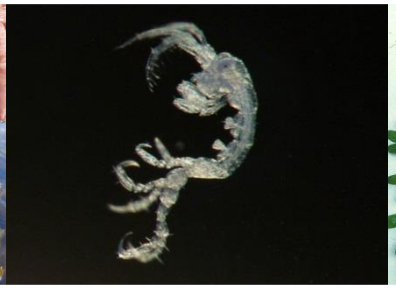
Marine invasives in the Clyde: What's here? What's coming our way?







Fiona Manson
Scottish Natural Heritage

Scottish Natural Heritage

Firth of Clyde: what is here?

Carpet sea squirt



Japanese skeleton shrimp



Acorn barnacle





Leathery sea squirt

Scottish Natural Heritage

Firth of Clyde: what is here?

Wireweed



Common cord grass





Green sea fingers

How do they get here?



Shipping
commercial and recreational

- Hull-fouling
- Ballast water exchange

Aquaculture

- Target species
- Associated species





Why does it matter?





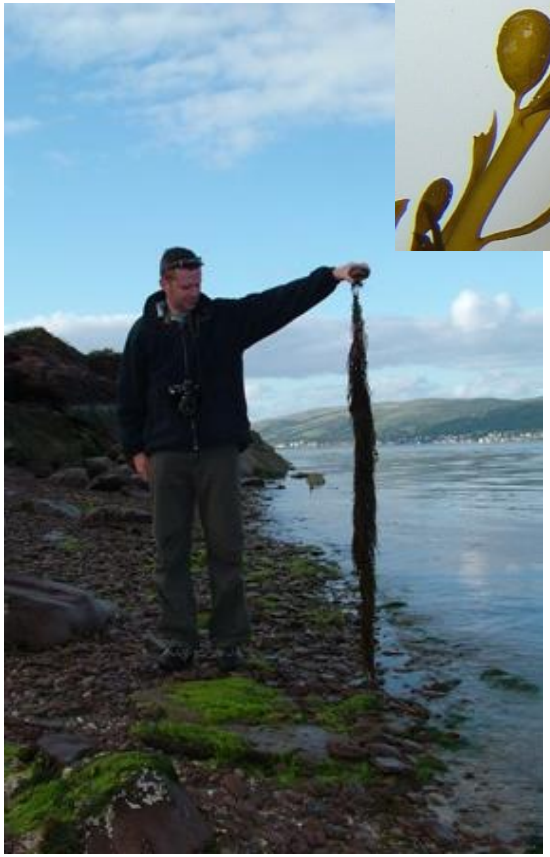
Ecological impacts

Economic impacts

Case study: Wireweed

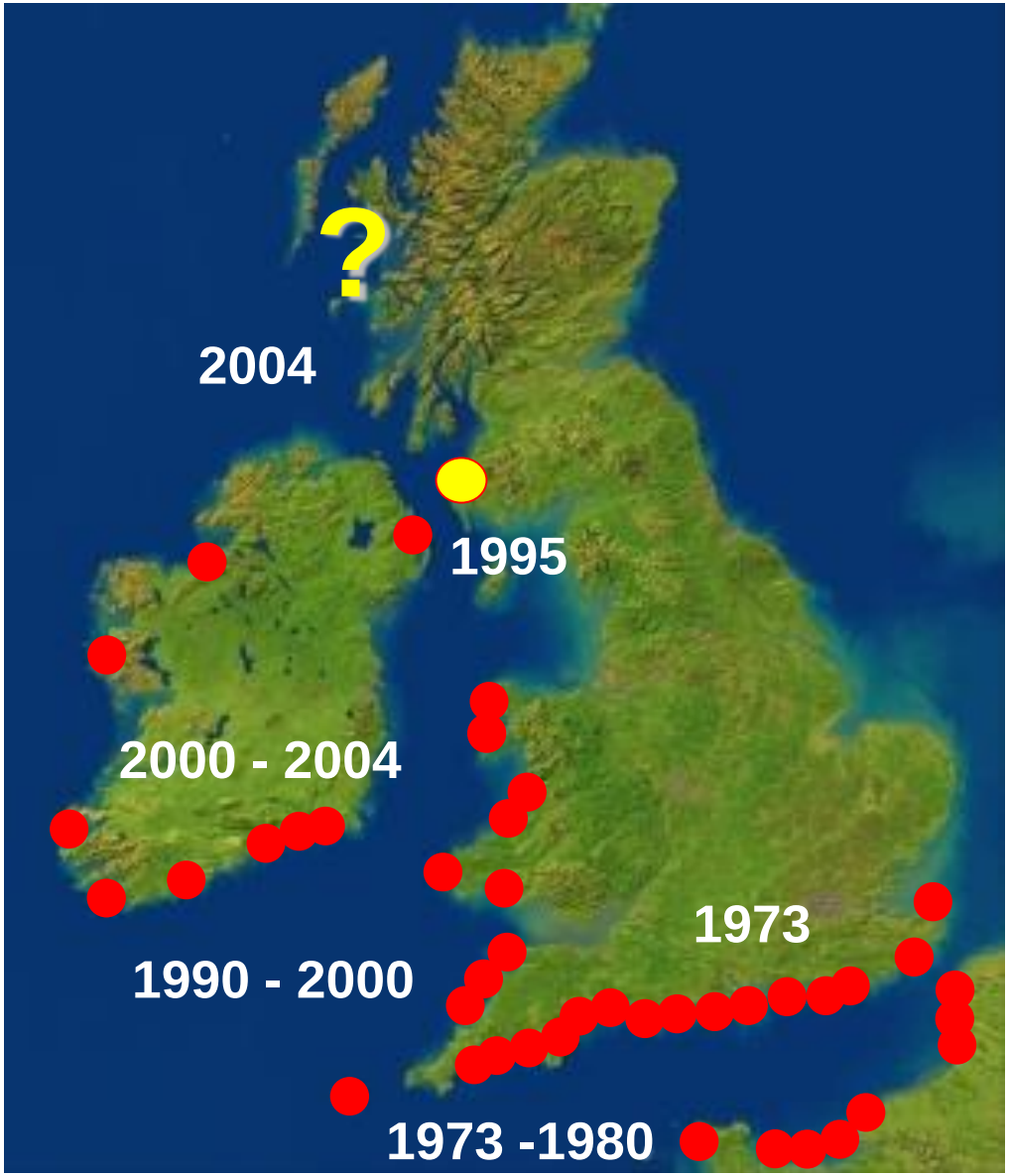




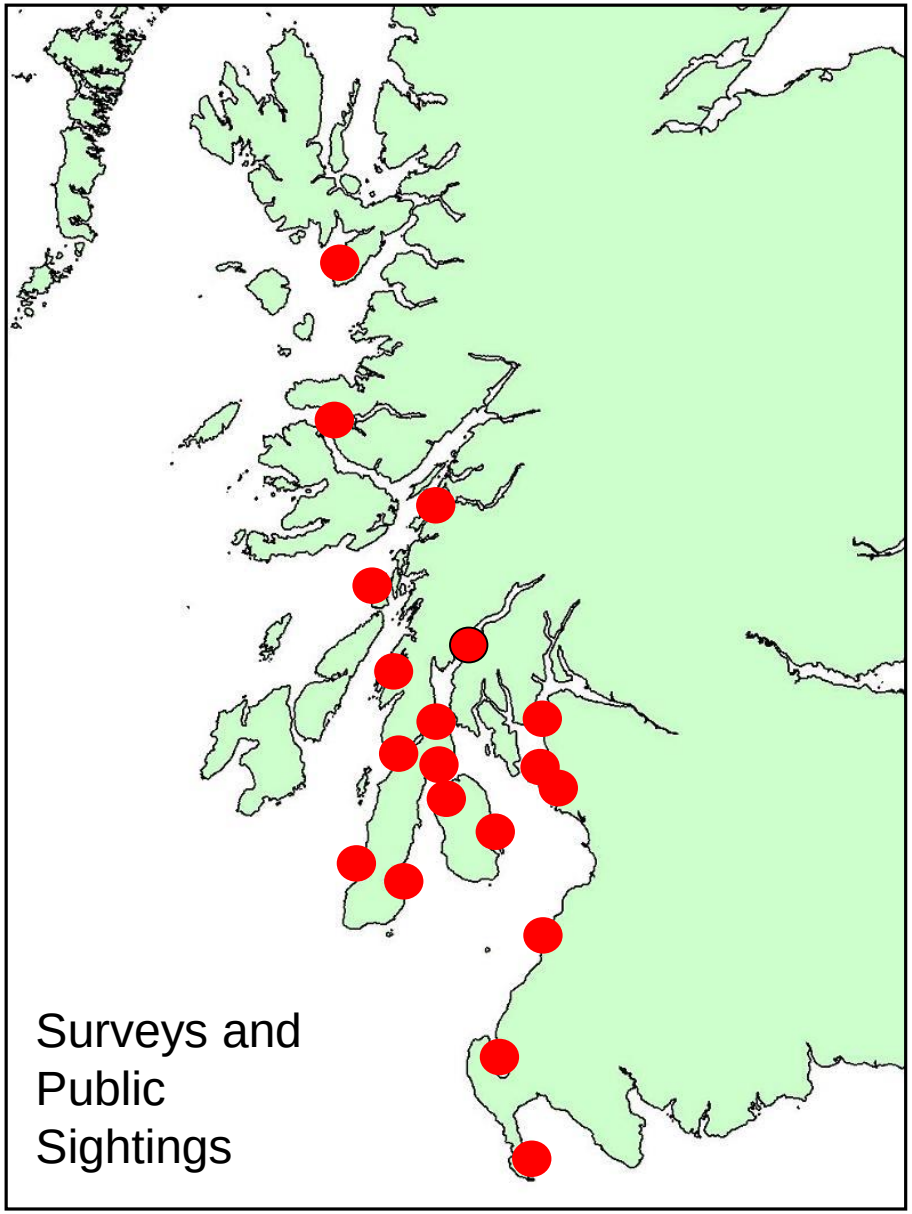




Wireweed: UK distribution



Wireweed: Current distribution in Scotland



A new arrival:
Carpet sea squirt
Didemnum vexillum







Why does it matter?





Impacts on biodiversity

Why does it matter?





Issues for shellfish farming:

- **Fouling of equipment**
- **Fouling of stock**
- **Impact on growth**

Why does it matter?

