VOL. 80 | NO. 6
AUGUST 2018

THE AMERICAN BIOLOGY TEACHER

About Our Cover

The cover photo is of a Purple Pitcher Plant (*Sarracenia purpurea*) surrounded by sphagnum moss (*Sphagnum* spp.). It was taken at bog in central Wisconsin

Bogs are unique wetlands that often develop in glacial depressions with poor drainage. The lack of water outflow allows for acidic compounds to build up, selecting for species that are able to tolerate low pH habitats, such as sphagnum moss and tamarack trees (*Larix laricina*). Carnivorous plants, including the Venus flytraps (Dionaea muscipula), Sundews (*Drosera spp.*), and Pitcher plants (*Sarracenia spp.*), are common bog autotrophs that evolved to catch small animals as a way survive in the nitrogen-poor bog soils.

Of the eleven species of Pitcher Plants found in North America, the Purple Pitcher Plant (*S. purpurea*) is the only one found in the Northern latitudes. The leaves of these plants form hollow tubes that collect rainwater, and sweet-smelling nectar produced in the leaves attracts arthropods like bees. As arthropods walk down the leaves, small hair-like structures (some of which are visible in the shiny parts of the leaf) prevent them from turning around and walking up. As a result, they end up walking down toward the bottom, eventually reaching a slippery part of the leaf where they fall into the water and drown. Weak enzymes produced by the plant, as well as commensal decomposers in the water, break down the arthropods, releasing the nitrogen for the plant to use.

Bob Remedi, Ed.D., faculty member at College of Lake County in Grayslake IL, took the photo with a hand-held using a Canon 7D Mark II and an EF100mm f/2.8L macro lens. The exposure was 1/400 second at f/13 with an ISO of 400.

Contents