Robert S. Harbert, Ph.D.

Curriculum Vitae

Stonehill College, Easton, MA
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EMPLOYMENT HISTORY

Stonehill College, Easton, MA. Assistant Professor of Biology. August 2016 to present.
American Museum of Natural History, New York, NY, Gerstner Scholar in Bioinformatics and Computational Biology. July 2016-June 2018.

EDUCATION

Ph.D., Plant Biology, Cornell University, Ithaca, NY. 2016. Dissertation: "The intersection of climate and niche: Likelihood estimation of modern and past climate using plant biodiversity", Advisor: Dr. Kevin C. Nixon
B.S. Biology, Roanoke College, Salem, VA. 2011. Advisor: Dr. Leonard Pysh.

PUBLICATIONS

Harbert, R.S., and K.C. Nixon. 2018. Dynamic Quaternary vegetation as a proxy for 50,000 years of climate change in Western North America. *Open Quaternary*, doi: https://doi.org/10.5334/oq.46
Harbert, R.S. 2018. Algorithms and database strategy for the reconstruction of plant communities from ancient and environmental DNA. *Applications in Plant Sciences*, e1034
Martinez, C., T.Y.S. Choo, D. Allevato, K. Nixon, W. Crepet, **R. Harbert**, C. Daghlian. 2016. Rariglanda jerseyensis a new ericalean fossil flower from the Late Cretaceous of New Jersey. *Botany* 94: 747–758 dx.doi.org/10.1139/cjb-2016-0062
Harbert, R.S., and K.C. Nixon. 2015. Climate reconstruction analysis using coexistence likelihood estimation (CRACLE): A method for the estimation of climate using vegetation. *American Journal of Botany*, doi:10.3732/ajb.1400500
Harbert, R.S., A.H.D. Brown, and J. Doyle. 2014. Climate Niche Modeling in the Perennial Glycine (Leguminosae) Allopolyploid Complex. *American Journal of Botany* 101(4):710-721.
Pysh, L., N. Alexander, L. Swatzyna, and **R. Harbert**. 2012. Four alleles of AtCESA3 form an allelic series with respect to root phenotype in Arabidopsis thaliana. *Physiologia Plantarum* 144:369-381.

COURSES

BIO101L – Biological Principles I Lab, Stonehill College
BIO102L – Biological Principles II Lab, Stonehill College (SP2019)
BIO200 – Introduction to Bioinformatics, Stonehill College
BIO261 – Biological Statistics, Stonehill College (SP2019)
BIO332 – Applied Bioinformatics, Stonehill College (SP2019)

MENTORING

Grace Moore – AMNH REU 2018, "Paleogenomics of Ancient DNA from *Neotoma* packrat midden plant macrofossils."

SCIENTIFIC SOFTWARE

cRacle – https://github.com/rsh249/cRacle.git -- R Library
rasterExtras – https://github.com/rsh249/rasterExtras.git -- R Library
ISOETES1 – https://github.com/rsh249/ISOETES1.git -- Pipeline for metagenomic analysis of short-read DNA sequence data.
NeotomaSeq – https://github.com/rsh249/NeotomaSeq.git -- Pipeline for metagenomic analysis of ancient DNA from packrate middens.
raster_PET – https://github.com/rsh249/raster_PET.git -- R code for calculating Evapotranspiration from global climate data.

EDUCATIONAL MATERIALS

Introduction to Bioinformatics: https://rsh249.github.io/bioinformatics/
RGGS short course in Spatial Bioinformatics: https://rsh249.github.io/spatial_bioinformatics/
SICG Workshop – Python Programming for Bioinformatics: https://rsh249.github.io/python_workshop