

Camcore: Thirty-five Years of Mesoamerican Pine Gene Conservation¹

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Abstract

Camcore is an international tree breeding and conservation program with headquarters at North Carolina State University. Camcore was founded in 1980 as a cooperative, non-profit organization to identify and save the dwindling natural populations of pines in the highland regions of Guatemala in Central America. Funded by the private sector, the program has played an important role as an international gene conservation cooperative. The program emphasizes *ex situ* conservation as a complement to *in situ* conservation to ensure that a wide range of genetic variation in a species is protected. Camcore has collected seed from almost 10,000 trees from 349 populations of 25 species of pines in natural stands in Mexico, Central America, and the United States. A goal of 20 trees per population ensures that collections include most genes that have a frequency of over 5 percent. Working with local people, Camcore staff determines the conservation status of some of the natural populations using the criteria established by the International Union for Conservation of Nature (IUCN). Out of the 105 populations assessed, 5 percent are critically endangered, 32 percent endangered, 61 percent vulnerable, and only 2 percent low risk. Camcore has established 1,250 pine genetic trials in 17 countries. Eighty-six percent of the provenances and 70 percent of the families of collected pine species have been planted in Camcore trials and conservation banks. Camcore has sent seeds to government organizations in Mexico and Guatemala for the establishment of reintroduction studies, including two studies of *P. patula* Schldl. et Cham. and one of *P. greggii* Engelm. ex Parl. planted in Mexico, and four studies of *P. maximinoi* H.E. Moore and one of *P. tecunumanii* Eguluz and Perry planted in Guatemala. One of Camcore's latest efforts is the establishment of six large multi-species pine conservation parks in South Africa that will eventually be 20 hectares each.

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