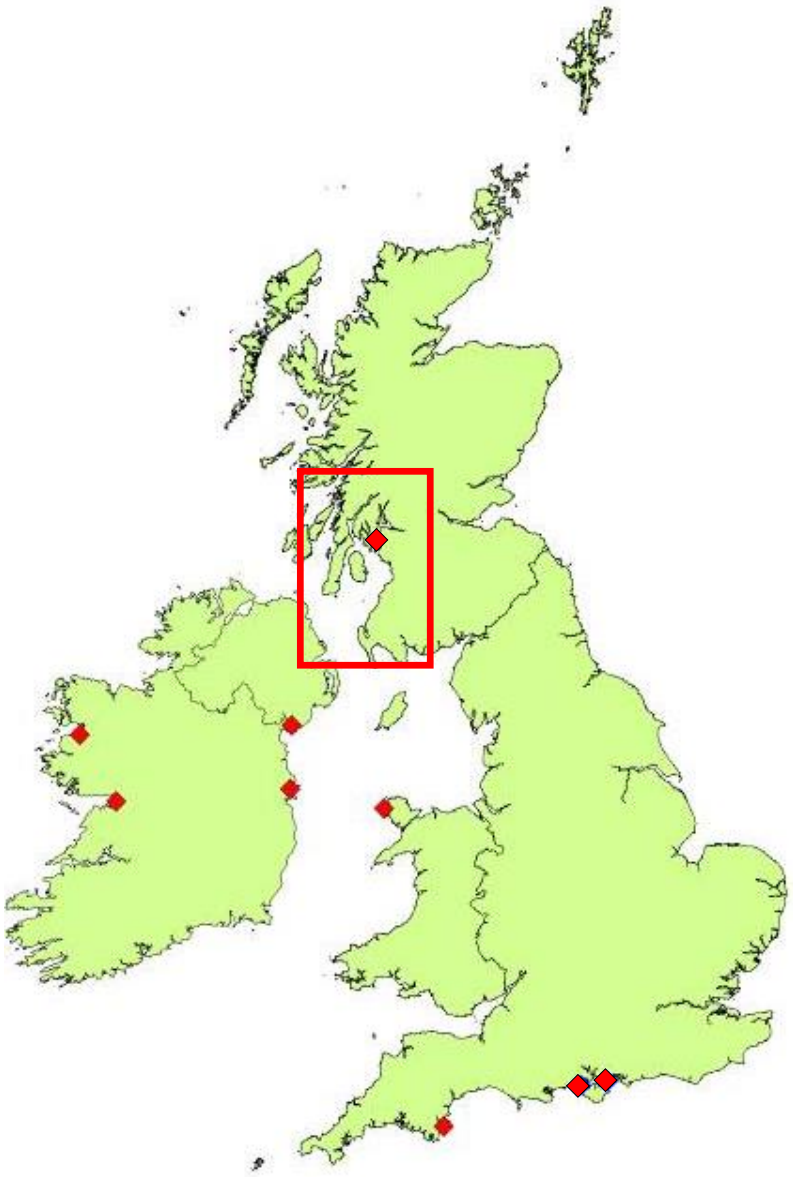


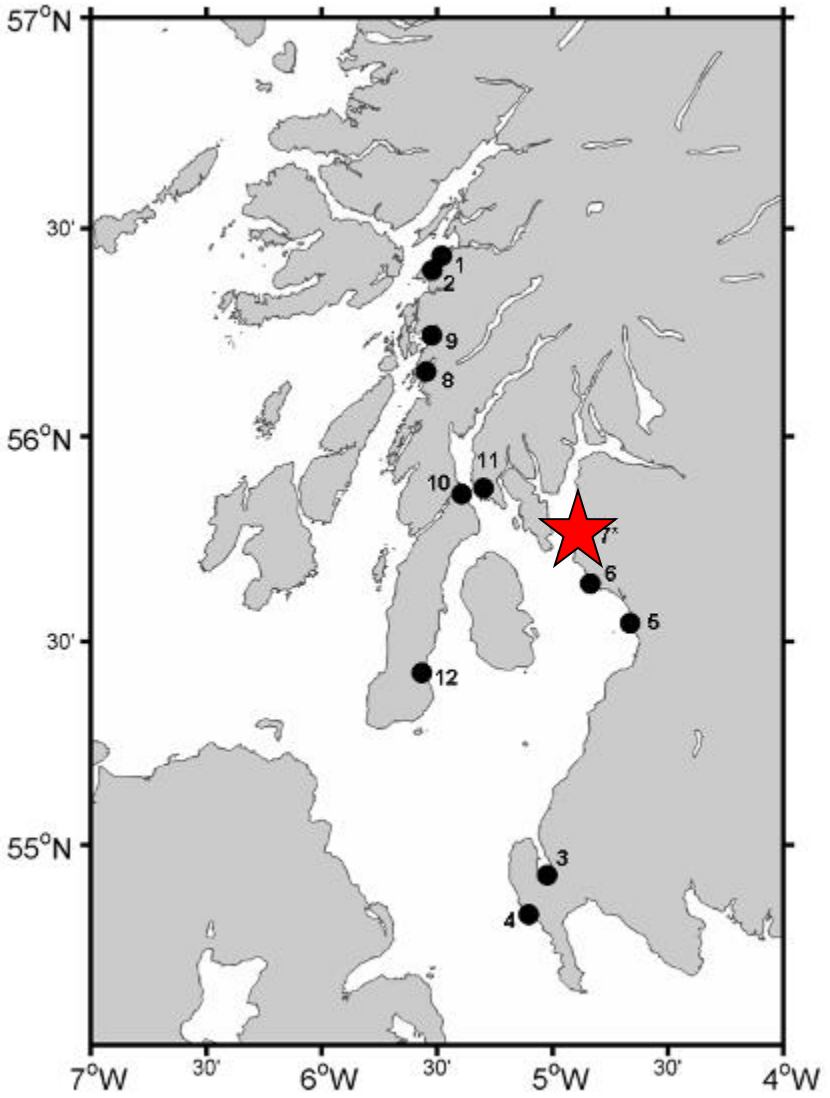
Issues for boaters:

- **Hull fouling**
- **Increased drag**
- **Extra cleaning**

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Where is it?





What should I do if I see carpet sea squirt?

Email:

carpetseasquirt@snh.gov.uk

(include a photograph if possible)

Phone: 01738 458641

Or contact your local SNH office

www.nonnativespecies.org

What can we do about it?

Options:

- Do nothing
- Control / manage / best practice
  (learn to live with it)
- Eradication

What can we do?

Holyhead Harbour – eradication





Scottish Natural Heritage

Firth of Clyde: what's coming?



Slipper limpet



Chinese mitten crab



Japanese red alga

???