

Spiders on Scottish SSSIs: Site Condition Monitoring 2013-14



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Overview

- Summary of Project
- Sites Relevant to Spiders
- Site Accounts
- Discussion

Report

Cathrine, C., Norris, G., Wiswell, H., Gleed-Owen, C., Wilkinson, G., Willet, J. and Shanks, S. 2015. *Site Condition Monitoring of invertebrate features at 19 designated sites in Scotland. Scottish Natural Heritage Commissioned Report No. 872.* Scottish Natural Heritage, Inverness.

<http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=2365>

Data available at full resolution on NBN Gateway

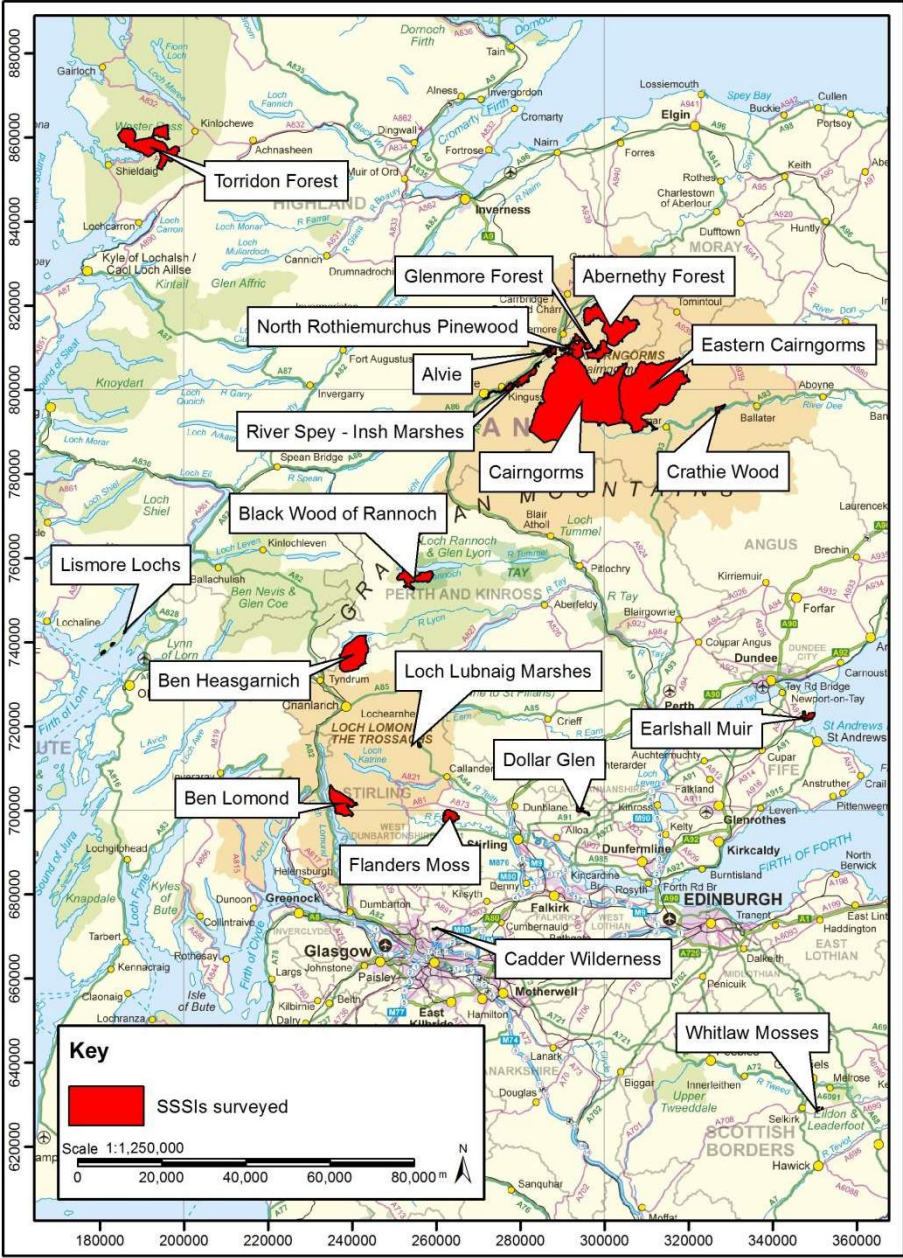
<https://data.nbn.org.uk/Organisations/231>

Summary of Project

- Site Condition Monitoring of invertebrate features at 19 Sites of Special Scientific Interest (SSSI)

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SSSIs Surveyed



Summary of Project

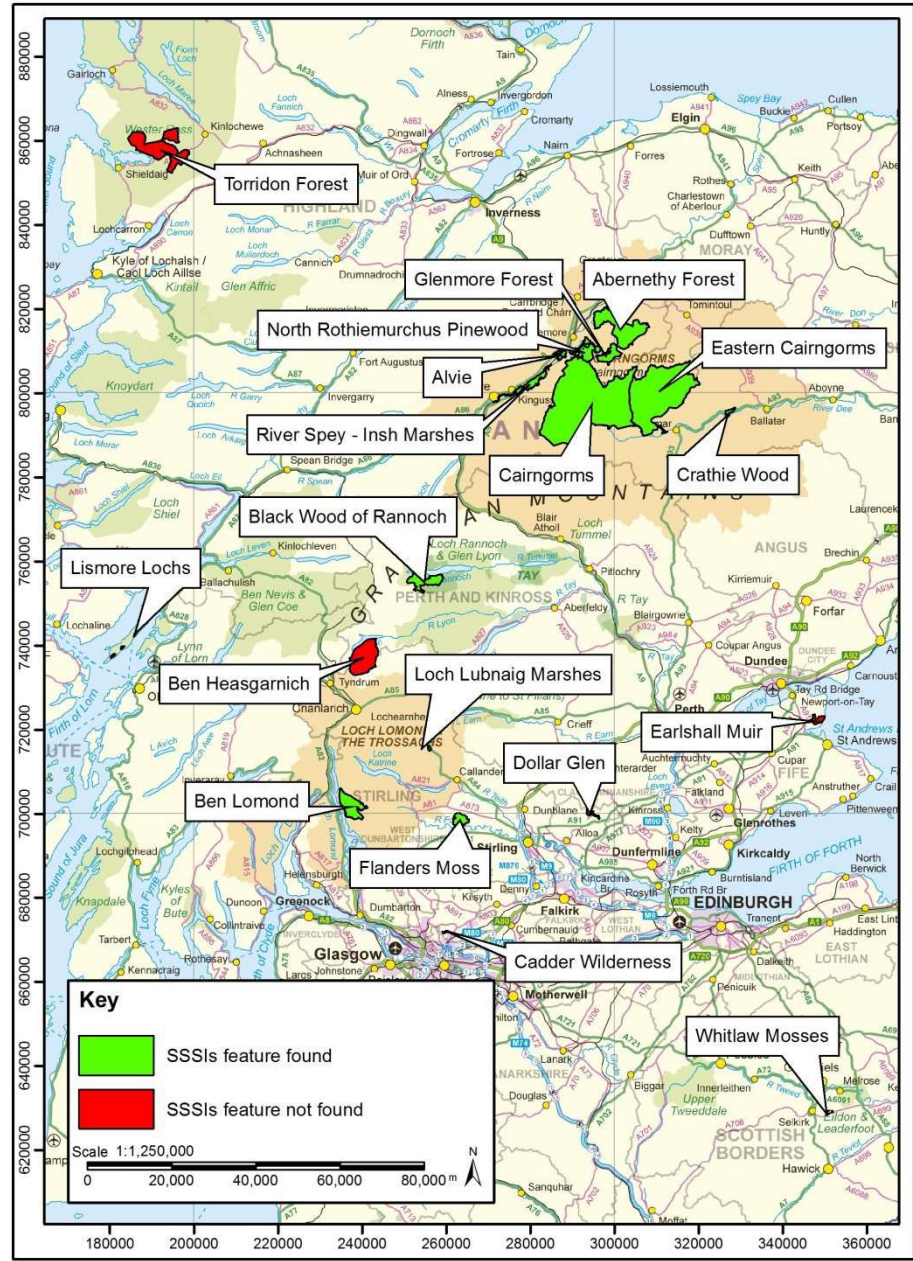
- Site Condition Monitoring of invertebrate features at 19 Sites of Special Scientific Interest (SSSI)
- Features fully or partially re-found at 14 SSSIs

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SSSIs Where Features Were Fully or Partially Re-found



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Summary of Project

- Site Condition Monitoring of invertebrate features at 19 Sites of Special Scientific Interest (SSSI)
- Features fully or partially re-found at 14 SSSIs
- One feature partially destroyed: Earlshall Muir - *Pissodes validirostris* (weevil requiring Scots pine)
- One feature no longer exists as taxonomic revisions have rendered the species invalid: Torridon Forest –
Pachynematus torridonensis = *P. moerens*

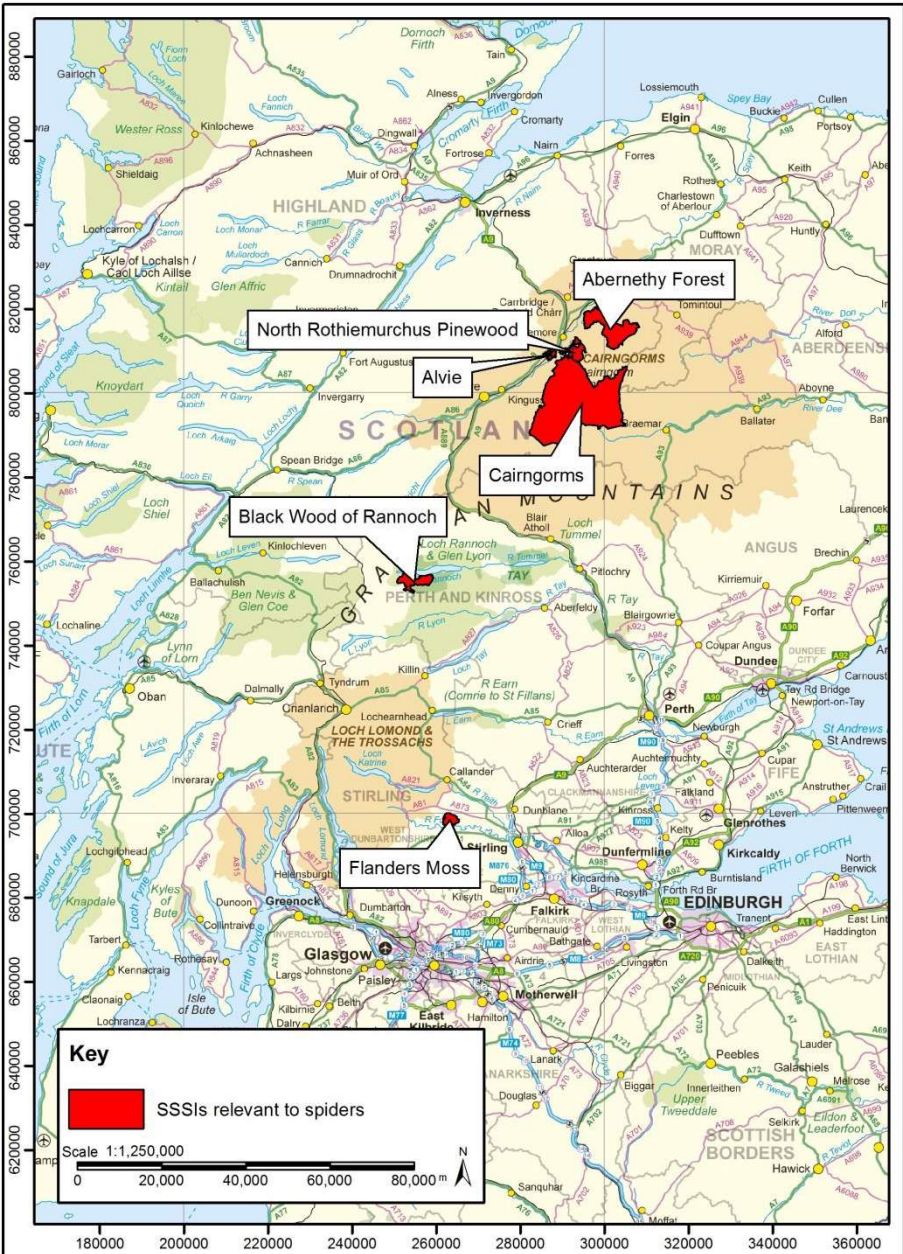
Sites Relevant to Spiders

- Abernethy Forest Araneae
- Black Wood of Rannoch Araneae
- Cairngorms Araneae
- Flanders Moss *Heliophanus dampfi*
- North Rothiemurchus Pinewoods *Clubiona subsultans*
- Alvie Diptera, Coleoptera, Mollusca, Trichoptera

