

Botanical Specimens for Identification

How to send botanical specimens for identification and incorporation into the Queensland Herbarium collections.

Queensland Herbarium service

The Queensland Herbarium provides a botanical identification, information and advisory service for government, private enterprise and the public. Charges apply for commercial clients.

More information can be found at www.qld.gov.au/herbarium, or call us 07 3199 7666, or email Queensland.Herbarium@qld.gov.au

Before collection specimens

Before you collect, make sure you have permission from the landowner. You'll need a [permit](https://www.qld.gov.au/environment/plants-animals/wildlife-permits/requirements) (<https://www.qld.gov.au/environment/plants-animals/wildlife-permits/requirements>) to collect native plants on public land.

Evidence of permits/permissions enhances the scientific value of your specimens in accordance with the [Nagoya protocol](https://www.cbd.int/abs/about/) (<https://www.cbd.int/abs/about/>). Please submit permit/permissions documents with specimens where relevant.

How to collect plant specimens

A specimen usually consists of a branch or portion about 20–30 cm long, with leaves, flowers and/or fruits attached (or the whole plant if small).

Collect enough material to make two specimens from each plant, or for small plants, two adjacent individuals. Clearly number each specimen using merchandising tags or similar. Specimens of each pair should have the same number. Retain one specimen of each pair and send the other for identification. The specimens you send will not be returned: the Herbarium's reply will have the identifications listed next to your numbers so you can refer to your own set of specimens. Do not send more than 10 specimens in any one batch, and wait to receive results before sending the next batch.

More information is available in our [step-by-step guide](https://www.qld.gov.au/environment/assets/documents/plants-animals/herbarium/collecting-manual.pdf) (<https://www.qld.gov.au/environment/assets/documents/plants-animals/herbarium/collecting-manual.pdf>)

What information is needed?

A written locality where each specimen was collected, in sufficient detail to enable another person to return to the site e.g. distance from nearest town or other prominent landmark.

Include GPS or map grid coordinates if possible.

A description of the plant's habit of growth (e.g. tree, vine, herb), height, flower colour, abundance in area, situation (e.g. landform, aspect, proximity to water), surrounding vegetation, soil type, and, for trees, the appearance of the bark, is also necessary.

Describe or photograph any features that cannot be seen in the dried specimen e.g. bark (for trees and shrubs), habit, flower colour.

Please refer to our specimen [coversheet](https://www.qld.gov.au/environment/assets/documents/plants-animals/herbarium/specimens-cover-sheet.pdf) (<https://www.qld.gov.au/environment/assets/documents/plants-animals/herbarium/specimens-cover-sheet.pdf>) for details.

How to dry specimens

Specimens must be dried before sending, by pressing between sheets of newspaper using moderate pressure, for example under a heavy book. When drying plants, it is essential to change the paper every day for the first few days to prevent mould formation. Wetland or water plants may need more frequent paper changes to prevent mould. Some species fall apart on drying; if this happens, try to keep all the fragments together. Some plant groups have special requirements. See below.

Packing specimens

Pack dried specimens flat, each in a separate folder of newspaper with some cardboard packing around the bundle. This will help to avoid the specimens breaking in transit. Do not use sticky tape or staples to secure the specimens. Do not send fresh specimens in plastic bags as they quickly become mouldy and we will not identify them.

All specimens and packages should include the specimen [coversheet](https://www.qld.gov.au/environment/assets/documents/plants-animals/herbarium/specimens-cover-sheet.pdf) (<https://www.qld.gov.au/environment/assets/documents/plants-animals/herbarium/specimens-cover-sheet.pdf>), or a covering letter including the sender's name and address and stating what information is required and why.

Eucalypts

Collect fruits and buds, as well as adult leaves. A description or photograph of the bark (recording the type of bark and how far it extends on the trunk and branches) is essential. Coppice or sucker leaves are very helpful, if present.

