



Laukahi: The Hawai'i Plant Conservation Network

| Priority | Research Topic | Genus/Species and comments |
|----------|---|--|
| 1 | Population Trends (monitoring of life stages & longevity) | I would retitle this topic to gaining knowledge of basic biology of Hawaiian plants - this information is not know for the majority of Hawaiian plants, the list of species would be several hundred taxa; reserach is needed on basic population biology - age classes, reproduction, pollinators, disperser, recruitment rates,life span, what is a viable population (size and structure) and how much area of habitat does a species need to maintain a viable population |
| 1 | | T&E species in restored dryland forests (mao hau hele, hau hele ula, aiea, kauila (Colubrina),halapepe, uhiuhi and others): to determine how well is restoration working? What are major threats still? Non T&E longlived species for which little regeneration is observed even in restored areas of dry forests: (lama, olopuia, iliahi and others) and mesic or other forests (manono,ahakea, hame others) - which ones may be at risk of being threatened over the long-term, but we don't notice now since the adults are so long lived. |
| 1 | | These are the endangered/threatened plant taxa in the state lands in North Kona, Hawaii - the ahupua'a of Pu'uwa'awa'a and Pu'uanahulu. Having info on population trends is critical to management efforts: <i>Argyroxiphium kauense</i> , <i>Asplenium peruvianum</i> var. <i>insulare</i> , <i>Bonamia menziesii</i> , <i>Chrysodracon hawaiiensis</i> , <i>Colubrina oppositifolia</i> , <i>Delissea undulata</i> , <i>Haplostachys haplostachya</i> , <i>Hibiscadelphus hualalaiensis</i> , <i>Hibiscus brackenridgei</i> ssp. <i>brackenridgei</i> , <i>Kokia drynarioides</i> , <i>Mezoneuron kawaiense</i> , <i>Neraudia ovata</i> , <i>Nothoestrum breviflorum</i> , <i>Portulaca sclerocarpa</i> , <i>Silene lanceolata</i> , <i>Solanum incompletum</i> , <i>Stenogyne augustifolia</i> , <i>Zanthoxylum dipetalum</i> var. <i>tomentosum</i> , <i>Zanthoxylum hawaiiensis</i> . |
| 2 | Population Trends (monitoring of life stages & longevity) | Population trends for at risk and climate vulnerable species is needed, along with development of critical thresholds that if surpassed should trigger a decision framework aimed at identifying viable options: insitu vs seedbank vs exsitu propagation program vc assisted colonization, vs etc... |
| 2 | | Basic population biology – # of populations and individuals, age classes, reproduction, pollinators, dispersers, recruitment rates, life span, etc |
| 2 | | Restoration and management can only be realized if you know that your target species and communities are able to maintain a viable population structure. |



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| 3 | Population Trends (monitoring of life stages & longevity) | all native taxa |
| 3 | | Any Hawaiian plant species that lacks recruitment in the wild. |
| 3 | | for rare and listed species- |
| 3 | | Outplanting - population monitoring and weed control. Or should it be the other way around - weed control and then outplanting. |
| 4 | Population Trends (monitoring of life stages & longevity) | This is a lot of work, but it's really important for identifying the stages at which population stability are most dependent, and also the stages most threatened by global change factors. I don't think we do enough of this. |
| 4 | | Especially in response to threats by climate change, introduced pathogens, and invasive species. Identification of focused areas to implement restoration strategies for species preservation. |
| 5 | Population Trends (monitoring of life stages & longevity) | lonomea, wiliwili, koai'a, nio |
| 5 | | How long do species really live? Why do some lobeliads (in particular) appear to last longer than others; why do some like Delissea do well in cultivation, but there is no habitat left in the wild. Look at Kanaloa: once a very widespread plant, if you look at the pollen record: gone from the main islands, only on a sea stack off Kaho`olawe where ungulates (and other predators including humans) could not reach it. it was discovered as an end game. Can anything be done to restore it to the wild or will it forever be only a rarity even in specialized cultivation. |
| 5 | | Cyrtandra |
| 5 | | all native species |
| 5 | | Knowing the population size and trend is the basis and rationale for all work on rare and threatened species. |