

Grasshoppers and related species Recording Scheme of Britain and Ireland

grasshoppers crickets stick-insects earwigs cockroaches mantises

www.orthoptera.org.uk



Newsletter 33, Autumn 2016

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Annual day of talks in the NHM London

Everyone is very welcome to attend the annual "Orthopterists' Meeting" of the Royal Entomological Society, whether to present research or just to listen and meet others. This year's meeting will be held in the **Earth Sciences Seminar Room, in the London Natural History Museum on Wednesday 2nd November 2016, 1:00-5:10pm**, followed by drinks and a cold buffet (directions below). We are looking forward to a great line-up of talks and displays. We now have sufficient talks, but please email the convenor Björn Beckmann at orthoptera@ceh.ac.uk if you would like to bring a poster or display.

Programme

1:00 Arrival & tea; posters & displays

1:30 Welcome

1:40 Louise Dyson (University of Warwick) – How many locusts does it take to make a swarm?

2:00 Hannah ter Hofstede (Dartmouth College, USA) – Imitating bats to startle females: evolution of lebinthine cricket calls

2:30 Julie Sarmiento-Ponce (University of Cambridge) – Phonotaxis experiments in crickets: Walking response depends on surface structure of substrate

2:50 Megan Shersby (naturalist and blogger) – Encouraging love for Orthoptera amongst young birders

3:00 Break

3:30 Marion Hall & David Robinson (Open University) – Diet and reproductive success in Speckled Bush-crickets *Leptophyes punctatissima*



Rufous Grasshoppers *Gomphocerippus rufus* by John Walters

- 3:50 Rose Poston-Saynor & Karim Vahed (University of Derby) – Surveying one of Britain's rarest crickets, the Scaly Cricket *Pseudomogoplistes vicentae*
- 4:10 Ed Baker, Hannah O'Sullivan and Quentin Geissmann (Natural History Museum London) – Towards automated monitoring of Orthoptera
- 4:30 Roger Hawkins – Hear the Birds Again - a hearing aid also for Orthopterists
- 4:40 John Walters (wildlife artist) – Observing the Rufous Grasshopper *Gomphocerippus rufus* and recording behaviour through field sketching and video
- 5:10 Drinks, followed by supper**
- 8:00 Finish**

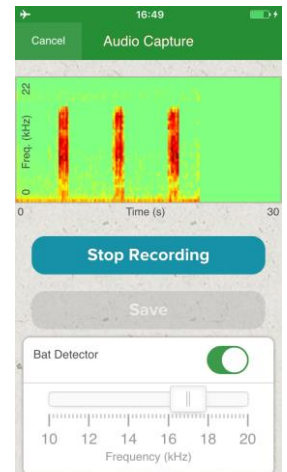
Posters / displays

- iRecord Grasshoppers app with sound recording and bat detector function
- Hear the Birds Again – a hearing aid also for Orthopterists
- Captive-reared native bush-crickets
- Display of phasmids
- new book of French, Belgian and Swiss Orthoptera
- new book of German and north-Tyrolian Orthoptera

Registration

Please register by sending an email to orthoptera@ceh.ac.uk, or by post to Björn Beckmann, Centre for Ecology & Hydrology, Wallingford OX10 8BB, providing the following details:

- your first name, surname and institution if applicable (for name badge)
- title of talk or poster or display, if you would like to present something
- indicate whether you will be staying for the buffet or not, and any special dietary requirements



Cost

- Either a full price of £14 to include a cold buffet with wine, and tea and biscuits during the afternoon
- Or a reduced price of £4 to include tea and biscuits only, if you are not staying for the buffet
- For students and members of the Royal Entomological Society the respective prices are £10 (with buffet) and £0 (without)

Payment

- either send a cheque made payable to the Royal Entomological Society to: Kirsty Whiteford, Royal Entomological Society, The Mansion House, Chiswell Green Lane, St Albans, Herts, AL2 3NS
- or pay by bank transfer: Royal Entomological Society, sort code 30-97-25, account number 01921533. Please ensure that you include your name and "Orthoptera SIG" for reference.
- or pay by card over the phone. Please phone Kirsty on +44 (0)1727 899387. There is a 2% admin charge for credit cards, no charge for debit cards.

Directions

The meeting will be held in the Earth Sciences Seminar Room in the Natural History Museum London. Come in by the main entrance on Cromwell Road and go to the Admissions Desk immediately on the left, from where you will be collected. (If you enter from Exhibition Road walk through the galleries to the Cromwell Road entrance). If you are late, ask the Admissions Desk to phone the Earth Sciences Seminar Room, or call Judith on 07802 154 711 or Björn on 07506 013 203. Bags are searched when entering the museum so do not carry knives, scissors or similar sharp items as they will be (temporarily) confiscated. When leaving ask Judith or Ed to escort you back into the public galleries. The Museum closes at 6pm. After that we will leave via the basement and the Bronze Gate to Exhibition Road.

Hope to see you there!



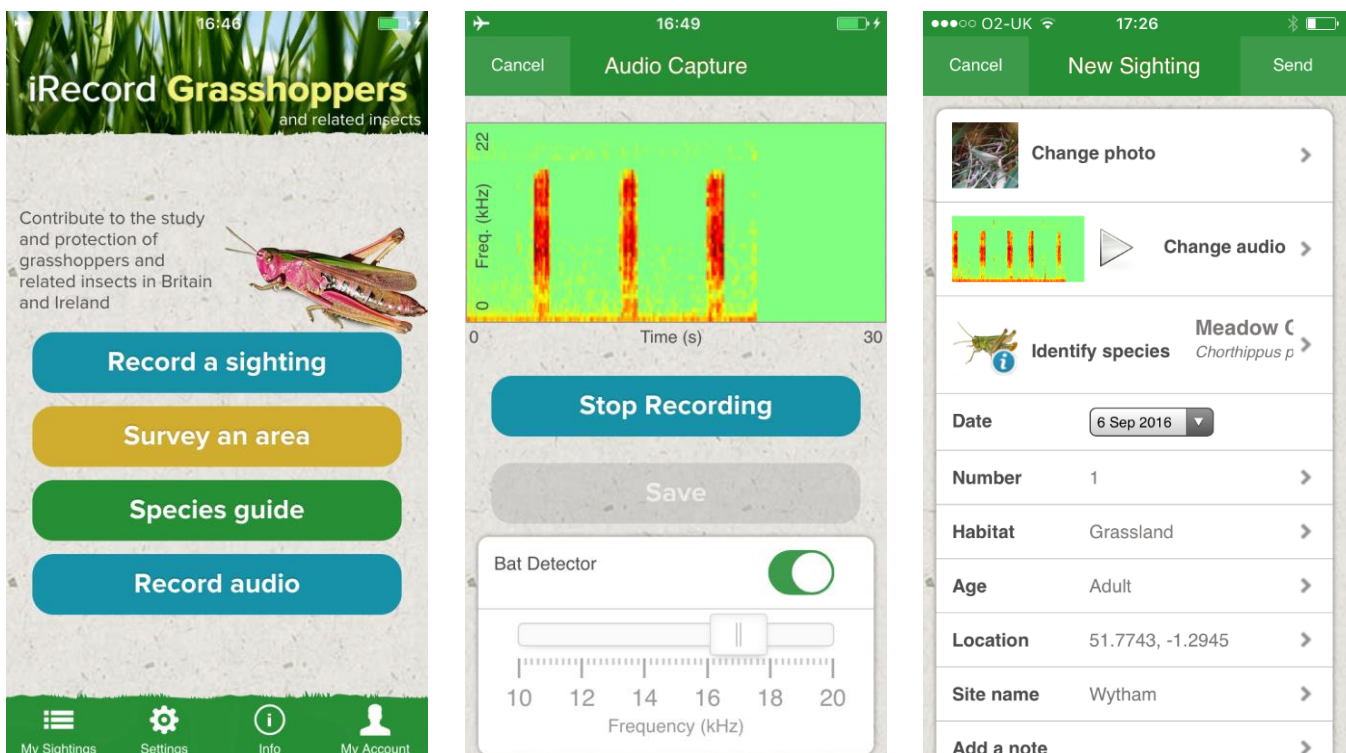
iRecord Grasshoppers update: sound recording + bat detector

We are very excited that the iRecord Grasshoppers app has just received an update, giving it two new functions:

- recording sounds – you can now record grasshopper and cricket calls in the field and attach them directly to records as evidence for species identification
- turning your phone into a bat detector – the app now has a function that works like a heterodyne bat detector, making quiet and high-pitched grasshopper and cricket calls much easier to hear

You can access both new functions from the “Record Audio” button on the home screen, or from the “Audio Evidence” field on the single species record page.

