

## **Health and Safety**

Safety is paramount, do not enter the water unless you are sure it is safe to do so. Always work in pairs and always have at least one person on the bank with a mobile phone. Remember that use of the Foss Barrier can result in normal water levels with high flow rates as well as high water levels with low or no flow. Please keep in mind the risk of Weil's disease, and wear gloves if necessary. Use waders (these can be provided) and a stout pole to help with balance.

Please remember, do not survey if the water level is unsafe, or there seems to be any other risk present.

## **Biosecurity**

If you are intending to go into rivers other than the Foss, please ensure your waders/wellies have been thoroughly cleaned and, preferably, disinfected, to avoid any cross-contamination.

## **Collecting the Sample**

We use a 3-minute kick sample accompanied by a 1-minute manual search.

1. Identify the different habitats within the sampling area. These might include fast moving riffles, slow water, shallow still water and weed.
2. Split the sampling time proportionally between the habitats. For example, if a riffle occupies half of the sampling site, spend 90 seconds sampling the riffle. Three minutes is equal to 180 seconds.
3. Sample the habitats working across the river and from downstream to upstream. Rest the net on the riverbed, so the mouth of the net faces upstream. Vigorously disturb the area immediately upstream with your foot (this is the 'kick sample'). The invertebrates are carried into the net by the current. For weed areas, sweep the net upstream through the weed-bed.
4. The complete 3-minute sample may be taken at once, or it may be decanted from the net, into a bucket containing river water, in between sampling each habitat.
5. Carry out an additional 1-minute manual search of large liftable stones. Wipe all surfaces of the stone with your hand in front of the net. If you do not find any suitable stones within one minute, discontinue the search.

## **Washing the Sample**

To make the counting process as easy as possible, it's important to remove as much unwanted debris as possible. This includes silt, weed, gravel, stones and leaves. Try and remove this content without losing any important invertebrates.

6. Tip the whole sample into a large bucket of river water. Strain the water back through the net whilst agitating the stones and gravel to dislodge invertebrates, leaving the unwanted stones and gravel in bucket.
7. Refill the bucket with fresh river water and repeat the process until all invertebrates appear to be dislodged and are now in the net.
8. Check the stones and gravel for any remaining invertebrates, especially cased caddisflies. Before discarding the stones examine them for attached invertebrates (discard any empty caddis cases).
9. To remove most of the unwanted fine silt through the net, hold it into the current and move the material around in the net.
10. Return the remaining sample from the net into the bucket, half filled with clean water, for sorting.

## **Sorting the Sample**

11. Take small 'sub samples' from the bucket and place into a shallow white tray, half filled with clean water.
12. Using a large pipette transfer the invertebrates into a segmented tray ready for identifying and counting. It may be useful to count and take tallies as you go along. Sorting the sample and estimating the numbers of each group becomes quicker with experience.