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Sites Relevant to Spiders



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Abernethy Forest

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Abernethy Forest (57.9km²)

- Feature poorly defined in citation
- Used unpublished SNH dossier of invertebrate records from site to target surveys
- Included six spiders:
 - *Diplocephalus torva* (only spider included in citation)
 - *Haplodrassus soerenseni*
 - *Pelecopsis elongata*
 - *Clubiona subsultans*
 - *Notioscopus sarcinatus*
 - *Desmodicus elevatus*

Diplocephalus *torva* - Wild galloways-spider

- RDB2
- Scottish Biodiversity List
- Habitat: Caledonian Forest
 - Trunks of mature Scots pine
- Maturity: June - September
- Spins a small web in deep fissures in bark
- Preys on wood ants

Haplodrassus soerenseni - Sørensen's grasper

- RDB2
- Scottish Biodiversity List
- Habitat: Caledonian Forest
 - Ground layer with preference for open woodland
- Maturity: June – July
- Hunts on ground layer

Pelecopsis elongata - Caledonian balloon-head

- RDB2
- Habitat: Caledonian Forest
 - Dry pine litter, under rocks and in lower branches of juniper
- Maturity: Most active in winter, but also June – August

***Clubiona subsultans* - Caledonian sac spider**

- RDB2
- Scottish Biodiversity List
- Habitat: Caledonian Forest
 - Associated with Scots pine (*Pinus sylvestris*)
 - Found under bark & in pine litter
- Maturity: March – September

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Clubiona subsultans - Caledonian sac spider



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Clubiona subsultans - Caledonian sac spider



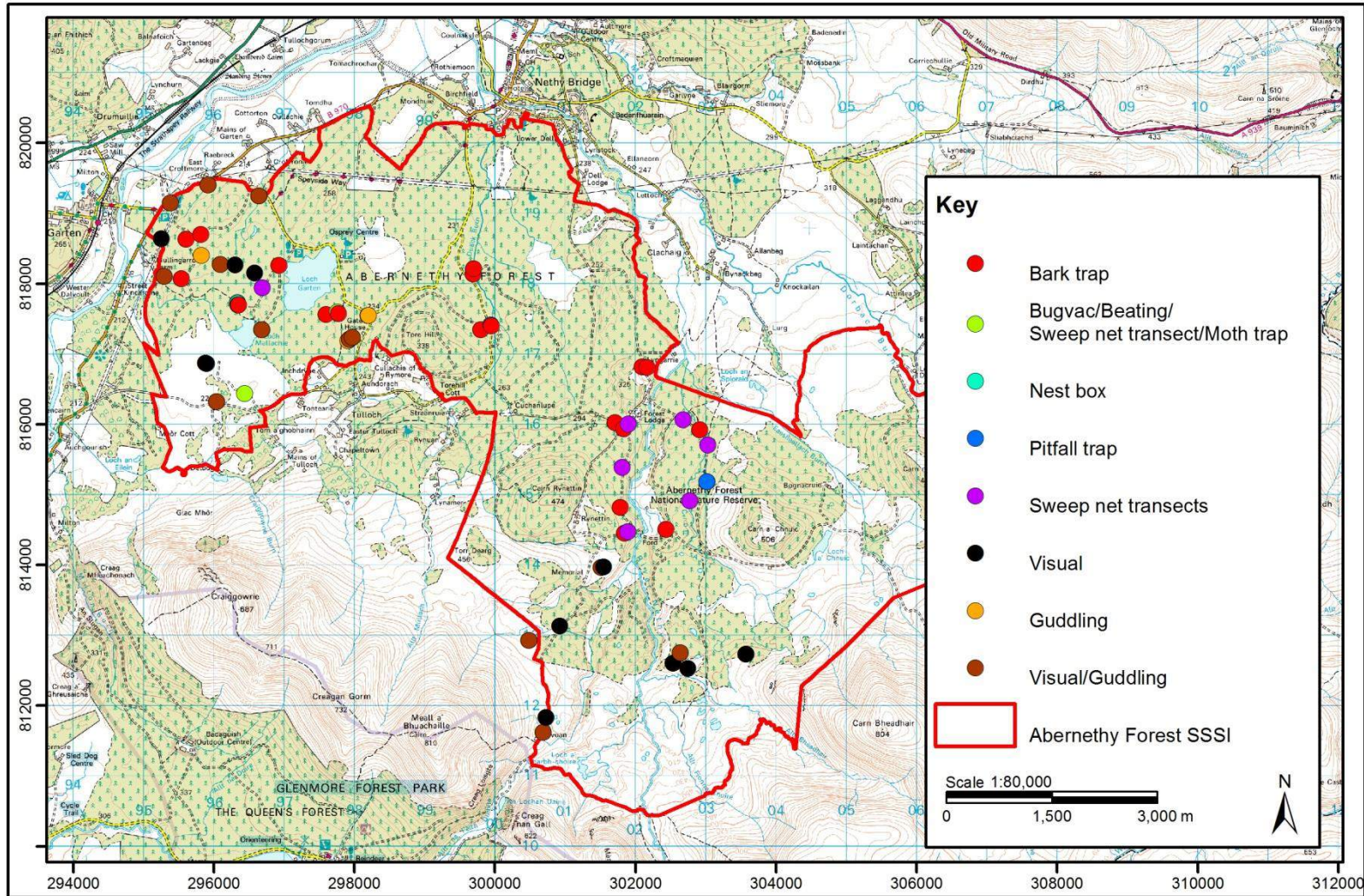
Notioscopus sarcinatus - Swamp lookout spider

- NS
- Scottish Biodiversity List
- Habitat: Wet woodland
 - *Sphagnum* spp. and *Polytrichum* spp.
- Maturity: All year

Desmodicus elevatus - Highest sphere-head

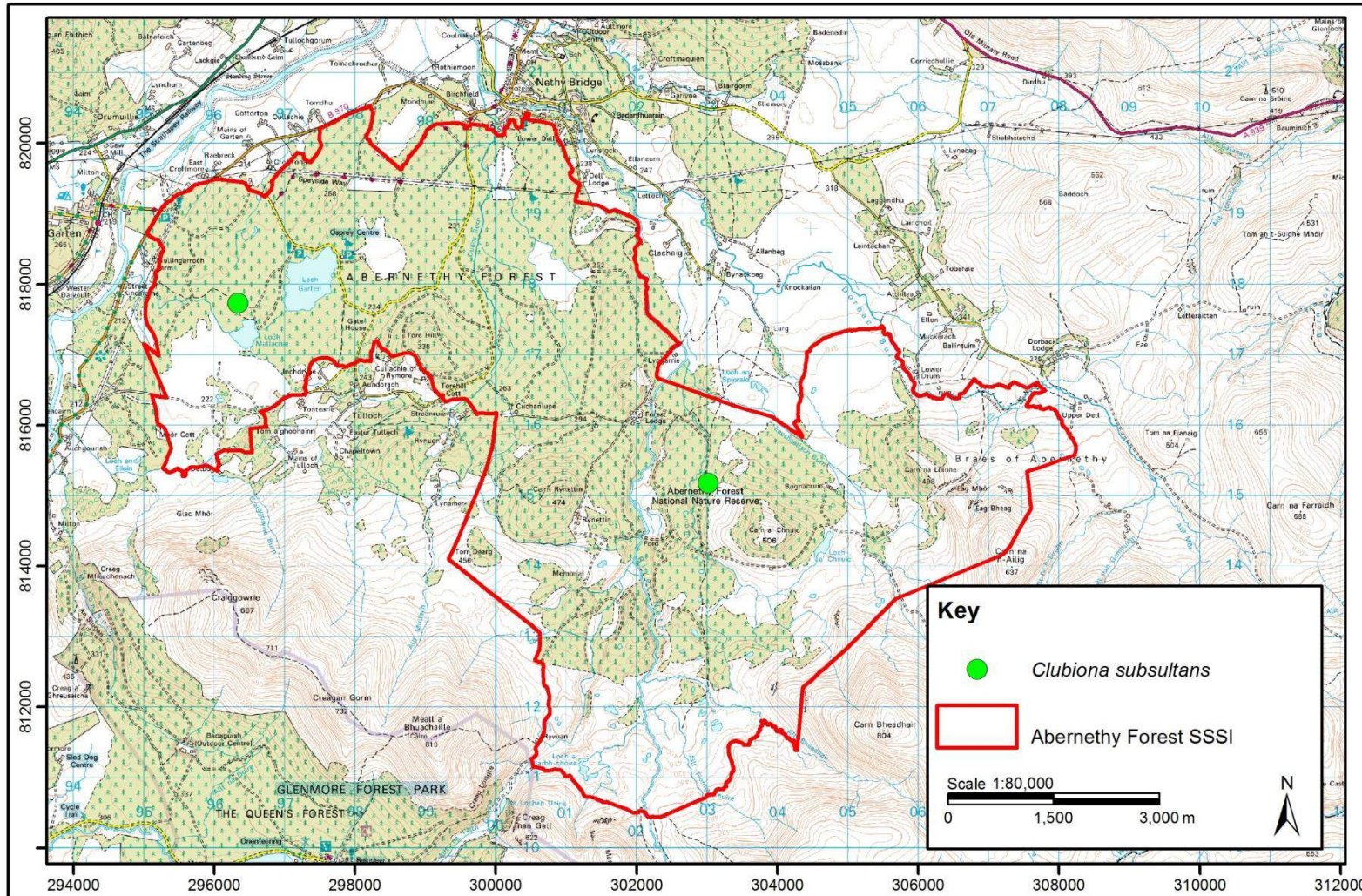
- NS
- Scottish Biodiversity List
- Habitat: Caledonian Forest
 - Generally found in ancient Caledonian forest
 - Sometime found in conifer plantation
 - Heather, gorse and juniper
- Maturity: ♂ May – July | ♀ May - September