The detector is intended to be used with headphones (otherwise it is likely to cause feedback). Move the frequency slider to a setting that lets you hear the calls clearly (bush-crickets generally have higher calls and grasshoppers lower ones, but this may vary with temperature). The detector does not go above 20kHz for technical reasons (so is unlikely to work for most bats). The microphone tends to be at the bottom of mobile devices so point this forward when scanning for chirps. When you hear a call, start recording – you should see the chirps appearing in the sonogram. You can record with the detector turned on or off. The sound recorded is always the natural sound, not the detector sound. Recordings can be up to 30 seconds long – you can record for longer, but the earlier parts will then be gradually discarded.



Recorded sounds are uploaded to the iRecord database alongside any attached photos and stored with the record. Verifiers can use them to help with species identification.

The updated app version is currently available for Apple devices only <https://itunes.apple.com/gb/app/irecord-grasshoppers/id946228299?mt=8>, an update to the Android version https://play.google.com/store/apps/details?id=com.natural_apptitude.grasshopper will follow in the next weeks.

A huge thank you to Alex Rogers and Davide Zilli of Oxford (and formerly Southampton) University, who developed the sound recording and bat detector plugin, originally in the context of the New Forest Cicada Project <http://newforestcicada.info>, and Jasper Tredgold and Dave Kilbey of Natural Apptitude Ltd. <http://naturelocator.org> who built the plugin into the iRecord Grasshoppers app and made it all work in that context! Likewise a very big thank you to the Centre for Ecology & Hydrology (Paul Fisher and Nicholas Corker) and the Biological Records Centre for providing funding.

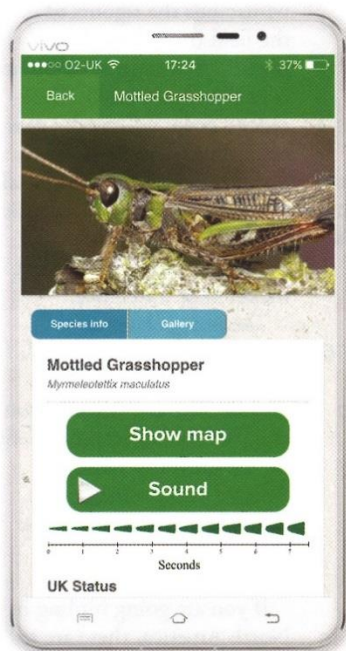
For those interested in connecting an external microphone or their own bat detector to their mobile device there are some useful tips in this video: www.youtube.com/watch?v=W0gMvyMU0PY.

We are interested to hear your views - please send any comments and suggestions about the app to orthoptera@ceh.ac.uk.

Prior to the addition of the new sound recording functionality, the app received a thorough review in the British Trust for Ornithology's News, reproduced with permission below.

TECH REVIEWS

iRecord Grasshoppers an app for orthopterists



Review of the Android app
by **Stephen McAvo**

Produced by the Centre for Ecology and Hydrology, the iRecord Grasshoppers app aims to introduce recording of Orthoptera (grasshoppers and allies) to a wider audience. This free app for mobile devices contains a comprehensive species guide and two options for recording your sightings.

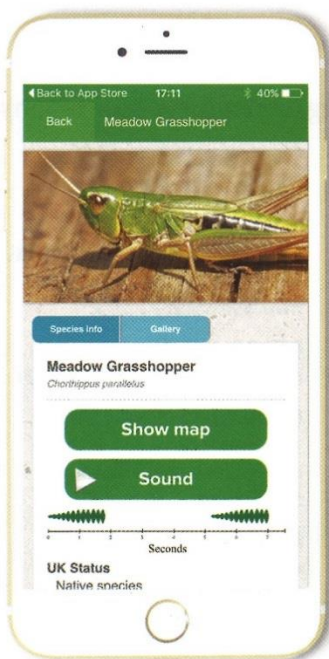
The species guide contains a list of all grasshoppers, bush-crickets and related insects likely to occur in Britain, and each species account contains several illustrations and photographs highlighting salient identification features. The accompanying text also highlights habitat, season and a range map. Each species (where relevant) also has a sound recording, which helps in identifying species. A good feature of the app is that in the settings you can select your region,

filtering the species guide down to those relevant to your location.

A key feature of the app is being able to record your grasshopper sightings in the field (for which registration with iRecord is required). This recording takes two forms: a single record or doing a dedicated survey in an area. For both, there are options to attach pictures taken on your mobile device in the field, as well as information on habitat and the specimen's age. Submitted sightings will also help monitor the distribution of grasshoppers in Britain.

All in all, this is a very nicely laid out app and worth downloading for the species guide alone.

Price	Free
Depth of content	●●●●●●●●
Ease of use	●●●●●●●●
Quality of content	●●●●●●●●
Overall	●●●●●●●●



Review of the iOS app
by **Paul Stancliffe**

The title of the app is a bit of a misnomer as it also allows you to record bush crickets and allied insects, as well as providing information to help identify them, their distribution in the British Isles and the months in the year that they are active.

The aim of the app, to contribute to the study and protection of grasshoppers and related insects in Britain and Ireland is clearly stated on the homepage. There are also 'record a sighting', 'survey an area' and 'species guide' buttons which take you to very easy to use sections that speak for themselves.

The identification plates are excellent, pointing out the features needed to separate one species from another, very useful for some of the similar looking species of grasshopper. This, coupled

with the high quality recordings of the stridulations and the clear distribution maps, turn this app into a very powerful identification tool.

The species guide covers 16 species of grasshopper, 19 species of cricket, all three groundhoppers and 14 related insects that include earwigs, cockroaches and stick insects. All of the entries for every species contain excellent photographs, handy identification tips and recordings of their stridulations. If you are into Orthoptera this is a must-have guide, I am looking forward to using it 'in anger' during the next couple of months and submitting my records to help support the study and conservation of these wonderful insects.

Price	Free
Depth of content	●●●●●●●●
Ease of use	●●●●●●●●
Quality of content	●●●●●●●●
Overall	●●●●●●●●

PHOTOGRAPH: PAUL STERRY/NATURE PHOTOGRAPHERS

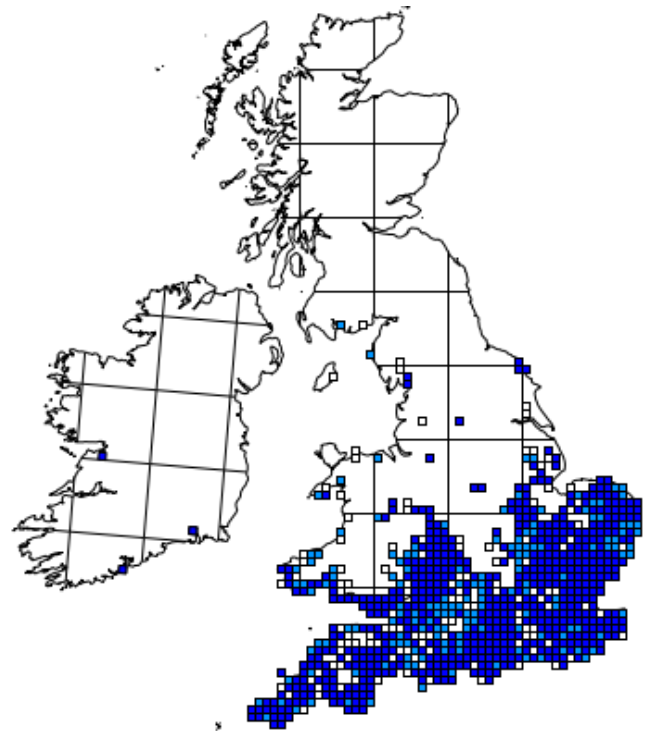


Records received in 2016

A big thank you to all who have sent in their observations this year, along with many excellent photos – a record total of >4,300 records received online alone so far. Please continue to do so! Some highlights are described in detail under Species News below.

