

ORTHOPTERA

CRICKETS AND GRASSHOPPERS IN DYFED - A P FOWLES

Of the thirty species of Orthoptera resident in Britain seventeen have been recorded in Dyfed. Until recently their distribution here was poorly known as many naturalists had ignored the group despite their conspicuousness and charm, however, in the past four or five years there has been an upsurge of interest which has contributed significantly to an understanding of their status and local ecology. The picture is still far from complete and many questions remain to be answered about distribution, habitat preference, life-style etc There is also every likelihood that new species could be found in the county, though realistically there are only two likely candidates - the Lesser Marsh Grasshopper Chorthippus albomarginatus (possible on upper saltmarshes in the southern estuaries) and the Greenhouse Camel-cricket Tachycines asynamorus (an Asian intruder occurring only in heated greenhouses). As with many other insect groups, southern England has a greater diversity of Orthoptera than can be found in Dyfed but nonetheless we have several interesting species which deserve greater popularity amongst local naturalists. It is surprising that the Orthoptera have been neglected as they are relatively large, colourful insects whose identification is aided by their distinctive songs, or stridulation. The recent publication of an excellent and inexpensive guide (Brown 1983) should bring the recognition they deserve whilst Ragge's (1965) book, sadly out of print, currently remains the only comprehensive account of their life-history.

Dyfed's Grasshoppers are widespread throughout the county, indeed three of them probably occur in every 10 km square. They begin to appear as nymphs in May and the earliest reach adulthood and begin to sing in mid-June and can be seen in their favoured open grassland habitats until October. The **COMMON FIELD GRASSHOPPER** Chorthippus brunneus prefers dry soils and is the species most likely to be encountered in urban environments such as waste ground. It is one of the few Orthopterans which occur on our offshore islands and is generally common in lowland Dyfed although it becomes much scarcer above about 300 m asl. In contrast, the **MEADOW GRASSHOPPER** Chorthippus parallelus is most abundant in damp pastures though also occurs on well-drained soils with luxuriant vegetation. It lacks the ability to fly and this probably accounts for its absence from our islands, its colonisation of Britain following the last glaciation was probably too slow to enable it to reach West Wales before the islands were cut off from the mainland. The **MOTTLED GRASSHOPPER** Myrmeleotettix maculatus is a charming insect with clubbed antennae (the other grasshoppers in Dyfed have antennae which taper gradually) and an astonishing variety of colour morphs. It is to be found only on the driest soils, particularly along the coast, where mature dunes and cliff scree can have large populations, but also inland on the spoil of abandoned mines and in some localities on the limestone slopes of Carmarthenshire. Our other widespread species, the **COMMON GREEN GRASSHOPPER** Omocestus viridulus, is almost ubiquitous - its "ticking" song a feature of summer walks throughout the county. This is the first of our grasshoppers to mature each year and it can be found in lush vegetation from coastal dunes to the mountain tops, where it is invariably the only species present. It has also been recorded from Skokholm and Skomer Islands. [A fifth species, the **WOODLAND GRASSHOPPER** Omocestes rufipes, has been reported from southern Carms but this is the only Welsh record and is believed to be erroneous.]

The Groundhoppers are only about one centimetre long and resemble miniature, stocky grasshoppers. They are usually some shade of brown, though more colourful forms do exist, and as such are easily over-looked. However, there is the advantage that they over-winter in the adult stage and are therefore active from the first mild days of spring until the onset of winter. The chief foodplants are mosses and

algae. The **COMMON GROUNDHOPPER** Tetrix undulata is found throughout Dyfed but it is certainly under-recorded at present. It can tolerate drier conditions than its two relatives and is frequently seen along rides or footpaths through woodland; heaths and sand-dunes are also favoured. Records currently indicate a lowland distribution in Dyfed, up to about 250 m asl, although this may rather be due to a lack of survey work on higher ground. The **SLENDER GROUNDHOPPER** Tetrix subulata inhabits damper localities, especially the muddy margins of ponds, and also occurs on wet pastures and in freshwater marshes. It is presently known only from a handful of sites in Carmarthen and South Pembrokeshire but is probably more widely distributed and could potentially occur anywhere in lowland Dyfed. The only other British representative of the Tettigidae is **CEPERO'S GROUNDHOPPER** Tetrix ceperoi which is very similar in appearance to subulata. This is a very local insect of southern Britain and was first recorded in Dyfed in 1984 when specimens were collected from two localities on the Carmarthen coast. These colonies, above the saltmarsh at Tywyn Point and alongside Witchett Pool in Laugharne Burrows, are the most northerly in Britain for the species.

