



# 15<sup>th</sup> International Auchenorrhyncha Congress and 10<sup>th</sup> International Workshop on Leafhoppers and Planthoppers of Economic Importance

## **TaxonWorks as a successor of 3i cybertaxonomic platform for revisionary systematics and its application for management of World Auchenorrhyncha database**

**D.A. Dmitriev**

Illinois Natural History Survey, 1816 S. Oak str., Champaign, IL 61820 USA

For more than 10 years the cybertaxonomic software package 3i (Dmitriev 2006; <http://dmitriev.speciesfile.org/>) was used by numerous researchers, including many scientists studying Auchenorrhyncha, for managing their taxonomic and revisionary projects. Originally designed as a desktop package for managing data relevant to morphology-based taxonomic revisionary studies and presentation of accumulated knowledge over the web in a form of searchable nomenclatural checklists and interactive identification keys, the main restriction of the software was the difficulty to manage large collaborative projects between different labs. For the last 3 years, the SpeciesFile bioinformatics group from the Illinois Natural History Survey focused on development of a new data management package, TaxonWorks (<http://taxonworks.org>), which should unify features of 3i and three other well-established platforms: SpeciesFile (Cigliano & Eades 2010), mx (Yoder *et al.* 2006), and Mesquite (Maddison & Maddison 2015). TaxonWorks is an open-source platform (<https://github.com/SpeciesFileGroup/taxonworks>), which will provide web based interfaces for handling the full diversity of data required by taxonomists and collection managers, including, but not limited to, taxonomy (with validation based on codes of zoological, botanical, and bacterial nomenclature), specimen data, bibliographies, media (images, PDFs, sounds, videos), morphology (character matrices, dichotomous, pictorial, interactive keys, and auto-generated taxon descriptions), distribution (including interactive maps), biological associations, DNA and RNA sequences. All data on Auchenorrhyncha accumulated in the 3i database are being migrated to a new platform.

### **References**

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