



DOVE
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Flatworms

Defra's Code of Practice to prevent the spread of non-indigenous flatworms

The Code was set up to give practical advice on how to detect and limit the spread of non-indigenous flatworms, especially the New Zealand flatworm (*Arthurdendyus triangulatus*) and the Australian flatworm (*Australoplana sanguinea*). The Wildlife and Countryside Act 1981 states that it is an offence to release or allow to escape into the wild any animal which is included in Part I of Schedule 9 of the Act and this includes any non-indigenous flatworms. Although this Code of Practice has no legal status, you still need to be able to prove that you followed the guidance made below. By showing that this has occurred, we will be able to demonstrate that measures are being taken to avoid spreading the flatworm through trade in planting material and soil both within and outside the UK. **Failure to prevent the spread of flatworms could threaten UK exports.** Setting up nursery/garden centre hygiene practices for other pests and diseases will aid in limiting the spread of flatworms. This Code applies to plant producers, nurseries, wholesalers, garden centres and other retailers of plants and is directed at all stages of plant production and marketing.

Why is a Code required?

- Non-indigenous flatworms prey on earthworms and so pose a potential threat to our native earthworm populations.
- Further spread of non-indigenous flatworms could have an impact on wildlife species dependent on earthworms.
- Local soil structures could be harmed without an earthworm population.
- Findings in some parts of the United Kingdom, suggest that non-indigenous flatworms are becoming more widespread and action is needed to restrict their further spread to other parts of the country.

How to identify a New Zealand flatworm

They were introduced into the United Kingdom about 30 years ago and thrive in cool, wet regions. It has spread quite quickly in southern Scotland and Northern Ireland. They have been seen in England but this is currently confined to the North, North West and South East.

The adult is purple/brown on the upper surface with its margins and underside a tan colour. It can be about 1 cm wide by 5 cm long, appearing longer when it's moving. It has smooth but very sticky skin. The tan edge of the flatworm ripples during movement.

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How to identify an Australian flatworm

These were introduced later and were first seen in the Isles of Scilly in 1980. Since 1990, they have been recorded in Lancashire, Cheshire, the South West, Wales and are locally well established in the Republic of Ireland.

It is smaller than the New Zealand flatworm, although length can increase if it's moving. Its colour varies from cream or white to peach or mid-brown, often with a distinct red tinge near the head.



**New Zealand Flatworm
with blackcurrant-like egg
capsule (4 -11mm long) (inset)**

Australian flatworm

Flatworm egg capsules

Flatworm egg capsules appear in the summer and resemble shiny smooth blackcurrants. They are between 4-11 mm long and 3-8 mm wide. Juvenile flatworms emerge after about a month and are creamy white/pink in colour.

Similar organisms

Other creatures such as leeches or slow-worms have in the past been mistaken for flatworms, but careful examination should help avoid mistakes. There are also several native flatworms which are mostly small and inconspicuous (about 2cm). These pose no threat to the earthworm population and should be left alone.



Leech: tough body wall, with fine cross lines and a sucker at each end

**Earthworm: thin, rounded,
obviously segmented body**

Recommended measures

The following measures are recommended to reduce the risk of the flatworm being introduced into or spread from your premises.

1. Inspect incoming plant material

Inspect pots or trays carefully particularly if they come from an area where findings of the flatworm have been reported.

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2. Maintain good hygiene

Always use fresh, sterile compost or other sterile growing medium when potting up plants, not material taken from places where flatworms might be hiding. For example, a container of compost or growing medium which has been opened and left lying on the ground may prove an attractive hiding place for flatworms. Clear up spilt compost or other growing medium, disposing of or thoroughly cleaning used pots and other containers.

3. Regular checking

Check regularly under matting or pots standing directly on the ground for flatworms or their egg capsules. Flatworms are found on the soil surface. They will seek damp places, such as under loose turves, plastic or other sheeting, rocks, flat stones and plant containers for shelter during the day. Egg capsules can also be found in such areas. Check the underside of the polythene or matting where containers are stood down. If pots are standing directly on the ground, check the inside and on the underside of the pots at regular intervals.

4. Set traps

Flatworms have been found quite frequently in private gardens. Where nursery or other premises are adjacent to private gardens, set 'traps' close to the boundary, consisting of a weighted down sheet of black plastic or plank of wood. check the underside of these traps frequently for the presence of flatworms or their egg capsules.

5. Inspect all outgoing consignments of plants

Check planting material leaving the nursery or other premises carefully for the presence of flatworms whether or not it is for export.

Action on discovering a flatworm

If you suspect that you have found a New Zealand or Australian flatworm, or their egg capsule, **do not touch it** as the mucus covering the flatworm can cause skin irritation. Please contact the relevant organisation below with details of the time, place and nature of the discovery. The species will then be identified and confirmed cases notified to the appropriate Department. This may lead to further investigations by the Departments or their agents.

If you are a commercial grower in England or Wales, send your find (alive) in a crush proof container with some moist paper or damp moss to:

Mike Lole
ADAS Wolverhampton
Woodthorne
Wergs Road
Wolverhampton
WV6 8TQ
Tel: 01902 693266
Fax: 01902 693166
Email: mike.lole@adas.co.uk

If you are in Scotland, send details of your find (not the flatworm) to:

Dr J Pickup
SASA
East Craigs
Edinburgh
EH12 8NJ

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Tel: 0131 244 8859
Fax: 0131 244 8940
Email: jon.pickup@sasa.gov.uk

If you are in Northern Ireland, send details of your find (not the flatworm) to:

Mr J P Moore
DARD
Newforge Lane
Belfast
BT9 5PX
Tel: 02890 255288
Fax: 02890 668372

If you find a flatworm in your garden, send details of your find or, if you would like it identified, send your find (alive) in a crush proof container with some moist paper or damp moss to:

Dr B Boag
SCRI
Invergowrie
Dundee
DD2 5DA
Tel: 01382 562731
Fax: 01382 562426

There are currently no chemical products that can control this pest. If you require further information, please contact your local DEFRA Plant Health and Seeds Inspector (England or Wales), Horticultural Officer in Scotland or equivalent inspector in Northern Ireland for further advice.

The information presented here can be found in the Plant Health section (under Plants and Seeds) on Defra's website at www.defra.co.uk.

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