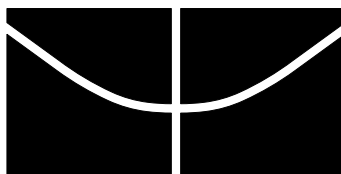

19th Annual Meeting of the Society for Conservation Biology

BOOK OF ABSTRACTS



Universidade de Brasília

Universidade de Brasília
Brasília, DF, Brazil

15th - 19th July 2005

minability) before and after two years storage at -20°C were also evaluated. Almost all progenies of both species maintained their original germinability after two years storage at -20°C . The material is maintained at -20°C since 1997 without significant loss of viability. All progenies were also conserved in field gene bank that was set up at Sucupira Experimental Field Station in a $3 \times 3\text{m}$ (*A. fraxinifolium*) and $5 \times 5\text{m}$ (*S. brasiliensis*) spacing design, carrying six plants per progeny in two random blocks for which species. Replacement of dead plants in field gene bank has been carried out as necessary, during three years after it was set up.

778. CONSERVATION OF SEED GERMPLASM RESCUED FROM HYDROELECTRIC'S AREAS IN CERRADO BIOME. Salomão, Antonieta N.; Walter, Bruno M.T.; Cavalcanti, Taciana B.; Santos, Aécio A.; Santos, Glocimar P.; Mundim, Rosângela C.; Pereira, João B.; Rezende, João M.; Santos, Izulmé R. I.; Moreira, Gledison A.; BRILHANTE, MARCELO DE M. Laboratório de Fisiologia de Sementes, Herbário CEN, Embrapa Recursos Genéticos e Biotecnologia, Brasília, DF, P.O.Box 02372, 70770-900 Brazil, antoniet@cenargen.embrapa.br. (ANS, TBC).

The Cerrado biome is under constant disturbances because of different human activities. Recently, environmental disturbance in Cerrado is due to hydroelectric constructions. Embrapa Recursos Genéticos e Biotecnologia botanical and genetic conservation staff, since 1996 has been rescued seed germplasm from five hydroelectrics (Serra da Mesa, Corumbá I and IV, Cana Brava in the state of Goiás and Queimado in the state of Goiás, Minas Gerais and Distrito Federal). A total of 463 accessions of 100 species belonging to 29 botanical families have been collected and stored at -20°C , after seed desiccation and sensitivity to subzero tolerance were determined. The most representative families are Caesalpiniaceae (105 accessions), Fabaceae, (86 accessions), Mimosaceae (81 accessions), Bignoniaceae (32 accessions), Anacardiaceae (30 accessions), Combretaceae (23 accessions) and Sterculiaceae (22 accessions). Plants of all accessions were used to afforestation of the disturbed area surrounding the hydroelectrics.

779. SYNERGISTIC SERIAL DEPLETION OF NEAR SHORE BENTHIC INVERTEBRATES LEADS TO A RECENT DECLINE OF A KEYSTONE GRAZER AND THE ALTERATION OF A COASTAL ECOSYSTEM. SALOMON, ANNE K.; Tanape, Nick Sr.; Ruesink, Jennifer L.; Huntington, Henry P. University of Washington, Department of Biology, Box 351800, Seattle, WA, USA 98195-1800 salomon@u.washington.edu (AKS JLR). Nanwalek Native Village, Box 8003, Nanwalek, Alaska, USA 99603 (NT). Huntington Consulting, Box 773564, Eagle River, Alaska, USA 99577 (HPH).

We investigated the relative roles of natural factors and harvest leading to localized declines of the black chiton, *Katharina tunicata*. This chiton is a subsistence shellfish resource and recognized keystone grazer. Small-scale removal experiments and large-scale experimental harvests, in collaboration with village residents, revealed that the absence of this dominant consumer can increase primary production by two orders of magnitude and species diversity by 50% yet reduce the survival of other benthic grazers. Based on interviews with village elders, localized declines can be attributed to changes in social and biological dynamics. Historical subsistence harvest was less spatially concentrated because communities shifted among seasonal camps and diets included a wider range of invertebrates, such as crab, urchins, and clams. These resources are now scarce, due to intensified consumption by an increasing sea otter population and histori-

cal subsistence and commercial harvest. Sequential prey switching by both humans and sea otters and a resulting restriction in prey species breadth may have led to intensified harvest of *K. tunicata*. Therefore, the recent localized depletion of this keystone grazer and its subsequent ecosystem-level effects may reflect a concentration in the spatial distribution of harvest pressure and the synergistic serial depletion of nearshore benthic invertebrates.

780. CONSERVATION OF ATLANTIC FOREST SPECIES IN THE CACAO PLANTATIONS OF SOUTHERN BAHIA, BRAZIL. SAMBUICHI, REGINA H. R.; Haridasan, Mundayatan. Departamento de Ciências Biológicas, Universidade Estadual de Santa Cruz, Ilhéus, BA, 45650-000, Brazil, sambuichi@uesc.br (RHRS). Departamento de Ecologia, Instituto de Biologia, Universidade de Brasília, Brasília, DF, 70818-900, Brazil (MH).

The Atlantic Forests of southern Bahia, with its high plant biodiversity and a great degree of endemism, has suffered intense deforestation over the last four decades with less than 10% of its original area remaining today mostly in fragments. A large part of these forests was converted into cacao plantations beginning the nineteenth century. Forests were thinned and cacao planted under the shade of remaining trees. Such plantations, known as cabruças, still conserve many of the native species. We surveyed the tree species in 3 ha each of five such cabruças of different ages to determine the extent of conservation of the original forest species. A total of 293 species were encountered among the 2514 individuals surveyed in a total of 15 ha. The number of individuals varied from 142 to 355 and the number of species from 46 to 180 among the cabruças, with the Shannon diversity index ranging from 3.31 to 4.22. The differences in species richness and plant diversity were influenced by tree density, management practices and the time of implantation of the cabruças.

781. STRATEGIES FOR CONSERVATION OF THE TROPICAL CLOUD FOREST IN TAMAULIPAS, MEXICO. SANCHEZ-RAMOS, G.; García-García, A.; Lara-Villalón, M.; Casas-González, S.L.; Martínez-Avalos, J.G. Instituto de Ecología y Alimentos, Universidad Autónoma de Tamaulipas. Mexico 13. Blvd. Adolfo L. Mateos No. 928 CP 87040. Cd. Victoria, Tamaulipas, Mexico, gsanchez@uat.edu.mx.

The Mexican cloud forest has been endangered the last three decades for the human impact. In the state of Tamaulipas (North of Mexico), this ecosystem shows the highest distribution for the American Continent. The principal strategies for the cloud forest conservation are by ecological studies as: diversity index (Shannon-Wiener H'), floristic studies (ecological importance value) and zoological studies (direct and indirect methods). Our results show the presence of four localities containing cloud forest as principal kind of vegetation. These are: El Cielo, El Molino, Puerto Purificación and San Carlos in the Tamaulipas state, Mexico. The diversity index shows high levels for all the localities as follows: El Cielo ($H'=0.93$), El Molino ($H'=0.84$), Puerto Purificación ($H'=0.89$) and San Carlos ($H'=0.90$). However, the evenness or similarity index (Sorensen) shows few levels among localities. These levels are less than ca. 40% ($C_s=0.39$). This fact shows the importance to establish the most adequate strategies for conservation. Actually, we are trying to put together all the tools (scientific and legal strategies) for the future conservation of this important ecosystem.