

All about Red imported fire ants (RIFA)

Answers are in our video and the PowerPoint (available from <https://www.nswdpi-schools-program.com/fireants-secondary>)

Description

What is the scientific name for Red Imported Fire Ants (RIFA)?

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What colour/s are RIFA?

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How is their length different to other ants?

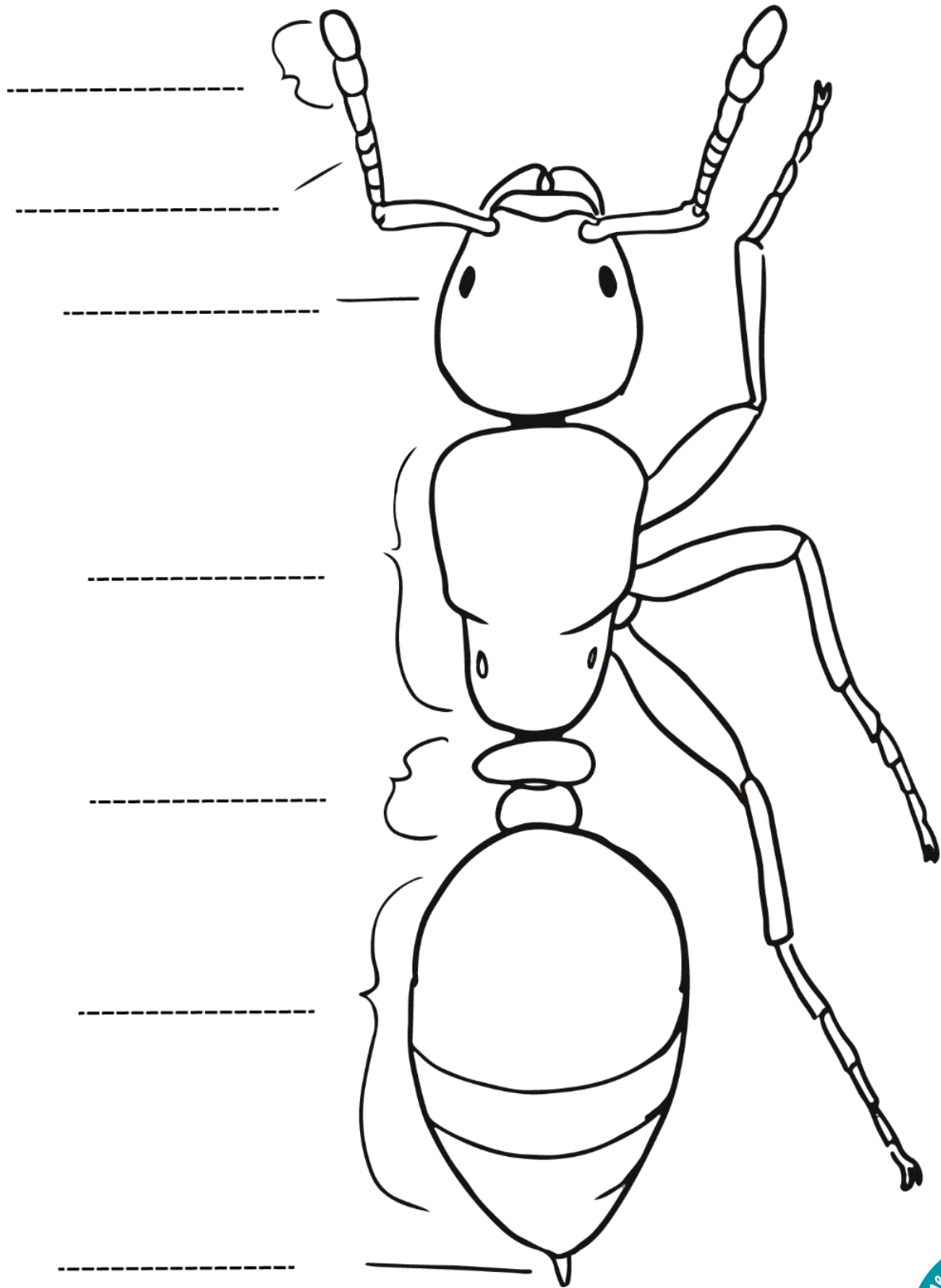
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How can you tell RIFA apart from other ants?

