

BIODIVERSITY OF THE BACK FORTY

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The freshwater algae present in the southern U.S. are understudied. This project is a flora voucher documenting the algae found in a small farm pond in Bowie County, Texas. The diatom assemblage is currently in the process of being identified. A species of *Stauroneis* closely resembling *S. baconia* has been identified, however the specimens display several features that suggest it may be an undescribed species. If it is *S. baconia*, it will extend the described range of this species by approximately two thousand miles. There are also several genera with a notably large diversity of species of *Eunotia*, *Cymbella*, and *Pinnularia*. The diatoms are part of a diverse algal community: several species of desmid in the genera *Micrasterias*, *Staurastrum*, and *Closterium* have been identified. In addition, the rare freshwater genera *Glaucocystis* and *Parallela* have been identified. Other heterokonts in the phylum Ochrophyta are present, including *Rhipidodendron splendidum*, *Mallomonas* and two species in the genus *Synura*. A species of dinoflagellate in the genus *Peridinium* is also present. In addition to a wide variety of phytoplankton there is also an interesting collection of fauna including *Stentor*, copepods, *Daphnia*, *Hydra*, *Vorticella*, *Amoeba*, and tardigrades. Vertebrates present in the pond include several species of *Lepomis* as well as the aquatic salamander *Siren intermedia*. This project is largely a labor of love but documenting the microflora of these systems has significance for understanding the ranges and preferred conditions of aquatic flora and fauna. Flora vouchers are crucial for the conservation of rare and endangered species. There is as much wonder in a drop of pond water as any grassland or forest.