Apologies that we did not manage to send out updated draft atlas maps in the spring as hoped. We have, however, updated both scheme datasets on the NBN Gateway, and updated the online maps in the species accounts on the scheme website to reflect this, and the maps are now coloured by the year of the latest record. So the best way to check current data holdings is to go to the species accounts www.orthoptera.org.uk/species, find the species of interest and scroll to the bottom of the account for the current distribution map (example of Dark bush-cricket *Pholidoptera griseoptera* on the right). Many thanks to Biren Rathod, Steph Rorke and Martin Harvey at the Biological Records Centre for their help with this!

We are aiming to publish the New Atlas in 2018, and all records up to the end of 2017 will be accepted. A set of draft atlas maps were appended to the Spring 2013 newsletter, which you can download at www.orthoptera.org.uk/recording/sites/default/files/Grasshoppers_and_related_insects_Newsletter_Spring_2013.pdf. We hope the maps illustrate some of the dramatic changes affecting Orthoptera and will inspire you to fill gaps in recording.



Recording your sightings

There are many ways to submit records:

- Log observations online at www.orthoptera.org.uk/survey or www.brc.ac.uk/irecord
- Use the iRecord Grasshoppers app to record observations:
Apple <https://itunes.apple.com/gb/app/irecord-grasshoppers/id946228299?mt=8>
Android https://play.google.com/store/apps/details?id=com.natural_apptitude.grasshopper
- If you have records in a digital format like Excel, Recorder, or MapMate, please email them to orthoptera@ceh.ac.uk or info@biodiversityireland.ie.
- If you have records on paper recording cards, please send them to one of the following addresses:

Biological Records Centre Centre for Ecology & Hydrology Wallingford OX10 8BB UK	National Biodiversity Data Centre Beechfield House Carriganore WIT West Campus County Waterford Ireland
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- If you send your records centrally to the scheme in any of the above ways, they will be shared with county recorders and Local Record Centres. Similarly, if you send your records to your county recorder, there is no need to send them in any other way.
- Observations of stick insects can also be submitted to the excellent Phasmid Study Group - <http://phasmid-study-group.org/content/Report-UK-Phasmid-Sightings>, we exchange data.
- The National Biodiversity Data Centre of Ireland has recently updated the Orthoptera data on their excellent online system, and is actively encouraging recording of this group. The dataset can be viewed at <http://maps.biodiversityireland.ie/#/DataSet/204/SpeciesGroup>. To submit additional sightings use the online form: http://records.biodiversityireland.ie/submit_records.php?fk=GrasshoppersCricketEarwigsStandard
- In Northern Ireland the Centre for Environmental Data and Recording (CEDaR) has set up a “Grasshopper Survey”, promoting the survey of sites for all known species: www2.habitas.org.uk/records/grasshoppers.

Recording Scheme updates



British Wildlife

See the summer and autumn issues of the bi-monthly British Wildlife magazine www.britishwildlife.com for highlights of Orthoptera observations and other current Recording Scheme news.



Twitter

The recording scheme is on Twitter: <https://twitter.com/grasshopperspot>. The feed is also included on the scheme home page www.orthoptera.org.uk.

Please get in touch if you would like a snippet of news sent out!



Facebook

The Facebook group “UK Orthoptera – Grasshoppers, Crickets & Allied Insects” www.facebook.com/groups/1638188166466726 is a great place to share photos, get help with identifications, and find out news.

Experienced recorders are encouraged to have a look regularly and provide advice on identifications (and encourage submission of sightings to the scheme!).

Identification Courses

A number of grasshopper and cricket identification courses were held this summer in Kent, Northamptonshire, Oxfordshire, and Greater London, as advertised on the website forum here: www.orthoptera.org.uk/content/grasshopper-and-cricket-identification-courses-2016.

Look out for these excellent opportunities to learn about species next year, several are likely to be repeated.

Please send any information about courses in 2017 to orthoptera@ceh.ac.uk – we are endeavouring to list all courses on the scheme website at www.orthoptera.org.uk/content/grasshopper-and-cricket-identification-courses-2017.



Field Grasshopper *Chorthippus brunneus* (photo Katie Beckmann)

County Recorders

Below is the current list of county Orthoptera recorders – please email orthoptera@ceh.ac.uk with any omissions, corrections, and offers of taking on vacant counties! Any county recorders interested in verifying online records for their county who are not doing so already, please register on www.brc.ac.uk/irecord and let Björn know. You will be given the required privileges and instructions – the verification system on iRecord is now very straightforward and easy to use.

Vice County		County Recorder	verifying records on iRecord
VC 3+4	Devon	Adrian Colston	
VC 5+6	Somerset	Robert Cropper	
VC 7+8	Wiltshire	Catherine Hosie	
VC 9	Dorset	Ian Cross / Bryan Edwards?	
VC 11+12	Hampshire	Lizzy Peat	
VC 13+14	Sussex	Ralph Hobbs and John Paul	yes
VC 15+16	Kent	Richard Moyse	
VC 17	Surrey	David Baldock?	
VC 18+19	Essex	Tim Gardiner	
VC 20	Hertfordshire	Ian Carle	yes
VC 22-24	Berks, Oxon, Bucks	Adrian Hickman	yes
VC 25+26	Suffolk	Stuart Ling	
VC 27+28	Norfolk	David Richmond	
VC 29	Cambridgeshire	Robert Partridge	yes
VC 30	Bedfordshire	Kevin Sharpe	
VC 33+34	Gloucestershire	John Widgery	
VC 35	Monmouthshire (Gwent)	Steve Williams	
VC 37	Worcestershire	Gary Farmer	
VC 39	Staffordshire	Andy Jukes	
VC 40	Shropshire	David Williams	yes
VC 41	Glamorgan	Greg Jones	
VC 44	Carmarthenshire	Ian Morgan	
VC 45	Pembrokeshire	John Steer	yes
VC 53+54	Lincolnshire	Brian Redman	
VC 55	Rutland / Leicestershire	Phil Rudkin	
VC 56+57	Nottinghamshire + Derbyshire	Roy Frost	
VC 58	Cheshire	Paul Hill?	
VC 60	West Lancashire	Michael Foley	
VC 61-65	Yorkshire	David Chesmore	yes
VC 69-70	Cumbria	Stephen Hewitt	yes
VC 71	Isle of Man	Richard Selman	
VC 91-95	Aberdeenshire and surroundings	Mick Marquiss	

County news

Worcestershire Orthoptera Atlas

Gary Farmer, county recorder

I am in the process of putting together the information for the new Worcestershire Orthoptera Atlas, and maps are currently being produced for me. Activities in 2016 included trying to re-find the Stripe-winged Grasshopper *Stenobothrus lineatus* (without success), waiting hopefully for Southern Oak Bush-cricket *Meconema meridionale* to reach the county (without success) and checking to see if Lesser Marsh Grasshopper *Chorthippus albomarginatus* has finally colonised the north-west of the county. A couple of hopeful 1st instars bred through in captivity turned out to be Meadow Grasshoppers *Chorthippus parallelus*, so the spread of Lesser Marsh Grasshopper in Worcestershire seems to have stopped for a while. I hope to have the atlas completed at the end of this year or early next year to try to stimulate a last push from our area for the national atlas. I think we have good coverage for all species in the county now and have unravelled a couple of mysteries so this is a good time to produce it.



