

HELPMATES OF FORESTERS IN FOREST REGENERATION



DID YOU KNOW?

For all age categories

Jays love to collect acorns.

One bird is able to carry in its crop 5 to 6 acorns. In a month, one jay can take away up to 5,000 acorns to a distance of up to 4 km.

Jays spread the acorns across the forest and hide them in the soil. They do similar also with the hazel nuts, beechnuts and other fruits. In the transition zone between the spruce and beech forests, the jay takes the beechnuts by 100-200 m higher to the mountains, thus enhancing the biological diversity of the spruce forests. Small groups of beechnuts plugged in the moss and forest litter by two up to eight pieces are jay's reserves. Forgetting about some of them, the jays in fact plant the new beech trees.



Jay as a nimble nursery gardener

Photo: Karel Palacký, www.kahlerphotogallery.cz.

Similarly forgetful is for example squirrel. This is why people use to say „forgetful like a squirrel“



Seeds of spruce cones are the main food of red crossbill.

Crossbills are concerned with a cone usually for 5 to 10 seconds. Have you noticed how the number of crossbills has increased in our forests with the more frequent seed years of spruce?

- Do you know other animals with a part of their body adapted to food intake?
- How many seeds you would be able to husk from a spruce cone in 10 seconds? Collect some cones and try to find out.

- You may play a game hiding in the classroom or outdoors a certain number of acorns, beechnuts or other fruits, or perhaps messages with tasks on the topic of forest regeneration, or English names of trees. Children will have to find them like jays or squirrels. From the found things you may together create a seed collection or assemble a message ...

How many seeds or tasks have remained unfound?



Crossbill. Photo: Karel Palacký, www.kahlerphotogallery.cz.

Great spotted woodpecker consumes every day 21 – 69 pinecones in winter. Woodpeckers pick the cones into pieces on so-called anvils somewhere in the fork of branch, behind the unstuck stump bark or in the bark of old pine trees where they like to tuck them. There may be about 300 cones in such a woodpecker kitchen.

Birds feeding on seeds from the cones always leave some seeds behind and because they take the cones to a place where they can crack them, they often help in spreading the trees.

However, this way of planting is not enough for the growth of sustainable forest and foresters realized the fact many hundreds of years ago. This is why forest nurseries have been established, which supply the forest with the high-quality transplants.



Great spotted woodpecker. Do you know that if you find a dotted feather in the forest, it most likely belonged to a woodpecker?
Photo: Karel Palacký, www.kahlerphotogallery.cz.

- How many seedlings you would be able to identify and classify to seeds and leaves? Draw three pictures each of you (seedling, leaf, seed) for one tree and create in this way a board card game for your class.
- Print a picture of some bird nursery helpmate. Drawing three wavy lines and three other three wavy lines running perpendicularly at approximately the same distance, you can make an original puzzle.

Few know that when the seeds are to be husked from the cones in the cone-drying kiln by special machines, they have to be precisely labelled as to their place of origin. Thus, the seed material must return to the site from where the cones were brought. The seed material is labelled also during the storage and forest nursery beds have the same labelling. At the same time, foresters keep a close eye on the seeds, which should come from the most beautiful and high-quality mother trees.

- Try to find out where our most frequently occurring introduced trees such as horse chestnut, Douglas fir, grand fir, eastern white pine, robinia, black walnut, boxelder, blue spruce, European larch have their homelands and when they were brought to our country.

The greatest gardener among the bird is the black bird, which feeds on the fruits of up to 100 tree species. The most favoured are black elder, mistletoe, European loranthus, juniper, dogwood, cornel, euonymus, berberis, mulberry tree, buckthorn, blueberry, cranberry, red elderberry, snowball, common privet, honeysuckles, common currant, cherry, sour cherry, blackthorn, vine, rose, rowan, hawthorn, service tree and white beam.

- How many of them can you recognize? Try to guess at least the colour of the fruits. The solution can be found in any atlas of woody plants – either printed or available on the internet.

The birds do not mind poison contained in some fruits, which are poisonous for humans. Daphne is delicious for black bird, brown thrasher, robin, hawfinch and pheasant or hazel grouse. Banewort is a delicacy for both thrasher and black bird.

- Make a ppt presentation of your own with the pictures of shrubs the fruits of which are food for birds, and an atlas of our woody plants according to elevations at which they grow. Are some of them at home mainly in lowlands? Which of them can be found in the mountains? There are even such woody plants that grow everywhere.

Source: Emanuel Opravil (1987): *How the plants travel*. OKO Edition. Vol. 72. Prague: Albatros



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