

May 12, 1995

To: Files

From: Sue Rutman, Ecologist, Organ Pipe Cactus National Monument



Subject: Discovery of Two Previously Unrecorded Non-Native Species in Organ Pipe Cactus National Monument

I found the following two species in Organ Pipe Cactus National Monument on May 3, 1995. Specimens collected May 11, 1995, have been pressed and will be deposited in the Monument herbarium as well as the University of Arizona herbarium.

Species Names: *Mesambryanthemum crystallinum* and *Mesambryanthemum nodiflorum*
(iceplant is the common name of both)

Location: Site is in the La Abra Plain, between 8.4 - 8.6 miles west of State Route 85 on the South Puerto Blanco Loop Drive, Organ Pipe Cactus National Monument (see attached map). The western edge of the *M. nodiflorum* population is marked by Boundary Marker 170, interpretive signpost 21, and wooden "International Boundary" sign. The eastern edge of the population is marked by bench marker 1247. The population extends north from the international boundary about 200 yards. Extent of the population to the south is unknown. The *M. crystallinum* population occurs within the eastern half of the *M. nodiflorum* population. Both species were abundant in nearby Mexico.

Abundance: *M. nodiflorum* was abundant; total number of plants was probably more than 10,000. Some of these were very small (a few centimeters), while others were nearly 2 decimeters tall. The largest plants were near pool perimeters. *M. crystallinum* was occasional and probably numbered less than 500. Large plants were about a decimeter tall.

Associated species: Associates include *Larrea divaricata*, *Ambrosia deltoidea*, *Atriplex linearis*, *Atriplex polycarpa*, *Carnegiea gigantea*, and *Opuntia fulgida*. *Geraea canescens* was present and probably displaced by the *Mesambryanthemum* plants.

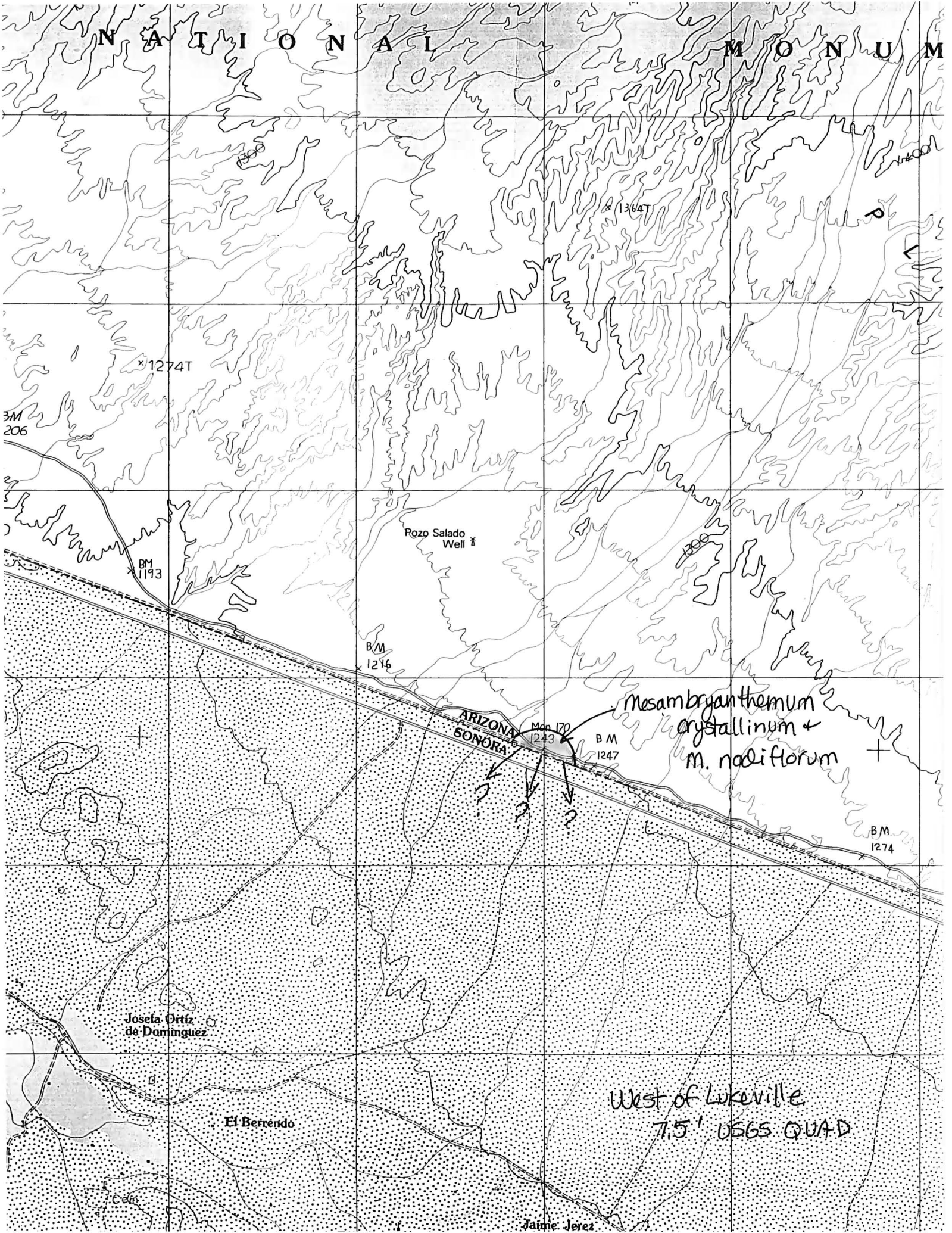
Site Description: The plant community has a distinctive pattern formed by water. Small pools of water a few feet across form in poorly drained areas with relatively small-grained soil surfaces. These are surrounded by slightly better drained sites with a coarse soil surface. *Larrea divaricata* is absent in areas where water sits, possibly a response to poor soil oxygen. Large *M. nodiflorum* plants formed borders around the pool basins; smaller plants occurred in the interstices between the pools. *M. crystallinum* had no clear association with the pools. Large and small plants seemed to occupy similar sites. Neither species occurred in nearby washes or on slopes. If eradication is to be undertaken

in the future, care should be taken to maintain the soil surface patterning and pools.

Phenological Information: Some of the *M. nodiflorum* plants nearer the pool basins were still flowering and partially green. Plants farthest away from the pool basins were completely dry, crisp, and tan colored. All plants had fruits in various stages of development; these were red or turning red.

M. crystallinum had mostly completed flowering. Plants were beginning to dry and fruits were either dry (vesicles nearly gone) or bright red with full vesicles.

Attachment



NATIONAL MONUMENT

BM 206

x 1274T

1364T

Rozo Salado Well

BM 1193

BM 1216

ARIZONA
SONORA

Mon 170
1243

BM 1247

mesembryanthemum
crystallinum +
m. nodiflorum

BM 1274

Josefa Ortiz
de Dominguez

El Berrendo

West of Lukeville
7.5' USGS QUAD

Jaime Jerez