FIRST RELEASE OF NORTH EUROPEAN TACHINID DNA BARCODES

by Jaakko Pohjoismäki

University of Eastern Finland, Department of Biology, P.O. Box 111, FI-80101 Joensuu, Finland. E-mail: jaakko.pohjoismaki@uef.fi

It is my delight to announce the release of the DNA barcodes for the first 366 species of Tachinidae sequenced as part of the Finnish Barcode of Life (www.finbol.org) initiative (Fig. 1, in part). An overview of the data has been published in PlosONE (Pohjoismäki et al. 2016) and is open access. The data is available in the Barcode of Life Database (BOLD) (http://www.barcodinglife.com/) as well as in GenBank (https://www.ncbi.nlm.nih.gov/genbank/). The easiest access to the whole dataset is through BOLD's Digital Object Identifier System (http://dx.doi.org/10.5883/DS-TACFI).

The data covers the majority of Finnish tachinid species and includes a number of rare taxa from elsewhere in Europe. My hope is that the data will serve as a good basis to facilitate species identification and address outstanding issues in taxonomy. As we report in the paper, many tachinid taxa have cryptic variation or taxonomic conflicts, and some taxa may have unjustified division between genera. Among the interesting issues to solve in the future are the numerous cases where barcode sequences are nearly identical between Palaearctic and Nearctic taxa. Sorting out their true species identities and rightful names is a waiting challenge.

Collector projects such as those compiling DNA barcodes are never finished. Our project started in 2010 and every year since then there have been interesting species to add. Despite the release of our data and paper, I am still collecting and including additional species into BOLD where they will be available for the online barcode identification tool. In addition, their photos are available through the taxonomy browser. The barcodes for species that were not included in the published study will be made publicly available in due time when a larger patch of specimens has been accumulated. If you have Palaearctic species of interest to add to our barcode collection, please do not hesitate to contact me.

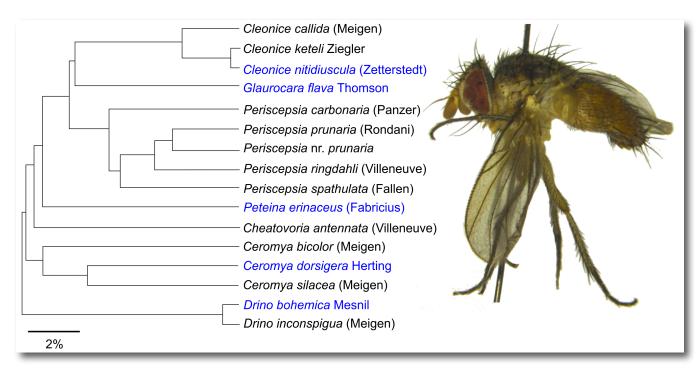


Figure 1. Neighbor-Joining tree for DNA barcode sequence similarity for some example tachinids. The species that have been sequenced since the publication of Pohjoismäki *et al.* (2016) are shown in blue. The tree does not depict true phylogeny between genera and is used here only to illustrate species differences. The pictured specimen is a male of *Ceromya dorsigera* Herting from Kitee, Finland, representing the second Finnish record of the species.

References

Pohjoismäki, J.L.O., Kahanpää, J. & Mutanen, M. (2016) DNA barcodes for the northern European tachinid flies (Diptera: Tachinidae). *PLoS ONE*, 11 (11), e0164933. doi:10.1371/journal.pone.0164933