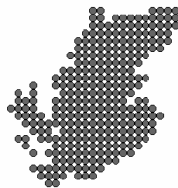


***Highland Bumblebees:
Distribution, Ecology and
Conservation***

Supplement 1, November 2006

Murdo Macdonald



Highland
Biological
Recording
Group

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Introduction

The Highland Biological Recording Group published *Highland Bumblebees: Distribution, Ecology and Conservation* on 1 March 2006. This supplement updates the original book in the light of discoveries made in 2006.

Gill Nisbet, co-author of *Highland Bumblebees*, died on 30 August 2006.

Erratum

The outline of the island of Canna was inadvertently omitted from the maps in the original work. It has been included in the maps here.

Update

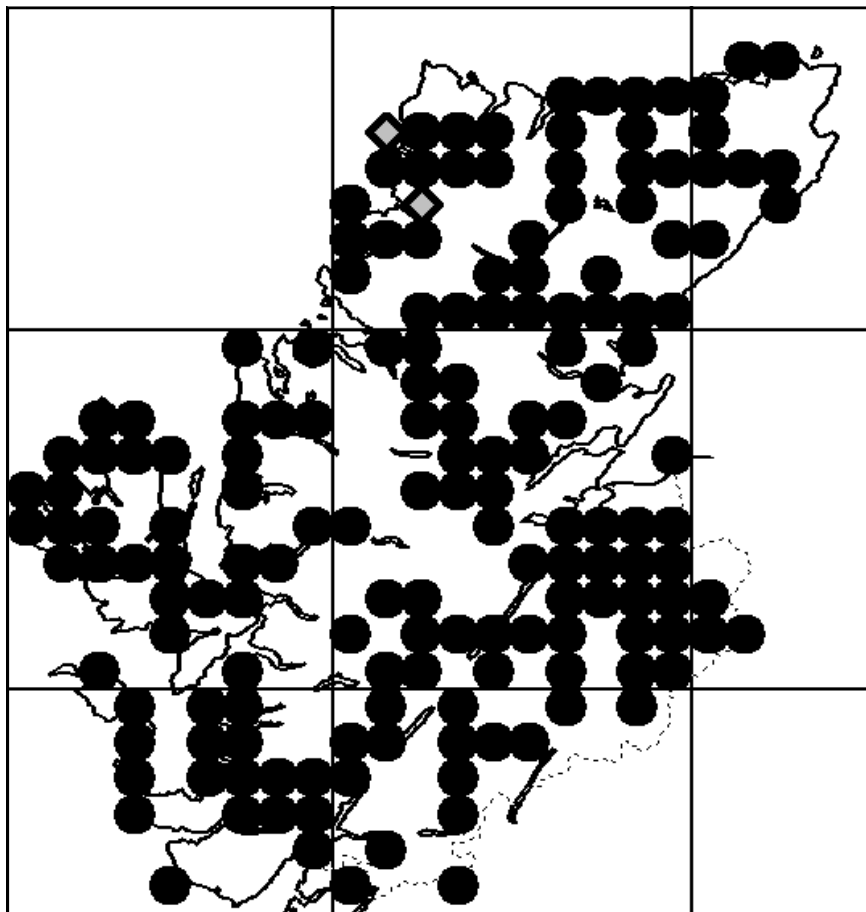
Biology

Observations on bumblebee hibernation sites are scarce. Two hibernation sites were found in 2006. On 7 September a female *Bombus sylvestris* was seen laboriously digging in to a SE facing clay bank near Dingwall. On 9 October, a queen *B. lucorum/cryptarum* was found under loose bark on a felled conifer trunk in a NW facing clearing at Corrieshalloch. The bee was covered in very active mites, and she stirred slightly when uncovered. Twenty minutes later she had disappeared, along with all the mites, presumably as a result of the disturbance.

Maps

New records of the following species have prompted minor revision of the maps and text. Significant additional information is indicated only in *B. monticola*, *B. lapidarius*, *B. ruderarius*, and *B. bohemicus*. Records added in this supplement are shown on the revised maps by grey diamond symbols.

