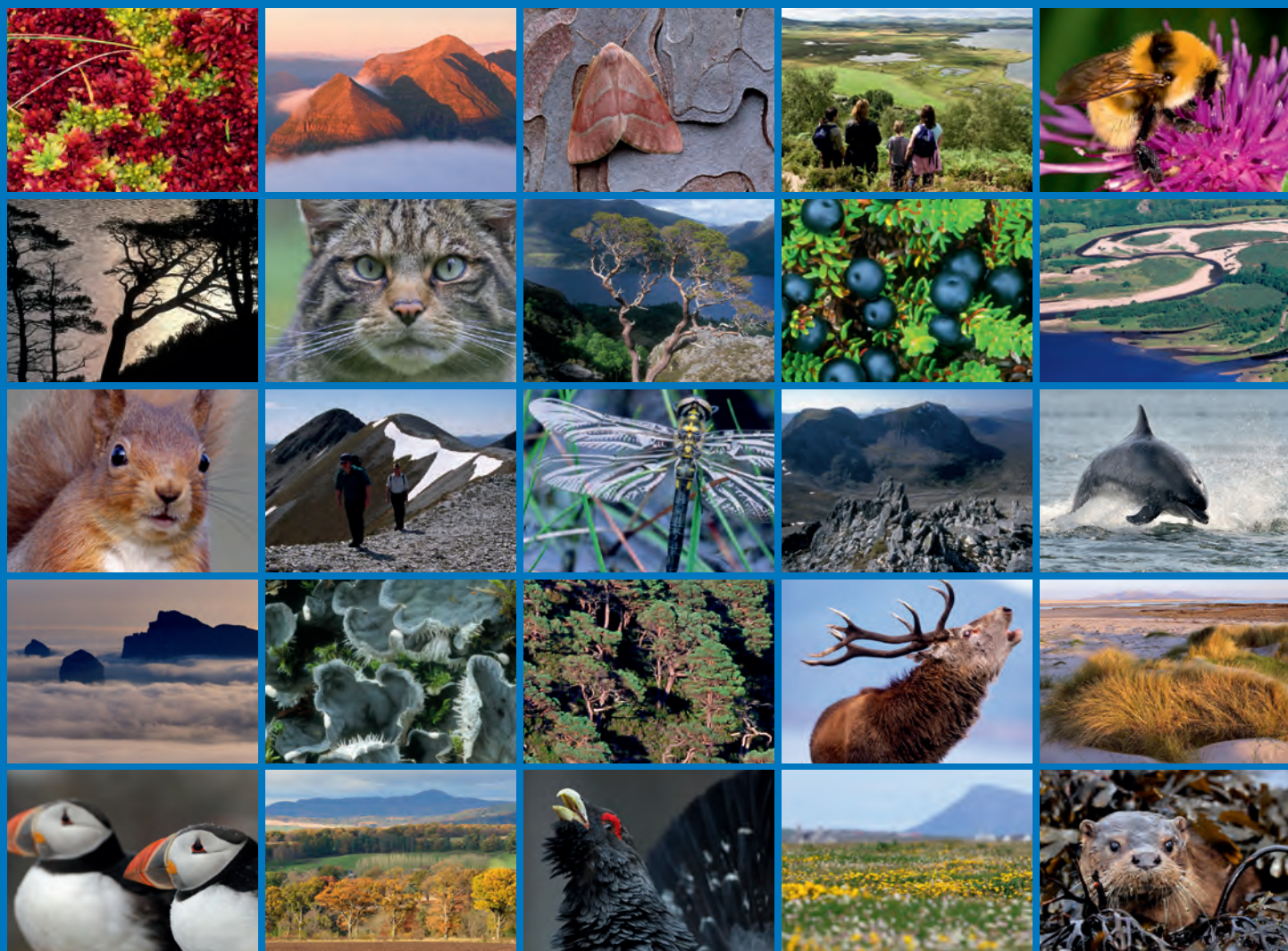


Site Condition Monitoring for dragonflies (Odonata) at Claish Moss SSSI





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COMMISSIONED REPORT

Commissioned Report No. 707

Site Condition Monitoring for dragonflies (Odonata) at Claish Moss SSSI

For further information on this report please contact:

Athayde Tonhasca
Scottish Natural Heritage
Battleby
PERTH
PH1 3EW
Telephone: 01738 458671
E-mail: athayde.tonhasca@snh.gov.uk

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COMMISSIONED REPORT

Summary

Site Condition Monitoring for dragonflies (Odonata) at Claish Moss SSSI

Commissioned Report No. 707

Contractor: P. Batty

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Background

Site Condition Monitoring is a six year rolling programme of assessment of the state of notified features on Sites of Special Scientific Interest (SSSI). Two visits were made in 2013 (25 June and 5 August) to assess the condition of dragonflies and damselflies at Claish Moss SSSI, which has a notable assemblage (nine species) of Odonata.

