

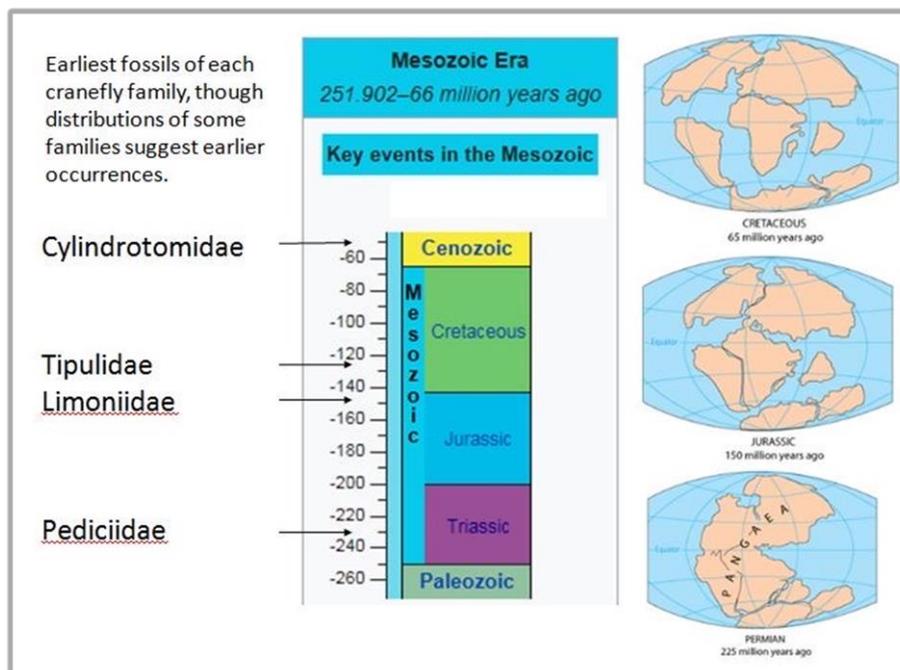
A SHORT INTRODUCTION TO CRANEFLIES AND CRANEFLY RECORDING FOR BEGINNERS

Craneflies (Crane Flies outside of the UK) are true flies (Order: Diptera) that belong to a group of families; Cylindrotomidae (damsel craneflies), Pediciidae (hairy-eyed craneflies), Tipulidae (long-palped craneflies), and Limoniidae (short-palped craneflies). The UK Craneflies Recording Scheme also records two further families that are similar, the Ptychopteridae (fold-wing craneflies or phantom craneflies as they are called in the USA), and the Trichoceridae (winter gnats).



Tipula lunata (Pete Boardman)

The true craneflies first turn up in the fossil record around 230 million years ago (on a Tuesday) and were originally flies of the super continent Pangea. They appear in sediments through the Jurassic and Cretaceous periods and are found as intrusions in amber from 100 m.y.a. to 20 m.y.a.



Adapted from Wikipedia

Cylindrotomidae – are represented by 4 species in the UK; 2 (*Cylindrotoma distinctissima* and *Diogma glabrata*) are woodland species and 2 others (*Phalacrocera replicata* and *Triogma trisulcata*) are found on bog or fen. Larvae feed upon mosses and are caterpillar like. Adults are long and very narrow-bodied.



