

PLANT TAXONOMY

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ABSTRACTS

The Taxonomic Relationship of *Chenopodium quinoa* and *Chenopodium nuttalliae*. DAVID C. NELSON, Indiana University.—*Chenopodium quinoa* Willdenow, cultivated in South America, and *Chenopodium nuttalliae* Safford, cultivated in Mexico, share many morphological features in common, particularly in the seeds. Recognition of the similarities of the cultivated chenopodiums of these two regions has led some investigators to suggest that only one species is involved. This paper discusses the disposition of these taxa and new evidence for justifying the maintenance of *C. quinoa* and *C. nuttalliae* as separate species.

The Genus *Cyclanthera* (Cucurbitaceae). C. EUGENE JONES, Indiana University.—The genus *Cyclanthera* consists of approximately 35 species which are distributed more or less continuously from Southwestern United States through Central America and throughout most of South America. Heinrich Adolph Schrader described the genus in 1831, delimiting the type species, *Cyclanthera pedata*, from *Momordica pedata* of Linnaeus. The only treatment of the genus was conducted by Alfred Cogniaux and published in 1871. There seems to be two main cultivated species, *C. pedata* and *C. explodens*. *C. pedata* is probably Peruvian in origin. This conclusion is supported by Bukasov, who maintains that the most widely used common names for this species are all Peruvian in origin; by Larco, who has found fruits of this species represented among Cupisnique ceramics on the north coast of Peru dating from the Formative Epoch or about 750 B. C.; and by the occurrence in Peru of a semi-wild entity, which may be an ancestral type of *C. pedata*. The origin of cultivation of the other cultigen, *C. explodens*, is obscured by several taxonomic difficulties; for example, plants grown from seeds obtained from fruits sold in the markets of either Ecuador or Peru as *C. explodens*, turned out to be two morphologically and genetically distinct species. Reciprocal crosses involving four species have been attempted and the results indicate that the species have developed rather extensive isolating barriers.

The Origin of Variation in the Cultivated Forms of *Schizanthus* (Solanaaceae). DIRK R. WALTERS, Indiana University.—Preliminary work indicates that the variability found in the cultivated forms of *Schizanthus* arose through interspecific hybridization. Almost all of the dozen or so wild species, all native to Chile, are known to have been cultivated in Europe since 1822. At present the cultivated forms show a broad, continuous range of variation in color, size, and shape of floral parts and size and degree of lobing of the leaves. All cultivated forms have shown a chromosome number of $n=10$, the same as that reported

for wild species. The cultivated forms and hybrids between them are characterized by pollen stainabilities ranging from 60 to 80%. Evidence is given which indicates that the cultivated varieties most closely resemble *S. pinnatus* R. & P. but show certain characters that might have come from *S. grahamsi* Gill. The cross between these two species could not be secured.

Evolution in the Genus *Mentha*. MERRITT J. MURRAY, A. M. Todd Company, Kalamazoo, Michigan.—In addition to the development of a polyploid series of $2n$, $4n$ and $8n$ species, dominant gene mutations and interspecific hybridization have contributed to the variability found in the genus *Mentha*. The paper also discusses the taxonomist's frequent use of the symbol X for "hybrid species" as opposed to "non-hybrid species."