Main findings

Ten species of dragonflies were found breeding and a cast skin of the rare northern emerald (*Somatochlora artica*) was seen. There was suitable habitat for the azure hawkler (*Aeshna caerulea*), although this species was not recorded.

The site was found to be in favourable condition for Odonata, and the current management should be maintained.

It will be helpful to contact surrounding landowners to ensure that some sheltered feeding areas for the northern emerald remain in future management plans for the surrounding forestry plantations.

For further information on this project contact:

Athayde Tonhasca, Scottish Natural Heritage, Battleby, Perth, PH1 3EW.

Tel: 01738 458671 or athayde.tonhasca@snh.gov.uk

For further information on the SNH Research & Technical Support Programme contact:

Knowledge & Information Unit, Scottish Natural Heritage, Great Glen House, Inverness, IV3 8NW.

Tel: 01463 725000 or research@snh.gov.uk

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1. INTRODUCTION

Claish Moss Site of Special Scientific Interest (SSSI) is notable for its nationally important assemblage of dragonfly species. Nine species have been recorded, including the black darter (*Sympetrum danae*), the blue-tailed damselfly (*Ischnura elegans*) and the common hawker (*Aeshna juncea*).

The site is also notable for its nationally important assemblage of dragonfly species which includes black darter *Sympetrum danae*, blue-tailed damselfly *Ischnura elegans* and common hawker *Aeshna juncea*.

Claish Moss is located on the southwest bank of Loch Shiel, near the village of Acharacle. It is one of the finest examples of a patterned raised bog system in Britain. Streams flow from the slopes of Beinn Resipol into Loch Shiel, and divide the site into three distinct raised bog units.

The mire units have thousands of inter-connecting pools of various sizes and depths (Annex 1. Vegetation in the pools includes bogbean (*Menyanthes trifoliata*), cotton grass (*Eriophorum angustifolium*), bog pond weed (*Potamogeton polygonifolius*), *Carex limosa* and *C. nigra*. Fourteen *Sphagnum* species have been recorded.

2. METHODS

Suitable sampling points (near emergent and floating vegetation and potential basking or perching sites for adults) were identified at the edge of the water body. Emergent and surrounding vegetation was searched for 5-10 min for larvae and exuviae, and flying adults were recorded.

Larval sampling was undertaken by “guddling”, which involves using a colander as a net and sweeping it through emergent vegetation along the pool edge or along the bottom. This is a tried and trusted larval sampling technique and the most useful when dealing with pools with a great deal of sphagnum, which tends to choke pond nets. In deeper, more open water a pond net was used in a similar manner.

For adult sampling, the minimum weather conditions required were temperatures over 13°C with up to 40% cloud cover or temperatures above 17°C (northern conditions for the Pollard Walk butterfly transects).

At each sampling point, the following methodology was used:

1. Observe for any adult activity.
2. Search the edges of the pool and any marginal vegetation for signs of emerging adults or exuviae, taking care to avoid damaging them.
3. Sample for larvae with at least 20 dips.
4. Record all Odonata species seen.

Visits were made on 25 June and 5 August 2013. Weather conditions were marginal for sampling, 14- 18°C with brief glimpses of the sun on both occasions. However, water temperatures stayed around 20°C, and larvae were plentiful.

All three raised mire units were visited and hundreds of pools sampled. A route was taken from the main access point in the west near Dig a Bhogha to pools at NM712067512 and then to a larger peaty lochan at NM71306791. Afterwards the area was crossed from NM71506780 to NM71646782, then to Dig an Sgulain at NM71966774.

Additionally, samples were taken at pools on the middle mire east of the burn at NM72056780 and at pools and runnels north of Tom nan Uam at NM732679 and NM7333967596. The east mire system was accessed from Loch Shiel by boat.

