



**From the craneflies  
point of view –  
*Craneflies and their  
Ecology***

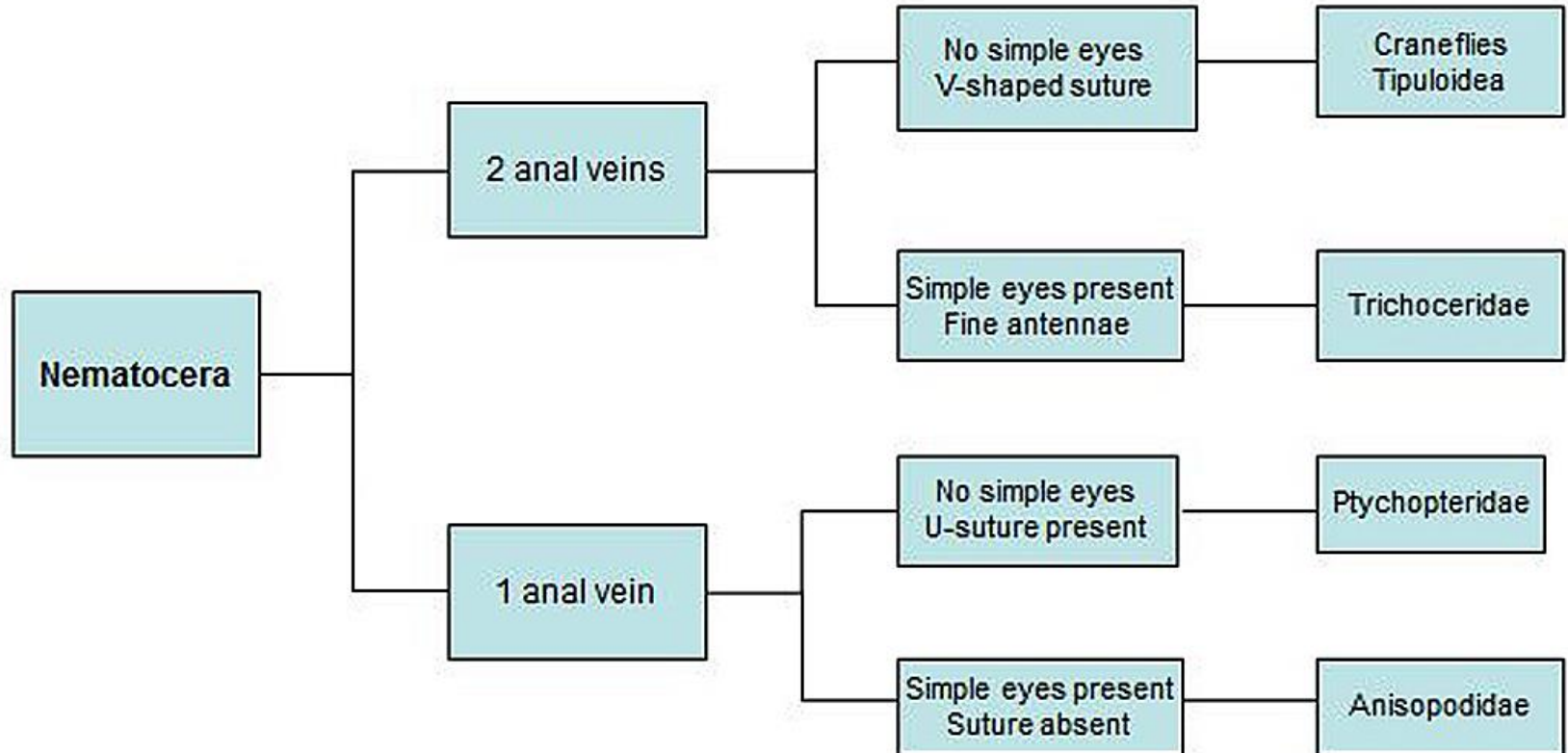
John Kramer

# What is a Crane fly ?

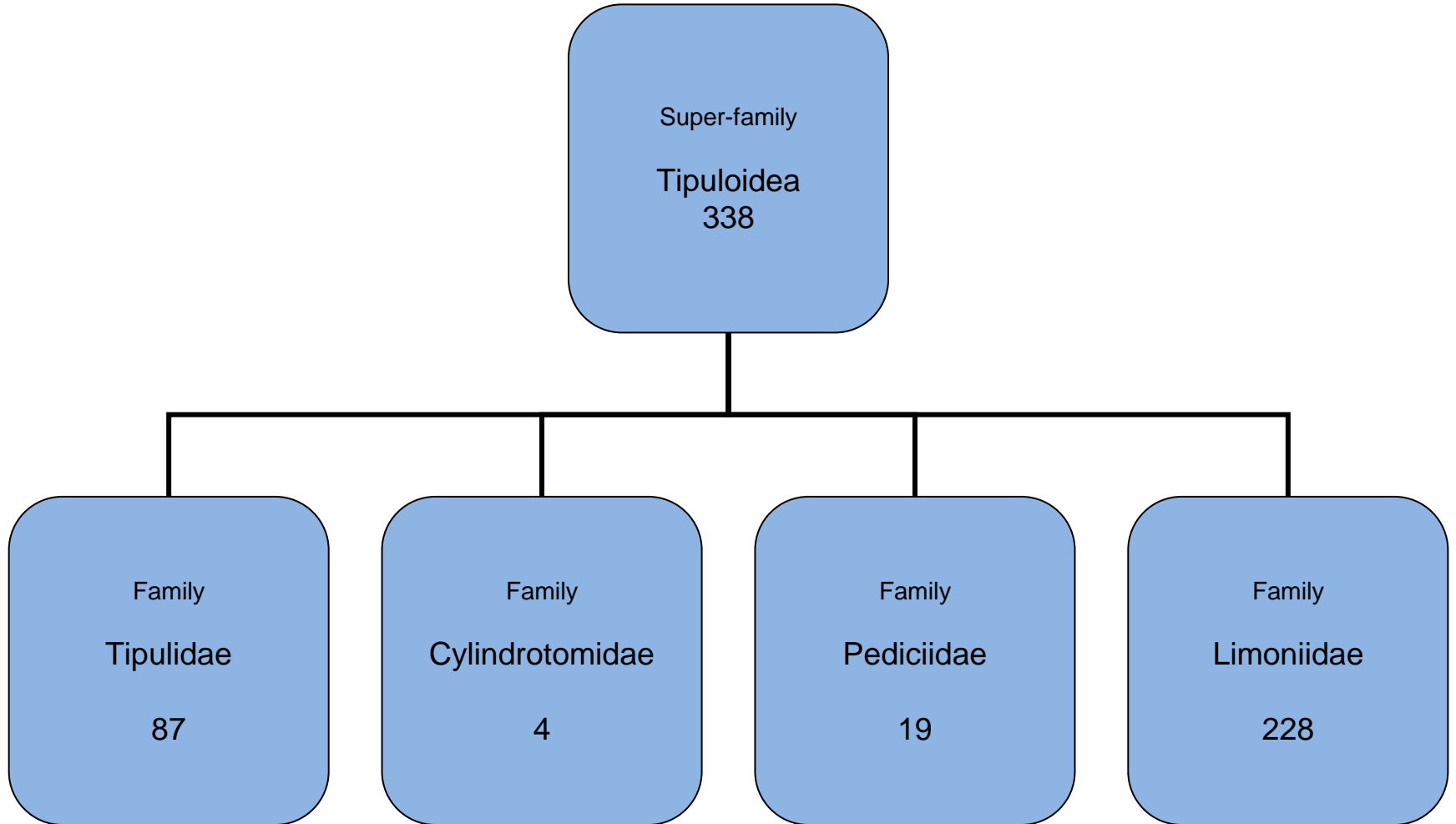


Photo: Graham Calow

# What is a Crane fly ?



# Superfamily Tipuloidea – Families

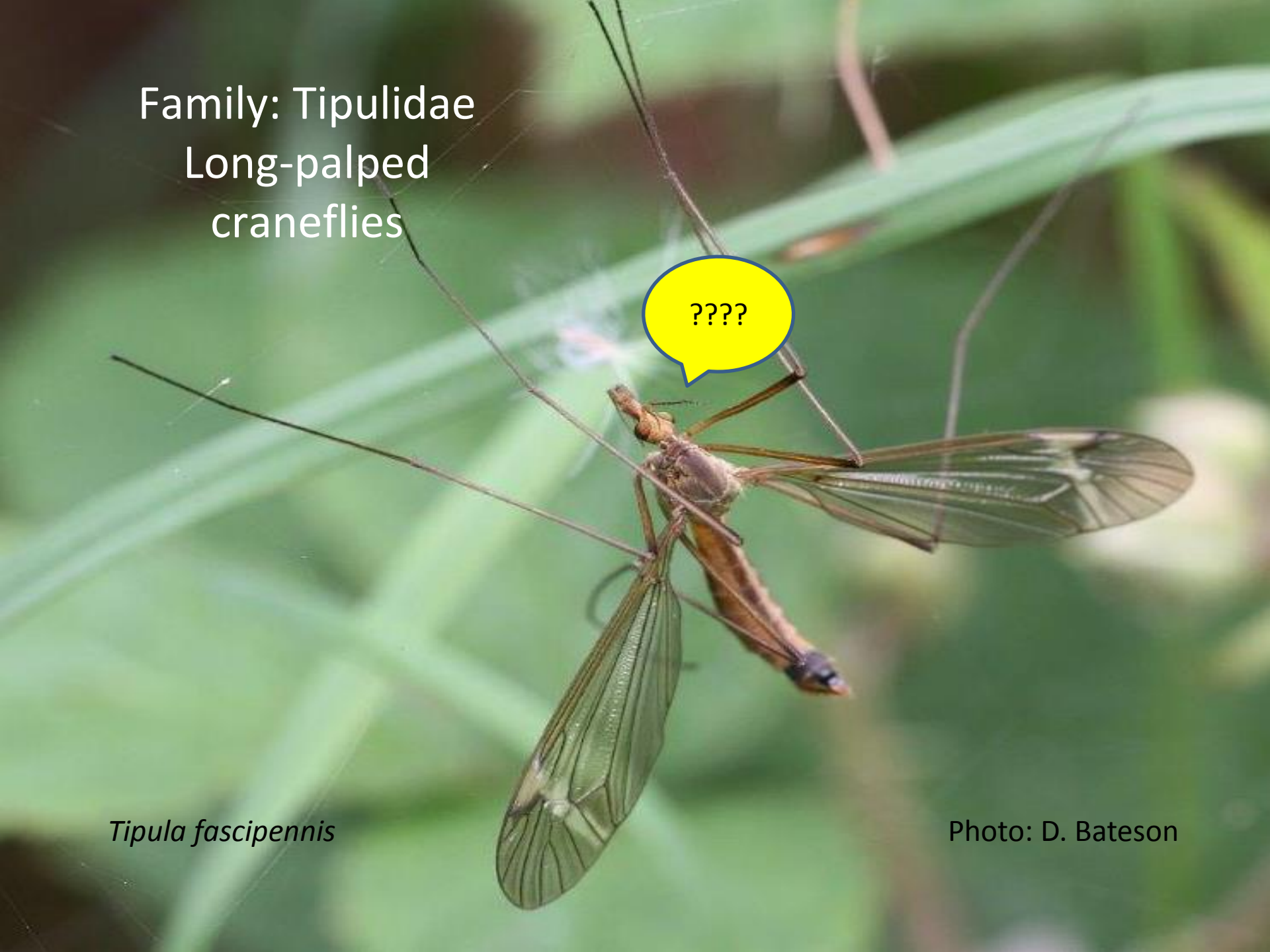


