

# **Red Squirrels**

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## **Topic description:**

Red squirrels live on Brownsea Island, an island situated in a bay close to Bournemouth in the South of the UK. A few people protected them and improved the habitat for them on this Island. The American grey squirrels introduced a virus into Europe which kills red squirrels very quickly. For this reason, red squirrels are becoming rare and are threatened with extinction in the United Kingdoms and Italy. But this is not the only reason why grey squirrels are dangerous for red squirrels. Direct competition also threatens red squirrels.

But the squirrels aren't the only special thing on Brownsea Island. There are also very beautiful places of nature, for example sandbanks, forests and a lake. It's possible to spend a night there on a Camping Resort.

The society of Brownsea Island offers a lot of activities like hikes, an OpenAir theatre and there is also a museum and a visitor centre in which they exhibit the history of the Island.

## **Glossary:**

- *Sciurus vulgaris* (Rotes Eichhörnchen): This is the species of squirrels which live on Brownsea Island. They are also called red squirrels or Eurasian squirrels. Males and females have the same size. They use their tail for balance and to jump from tree to tree. The fur of the squirrels changes in a specific time of the year (for example in the winter it changes to black).
- *Sciurus carolinensis* (Graues Eichhörnchen): This species of squirrels is bigger than the red squirrels. Its fur is Grey and they live in the Deep forest in the UK.
- Invasive species (Gebietsfremde Arten): These are species which are not native to a specific location or region.
- Threatened with extinction (Vom Aussterben bedroht): Very high risk of extinction in the wild in the near future. People often put these animals on a list, so it's forbidden to hunt or kill them.
- Sandbanks (Sanddünen im Wasser): A large hill of sand in waters (sea or ocean).
- Genetic diversity (Genetische Vielfalt): Genetic diversity is the total number of genetic variations within a population.
- Inbreeding (Inzucht): The meaning of inbreeding is the crossing of closely related animals and plants.
- compounds (Gehege): A place where animals can't leave.
- increase (vermehrten): If there are more and more animals of some kind.

## **Survey:**

On the 23.09.2018 we asked people in Poole from 16:30 - 17:30. And on the 24.09.2018 we asked people in front of Mc Donalds in Bournemouth from 15:00 - 15:30.

### **·Do you know Brownsea Island?**

Answer: 23.09.2018 --> Asked: 15 People / Yes: 12 No: 3

Answer: 24.09.2018 --> Asked: 10 People / Yes: 10 No: 0

### **·Did you ever go to Brownsea Island?**

Answer: 23.09.2018 --> Asked: 15 People / Yes: 3 No: 12

Answer: 24.09.2018 --> Asked: 10 People / Yes: 4 No: 5

### **·Would you like to go to the Brownsea Island? Why?**

Answer: 23.09.2018 --> Asked: 12 People / Yes: 10 No: 2

Answer: 24.09.2018 --> Asked: 5 People / Yes: 5 No: 1

**•What did you like most on the Island?**

Answer: 23.09.2018 --> Asked: 3 People / 1) Squirrels, Animals 2) Nature 3) Campingsite

Answer: 24.09.2018 --> Asked: 5 People / 1) Luck to see a squirrel (2x) 2) wild life (2x) 3) nature

**•How many times were you there?**

Answer: 23.09.2018 --> Asked: 3 People / 1) 1x 2) 1x 3) 2x

Answer: 24.09.2018 --> Asked: 5 People / 1) many times (2x) 2) many times (2x) 3) 1x

Results: 25 people asked in total

1. Question: Yes: 88% No: 12%

2. Question: Yes: 28% No: 72%

3. Question: Yes: 88% No: 12%

4. Question: Animals: 37.5% Nature: 50% Remains: 12.5%

5. Question: 1x: 25% more than 1x: 75%

We asked 25 people. First we asked at Poole, the harbour city close to Bournemouth, from where the ferries to Brownsea Island leave. On the second day we did our survey and asked people in front of Mc Donald's in Bournemouth. The average age of the people we asked was 52 years. We found that 88% knew the island which was very surprising for us. From these 88%, nearly 30% had already visited the island. Persons who already had been to the island used to visit it many times. Especially older people knew the island and had already been there. Half of the persons asked said that the wildlife is the thing they love most on the island. Nearly 38% said that they find it exciting to see a squirrel. The majority of people who hadn't been to the island said they would like to go there.

