Newsletter
Issue: 003

This newsletter is especially for Teenagers.

BEAKS

By Trish MacDuff ABNA

Why does a curlew have a long beak? Why does an eagle have a hooked beak? A bird's beak has several uses:

- to collect materials to build a nest
- to be able to defend themselves and their chicks
- to preen their feathers and to get rid of any parasites on their bodies
- a colourful beak (like a puffin) can help attract a mate
- to be able to drink and to feed themselves and their young.

Beaks are made from keratin – similar to a deer's antlers, an animal's hoof and fingernails. This is constantly growing. If a bird is to survive, it is absolutely crucial that it can catch or gather enough food quickly and efficiently. So, it needs the right tool for the right job – hence different types of birds have different shaped beaks. (P.T.O for pictures)

Eagles, falcons and vultures have strong hooked beaks to kill their prey, and the tip at the end of the beak is hooked to rip the flesh of an animal apart if it is too big to eat whole.

Goldfinches and sparrows have a strong but short beak which ends in a conical shape which is useful for breaking seeds open.

Swallows and swifts hunt in the air with their mouths open to catch insects. Their beaks are short wide and flat.

A **robin** also eats insects, but since it mostly eats them on the ground, its beak is short, thin and straight.

The **curlew** and its wonderful long curved beak – a beak that is quarter the length of the body, is used like tweezers so that it can feel around in the mud for worms and invertebrates.

Swans, ducks and geese are filter feeders. Their beaks are wide and flat, inside there are little structures which strain the food from the water.

The **kingfisher** has a sharp pointed beak, which with its head forms a wedge shape, allowing it to dive at great speed into the water to catch fish.

Wading birds such as **snipe, redshanks and avocets** all have long beaks of different sizes to look for food under the water, the varying lengths mean they are not all competing for food in the same area.

Seed Dispersal

by Trish MacDuff ABNA

Have you ever blown the seeds away on a dandelion "clock, or got home from a walk and found goose grass seeds sticking to your socks and trousers? Then you have been helping out plants with seed dispersal. As a flower dies and its fruit produces seeds, its mission in life is to get as many seeds as possible to grow, ensuring that the species continues to survive.

If all seed fell close to the parent plant, there would be too much competition for food, light and water, and few would thrive. So nature has evolved ways of getting these seeds as far away as possible. They can fly, float, hitch a lift, go ballistic – or just hang around!

Wind dispersal is when plants such as dandelion, thistle seeds catch the wind and float away on parachutes of hairs. Trees such as sycamores have seeds that develop into little helicopters which get blown away from the parent tree.

Water dispersal - coconut seeds fall into the water and float along until they reach dry land. Water lily seeds float away until their outer coating disintegrates and sink to the bottom of the mud, where a new plant will germinate. Foxglove and harebell seeds have also been known to be dispersed by water.

Animals play a part in helping seeds move around. They can either attach themselves to the animal's wool or fur, and get moved around that way, or birds or animals can eat fruit which passes through them. Burdock seeds have barbed hooks which stick onto the animal's coat, cleavers (goose grass) seeds attach themselves easily. Mistletoe berries are very sticky, after eating them, birds often wipe their beaks on the bark of the host tree, and a new plant could spring to life this way. Squirrels and jays bury nuts and acorns to feast on later – those that aren't eaten can grow into a new plant.

Some seed cases go ballistic! Plants like laburnum, brooms and peas develop their seeds in pods. After ripening, tension builds up inside the pods, until the pods explode and the seeds are violently ejected. If you sit near gorse on a hot sunny day, you can actually hear the pods exploding like gun shots.

Heavy fruits like apples, remain on the tree until fully ripe and then fall to the ground. Once they land on the soil, then they can then be dispersed by one of the other methods.

Looking at Fungi

Text and pictures By Pauline Rutherford MBNA

If you're at a loose end in the autumn, what better to do than go out and look for some fungi? There are hundreds of species, some grow on grassland, some grow in a woodland and some grow on dead wood. Some are a typical mushroom shape; some form a crust and some are like a mould.

