

THE PHYLOGENY OF *ASIMINA* AND *DEERINGOTHAMNUS*

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The molecular phylogenetic classification of the North American genera *Asimina* and *Deeringothamnus* (Annonaceae) has never been determined with strong support and/or resolution. DNA sequences for the two genera were shown in previous studies to be too similar to determine phylogenetic relationships. In this analysis, ISSR DNA fingerprinting techniques were used in order to elucidate the phylogeny of the group. DNA was extracted from accessions from both the field and herbarium. Six ISSR primers were used with 15 species, including 11 of *Asimina*, two of *Deeringothamnus*, one *Annona* and one *Disepalum*. Agarose gels stained with ethidium bromide were used to determine the presence and absence of bands. The gels were replicated two times for each primer. These data were analyzed in PAUP using Neighbor Joining algorithms. Morphological traits (including floral scent characteristics) were included in addition to the molecular data. The preliminary conclusions strongly support the inclusion of *Deeringothamnus* in *Asimina*.