<http://worcestershireorthoptera.weebly.com>

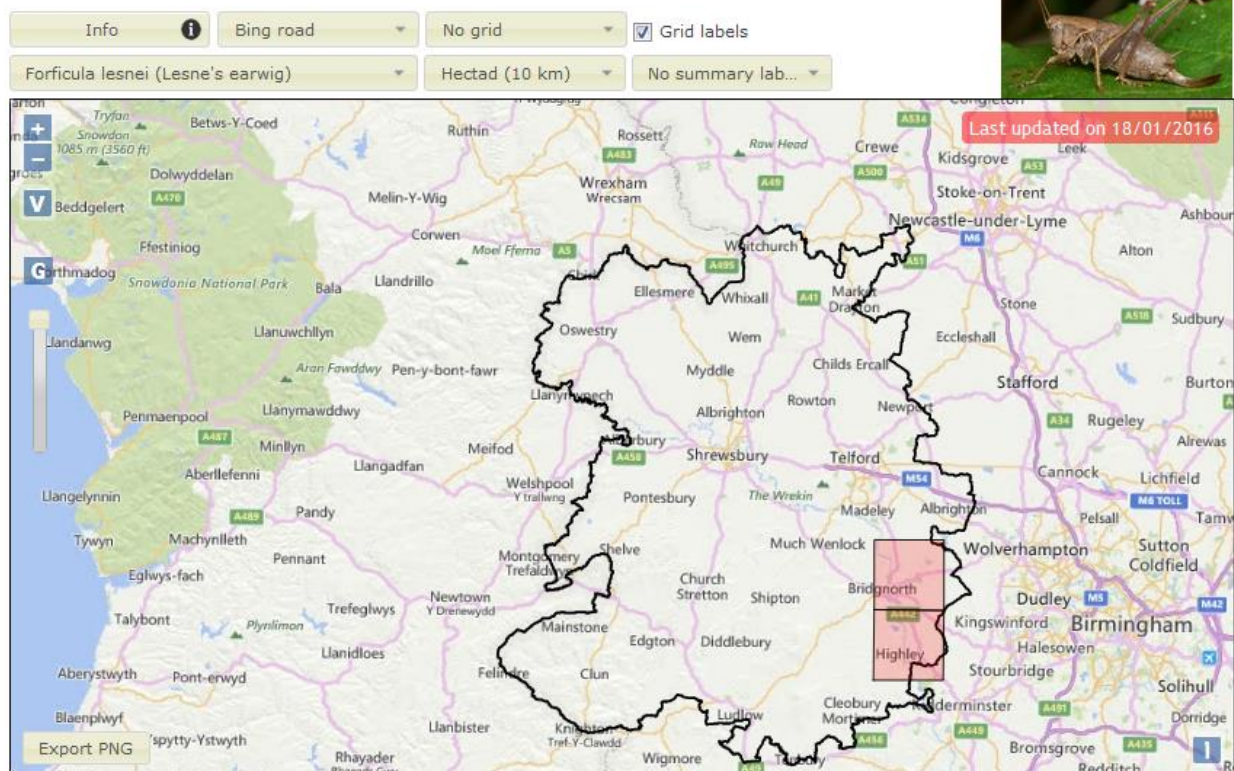
Orthoptera & Allies Distribution Maps for Shropshire

David Williams, county recorder

Distribution maps for all Orthopteroid taxa recorded within VC40 can now be found at www.tombio.uk/?q=fullscreen/orthopteraatlas. To quote from its own website: "Tomorrow's Biodiversity is an FSC project funded by the Esmée Fairbairn Foundation for five years (2013-2017 inclusive). It is helping us to identify important gaps in identification and monitoring skills, as well as barriers to filling those gaps, and developing/trialling solutions with new training, resources (e.g. new AIDGAP keys or electronic resources) or other interventions". I am extremely grateful to Rich Burkmar of the Field Studies Council / Tom Bio for creating these maps & hosting them on the Tom Bio website. I intend to update these maps annually.

Shropshire Orthoptera and Allies Atlas

Submitted by rich burkmar on Sun, 01/31/2016 - 00:02



www.tombio.uk/?q=fullscreen/orthopteraatlas

Species news

Lesne's Earwig *Forficula lesnei* in Shropshire

David Williams, county recorder

Until 2015, the presence in Shropshire of Lesne's earwig, *Forficula lesnei* (Finot, 1887) rested on three records made by the same recorder (Chris Timmins), all from Severn Valley County Park ('SVCP') in 1997. I had been to that location numerous times myself and searched in vain, and I must admit that I was inclined to doubt that I would ever find the species in VC40. My doubts were reinforced by the seeming absence of *F. lesnei* from nearby north Worcestershire, records being confined to the south of that county. Lesne's earwig is a warmth-loving species and southern in its national distribution, Shropshire being at the northern edge of its inland range.



Male Lesne's earwig, Eardington Quarry (photo David Williams)

In May 2015, the Shropshire Moth Group held a trapping night at Eardington Quarry nature reserve. Eardington is approximately 6km north of SVCP, both sites being in the south-east of the county and close to the River Severn. Whilst waiting for darkness to fall, one of our party began beating the trees and shrubs. I was standing beside him when, to my considerable surprise, he induced a female *F. lesnei* to part company with the Scots pine, *Pinus sylvestris* (L) in which she was residing. Subsequent visits to Eardington Quarry during moth-trapping nights in August and September 2015 revealed a large colony of the species, to the extent that it seems to greatly outnumber *F. auricularia*, (Linnaeus, 1758) at the site. The species is certainly very much easier to find at night, when it can be observed out & about on oak (*Quercus*), willow (*Salix*), bramble (*Rubus*) & other trees & shrubs at that location. Beating during daylight produces much smaller numbers and a completely different impression of population size.

Spurred on by these finds, I redoubled my efforts at SVCP, and on 8th October 2015, I finally managed to re-find the species at this location. I beat two males from oaks (*Quercus* sp.) in a tetrad immediately south of the 1997 records. They were outnumbered 8:2 by *F. auricularia* on that day, suggesting that they may be much less numerous at that site. The unseasonably mild weather in November 2015 produced another record from Severn Valley Country Park, when on 18th November Keith Fowler beat another male from oak.

Subsequent to the finds at Eardington, searches in north Worcs have located the species at several locations (see Recording Scheme Newsletter 32).








I have continued to search for this species in 2016, but so far I have not found it anywhere other than SVCP & Eardington. I believe that within VC40, the species is genuinely restricted to the relatively warm Severn corridor in the

south-east corner of the county, and that this probably represents the northern limit of its distribution in the West Midlands. In Shropshire its range now extends to five monads spread over two hectads (see map above).



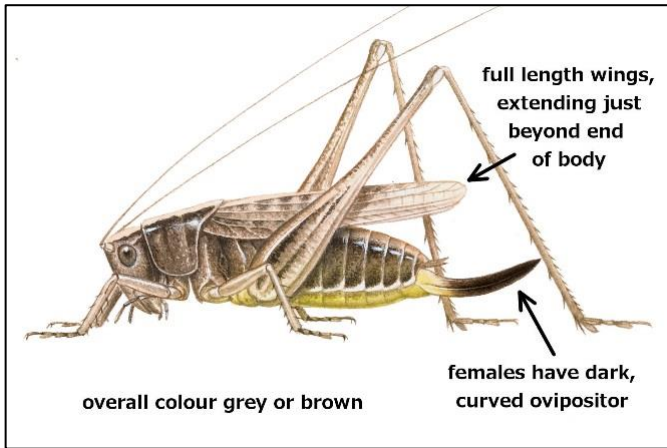
Female Lesne's earwig, Eardington Quarry (photo David Williams)

Distinction between Common Earwig and Lesne's Earwig, from www.orthoptera.org.uk/node/1035:

Common Earwig - <i>Forficula auricularia</i>	
 <p>adult male</p> <p>© Stuart Read</p>	<ul style="list-style-type: none"> • adults 12-20mm long, dark chestnut brown • in males, pincers curved, widened and toothed at base; widened part of pincers makes up <u>less than half of their total length</u>
 <p>adult female</p> <p>© J.K. Lindsey</p>	<ul style="list-style-type: none"> • ends of the folded wings <u>visible in both sexes</u> • in females, pincers almost straight • in juveniles, wing buds form a 'W' shape • juvenile pincers very slim
<p>Habitats:</p> <ul style="list-style-type: none"> - hedgerows, scrub, woodland - long grass, heathland - marsh, waterside vegetation 	
 <p>juvenile (wiglet)</p> <p>© Anders Sandberg</p>	
Lesne's Earwig - <i>Forficula lesnei</i>	
 <p>adult male</p> <p>© Keith Lugg</p>	<ul style="list-style-type: none"> • adults 8-10mm long, light brown • <u>no wings</u> visible in either sex • barrel-shaped abdomen • in males, pincers curved, widened and toothed at base; <u>the widened part of the pincers makes up about half their total length</u>
 <p>adult female</p> <p>© Keith Lugg</p>	<ul style="list-style-type: none"> • in females, pincers almost straight
<p>Habitats:</p> <ul style="list-style-type: none"> - oak woodland - chalk scrub - hedgerows, nettlebeds - rough herbage on sea cliffs 	

