



Laukahi: The Hawai'i Plant Conservation Network

Priority	Research Topic	Genus/Species and comments
1	Climate Change: Assisted Colonization (mitigating threat)	Research on the potential for assisted colonization is required for the >100 species identified as having no overlap between current and future distributions (Fortini et al 2013 and 2016).
1		Climate change overall would be my highest area of priority. It affects everything - native species ranges, invasive species ranges, those interactions, etc, etc, etc. Modeling ranges to the best extent possible and assessing how both species ranges and those range overlaps that govern interactions (invasive species, pollinators, predation, etc) will change.
1		You want me to pick a single species? I think all the ecosystems as a whole need to be studied, that includes arthropods, plants, birds etc.
1		sesbania tormentosa, Capparis san, Chamaesyce sp. We need to mitigate the loss of the current strand habitat . Restore current inland coastal areas and take measures to build or raise/expand current coastal dunes
2	Climate Change: Assisted Colonization (mitigating threat)	genera that likely had a wider distribution but their former habitat is so altered that virtually nothing exists today. Where could you or would you put these? And how would all this play out in the Natural Area Reserves System, where there are varying philosophies on how or if these areas should be used for introductions; particularly if it is outside their former known range, even if it appears to be the only safe place to plant them.
2		Assisted colonization methodology for species first to be impacted. (Alpine?)
2		Acacia koa & Met pol. without our native forest "backbone"???
2		Brighamia rockii, Pittosporum halophilum, Scaevola coriacea, Cyanea solanacea, Cyanea procera, Phyllostegia hispida, Lysimachia maxima, Platanthera holochila, Schiedea laui, Clermontia oblongifolia ssp. brevipes, Hibiscus arnottianus immaculatus, Schiedea diffusa diffusa, Cyrtandra hematos, Peucedanum sandwicense
2		All species located at the top of the mountain.
2	Put Climate Change Assisted migration as number two, but think there really is not much real estate that the mid- and higher elevational plants can move to. In these cases, in order for the saving of these species through assisted migration to occur, I think it has to go hand in hand with restoration strategic planning and design.	



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2		All narrow range endemics, particularly species found in unique ecological niches (such as alpine or bog habitats).
3	Climate Change: Assisted Colonization (mitigating threat)	Combining population variation studies with climate change models will enhance assisted colonization (or simply prioritized conservation of tolerant populations).
3		Much of the vulnerability has been assessed, at least from a modeling perspective, so I would like to see studies on threat mitigation, especially for taxa with narrow ranges and/or from habitats threatened by sea level rise, high elevations, or other threatened habitats.
3		Endangered coastal species, i.e., <i>Scaevola coriacea</i> , <i>Sesbania tomentosa</i> , <i>Brighamia rockii</i> , and many others are our interest for protection because they are appropriate for our location and because wild populations will likely be under water in the future. Both identifying and mitigating threats to these species are equally important.
3		knowing what plants/animals will be most likely impacted by climate change and starting to plan restoration projects to incorporate vulnerability of certain plants/animals
4	Climate Change: Assisted Colonization (mitigating threat)	In general, creating maps to help land managers anticipate climate change and where future habitats will be for certain species/ecosystems.
4		for rare and listed species, and keystone species
4		Help determining how to overcome effects of changing climate for taxa that rank high in vulnerability assessment. Many taxa, eg. <i>Sanicula mariversa</i>
5	Climate Change: Assisted Colonization (mitigating threat)	Research on restoration/outplanting outside current ranges of species - especially for T&E species, rare species and single island endemics
5	Climate Change: Assisted Colonization (mitigating threat)	Target spp: All PEP species and other rare taxa. I think the vulnerability assessments are also critical. We need to start planning now so we can start taking corrective actions in the methodologies we choose to implement today, to the extent that we are able.
5		How far is reasonable to move a species in anticipation of change? Minimum population size to start with in a marginally new environment? Are there groups of appropriate species to move to higher elevation or wetter climate together?



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1	Climate Change: Vulnerability Assessment (identifying threat)	Aweo'weo, Milo, kou, lonomea, wiliwili, koai'a
1		Sakai and Weller; and also Robichaux and others with the Silversword alliance: a overall approach needs to be done: former distribution, current, and then what happens with all the factors and vulnerabilities and what exactly can be done to pull them back from the brink.
1		Brighamia rockii, Pittosporum halophilum, Scaevola coriacea, Cyanea solanacea, Cyanea procera, Phyllostegia hispida, Lysimachia maxima, Platanthera holochila, Schiedea laui, Clermontia oblongifolia ssp. brevipes, Hibiscus arnottianus immaculatus, Schiedea diffusa diffusa, Cyrtandra hematos, Peucedanum sandwicense
1		I am looking at this from the perspective of a professional in ex situ conservation, in other words, would defer decision to the field biologists who work closely with the species in the field. But would give more priority to the ones that are difficult to store or propagate for some reason or other and/or have very little or no information on.
1		All narrow range endemics, particularly species found in unique ecological niches.
2	Climate Change: Vulnerability Assessment (identifying threat)	Needed for all T&E species and for single island endemics as priorities. All species eventually.
2		Sub-alpine & alpine plants (similar to Krushelnycky, P. D., Loope, L. L., Giambelluca, T. W., Starr, F., Starr, K., Drake, D. R., ... & Robichaux, R. H. (2013). Climate-associated population declines reverse recovery and threaten future of an iconic high-elevation plant. <i>Global change biology</i> , 19(3), 911-922.
2		All species, but starting with canopy-dominant species seems a reasonable place to start.
3	Climate Change: Vulnerability Assessment (identifying threat)	All native flowering plants
4	Climate Change: Vulnerability Assessment (identifying threat)	Leptecophylla tameiameiae, Vaccinium reticulatum, Geranium cuneatum ssp. tridens, Dubautia spp.
5	Climate Change: Vulnerability Assessment (identifying threat)	Cyanea, Clermontia, Delissea, Brighamia, Lobelia, Trematolobelia



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5	Climate Change: Vulnerability Assessment (identifying threat)	Habitat conditions and distributions are definitely being modified as a result of climate change and long-term stability of communities and ecosystems will be impacted even if the proximal threats (ungulates, land use, rodents, slugs, etc.) are controlled locally. Understanding the direction and magnitude of climate change factors will be critical to develop dynamic and, hopefully, successful conservation strategies from this point on.
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