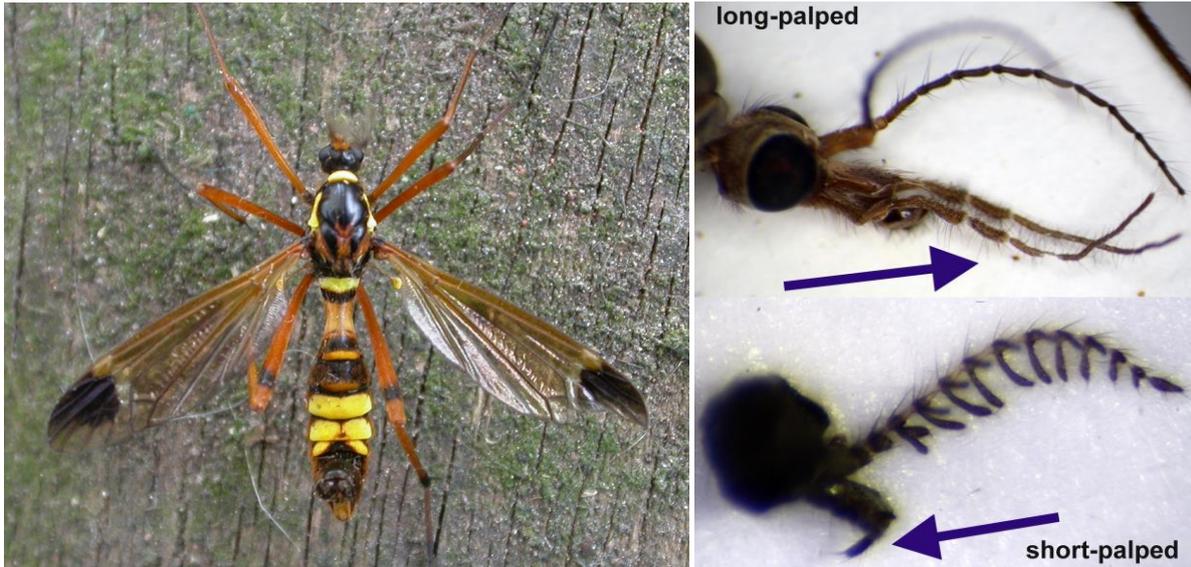
Cylindrotoma distinctissima (D. Gavryushin via CCW) and *Triogma trisulcata* (Mike Shurmer)

Pediicidae – the hairy-eyed crane flies are represented in the UK by 20 species. They mostly live close to water or wet habitats and their larvae are aquatic or semi-aquatic. One sub-family (Ulinae) are fungal-feeders and so are woodland insects. The hairy eyes are difficult to see without a decent level of magnification and lighting. Some species are readily identifiable by their wing patternation.



Hairy-eyes (Pete Boardman) and *Pedicia rivosa* (P. Ketola via CCW).

Tipulidae – the long-palped crane flies are represented by about 87 species in the UK (a couple not seen since the early 1900's are about to be made extinct). They occur in a variety of habitats and have several different larval requirements including; deadwood, mosses, fungi, plant roots etc. Most are larger species and the species which beginners and the public most often encounter. About a third are readily identifiable from photographs, though many need microscopic examination of genitalia. Females are often quite difficult to identify. The commonest species is *Tipula paludosa* – the classic daddy long legs that comes into the house in late summer and flies around the lights. Some are wasp mimics, such as the deadwood Ctenophorines (*Ctenophora ornata* etc.). The vast majority of others never encounter members of the public as they are woodland, wetland, or mountain species, and many are nocturnal. They are nevertheless very important in the food chain and relied upon by a variety of birds, including starlings, and golden plover, and our more uncommon species of bats.



Ctenophora ornata (Ian and Pamela Gamble) and the difference between long-palped and short-palped crane flies (Pete Boardman)

Limoniidae – the short-palped crane flies are represented by around 227 species in the UK. Many are small and difficult to identify without some prior knowledge, but some distinct groups are relatively easily identified such as those displayed below in the *Limonia* crib. Some species are identifiable by photographs but most species require a specimen to be taken and identification using a key under the microscope.

<i>Limonia flavipes</i>	<i>L. macrostigma</i>	<i>L. maculipennis</i>	<i>L. nigropunctata</i>
A strikingly marked striped brown species. Spring to summer in woodland, particularly calcareous woodland. Has a fingerprint mark on the side and rear of the thorax (microscope needed to view it clearly).	A brown species with unmarked wings, and quite different to other woodland <i>Limonia</i> . Found by woodland streams, and wet woodlands. May to October. Vein Sc at or just past base of vein Rs.	A very striking black and orange species with striped orange and black legs. Flies in April and May. Associated with hedgerows and a limited range of other sites. Ecology uncertain. Restricted mostly to the south-east of England.	An orange species with a dark thoracic stripe, though sometimes a darker with an all black thorax. Found in woodland. Striking glossy species – wing with 3 spots and dark wing edge. Legs can be dark-tipped or nearly all dark. April – June.
			