The Grey Bush-cricket *Platycleis albopunctata* in Pembrokeshire

John Steer, county recorder



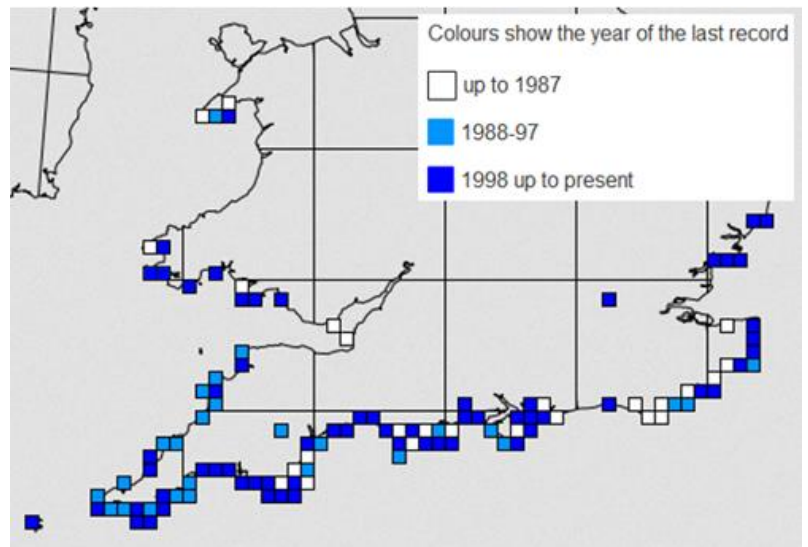
Grey Bush-cricket female (illustration Denys Ovenden, iRecord Grasshoppers app)



Grey Bush-cricket male (photo David Browne)

The Grey Bush-cricket (*Platycleis albopunctata*) is one of the rarer species of Orthoptera found in Pembrokeshire. It is at the northern edge of its range in the UK explaining why it is found at almost entirely coastal sites mainly in southern England. It is found on the east coast of England only as far north as Suffolk, all along the south coast to Land’s End, and along the Bristol Channel coast in Cornwall, Devon and Somerset. In Wales it has good colonies on the Gower coast, in Pembrokeshire and at a couple of sites on the south coast of the Llyn Peninsular, its most northerly UK location.

It was first recorded in Pembrokeshire at “Manorbier” in 1943. The grid reference being inland suggests it was recorded as “being in the Manorbier area”. It was found at Marloes Sands in 1946 where the greatest number of records



Distribution of the Grey Bush-cricket in southern Britain



Coast path east of Manorbier (photo John Steer)

are for. In 1947 it was recorded from St. Davids, another inland grid reference suggesting again the record was from the “St. Davids area”. In 1973 it was recorded from Freshwater East from where there do not appear to be any further records until 2014 when I found large numbers there. In 1984 John Comont recorded the species from West Blockhouse east of St. Anns Head, where it was not recorded again until I found good numbers there in 2014. In 1991 Jack Donovan found Grey Bush-crickets at the old Esso refinery, South Hook, where many people have recorded them in subsequent years. This is the only known site I did not visit in 2014, not having access there. In 1992 I found several at West Moor Cliffs, west of Swanlake Bay. In 2000 Stephen Evans found some at Pen y Cwm. He has also found them there more recently, as has Jon Hudson.

In 2014 I found large numbers at Freshwater East extending from the verge of the car park right across the dunes and also at West Moor Cliffs. I also found good numbers between Manorbier and Old Castle Head, a new location. I also found good numbers above Lindsway Bay, St. Ishmaels, a new site between West Blockhouse Point and South Hook. At Marloes Sands I found them on the clifftops at the top of the steps down to the beach, and at the landslip a bit further south. Also in the previously known location down the valley from Greenmire Cottage and along the clifftop towards Gateholm. At Pen y Cwm I found good numbers and also further west along the cliffs as far as Dinas Fawr. I failed to find any in the Stackpole / Bosherton area despite this seeming a suitable location.

There are a number of dune sites for the species in the Gower, but Freshwater East is the only dune site found in Pembrokeshire so far.

Being at the northern limit of their range Grey Bush-crickets favour south-facing sites with short vegetation and bare patches of ground, which warm up quickly and offer suitable sites for egg-laying. The species overwinters as eggs so needs to hatch early enough and receive sufficient warmth to complete its life cycle by autumn. In Pembrokeshire, Grey Bush-crickets do not seem to like tall vegetation and scrub so areas where these predominate are unsuitable. At Freshwater East they seem to like areas of short vegetation with Burnet Rose (*Rosa pimpinellifolia*). On several of the cliff top sites there was evidence that there had been burning which had arrested the growth of tall vegetation.



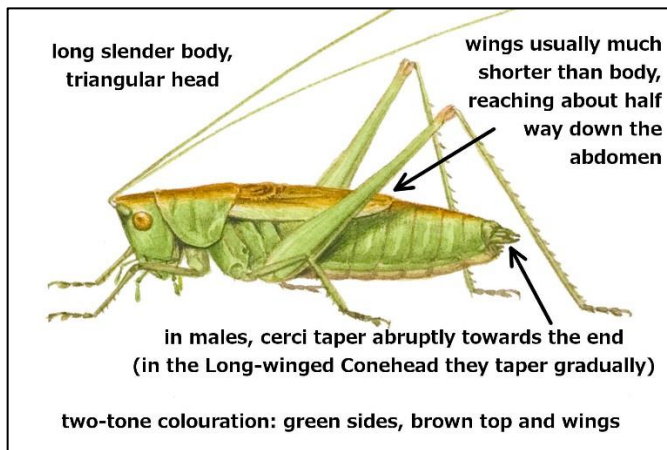
Grey Bush-cricket habitat near Manorbier (photo John Steer)

The Pembrokeshire population is important in a UK context as it is one of the most northerly in Britain. All the sites are coastal and many are either managed by Pembrokeshire Coast National Park or the National Trust. Conservation measures aimed at benefitting Chough (*Pyrrhocorax pyrrhocorax*) are likely to be beneficial for this species as well as other invertebrates.



Short-winged Cone-heads *Conocephalus dorsalis* in Scotland

Richard Mearns and Mick Marquiss



Short-winged Conehead male (illustration Denys Ovenden, iRecord Grasshoppers app)



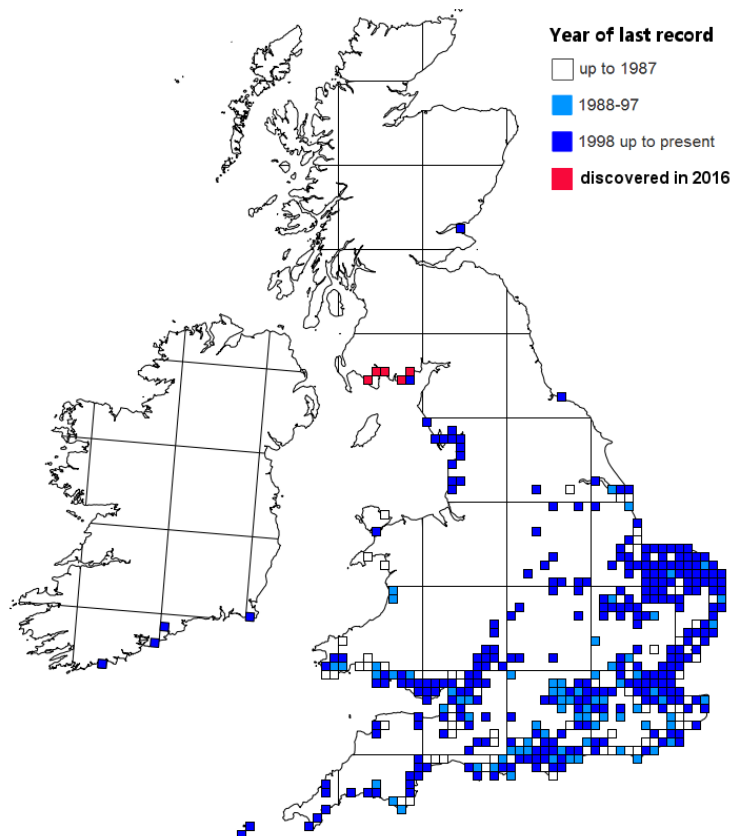
Short-winged Conehead female (photo Gilles San Martin, iRecord Grasshoppers app)

Short-winged Cone-heads *Conocephalus dorsalis* were first found in Southern Scotland by Keith Kirk in a small stand of sea club-rush *Bolboschoenus maritimus* close to the high water mark at Rascarrel Bay, Kirkcudbrightshire (VC73) on 22 August 2011 during a Dumfries and Galloway Environmental Record Centre (DGERC) / Buglife walk. There appears to have been no real attempt to search similar habitat elsewhere along the Dumfries & Galloway coast until 2016 when Mick Marquiss and Richard and Barbara Mearns found the species at Mullock Bay and Carrick Shore on 14 and 15 August.

