

Sending specimens for identification

By officers of the Pest and Disease Information Service



Details describing where samples are collected assist the identification process.

Correct identification is central to effective control of pests and diseases and for the detection of new exotic pests and diseases which have penetrated our quarantine barrier.

Since many hundreds of animal, plant and insect samples are received by the Department of Agriculture and Food each year, the process for identifying them

can be made a lot easier if the specimens are freshly gathered and are undamaged.

Alternatively, electronic (digital) copies of photographs can be emailed to the department at the following address <info@agric.wa.gov.au>. Where possible, photos should include a ruler or other common object to give an indication of the size of the specimen.

Important Disclaimer

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

For more information visit our web site www.agric.wa.gov.au

Important

It is not necessary to personally deliver the specimens to the Department of Agriculture and Food. Simply mail to:

Department of Agriculture and Food
Pest and Disease Information Service
3 Baron Hay Court
South Perth WA 6151

or Locked Bag 4, Bentley Delivery Centre WA 6983

It is important not to mail specimens on a Thursday or Friday. This avoids deterioration while in transit over a weekend.

Also provide these details:

- the locality where the specimens were collected: that is, the address and the wider area, such as name of suburb, town or shire;
- the date when collected;
- the name of the collector and a contact telephone number; and
- a description of the damage caused or other reason for submitting the sample.

Sending insects, spiders, mites and other insects for identification

- Send the specimens live unless recommended otherwise as below.
- Gather 10-20 specimens if the insects are small and if this is practicable. Insects with strong jaws such as ground beetles or plant feeders such as scarab larvae are best sent with a handful of soil or leaves as they may otherwise damage each other in transit (see killing methods below).
- Place the specimens in a plastic or glass vial or small jar, or in a crush-proof box with tissues.
- Containers of live insects should have ventilation holes which are sufficiently small to prevent the escape of the specimens.
- **Kill butterflies and moths immediately** by freezing for 24 hours or by placing them in an airtight container with a tissue or cotton wool that has been soaked in nail polish remover.
- Also, **kill hard-bodied insects** such as beetles and grasshoppers by freezing for 24 hours.
- **Do not kill** soft-bodied insects such as grubs or caterpillars.
- Leave insect larvae (grubs, caterpillars or maggots) in grain or other seed or fruit as this will help to preserve them.
- Include loosely crumpled facial tissues or similar in the bottom of containers to help prevent damage to fragile insects and absorb any free fluids.
- A preferred method of sending ant specimens is to first spray them with fly spray, then stick to **clear** sticky tape. Stick this to a piece of paper on which are listed the location where caught and the collector's name and contact details.



Examples of common crushproof containers



A simple and effective way to send ant specimens – attached to sticky tape

- Clues to the identification of the specimens can be found from the plants they feed on. Examples where the specimen may be attached to the host plant include scale insects, mealy bugs and lerps. Where appropriate, send leaves of freshly-damaged plants. (See instructions for sending plant specimens.)

Sending plant specimens for identification

In many cases these will be unfamiliar plants suspected of new weed potential.



Whole plants sent for weed identification

- Collect fresh samples of the growing plant.
- Where practicable send whole plants (roots, mature and immature leaves, flowers, seed pods, fruit). If no flowers or seeds are present wait until the plant is mature.
- Send more than one plant, if possible.
- Keep plant specimens out of direct sunlight.
- Place the plant samples between several sheets of absorbent paper, such as newspaper.

- Enclose the samples and their separating paper with a sheet of cardboard on either side to prevent crushing during transit.
- Seal the sample inside a paper bag (it will 'sweat' and deteriorate faster in a plastic bag).
- Label with the locality where collected, date and collector's contact details.

Sending samples of diseased plants

These situations will mainly apply to suspected diseases of fruit trees or garden plants.

- Where practicable, send the whole plant (where it is clearly not a leaf, stem or fruit disease).
- Dig up plants so the roots remain intact. Soil on the roots will keep the plant alive in transit.
- Seal the roots and soil in a plastic bag near the base of the plant, then enclose the whole sample in another plastic bag.

For suspected fungal or bacterial diseases:

- Wrap leaves in paper and enclose in a paper envelope.

For suspected viral diseases:

- For vegetative plants, collect new growth or whole shoots.
- For potatoes, shoots are better than tubers.
- For grapevines, collect dormant canes (instead of leaves).
- Package leaves to prevent them getting crushed in transit (as for plant specimens in previous section).
- Enter the locality where collected, date and collector's contact details.



Tightly seal infected plant parts to avoid spreading of disease

Sending animal specimens for identification

Although they are less often sent for identification, animals such as frogs, which are suspected of being cane toads, are sometimes caught. Usually, the identification of frogs can be done over the phone by contacting the Department of Agriculture and Food's cane toad hotline (Freecall 1800 084 881). In most cases native frogs are misidentified as cane toads and are sometimes killed unnecessarily. If, after a phone call it is necessary to send a frog specimen to confirm its identity, the following procedure should be followed:

If alive :

- Place frog in an escape-proof container.
- Add to the container a wet tissue (frogs can drown if placed in a container full of water with nowhere to rest) and provide ventilation.
- Label with the following information:
 - **Location:** Where **exactly** was the animal found? In/near a pond, creek, drain etc, at a commercial/residential premises (address details), crossing a road, in a hanging basket etc.
 - **Number observed:** Was the specimen alone or were there a number of them? Were they all adults or were some tadpoles or eggs?
 - **Date collected:** This may be important, especially if it has been a while since the specimen was collected.
 - **Name and contact number for person collecting the specimen:** More information may be required for staff to follow up the sighting.
- **Deliver** to the nearest office of the Department of Agriculture and Food. Do not post specimen.

If dead :

- Place frog in a leak-proof container containing 70 per cent alcohol (7 parts methylated spirit and 3 parts water).
- Label with appropriate information (see above).
- **Send or deliver** to the Department of Agriculture and Food.

There is sometimes a need to determine the identity of other animals. For example, birds are often seen that require identification to determine if they are declared species such as sparrows or starlings. This identification can also be done over the phone (ring the Western Australian Museum tel. 9427 2700, or the Vertebrate Pest Research Section (VPRS) of the Department of Agriculture and Food tel. 9366 2301) if sufficient information is supplied. Dead specimens can also be sent to the Museum or VPRS for identification:

- Preferably, wrap sample in absorbent paper, place in a sealed plastic bag, then a suitably sized box. Alternatively, preserve in 70 per cent alcohol (7 parts methylated spirit and 3 parts water), in a leak-proof container.
- Label with appropriate information (see above).
- **Send or deliver** to the Museum or VPRS at the addresses above.

Specimen identification requirements

When sending or delivering samples, the following information is required:

- Collector's name, location (where the specimen was found), full address, telephone number and e-mail address, description of the damage and date collected.

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