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MEMBER NEWS

Drs. J. Manuel Tierno de Figueroa and Manuel J. López-Rodríguez, University of Granada (Spain), carry on working on Plecoptera nymphal biology and ecology in Spain and Italy, in collaboration with Drs. J.M. Luzón-Ortega (Hydraena S.L.L., Spain), S. Fenoglio and T. Bo (Università del Piemonte Orientale, Italy), R. Fochetti (Università della Tuscia, Italy), and J. Garrido (Universidad de Vigo, Spain). Moreover, physiological studies on digestive enzyme activities and antioxidant defences of stoneflies are being carried out in collaboration with Drs. A. Sanz and C. Trenzado (University of Granada, Spain). Also, with Dr. J.M. Luzón-Ortega, they are studying the drumming calls of several species of stoneflies from Spain, as well as the distribution of the stoneflies in the Iberian Peninsula. A study on DNA quantification and a phylogenetic study on the cavernicolous stonefly *Protonemura gevi* are being made in collaboration with some colleagues of the Department of Genetic from the University of Granada (Spain). They are also working at the community level (mainly on trophic webs) in several streams from southern Iberian Peninsula. JMTdeF is also collaborating with Dr. T. Derka (Comenius University, Slovakia) in some nymphal biology studies of species inhabiting streams in Slovakia and, punctually, in taxonomy of stoneflies from SE Venezuela. Finally, they are also collaborating with some other plecopterologists and directing or co-directing the researches of B. Gaetani, I. Peralta-Maraver, J. Rúa and P. Vannucci.

STANDING COMMITTEE OF THE INTERNATIONAL SOCIETY OF PLECOPTEROLOGISTS

Changes in the Standing Committee of the International Society of Plecopterologists

The Standing Committee of the International Society of Plecopterologists is responsible for ensuring the continuity of the International Symposia on Plecoptera. The committee also has the overall responsibility for the Perla funds and for allocating travel scholarships for attending the International Symposia. Sadly, Dr. Ken Stewart, a longstanding member of the committee, recently passed away, and for various reasons Drs Y. Isobe, P. Harper and C. Froehlich wished to step down from the standing committee. We have now appointed three new members, Drs Mayumi Yoshimura, Dávid Murányi and R. Edward DeWalt. All have an avid interest in Plecoptera and will certainly be an asset to the Committee. Dr. Yoshimura works in the Biodiversity Research Group of the Forestry and Forest Products Research Institute, Kyoto, Japan. She has published many papers on the distribution, ecology and physiology of stoneflies. She also did an excellent job as secretary general of the recent Wakayama conference. Dr. Murányi works at the Hungarian National Museum in Budapest and was co-organiser of the Plecoptera session at the European Congress of Entomology in 2010. More recently he spent several months working on stoneflies at Brigham Young University, Provo, USA, with Drs. **R. Baumann** and **C. R. Nelson**. Dr. **DeWalt** is employed by the Illinois Natural History Survey, USA. As well as conducting extensive research on North American Plecoptera and other aquatic insects, he has taken the lead in developing and updating the database, *Plecoptera species file* (<u>http://Plecoptera.SpeciesFile.org</u>), an extremely useful website for Plecopterologists worldwide.

John E. Brittain, Chair, Standing Committee of the International Society of Plecopterologists

ARTICLES

Predicting Pre-European Settlement Ranges of Stoneflies in the Midwest USA

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Natural history collections hold tens of thousands of Plecoptera specimens, many of them collected before the worst degradation occurred. These are some of the most important specimen data for reconstructing past stonefly assemblages. Our objectives are to model the distribution of stonefly species within the region in order to produce pre-European settlement distributions for each species and species richness estimations across the region.

Our team has amassed ca. 24,000 Midwest stonefly specimen records from 24 museums and private collections and from new sampling within Illinois, Indiana, Michigan, Ohio, and Wisconsin. To date we have specimens from 4,486 unique locations (Fig. 1).

Using Maximum Entropy models, and over 100 environmental variables associated with USGS HUC12 scale watersheds (mean 70 km²), we have modeled 102 species to date. The cumulative output of the models was used to create an index of species richness at the HUC12 scale (Fig. 3). The species distribution models and index of species richness closely correspond to current known distributions and species richness hot and cold spots in the region.

Future work includes assessment of change of species traits distribution across the region, how well-sampled locations have changed with time, and how climate change might alter the original range of species and species richness over the next century.

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