

BOTANY

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ABSTRACTS

Propagation and Maintenance of High Density, Disease-Free Orchid Plantlets in Species Banks. HERBERT L. SAXON, Wheeler Orchid Collection, Biology Dept., Ball State University, Muncie, Indiana 47306.——The habitat of tropical epiphytes is disappearing. Emerging industrial societies will probably continue to deforest the tropics into the next century. Species banks will be essential gene pools of plant species which will require reintroduction into sanctuaries as they become extinct in the wild. The orchids are the largest plant family among tropical epiphytes and the Wheeler Orchid Collection and Species Bank (WOCSB) is one of the most diverse collections of orchids in the world. Research at WOCSB emphasizes developing a high copy number, disease-free pool of plantlets which can be held in minimum space or *in vitro* in distributable condition. The speaker will show evidence that: orchid plantlets can be held *in vitro* for longer than one blooming and new seed production cycle; the rate of viral infestation of old orchid collections held by traditional methods necessitates extended flasked time in species banks; and that plantlets thus propagated can be matured in a high-density, compost free culture.