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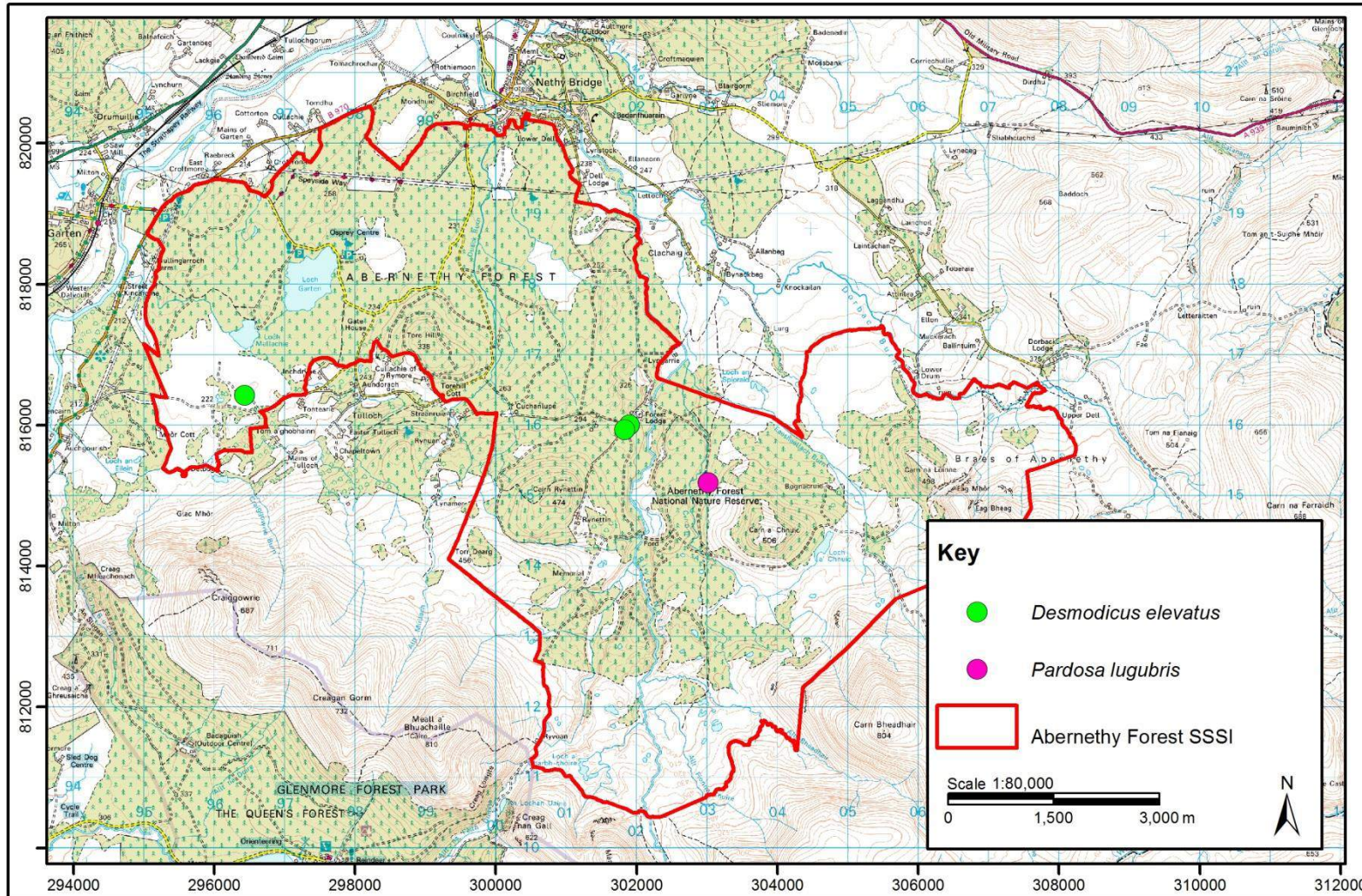
Abernethy Forest: Sample Locations

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Abernethy Forest: Results

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Abernethy Forest: Results

Abernethy Forest - Results

- Re-found
 - *Clubiona subsultans*
 - *Desmodicus elevatus*
- Also found *Pardosa lugubris* sens. str.
 - Status unknown
 - Only known from a small number of Caledonian forest sites in Highlands and one English site.
 - Found in large numbers in Abernethy Forest in 2004
- Habitat in good condition
- **Total: 56 species of spider**

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Black Wood of Rannoch

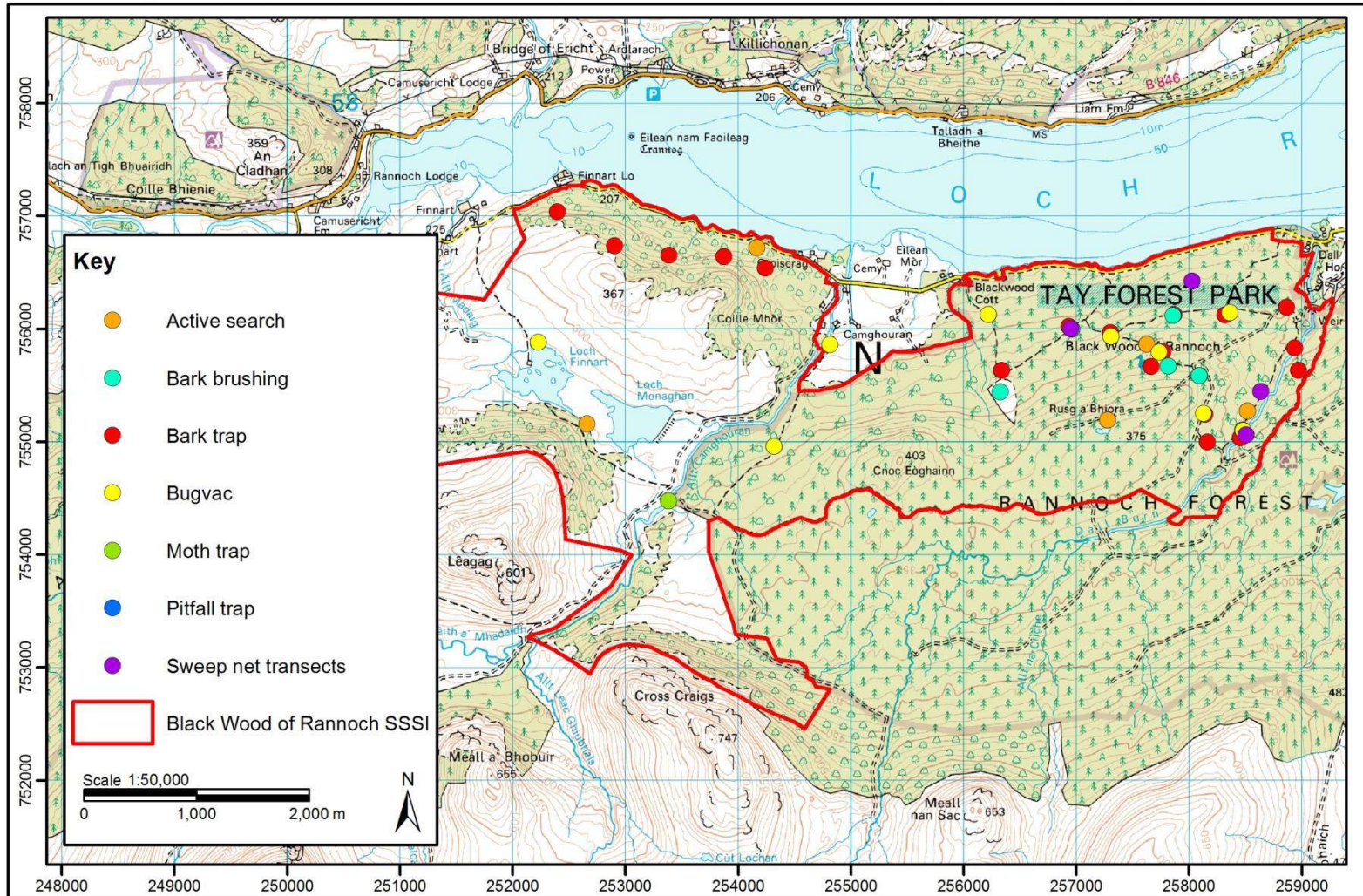
Black Wood of Rannoch (18.9km²)

- Feature poorly defined in citation
- Used unpublished SNH dossier of invertebrate records from site to target surveys
- Included four spiders:
 - *Diplocephalus torva*
 - *Haplodrassus soerenseni*
 - *Clubiona subsultans*
 - *Robertus scoticus*

***Robertus scoticus* – Scottish Robert**

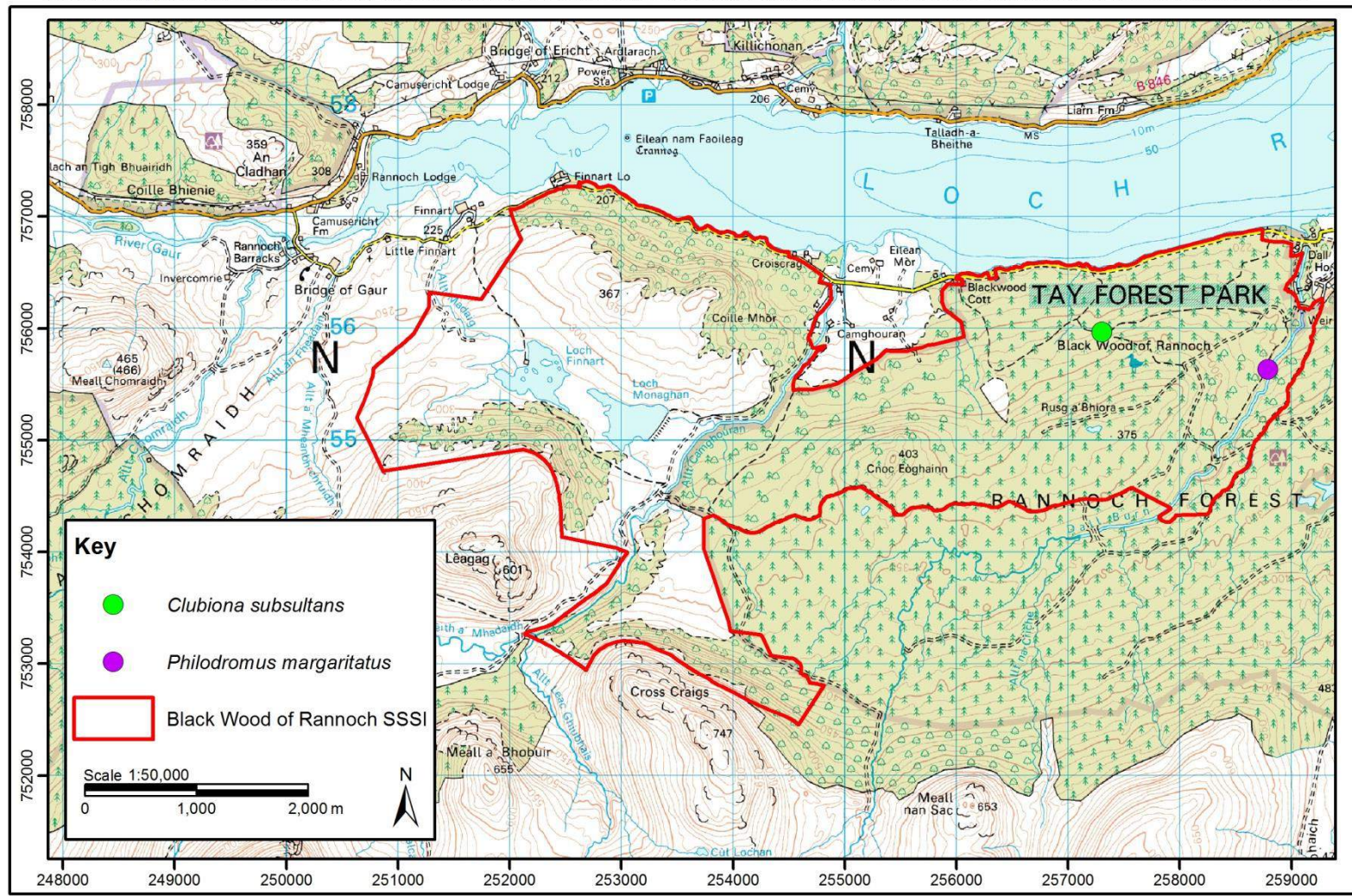
- RDB1
- Scottish Biodiversity List
- Habitat: Caledonian Forest
 - Moss and pine litter
 - Damp ancient forest
- Maturity: June - October

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Black Wood of Rannoch : Sample Locations

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Black Wood of Rannoch: Results

Black Wood of Rannoch - Results

- Re-found
 - *Clubiona subsultans*
- Also found *Philodromus margaritatus*
 - NS
 - Semi-natural woodland: lichen-covered tree trunks

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Black Wood of Rannoch - Results

- Re-found
 - *Clubiona subsultans*
- Also found *Philodromus margaritatus*
 - NS
 - Semi-natural woodland: lichen-covered tree trunks
- Bracken encroachment limits suitable habitat
- Encroachment from commercial plantation threatens site
- **Total: 59 species of spider**

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Cairngorms

Cairngorms (292.3km²)

