## "Looking for Cowslips" - the instructions



Cowslips. Photo by Kaarel Kaisel

## How to tell the difference between the flowers?

No prior knowledge of the cowslip is necessary; one should just be able to recognise the flower in the wild. The observation itself is easy and anybody can do it. You just need to take a peek into the flower and determine whether it is an S-type or an L-type flower. In S-type flowers, the stamens are visible. In L-type flowers, only a tiny tube can be seen – that is the pistil.

Don't worry if you cannot tell apart whether you are looking at the stamens or the pistil. Just move over to the next plant, which could be easier to determine. At first glance, it can be a bit difficult to tell apart the stamens and the pistil. However, the more flowers you look at, the easier it gets. Should you find a flower that has both characteristics or looks totally weird, take a photo and upload it alongside the guestionnaire and write about it in the box of notes.



S-type



L-type

## Conducting a survey

You don't need to pick any flowers because it is sufficient to just look inside the flower. Squat or bend over the plant and turn the flower in your direction. Take care to not step on the plant so that the plants can remain beautiful and whole and the survey does not disturb the nature. Oberve 100 different plants as sparsely as possible across the entire area.

## Start like this:

Before embarking into the nature, ensure that at least one of the participants of the search party has a smartphone with Internet access. Should that be impossible, print out the survey questionnaire. If you go out and find a place where the cowslips grow, open the cowslip website www.nurmenukk.ee and select 'Observe'. Keep in mind that we are studying cowslips growing in the natural environment, so don't bother with domestic gardens and parks. Look for cowslips growing on grasslands and forest edges. The roadside can also be a good place for a survey. Before submitting the survey, take a comprehensive photograph of the survey area, which you can upload along with the survey questionnaire.

Having found a suitable place, begin filling out the questionnaire based on the questions posed. The smartphone will determine your location automatically (provided it has location information or GPS turned on), however, should that be impossible, you should determine your location on the cowslip map yourself. Try to assess how many cowslips there could be in the area. Can you see only a few specimens (you can count them quickly), are there numerous plants (hundreds of plants), or is the entire area covered in cowslips (thousands of plants)?

Start surveying the flowers one by one. Look inside the flower and write down whether it's an L-type or an S-type flower. Remember your starting point and take a step further after every survey, that way you will avoid surveying the same plant multiple times. Keep going until you have surveyed 100 flowers. Should there not be that many plants in your surveyed area, worry not, just add a comment to the questionnaire that there were no more plants.

If you're out with a few people, try to divide the area among yourselves so that the surveyed plants are dispersed sparsely across the entire area. One person can begin in one corner, another in the other one, and before you begin, agree upon a line that either of you won't cross. For example, 'I'll be doing the survey left of this stone here, and you will survey on the right side'. If the survey party is large, then form smaller groups and divide the area among the groups. One person can stay to fill out the questionnaire, for example standing in the middle and writing the results down. The surveyors shout which flower they just surveyed, and one person writes down the results of the entire group.

Enter your or your team's name in the cowslip website. That way you can check later what the scientists concluded from your survey data.



Cowslips on the landscape Photo by Tsipe Aavik















