



### Survey Instructions

#### Getting Started

Register the 1km OS grid square/s you would like to survey using the interactive map. You can get an aerial view of your square/s and the surrounding area using [Grid Reference Finder](#) or [Bing Maps](#).

You can subscribe to as many 1km OS grid squares as you like. If you already know where you would like to survey and it is not on the map, please contact [Andrea](#), the Project Coordinator.

Once you have selected your squares you will be automatically signed up to the Northern Damselfly Survey mailing list for information and updates related to this project.

#### When to visit

Recording of adults should be conducted between 1st June and 31st July (the main flight period of Northern Damselflies is June and July). Searches for larvae can be conducted at anytime, but it is best to avoid the winter months.

Try to conduct at least **2 visits per site** and try to space them out within this date range, preferably **one visit in June and one in July** for adults. Searches for larvae can be conducted during the same visit if wished. More visits for larvae can be undertaken outside of these months. Suggested visits would be once during the Autumn and once during the Spring.

#### Weather

Check the weather forecast before going out. Searches for adults are best conducted on warm, sunny, dry and calm days. Adults may not be very active early in the morning or during the hottest part of the day, so mid-morning is usually a good time to start.

## Conducting your survey

Use the **Recording Form** to help you record your findings.

You have three options when it comes to conducting this survey:

1. Simply note whether Northern Damselflies (adults or larvae) are present or absent within your square.
2. Record the number of Northern Damselflies within your square.
3. For the more experienced surveyor, record the number of Northern Damselflies within your square along with age (adult or larvae), sex (male or female) and breeding behaviour (copulating or egg laying). If you are experienced enough to identify Northern Damselfly exuvia, please also record this.

You can also record other species of Dragonflies if you wish.

If large numbers are present, and it's difficult to provide a precise number, give an estimate.

Survey all areas of suitable habitat within your square that you can access safely. We would also ask you to give us your opinion of the habitat encountered. We would ask you to judge whether the habitat is 1. Good condition 2. Needs some management or 3. Poor condition.

### Method

#### Option 1—confirm presence or absence

Walk slowly along the edge of your pond, lochan or bog pools and look out for adults flying around or perched on edge vegetation. Damselflies are weak fliers so they will generally fly close and low to emergent or marginal vegetation. If you have walked the perimeter of the pond and not seen any Northern Damselflies extend your search area and step back from the water's edge and look in the surrounding habitat. Once you have had a good search note down the details of your survey and whether you found any Northern Damselflies or not.

#### Option 2— record presence and numbers

Follow the same method as option 1 above, but note down the numbers of adults seen.

#### Option 3— record detailed information to confirm breeding habitat

Follow the same method as options 1 & 2 above, but note down more information. If looking for larvae you will need to visit with appropriate pond dipping equipment, but only do this if safe to do so.

If a waterbody only partly sits in your square, please survey all of it if you can. Use your common sense to judge what is best.

### Habitat survey

We would appreciate your judgement on the state of the habitat within your survey square. If a waterbody is no longer present for example we would like to know this. All of the squares should contain some suitable habitat based on our historic knowledge, so if this habitat no longer exists this is important information for us to have.

## **Habitat Assessment**

Based on the information below, we would like you to record whether you consider the habitat to be a grade 1, 2 or 3 - i.e.:

1. Good condition
2. Needs some management
3. Bad condition

The Northern damselfly does not seem to have a preference for size of waterbody as it has been found in small pools, lochans as well as larger lochs. There needs to be emergent vegetation present as larvae tend to cling to pondweed and Water Horsetail. They seem to prefer a sheltered site with stands of high emergent vegetation, and they have a strong association with long established pine or birch woodlands. We are still learning about the habitat preferences and ecology of this rare species, so learning more about the habitat and the management of the sites where they are found is really valuable.

### **Recommended Equipment:**

- Recording forms or a Smartphone with iRecord loaded;
- Pen and paper for other notes;
- Binoculars;
- ID sheets or books;
- GPS or GPS app (to assist with making sure you stay within the designated grid square);
- Camera or Smartphone with camera (photos can assist us in verifying your sightings); and
- Pond dipping equipment if looking for larvae i.e. net or colander, tray or other receptacle, a plastic spoon, a hand lens or magnified viewing bug pot.

Please ask if you need more guidance about pond dipping methods.

### **Health and Safety**

Please wear appropriate outdoor clothing and protection from the sun and biting insects. Be careful around the edge of waterbodies and watercourses. If you are visiting a remote site please let someone know where you are going and when you should be back.