Family: Tipulidae  
Long-palped  
crane flies

????

*Tipula fascipennis*

Photo: D. Bateson



*Ctenophora pectinicornis*



Photo: Alan Outen



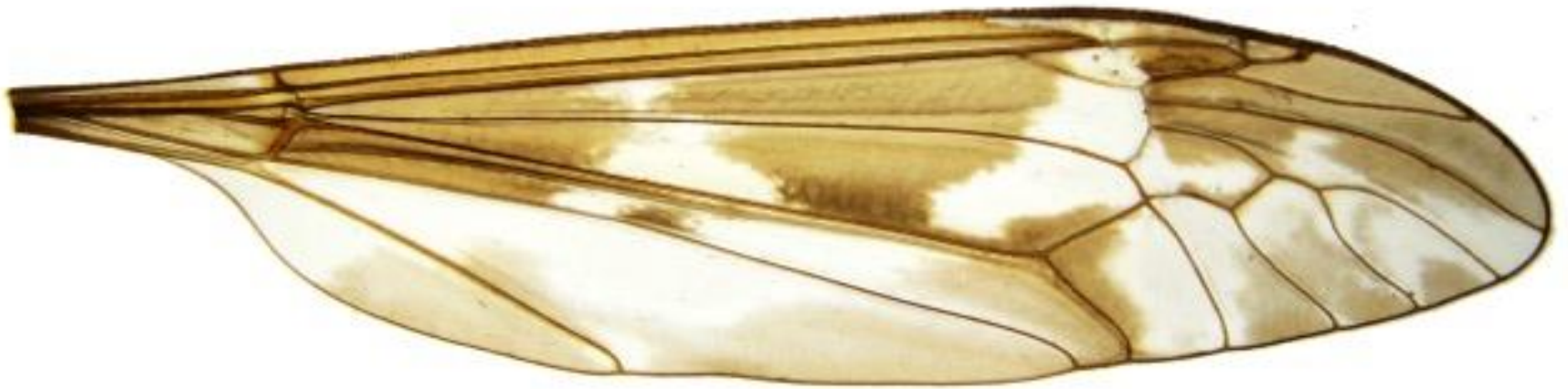
Photo: Alan Outen



*Tipula maxima*

Photo: G. Calow





*Tipula maxima* - wing

Photo: C. Spilling

Larva of *Tipula fulvipennis*  
A 'leather-jacket'

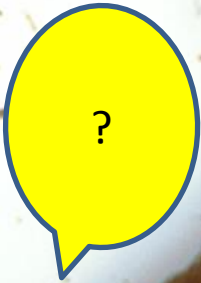


Photo: A. Rowland

## Tipulidae - Modes of Larval Nutrition

Ctenophorines: Xylophage, with the help of symbiotic bacteria

Tipulines: Saprophages. 'Gross-feeders' on soil, digesting the organic detritus.

