A widespread species and its restricted endemic relative: preliminary taxonomic inferences for *Echinocereus maritimus* and *Echinocereus maritimus* subsp. *hancockii*

Classification of plants has relied on gross morphology of stem, leaf, spine, flower, fruit and seed for centuries. Even after the emergence of genetic sciences and species concepts based on molecular data, phenotype generally has been assumed to represent genotype. Remarkably large portions of plant taxonomy based on morphology withstand phylogenies constructed by analyzing genetics, a tribute to the historically acute observation skills of botanists.

In the Cactaceae, however, many taxonomic problems remain, in spite of the wealth of research, both morphological and molecular. The welter of names, name changes, revisions and more revisions, elimination of names and their restoration, evoke well known frustration on the part of students of the cacti. Many of these changes result from different concepts of genus and species, or even ranks below species, on the part of researchers. Some revisions result from a thorough review of the publication history and typology of specimens and herbarium records. Others result from new data and new plant material from the field, larger sample sizes from the field, and quantitative and molecular analytical techniques.

In many cases, taxa at the rank of subspecies, or the now more rarely used rank of variety, were

1. The green dots (●) represent peninsular localities of *Echinocereus maritimus* and red (●) *Echinocereus maritimus* subsp. *hancockii* where morphological data was gathered for this study.

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