**What do you do if you suspect an outbreak of crayfish plague or find non-native crayfish?**

Any sightings of large numbers of dead white-clawed crayfish (especially upside down animals on the river bed) or any suspicion of an outbreak of crayfish plague (crayfish acting lethargic/easily visible during daylight) should be reported to Biodiversity Ireland via <https://records.biodiversityireland.ie/record/invasives>, as should any suspected sightings of non-native crayfish. This webpage: <http://www.biodiversityireland.ie/projects/invasive-species/crayfish-plague/> provides information on the clean, check and dry biosecurity protocol and information on identifying non-native crayfish species, along with regular updates on the status of crayfish plague in Ireland, so is worth checking on a regular basis.

If you are asked to collect a sample of crayfish for testing by the Marine Institute, please refer to the protocol detailed below:

**Protocol for collecting samples for sending to the Marine Institute:**

**Notification of collection of samples**

In the event that a crayfish kill is observed by IFI / NPWS staff or reported through other agencies, private consultants, or a member of the public, samples should be collected as soon as possible and sent directly to the Marine Institute. Please notify the Marine Institute as soon as samples have been collected.

**Crayfish Sample Collection Form**

In the event that samples are collected and shipped to Marine Institute, a crayfish sample collection form should be completed and returned with the sample. A copy of the form is included in Appendix I.

**Selection of individuals**

In the case of a suspected outbreak of crayfish plague in a population of highly susceptible crayfish species, the batch of crayfish selected for investigation for the presence of crayfish plague (*A. astaci)* should ideally consist of:

**a)** live crayfish showing signs of disease,

**b)** live crayfish appearing to be still healthy, and,

**c)** dead crayfish that may also be suitable, although this will depend on their condition.

Ideally a sample of 30 specimens should be collected comprising live and dead crayfish, where possible. Live crayfish should be transported using polystyrene containers equipped with small holes to allow aeration, or an equivalent container. The temperature in the container should not exceed 16°C. The container should provide insulation against major temperature differences outside the container.

In periods of hot weather, freezer packs should be used to avoid temperatures deleterious to the animals. These can be attached at the inside bottom of the transport container. The crayfish must however be protected from direct contact with freezer packs. This can be achieved using, for instance, cardboard or a several layers of newspaper.

Crayfish should be transported in a moist atmosphere, for example using moistened wood shavings/wood wool, newspaper or grass/hay. Unless transport water is sufficiently oxygenated, live crayfish should not be transported in water, as they may suffocate from lack of oxygen. The time between sampling of live animals and delivery to the investigating laboratory should not exceed 24 hours.

Should only dead animals be found at the site of a suspected outbreak, or if, for practical reasons, transport of recently dead or moribund crayfish cannot be arranged quickly, these might still be suitable for diagnosis. Depending on the condition they are in, they can either be:

**a)** transported chilled (if they appear to have died only very recently) or frozen prior to transportation, or,

**b)** placed in non-methylated ethanol (minimum concentration 70%). The crayfish: ethanol ratio should ideally be 1:10 (1-part crayfish, 10-parts ethanol). Fixation of tissue can however affect test sensitivity.

Fresh or frozen samples should be shipped in a polystyrene box with ice packs to ensure they arrive in good condition. Animals showing advanced decay are unlikely to give a reliable result, however, if no other animals are available, these might still be suitable for testing.

**Marine Institute Contact details**

Fiona Swords

Fish Health Unit

Marine Institute

Rinville

Oranmore

Co. Galway

Tel: **087 6073431** Email: [fiona.swords@marine.ie](mailto:fiona.swords@marine.ie)

If Fiona Swords is out of the office, please contact the Marine Institute’s main reception on (091) 387200 so you may be directed to other personnel in the Fish Health Unit.

**Appendix I: Crayfish sample Collection form**

Date mortality first observed/reported: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Coordinates: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date sent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of sender: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contact details: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Extent of observed Kill (length of affected stretch, no of dead animals observed etc.): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Sample Details**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Date of collection | live / dead | Frozen / fresh | Number | Site of collection | Condition when sampled |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
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**Additional Information**

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