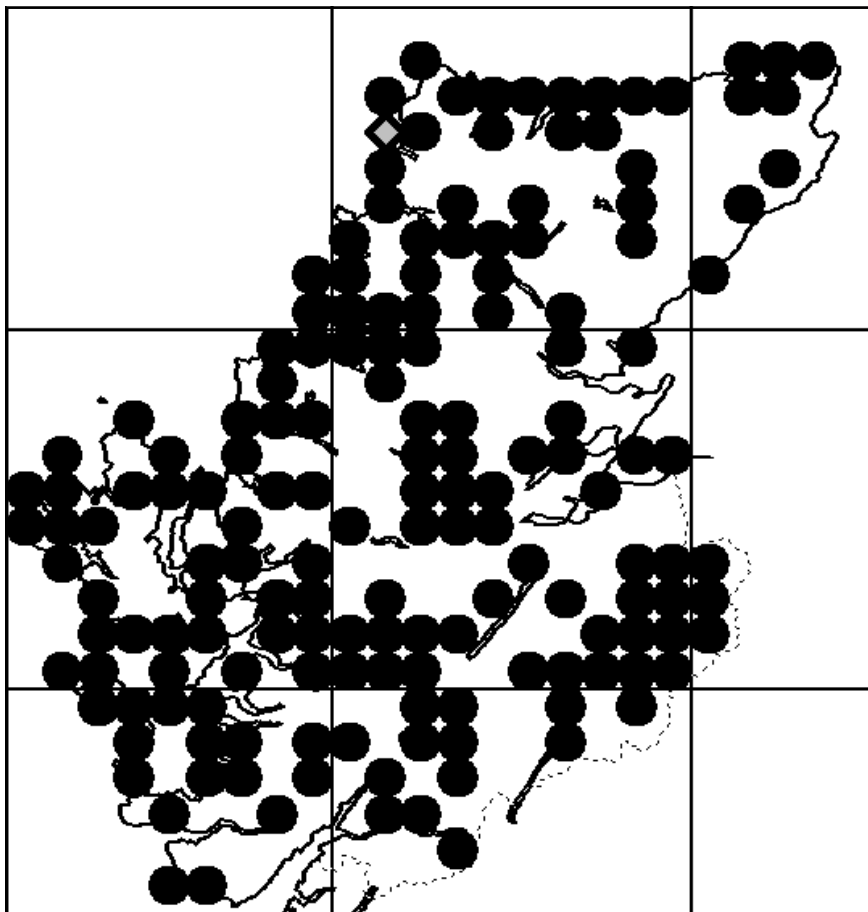
| Species | original page |
|--------------------------|---------------|
| <i>Bombus soroeensis</i> | p17 |
| <i>B. magnus</i> | p21 |
| <i>B. terrestris</i> | p25 |
| <i>B. jonellus</i> | p27 |
| <i>B. monticola</i> | p29 |
| <i>B. lapidarius</i> | p33 |
| <i>B. muscorum</i> | p37 |
| <i>B. pascuorum</i> | p39 |
| <i>B. distinguendus</i> | p41 |
| <i>B. ruderarius</i> | p46 |
| <i>B. bohemicus</i> | p43 |