**On-site research:**

On the 23rd of September, we were on Brownsea Island and observed animals and different squirrels. We walked around the island and took pictures and notes of our impression of the wildlife there. On the island we performed our interview with David Kitkatt. He works for National Trust, the charity that owns the island. In Poole and Bournemouth, we talked to people for our survey. More about our experiences can be found in our report.

**Interview with David Kitcatt from National Trust.**

**How did the Island develop geologically?**

The island is completely natural. They mention that there were big storms, but the trees and plants were replanted.

**How do you finance your expenses for the maintenance of Island and care for the squirrels?**

The people who are members of National Trust pay their membership fees of 60 pounds per person per year. Having a membership with National Trust means all National Trust properties can be visited for free. On Brownsea Island, National Trust also makes money with the café and the shop. Sometimes people who died leave some money as their legacy. In summer there is always an openair concert on the island.

**How many full-time employees are working here?**

20 to 25 people

**What do you like most on your job on the Island?**

He enjoys that on the island there isn't any traffic and that he sees happy people.

**Are there any risks to work on this Island?**

There aren't any risks. But national Trust employees and volunteers have to look out that nobody gets injured, that barbeques don't get out of control and that nobody climbs up trees.

**How many squirrels are living on the Island?**

150 - 200

**Can you tell us something special about the squirrels?**

The colour of the squirrels is special. Their colour changes in the course of the year from blond to black.

**How did grey squirrels get from the US to Europe and how do they harm the red squirrels?**

They are not sure but they think with ships.

**How big is the danger of accidentally bringing the Virus on the Island (Tourists)?**

The danger is not big, because the virus can't be transferred with people.

**Is the population of squirrels big enough to survive?**

Yes, because squirrel number keep increasing.

**What about genetic diversity and inbreeding?**

He didn't know really, but didn't think there is too much inbreeding, because squirrel numbers are big enough.

Introduction: Miss Waiblinger gave us a choice of topics which we could choose from for our project. So we heard about Brownsea Island and the red squirrels which are living there. Before this, we had never heard of Brownsea Island, so we didn't know anything about this island. We asked different questions:

- How do the red and grey squirrels threaten each other?
- What do they eat?
- Are the squirrels afraid of people?
- How many squirrels live on the island?
- What people (the National Trust) do for the squirrels (except of giving them food)?

Our wish was to see a minimum of one red squirrel and some different animals. We also wanted to have a look around the island and observe the wildlife. Our main question was: How can humans protect the red squirrels from extinction?

Methods: At first we searched on the internet for information about Brownsea Island, how to get there and also about the biology of squirrels. Then we wrote some E-mails to National Trust to make an appointment for an interview, but we didn't get an answer. After that, we went to the Island on a visit. We made a plan in which direction we should go first when we were on the island, and who we wanted to ask for the interview. On the island we walked around, took pictures and read a lot of information on the local information boards. Our next step was to go to the visitor centre and ask employees for an interview. The following step was to walk around in Bournemouth and perform the survey. We asked people in front of the ferry station at Poole and in front of Mc Donald's at Bournemouth. We did the survey and in the end we calculated the answers in percentages. After we had written down all our information we prepared our presentation. The last step was to learn the presentation by heart.



Results: In our opinion it was a great experience to go to the island and observe squirrels and other wildlife. We were very happy to talk to David Kitcatt from National Trust. We got loads of information from him and were able to learn by talking to him. We were really surprised that so many people knew Brownsea Island and that quite a lot of them already had been there. On the other hand it was disappointing that there were people who didn't want to answer our questions for the survey.