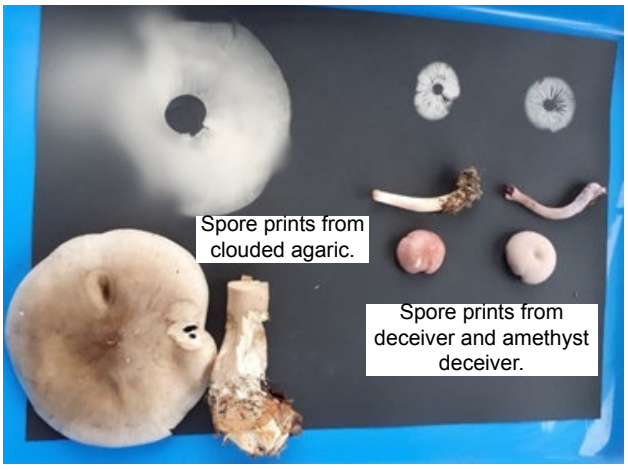
But what is Fungi? It isn't an animal or a plant but is alive and can move or grow depending on the weather and the habitat it is in. sometimes you get a good year for it to grow but you might not see it again in the same place for a few years. It grows from spores which are like minute specks of dust which are expelled from a fully-grown fungus into the air and lands in a suitable area. If the area is right it sends out tiny hair-like structures or "roots" under ground which eventually sprout fruiting bodies which we know as the visible 'mushroom'.

It is a difficult subject to study as there are so many species to identify, however some are easier than others. Probably the most recognisable one is the Fly Agaric Amanita muscaria, as this is the one often featured in story books. It is bright red with white spots on it, which rub or wash off very easily.

Another easy one to recognise is a Parasol Macrolepiota procera, this is a very large mushroom found on open grassland and starts off as a ball shape but opens up to a "dinner-plate" size fungus.

If you go out and collect some fungi put them into paper bags so they dry off, and when you get them home do some "spore prints" with them. Use sheets of black or white card and, after carefully removing the stem, place them spore side down on the card. Some fungi give light spore prints and some give off dark prints but if you aren't sure which colour card to use put the mushroom over both colours of card. Leave them overnight and next morning if you lift up the mushroom it will have left its individual print.

Spore prints can help identify the individual fungus but they also leave lovely patterns on the paper and it's great fun to do!



Be careful if you go picking mushrooms or touching fungi as some of them are poisonous and can make you ill so you should ALWAYS wash your hands and NEVER eat it, (unless its been bought in Tesco or already on a pizza!)

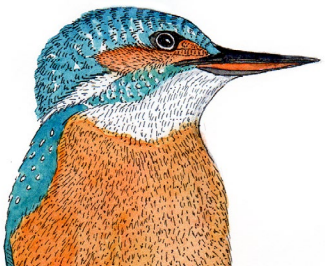
Parasol Mushroom and Fly Agaric

Do you have a query?
email: info@bna-naturalists.org
write: Youth Officer, British Naturalists' Association, BM8129, London WC1N 3XX

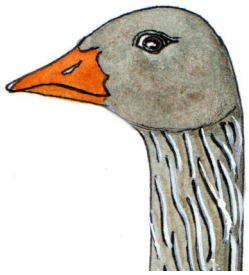
Do come along to your local branch field trips. It is one of the best ways to learn and you will meet like minded people.

Identifying Beak shapes

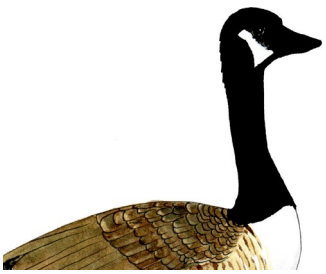
(Not to scale)



Kingfisher

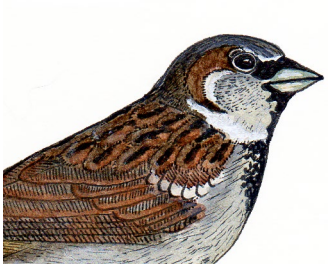


Graylag Goose

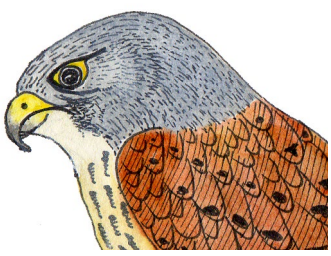


Canada Goose

Goldfinch



House Sparrow



Kestrel