Bombus soroensis

Broken-belted Bumblebee

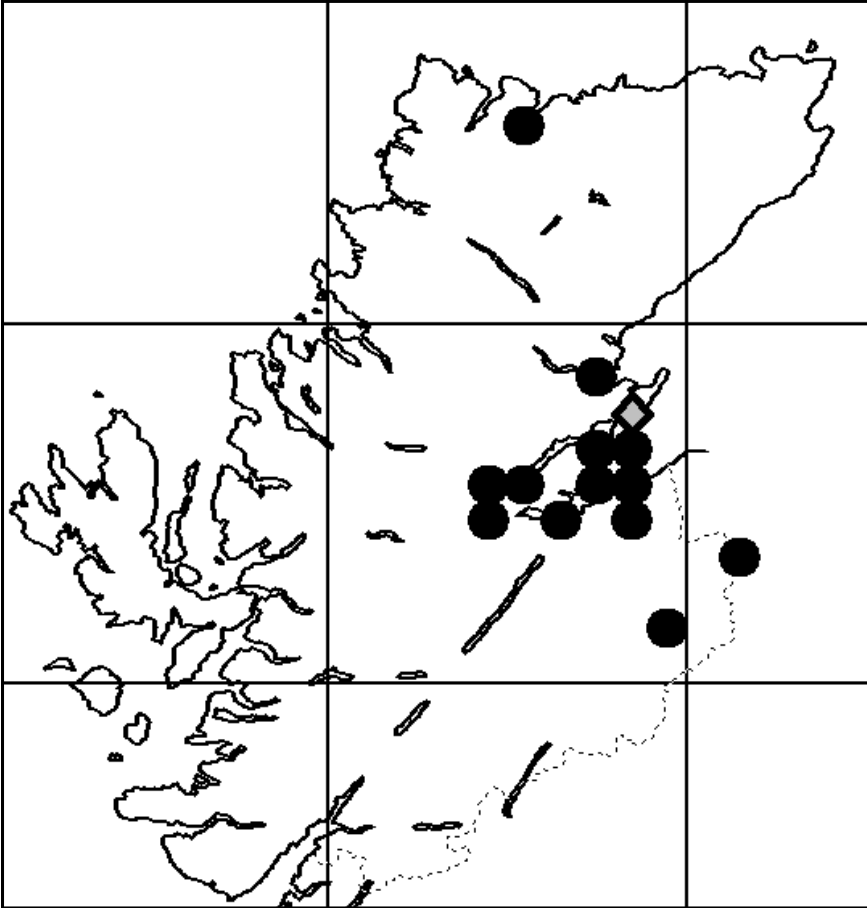
Two additional squares in NW Sutherland.



Bombus magnus

Northern White-tailed Bumblebee

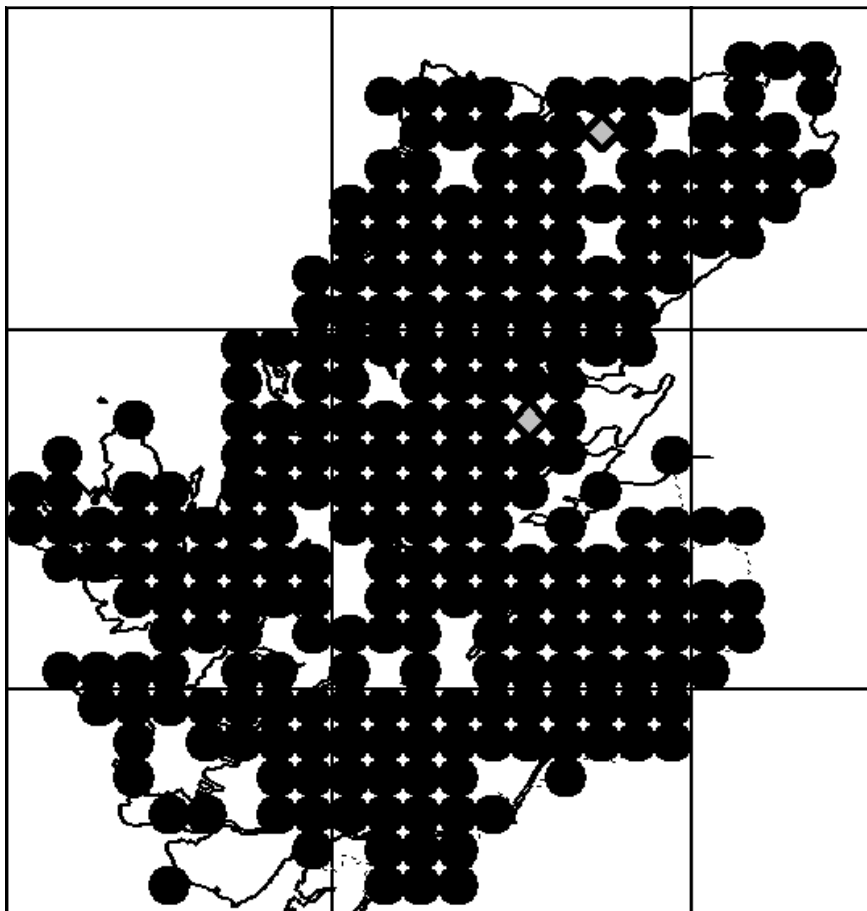
One additional square in NW Sutherland.