			
			

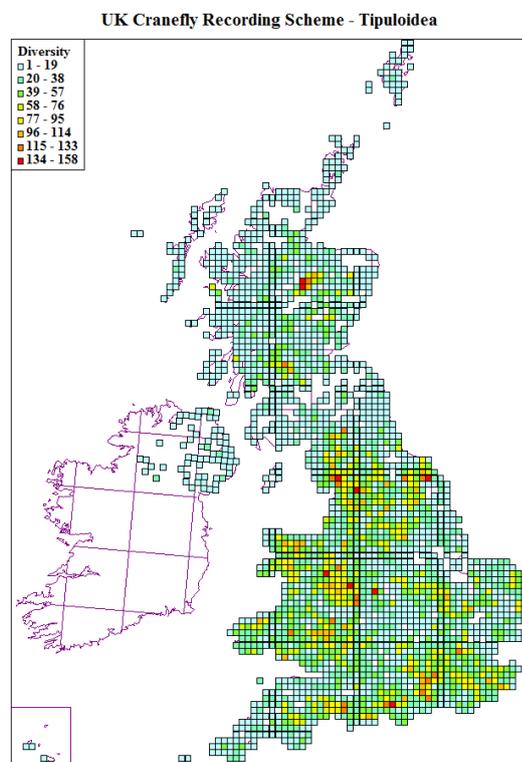
Limonia crib (Pete Boardman)

Ptychopteridae and Trichoceridae – The fold-wing craneflies (7 UK species) and the winter gnats (10-14 UK species – taxonomy under review) are also covered by the UK Cranefly Recording Scheme. Fold-wing craneflies resemble fungus gnats more than they do craneflies and are species of wetlands. Winter gnats are very like craneflies and mostly occur during the winter (as the name suggests) apart from one species which clearly missed the memo and flies in the height of summer. They possess ocelli (simple eyes) on the top of their head which true craneflies lack.

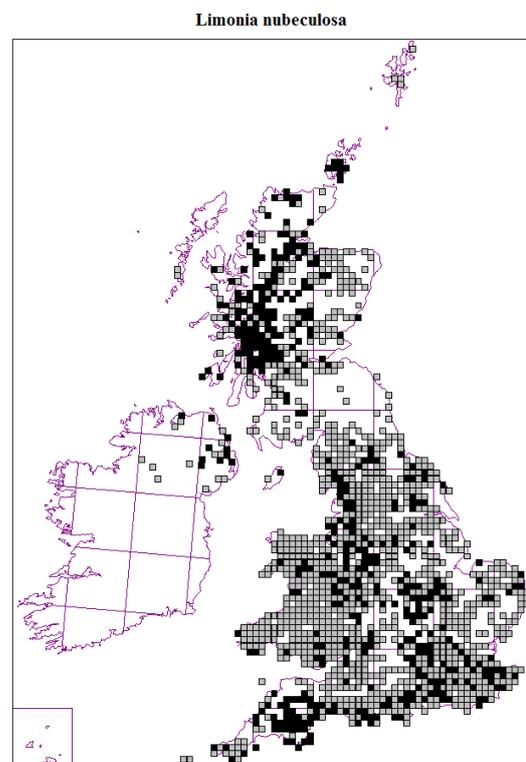


Ptychoptera albimana (Pete Boardman) and the head of a winter gnat showing the ocelli (Matthias Lenke)

The UK Cranefly Recording Scheme – was formed in 1973 by Alan Stubbs and collects records of the above families. They have most recently been used in the preparation of a Status Review of UK Craneflies. Records should be submitted via iRecord (<https://www.brc.ac.uk/irecord/>) where possible and queries posted there or via the UKCRS Twitter or Facebook pages. Here are a few of the most recently available distribution maps.



Map 1 – Density map of all records by hectad (10km x 10km)



Map 2 – *Limonia nubeculosa* – grey square pre-2014 / black squares 2015-current

More information

Identification keys; the crane fly test keys by Stubbs and Kramer (2016) are available as PDF's on the Dipterists Forum website (<https://www.dipterists.org.uk/cranefly-scheme/home>)

Other keys available as part of – Shropshire Craneflies (Boardman, 2016) – available from the Field Studies Council (<https://www.fieldstudiescouncil.org/productcategory/publications>)

Indispensable to crane fly workers is the Catalogue of the Craneflies of the World by Pjotr Oosterbroek - <https://ccw.naturalis.nl/>

UK Crane fly Recording Scheme – Twitter @CRStipula

UK Crane fly Recording Scheme – Facebook <https://www.facebook.com/groups/1662885270502966/>

iRecord website for crane fly records - <https://www.brc.ac.uk/irecord/>

For up to date information, a twice annual crane fly newsletter, the Dipterists Digest and Bulletin why not join the Dipterists Forum – currently membership is only £20 per year. Join via the Dipterists Forum website - <https://www.dipterists.org.uk/join>

Pete Boardman – 18/05/20