

## Has *Manihotoides pausiflora* Rogers & Appan, a Cassava Relative Become Extinct?

By

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In 1983, this author led an expedition to collect wild cassava relatives from Mexico, one of the four diversity centers of the gene pool. The scarcity of *Manihotoides pausiflora* specimens in the herbarium for the last 40 years was noted. The last documented stand was in the period from 1921 to 1960 and it was in Tehuacan (55 Km South near a road).

On visiting the site, the stand was found to be devastated and harboring vegetation, which was almost cleared. A road was also constructed near it. These conditions were reported to the then International Board for Genetic Resources (IBPGR), with details of the threats to the species. Seeds were collected and planted in the living collection in Brasilia but all of them failed to grow. Seedlings grew to only 6cm in height, and the died, probably due to climatic and soil conditions.

*M. pausiflora* ( see photo gallery [fig.27](#)) is distinct from all cassava species with its primitive characteristics such as its uniformly 3-lobed leaves and condensed stem arising from its branchlets. It grows as a short tree with telescoped internodes and pubescent leaves. These primitive characteristics make it a strong candidate as a putative ancestor of the genus *Manihot*. There is no information about its chromosome number compared to  $2n=36$  of all investigated *Manihot* species, and  $2n=18$  of all *Euphorbia*'s known.

From the point of view of plant breeding, the growth habitat and adaptations ( see [fig. 28](#) in photos gallery) of a *M. pausiflora* show this species to be most interesting and manipulated for crop improvement, especially for adaptation to very dry habitats. Pubescent leaves make it tolerant to both drought and insects. A limiting factor of cassava production in different areas of the tropics and sub-tropics is current lack of drought resistance in the crop.

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