Bombus terrestris

Buff-tailed Bumblebee

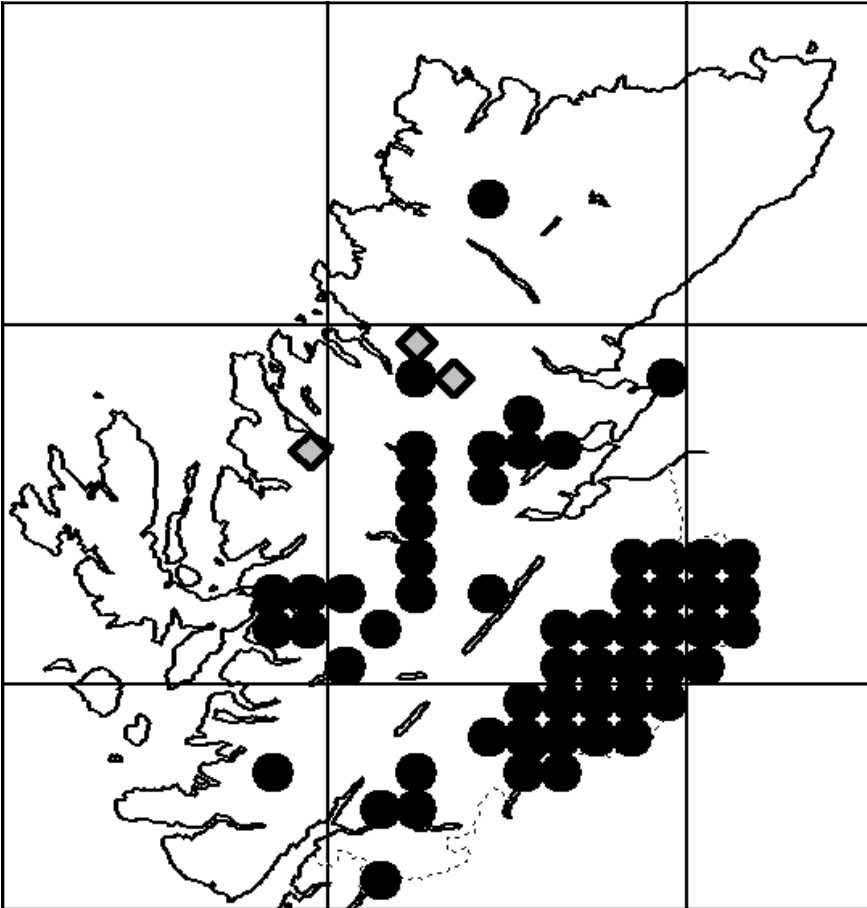
One additional square, within the previous known range in E Ross where it is well established.



Bombus jonellus

Heath Bumblebee

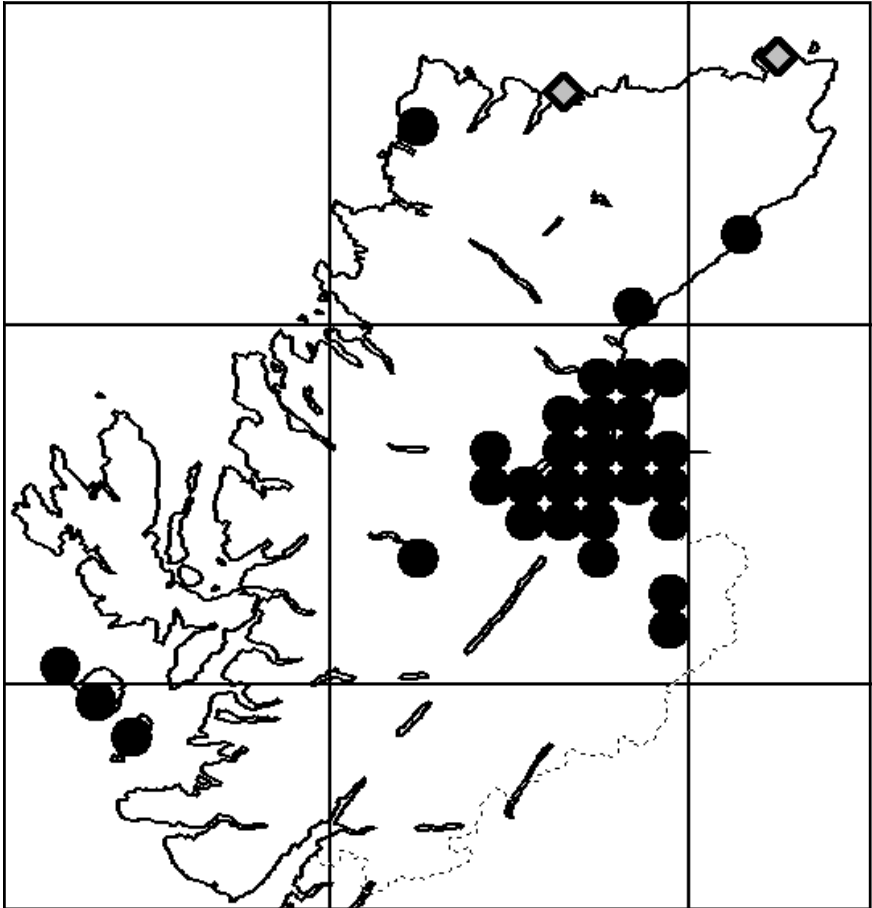
Two additional squares in N Sutherland and E Ross..