This inspired more searching and other observers to check some of the sea club-rush between Stranraer and Gtretna with the result that six new sites were added in 2016 (in five different hectads). Most Short-winged cone-heads were found by eye but some stands were checked with a bat detector; sweeping has been recommended as the best method to locate them but has not been tried yet. The species was not found at all sites, and at those sites where Short-winged cone-heads were present they were sometimes apparently absent from adjacent and nearby clumps of sea club-rush. At least 18 individuals (males and females in roughly equal proportions) were found at one site but most counts were of 1 to 4 individuals. Additional sites for Kirkcudbrightshire were at Portling near Dalbeattie, Mullock Bay near Dundrennan, and on the Fleet estuary at Carrick and Skyreburn.

In Wigtownshire (VC74) Short-winged cone-heads were found in Wigtown Bay at RSPB Crook of Baldoon and in Luce Bay near Port William. None were found on the coast of Dumfriesshire (VC72) but large areas of sea club-rush here and elsewhere remain unsearched.

The only other Scottish record of Short-winged Cone-head was a find by Gordon Maxwell in north east Fife, at Earlshall Nature Reserve (VC85) in August 2010. From 2014 to date, visual searches by Mick Marquiss in nearby sea club-rush beds at Tentsmuir, and also further north at Carnoustie and Lunan Bay (VC90), and at St Cyrus (VC91) have so far been unsuccessful.



Distribution of the Short-winged Conehead in Britain and Ireland

Nevertheless, diligent searching of sea club-rush on the east coast, in the Tay estuary, Forth estuary, East Lothian and Northumberland, or in the west, on the coasts of Northern Ireland, Ayrshire, Arran and further north might well prove fruitful in 2017 or in the near future.

Thanks to Barbara Mearns, Jim McCleary and Alison Robertson for search results and to Mark Pollitt of the Dumfries and Galloway Environmental Record Centre for details of the original record for Kirkcudbrightshire.



Searching for Short-winged Cone-heads *Conocephalus dorsalis* at Mullock Bay, Dundrennan, south-west Scotland (photo: Barbara Mearns).



Tree Cricket *Oecanthus pellucens* and Sickle-bearing bush-cricket *Phaneroptera falcata* in Kent

Following the exciting discovery of colonies of Tree Crickets *Oecanthus pellucens* and Sickle-bearing bush-cricket *Phaneroptera falcata* at Dungeness in Kent last year, there was much interest in whether they would survive the winter and reappear this year. David Walker the warden of Dungeness Bird Observatory (www.dungenessbirdobs.org.uk, see the blog posts and Twitter feed) kept a constant look out for both species from July onwards, and on 5 August 2016 discovered 11 Tree Cricket nymphs, indicating that the colony had indeed survived. This was followed in the coming days and weeks by many more nymphs, and from 9 August onwards, adults. Altogether at least a similar number of individuals as last year were heard and seen (an estimated 100 or more singing males).

One evening David managed to observe the interesting mating behaviour in this species, where the male feeds the female from a gland on his back during and after mating – thought to be mainly for the purpose of detaching her long enough to prevent her from eating the spermatophore before fertilisation has taken place. This behaviour was also superbly filmed by the BBC last year:

www.bbc.co.uk/programmes/p0351qp2.

Ross Newham made an intriguing discovery at the end of August when he heard and caught a single male Tree Cricket on an allotment near East Malling, some 35 miles (55km) inland from Dungeness – a possible indication of dispersal from Dungeness, or an unrelated arrival?

On 9 August, David discovered 5 Sickle-bearing bush-cricket nymphs at last year's site near the Bird Observatory at Dungeness, indicating that this species, too, had survived the winter! This was followed by the first adults on 15 August, and altogether about 6 males and 16 females were seen this year, an increase on last year's numbers.

In a further astonishing development, on 27 August Dave Brown (<https://twitter.com/dbbirding>) discovered and photographed some bush-cricket nymphs at Wye National Nature Reserve when searching for Adonis Blue butterflies; the photographs were determined a few days later by David Walker as Sickle-bearing bush-cricket nymphs! Dave returned to Wye several times over the coming days and on 6 September counted a total of 28 Sickle-bearing bush-cricket nymphs on the reserve! No nymphs were seen, although the large number of adults suggest that the species probably arrived at the site in 2015 or earlier. Wye NNR is 17 miles (27km) from Dungeness and this is therefore a second current British population of this species.



Tree Cricket *Oecanthus pellucens* female feeding from gland on male's back during mating, Dungeness, 13 September 2016 (photo: David Walker).



Sickle-bearing bush-cricket *Phaneroptera falcata* male nymph, Dungeness, 12 August 2016 (photo: David Walker).



dave brown @dbirding · Sep 6

Walked most of the Wye NNR (Devils Kneading Bowl area), 28 Sickle-bearing Bush Crickets. 3 Clouded Yellows, 1 Wasp Spider

On 29 August, Marc Botham of the Centre for Ecology & Hydrology made another interesting discovery of a Sickle-bearing bush-cricket female at the north end of Long Pits at Dungeness, just under 1 mile (1.4 km) from the previously known colony near the Bird Observatory – an indication that the Dungeness population may be dispersing.

Altogether, therefore it seems likely that both these species have indeed arrived to stay in Britain and it will be fascinating to observe them in the years to come. David Walker visited the Dungeness colonies of both species almost daily and showed many interested visitors around – many thanks to him for his dedication and spreading the word about these new arrivals.



Sickle-bearing bush-cricket *Phaneroptera falcata* female, Wye National Nature Reserve, September 2016 (photo: Dave Brown). Note the sickle-shaped ovipositor which the English species name refers to, and that the hind wings are much longer than the front wings, as is characteristic for the species.



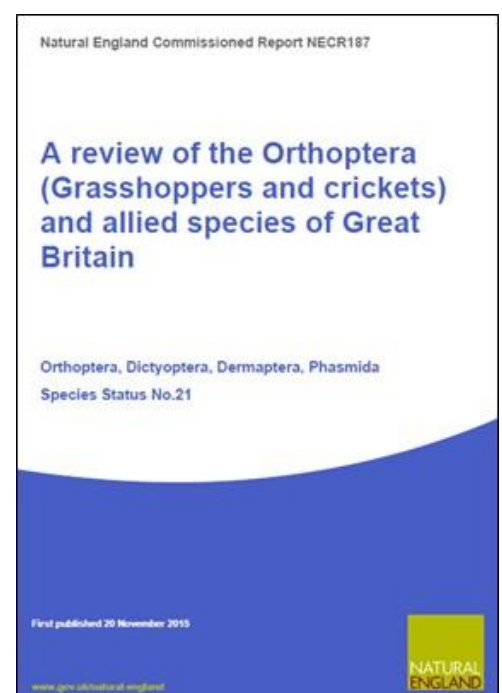
Publications

New Red Data Book now published

Sutton, P.G. (2015): **A review of the scarce and threatened Orthoptera and allied species of Great Britain**, Orthoptera, Dictyoptera, Dermaptera, Phasmida. Species Status No. 21, Natural England Commissioned Reports, pp. 1-51.

This publication provides a complete re-evaluation of the threat status of all British species in accordance with the latest IUCN criteria. The evaluation is based on the records of the Grasshopper Recording Scheme and expert opinion and provides an excellent example of the importance of biological records.

<http://publications.naturalengland.org.uk/publication/5368778738106368>



New field guide to the grasshoppers and crickets of France, Belgium and Switzerland



Sardet, Roesti & Braud 2015.
Cahiers d'identification des Orthoptères de France, Belgique, Luxembourg & Suisse. Biotope Éditions, Mèze. ISBN 978-2-36662-155-6.

This is a fantastic new book for identifying and learning about continental western European Orthoptera. All 261 Orthopteran species of France, Belgium, Luxemburg and Switzerland are illustrated beautifully and in great detail through photos, drawings, oscillograms, maps and a CD with sound recordings.

The text is in French, but in conjunction with the photos and drawings many details are easily understood even for non-French-speakers (see the example of the two Sickle-bearing bush-cricket species here). There is a complete key to all species.

The book is available for example at www.pemberleybooks.com/product/orthoptres-de-france-belgique-luxembourg-et-suisse/29332.

