



## Red-necked phalarope *Phalaropus lobatus*

### Status

Red listed: HD, BR  
Non-SPEC  
Schedule 1 of WCA 1981  
Annex I of EC Wild Birds Directive

### National monitoring

Rare Breeding Birds Panel.

### Population and distribution

Red-necked phalaropes are a rare breeding summer visitor to Britain and Ireland. They occur in the far north and west, especially Shetland, Orkney, the Outer Hebrides and County Mayo. The breeding population has declined over a long period, mostly as a consequence of habitat loss. Conservation measures aimed at halting this habitat loss are proving successful (88–91 *Atlas*). There are currently about 36 males in Britain (*Population Estimates*).

### Ecology

Red-necked phalaropes breed at sites with open water, emergent swamp, wet and dry mire and old peat workings. Birds arrive in May and mate during late May and early June. A clutch of 3–7 eggs is laid between early June and early July; there is one brood. Incubation lasts 18 days and is by the male alone, with hatching in late June to late July. The chicks are quickly able to fend for themselves, although tended by the male; they fledge between late July and mid-August (*Red Data Birds*).

### Breeding season survey – population

This method is based on research undertaken on Fetlar by O'Brien (in prep).

#### Information required

- average number of males
- maps showing sightings of males.

#### Number and timing of visits

At least twice a week, but more frequently if possible; 20 June to 20 July.

#### Time of day

Any time of day.

#### Weather constraints

Due to the disturbance aspect of the method, do not survey in heavy rain or very cold weather.

### **Sites/areas to visit**

Areas with a mixture of shallow pools and emergent vegetation with wet marsh.

### **Equipment**

- chest waders
- 1:10,000 detailed maps of mires
- Schedule 1 licence.

### **Safety reminders**

Tell someone where you are going and when you are due back.

### **Disturbance**

The method is based on disturbing males, either while incubating, or with newly hatched young, so do not stay in one spot for more than about 10 minutes (the typical period for which a male usually leaves the nest to feed) and minimise disturbance to other breeding species nearby, eg terns and skuas.

### **Method**

On Fetlar, paired birds frequently appear up to 2 km from where the male subsequently breeds. The Fetlar mires, which are 2–5 ha in size, each take 1–1.5 hrs to survey on each visit, depending on the number of males present.

If possible, scan the site from a high vantage point to gain an idea of where most of the visible birds are. Plan a survey route to include the perimeter of all areas of wet marsh. Where the site is large, it may be necessary to walk through the centre of the marsh; waders will be necessary. All sightings of males should be marked on detailed maps of the site, along with the apparent stage of the breeding cycle which the male has reached. This can be determined by the male's behaviour: if he is paired then laying will have started but the clutch will still be incomplete; if he is solitary, sneaky and aggressive toward females then he is likely to be incubating a clutch; if he is flying around and calling he is looking after chicks. Record all males. There is no need to record females; by the end of the survey period most females have left the breeding mires anyway.

To calculate the population size, sum the total number of breeding males recorded across all visits and divide by the number of visits. This provides an estimate of the number of breeding pairs.

## **Breeding season survey – breeding success**

### **Information required**

- total number of males acting as if with young.

### **Number and timing of visits**

As for the population survey (above), a minimum of every three days. Check sites from about 18 June to the end of August.

### **Time of day, Weather constraints, Safety reminders**

As for the population survey (above).

**Sites/areas to visit**

As above, males with young are more likely to be in the very wet areas.

**Disturbance**

As for the population survey, although only males will be with young.

**Methods**

As for the population survey. The first males acting as if with young normally appear about 20 June. Males tend to fly from one pool to another, calling, or continually fly overhead. Often two or three other males will join in. The level of response to disturbance varies with the age of chicks and number of males present, although it is usually greatest 4–5 days after chicks have left the nest. As the chicks get older, so the male's response becomes less intense, covers a wider area and is less frequent. Males continue to respond to disturbance for up to 20 days after hatching (contrary to previously quoted Finnish studies).

It is useful to attempt to recognise males individually at this stage. Plumage variation combined with the onset of moult means that this is often relatively straightforward. Record the approximate location of displaying males on a map.

A combination of mapping locations of displaying males and individually identifying them through plumage variation builds up a picture of the total number of males that have managed to hatch successfully at least one egg from a clutch.

**Breeding season survey – productivity**

Although the method outlined above gives a crude measure of breeding success, it does not quantify the total productivity (ie number of chicks fledged) of the site. A method to do this is outlined below.

**Information required**

- total number of fledged juveniles.

**Number and timing of visits**

Every three days, 15 July to 25 August. Do not visit the site any more or less frequently, otherwise the final estimate of the total number of juveniles fledged from that site will not be reliable.

**Time of day, Weather constraints, Sites/areas to visit, Safety Reminders**

As for the population survey (above).

**Disturbance**

The method is based on disturbing fledged juveniles. Consequently, do not to stay in one spot for longer than is absolutely necessary.

**Methods**

The first fledged juveniles are seen from about 21 days after the first eggs hatch. Juveniles hide in emergent vegetation around the edge of open water, so they tend to be more secretive than males with young and require considerably more effort to locate. Plan a route that ensures

coverage of all areas of open water. Follow the same route on each visit, as this minimises damage to the vegetation and provides a corridor which fledged juveniles use, thus creating additional good habitat. Map the location of fledged juveniles, as this gives a good idea of preferred areas within the mires and minimises the chances of double-counting.

From detailed observations of individually colour-ringed birds on Fetlar, it is known that fledged juveniles remain on site for about six days and that there is about a 50% chance of seeing a fledged juvenile on any one visit. Thus, if a site is visited once every three days, the total number of fledglings recorded on the site (ie the sum of all individual visit counts) is the best estimate of the total number of juveniles fledged.

Information on fledged juveniles seen on other areas may also be of use. During the work undertaken on Fetlar, very few fledged juveniles were seen away from the breeding mires, though this was not always the case.

Contributed by Mark O'Brien

### **Reference**

O'Brien, M (in prep) *Ecology and Habitat Requirements of Red-necked Phalaropes on Fetlar*. RSPB unpubl.