The employees and volunteers of National Trust were very motivated to do their job. The result of our interview was that the red squirrels aren't threatened by extinction because there are a lot of organisations who take care of them, improve and protect their habitats. Mr. Kitcatt and the other volunteers from National Trust enjoyed our visit and our interview.

### Red Squirrels

Red squirrels are rodents (Nagetiere). Their main food are nuts, fruit and some small animals like insects and small birds. Populations in England number about 160'000 red squirrels and 2.5 million grey squirrels. Red squirrels are native to Europe and Asia. The red squirrel is found in Scotland, the Lake district and Northumberland, in isolated populations further south in England and Wales, including Formby, Anglesey, Brownsea Island in Dorset and the Isle of Wight. The grey ones are native to the USA and they are bigger and stronger than the red ones. Native enemies are birds of prey (Raubvogel) and martens (Marder). Squirrels live up in trees most their time. They build safe nests high up for their offspring and they only go to the ground to find food. Red squirrels do not hibernate, but they do keep stores of food to see them through difficult times when fresh food is not available.

**Please note:** The following text part is from the internet and not written by ourselves (see sources at the end of the report)

### How to save the red squirrels?

Red squirrels and grey squirrels can often show an overlap in their choice of habitat, but there are some important differences in the type of tree used by each species. Grey squirrels tend to rely (bauen) on trees with large seeds that have high calorific values, such as oaks, whereas red squirrels can feed on smaller seeds with lower calorific values, such as the seeds of coniferous trees (Tannen) like pines, but also broadleaved trees like alder. This is the reason why most UK red squirrel populations are restricted to coniferous (Nadelwald) woodlands, where grey squirrels struggle to gain a foothold. In the regions where red squirrels can still be found but grey squirrels are absent,

careful management of the woodland habitat can help red squirrels to survive. There are two key principles in this management: making the habitat as attractive as possible for red squirrels, and as unattractive as possible for grey squirrels.

There are several opinions on how to make a woodland more attractive to red squirrels, but the most important thing is that there is a healthy food supply available all year round. National Trust prefers planting conifers with large seeds, but it is a balancing act between providing (unterstützen) red squirrels with their ideal food choice and not attracting grey squirrels into an area.

The second habitat management principle, making forests unattractive for grey squirrels, relies on producing “islands” of woodland that can only support red squirrels, with some form of a barrier between that forest and any surrounding “grey squirrel friendly” areas.

### National Trust

The National Trust for Places of Historic Interest or Natural Beauty is a non-profit organization which is working for the protection of nature in England, mostly in Wales and in the north of Ireland. With 4.1 million members, National Trust is the biggest organization for nature protection. The main idea was to protect old and historic buildings. This organization is financed by member contributions (Beitrag), donations (Spenden) and the yield (Gewinn) of the restaurants and shops.

National Trust manages the woodlands on Brownsea Island predominantly (vorwiegend) for the red squirrels. Old trees are removed and replanted by new, more suitable trees to supply a food source for the squirrels. There are several enclosures (Anlagen) on the island where fencing has been put up to prevent rabbits and Sika deer from nibbling vulnerable seedlings and young trees.

The rich variety of woodlands attracts small birds like coal, blue, great and long tailed tits, great spotted woodpeckers and nuthatches (Kleiber). There are also bats and owls living on this island, just like a resident population of peacocks. Another special animal on Brownsea Island is the Sika deer from Japan. Because they are good swimmers, there is a fence around the island.



### History of Brownsea Island

Brownsea has played an important role against enemy invasions (Feind). Vikings destroyed a little chapel on the island when they invaded Poole Harbour in 1015. A blockhouse was built in 1545 by Henry the Eighth to protect the English coastline from invasion. During World War One, many of the estate workers were conscripted (zwangesverpflichtet) to fight. During World War Two, Brownsea was used as a decoy (Lockvogel) against enemy bombs.

