produced. It appears that selfing may be the mechanism at work. Further observations as well as crossings and exclusions are planned to determine which pollination mechanism is acting and how effective it is.

Any ideas or information on these tropical Utricularia and their life histories would be most welcome.

ROBERT ZIEMER (P.O. Box 4562, Arcata, CA 95521). For the past 3 months, I have been carefully cross-pollinating the flowers of Heliamphora heterodoxa and H. nutans. So far I cross-pollinated 10 flowers and I believe that seven of the ovaries are enlarging and the seed capsules appear to be developing normally. Last year, I self-pollinated H. heterodoxa and obtained over 100 seeds. I subsequently sowed 30 of the seeds and obtained 28 seedlings — a 93% germination!

I have observed that the stamens of my H. heterodoxa spontaneously dislodge and fall off the recepticle within a week after the petals open, whereas the stamens of H. nutans remain fixed to the receptacle for the duration of the flower and are difficult to dislodge or remove from the receptacle even months after the petals

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Review of Recent Literature


A very good review of the general principles of propagative plant tissue culture with references to lead the interested reader into more depth not possible in an article of this length. This process assumes more importance as horticultural interest in CP increases and places a strain on natural populations and traditional propagation techniques.


A considerable number of primitive features characterize the wood of the family, Sarraceniaceae. Vessel elements in the genus Heliamphora have the greatest number of primitive features and Darlingtonia and Sarracenia appear to have modifications relating to temperate climates. All of the wood is similar to the wood of the order Theales.


Leaf tissue of S. flava was analyzed for total content of nitrogen, phosphorous, calcium, magnesium and potassium. Plants grown in nutrient deficient environments had lower contents of the above elements but insect-fed plants showed much higher concentration of nitrogen and phosphorous but not the other three elements.


There is only one polysaccharide macromolecule in the secretion of this CP with a molecular weight greater than 2 million. It exists as a 4% solution in water of an acidic polysaccharide containing xylose, mannose, galactose, glucuronic acid and ester sulfate in the ratio of 1:6:6:6:1. Although protein is absent the mucin contains calcium, magnesium, potassium and sodium cations. The mucin from Drosera binata has similar properties.