

ORTHOPTERA OF SUFFOLK

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Grasshoppers, bush-crickets, and the closely related cockroaches and earwigs, are familiar insects to naturalists and members of the public alike. Many of the species are relatively large, vocal, easy to locate, common and well described in the literature, yet despite this they remain very poorly recorded in Suffolk.

Nearly twenty years have elapsed since the last account of grasshoppers and bush-crickets in these Transactions (Maybury, 1982) and the last papers to deal with cockroaches and earwigs are over fifty years old (Morley, 1929, 1946).

The aim of this present paper is to produce an up to date checklist of all orthopterans recorded in Suffolk and to provide a framework for future recording in the county.

The order Orthoptera, comprising bush-crickets, true-crickets, groundhoppers and grasshoppers, is closely allied to the Dictyoptera, comprising cockroaches and the Dermaptera, comprising earwigs. These three orders, together with the Phasmida (stick-insects), have long been grouped together for recording purposes.

The following checklist contains all species known to have occurred in Suffolk up to the end of 1999. Information on the status of each species has been drawn from a brief literature search and from records supplied to the Orthoptera Recording Scheme for Britain and Ireland. For species known to have occurred since 1970, the current 10-km distributions have been given; numbers in brackets refer to pre-1970 records. Occupied 10-km squares on the county boundaries do not necessarily imply that the record was made in Suffolk.

Meconema thalassinum (De Geer) Oak Bush-cricket

This small green bush-cricket is a common and widely distributed species. It inhabits deciduous woodland and hedgerows and can be found in quite isolated trees where it is most easily encountered by beating. Being fully winged and largely nocturnal it is frequently encountered at light, particularly in urban areas.

Recorded from all squares except TL (66) 67 68 75 77 85 (87) (88) 95
TM 07 08 27 33 36 37 48 49

Tettigonia viridissima L. Great Green Bush-cricket

This species is the largest native orthopteran, females attaining a length of up to 54 mm, yet despite their size they can be frustratingly difficult insects to locate. The stridulation of the male is very loud and far carrying and can even be detected from a moving vehicle, a factor that has led to the discovery of two new sites in recent years. It is thinly distributed in Suffolk, favouring rough scrub in warm, sunny locations. Large populations have been found around Bramford and the Whitehouse district of Ipswich and around Aldeburgh and Thorpeness.

Recorded from squares TL 78 (86) 87 88 (93)
TM 04 13 14 (15) 17 (23) 24 45 46

Pholidoptera griseoptera (De Geer) Dark Bush-cricket (Plate 4)

This medium sized species is undoubtedly the most widely distributed bush-cricket in the county, occurring in a wide range of scrubby habitats. Nymphs can easily be found sunning themselves in spring and early summer and, when mature, males stridulate throughout the afternoon and evening, even in dull weather when few other orthopterans are vocal.

Recorded from all squares except TL 67 68 77 87 88
TM 44

Platycleis albopunctata (Goeze) Grey Bush-cricket

This medium sized greyish brown bush cricket is almost exclusively restricted to the coast in Britain, inhabiting long grass and herbage on cliffs, dunes and shingle beaches. It can be found along the south coast from the Isles of Scilly to Kent, as well as several sites in north Devon and Wales. One of the most important orthopteran finds in Suffolk in recent years was the discovery of this species by two independent observers in the shelter of the lighthouse on Orfordness in August 1996 (2 specimens in the collections at Ipswich Museum). This represents the most northerly location for the species on the east coast of Britain, being approximately 80 km north of the nearest Kent locality. These records have only recently come to the attention of both myself and the national recorder. It is hoped that fieldwork during 2000 will reveal the true extent of the population.

Metrioptera roeselii (Hagenbach) Roesel's Bush-cricket

Roesel's Bush-cricket is one of two orthopterans currently showing dramatic range expansion in southern Britain (the other being Long-winged Cone-head) and Suffolk is at the forefront of the northward movement of the species. The first county record came from East Bergholt in 1947 and it has slowly been pushing northwards ever since. It is typically an inhabitant of tall, dry, established grassland along the coast and estuaries and inland along river courses. In recent years it has increasingly been colonising roadside verges, swiftly expanding its range. It probably remains unrecorded from several 10-km squares in the county.

