



KingSearch

SURVEY GUIDE

We are looking for sightings of the king ragworm, *Alitta virens*, around the Irish coast. We want to find out where populations of this species can be found.

King ragworm have an important role in the marine ecosystem as prey for wildfowl, waders, and flatfish. They act as drivers and regulators of benthic diversity through the over-turning of sediment, the circulation of nutrients, and interactions with other species. They are also highly prized as bait for sea angling.

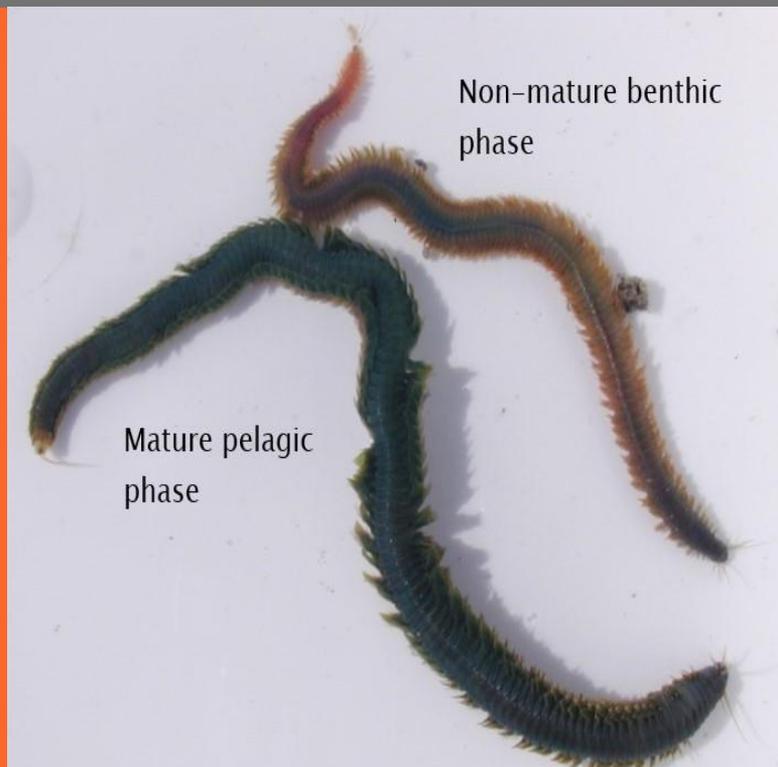


How you can help

We currently have limited knowledge about where this species is found and where their spawning grounds could be.

In their benthic phase, king ragworm move about on the sea floor during the flood (high) tide but burrow in the sediment during the ebb (low) tide.

Once ready to reproduce (mature phase), they go through a body change where their parapodia (feet-like appendages) get much larger. This allows them to swim to their spawning grounds.



This means a king ragworm can look different depending on when you see one.

This is where local knowledge and citizen scientists can help. You can contribute to these efforts through

1) A casual sighting of a king ragworm in the water column or washed up on the strand line

or

2) A deliberate search of what's in the sediment at a shore near you. Details on where to look and what to look out for below.

Get in touch



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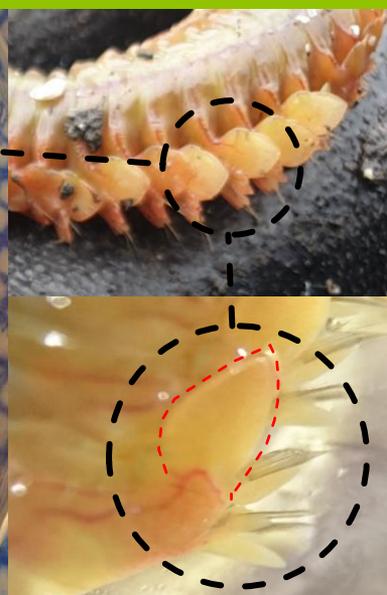


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Hediste diversicolour, Image CC BY-NC-SA 4.0 : Eric Kristensen

Species ID



Harbour ragworm, *Hediste diversicolour* (above)

Length: Up to 120 mm
Colour: Green during spawning but usually light brown to red/orange with a red dorsal blood vessel
Body: Soft and ovoid (egg-like).

Often confused with small king ragworm. Photo Identification of king ragworm difficult when <100 mm in length.

Harbour ragworm are freshwater tolerant (euryhaline), a competitor, and prey of king ragworm so is not usually found in the same areas.

King ragworm, *Alitta virens* (above)

When king ragworm are found in the sediment, they can appear as images above.