Ferns and fern allies

Collect ferns (except tree ferns) and fern allies with a sample of the root-like structure (rhizome) attached to the frond. For tree ferns, the scales or hairs at the base of the stalk of the frond are essential for identification. Using a small knife, remove a sliver of the outer stalk (with scales attached) and include in the sample.

Fleshy plants and soft fruits

These can be dried as slices, or preserved in a bottle (see 'spirit material' below). Fresh material may be sent but must be carefully packed with paper in a suitable container to prevent squashing, leakage and deterioration. Cacti should be sent fresh in a suitable rigid box. A photograph should be included.

Fungi

The Queensland Herbarium is unable to identify fungi for the public. However, specimens may be sent for incorporation. Fungi collection requires specialist equipment and training. Contact us.

Grasses, sedges and small plants

Collect the whole plant including any underground runners, stems, bulbs or tubers. Both mature and over-mature flower-heads (inflorescences) and the base of the plant (with some roots attached) are essential for identification. Ensure fruiting heads still retain seeds and bag these if necessary to prevent weed spread.

Grass Trees (Xanthorrhoea)

Collect the whole leaf showing the shape in cross section, along with a portion of the flower spike showing the base and attachment onto the stalk. Describe the leaf colour (i.e. blue-green, greyish, green). Measure the length of both the flowering spike and non-flowering stalk (the ratio is important), along with the trunk height if present.

Images

Add a scale to the image, e.g. a ruler or coin. The preferred email format is .jpg file with sufficient compression to keep the file size below 200 Kb. It is not always possible to identify plants from images if the diagnostic characters are not visible.

Large leaves or flower heads

Collect a sample of the apex and base of leaf or flower head, and measure the dimensions of the whole leaf or flower-head. A photograph of the organ, and/or the whole plant should be included.

Orchids and delicate flowers

Delicate flowers should be photographed and then carefully wrapped in paper towel before pressing. Leave the tissue in place while drying. Alternatively, preserve flowers in spirit (see below 'spirit material').

Spirit material (preserving liquid)

Soft fruits and delicate flowers are best preserved in alcohol. Place cotton wool soaked with methylated spirits in a bottle/jar with the specimen. This prevents any spills of liquid during transportation. Flammable liquids must not be sent through the mail.

Weeds

Strict hygiene must be observed when collecting specimens of weeds in order to prevent the further spread of these pests. There is an exemption under the [Biosecurity Act 2014](https://www.legislation.qld.gov.au/view/whole/pdf/inforce/2017-07-03/act-2014-007) (<https://www.legislation.qld.gov.au/view/whole/pdf/inforce/2017-07-03/act-2014-007>) that allows specimens of declared species to be sent to the Queensland Herbarium for identification.

Privacy

Specimens and data submitted to the Queensland Herbarium will be considered to be in the public domain excepting specific locality data relating to certain sensitive species.

Queensland Herbarium will only use the personal information submitted in this form to assist with managing the acquisition process. For more information on [privacy](https://www.des.qld.gov.au/legal/privacy/) (<https://www.des.qld.gov.au/legal/privacy/>)

Collection checklist

- Select specimens with flowers or fruits.
- Number and label two specimens from the one plant (duplicates).
- Press specimens between sheets of newspaper until fully dry, keeping all fragments together.
- Record collecting location, collector's name, and date of collection for each specimen.
- Keep one of each pair of specimens (one set).
- Pack second set of specimens securely with cardboard.
- Include a *Botanical specimens— cover sheet*.
- Include permits/ permission documents if relevant.
- Don't place specimens in plastic bags
- Don't use sticky tape or staples
- Don't send liquids through the mail.

Send or bring specimens to:

Plant Information and Advisory Service
Queensland Herbarium
Brisbane Botanic Gardens Mt Coot-tha
Mt Coot-tha Road
Toowong Qld 4066

The Queensland Herbarium is open between 9.00 am and 5.00 pm Monday to Friday.