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Label this diagram



Habitat and diet

What does a RIFA nest look like?

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Where would you find a RIFA nest?

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How are they different to other ant nests?

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What do RIFA eat?

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Biosecurity

Where did RIFA originally come from?

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Why are RIFA such a threat to Australia?

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How do RIFA spread?

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Describe how RIFA could impact our way of life in Australia in terms of

Human health

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Culture

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Environment

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Economy

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Agriculture

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If you think you find a RIFA nest, what should you do?

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What is each individual's biosecurity responsibility?

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Stings

How do RIFA usually behave when disturbed?

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Why are RIFA dangerous to humans?

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What types of animals can RIFA harm and how do they harm them?

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What should you do if you get stung by a RIFA?

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Detection science

What is the technology being used to track the spread of the ants?

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How does it work?

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Explain the technology being used to stop the spread of RIFA in NSW

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Check for fire ants



CHECK:

- Open sunny areas like lawns, parks, paddocks and disturbed ground
- Where hay, turf, soil, sand, gravel, mulch or potted plants have been used or stored



Fire ants attack and sting over and over

LOOK FOR:

- Nest mounds or patches of soil up to 40 cm high, with no obvious entrance holes
- Aggressive ants, swarming from the nest if gently prodded with a long stick
- Small, dark reddish-brown ants with darker black abdomens
- 2-6 mm long and a range of sizes within a nest



Think you've seen them?
Call us **1800 680 244**

Scan the QR code for more information
www.dpi.nsw.gov.au

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All about RIFA- Answer sheet

Answers are in our video and the PowerPoint (available from <https://www.nswdpi-schools-program.com/fireants-secondary>)

Description

What is the scientific name for Red Imported Fire Ants (RIFA)?

Red imported fire ant (*Solenopsis invicta*)

What colour/s are RIFA?

Dark reddish-brown thorax and head, with a darker brown-black abdomen

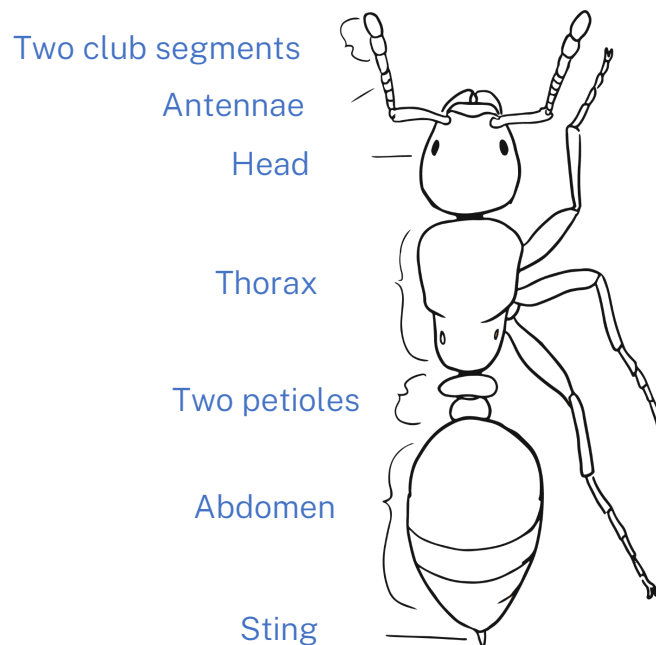
How is their length different to other ants?

RIFA range from 2–6 mm long, and are found in a variety of sizes within one nest. This is different to other ants which are regularly all a similar size.

How can you tell RIFA apart from other ants?

Colour, different size ants plus two club segments on antennae and two petioles between thorax and abdomen.

Label this diagram:



Habitat and diet

What does a RIFA nest look like?

- Mounds or flattish patches of soil with no obvious entrance holes
- Can be up to 40 cm high.

Where would you find a RIFA nest?

- More likely to be seen in sunny open areas such as lawns, school yards, parks, roadsides and golf courses where soil has been disturbed by humans
- Occasionally found in rotten logs, along pavers and building walls.

How are they different to other ant nests?

No observable entrance into the nest/mound

What do RIFA eat?

RIFA are omnivorous predators and scavengers that eat both plant material and meat. For example, insects, small birds, frogs, native flora and agricultural crops and pastures.

Biosecurity

Where did RIFA originally come from?