- Length: Up to 1 m but usually up to 400 mm
- Colour: Mostly green/brown with iridescent blue/purple patches. Orange/yellow parapodia (highlighted with dashed-line circles)
- Body: Rigid when disturbed, cylindrical, and large (may be the width of a finger)
- Habitat: lower shore and shallow water, occupies burrow in black muddy sand or gravel/shale. Can often be found in or nearby mussel and/or cockle shell beds.

Dorsal (upper) surface of parapodia is large and leaf-like (Highlighted in red dashed-line).



NUI Galway
OÉ Gaillimh



Ryan
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IRISH RESEARCH COUNCIL
An Chomhairle um Thaighde in Éirinn

For a deliberate search

1. Go to a shoreline where you think king ragworm may be hiding.
2. Turn-over the sediment (fork length deep).
3. Break up the sediment you dug and count the number of king ragworm (be careful and try not to harm the animals you find).
4. Take several photos of the complete animal and close-ups of its mid-section (side-view) so we can positively ID the species by its parapodia. Remember detail is key so the sharper the image, the better.
5. If none are found, try searching different sediment types.
6. Return any animals to the hole, back-fill and level any sediment you have dug to minimize disturbance of the habitat.
7. Repeat several times in different areas of the shoreline.

8. Make a note of:

- How many holes you dug at a single location and estimated king ragworm per hole.
- Your search area (in metres).
- The sediment types where you found king ragworm.
- Your location or drop a pin on google maps.

9. Complete the online recording form.

10. Share the sighting on our Twitter or Instagram page @kingsearchbio if you wish.

For a casual sighting

1. Take as many photos as you can and try to get a side-view of the animal's mid-section if possible. This will help with a positive ID.
2. Remember detail is key if you can get it.
3. Make a mental note of your location or drop a pin on google maps.
4. Complete the online recording form.
5. Share the sighting on our Twitter or Instagram page @kingsearchbio if you wish.



Example notes for a search

Date:	Location:
Samples (holes dug)	4
Worms/fork	0-2
Search area	10 m x 10 m
Sediment type	Black muddy sand

Don't forget

- Tides and weather forecast ✓
- A fully charged smartphone ✓
- Appropriate clothing ✓
- A garden fork ✓
- A pair of gloves ✓

BE SAFE!

112/999 for coastguard



Questions?

Q: I can't find the tide for my exact location?

A: Ireland's tide stations are too spread out for precise information but the closest tides are fine. Make allowances for inaccuracies from local conditions. [Tides Near Me](#) and the [Marine Institute](#) give the most accurate information available.

Q: What if I haven't got a garden fork to go for a dig?

A: The items mentioned are essential unfortunately, but you can still contribute by making a casual sighting. You could also try borrowing some items off a neighbour or a family member.

Q: What if I find an animal that looks similar to a king ragworm but not exactly?

A: Make a recording regardless. If it's not a king ragworm we can still try to identify it and possibly add it to another dataset with the [National Biodiversity Data Centre](#).

Q: I don't know where to look or where to start?

A: Ask around, people in your local area might know if any have ever been found. After that, it's an educated guess. Look for areas where currents pass through and dry up/get very shallow at low tides. Google maps is a good starting point for potential search areas, but sediments shift, and the area may have changed since. They are usually not found in very sandy areas or places that get battered by waves.

Q: Do I have to fill in all the information if I go for a dig but only find one?

A: No, but please let us know that you completed a deliberate search. This tells us that a population is likely found there or nearby. We just can't estimate the size or health of the population. You can skip all the other information e.g., search area etc.

Q: What if I do find a king ragworm population, do I stay in the same spot for repeated digs?

A: Do a couple in that exact spot and then move further out to see how widespread the population is.

Where to look?

King ragworm are usually found in muddy sand at the outer reaches of estuaries where it is most saline but also in some bays and harbours.

Look for areas where king ragworm are protected from the full force of the ocean but where food will be brought in by the tide. They will never be found in areas the tide doesn't reach. While they can survive out of water for extended periods, they are usually found in areas that are only revealed at low or spring (lowest) tides. The tide and other currents supply the food/nutrients that allows their prey to survive/grow. The largest ragworm can often be found in channels where the current of the water is concentrated when flooding/ebbing.

They seem to prefer black muddy sand or gravel/shale which may be hidden just below the seabed. They are also known to be found near mussel and/or cockle beds.



If you would like to do a search but there are some things you are unsure of, reach out to us. We would be happy to assist in any way we can.