Recorded from squares TL 63 64 73 74 75 76 (83) 84 85 93 95
TM 03 04 13 14 23 24 25 33 34 35 44 45 58

Conocephalus discolor (Thunberg) Long-winged Cone-head

This species has shown the most rapid range expansion of any native orthopteran. Prior to 1990, it was largely restricted to a handful of counties along the south coast of Britain, but since that time it has rapidly spread in all directions, turning up in many new counties. The first Suffolk record was obtained at Sycamore Farm, Swilland (TM25) in 1995, where there is now a large population, but to date the only other county record concerns a colony found at Great Cornard (TL84) in 1999. It is likely that this species occurs at many more sites, but as the stridulation of the male is very quiet a thorough search, ideally with a bat detector, may be necessary to detect new colonies.

Conocephalus dorsalis (Latreille) Short-winged Cone-head

This slim bush-cricket is typically an inhabitant of coasts and estuaries, occurring in saltmarsh, reedbeds and other similar habitats. It can also be found more sparingly inland on marshes and well vegetated ponds and dykes. The stridulation of the male is barely audible and this, coupled with its ability to sit motionless on stems, makes thorough searching necessary to record the species. As with the preceding species a bat detector is useful in locating stridulating males.

Recorded from squares

TL 66 (77) 78 98

TM 03 07 (08) 13 14 23 25 33 34 35 44 45 46 47 (48) 49 57 58

Leptophyes punctatissima (Bosc) Speckled Bush-cricket

This small, flightless bush-cricket is widespread and common across most of the county. Nymphs can easily be found sunning themselves on low herbage, particularly brambles, although adults may become more elusive as they move higher up in the vegetation. The stridulation of the male is barely audible to most people and this is another species which is easier to locate with a bat detector.

Recorded from all squares except

TL 67 68 78 87 88

TM 08 15 (33) (37) 38 48 49

Acheta domesticus L. House-cricket

This long established alien is nowadays most frequently found in heated buildings such as hospitals and factories and outdoors in rubbish tips where there is sufficient warmth among decaying matter for reproduction to be successful. Records for Suffolk have been few and far between, particularly in the second half of the twentieth century, the last report coming from Hundon in 1973. It is likely that future fieldwork will reveal this species to still be present in the county.

Gryllus campestris L. Field-cricket

The only claim for this species in Suffolk was of one taken by W. H. Tuck in the vicinity of Tostock in May 1907. No further details of the record exist and there has always been an element of doubt surrounding the record. Nationally, it has always been one of the rarest orthopterans, being confined to a single site in West Sussex by the early 1990s. A recovery programme for the species was established by English Nature in 1992 with successful re-introductions at three sites in Surrey, Sussex and Hampshire by 1998.

Gryllotalpa gryllotalpa L. Mole-cricket

The Mole-cricket was reported several times from Suffolk in the nineteenth century, the last sighting coming from Dallinghoo in 1858. Sadly, there have been no confirmed breeding records anywhere in Britain in recent years and it is extremely unlikely to be found in Suffolk again.

Tetrix subulata L. Slender Ground-hopper

This small insect is most easily separated from the similar Common Ground-hopper by examining the hindwings and pronotum, which clearly extend well beyond the tip of the abdomen in this species. The Slender Ground-hopper

has a distinct preference for moist habitats where there is a good moss flora nearby. It is most frequently found on the muddy edges of ponds and streams and in wet meadows. It is a widespread but localised insect in Suffolk. However, recent discoveries suggest that it is a seriously under-recorded species and future recording will undoubtedly add many new sites.

Recorded from squares TL 64 66 74 (77) 78 83 84 88 94 95 98
TM 03 04 05 07 (08) 13 14 18 25 28 39 49 59

Tetrix undulata (Sowerby) Common Ground-hopper

Like the previous species, the Common Ground-hopper is an unobtrusive, small insect, being harder to locate than many other orthopterans. It can be found in both wet and dry locations, particularly favouring woodland rides and clearings and heathland, provided that there is plenty of bare ground and low vegetation with a good moss flora. Recent records suggest that this is a localised insect in the county but, like the Slender Ground-hopper, it is probably seriously under-recorded.

Recorded from squares TL 66 68 78 83 84 (93) 95
TM 03 04 05 (08) 13 (14) (24) (48) (49)

Stethophyma grossum L. Large Marsh Grasshopper

This large, colourful grasshopper is typically an inhabitant of quaking acid bogs. In Suffolk it was reported from Belton Bog prior to 1834 and Kessingland in 1935 but it is certainly now extinct in the county. In Britain this species is currently only to be found in Dorset and Hampshire, there being no recent records from former sites in Somerset and Surrey (Widgery, 2000).

Stenobothrus lineatus (Panzer) Stripe-winged Grasshopper (Plate 5)

This colourful grasshopper has a most distinct, almost metallic sounding, stridulation, quite unlike that of other grasshoppers. It is most commonly found on short turf on chalk and limestone and in Suffolk it has been found at many sites in Breckland. It also occurs more sparingly on heaths and dunes and coastal populations exist at Westleton Heath, Sizewell and Thorpeness golf course.