- Elevation 200 – 1,309m
- Range of habitats from mountain to forest
- Feature poorly defined in citation
- Used unpublished SNH dossier of invertebrate records from site to target surveys
- Included nine spiders

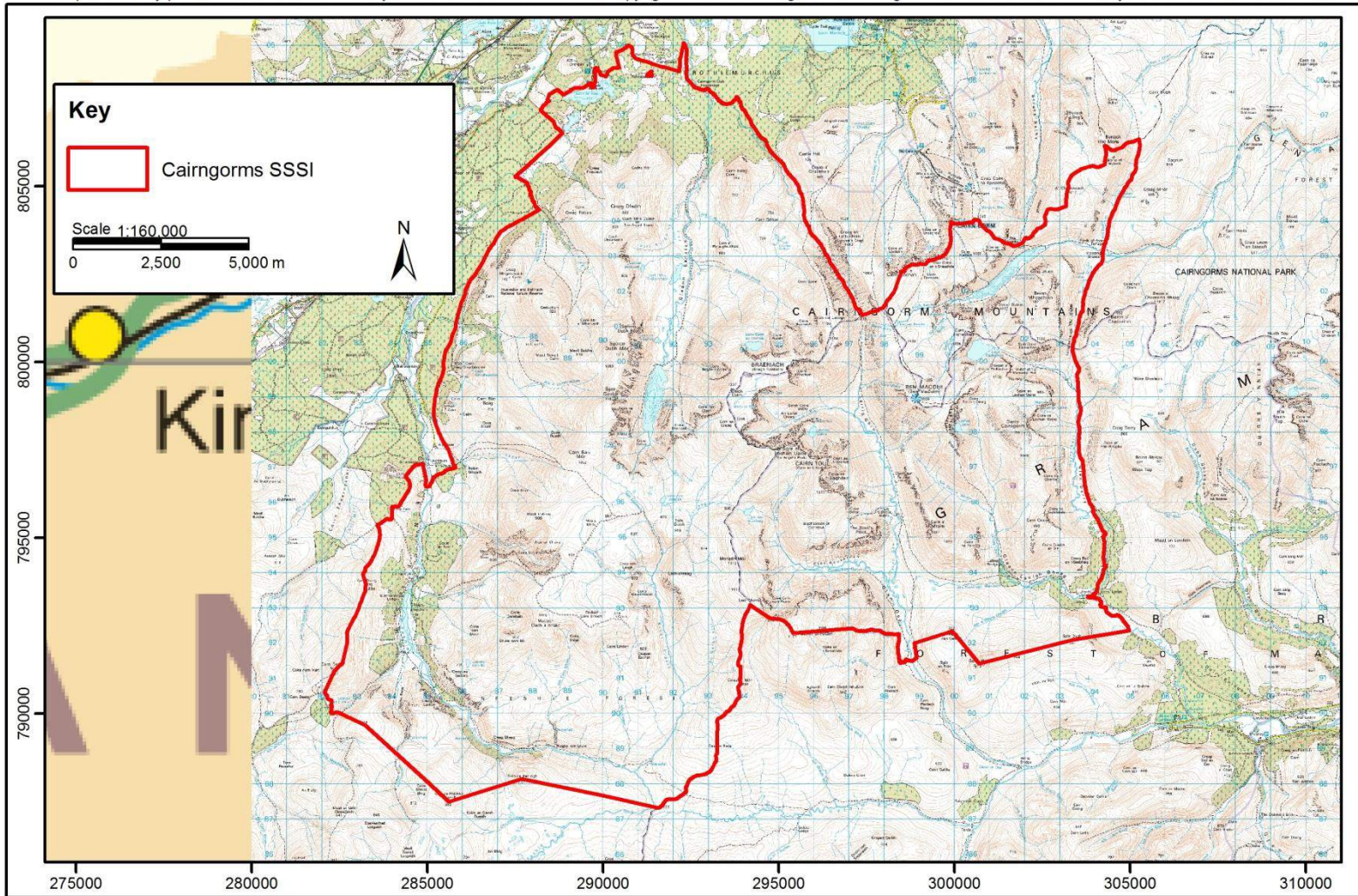
Cairngorms (292.3km²)

- Mountain spiders (>500m):
 - *Arctosa alpigena* (Alpine bear-spider) RDB3
 - *Entelecara errata* (Wandering perfect-head) NS
 - *Tiso aestivus* (Mountain tiso) NS
 - *Erigone tirolensis* (Scottish money-spider) NS
 - *Halorates holmgreni* (Holmgren's mountain-spider) NS
 - *Mecynargus paetulus* (Scottish mountain-spider) RDB2 SBL
 - *Meioneta nigripes* (Black-legged weblet) NS
- Caledonian forest spiders:
 - *Dipoena torva*
 - *Pelecopsis elongata*

Halorates holmgreni - Holmgren's mountain-spider

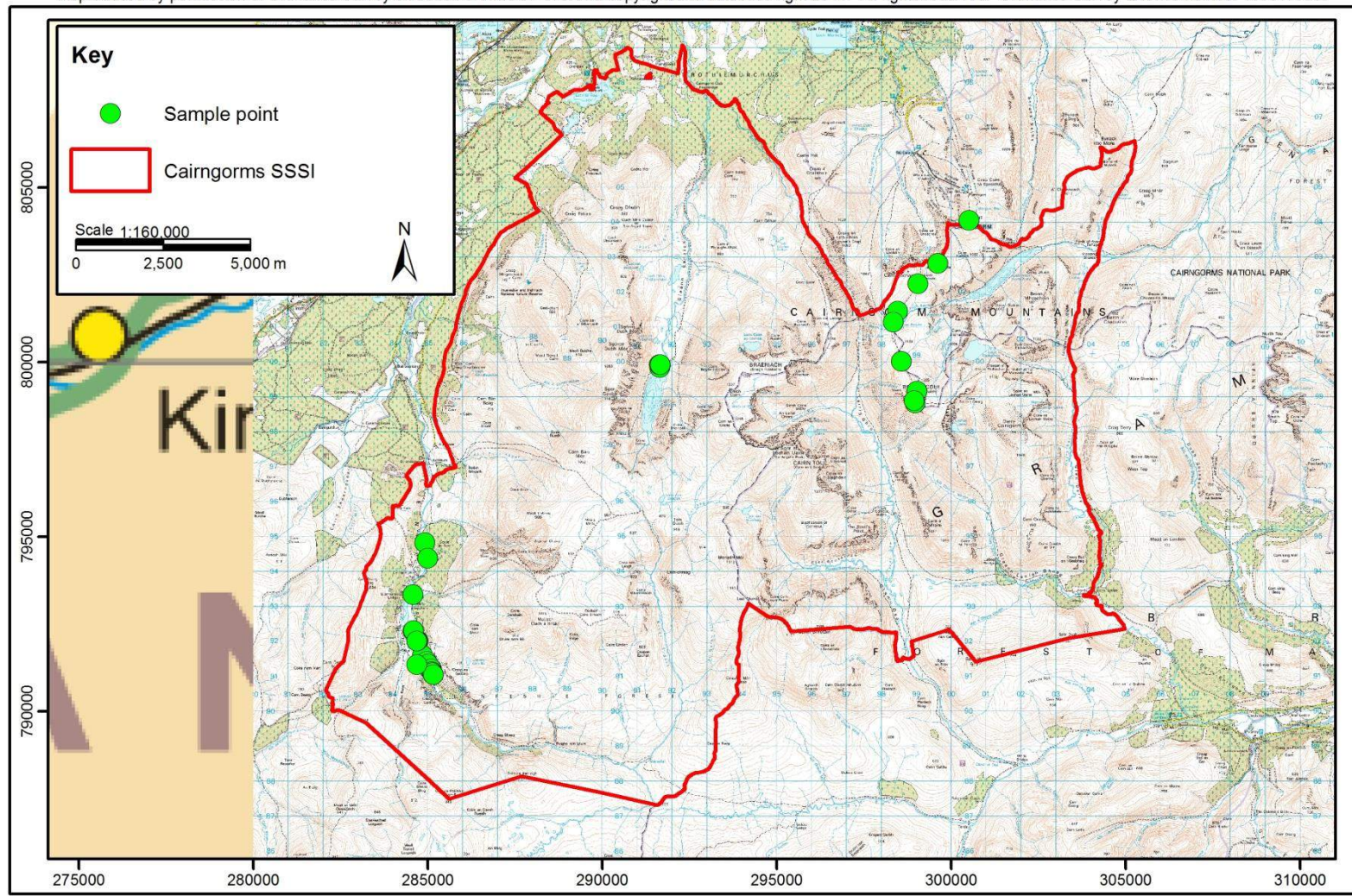


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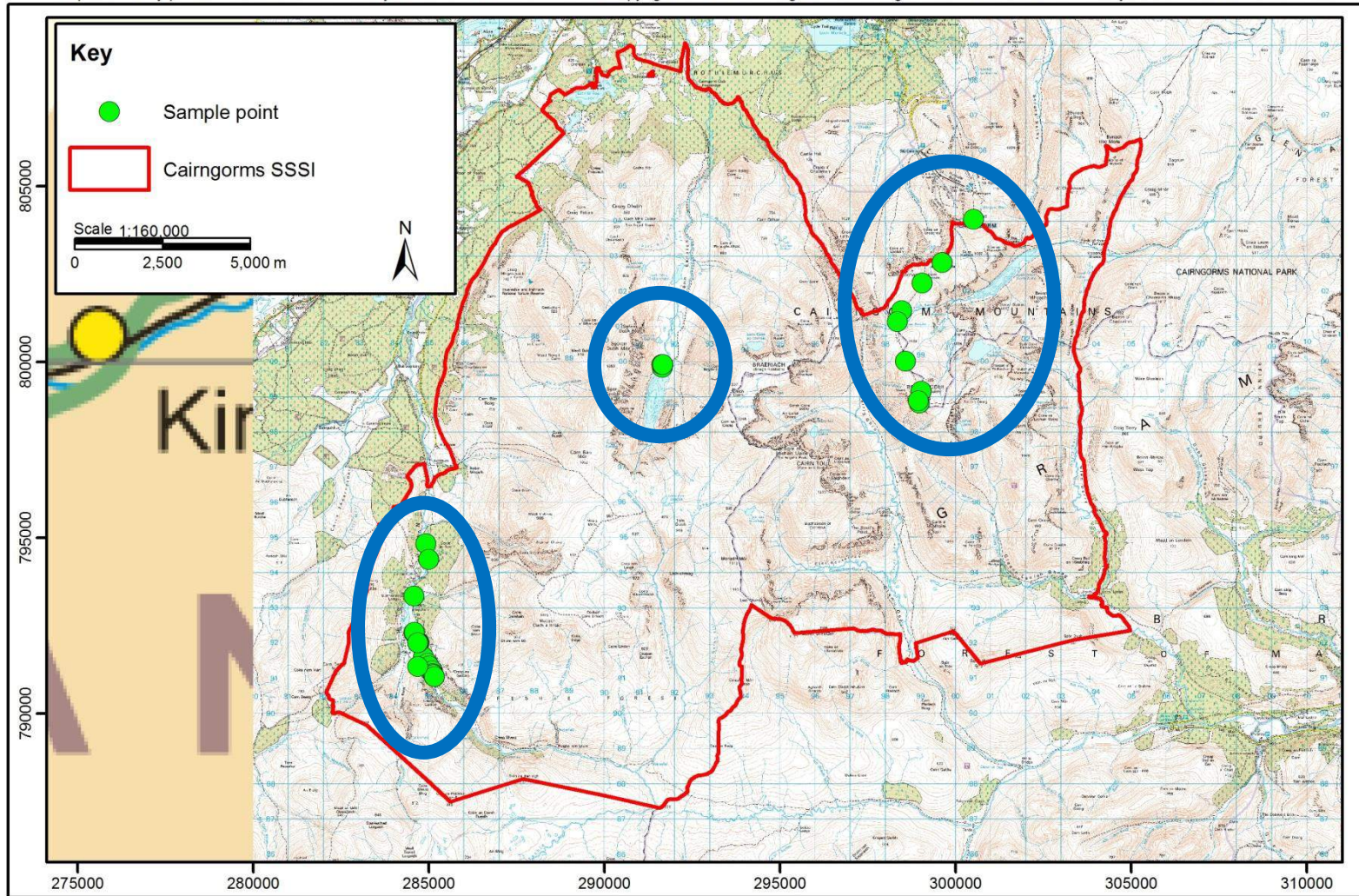
Cairngorms: Site

