

Step 11

Photo reference points

Photographs taken from the same location over a period of time can show changes to the structure and composition of land management units on a site.

Visual changes that result from management activities or unforeseen events are recorded from photo reference points.

Photo reference points allow visible changes that are a result of management activities or other unplanned events to be observed over time. However, photographic records are only useful if structural and compositional change is obvious.

Photographs are more reliable than memory for identifying broad changes over time.

They can be used to detect changes that help reveal the results of management activities. Although photographs can show change, they do not show the causes of change.

Photographs can be used to find monitoring sites again. They are also a visual record of other monitoring activities. Select suitable and readily photographed subjects to monitor.

Aims

To make a visual record of:

- structural changes in vegetation;
- the results of management activities or unforeseen events; and
- obvious changes in species composition.



Fimbristylis dichotoma

Some changes in vegetation that are readily photographed

- General trends in the abundance of dominant species
- Extent of flowering in spring and summer
- Amount of bare ground
- Health of the canopy trees
- Vegetation structure
- Weed distribution

When to take photographs

The interval between photos will depend on the feature or action being monitored.

Photos may be taken monthly for short-term events, such as changes in vegetation after weed control.

For longer term monitoring it may be appropriate to photograph seasonally, yearly or at even longer intervals, for example following a wildfire.

Herbaceous plants should be photographed at the same time each year as their growth patterns vary considerably between seasons.

Trees may be photographed at most times of the year but photos taken in the same season can show if the health of trees changes over time.

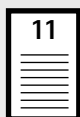
Materials

Sheet 11

Map

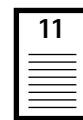
Overlay 4

Camera



Method

1. **Select locations within the management unit to be monitored.** An example is a site where weeds are being controlled. The sites chosen should be easy to find again and access.
2. **Decide on photo reference points for each monitoring location.** Ensure that there is a good view of the feature that is to be monitored. Mark these points as permanently as possible on the site as they become reference points for future monitoring. Corner posts or tree stumps are good choices. Star pickets may be used as markers but animals can dislodge these and their location should be identified in some additional way.
3. **Mark the location of the monitoring points on Overlay 4.** Identify the monitoring point and the category of subject being monitored with a simple key. For example:
 - V1 (vegetation monitoring site 1); or
 - H3 (Habitat monitoring site 3); or
 - F2002/1 (2002 wildfire monitoring site 1).
4. **Record the details of the monitoring and sketch the location of the sites on Sheet 11** to help find them again. Include the reasons for monitoring and any relevant history, for example the dates and extent of wildfire.
5. **Record the details of the photograph on Sheet 11.** All the recorded details should clearly identify the site so that in the future anyone is able to take a photo from the same points in the same way.
 - **Direction** it will be taken in: north, south, east or west;
 - **Format** of the photo as either landscape or portrait;
 - Choose the **shape** (single or panorama) that suits the subject best;
 - **Number** of photos needed for a useful record;
 - **Scale reference.** This is useful in each photo because it is the benchmark against which changes in structure can be shown. Examples are a person, a marker, or a card of a fixed and known size that includes the site number;
 - **Focal length** on the camera, if it is a SLR camera. It is usually better to use a focal length of 50 mm or 55 mm;
 - **Time of day:** afternoon or morning light will help to define the details of the photograph and shadows will be similar;
 - **Best angle** to reveal the most information about the subject of the photo; and
 - The exact **site**, the **date** and the **number** of the photo.
6. **Record other information** that will help with reviewing the reasons for changes. This may include obvious changes or items of interest that are on the site, or work that has taken place since the previous photos were taken.
7. **Take photos from the fixed reference points on a regular basis.** It is useful to refer to earlier monitoring photos before taking new ones so that the same landscape features can be incorporated each time a photograph is taken. Keep photographs in the folder with Sheet 11. Add any relevant notes.



Example

Step 11: Record of photo point monitoring

Object(s) of monitoring: To observe any change in vegetation structure and composition

Details of monitoring (*how it is being done and how often*): At 3 locations, take regular photos of the vegetation each year in spring. Points correspond to locations of monitoring of plant diversity. Photos taken from marked star pickets.

Location (*including management units, direction, height, reference points*): See monitoring map (Overlay 4). P1: Unit B; P2: Unit D opposite A; P3: Unit F in Button Wrinklewort patch.

Management: Unit B: rotationally grazed; Unit D not grazed for more than 10 years. F not grazed since 1998.

Photo type, details (*focal length etc*): Direction of photos from northernmost star picket; Landscape photo, single; scale reference opposite star picket; focal length 50 mm using SLR camera, photo taken in morning.

First record **Date:** 21/12/98 **Photo number(s):** 04, 05, 06, 07

Notes: Button Wrinklewort patch only just been fenced off; grazed until several weeks ago. Other paddocks are rotationally grazed.

Subsequent records **Date:** Dec 99 **Photo number(s):** 13, 14, 22, 23

Describe changes: Greater amount of biomass in Location P3 (no grazing for over one year).

Identify follow-up actions: No change to mgmt in Land Unit A or D required; watch that biomass in Land Unit B does not exceed 3000 kg DM per ha.

Notes:

Subsequent records **Date:** 3/11/00 **Photo number(s):** 11, 12, 13, 14

Describe changes: Bare ground in Location P3 high due to seasonal conditions.

High density of Flatweed flowering.

Identify follow-up actions: Consider short period of grazing in Unit D to reduce biomass. Otherwise, maintain current management. Consider removal of unhealthy non-indigenous trees.

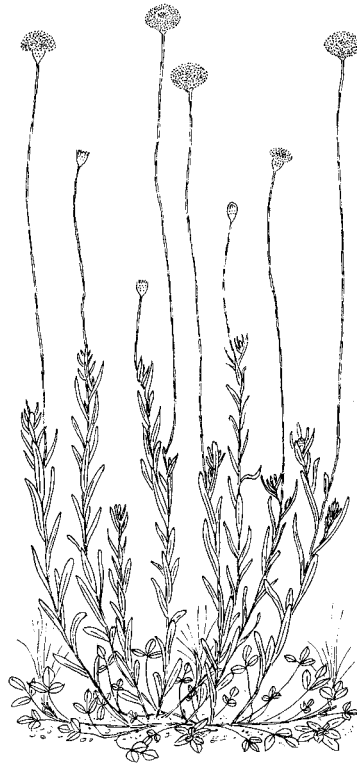
Notes:



Melichrus urceolatus



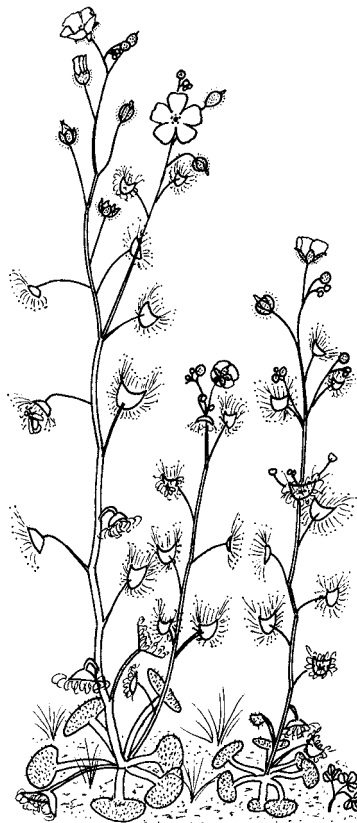
Erodium crinitum



Leptorhynchos squamatus



Convolvulus erubescens



Drosera peltata