Recorded from squares TL 66 77 78 87 88 98
TM 46 47

Omocestus rufipes (Zetterstedt) Woodland Grasshopper (Plate 6)

The Woodland Grasshopper is usually a very dark insect, some individuals appearing almost black, with a bright red tip to the underside of the abdomen and characteristic white tips to the palps. It is typically found in deciduous woodland in grassy rides and clearings, occasionally being found on downland and lowland heath. Old records exist for Suffolk from Lowestoft, Barnby Broad, Bentley and Dodnash Woods, many of which have been considered suspect. It was thought to be extinct in the county until 1996 when a remarkable series of records was made in the space of a few days by one observer. Sightings were made at three sites around Walberswick and at Dunwich, Blaxhall Common and Tunstall Common. This is certainly one species which would benefit from specific searches in coming years.

Recorded from squares TM 35 46 47

Omocestus viridulus L. Common Green Grasshopper

This is one of the most widely distributed grasshoppers in Britain, favouring damp, coarse grassland in a variety of habitats. Adults lack the red or orange colouration present on the abdomen of many other species of grasshoppers and the distinctive stridulation of the male lasts for up to twenty seconds, gradually increasing in volume. It has a very curious distribution in Suffolk, appearing to be absent from much of the central and coastal areas of the county. A similar pattern of distribution has been revealed in Essex (Wake, 1997) although in Norfolk it is widespread and often abundant (Richmond, 1999). Specific searches in the future will hopefully reveal its true distribution in the county.

Recorded from squares TL 65 66 68 74 77 78 86 87 88 98
TM 07 08 (14) 17 18 39 45 46 47 (48) 49 (57) (58)

Chorthippus brunneus (Thunberg) Field Grasshopper

This medium sized grasshopper has several colour varieties and patterns, the commonest form in Suffolk being brown and 'stripey'. It can be found in a wide variety of habitats, favouring dry, sunny conditions where the vegetation is low. It is commonly found in urban locations on wasteland, roadside verges and even small gardens. This is one of the commonest and most widespread orthopterans in the county.

Recorded from all squares except TL (65) 94
TM 16 26 (36) 37

Chorthippus parallelus (Zetterstedt) Meadow Grasshopper

This medium sized grasshopper is usually of green colouration with brown wings. The male has forewings clearly shorter than the abdomen whilst the female has very short forewings, only reaching half way along the abdomen. It inhabits a wide variety of grassland habitats from short heathland turf, through woodland rides and wasteland, to the tall grasses of coastal seawalls and saltmarsh. Like the previous species it is widespread and common across the county.

Recorded from all squares except TL 65 68 75 86 97
TM (34) (36) 49 (58)

Chorthippus albomarginatus (De Geer) Lesser Marsh Grasshopper (Plate 7)

This is another medium sized grasshopper, usually green or brown in colouration, the latter predominating in Suffolk. It inhabits a variety of grasslands, being a particularly characteristic inhabitant of saltmarsh and neighbouring grasslands along the coast and estuaries. It is also regularly encountered inland along river courses and in recent years it has increasingly been found on roadside verges. This species has clearly been expanding its range in the county in recent years and can probably now be found in the majority of 10-km squares.

Recorded from all squares except TL 65 66 83 93 95
TM 04 06 15 16 26 27 28 37 38 (48)

Gomphocerippus rufus L. Rufous Grasshopper

The Rufous Grasshopper was reported from Potters Bridge near Southwold in 1920 and Poors Heath in West Tuddenham in 1906 and 1913, but these

records must now be considered very doubtful. It is almost exclusively found in rough grass over chalk or limestone and there have been no confirmed records in Britain north of a line from the River Thames to the Cotswolds.

Myrmeleotettix maculatus (Thunberg) Mottled Grasshopper

This small grasshopper has a large number of colour variations with the antennae characteristically clubbed in the male and thickened at their tip in the female. Its habitat requirements are more select than most grasshoppers, requiring short, dry turf with plenty of bare ground in sunny locations. In Suffolk it is widespread in Breckland and on coastal heaths and cliffs, being more localised elsewhere when suitable conditions exist.

Recorded from squares TL 66 74 77 78 87 88 98

TM 05 07 13 14 24 33 34 35 39 45 46 47 (48) 57 58 59

Ectobius pallidus (Olivier) Tawny Cockroach

This small yellowish-brown cockroach is found in a variety of habitats including woodland, heathland and coastal dunes. It is quite widespread in southern England but is very rare north of the River Thames, so the discovery of several individuals at Wangford Carr (TL78) in 1988 was of great interest. The population is clearly self-supporting as a nymph was found at the same site in 1997.