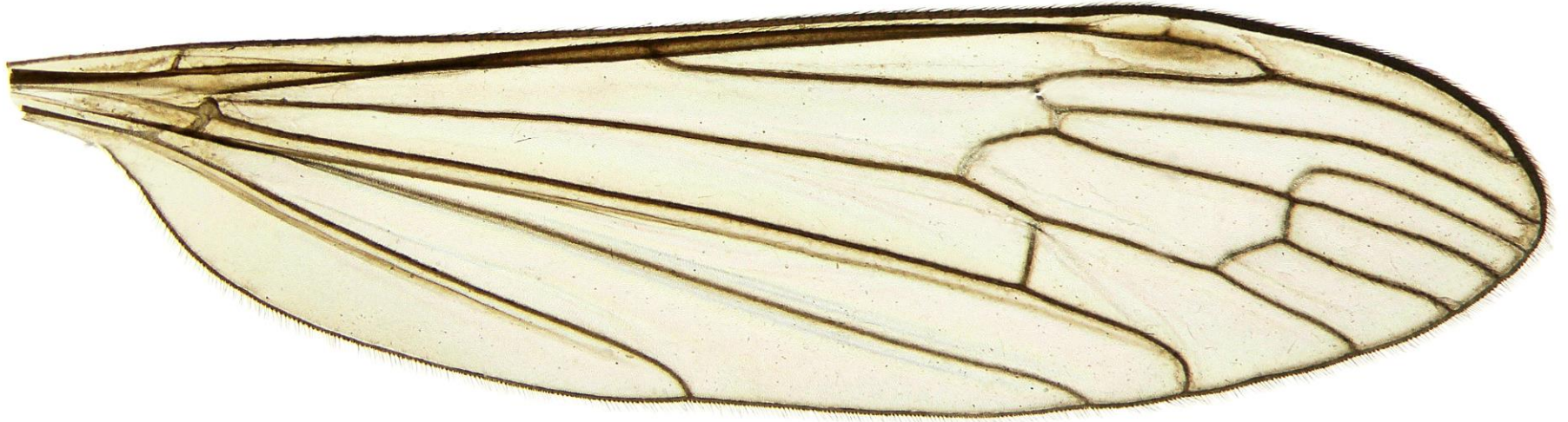
Seem to be opportunistic, feeding on whatever material is available. Gut bacteria ?  
Micromycetophage?

Family  
Cylindrotomidae



*Cylindrotoma distinctissima*

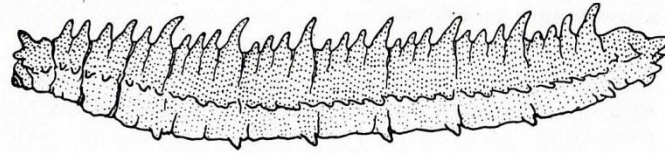
Photo: D. Bateson



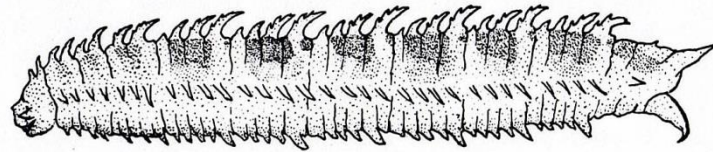
*Cylindrotoma distinctissima*

Photo: C. Spilling

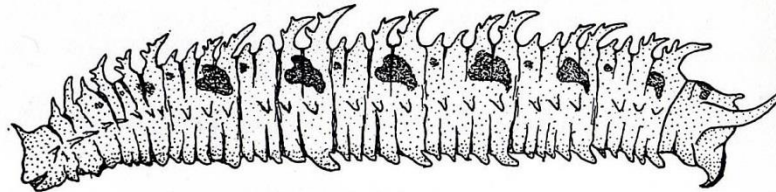
Larvae of  
Cylindrotomidae



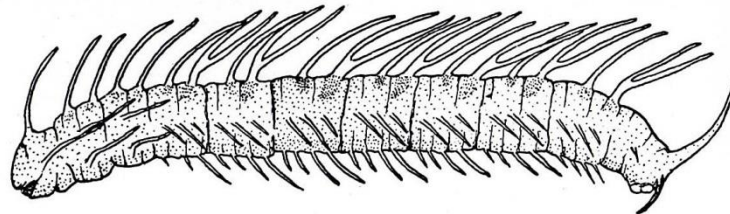
1



2



3



4

Cylindrotominae

FIGS. 1-4.—Larvae (lateral)—1, *C. distinctissima*; 2, *T. trisulcata*; 3, *D. glabrata*; 4, *P. replicata*.