3. Lobes latéraux du pronotum un peu moins hauts que longs **A**. Élytres plus longs et étroits, donnant une allure générale plus svelte **B**. Fémurs postérieurs en général plus long (♂ 17,5-21 mm, ♀ 18-24 mm), à base moins élargie **C**.
 ♂ : plaque sous-génitale élargie à l'extrémité, en deux lobes divergents **D**.
 ♀ : oviscapte anguleux à la base, avec la lamelle sinueuse, et à apex arrondi, à dentelures plus fortes et moins nombreuses sur le bord supérieur (< 35) **E**.
 *Phaneroptera falcata*

JFMAMJJASOND

RÉPARTITION : 0 à 1 620 m.

HABITAT : Pelouses et prairies à végétation herbacée haute, haies, bosquets.

CONFUSION POSSIBLE : *P. nana* et *T. viridissima*.

3'. Lobes latéraux du pronotum un peu plus hauts que longs **A**. Élytres plus courts et larges, donnant une allure générale plus trapue **B**. Fémurs postérieurs en général plus court (♂ 14,5-18 mm, ♀ 15,5-20,5 mm), et à base plus élargie **C**.
 ♂ : plaque sous-génitale triangulaire, rétrécie et échancrée à l'extrémité **D**.
 ♀ : oviscapte régulièrement courbé à la base, avec la lamelle non sinueuse, et à dentelures plus fines et plus nombreuses sur le bord supérieur (> 35) **E**.
 *Phaneroptera nana*

JFMAMJJASOND

RÉPARTITION : 0 à 1 300 m.

HABITAT : Milieux arbustifs thermophiles, haies, lisières, friches.

CONFUSION POSSIBLE : *P. falcata*, *T. lilifolia*, *T. viridissima*.

♂ Taille : 12-17 mm

Phaneroptera falcata | le Phanéroptère commun

♀ Taille : 15-18 mm

♂ Taille : 12-15 mm

Phaneroptera nana | le Phanéroptère méridional

♀ Taille : 15-18 mm

New guide to the grasshoppers and crickets of Germany and north Tyrol

J. Fischer, D. Steinlechner, A. Zehm, D. Poniatowski, T. Fartmann, A. Beckmann, C. Stettmer (2016): **Die Heuschrecken Deutschlands und Nordtirols – bestimmen, beobachten, schützen**. Bayerische Akademie für Naturschutz und Landschaftspflege. Quelle & Meyer, Wiebelsheim.

This is another superb new guide to continental Orthoptera, beautifully illustrated throughout with detailed, labelled photographs. It covers the 85 species currently found in Germany and north Tyrol. Introductory chapters cover anatomy, biology, life history, ecology, habitats, behaviour, survey methods and conservation. There is a detailed key to all species in the book split into families or smaller groups, and a “quick key” on a separate card. Each species is covered on a double page, with photos of male and female, a distribution map, and detailed text often including references for further reading. The text is in German, but even the photos alone provide useful information, with arrows pointing at important features (see example of *Cepero's* Groundhopper below).

The book is available e.g. at <https://www.amazon.co.uk/Die-Heuschrecken-Deutschlands-Nordtirols-Beobachten/dp/3494016704>



Tetrigidae – Dornschröcken

Westliche Dornschröcke

Tetrix ceperoi

Merkmale

Die Westliche Dornschröcke ist etwas kleiner und zierlicher gebaut als die sehr ähnliche Säbel-Dornschröcke. Der Halschild-Mittelkiel ist in Seitenansicht fast gerade und nur im ersten Drittel etwas erhöht. Der Dorn überragt den Hinterleib weit. Kurzdornige Exemplare sind äußerst selten. Von oben betrachtet ist der Augenabstand nur wenig größer als eine Augenbreite. Die Stirn ist gerade und überragt die Augen nicht. Die Mittelschenkel sind an der Unterseite leicht gewellt, die Hinterschenkel länger als ihre dreifache Breite. Im Gegensatz zu *Tetrix subulata* ist der obere Kiel des Hinterschenkels zum Knie hin deutlich nach außen gebogen und trägt eine kleine knötchenartige Erhebung, die *Tetrix subulata* fehlt. Die Legeröhre ist schmal und grob gezähnt. Färbung und Zeichnung zeigen bei *Tetrix ceperoi* eine immense Variabilität, die Grundfärbung kann schwarz, grau, braun oder grünlich sein. Auffällig ist, dass die Weibchen häufig in einer moosgrünen Form auftreten.

Verbreitung und Lebensraum

Die Westliche Dornschröcke wurde in der Vergangenheit häufig mit *Tetrix subulata* verwechselt, sodass die Verbreitungsangaben noch lückenhaft sind. Aktuell gibt es zahlreiche Funde vom Nördlichen Oberrhein, der Kölner Bucht, dem Niederrheinischen Tiefland, den Ostfriesischen Inseln, dem östlichen Harzvorland, der Leipziger Tieflandsbucht und der Niederlausitz. In Nordtirol fehlt die Art. Die höchstgelegenen Funde liegen auf 600 m ü. NN. Dabei lebt die wärme-liebende Pionierart vor allem in Feuchtgebieten mit Schlamm- und Sandflächen, die einen geringen Bewuchs aufweisen. Oft ist *Tetrix ceperoi* mit *Tetrix subulata* vergesellschaftet.

Entwicklung und Phänologie

Adulte Tiere findet man vom Frühjahr bis in den Juli hinein, die im Herbst ausgewachsene zweite Generation überwintert.

Gesang

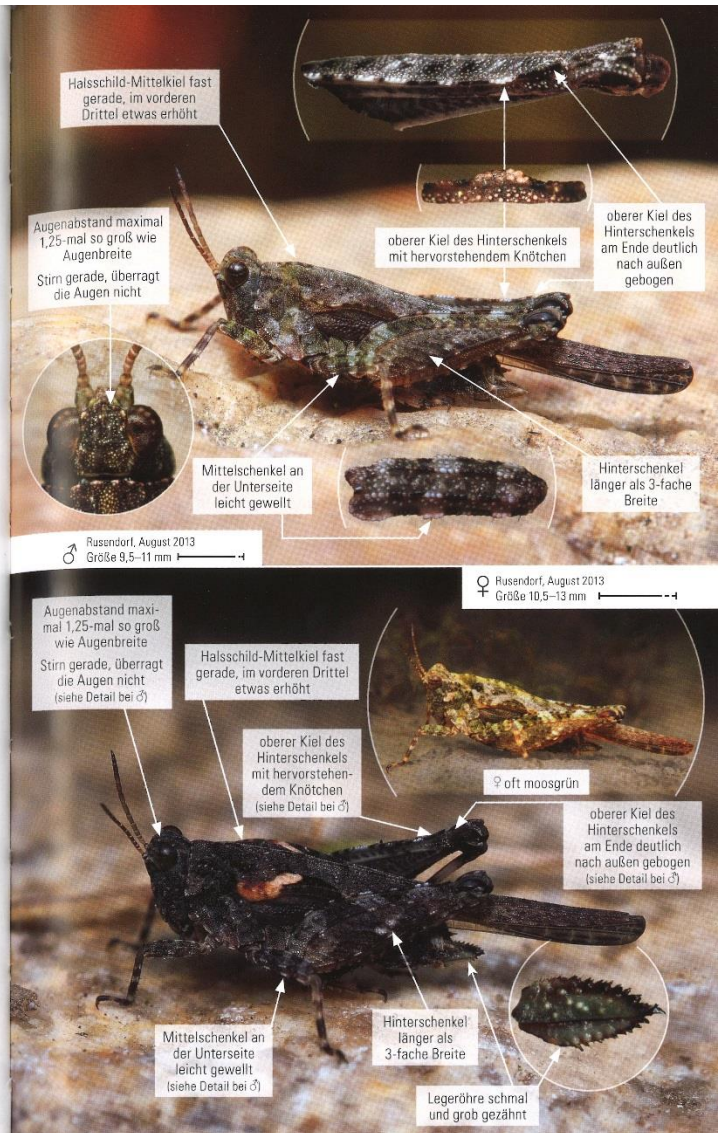
Ein Gesang oder hörbare Lautäußerungen sind nicht bekannt.

Besonderheiten

Als Anpassung an ihren feuchten Lebensraum ist *Tetrix ceperoi* bei Gefahr in der Lage, kurze Zeit unter Wasser auszuharren.