Ectobius panzeri (Stephens) Lesser Cockroach

The Lesser Cockroach is typically a coastal insect, being found on sea cliffs, shingle beaches and sand dunes. Like the preceding species this small insect can be very unobtrusive and difficult to find. It has been found on the coast in Suffolk in recent years at Landguard, Thorpeness and Minsmere with older records from Felixstowe, Corton, Sizewell, Kessingland and Lowestoft. Inland records are rare, but increasing, so the discoveries at Snape Warren in 1984 and Westleton Heath in 1995 are of significance.

Recorded from squares TM 23 (33) 45 46 (59)

Labia minor L. Lesser Earwig

This small earwig can easily be confused with immature stages of the Common Earwig but, when mature, the males can be distinguished by their slender, gently incurved forceps and small size. It typically inhabits dung heaps and compost heaps where the stable warmth and humidity encourages breeding. The choice of habitat may explain the paucity of records in Suffolk. Unlike the Common Earwig this species flies readily and may be encountered in buildings and at light traps. Specific searches of suitable habitat will undoubtedly reveal more sites in the county.

Recorded from squares TL (74) 78 93

TM (03) 24 46

Apterygida media (Hagenbach) Short-winged Earwig

This species differs from the Common and Lesser Earwigs in that the hind wings are concealed by the elytra at rest. The forceps of the male are gently curved, with at least one tooth on each valve. It is most easily found in early autumn by beating hedgerows and scrub over a white sheet. Prior to 1998 the

bulk of the British population was centred on east Kent, with only a handful of records from Suffolk. However, in that year, John Widgery, the national Orthoptera recorder, found the species to be widespread and reasonably common across Suffolk with a total of fifteen new 10-km squares added during a one week visit to the county. Further searching will certainly add many more sites.

Recorded from squares TL 64 74 75 76 84 85 94 95 96 97
TM 04 05 06 07 16 25 26 27 36 (37) 48 58

Forficula auricularia L. Common Earwig

The Common Earwig is familiar to most people as a pest of garden plants. It occurs in most habitats, although it is scarce in dry heathland and saltmarsh herbage (Marshall & Haes, 1988).

Recorded from all squares except TL 67 (93)

Forficula lesnei (Finot) Lesne's Earwig

Like the Short-winged Earwig, this species also has the hindwings concealed by the elytra at rest. The forceps of the male are strongly curved with a widened basal portion. It may be found in woodland, scrub and other rough herbage. The only records for Suffolk are from Sudbury in 1923 and 1931 and Stoke-by-Nayland in 1916 although there was an unconfirmed report from Hundon in about 1970.

The species described above are all native to Britain with the exception of the House-cricket, which has been established in this country for many centuries. Numerous other species have been recorded in Britain from time to time, either as migrants or casual introductions. Many of these have been recorded in Suffolk in the past but there would appear to have been few documented records in recent years. It is beyond the scope of this paper to provide full details of all these records, but I am currently collating historical data for a possible future summary.

The information given in the accounts above provides a broad overview of the distribution of each species in the county, but more intensive recording is needed in the coming years to provide a more accurate assessment of each species status in the county. As an indication of the amount of information I currently have on file, the only species so far recorded in more the one hundred tetrads is the Dark Bush-cricket.

I would greatly appreciate any records observers may hold, both from recent years and earlier, and I would appeal to anybody who records Orthoptera in the future to submit their records. By the end of 2000 I hope to be able to produce the first provisional maps of Suffolk Orthoptera and to initiate the Suffolk Orthoptera Recording Scheme. It is my intention to publish a newsletter annually, providing information on Orthoptera recording as well as updates on the latest discoveries. Anybody who would like to contribute to the scheme and receive the first newsletter can contact me at the address below.

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Plate 4: Dark Bush-cricket, *Pholidoptera griseoaptera* (De Geer) - a typical view of this common and widespread insect (p. 54).



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Plate 5: Stripe-winged Grasshopper, *Stenobothrus lineatus* (Panzer) - a local species of Breckland and a few coastal sites (p. 56).



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Plate 6: Woodland Grasshopper, *Omocestes rufipes* (Zetterstedt) - rediscovered recently in Suffolk after an absence of many years (p. 56).



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Plate 7: Lesser Marsh Grasshopper, *Chorthippus albomarginatus* (De Geer) at Mayday Farm, Brandon, 1993. A widespread and common species over much of Suffolk (p. 57).