FORMAK Plant Identification Guidelines

Take steps to learn your plants first

It is important to try to get to a stage where at least one member of a survey team is familiar with most (say 2/3rds) of the plants on the site before vegetation plots are measured. If you are not already at this stage you can:

- Get people who have good plant identification knowledge to spend time training you in identification, and / or help you with your measurement of plots. Some organisations that may be able to help with plant identification are listed at the end of this guideline.

- Use good field guides to identify plants in the field (See reference list at the end of this guildeline).

- Collect specimens of plants you can't identify and prepare a plant folder.

Collecting specimens and using a plant folder.

A very helpful way to learn your plants, and ensure that plants are consistently named in field measurements, is to collect specimens and use a plant folder.

Collecting plant specimens
Some points when collecting specimens are:

- Specimens should be collected away from the immediate area where a vegetation plot is being measured, to avoid any possible impacts on this measurement.
- Try to collect specimens so that, if possible, have fruit and/or flowers as well as leaves. If the species has different juvenile and adult foliage, collect both.
- Specimens do not need to be overly large – they should fit into an A5 folder if possible.
- Do not take specimens of rare plants.
- Be very careful when taking specimens of weed species, so you do not transport seeds or other material to spread the species to new sites.

A plant folder
A very useful approach is to produce a folder which has specimens of plants that can be referred to in the field. The plant folder should only include species you cannot identify in the field. Steps in using a plant folder are set out below:

- Get a small folder, A5 size is best as it can be more easily taken into the field
- Get duraseal or similar self adhesive clear sheet. Note that biodegradable sheets are not suitable.
- Fold over and cut to size so that the folded sheet is A5 size, and has a fold down the long edge.
- Hole punch in the folded edge and place the sheet in an A5 ring binder.
- Peel backing sheet a small distance (20mm) back from

the edge of the two leaves, and stick each edge back onto itself. This ensures that the outer edges of the two leaves will not stick to each other – making it easier to pull them apart when required to put in new labels etc.

- Peel the rest of the backing sheet off and put the plant specimen and a written label between the two sticky sheets. The label can either be the correct name, if you have already identified it, or your made up interim one for plants you haven't identified. This interim name should be descriptive e.g. "hairy stems"
- Stick sides together – pressing them firmly together.
- Use this fresh specimen while you are in the field to refer to and make sure you are consistently using the same interim name.
- Specimens in the folder can then be taken to an expert to help identify the plants correctly. Or you can spend more time at home using books to help you identify the plant.

- If you wish to keep the specimen for more than a couple of days, remove it from the clear plastic and place it between newspaper under a heavy book. Replace the newspaper every couple of days until it stays dry. Once the specimen is dry you can return it permanently to the clear sheets in your plant folder. It then forms a permanent reference for your site. If you leave a green specimen in your folder, it will not dry effectively and start to rot, it will also affect the adhesive on the sheets.

- Continue your collection as you find more specimens of species you don't know and build up a folder of plants

- When you have correctly identified the name of a plant, open the sticky sheets and put this in with the interim name. Note leave both the interim and correct name with the plant. This allows you to refer to it to make sure interim names are correctly changed.

Use interim names & correct these before data entry

When you are undertaking measurement of vegetation plots and encounter a species you are not able to accurately name, from your own knowledge or quickly referring to field guides, take a specimen (add it to your plant folder) and give it an interim name.

Make sure you continue to use the same interim name consistently (by referring to your plant folder) until you have accurately identified it.

Get help to identify the specimen (some organisations who may be able to help are listed at the end of this guideline) and put the correct name with the specimen, as well as the interim name.

You must correctly identify the plant species before you enter data onto the FORMAK website - and go back through plot forms and replace the interim name with the correct name before you enter the data.

Learning leaf shapes of canopy trees so you can identify them on the ground

With practice it is possible to identify the individual leaves of most canopy tree species from single dead leaves on the forest floor.

This is a very useful skill as it can help you identify canopy trees when it is difficult to view the foliage high in the forest canopy. If you strike this situation, look on the forest floor underneath the crown of the tree, pick up the leaves there and see if you can identify them.

Learn what the trunks look like

Knowing what the trunks of trees of different species look like and their distinctive features is very useful.

This is often useful in identifying species that are high in the canopy where there foliage and flowers etc are difficult to view.

Useful guides for plant identification.

The following are some references selected as useful for novice botanists

Title	Author(s)	Publisher	Comments
Nature Guide to the New Zealand Forest	John Dawson & Rob Lucas	Random House NZ Ltd 2000	Excellent in that it covers many trees & shrubs, vines, epiphytes and the forest floor as well as information on native fauna. Is not as comprehensive as some other publications.
Trees and Shrubs of New Zealand	A.L Poole & Nancy M. Adams	Government Print 1980	Comprehensive text for trees and shrubs. Line drawings are sometimes difficult to interpret
Which Native Fern?	Andrew Crowe	Viking 1994	Very easy to use and fairly comprehensive book for ferns.
Field Guide – Stewart Island Plants	Hugh D Wilson	Field Guide Publications 1982	Very useful and comprehensive guide for people in Southern NZ.
An Illustrated Guide to Common Weeds of New Zealand	Bruce Roy, Ian Popay, Paul Champion, Trevor James, Anis Rahman	NZ Plant Protection Society Inc 1998	Very useful guide for weeds.

Organisations that may provide assistance with plant identification.

Regional Councils: a number of Regional Councils have ecologists and are sometimes able to provide support to groups undertaking monitoring and with identification of plant species.

Department of Conservation: Some staff at area offices and conservancies have good plant identification knowledge and may be able to help.

NZ Botanical Society: This organisation includes many very skilled and helpful botanists who can potentially assist with plant identification. The local brances of the Society run regular field trips. These can be very useful to attend if you wish to learn more detailed plant identification.

QE2 Trust – Field Officers: The trust has a network of field officers that deal with covenant and potential covenant areas. If you already have dealings with QE2 these officers are potentially a useful source of knowledge.

Private Ecological Consultants: A wide range of ecological consultants are present throughout the country and many have very good plant identification skills.

Museum Herbaria: Most larger regional museums operate a herbarium that stores and records specimens of NZ Flora. Staff responsible for these herbaria can sometimes assist with identification of specimens of unusual plants. Contact your museum and see if they can offer this service.