Nordtirol: fehlend
Rote Liste: D: 2 | Ö: NE

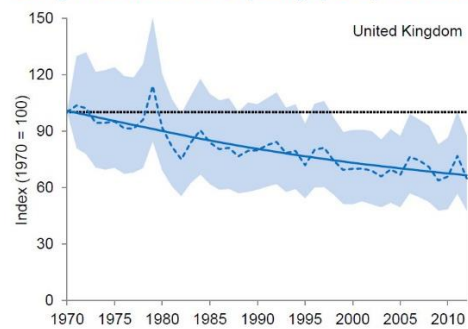


Research articles and reports

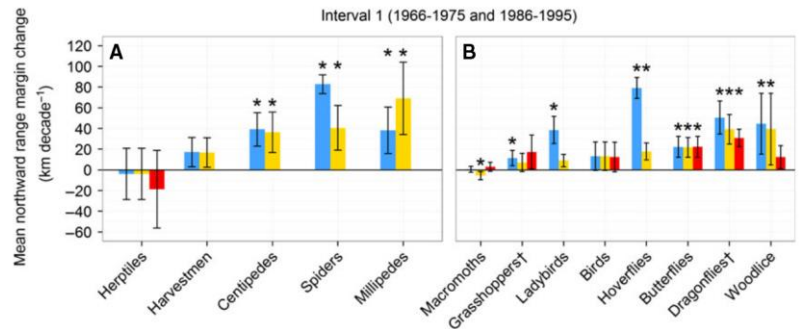
Grasshopper Recording Scheme data was used in a number of studies and reports over the last year:

Eaton, M.A., F. Burns, N.J. Isaac, R.D. Gregory, T.A. August, K.E. Barlow, T. Brereton, D.R. Brooks, N. Al Fulaij and K.A. Haysom (2015). **The priority species indicator: measuring the trends in threatened species in the UK.** *Biodiversity* 16(2-3): 108-119.
www.tandfonline.com/doi/abs/10.1080/14888386.2015.1068222

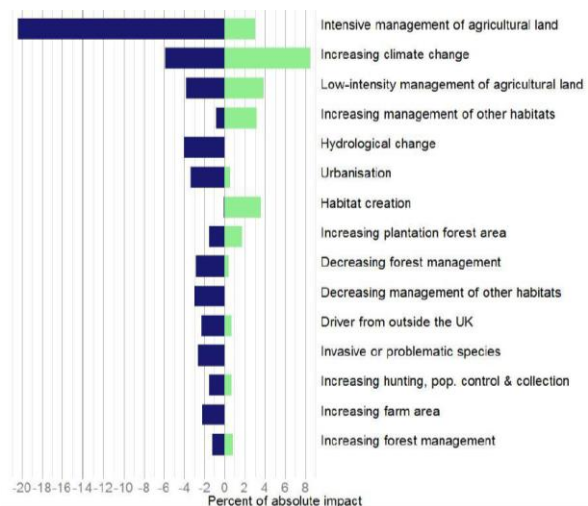
Change in distribution of UK priority species, 1970 to 2012



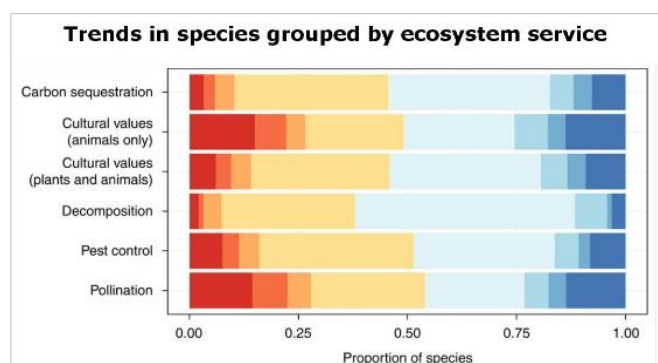
Mason, S.C., G. Palmer, R. Fox, S. Gillings, J.K. Hill, C.D. Thomas and T.H. Oliver (2015). **Geographical range margins of many taxonomic groups continue to shift polewards.** *Biological Journal of the Linnean Society* 115(3): 586-597.
<http://onlinelibrary.wiley.com/doi/10.1111/bij.12574/pdf>



Burns, F., M.A. Eaton, K.E. Barlow, B.C. Beckmann, T. Brereton, D.R. Brooks, P.M. Brown, N. Al Fulaij, T. Gent and I. Henderson (2016). **Agricultural management and climatic change are the major drivers of biodiversity change in the UK.** *PloS one* 11(3): e0151595.
<http://journals.plos.org/plosone/article/asset?id=10.1371/journal.pone.0151595.PDF>



Oliver, T.H., N.J. Isaac, T.A. August, B.A. Woodcock, D.B. Roy and J.M. Bullock (2015). **Declining resilience of ecosystem functions under biodiversity loss.** *Nature communications* 6. www.nature.com/articles/ncomms10122.pdf



Hayhow, D.B., F. Burns et al. (2016). **State of Nature.** The State of Nature Partnership.
www.rspb.org.uk/Images/State%20of%20Nature%20UK%20report%2020%20Sept%20tcm9-424984.pdf



Media

Rufous Grasshoppers on BBC One Show

John Walters, www.johnwalters.co.uk

My favourite place to watch the Rufous Grasshopper *Gomphocerippus rufus* is on the east Devon coast at Branscombe near Sidmouth. The eroding limestone cliffs with tussocky grassland and scrub here provide a perfect habitat for many warmth-loving insects. In the shelter of the cliffs on sunny early autumn days you can catch the last of the summers' warmth and watch the beautiful display of these grasshoppers. On 29th September 2015 I

spent the day with Mike Dilger and a BBC film crew making a short film about them for the One Show. The weather was perfect and the grasshoppers performed superbly. Devon-based wildlife cameraman Rod Clarke was able to get some stunning shots of the display as one particular male displayed to a female. This is available to view at www.bbc.co.uk/programmes/p03747r9.



John's sketches, notes and video are available on his website <http://johnwalters.co.uk/notebook/post.php?s=2015-10-27-rufous-grasshoppers>.



BBC Radio 4, The Life Scientific: Interview with Georgina Mace

Georgina Mace spent ten years working on the development of the current IUCN criteria for the Red List of Threatened Species, a robust set of quantitative scientific criteria for assessing the threat of extinction across all species: www.bbc.co.uk/programmes/b07jys1h.



Meetings

First European Congress on Orthoptera Conservation

Roy Kleukers' summary, taken from www.grasshoppersofeurope.com/news

The First European Congress on Orthoptera Conservation was held in Trier (Germany) from March 18-20, 2016. There were about 20 lectures, with a titillating key note talk on sexual selection in bush-crickets by Karim Vahed (University of Derby, UK). Many of the presentations focussed on conservation issues: introduction of *Oedipoda germanica*, hybridisation in *Chorthippus montanus*, protection program for *Prionotropis rhodanica*, knowledge gaps Canary Islands, climate change and change in land use in montane grasslands. Furthermore a wide variety of topics was presented: social networks as a tool in Tetrigidae

studies, transgenerational effects of diet in *Chorthippus biguttulus*, some focussing on taxa (*Odontura* in Morocco, *Isophya fatrensis*, *Pseudomogoplistes vicentae*) or regions (Dobrogea, Tyrol, Great Britain, Brandenburg and Berlin, Andalucia, Socotra, Istria and Greece). You can find the abstract book here: https://www.uni-trier.de/fileadmin/fb6/prof/BIO/Claudes_Datenbank_sortiert/O8Heuschrecken_Tagung/Programm/Abstractband_Heuschreckentagung_Trier_Homepage_11.03.16.pdf. In total there were 75 participants from all around Europe. This event has shown that there is broad support for a meeting of European orthopterists and surely it will be the memorable start of a long tradition.



12th International Congress of Orthopterology

30 October – 3 November 2016, Bahia, Brazil

The theme is Orthoptera in a changing world: www.ico2016.com.br

National Biodiversity Network Conference

17-18 November 2016, National Museums Scotland, Edinburgh

<https://nbn.org.uk/news-events-publications/nbn-conference>

Orthopterists' Meeting 2017

Wednesday 1st November 2017, 1:00-8:00 pm, Natural History Museum London. All welcome. Please email Björn Beckmann at orthoptera@ceh.ac.uk to register and if you would like to present a talk or poster, or suggest a speaker.



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