3. RESULTS

Over a hundred bog pools were sampled. Ten species of dragonflies were seen, all with evidence of breeding; most were recorded as larvae (Annex 2 Tables 1 & 2).

The three pools systems of Claish Moss were similar, and most species were present throughout.

Larvae of the four-spotted chaser (*Libellula quadrimaculata*) were most numerous, with hundreds seen. The black darter (*Sympetrum danae*) was also common. Only a few common darters (*Sympetrum striolatum*) were seen on Dig an Sgulain; this species is likely to be more widespread in the larger pools. Larvae of the common hawkler (*Aeshna juncea*) were recorded in only two pools, however this bog pool species is likely to be more common because it flies later in the season. The golden-ringed dragonfly (*Cordulegaster boltonii*) and the large red damselfly (*Pyrrosoma nymphula*) were breeding in the two burns surveyed. The azure hawkler (*Aeshna caerulea*) was not found, though there was suitable breeding habitat. This species has not yet been recorded from the area.

3.1 Northern Emerald dragonfly (*Somatochlora arctica*)

The northern emerald is a nationally scarce species that breeds only in Scotland. It is difficult to find, as it breeds in sphagnum-filled bog pools, runnels and ditches. Adults often feed in the tree canopy.

Fifty adults were reported on the track from NM691659 to NM705670 on August by Carl Chapman (BDS records). It is unusual to see so many northern emerald adults; some may have bred on Claish Moss and were feeding in this nearby woodland. The SSSI itself is fairly exposed, and the surrounding plantations make excellent feeding areas.

A cast skin of the northern emerald was found in a sphagnum-filled runnel at NM7333967596 draining into Allt na Fasaìdh Fearnà burn. The area is sheltered, close to mature forest. Several runnels in this area looked suitable, particularly at NM7334267591 and NM7327767631. It is possible that adults would have been found if there had been more sunlight. There were other possible breeding habitats across the site.

Northern emerald is also breeding in *Sphagnum* filled ditches at Lochan Druim na Luinge mire at NM7401967590. This is in mature forestry managed by the Forestry Commission 800 m to the east of Claish Moss. On 5 August, 20 adults were seen mating and egg-laying.

4. DISCUSSION

Claish Moss raised mire is bisected by burns and has many pools, providing ideal conditions for dragonflies. Ten breeding species were found despite marginal conditions for flight. The addition of the rare northern emerald dragonfly to the species list increases the value of the site, which is in favourable condition.

The site is now surrounded by forestry plantations, which provide shelter and feeding areas for adult dragonflies. These woodlands are also good breeding areas for the northern emerald. Lochan Druim na Luinge mire at NM7401967590, a sheltered boggy clearing with numerous sphagnum filled ditches, is an excellent wetland area. Management should aim to maintain the quality of these wetlands.

The site has numerous bog pool systems, unstable ground and floating sphagnum mire which are difficult and dangerous to cross in places. One can easily become stranded amongst the maze of pools, and often it is necessary to retrace steps to find a new route. On wet weather, access could be very difficult, and this should be taken into consideration on future surveys.

4.1 Recommendations for management

- Maintain current management of the wetlands.
- Continue to monitor the site for dragonflies.
- Discuss with surrounding landowners the possibility of keeping some sheltered feeding areas for northern emerald in future management of the adjacent woodland and wetlands.