Cylindrotomidae  
Larvae of *Triogma trisulcata*



Photo: J. Webb

Family: Pediciidae  
'Hairy-eyed' Craneflies



0.20mm  
*Pedicia straminea*



*Pedicia litoralis*



*Pedicia occulta*



Photo: Khris Peeters



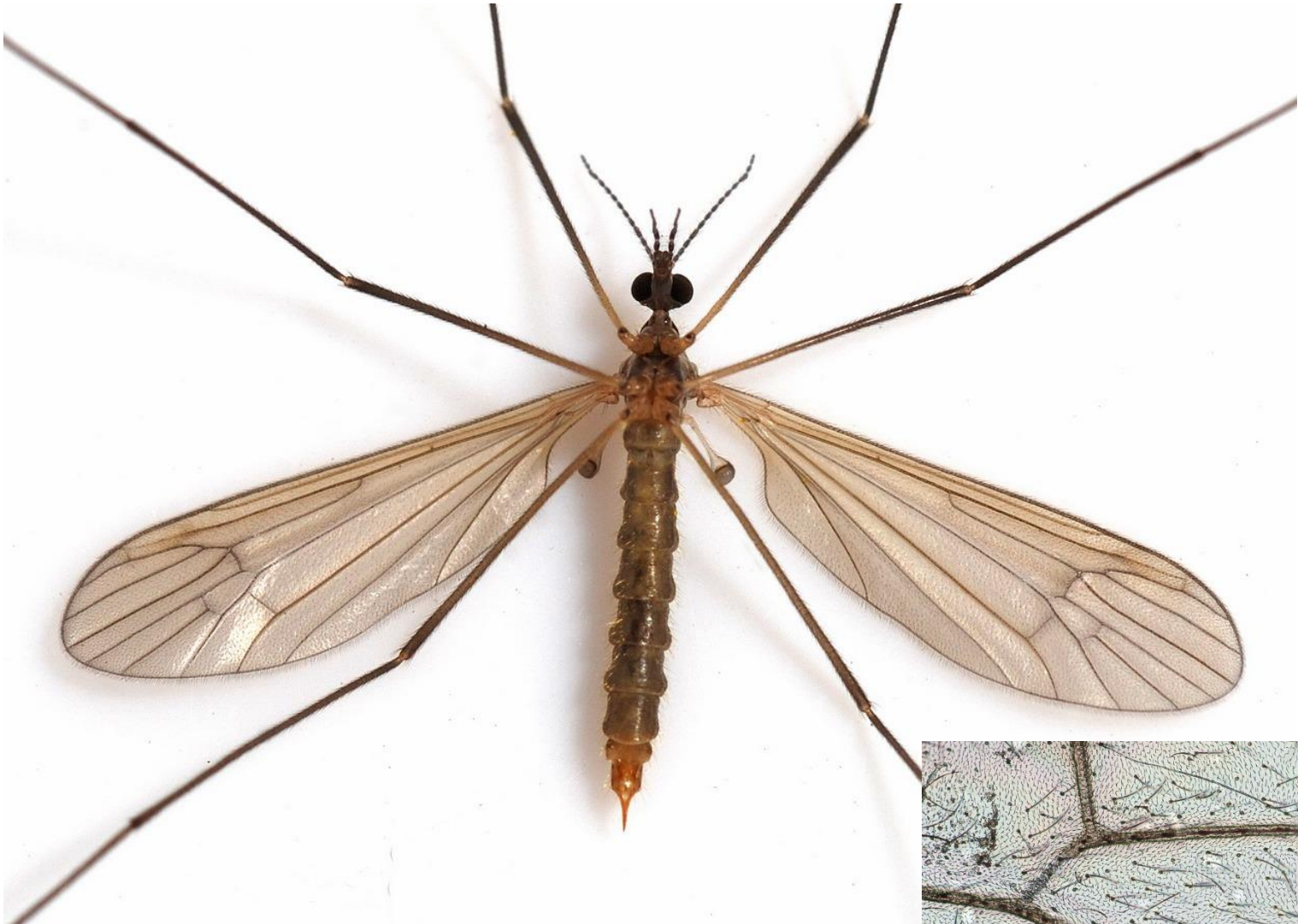
Wing of *Pedicia occulta*

Photo. C. Spilling

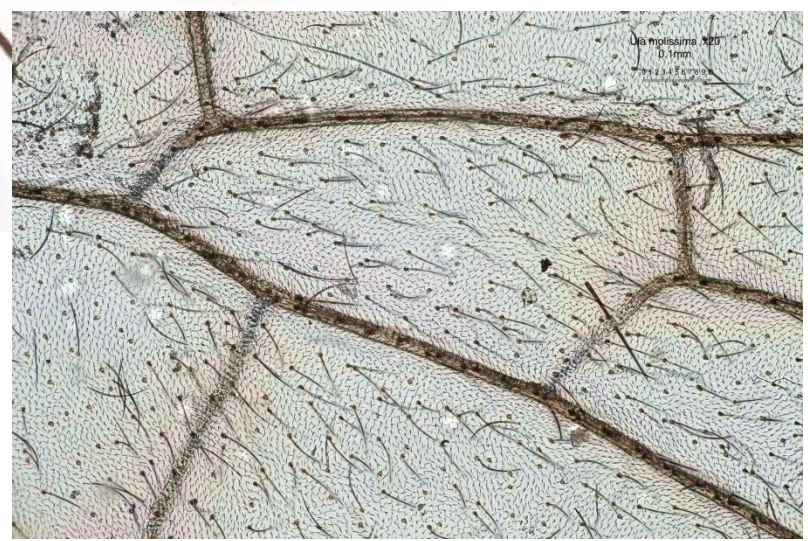
Pediciidae  
Larva of *Pedicia rivosa*



Photo: J. Webb