Bombus monticola

Bilberry Bumblebee

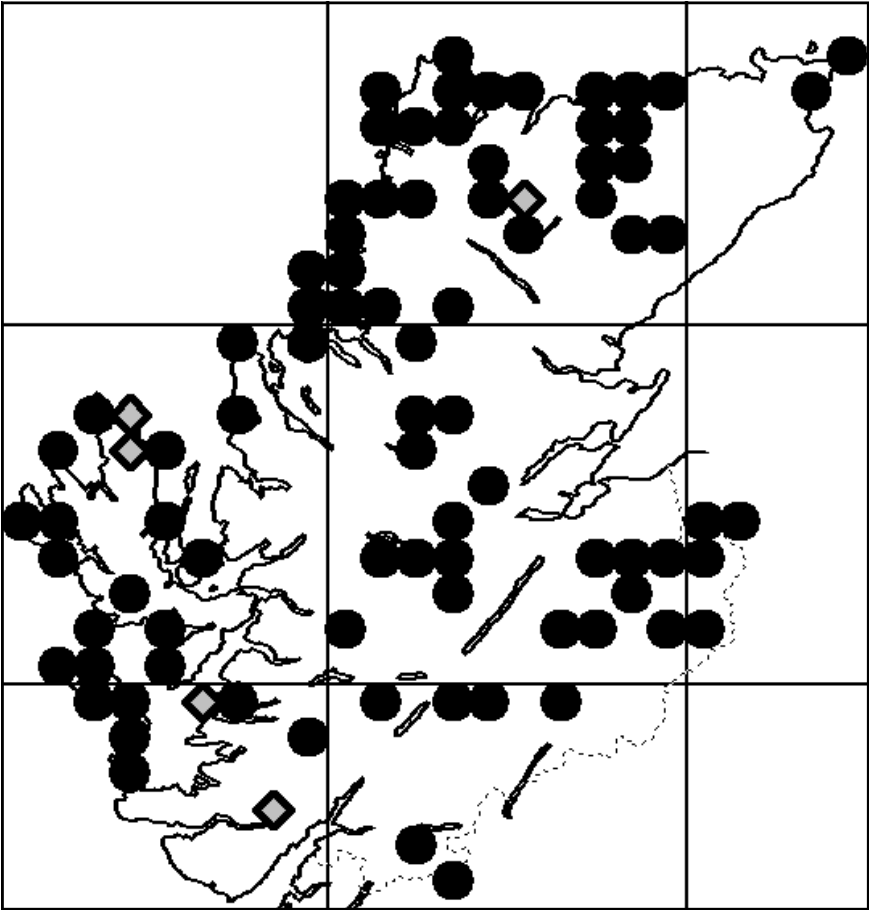
Found in 3 three additional squares in W Ross, where the species is sparsely and irregularly distributed, with a slight extension to the known range into Torridon (NG96).