ANNEX 1: DRAGONFLY BREEDING HABITAT



Fig 1 Claish Moss SSSI typical pool



Fig 2 Claish Moss access track ditch northern emerald breeding site

ANNEX 2: DRAGONFLY RECORDS FOR CLAISH MOSS SSSI

Table 1. Records at Claish Moss SSSI

| Site Name | Grid Reference | Species | Date | Ad | La | Ex |
|---------------------------------|--------------------------|-------------------------|------------|----|----|----|
| Claish Moss bog pools | NM712067512 | common blue damselfly | 25/06/2013 | B | | |
| | | large red damselfly | 25/06/2013 | | A | |
| | | emerald damselfly | 25/06/2013 | | C | |
| | | four-spotted chaser | 25/06/2013 | | D | |
| | | common hawkker | 25/06/2013 | | A | |
| | | black darter | 25/06/2013 | | A | |
| Claish Moss Lochan | NM71306791 | common blue damselfly | 25/06/2013 | B | | |
| | | emerald damselfly | 25/06/2013 | | C | |
| | | black darter | 25/06/2013 | A | | |
| Claish Moss pool systems | NM71506780 to NM71646782 | large red damselfly | 25/06/2013 | | C | |
| | | emerald damselfly | 25/06/2013 | | D | |
| | | four-spotted chaser | 25/06/2013 | | D | |
| | | common hawkker | 25/06/2013 | | A | |
| | | blue-tailed damselfly | 25/06/2013 | | B | |
| Dig an Sgulain | NM71966774 | golden-ringed dragonfly | 25/06/2013 | | | A |
| | | large red damselfly | 25/06/2013 | B | | |
| Dig an Sgulain east pools | NM72056780 | emerald damselfly | 25/06/2013 | | C | |
| | | four-spotted chaser | 25/06/2013 | | D | |
| | | common darter | 25/06/2013 | | B | |
| | | black darter | 25/06/2013 | | B | |
| Dig an Sgulain west pools | NM71836785 | emerald damselfly | 25/06/2013 | | C | |
| | | four-spotted chaser | 25/06/2013 | | D | |
| | | common hawkker | 25/06/2013 | | B | |
| Claish Moss east pools | NM732679 | black darter | 05/08/2013 | D | C | |
| | | large red damselfly | 05/08/2013 | | B | |
| | | emerald damselfly | 05/08/2013 | D | | |
| | | four-spotted chaser | 05/08/2013 | | D | |
| | | common darter | 05/08/2013 | A | | |
| Claish Moss East runnels | NM7333967596 | northern emerald | 05/08/2013 | | A | |
| Claish Moss East runnels | NM7333967596 | golden-ringed dragonfly | 05/08/2013 | A | | A |

Numbers seen: A = 1, B = 2-5, C = 6-20, D = 21-100 (British Dragonfly Society recording format). Ad: adult, la: larva, ex: exuvia.

Table 2. Records for forestry sites at the edge of Claish Moss

| Site Name | Grid Reference | Species | Date | Ad | Co | Ov | La | Ex |
|--|----------------|-------------------------|------------|----|----|----|----|----|
| Claish Moss access track SW plantation | NM7031167188 | northern emerald | 25/06/2013 | A | | | | |
| | NM7031167188 | common darter | 25/06/2013 | A | | | | |
| | NM7031167188 | four-spotted chaser | 25/06/2013 | C | | | | |
| | NM7022867175 | northern emerald | 25/06/2013 | | | | | A |
| | NM7022867175 | black darter | 25/06/2013 | | | | B | |
| | NM7022867175 | golden-ringed dragonfly | 25/06/2013 | B | | | B | |
| | NM7022867175 | large red damselfly | 25/06/2013 | B | | | | |
| | NM6941866308 | northern emerald | 25/06/2013 | A | | | | |
| Lochan Druim na Luinge mire | NM7393367620 | blue-tailed damselfly | 05/08/2013 | B | | | | |
| | NM7393367620 | emerald damselfly | 05/08/2013 | C | B | | | |
| | NM7393367620 | four-spotted chaser | 05/08/2013 | | | | D | |
| | NM7393367620 | common hawkler | 05/08/2013 | B | | | A | |
| | NM7393367620 | black darter | 05/08/2013 | C | | | | |
| | NM7393367620 | common darter | 05/08/2013 | B | | | | |
| | NM7393367620 | golden-ringed dragonfly | 05/08/2013 | A | | | | |
| | NM7401967590 | northern emerald | 05/08/2013 | 20 | A | A | A | |
| Lochan Druim na Luinge | MN741675 | large red damselfly | 05/08/2013 | | | | B | |
| | MN741675 | blue-tailed damselfly | 05/08/2013 | B | | | C | |
| | MN741675 | black darter | 05/08/2013 | D | | | | |
| | MN741675 | common darter | 05/08/2013 | D | B | B | B | |

Numbers seen: A = 1, B = 2-5, C = 6-20, D = 21-100 (British Dragonfly Society recording format). Ad: adult, co: pair in tandem (copula), ov: female ovipositing, la: larva, ex: exuvia.

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Policy and Advice Directorate, Great Glen House,
Leachkin Road, Inverness IV3 8NW
T: 01463 725000

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