Brownsea Castle was originally built as a fortress (Festung) to protect Poole Harbour during the 16th century under the reign of Henry the Eighth. In 1719 William Benson, who was a philosopher, poet and architect, bought the island for 300 pounds. He was the first owner of the Brownsea Island and he lived in the castle.

Sir Humphrey Sturt bought the island in 1765 and planted a wide variety of trees. He also spent huge sums improving the castle and its grounds and building the first farm.

On 18 July 1934 a fire broke out on the island. It raged (wüten) uncontrollably for seven days and seven nights before it could be extinguished. The fire reduced two thirds of the island to ashes. The church, farm buildings, castle and quay cottages (Hafenhäuschen) only suffered smoke damage. To this day, no one ever can be certain whether the fire was by accident or arson (Brandstiftung).



### Facts

The island is about 2.4 km long and 1.2 km wide. Its surface area is 2.02 km<sup>2</sup>. Brownsea boasts a mosaic of wildlife habitats. This mix of woodland, grassland, heath, open freshwater, seashore, mudflat (Wattenmeer) and lagoon incorporated within a small island, creates a diversity of species rarely matched by places of a similar size.



Maryland: The founder of Maryland, Colonel William Petrie Waugh, named this place after his wife, Mary. There are woodlands and clifftop views along the the Maryland walk. It is a very peaceful place.



**Woodland:** Over a hundred tree species are growing there, mostly hardwood trees like oak, beech, rowan and hazel. The western side of the island is dominated by pine woodland. These pinewoods provide the perfect habitat for the squirrels.

**Natural play area:** Brownsea's natural play area is the perfect setting for a family trip. There are some wood trunks laid out in a row.

**Wetland and lagoon:** From the hides you can spot various bird species on the lagoon, including avocet and oystercatcher.



**Heathland:** Until the 16th century, Brownsea was largely open heath, covered with gorse (Stechginster) and heather (Heidekraut) and a scant (kaum) amount of trees. Heathland, once a common part of the landscape in Southern England, is becoming very rare. For part of the year the heath can appear dormant and dull, but when the temperatures rise (mostly during July and August) the flowers turn into colours like purple and pink and grasshoppers and spiders appear.



**South Shore:** The South Shore is the best place to walk along the water's edge which runs along the southern side of the island.





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### Our Conclusion

In our opinion it was a great experience to go to the island and observe squirrels and wildlife. We were very happy to talk to David Kitcatt from National Trust. We got huge amounts of information from him and learned a lot. What us really surprised was that so many people knew Brownsea island and that quite a lot of them already were there. On the other hand it was disappointing that there were people, who didn't want to answer our questions for the survey.

Discussion: Writing and researching this project was a lot of fun for us. We learned a lot about the different squirrels and animals, about nature and about England. It was really helpful for us that we had a glossary, so it was easier for us to communicate with David Kitcatt and the people on the street. We learned a lot of English and were able to practice our English skills. It was a really good experience. For us it's not natural that people spend so much of their free time working for the National Trust. This made us really confident.

We expected that the island would be presented like a zoo with very big enclosures. But surprisingly the squirrels could use the same paths as the visitors. We thought that the squirrels would be more afraid of humans, but they weren't. So we were very happy to see some of them.

In our opinion there was too little catering. There is one little restaurant at the beginning and one checkpoint with tea and coffee on the other side of the island. Our idea would be to put a food machine into the outdoor centre.

### **References:**

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- [www.wildlifetrust.org](http://www.wildlifetrust.org)

### People

- David Kitcatt
- Passengers

### Others

- Flyers



- Informationshield

**Source:**

- [https://en.wikipedia.org/wiki/Red\\_squirrel](https://en.wikipedia.org/wiki/Red_squirrel)
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