



**The Dirzo lab primarily investigates the evolutionary ecology of species interactions, and related aspects of conservation science (i.e. the effects of anthropogenically driven biodiversity change on evolutionary ecology). We conduct field and lab-based research mostly in tropical ecosystems of Latin America, Africa, and the Central Pacific.**

Our lab focuses its efforts on two major areas of scientific research: i) **species interactions** (within and among trophic levels) from an EcoEvo perspective, and ii) **conservation science** (anthropogenically driven deforestation, defaunation, biodiversity change). In addition to conducting research on these two topics in isolation, a significant portion of our work examines the interactions thereof, asking, in general, to what extent the ecological and evolutionary patterns of biotic interactions (herbivory, pollination, dispersal, plant-fungus relationships, predation, etc.) are affected by anthropogenic global environmental change (land use change, over-exploitation, invasive exotic taxa). In other words, our work examines the **conservation biology of species interactions**, and we examine the patterns and consequences of the local loss of, or changes in biotic interactions, and the resulting **consequences in terms of changes in ecosystem processes and services**.

Our work takes place in different parts of the world, largely –but not exclusively– in **tropical ecosystems** from Latin America, Africa, and the Central Pacific. Some work is conducted in temperate systems too, mainly in Northern California [see [photos \(http://web.stanford.edu/group/dirzolab/cgi-bin/wp/?p=179\)](http://web.stanford.edu/group/dirzolab/cgi-bin/wp/?p=179)]. Our approaches include observations and experimental manipulations and we engage in collaborations with colleagues and students from many institutions within Stanford, the USA and abroad [see [collaborations \(http://web.stanford.edu/group/dirzolab/cgi-bin/wp/?p=75\)](http://web.stanford.edu/group/dirzolab/cgi-bin/wp/?p=75)].

Beyond research, we are engaged in education at a variety of levels, ranging from teaching **graduate and undergraduate courses** (<http://web.stanford.edu/group/dirzolab/cgi-bin/wp/?p=263>), to **educational programs for youth** (<http://web.stanford.edu/group/dirzolab/cgi-bin/wp/?p=67>), with a particular emphasis on underserved communities. Some of the work on education involves participation in diagnostic analyses and synthesis on national science education policy [see [Framework for K-12 Science Education \(http://www.nap.edu/read/13165/chapter/1\)](http://www.nap.edu/read/13165/chapter/1)].

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## LATEST NEWS

Assessing demography and genetic variation in Bobcat (*Lynx rufus*) using non-invasive DNA analysis and comparing with population size estimates obtained by camera-trapping in Jasper Ridge Biological Preserve (<http://dirzolab.stanford.edu/research/assessing-demography-and-genetic-variation-in-bobcat-lynx-rufus-using-non-invasive-dna-analysis-and-comparing-with-population-size-estimates-obtained-by-camera-trapping-in-jasper-ridge-biological-pr/>)

Effects of “primitization” on the population dynamics of a palm tree that is vulnerable to extinction (<http://dirzolab.stanford.edu/research/effects-of-primitization-on-the-population-dynamic-of-a-palm-tree-that-is-vulnerable-of-extinction/>)

Incidence and dynamics of mistletoe infestation on the oaks of Jasper Ridge (<http://dirzolab.stanford.edu/research/incidence-and-dynamics-of-mistletoe-infestation-on-the-oaks-of-jasper-ridge/>)

Ecology of oak regeneration at Jasper Ridge (<http://dirzolab.stanford.edu/research/ecology-of-oak-regeneration-at-jasper-ridge/>)



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