Eight Bush crickets occur in Dyfed, they generally inhabit areas of taller, more scrubby vegetation than the grasshoppers and none can be regarded as common throughout the county. Many of them stridulate loudly, and this can be the easiest way to locate them as they tend to be comparatively elusive, although some species have a high-pitched song which eludes all but the keenest ears. They reach the adult stage in July and last through until the first frosts in October but are often most conspicuous as early-instar nymphs (which are easily identifiable in most species) in May and June. The **SHORT-WINGED CONEHEAD** Conocephalus dorsalis frequents marshy areas near the coast where it is usually found amongst tall stands of rushes and sedges, Scirpus maritimus in particular. The eggs, laid within plant stems, can withstand prolonged immersion in brackish water and as such the species is a regular inhabitant of saltmarshes. It is scarce in Ceredigion, where it is known only from the Dyfi Estuary, but much more widespread in the other two districts. The **BOG BUSH CRICKET** Metrioptera brachyptera is one of our rarest species, apparently confined to just two sites in the county - Cors Fochno (Borth Bog) in Ceredigion and Cors Goch, Llanllwch in Carmarthen. Here it occurs in some abundance amongst sparse Myrica bushes, usually where there is a lush growth of Molinia but also in more open areas with Erica tetralix. Several other suitable localities in Dyfed have been searched without success but the discovery of one or two new colonies may be anticipated. A similar species is **ROESEL'S BUSH CRICKET** Metrioptera roeselii although it is readily distinguishable by the bright yellow margin to the pronotal side-flaps. Its occurrence in Dyfed (and Wales) is limited to the Dyfi Estuary where it was first discovered in 1970. At the time it was known only from the south and east coasts of England and it was speculated that the Dyfi population had been accidentally introduced. This possibility still exists though the recent discovery of the species in southern Ireland perhaps suggests a natural origin. It is locally common around the fringe of the inner estuary where it inhabits rushes which are subject to occasional spring-tide flooding.

The commonest member of the Tettigonidae in Dyfed is the **DARK BUSH CRICKET** Pholidoptera griseoaptera which fills the evening air with shrill chirps at many sites in the south of the county. Its favoured haunts are bramble thickets in hedgerows and coastal valleys, there are rather few inland records. The south coast has strong populations but north of the Teifi valley there are only three reported sightings. Another of our rarities is the **GREY BUSH CRICKET** Platycleis denticulata, recorded from a few sites on the Pembrokeshire coastline where it inhabits scrub in sheltered situations. Colonies are known from Dale and Marloes and there is an old record from St David's Peninsula. Colonies are often small and localised and the species could be easily overlooked, further sites in Pembrokeshire and the adjacent Carmarthen coast should be surveyed.

Our only tree-living Orthopteran is the **OAK BUSH CRICKET** Meconema thalassinum which is carnivorous and not restricted to Oak woodland. The species has been recorded from few localities in Dyfed but is probably widely distributed, even occurring on garden trees as in Aberystwyth. It is a nocturnal insect, often turning up at moth-traps and houselights in the autumn, and the best way to see it is to search the lower boughs of old deciduous trees by torchlight. The **SPECKLED BUSH CRICKET** Leptophyes punctatissima is another elusive species, beautifully camouflaged in its chosen tangles of bramble and nettles. It is not uncommon in Dyfed, particularly in the south, but has rarely been seen away from the vicinity of the coast where sheltered valleys are favoured. Searching for the more abundant and confiding nymphs in June can be the easiest way to locate them. Last, but far from least, is the **GREAT GREEN BUSH CRICKET** Tettigonia viridissima, an impressive insect with a far-carrying song that can be heard up to two hundred metres away on a still summer's evening. Apart from a recent sighting in Carms the species is restricted to coastal localities of southern Pems where it is quite widespread. It inhabits a variety of shrubby situations where there is warmth and shelter, the males often climbing to the top of a bush to sing.

Two types of Cricket have been recorded in the county, although one of these has not been recorded for fifty years. The **HOUSE CRICKET** Acheta domestica is not native to Britain, having become widely established after the sixteenth century following its introduction from Asia. However, it never seems to have been common in Dyfed and now appears to be confined to Carms. It is widespread in Cydweli old town and in hot summers its shrill song bursts forth from cracks in many garden walls. Other localities are Llangadog Creamery and the rubbish tip at Llanllwch. There are old records from Aberystwyth and Blaenannerch in Ceredigion. Finally, there is the **MOLE CRICKET** Gryllotalpa gryllotalpa, an extraordinary creature that is extremely rare in Britain as a whole - there are two records for Dyfed. Edward Llwyd wrote to John Ray in 1693 that he had observed them that year near Cydweli, Carms "in the sealands that are covered every tide" and there is a specimen in the National Museum of Wales which was collected at Haverfordwest, Pems in 1936. The adults live in burrows in moist soil, water-meadows and flood-plains are ideal habitats. The species is elusive and there are many suitable localities in Dyfed but it is doubtful that it is still a resident here.

The Mole Cricket might have gone from our meadows but can we be certain? It was once common enough in Wales to be given the name "Rhing y Les", and perhaps still sings in isolated riverside pastures. Our knowledge of the distribution of so many of our Orthopterans is based on the fieldwork of a few observers and large areas of the county have only been briefly surveyed. Much remains to be done and many interesting discoveries are still to be made; with improved and inexpensive guides local naturalists have much to contribute to our knowledge of this diverse group of insects.

Bibliography

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