

light dressing of slow release fertiliser. Too much fertiliser encourages soft growth and tends to make the plants more susceptible to pests and diseases.

When possible, try to grow the plants in full sun in the open, but not in an exposed, windy position. This will result in a tougher plant with darker green foliage. In Western Australia, where we have our fair share of bush flies during the warmer months of the year, the plants are extremely well fed.

Watering in cultivation, I find, should be regular and throughout the year. In

cooler climates, when growing plants under cover, it may be easier to dry the plants off during late summer without causing the plants to dehydrate too much. Avoid watering overhead as this can reduce the amount of mucilage present on the plant, which could also weaken the plant by reducing the numbers of insects caught and also increase the energy required to keep producing the mucilage.

In Western Australia the two main reasons for plant losses are keeping the plants too dry during the summer and waterlogging due to bad drainage.

The Influence of pH and Nutrient Availability on the Distribution of *Sarracenia purpurea* (Pitcher Plant) in Three Southeastern Wisconsin Fens.

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ABSTRACT

Temperature, pH, alkalinity, total-N, total-P, K, Na, Ca and Mg levels were measured in groundwater during the summer and fall at the Pickerel Lake and Ottawa Lake calcareous fens and the Cedarburg Bog patterned fen. The two calcareous fens were similar in all physical and chemical parameters. Alkalinity, pH and Mg were significantly lower in the patterned fen when compared to the calcareous fens, while the other physical and chemical parameters were similar at all three sites.

Each of the three southeastern Wisconsin fens supported *Sarracenia purpurea* (pitcher plant). In each fen the physical and chemical characteristics of the groundwater of the areas that supported *S. purpurea* were compared with that of areas that did not support *S. purpurea*. The distribution of *S. purpurea* in these three wetlands was not correlated with the measured groundwater characteristics.

Eleocharis rostellata was dominant in the calcareous fens, while *Rhynchospora alba* was the dominant plant of the patterned fen. *S. purpurea* appeared to form no vascular plant associations, although it often occurred in association with various mosses. In the two calcareous fens, *S. purpurea* usually grew near spring seeps.

Sarracenia purpurea occurred in greater density in the calcareous fens compared to the patterned fen. Clones in the calcareous fens reached larger size and contained more leaves than clones at the patterned fen.

Sarracenia purpurea was cultivated hydroponically under controlled conditions at three levels each of N, P, and K, in a complete nutrient solution and in double distilled water. The absence of K depressed *S. purpurea* growth. Levels of other nutrients showed little effect during the first eight months of growth.