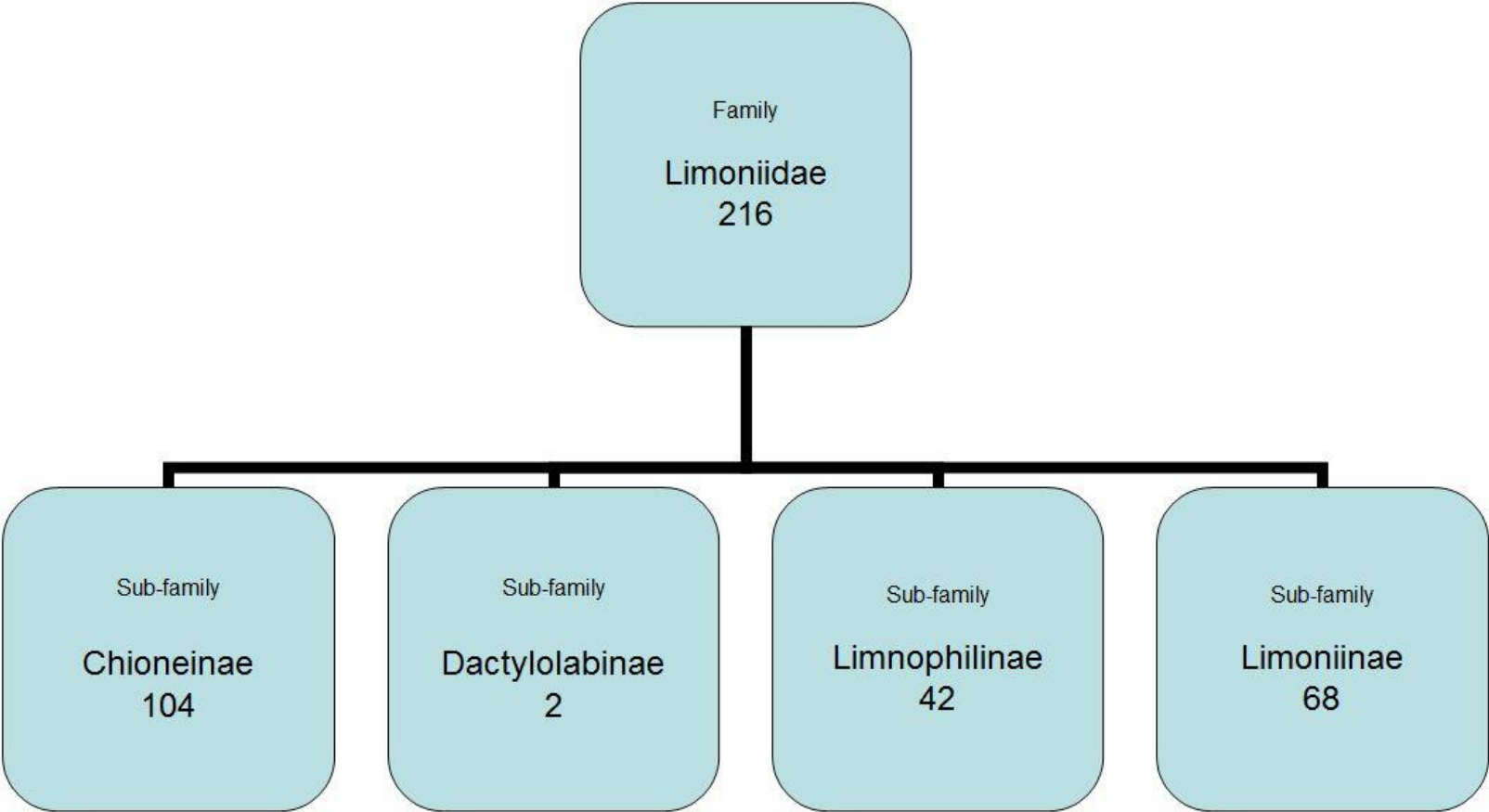
Pediciidae  
*Ula molissima*  
Mycetophage



Family – Limoniidae



# Sub-families of the Family Limoniidae




## Limoniidae - Modes of Larval Nutrition

Chioneinae - Bulk-feeders on rotting vegetation.

Dactyloabinae - Moss and algae

Limnophilinae - Bulk-feeders and Predatory

Limoniinae - Rotting vegetation, Moss/algae, decaying vegetation, fungi.



