



## Technical Training Series- Collecting Herbarium Specimens

### What is a herbarium specimen?

A herbarium specimen is essentially a dried pressed plant that is mounted onto a sheet of paper and it's associated with label data so herbarium specimens are a vital component of the seed collection. So you have the seed, you have the data associated with the seed collection and you have the voucher specimen which is the reference to the seed material and provides identification.

### What data do you need to collect?

There's a data form to fill in that includes information on the plants. Any characters that are going to be lost such as flower colour. We also need to know about plant height, and any other dimensions which aren't captured by the specimen. The location, the latitude and longitude, description of the habitat is really useful including what species are growing alongside, and also the collection information, so who's collected it, it should be assigned a unique collection number as well and when it was collected, the date.

At the point of collection it's very important to label, or tag, your specimens with a jewellers tag and put a unique identifier so collector name and number to each part of the specimen.

### What are the herbarium components?

First you have the field press which is a wooden frame. You then have newspapers in which you'll arrange the plant specimens. Then you'll have cardboard or aluminium corrugates and blotters to absorb moisture. You'll have the straps which are important to tighten up the press and of course you need your collecting notebook your data sheets to attach all the information that is relevant for a collection.

### What do you need to collect from the plant?

It's important to collect as much of the plant as possible, so the leaves, the arrangement of the leaves, the roots if possible, of course the flowers and the fruit are very important for identification. We ideally want points of attachment, so for instance where the leaf joins so we can see the stipules and the buds. We also need representations of all the organs, storage organs might be important particularly for bulbs. We need stems, branches and leaves. If there's any kind of heterophylly going on for instance if the basal leaves differ to cauline or stem leaves we need those as well. We want all stages of development so from buds to flowers to mature fruits. Sometimes it's not possible to get it both flowering and fruiting at the same time. Do what you can with the material available.

### What to consider when pressing a specimen

When you're pressing specimens, you need to make sure it fits within the sheet. Hold down any parts, make sure they're going to flatten correctly. You want the specimen to fill the sheet, you don't want it to be too big. If it is you need to trim it or fold parts over. You need to make sure you turn over one leaf because we need to see the underside as well, and also any flowers make sure we can



see the front and back of the flower so we can see all the characters. Put the specimen in newspaper or flimsy and then sandwich that with blotters which will absorb the moisture and then we put the corrugates either side of that. And then pop it that in the wooden press and make sure that the straps are tightened and then we put it on its side over the heat source.

### How to take a specimen for small plants?

Really small plants you can collect several, enough to fill a sheet but as long as you don't take too many it endangers the population so keep that in mind.

### How to take a specimen for large plants?

For a larger specimen you may have to fold over a large leaf or cut it in half, you may have to make a cross section of a large fruit or flower.

Herbarium specimens arriving at Kew should be unmounted. At Kew they will be mounted and made available to researchers.

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