Collection and Preservation of fungus voucher material

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This note provides guidance on best practice for collecting field information about fungi and then preserving specimens for further investigation. It is intended to cover species growing on soil, but the general principles apply to many species found on other substrates (wood, dung, mosses etc.).

Generally speaking it is best to avoid spending time on specimens which are in poor condition. Instead, concentrate efforts on good collections which contain a number of specimens at different stages of growth.

Field observations

Make a note of the location, habitat and soil type where the fruiting bodies are found. Nearby vegetation may give clues regarding the acidic or basic nature of the soil. Some fungi are particularly associated with roots of nearby trees and shrubs, so a record of these associate species is important.

Record field characters including fruit-body size, surface texture (dry, fibrous, sticky, glutinous etc.), and smell (mealy, honey, menthol/cedar etc.). The colour of fresh, undamaged samples is important along with any changes, for example to the freshly cut surfaces of boletes.

Photographs are invaluable: include a ruler or other object for scale and shade the subject matter from direct sunlight when taking the photograph. Ensure at least one image shows the underside of the fungus (especially species with caps). Take care to remove the stem intact when preparing for this image. Images of the stem and cap underside provide information on the shape of the base of the stem as well as gill colour, gill spacing and gill attachment.

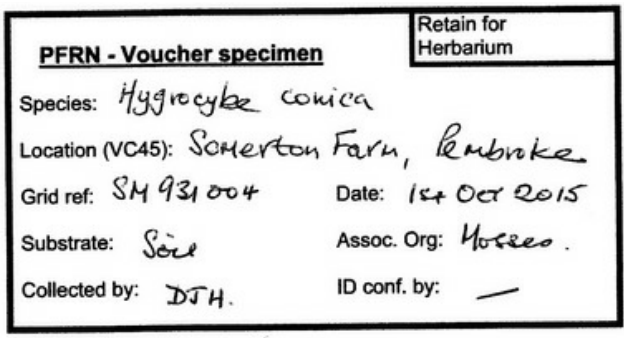
A spore print on paper provides valuable information of the colour of the spore mass. Pale examples may need to be made on a glass slide which can be viewed over a black surface.

Voucher material

Interesting or important specimens should be retained as voucher material which can be examined at a later date for microscopic characters. In many cases this is essential for determination or confirmation of the species. Specimens which are rarely recorded in the UK should be forwareded to the Conty Recorder for deposition with the Royal Botanic Gardens, Kew.

There is an increasing trend for requests by researchers for well documented voucher specimens to support research projects. In most cases, these samples will be analysed using molecular techniques to establish the DNA barcode for the specimen.

Voucher material should be labelled with key information as shown in this example. Additional notes can be written on the reverse. Blank sheets of suitable labels can be downloaded from the PFRN website.


PFRN - Voucher specimen

Retain for Herbarium

Species: Hygrocybe conica

Location (VC45): Somerton Farm, Pembroke

Grid ref: SM 931 004 Date: 1st Oct 2015

Substrate: Soil Assoc. Org: Mosses.

Collected by: DJH. ID conf. by: —

Collections should ideally include at least 3 fruit-bodies and be dried in a current of warm air at ~40°C for 12-24 hours.

A fruit dehydrator (pictured above left) is ideal, but in practice, a sunny window-ledge, radiator or other warm, dry location will be satisfactory for most samples. The dried collection should be sealed in a labelled paper envelope and stored in a dry place.

Well-dried samples intended for long storage should be deep frozen for 2 days (-20°C) to kill any bugs, then stored in sealed polythene bags with desiccant. Air-tight plastic boxes sold for food storage can be ideal for long term retention of samples.

If you plan on keeping a number of samples, then it is well worth assigning reference numbers to each collection and keeping an inventory. The same reference number should be attached to images and notes that relate to the collection.