Limoniinae  
*Metalimnobia quadrimaculata*  
A mycetophage

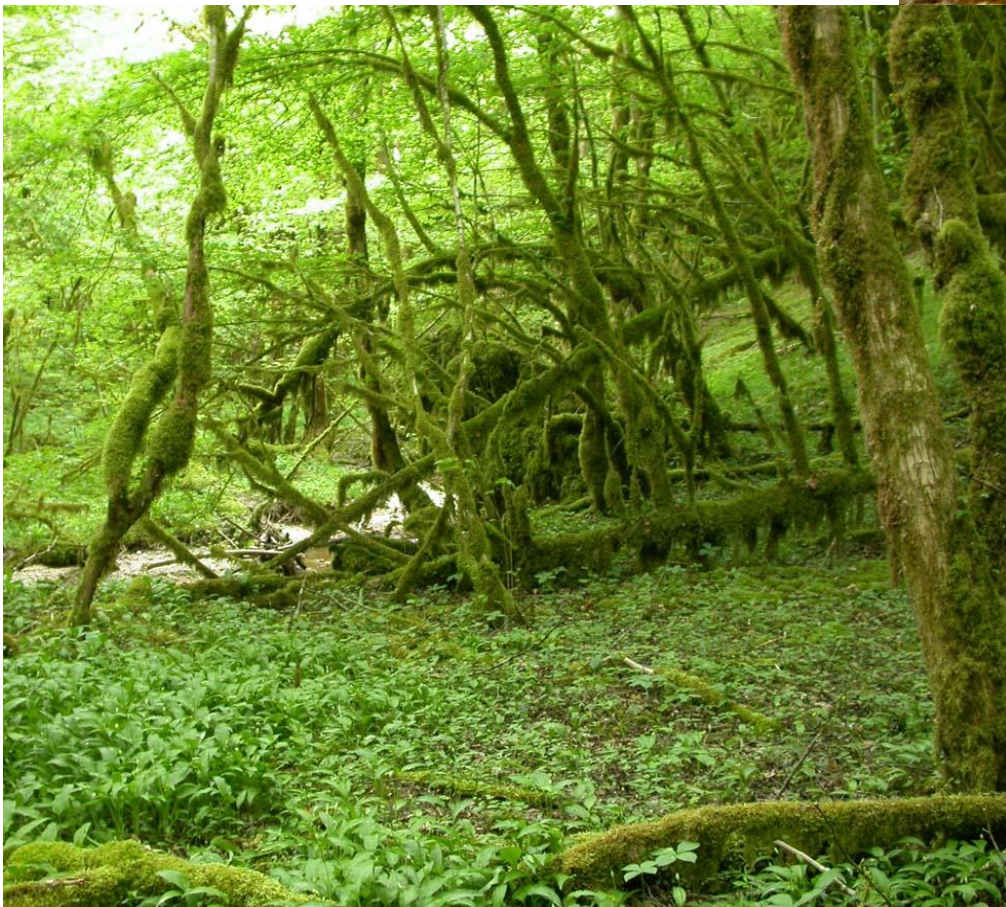
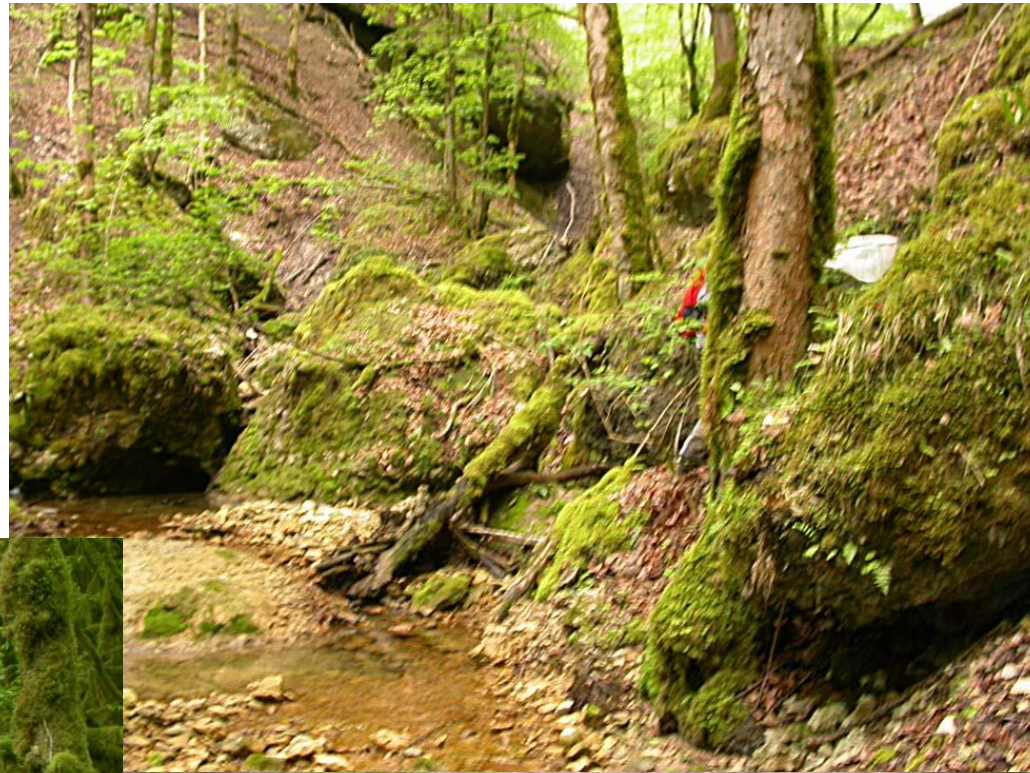
Photo: P.D. Brock