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Cairngorms: Sample Locations

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Cairngorms: Sample Locations

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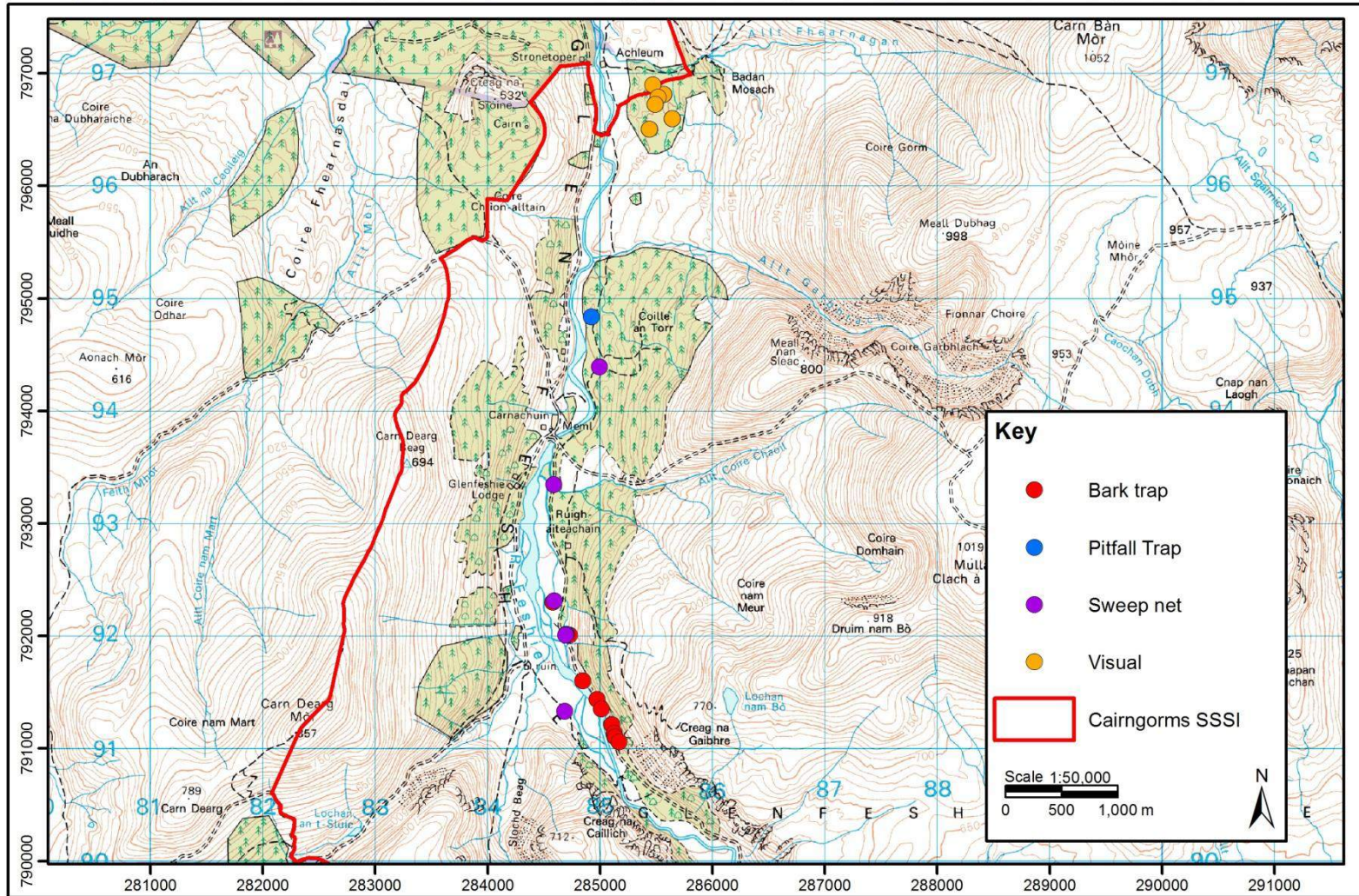


Cairngorms: Glen Feshie

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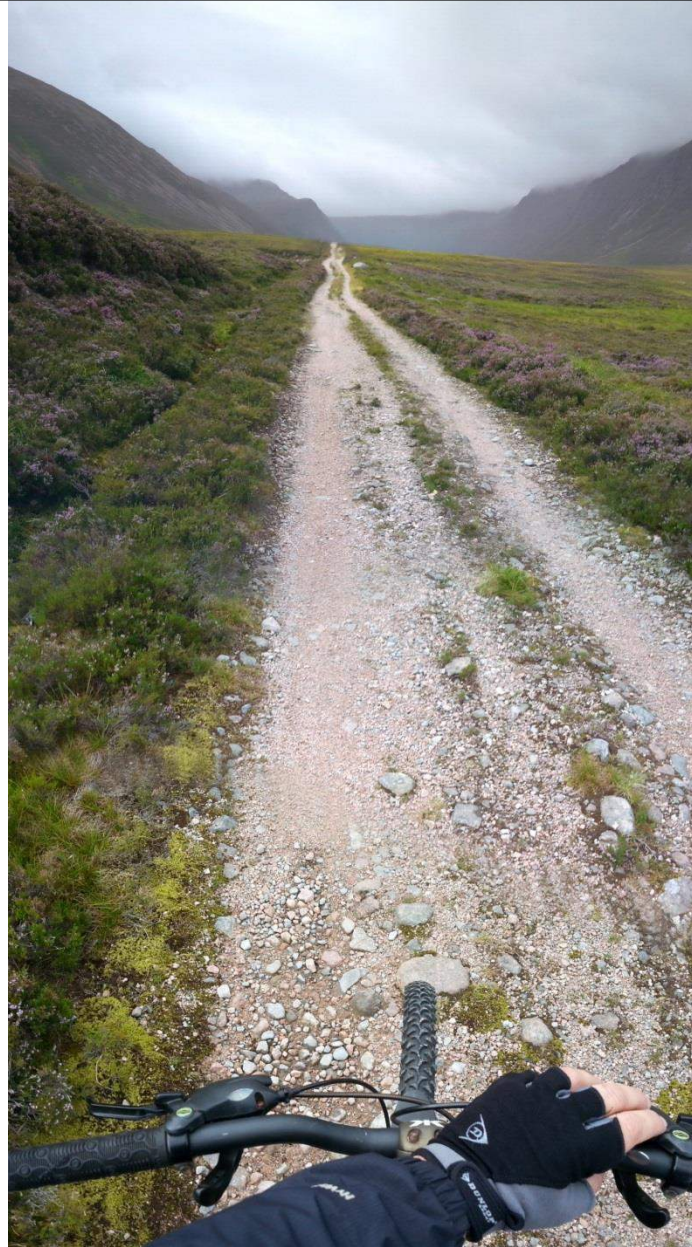
Cairngorms: Glen Feshie Sample Locations

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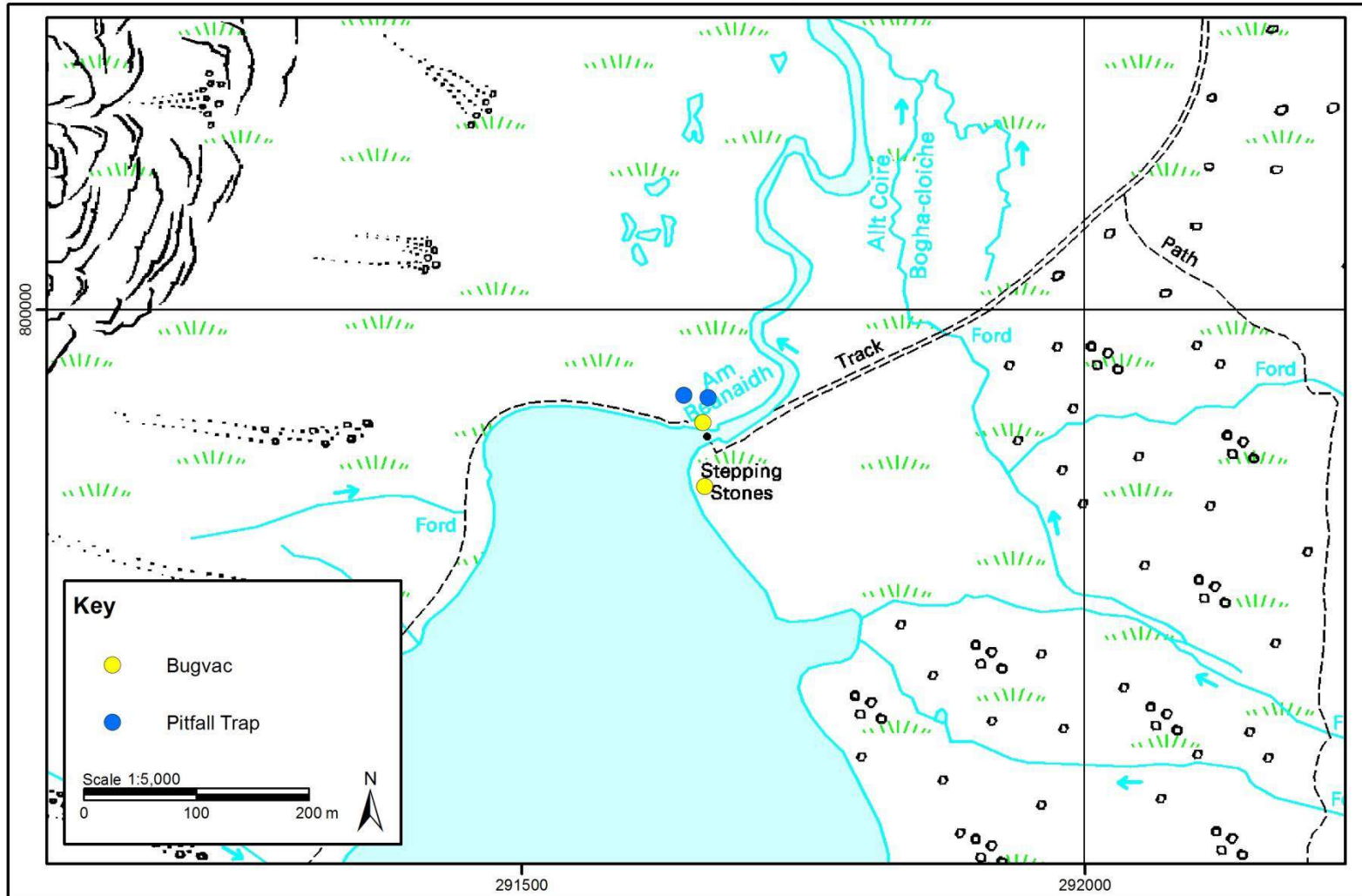


