

THE DIATOM FLORA OF THE SOILS OF THE ATACAMA DESERT, CHILE

Christine Vaccarino, Lauren Baldarelli, and Jeffrey R. Johansen.

Department of Biology, John Carroll University, University Heights, Ohio 44118 USA.

The Atacama Desert in coastal Chile is the driest hot desert in the world. We collected a total of 88 soils samples from a 1000 km long region of the Atacama (La Serena to Iquique) as part of a study of the algal flora of the soils of the Atacama Desert, and here report on the diatom portion of that flora. Most of the soil samples collected contained no recoverable chlorophyte or cyanobacterial taxa. Thirty-two of the samples had at least one green algal or cyanobacterial isolate; these samples were examined for diatom frustules. A total of 49 different diatom taxa were recovered from the soils. Of these, the clear soil inhabitants were *Hantzschia amphioxys*, *Luticola cohnii*, *L. goeppertiniana*, *L. mutica*, *L. nivalis*, *L. ventricosa*, *Pinnularia borealis*, and *Pinnularia subcapitata*. There were several other taxa reported from desert soils previously, including *Epithemia adnata*, *Denticula valida*, and *Nitzschia valdecostata*. *Planothidium lanceolatum*, a generally aquatic taxon, was also fairly common. Chrysophyte cysts were also commonly encountered, a typical finding in desert soils. A number of other aquatic taxa were present in very rare numbers, and we suspect wind-blown transport for these species.

Poster Presentation