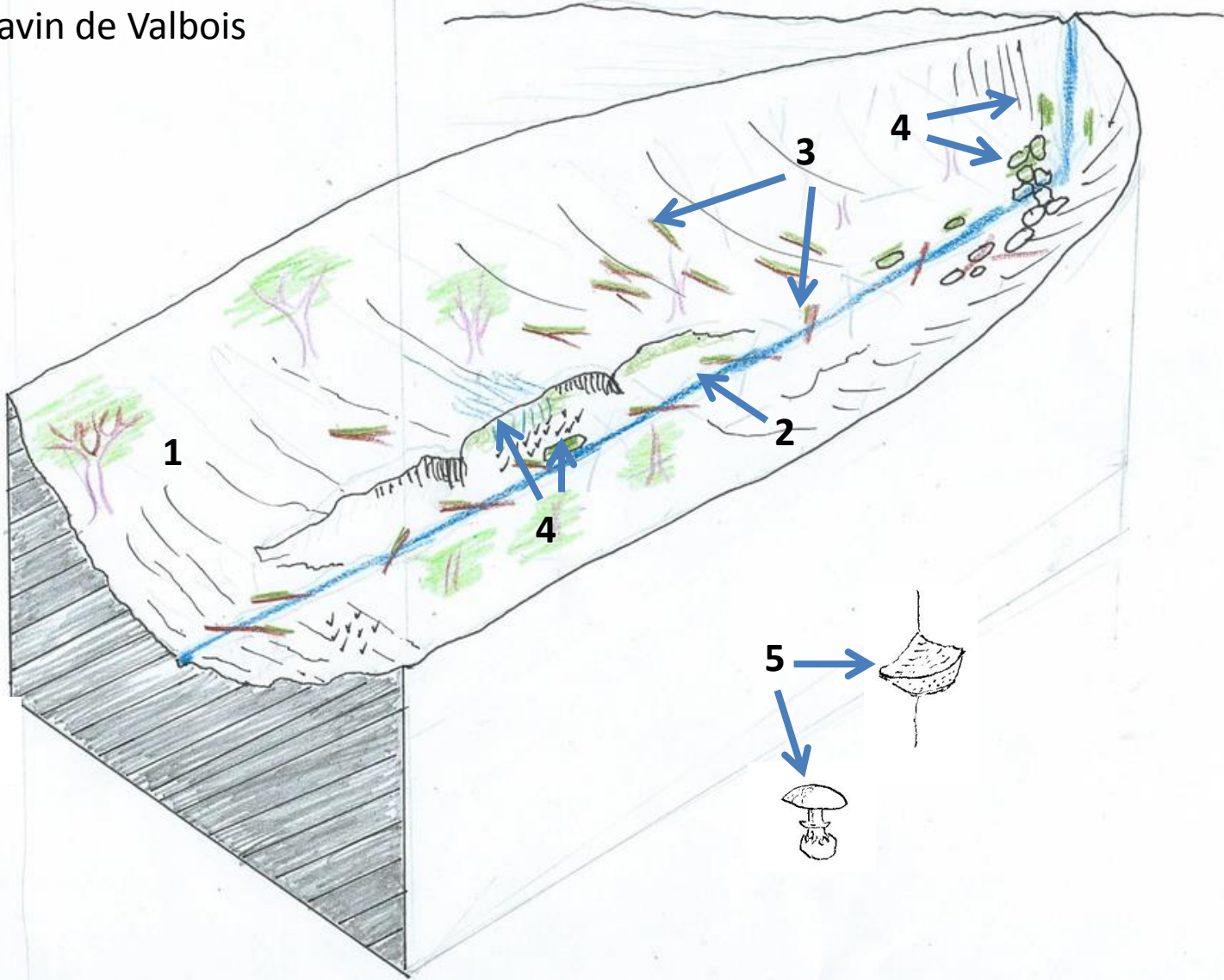
# Cranefly Habitats



# Le Ravin de Valbois



Cranefly Habitats  
Le Ravin de Valbois



## CRANEFLY HABITATS

### 1. SOILS

- a. Pasture - *T. paludosa*, *T. vernalis*
- b. Woodland – *T. varipennis*
- c. Wetlands – *T. maxima*, *T. varicornis*, Chioneinae,

### 2. AQUATIC: Larvae of some *Tipula*, and *Pedicia* and *Dicranota*.

### 3. Rotting WOOD :

a) Dry *Dictenidia bimaculata*, *Tipula flavolineata*, *Austrolimnophila ochracea*, *Epiphragma ocellare*, *Limonium nubeculosa*, *Rhipidia maculata*.

b) Wet Wood: *Lipsothrix species*

### 4. MOSSES:

- a. Terrestrial – *Tipula* (sg. *Savtshenkia*) eg *T. rufina*, *T. pagana*, *T. irrorata*
- b. Aquatic mosses – *Sphagnum* : genus *Prionocera*, *Dicranomyia* (*Melanolimonia*) *caledonica*. *Dicranomyia* (*Numantia*) *fusca*.

### 5. FUNGI *Metalimnobia* species. (*Limoniidae*) *Ula* species (*Pediciidae*)



Acknowledgements for digital  
photographs:

Alan Outen , Alan Rowland, Derek  
Bateson, Graham Calow, Chris Spilling,  
Judy Webb, Paul Brock

# Useful Websites and e.mail addresses



Dipterists Forum: [www.dipteristsforum.org.uk](http://www.dipteristsforum.org.uk)

Cranefly News: [john.kramer@btinternet.com](mailto:john.kramer@btinternet.com)

- Cranefly records to Peter Boardman: [pete.ento22@gmail.com](mailto:pete.ento22@gmail.com)
- NBN Atlas: [NBNAAtlas.org](http://NBNAAtlas.org)
- Catalogue of Craneflies of the World : [www.http://ccw.naturalis.nl](http://www.http://ccw.naturalis.nl)
- Studia Dipterologica: [www.studia-dipt.de](http://www.studia-dipt.de)
- Thank you for your attention !