Cairngorms: Loch Eaniach

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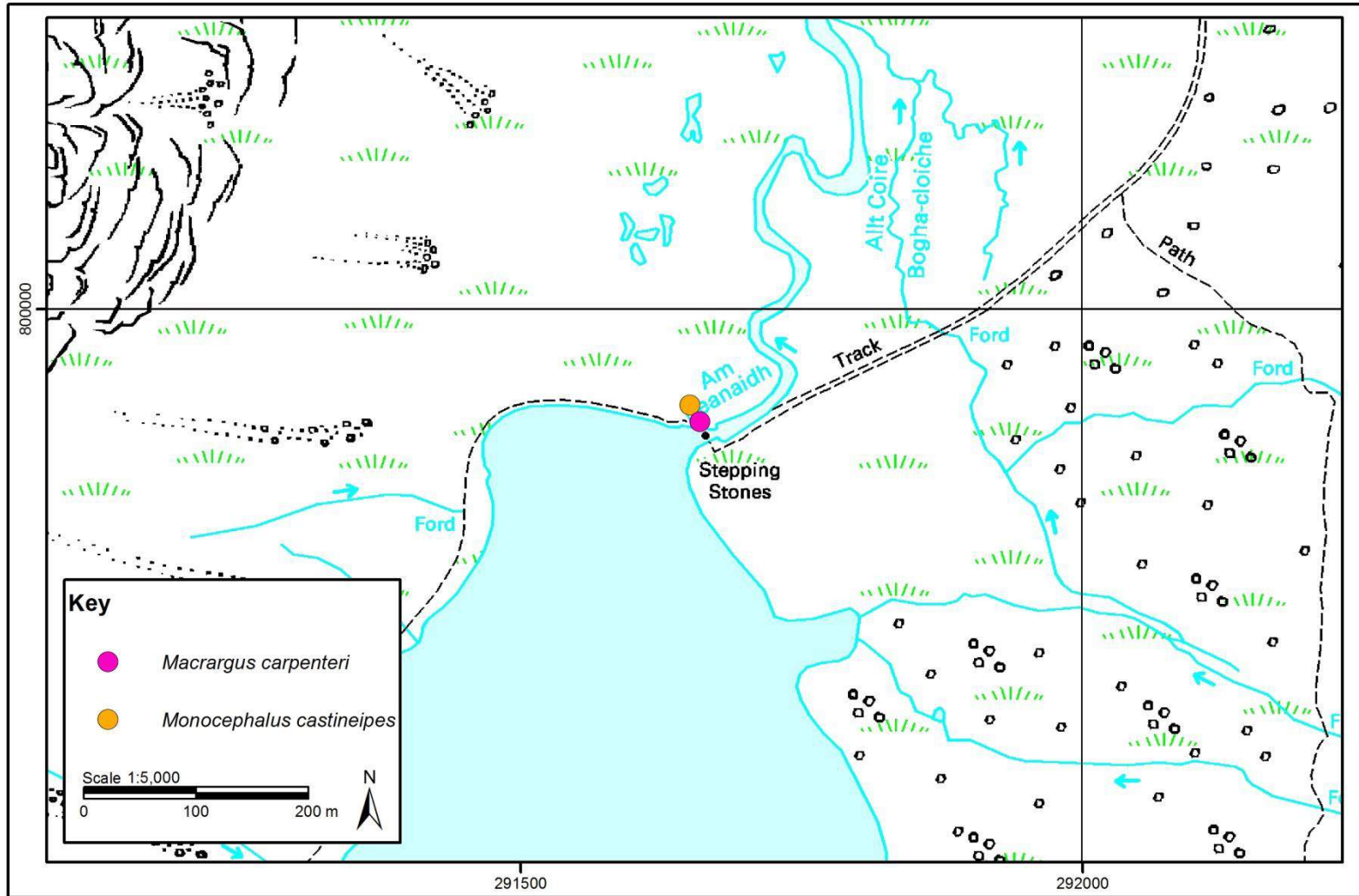


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Cairngorms: Loch Eaniach Sample Locations

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Cairngorms: Loch Eaniach Results

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Cairngorms: Plateau

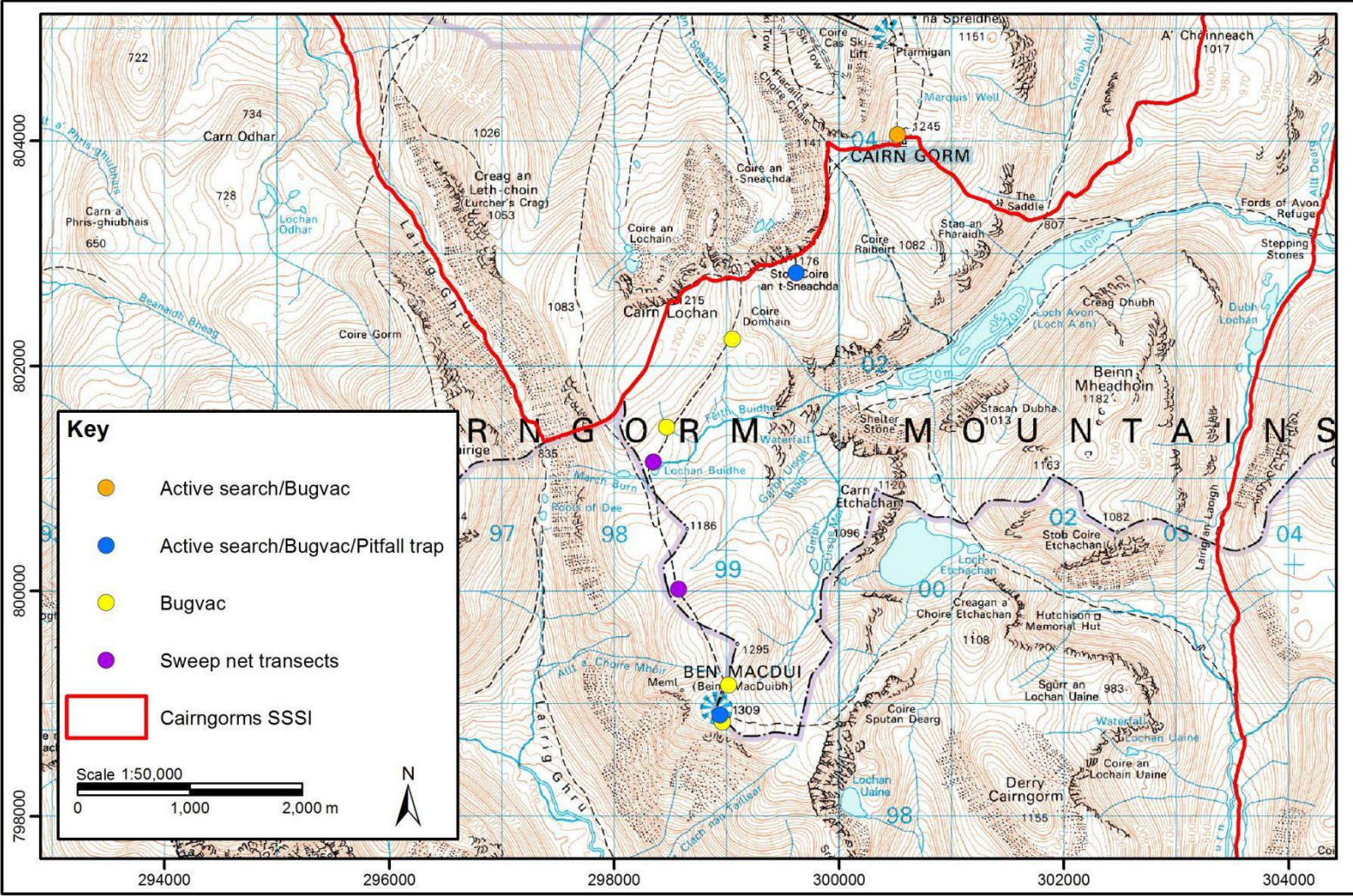
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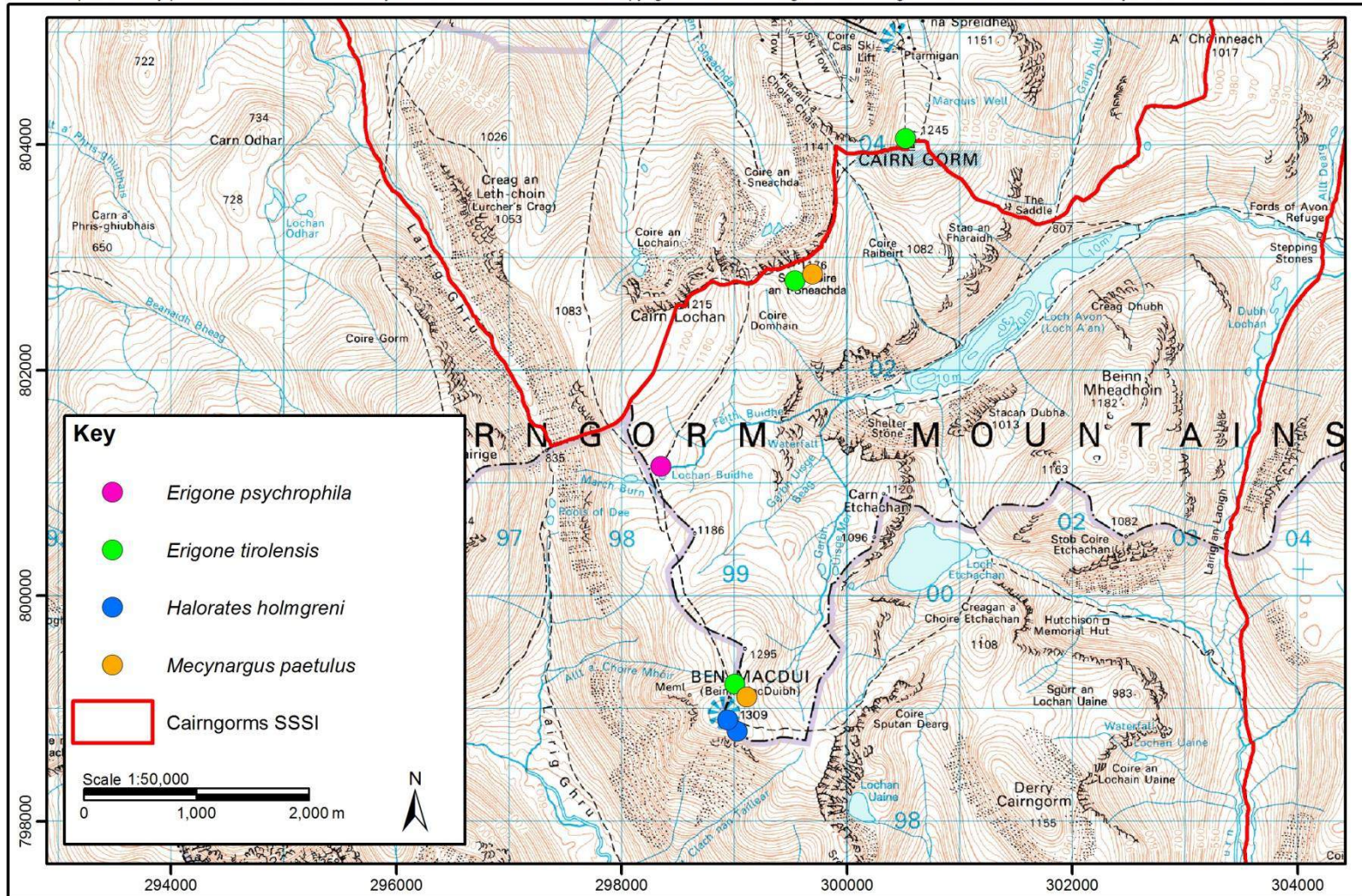


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Cairngorms: Plateau Sample Locations

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Cairngorms: Plateau Results

Note: Some points have been moved to avoid overlap.

