go to: www.snh.org.uk/nnr-scotland

For information on the protected areas associated with the Isle of May NNR please go to: www.snh.org.uk/snhl/

Other useful links:

Scottish Natural Heritage www.snh.org.uk

Joint Nature Conservation Committee www.jncc.gov.uk