

THE GRASSHOPPERS OF THE ISLAND OF BUTE

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Introduction

This short paper deals with the Acrididae or grasshoppers which have been recorded for the Island of Bute. Grasshoppers are among the more conspicuous and easily recognised insects, so it is somewhat surprising that relatively little interest seems to have been taken in them by Bute field-naturalists in the past. Certainly I can trace no significant reference to grasshoppers in any previous volume of the Society's *Transactions*, although at least one species is very common on Bute.

The time is therefore probably overdue for publishing this short list, since the latest work on the British Grasshoppers (Marshall and Haes, 1988) gives only one species recorded for Bute, and three species (all older records) from the neighbouring Clyde island of Arran.

Identification

Although grasshoppers are usually easily recognised as such by almost everyone, identification of individual species can be quite another matter. The identification guides I originally used were by Burr (1936) and later by Ragge (1965). Recently I have used Marshall and Haes (1988), a work which set out to update and supplement Ragge "long established as the orthopterist's Bible".

Initial collecting is usually most easily carried out by the use of a standard butterfly net. Thereafter, the identification method I have usually used for any insect not immediately recognisable is as described in my paper on the Bumble-Bees of Bute (Gibson, 1990), *i.e.* to catch and imprison the insect for a short time in a clear plastic cup with a lid. This makes close and detailed examination easily possible, and identification, when immediately compared to a suitable key, usually reliable. It also avoids any unnecessary harm to the insect.

Life-cycle

Grasshoppers have a simple one-year life-cycle. The adult insects are active during the summer months, when they mate, lay eggs, and then die in the autumn; the eggs then hatch in the spring. Adult grasshoppers have a short life, and in my experience are active on Bute only for the four months from mid-June to September, although in really warm summers some may still be seen until mid-October.

Systematic List

The following notes are based entirely on my own observations. Originally, some forty-odd years ago, any information on Bute grasshoppers was collected fairly casually in the course of my other field-work, mainly on the vertebrates of Bute, but recently, particularly since the publication of the splendid new book by Marshall and Haes (1988), I have made a determined effort to collect detailed information on Bute grasshopper distribution. Arrangement and nomenclature follow Marshall and Haes (1988).

GREEN GRASSHOPPER *Omocestus viridulus*

This is apparently one of the most widely distributed grasshoppers in Britain, although on the Island of Bute it is not nearly so common as the Meadow Grasshopper. It is, however, fairly well distributed, and I have recorded it, in small numbers, from coarser grassland, moorland, the edges of woods, and (less often) near the coastal fringe; in fact from most areas apart from bog-land. No records from Inchmarnock.

FIELD GRASSHOPPER *Chorthippus brunneus*

Fairly common and reasonably well distributed over the island. This is the second commonest grasshopper on Bute, although in numbers it is still well behind the Meadow Grasshopper, and is more local. Probably best known in shorter grassland, edges of woodland, and around the coastal fringe; less common in long grass. Several records from Inchmarnock.

MEADOW GRASSHOPPER *Chorthippus parallelus*

In my experience this is by far the commonest grasshopper on Bute. It occurs widely over both north and south parts of the island, including the highest hills, and although probably commonest on agricultural grassland, it also occurs regularly on sandy pastures, the moors, edges of woodland, and the coastal fringe. It also seems to be the only grasshopper commonly found on bog-land. On some warm summer days it is extremely common, and can be seen jumping around in large numbers. Regularly seen on Inchmarnock.

MOTTLED GRASSHOPPER *Myrmeleotettix maculatus*

Undoubtedly the least common Bute grasshopper. Occurs in small numbers, mainly on shorter grassland near the coastal fringe, and only seems to be seen in very sunny weather. Nearly all my records come from the south of the island, with only a few records from the north (north-west shore-line), but it must be admitted that my collecting activities have been much greater in the south. More information would be welcome. No Inchmarnock records.

Summary

By far the commonest grasshopper on Bute is the Meadow Grasshopper, which is common in all suitable areas and in sheer numbers accounts for most of the Bute grasshopper population. The Green and Field Grasshoppers are much less common, and the Mottled Grasshopper seems to be fairly rare. Although I have only been able to identify four grasshopper species on Bute, these are apparently the only four species known to occur in Scotland (Marshall and Haes, 1988), so I suppose we are fortunate that all four Scottish species have been recorded from Bute.

In this respect, it is probably also worth drawing attention to the fact that a closely allied species, the Common Ground-hopper *Tetrix undulata* (the only Scottish ground-hopper species) also occurs on the Island of Bute. A short note about this appears in the current

volume of the Society's *Transactions* (Gibson, 1996).

Needless to say, I shall be extremely grateful to receive any additional information about Bute grasshopper distribution, particularly about the status of *maculatus*.

References

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