

Incredible moving plants delight and amaze

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As a child, I was struck by the idea that plants operate on a different time scale; they move in terms of days, months, and years, much more slowly than animals. Thus, when I observed plants moving in just seconds like animals, I was startled.

The most common plant that I ran across was the sensitive plant (*Mimosa pudica*).

This plant, native to the Americas, is now a pantropical weed. Like many plants, it folds its leaves up with darkness; this is called a nyctinastic movement. However, the sensitive plant will also fold its leaves with touch (a seismonastic movement) due to a rapid change in water or turgor pressure at the base of the leaves. One hypothesis says that plants that move suddenly are less likely to be eaten by animals.

Venus fly traps (*Dionaea muscipula*) also intrigued me as a kid. An endangered plant native to North Carolina, Venus fly traps are propagated in nurseries around the world for the intriguing rapid closure of its "jaws" when the tiny hairs inside the trap are triggered. Again, the rapid closure is due to turgor pressure, but in this case

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A member of the bean family, the singing tea plant is native to Asia. The leaves consist of three leaflets, one large leaflet and two basal leaflets.

the purpose is to capture insects, primarily for their content of phosphorus (and organic nitrogen).

Probably the most amazing moving

plant that I remember as a kid was what was then called the telegraph plant and is now being marketed as the dancing tea plant, singing tea plant, semaphore plant,

or music tree (*Codariocalyx motorius*, alias *Desmodium gyrans*). A member of the bean family, this woody plant is native to tropical Asia. The leaves consist of three leaflets, one large leaflet and two tiny basal leaflets.

Apparently, in order to optimize the use of energy, the tiny leaflets move to redirect the large leaflet for the best light. The movement involves a tiny electrical potential and the expenditure of energy. The tiny leaflets move most rapidly at certain temperatures (around 70-72 degrees F.), changing light levels, and/or sound waves, i.e., singing. Check out the Youtube videos on the web that show people singing to their telegraph plants.

Both the sensitive plant and the Venus fly trap are sold at larger garden centers. The singing tea plant is more difficult to find, but there are a number of sources on the web.

On the campus of Delaware State University, the Claude E. Phillips Herbarium is Delaware's center for research, education, and outreach about plant identifications, locations, and uses. Call 302-857-6452 (Dr. Susan Yost) to arrange a tour of the Herbarium, and call 302-857-6408 (Dr. Arthur Tucker) for more information about this article.

Submitted photo