Cairngorms - Results

- Re-found
 - *Eregone tirolensis*
 - *Halorates holmgreni*
 - *Mecynargus paetulus*
- Also found
 - *Eregone psychrophila* (Chilled money-spider) NS
 - *Monocephalus casteneipes* (broad groove-head) SBL
 - *Macrargus carpenteri* (Northern litter-spider) NS

Cairngorms - Results

- Glen Feshie total: 18 species of spider
- Loch Eaniach total: 9 species of spider
- Plateau total: 12 species of spider
- **Total: 39 species of spider**

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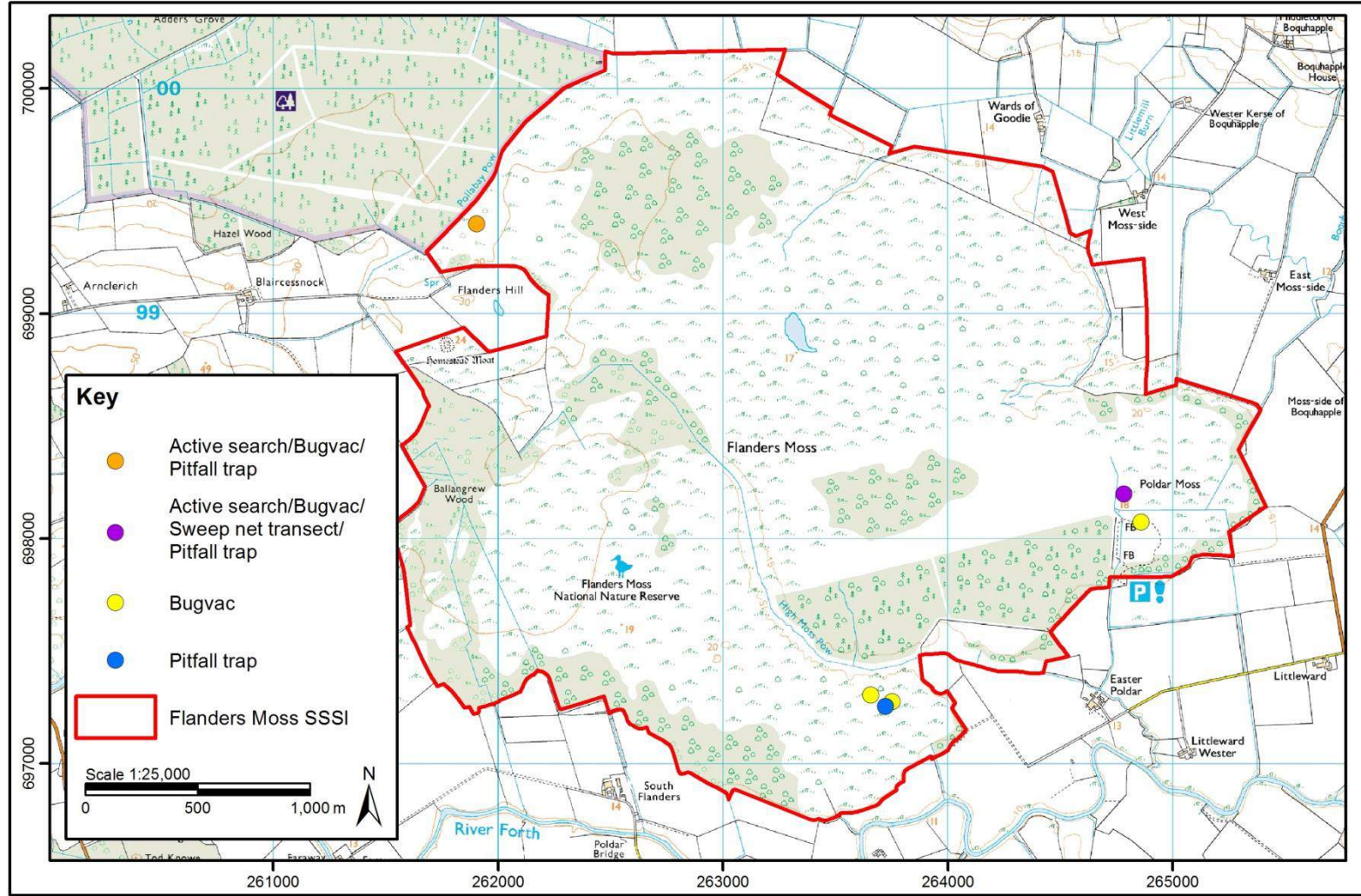


Flanders Moss

Flanders Moss (8.6km²)

- *Heliophanus dampfi* – Bog sun-jumper
- RDBK
- Associated with lowland raised bogs
- Wales – pitfall traps
- Scotland - sweeping
- ♂ June & July
- ♀ April to July

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Flanders Moss: Sample Locations

Flanders Moss- Results

- Re-found *Heliophanus dampfi* at all locations
- Also found *Araneus alsine* (strawberry orb-weaver)
 - NS
 - Poldar Moss: bog with encroachment from shrubs and birch
- **Total: 35 species of spider**

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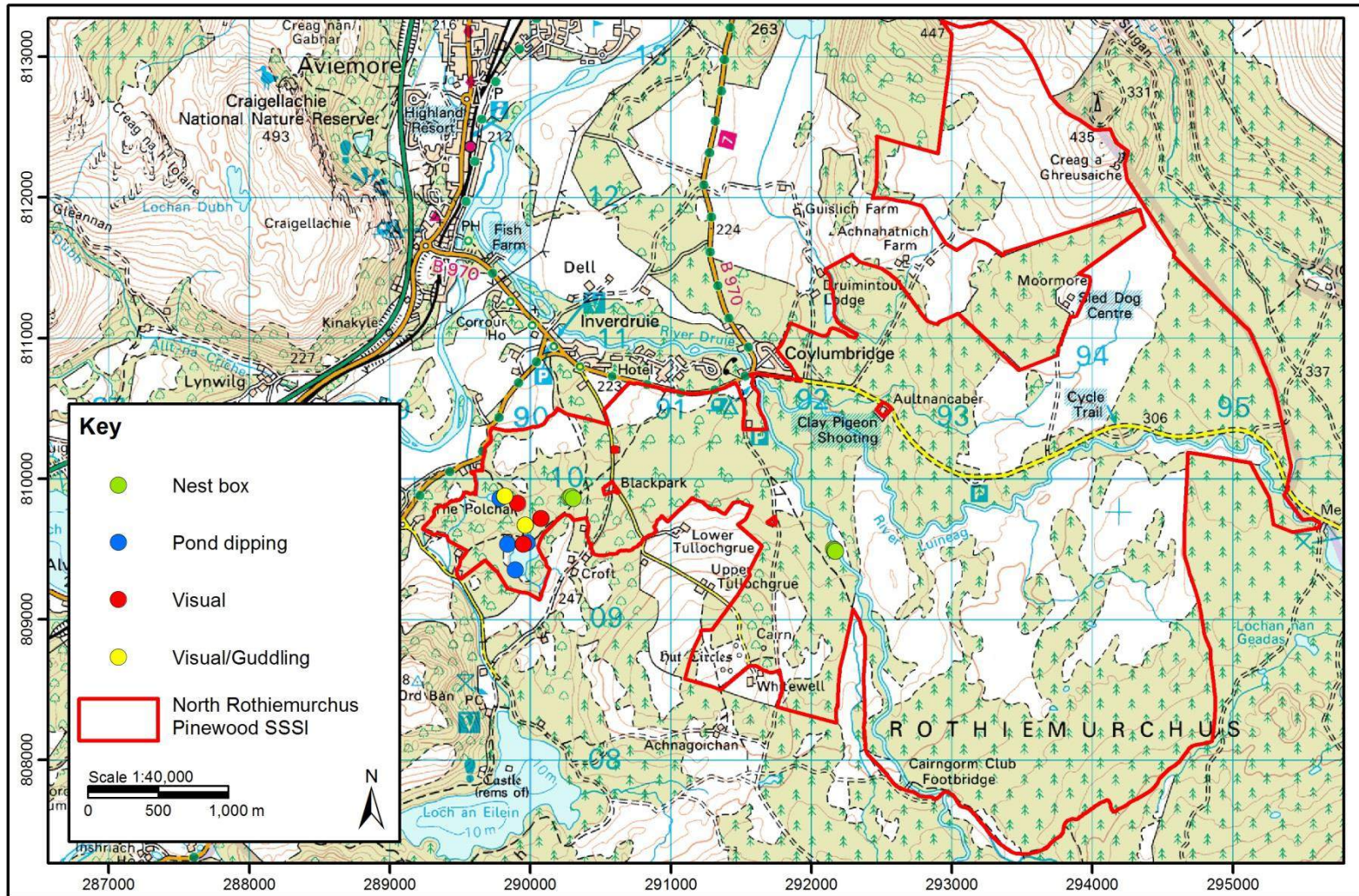


North Rothiemurchus Pinewood

North Rothiemurchus Pinewood (15.1km²)

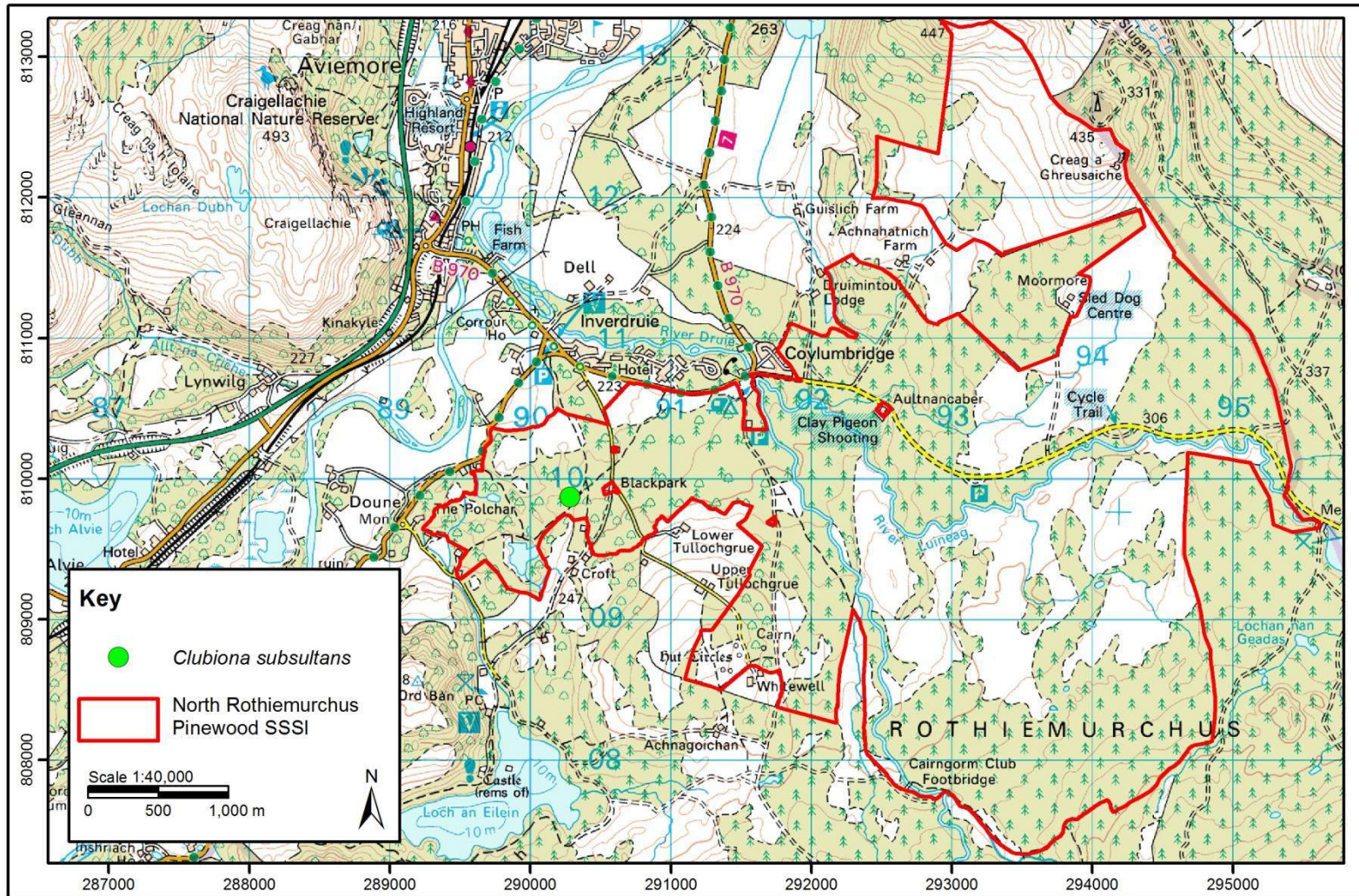
- *Clubiona subsultans*

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North Rothiemurchus Pinewood: Sample Locations

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North Rothiemurchus Pinewood: Results

North Rothiemurchus Pinewood (15.1km²)

