As part of an ongoing research collaboration in karst ecology, I am seeking a student interested in learning how to run and improve a well-known and vetted Dynamic Global Vegetation Model (S-DGVM; Woodward and Lomas 2004, Biological Review 79: 643-670). The purpose is to improve the model for vegetation growing on thin soils over weathered bedrock. This characterizes at least 10% of all terrestrial land area known as karst, but there is no adequate representation of karst features in current global dynamic vegetation models. The project will be guided by the accumulation of decades of field data collected on the Edwards Plateau of Texas, including 10 years of net ecosystem exchange and evapotranspiration data. Of particular interest is the prediction of drought-related tree die-off, as happened in Texas in 2011. In addition to modeling, the student is also expected to develop an experimental research component in synergism with model development and/or evaluation.

Qualified students would join our Ph.D. program in Aquatic Resources and receive a teaching scholarship through the Department of Biology. The Department of Biology at Texas State University is a large and diverse department with 33 full time faculty members and 14 academic associates. To learn more about the Department's resources visit http://www.bio.txstate.edu/.

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