Bombus lapidarius

Red-tailed Bumblebee

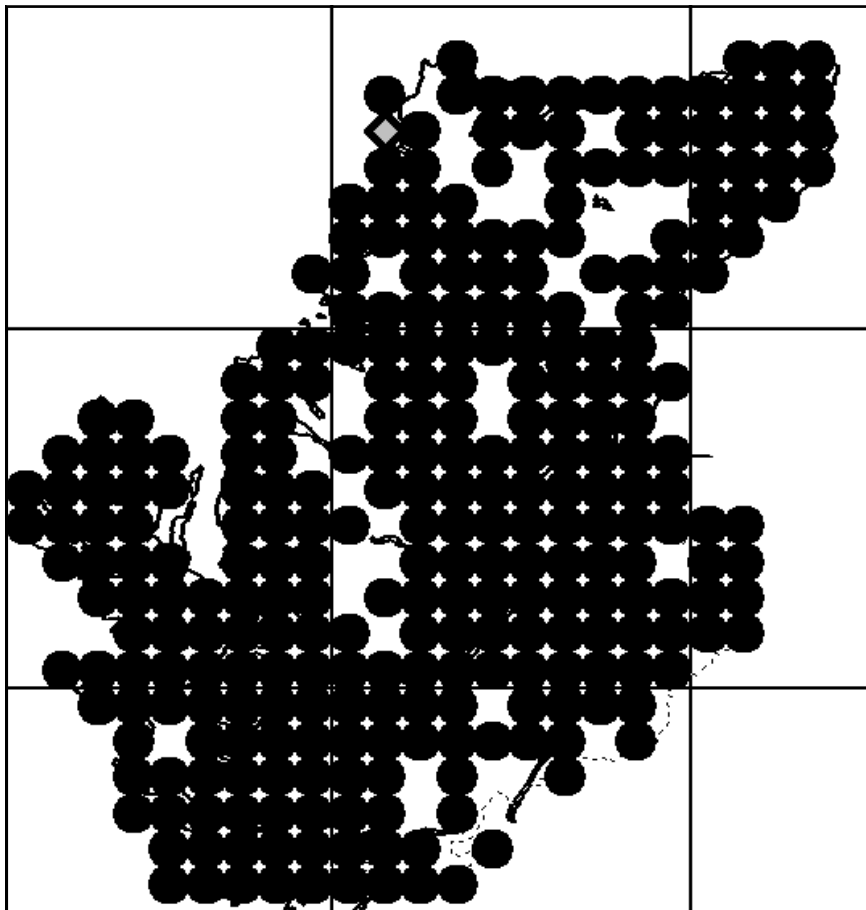
Two records on the north coast were both of workers, confirming the predicted further northward establishment of the species in Highland.



Bombus muscorum

Moss Carder Bee

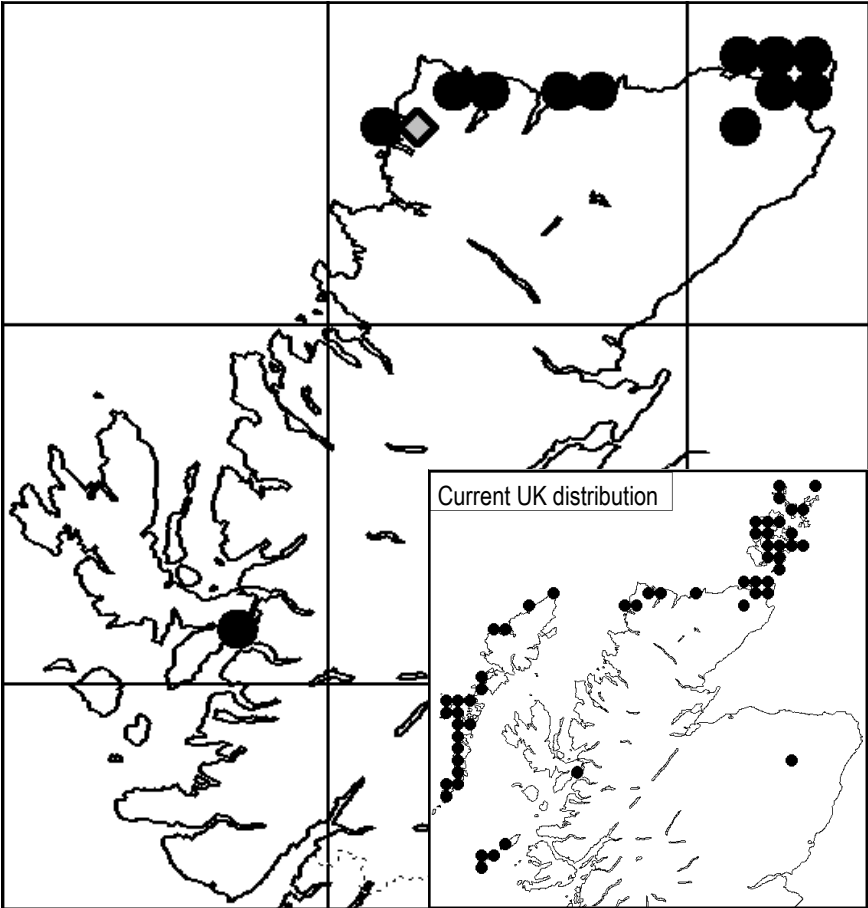
Five additional squares, all within the core areas in the west and north.