South America

Why are RIFA such a threat to Australia?

Answers may vary, but should include:

If they become established, they have the potential to invade and inhabit 99% of our country. They will have devastating and irreversible effects on human health: our outdoors culture; our environment (flora, fauna and ecosystems); our economy; and agriculture.

How do RIFA spread?

Airborne (on the wing), via the ground (expanding nests and starting new colonies) as well as by water (for example in floods and via rivers/streams etc).



Describe how RIFA could impact our way of life in Australia in terms of:

Human health

- Fire ants are very aggressive and move quickly when disturbed, giving painful stings. Multiple stings give a sensation the body is on fire.
- Small pustules may form several hours after stinging and may become itchy and infected.
- People prone to allergic reactions could experience severe symptoms

Culture

Fire ants can restrict everyday activities such as picnics and outdoor play, and sporting activities, because backyards, parks, playgrounds, beaches and sports grounds become unusable.

Environment

- RIFA feed on fauna that nests or feeds on the ground, including insects, spiders, lizards, frogs, birds and mammals
- RIFA can displace and potentially eliminate some native species.
- RIFA eat and damage seeds causing major ecosystem changes over time
- RIFA predate or disturb the insects and animals that pollinate native plants, which may also cause long-term changes to the vegetation of our bushland areas

Economy

- Fire ants have the potential to surpass the combined damage done each year by our worst pests: feral cats, wild dogs, foxes, camels, rabbits and cane toads.
- They could affect our economy, markets and industries:
 - Tourism and lifestyle businesses and industry
 - Agriculture - destroying crops and livestock
 - Impacts overseas markets stopping our trade and travel with unaffected countries



Agriculture

- RIFA will affect our countries agricultural production which will affect the economy. RIFA sting animals which causes, stress and pain which will affect animal welfare and production. The stress from the stings can in some cases cause animals to abort through gestation, young animals to die from shock, stings to the face and eyes can cause blindness and in severe infestations near water sources can cause animals to dehydrate being too afraid to drink.
- RIFA attack electrical gear and can cause significant damage to irrigation equipment.
- RIFA feed on plants causing damage to crops and pastures.

What is each individual's biosecurity responsibility?

Everyone, no matter where you live in NSW, has a legal responsibility to make sure plant and animal pests, diseases and weeds are not introduced to, or allowed to spread, throughout our community or environment. This includes the school community.

If you think you find a RIFA nest, what should you do?

Observe but do not disturb it. Tell an adult. Take a picture and contact NSW DPI biosecurity staff to report on 1800 680 244

Stings

How do RIFA usually behave when disturbed?

Very aggressive, mass swarm from nests, then RIFA sting whatever is disturbing them.

Why are RIFA dangerous to humans?

Those prone to allergic reactions can have allergic or anaphylactic response.

What types of animals can RIFA harm and how do they harm them?

Answers will vary. Could include: All domestic and native animals. Can harm through stings to all body parts that RIFA come into contact with. For example, feet, toes, faces, stings to the eyes can cause blindness. Shock can cause death in small animals or termination of pregnancies etc.

What should you do if you get stung by a RIFA?

Tell a parent, wash it with soap and water, ice it. Seek medical assistance if necessary. Contact the DPI Biosecurity staff on 1800 680 244 to report the RIFA



Detection science

What is the technology being used to track the spread of the ants?

DNA sequencing technology to identify the state origin of the RIFA.

How does it work?

DNA is extracted from the RIFA identified in NSW. DNA is unique to an individual, however is a combination of parent genes. Therefore DNA sequencing allows an individual to be linked to its relative. DNA extracted from RIFA detected in NSW will be compared to DNA from RIFA in Queensland. If the DNA links, (suggesting a linked ancestry) it is good news as it suggests the RIFA have come from Queensland allowing for tracing and control. If the DNA is not similar it suggests the ants have come from an unidentified population/source which suggests there could be more a known RIFA in NSW or they have been introduced via another method.

Explain the technology being used to stop the spread of RIFA in NSW

DPI is using hormones to sterilize queen RIFA in a 2km diameter around the detected nests. The hormone sterilizes the queen ants, which results in them no longer able to lay eggs. Over time this will mean the colony will die thus eradicating the ants.

Check for fire ants





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- Where hay, turf, soil, sand, gravel, mulch or potted plants have been used or stored

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