

**THE GOSSYPIUM OF MEXICO: OBSERVATIONS  
FROM RECENT COLLECTIONS EXPEDITIONS**

**J.McD. Stewart**

**University of Arkansas**

**Fayetteville, AR**

**M. Ulloa**

**USDA, ARS**

**Shafter, CA**

**A.E. Garcia-C. S. Godoy-A.**

**SAGARPA-INIFAP**

**Torreón, Coah., MX**

**J.C. Soto**

**Herbario Nacional de México (MEXU)**

**México D.F.**

**Abstract**

Germplasm collection expeditions were conducted in Feb.-Mar. and late April 2003 in the parts of the Mexican states of Colima, Guerrero, Jalisco, México, Michoacán and Nayarit. This was the second year in a planned series of three to 1) document the remaining diversity and *in situ* status of *G. hirsutum* landraces, 2) document the range and diversity of the wild diploid *Gossypium* species of Mexico, and 3) to collect seed samples of all *Gossypium* encountered for *ex situ* preservation. Both the center of origin and the center of diversity of *G. hirsutum* are in Mexico, and 11 of the 13 described diploid *Gossypium* species of the Western Hemisphere are endemic to Mexico. During the Feb.-Mar. expedition, 56 *Gossypium* seed accessions were collected that included four species: *G. aridum* (9 accessions), *G. hirsutum* (33 accessions), *G. lobatum* (11 accessions) and *G. schwendimanii* (1 accession). MU and JMS returned to Nayarit in late April and collected 5 additional accessions of cotton, including three grown by the Huichol and Cora Indians in the NE area of Nayarit. Two seed accessions were also obtained of *G. aridum* located in this same area in the interior of the Sierra Madre Mts. In addition *G. aridum* was collected from two populations in the upland center of the state. As was determined from the 2002 collection effort, indigenous cotton (*G. hirsutum*) seems to survive only as a curiosity in garden plots or as escaped plants from garden plots. Almost all cotton plants in Michoacán were of the race Palmeri type, however, in western Michoacán, Colima, Jalisco and Nayarit the genotypes were normal-leaf types. A considerable range of morphological diversity was noted among the non-Palmeri accessions collected during this expedition. *Gossypium aridum*, as currently circumscribed, is the most widely distributed wild *Gossypium* in Mexico, occurring from Sinaloa to Oaxaca. Morphological diversity is extensive among accessions of *G. aridum* from different locations and/or ecological niches. Particularly noted were the distinctions between coastal ecotypes and highland ecotypes of Colima and of Jalisco. The coastal ecotypes of Colima and Jalisco were similar to each other, but the highland accessions of the two states were not similar. The *G. aridum* of the more northerly states (Jalisco, Nayarit) blooms and fruits considerably later than that of the southern states. No *G. laxum* population was encountered in 2003, however, several new populations of *G. lobatum* were encountered in Michoacán. As a result of the recent expedition, the known range of *G. lobatum* has more than doubled, and it is now recognized that there is significant morphological diversity within the species. One accession of *G. schwendimanii* was collected that was sympatric with *G. lobatum*. None of the arborescent species of *Gossypium* appear to be threatened at this time. However, the status of *G. trilobum* is less certain. Visits to five locations where this species previously had been collected as a herbarium specimen failed to locate any plants. Urbanization and agricultural activities appear to have destroyed the habits.