

**International Association for Plant Taxonomy  
Research Improvement Grants for Plant Systematics 2017  
Final Report**

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**Systematic affinities of Early Cretaceous mosses of western North America – an inquiry into the deep history of bryophytes**

I traveled to California and worked in Dr. A.M.F. Tomescu's lab at Humboldt State University for a period of four months, February 2017- June 2017.

To study the bryophyte fossils I learned to section the rocks serially using the cellulose acetate peel technique.

We described and assigned taxonomically a new fossil moss, *Tricarinella crassiphylla* gen. et sp. nov., which marks the oldest record for family Grimmiaceae and sub-class Dicranidae. We wrote the manuscript during my stay in California and this study was recently published in *Annals of Botany*. I also contributed as a co-author to a comprehensive review of the bryophyte fossil record (currently in press in an Elsevier special volumen; see above) and I initiated the description of three other fossil mosses with polytrichaceous affinities.

While at Humboldt State University, I also took Marie Antoine's bryophyte diversity course.

Finally, I presented my work as first author at the national meeting of the Botanical Society of America in Forth Worth (Texas).

### Scientific articles:

Tomescu, A.M.F., B. Bomfleur, A.C. Bippus, and **M.A. Savoretti**. 2018. Why are bryophytes so rare in the fossil record? A spotlight on taphonomy and fossil preservation. In: Krings, M., C.J. Harper, N.R. Cúneo, and G.W. Rothwell (eds.). *Transformative paleobotany: Papers to commemorate the life and legacy of Thomas N. Taylor*. Elsevier. (*in press*)

**Savoretti A**, Bippus AC., Stockey RA, Rothwell GW and Tomescu AMF. Grimmiaceae in the Early Cretaceous: *Tricarinnella crassiphylla* gen. et sp. nov. and the value of anatomically preserved bryophytes. *Annals of Botany*, mcy015, <https://doi.org/10.1093/aob/mcy015>



Working at the Paleobotany Lab at Humboldt State University, making peels on cretaceous rocks.



Dissertation at the National meeting of the Botanical Society of America in Fort Worth (Texas), 2017.