

CSI: CANTERBURY

All Canterbury detectives assemble **HERE!**

New Zealand is a country made up of islands in the middle of the South Pacific Ocean. In the past, this isolation protected the New Zealand environment from any unwanted plants and animals (organisms) reaching our shores.

But with travel made easy by ships and planes, this has changed. The environment is now constantly under threat from unwanted foreign invaders. Canterbury already has its fair share of pests and unwanted

organisms. Possums, ferrets, gorse and German wasps are all land-based pests causing havoc in the environment. But pests don't just live on the land. There are pest plants, animals and algae that have invaded New Zealand's waterways and sea and are causing health and environmental problems.

We need YOUR help to stop their spread!!

Unwanted organism

Awful algae

Common name: Rock snot a.k.a Didymo
Scientific name: *Didymosphenia geminata*

- Algae that attaches to stones and to plants
- Forms a thick, brown layer and strands like 'rats-tails' that can turn white at the end looking like tissue paper
- Looks slimy but feels like cotton wool
- Pale yellow-brown to white colour, **NEVER** green
- Microscopic so only seen when already very numerous
- Found in freshwater streams, rivers and lakes
- Thrives in clear, shallow, warm water
- Needs lots of light to grow
- Spreads on footwear, fishing equipment and boats
- Irritates eyes making them itchy
- Light wind can also spread this algae
- First found in NZ in 2004, not yet present in Canterbury.



What you can do:

Check and remove all algae from fishing and boating equipment, including footwear. Leave the algae at the site where you found it. Collect a sample and put it in a plastic bag. **Ring the Biosecurity hotline on 0800 80 99 66.** If you find algae on your equipment once you get home, **DO NOT** wash with freshwater, or wash down the drain. Dry the algae for at least 48 hrs, or use household bleach to kill it. Visit www.biosecurity.govt.nz/pests-diseases/plants/didymo/cleaning-methods.pdf

Unwanted organism

Serious squirt

Common name: Sea squirt
Scientific name: *Styela clava*

- Leathery, cylindrical club-shaped organism
- 1/3 stalk, 2/3 bulbous club
- Can be whitish, yellowish or reddish-brown
- Grows on hard surfaces such as rocks, jetties and aquaculture frames
- Grows quickly crowding out other plants
- Travels on boat hulls and in ballast and/or bilge water
- Likes to live in sheltered bays and harbours
- Discovered in Lyttelton Harbour in 2005.



What you can do:

If you see anything that may be a sea squirt, record its location (write it down or draw a picture) and collect a squirt. Put the squirt in a plastic bag and put it in the freezer. **Call the Biosecurity hotline on 0800 80 99 66.**

Unwanted organism

Wicked/wayward weed

Common name: Oxygen weed
Scientific name: *Egeria densa*

- Leaves grow in whorls around the stem and curl a little downwards
- Leaves are light green with a reddish tinge, centre-vein very visible
- Tiny white flowers with three petals
- Grows under the water in strands up to 5m tall
- Spread by people on footwear, boats and fishing equipment
- Every broken piece can grow roots and leaves
- Crowds out native plants and fish
- Loves muddy, still, or very slow-flowing water
- Arrived in Canterbury mid 1980s



What you can do:

Check and remove all weed from fishing and boating equipment, including footwear. Leave the weed at the site where you found it. Collect a sample and put it in a plastic bag. **Ring the Biosecurity hotline on 0800 80 99 66.** If you find weed on your equipment once you get home, **DO NOT** wash with freshwater, or wash down the drain. Dry the weed and compost it.

Activity

The picture shows a case scenario, of what could happen this summer to one of Canterbury's rivers if people are not watchful about the spread of unwanted organisms. You have been sent to **investigate** the scene in search of clues that can determine –

- Whether an unwanted organism is present.
- What that organism is and is there potential of it spreading to other rivers.
- What can be done about it.

Clues:

(Things that show there could be an unwanted organism in the river)

Verdict:

Is an unwanted organism present? Is there a chance of it spreading? Why/why not?

Reasons:

What made you come up with your verdict (clues)?

Result: (What do you do with your information and who do you tell?)

Activity

- DIDYMO
- ORGANISM
- SEA SQUIRT
- UNWANTED
- CLEAN
- INSPECT
- DRY
- BIOSECURITY
- ALGAE
- BROWN
- EGERIA
- WEED

Can you find these words?

V	J	K	L	Z	X	V	B	N	M	Q	W	E	A	O	W	E	R	Y	W
Q	H	S	Y	S	A	X	Z	E	Y	U	I	J	Q	P	A	W	E	T	L
F	Q	S	R	A	F	D	I	W	F	B	M	Q	Q	E	F	I	Q	N	K
B	W	E	D	J	A	D	S	J	Q	A	C	L	E	A	N	N	M	H	
J	M	N	B	I	C	S	E	K	Q	M	C	S	Z	A	S	S	M	Y	F
Y	R	T	R	S	D	K	J	Q	F	S	A	J	K	H	Q	P	D	N	R
D	F	E	D	A	K	Y	E	N	W	K	Q	C	A	M	L	S	N	C	Z
Q	Q	E	J	E	A	Q	M	W	U	K	L	O	T	W	Q	S	E	R	Y
E	W	F	H	Z	M	B	V	O	X	U	K	F	S	A	D	T	J	E	J
L	P	D	F	Q	H	T	R	R	Q	F	D	H	L	S	C	B	V	Z	K
U	R	E	Q	W	E	R	T	B	I	O	S	E	C	U	R	I	T	Y	S
T	Y	W	I	O	P	A	S	D	F	Q	H	J	K	L	Z	X	C	V	M
N	M	N	Q	W	E	R	T	Y	U	I	O	P	P	M	A	S	D	F	N
Q	H	J	K	L	Z	X	C	V	B	N	M	Q	W	S	T	Y	U	I	B
U	N	W	A	N	T	E	D	A	S	D	F	Q	H	I	H	K	J	L	D
Z	A	S	L	D	F	H	J	K	L	Z	X	C	V	N	B	N	M	I	V
X	A	S	Q	W	E	R	T	Y	U	I	O	A	A	S	D	F	Q	D	
C	Q	W	A	E	R	T	Y	U	I	O	P	A	S	Q	D	F	Q	H	E
C	A	S	E	D	F	Q	S	E	A	S	Q	U	I	R	T	H	J	K	E
V	J	K	L	Z	X	V	B	N	M	Q	W	E	A	O	W	E	R	Y	W

