numerous recreational features including paddling amenities and over 15 miles of hike and bike trails. The San Antonio River Authority (SARA) completes operations and maintenance (O&M) of the project following an adaptive management strategy that balances the important functions of flood conveyance, ecosystem restoration and recreation. Though portions of the project are still under construction, SARA has accepted various levels of O&M as phases of the project are opened to the public and the construction contractor meets vegetation performance criteria. Significantly improved habitat conditions have already been achieved and are expected to improve over time as the ecosystem matures. An overview of the project, description of SARA's adaptive management strategy for O&M and lessons learned will be presented.

Constraints to the success of passive and active restoration of the Atlantic Forest in Brazil

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Passive (natural regeneration) and active (planting seedlings) restoration are two non-excludent technics for restore tropical areas, that involve very different management efforts and magnitude of costs. Experiments testing for vantages and disvantages of using one or other technic, are important to guide large restoration projects and , additionally, are a opportunity for testing ecological theories in natural and artificial systems. The southern Atlantic Forest is characterized by a forested landscape, but where large areas were logged for cattle pastures and abandoned. In this region, we leaded several experiments, by almost ten years, looking for the possible constraints of using passive or active restoration technics. Our main findings are: 1) seed arrival do not limit the passive restoration; 2) seedling establishment is the bottleneck for the passive restoration; 3) soil conditions (water excess) is the most significant factor influencing the seedling performance in active and passive restoration; 4) the grass competition has a secondary role in the seedling growth, and 5) active and passive restoration do not differ in species richness, but biomass accumulation can be excessive in active retoration. We will discuss our results in order to support future restoration projects of abandoned pastures in regions dominated by secondary forests.

The potential of biomass accumulation in restored tropical forest: estimates from Atlantic Forest of Brazil

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Estimating biomass accumulation in restoration projects is one important challenge for ecologists, because tree biomass is possibly affected by differences among species, by individual ontogenetic changes, and by habitat variation during the successional trajectory. We analyzed the accumulation of aboveground biomass (AGB) in 10 tree species (fast-growing and slow-growing species), aiming to verify possible factors (tree age, tree size, and woody specific gravity) that influence estimates of carbon sequestration in restored forests. Additionally, we simulated the carbon sequestration in restoration projects. There were large differences in AGB among species and between years in the 10 tree species. Slow-growing species accumulated almost twice AGB (410.13 kg) than did fast-growing species (225.32 kg). For both groups, AGB was positively affected by tree age, and size variables (DBH and h), but was not affected by woody specific gravity. Simulating the carbon accumulation in restored forests using a initial density of 2,500 individuals ha-1, we found that planting only slow-growing species, the carbon accumulation is 150 times lower (346 Kg C ha-1) compared to planting 100% of fast-growing species (4.546 Kg C ha-1) in the first years of the planting; after 60 years, differences are not so contrasting. We concluded that tree age and tree size are possible proxy for estimating AGB, and that balancing the use of fast-growing and slow-growing species in restoration programs, carbon sequestration can be more efficient.

Workshop: Ecocultural Restoration and Ecosystem-Based Adaptation to Climate Disruption: Fire, Water, Salmon and Indigenous Kincentric Ecology in Pacific North America

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This 2-hour workshop offers a window into a rich cultural and spiritual world little known by outsiders, accompanied by rare historical photos compliments of the Royal British Columbia Museum Archives. We begin with Pacific salmon and the traditional kinds of cultural practices—including transplanting of salmon when rivers were blocked by ice at the end of the last Ice Age—that contributed to the relative stability and ecological richness of Pacific North America. We show how local control of resource use enabled Indians to avoid the "tragedy of the commons" while caring for the needs of all members of society. We explain the conservative nature of traditional Indigenous landcare that maintained surplus biodiversity with limits always in mind and people and resources in balance; and how the regular use of Rx fire constantly created new and diverse habitats and niches for surplus biodiversity. Contrasting Western and Indigenous economic models, we argue that the industrial goals of "maximum productivity", e.g. pushing plant and animal growth with GMOs, or fertilization, can lead to unintended negative cascading ecological consequences, with examples from salmon, wild rice, fire suppression, and marsh restoration; while the conservative risk-averse Indigenous model keeps productivity in line with the unhurried tempo of natural processes and Natural Law with minimum necessary yields trumping so-called maximum "sustained" yields. Throughout the workshop we will discuss the relationships between ecocultural restoration, kincentric ecology, TEK/Western science, and adaptation/mitigation of climate instability and weirdness with the intent to show the value of traditional Indigenous ways of knowing for modern restoration, conservation, and agriculture.