Bombus pascuorum

Common Carder Bee

One additional square in NW Sutherland.



Bombus distinguendus

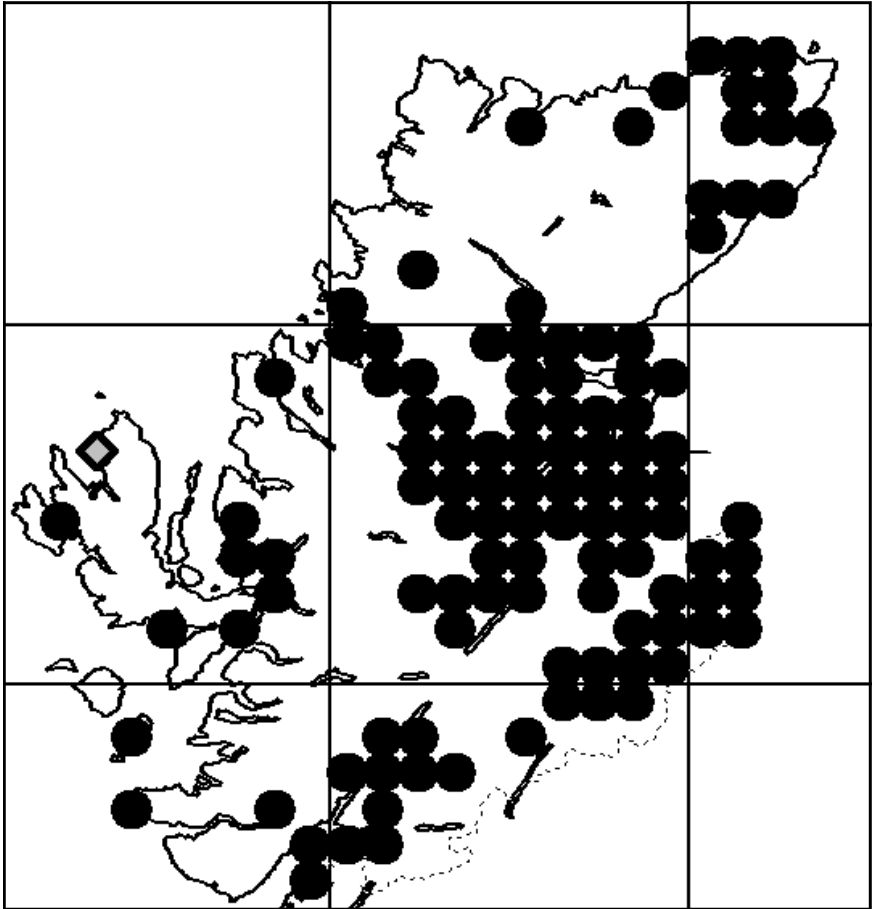
Great Yellow Bumblebee

Found at Oldshoremore, close to the known location at Polin. This does not represent a significant addition to range, but enhances the importance of the general locality.

Bombus ruderarius

Red-shanked Carder Bee

Found on Iona (outside our area) in 2005 (Ben Darvill pers. comm.). No map.



Bombus bohemicus

Gypsy Cuckoo Bumblebee

Found at Uig in N Skye, extending its known range on the island.

Acknowledgements

Some of the additional records were reported by Paul Castle, Ben Darvill, Martin Hind, Mary Legg, the late Gill Nisbet, and Steve North.

Bibliography

Macdonald, M. & Nisbet, G. 2006. *Highland Bumblebees: Distribution, Ecology and Conservation* . HBRG, Inverness. (ISBN 0 9552211 0 2, ISBN 978 0 9552211 0 1.)