- *Clubiona subsultans*
- Re-found
- **Total: 7 species of spider**

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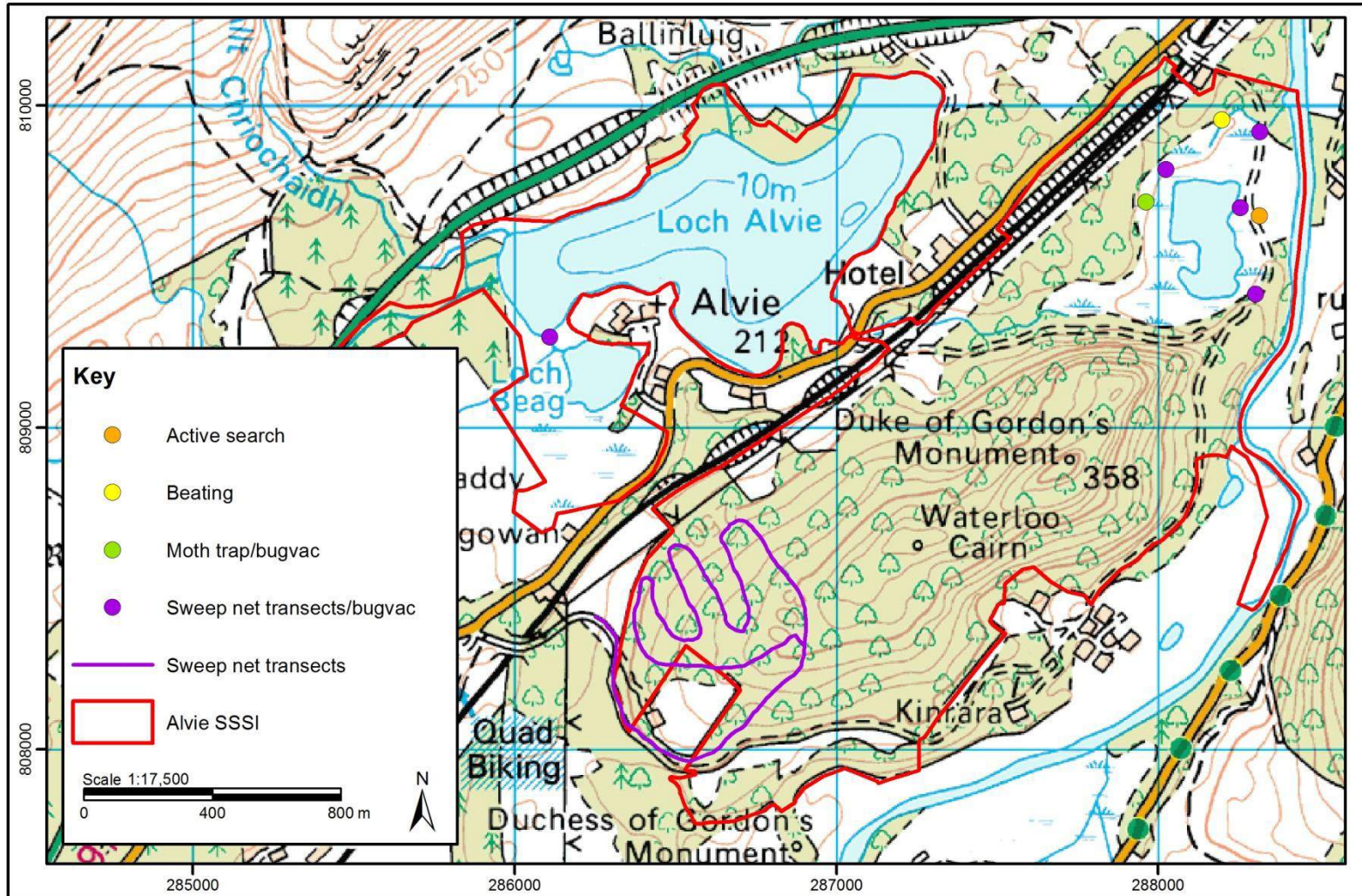


Alvie

Alvie (3.4km²)

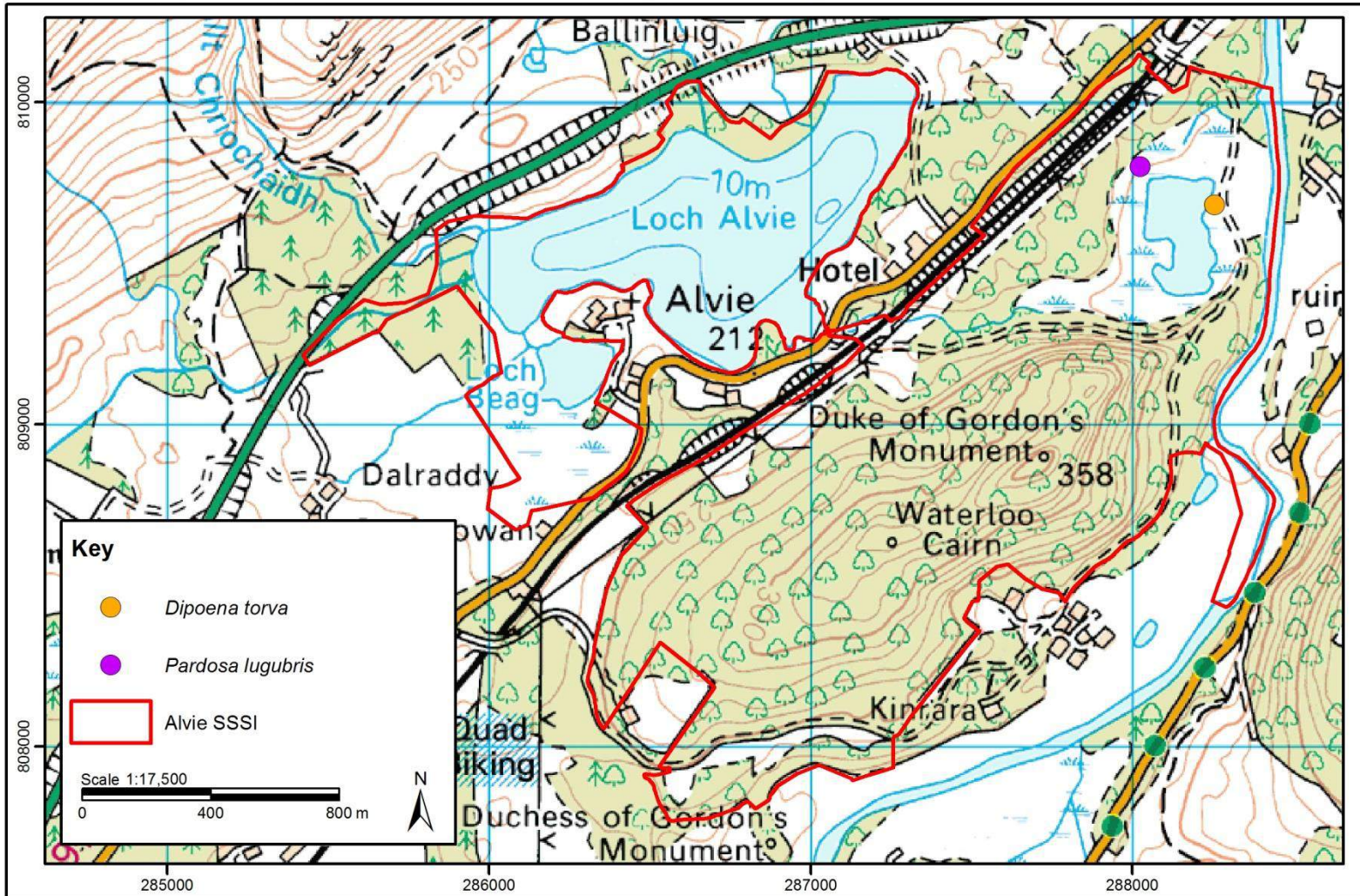
- Invertebrate Assemblage:
 - Diptera
 - Coleoptera
 - Mollusca
 - Trichoptera
 - **NOT ARANEAE**

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Alvie: Sample Locations

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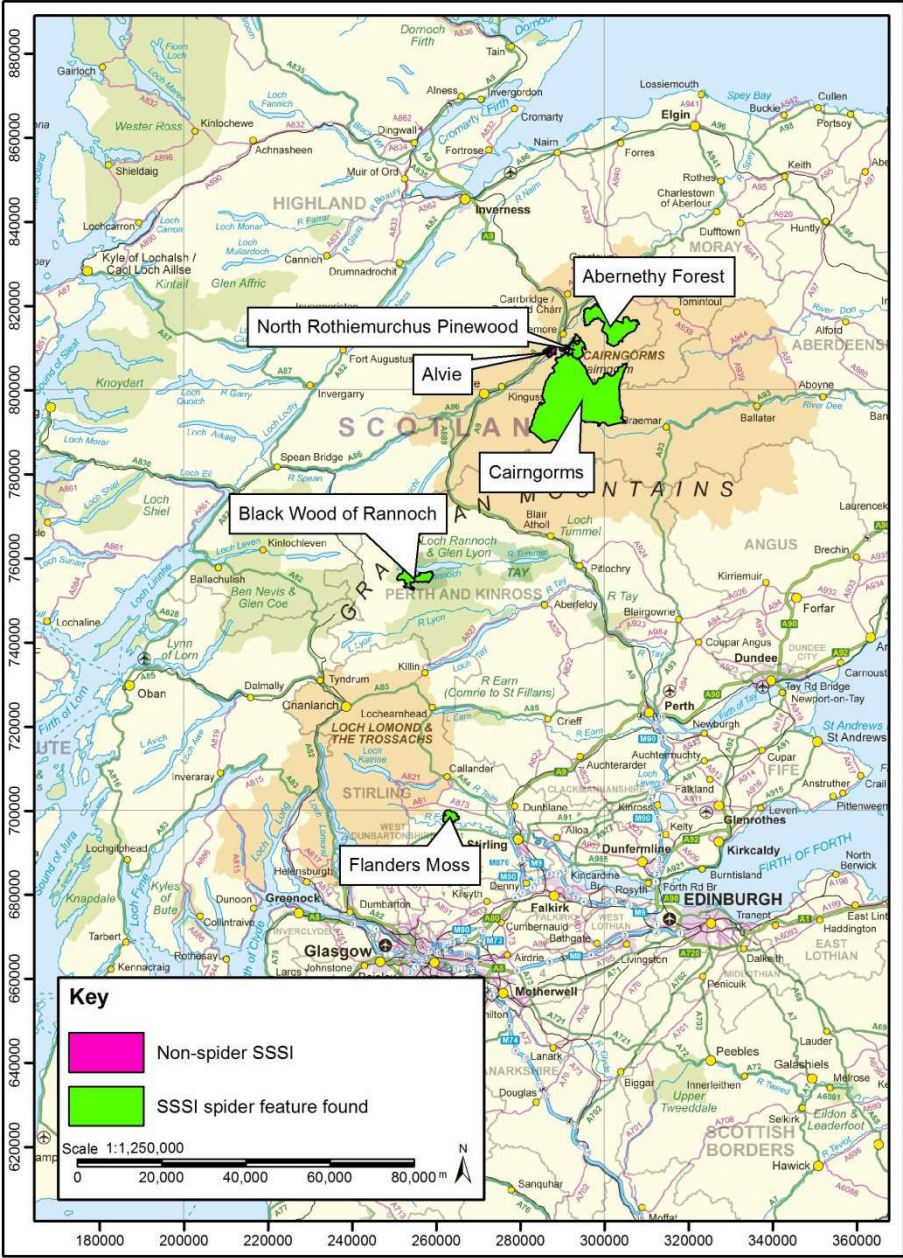


Alvie: Interesting Spider Finds

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Spider Results



Discussion

- 5 out of 5 notified spider features found
- Essential to:
 - Know which species to look for
 - Have original records before surveys
 - Target correct micro-habitat / methods
- **Huge sites – what's elsewhere?**
- **What spiders are on other SSSIs?**

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