

## sDiv writing retreat summary for sWEEP

**sWEEP writing retreat participants:** Joanne Bennett (iDiv), Ignacio Morales Castilla (Harvard University, USA), Miguel Ángel Olalla Tàrraga (Universidad Rey Juan Carlos, Spain), Jennifer Sunday (University of British Columbia, Canada) Piero Calosi – remote (Université du Québec à Rimouski, Canada), Miguel Araújo - part-time (National Museum of Natural Sciences, Spain), Brezo Martínez (Universidad Rey Juan Carlos, Spain), Fabricio Villalobos (Instituto de Ecología AC (INECOL), México).

The aim of the sWEEP working group was to synthesise data, disciplines and tools to explore how aquatic and terrestrial species distributions respond to macroevolutionary and macrophysiological determinants. During the initial workshop we identified three core goals:

- (1) Assemble a large dataset of species thermal physiological limits for taxa in both terrestrial and aquatic systems.**
- (2) Investigate if species' thermal physiological limits are conserved across the tree of life.**
- (3) Determine if there are global patterns in range filling.**

Since the initial workshop the dataset for all objectives was assembled. Further, a manuscript investigating the rate of Evolution of critical thermal limits was drafted. During the writing retreat the dataset called GlobTherm was published on-line (Dryad) and the associated data manuscript was finalized for ready for submission in *Nature scientific Data* (Bennett et. al., in 2<sup>nd</sup> Review). Second, we worked on revising the evolution of critical thermal limits manuscript to prepare it for submission in a high impact general science journal i.e. *Nature*. This manuscript is now receiving the final touches for submission and the submission letter has been drafted. In relation to objective 3, analyses were performed and a manuscript outline was drafted. We expect to deliver a manuscript lead by participants Sunday and Olalla-Tàrraga in relation to this objective latter this year.

Bennett, J. M., Calosi, P., Clusella-Trullas, S., Martínez, B., Sunday, J., Algar, A. C., Araújo, M. B., Hawkins, B. A., Keith, S., Kühn, I., Rahbek, C., Rodríguez, L., Singer, A., Villalobos, F., Olalla-Tàrraga, M. A., Morales-Castilla, I., (In 2<sup>nd</sup> Review) GlobTherm a global database on thermal tolerances for aquatic and terrestrial organisms. *Nature Scientific data*.

Bennett, J. M., Calosi, P., Clusella-Trullas, S., Martínez, B., Sunday, J., Villalobos, F., Araújo, M. B., Algar, A. C., Hawkins, B. A., Keith, S., Kühn, I., Rahbek, C., Rodríguez, L., Singer, A., Morales-Castilla, I., Olalla-Tàrraga, M. A., (for submission in 2017) Evolution of critical thermal limits of life on Earth. Target journal: *Nature*