



Water rail

Rallus aquaticus

Status

Amber listed: BDM
Non-SPEC
Annex II/2 of EC Wild Birds Directive

National monitoring

Breeding surveys: Wales 1996.
WeBS.

Population and distribution

Water rails breed throughout the UK but accurate censusing of this elusive species is difficult. In 1968–72, the UK breeding population was estimated at 2,000–4,000 pairs (68–72 *Atlas*), and in 1988–91 it was estimated at 1,300–2,400 pairs (88–91 *Atlas*). However, the difference in mean population size is more likely to be related to difficulties in censusing this species than to a real decline in the population. There is a need for more accurate monitoring of this species to ascertain whether numbers are in decline.

Ecology

Water rails breed in areas that include tall emergent vegetation, normally reeds, sedges or rushes. In the UK, incubation starts in the last week of March (*BWP*). This will be later in Scotland, but it is not known how laying dates vary north to south. In winter, Britain and Ireland receive birds from north and east Europe (Flegg and Glue 1973). Migrants arrive from September, set up winter territories and some may still be present in the following March (*BWP*). The 'sharming' call given by the male and female is likened to the sound of piglets squealing. The male and female of a pair regularly answer one another with this call, alternating in a duet, both at close range or over considerable distances (*BWP*).

Breeding season survey – population

The method given here is based on that devised by Moyes and Robertson (1991).

Information required

- minimum number of breeding pairs
- a map showing the boundary of the survey area and location of calling birds.

Number and timing of visits

One visit, late March (southern England) to late April (northern Scotland).

Time of day

Early morning, after sunrise.

Weather constraints

Avoid days with winds stronger than Beaufort force 3.

Sites/areas to visit

Sites with standing or slow running fresh water, some flat muddy ground and dense tall aquatic vegetation, which is not too prone to flooding.

Equipment

Essential

- 1:10,000 OS map
- A4 photocopied map of survey area for use in the field
- A4 photocopied map of survey area for compiling final visit map
- compass
- high-quality continuous loop-tape recording of a pair of water rails giving territorial calls
- moderately powerful portable cassette player.

Useful

- 1:25,000 OS map, for locating rights of way
- waders, for walking through wetter areas
- long stick
- boat, if water too deep to walk through.

Safety reminders

Always inform someone where you are working and what time you expect to return. Take extra care when working close to water; if any boat trips are necessary, wear life-jackets.

Disturbance

Use existing paths, banks or causeways (if on foot) or dykes (if travelling by boat) as much as possible. Avoid areas containing rare breeding birds such as bitterns and marsh harriers (access will probably be restricted anyway). The use of playback for this survey method is purely to elicit a vocal response from birds, and not to lure birds from one area to another. Follow the instructions for playback carefully.

Methods

At least two people are required for this survey method. Complete the survey in the shortest possible time to avoid double-counting birds. To ensure quicker coverage for large areas that require more than a few days surveying, you may need more than one team of people. In this situation, make sure that all teams use similar equipment and work in similar weather conditions.

Map the site and split large areas into manageable sections of up to about 40 ha each. Familiarise yourself with the site beforehand. Work out the best route through each section or site which will take you to within 200 m of all available habitat within the site.

Water rails respond to the 'sharming' call made by both male and female. Stand about 20 m apart to assess more accurately the location of any responding birds. One person should hold the playback equipment and both should have maps. Play the tape for 60 seconds, then switch it off. Remain stationary and quiet, listening for 60 seconds. If there is no response, switch the tape on for a further 30 seconds. Stand still and listen for 30 seconds. If there is still no response, assume that there are no water rails present in the area, and move on 100 m as quickly as you

can and repeat the playback procedure. Moving quickly is important to prevent birds following the tape or being counted more than once.

Both observers should mark on their map the location of any birds that respond, distinguishing between pairs and single birds. Established pairs will generally respond more readily and move quickly towards each other while calling. When the pair meet they will **call** together and continue to do so for some time after the observer has moved **away**. Single birds are more **reluctant** to respond, and where there is a response it will be brief. If undecided, make extra notes cross-referenced with mapped symbols to resolve later. Combine the maps from both observers into a final visit map as soon as each survey section or site is finished. Draw putative boundaries around registrations thought to be from the same pair.

Estimate separately the number of breeding water rail pairs and the number of single birds. If there is any doubt about the number of pairs responding to the tape, always report the lowest figure – double-counting of the same pair is more likely than pairs being overlooked.

References

- Flegg, J J, Flegg, M and Glue, D E (1973) A water rail study. *Bird Study* 20: 69–79.
- Moyes, S B and Robertson, D (1991) *A Census of Breeding Water Rails in the Tay Reedbed and the Effects of Reedbed Management on Breeding Densities, 1991*. Rep. from Tay Ringing Group to Nature Conservancy Council for Scotland, South East Region.

