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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

September 11, 2009

TO: Sandra Kunimoto, Chairperson
Board of Agriculture

THRU: *RS* Laura H. Thielen, Chairperson
Board of Land and Natural Resources

FR: Dale Bonar, Chairperson
Natural Area Reserves System Commission

SUBJECT: Request to recognize the importance of protecting thirteen dominant native forest species/genera of Hawai'i and to develop rules for quarantine regulatory actions.

On April 14, 2009 I wrote a letter to you on behalf of the Hawai'i Natural Area Reserves System Commission, appointed by Governor Linda Lingle, asking your help in protecting Hawai'i's dominant native plant species. We wrote a letter in March 2006 on almost the same topic; however at that time our greatest concern was focused on guava rust and the threat of new genotypes of that rust to Hawai'i's dominant tree, 'ohi'a (*Metrosideros polymorpha*).

Myoporum thrips (*Klambothrips myopori*), a very serious new pest of *naio* (*Myoporum*), was detected by Hawai'i Department of Agriculture (HDOA) staff in Waikoloa Village on the Big Island in March of this year. *Naio* makes up roughly half of the plant biomass in the *mamane-naio* forest, as well as being an important component of lowland and coastal dry forests throughout the State. The erythrina gall wasp has already threatened endemic *wiliwili* trees with extinction, and the *naio* thrips could do the same.

The Commission advises the Board of Land and Natural Resources and the Governor on issues that may affect natural areas across the entire State; and it is in this capacity that we are requesting recognition of the importance of protecting thirteen dominant native forest species/genera of Hawai'i through development and enforcement of quarantine rules.

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At its May 26, 2009 meeting, Commissioners discussed a list of 16 dominant plants that included *Eucalyptus* (not native), the high elevation endemic *Deschampsia* (all grasses are already regulated for sugarcane production), and *Cheirodendron* (*olapa*). After review by numerous specialists following the meeting, it was generally agreed to drop those three from the list in the interest of keeping it to a manageable size, while offering protection for some of our most important forest plants.

Rob Hauff, Forest Health Coordinator for the Division of Forestry and Wildlife (DOFAW), has already submitted to the US Department of Agriculture – Animal and Plant Health Inspection Services (USDA – APHIS), the same list of genera. APHIS is now soliciting input from states for plant genera (for propagation) appropriate for regulation under the proposed Not Authorized Pending Pest Risk Assessment rule. Federal rules would protect the dominants for foreign pest threats, while State rules would protect them from pests accidentally imported from other states.

At its August 25, 2009 meeting, Commissioners proposed the following 13 species for special Quarantine protection:

Hawaiian Name	Scientific Name
<i>ohi`a</i>	<i>Metrosideros polymorpha</i>
<i>koa</i>	<i>Acacia koa</i>
<i>hapu`u</i>	<i>Cibotium spp.</i>
<i>mamane</i>	<i>Sophora chrysophylla</i>
<i>naio</i>	<i>Myoporum sandwicense</i>
<i>a`ali`i</i>	<i>Dodonaea viscosa</i>
<i>wiliwili</i>	<i>Erythrina sandwicensis</i>
<i>ohelo</i>	<i>Vaccinium spp.</i>
<i>pukiawe</i>	<i>Leptecophylla tameiameia (Styphelia)</i>
<i>lama</i>	<i>Diospyros sandwicensis</i>
<i>hala</i>	<i>Pandanus tectorius</i>
<i>naupaka</i>	<i>Scaevola spp.</i>
<i>uluhe</i>	<i>Dicranopteris linearis</i>

Commission members feel strongly that this issue requires State regulatory action to protect our natural resources from permanent biological harm, so that at least these 13 dominant native plant species/genera can be provided regulatory protection as has been done with crops such as coffee, pineapple and sugar cane. Regulating at the generic level by no means provides a panacea, but it is the level chosen for regulation by USDA-APHIS, and seems to generally provide meaningful protection. Regulation at the genus level is, however, conspicuously inadequate for the rust fungus *Puccinia psidii* that threatens Hawaii's dominant *Metrosideros* (*ohi`a*).

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Puccinia psidii (guava rust) is notorious for its unusually broad host range within the myrtle family, having already demonstrated the ability to seriously attack many genera in the family (both native and introduced) to which it has been exposed, depending on the particular genetics of the rust population in question. Other species in these 13 genera may ultimately also require regulation at the family level to effectively protect them from disease or other pests

Dominant native plants such as *ʻohiʻa* and *hupuʻu* are the major components of much of our watersheds and others are “keystone species” in our remaining native plant communities. If one of these was severely attacked by another new pest, it could very significantly and permanently damage our environment. The Commission is willing and able to provide help or expertise toward federal and State special quarantine regulation of close relatives of our dominant native forest genera/species.