

Point of View

CONSERVATION OF THE BERMUDA JUNIPER

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Shortly before or during the scale epidemic, two distinguishable varieties of *J. virginiana*: var. *virginiana* and var. *silicicola* were introduced from nurseries in Florida and locally propagated and planted from nursery stock. While they do not self-seed as readily on Bermuda as the Bermuda cedar, they are inherently scale resistant, and, thus, their uncommon and localized presence in the landscape became noticeable once the majority of the Bermuda cedars had died.

The selective impact of the scale epidemic, leaving about 5% of the original *J. Bermudiana* forest unaffected, strongly suggests that a genetic trait for scale resistance had persisted sparsely in the population despite hundreds of thousands of years of evolution in a scale free environment. If this was the case natural selection will have quickly restored a scale resistant strain to dominance according to Stephen J. Gould's theory of punctuated equilibrium evolution. Concomitantly, hybridization with the recently introduced scale resistant junipers could be having the same effect. Whichever the case, *J. bermudiana* has remained numerically dominant over the introduced trees throughout this transition, so that all of the unique adaptive features of the Bermuda juniper should survive in the genetic code of the hybrids.

In view of Bermuda's very small size (20KM long and only 57 square Km in area) and the fact that junipers are wind pollinated and bird dispersed, and considering that the introduced *J. virginiana* varieties have now been on Bermuda for over 60 years and hybridize with *J. bermudiana*, it is undoubtedly far too late to preserve the pure *J. bermudiana* germplasm in the wild on Bermuda by attempting to cull out all of the *J. virginiana* and the hybrids. In any case, the public would be adamantly opposed to such a drastic measure. In my opinion the only sure way to preserve pure *J. bermudiana* stock for scientific research and biodiversity conservation purposes will be to propagate it by cuttings from surviving trees which predate both the scale epidemic and the introduction of *J. virginiana*.