

Diel Variation of Sugar Amount in Nectar from Pitchers of *Sarracenia purpurea* L. with and without Insect Visitors

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ABSTRACT.—*Sarracenia purpurea* L. is a carnivorous pitcher plant that attracts insect prey by producing nectar. We compared amount of sugar in different samples of nectar collected during the day and night and from bagged and nonbagged pitchers. Sugar content was measured in nectar samples from 87 pitchers at 3 h intervals over a 24 h period through the use of a wick-sampling technique and a colorimetric assay. We monitored environmental conditions at the time of nectar collection and correlated them with the amount of sugar/wick. We also measured ten pitcher characteristics and examined their relationship to variations in 24 h sugar amount. Sugar amount was higher at night for both bagged and nonbagged pitchers. During the day nonbagged pitchers had lower sugar amounts than bagged pitchers, perhaps due to removal of nectar by insects. A similar, but less pronounced, difference was observed at night. Relative humidity, air and ground temperature and time of day had little effect on sugar amount. Our data suggest that nectar may crystallize during the day and dissolve when dew forms at night.