

giant otters. Neotropical otters are solitary animals, and more animals are seen together (two or three) more frequently around October and November. Both species are diurnal animals in the area and there is not a visible separation between the areas that they use. It is very common see Neotropical otters using old giant otter dens and vice versa. Several times we saw both species using a same fishing area, but never in the same time. These are the first available data concerning a study of both otter species in the same area in Brazil and one of the first information about observation of Neotropical otters that is more crepuscular and shy in other areas.

932. THE GRAZING ECOLOGY OF THE WHITE RHINO AND ITS HABITAT SIGNIFICANCE. WALDRAM, MATTHEW; Bond, William; Stock, Willie. Botany Department, University of Cape Town, Rondebosch, Cape Town, 7701, Cape Town, South Africa, matteoscottwaldram@yahoo.com.

Megaherbivores were common on all the world's major landmasses until approximately 20,000 years ago, but today are found only in Africa. The study of eco-systems with this component of the fauna intact can shed a new light on global conservation problems such as bush encroachment. The white rhino is a grazing megaherbivore common in Hluhluwe-iMfolozi game reserve. I present data from enclosure experiments, burning trials and other surveys which examine the effects of white rhino grazing on grass biomass and consequently on the feeding behavior of other grazing mammals and on grassland fire regimes at both ends of a rainfall gradient. Through their feeding behaviour white rhino can facilitate other species of grazers by influencing the distribution of grazing lawns. Alternatively they can compete with other grazers depending on the annual rainfall of an area. White rhino grazing can also limit the spread of grass fires. Grazing and fires interact in a complex manner to influence change between vegetation types particularly in areas with high rainfall. These results have an importance for the conservation of savannas and guilds of grazing mammals and also for the study of bush encroachment. They are also of importance in trophic ecology.

933. HIDDEN DEPTHS AND HIDDEN DANGERS: CONSERVATION OF SEAMOUNT ECOSYSTEMS. WALKER, NATHALIE; Johnston, Paul; Santillo, David. Greenpeace International, Ottho Heldgringstraat 5, 1066 AZ Amsterdam, The Netherlands, nathalie.walker@int.greenpeace.org (NW). Greenpeace Research Laboratories, University of Exeter, North Park Road, Exeter, EX4 4QE, UK (PJ, DS).

As coastal fish stocks decline worldwide, the commercial fishing industry is increasingly exploiting deep waters, threatening, in particular, diverse and little-studied deep seamount ecosystems. Seamounts are geological structures rising from the sea floor which contrast markedly with the surrounding flat or shallow-sloping sediments in terms of both physical and biological characteristics. Studies of seamounts have found extremely high levels of biodiversity and endemism, with deep sea species often slow-growing and showing low levels of fecundity. This makes them particularly sensitive to disturbance. Commercial fishing vessels harvest deep sea fish by bottom trawling, a practice which can destroy up to 95% of coral and other benthic macrofauna in heavily fished areas. Most bottom trawling is carried out by eleven industrialized countries and, though it comprises less than 1% of the global fishing fleet, its impact on marine biodiversity is disproportionately large. The practice is mainly carried out on the high seas and is largely unregulated. Even where regulation does ex-

ist, within EEZs, it has not been sufficient to prevent widespread ecosystem damage. In order to prevent deep seamount ecosystems being destroyed before their biodiversity has even been properly studied, an international moratorium on bottom trawling over seamounts is urgently required.

934. BREEDING GRASSLAND BIRD USE OF RESTORED PRAIRIES IN THE LOESS HILLS, IOWA, USA. WALKER, TRACY A.; Miller, James R. Department of Natural Resource Ecology and Management, Iowa State University, 339 Science II, Ames, IA, 50011, USA (TAW, JRM), walker76@iastate.edu. Department of Landscape Architecture, Iowa State University, 146 College of Design, Ames, IA 50011, USA (JRM).

In the central US, land use change has resulted in the loss and fragmentation of grassland habitats. We examined the influence of different restoration practices (burning and grazing, both separately and in combination) on native plants and grassland birds within the Loess Hills at Broken Kettle Grasslands (BKG), the largest contiguous prairie in Iowa. We quantified bird response by using point count surveys in four management types in 2003-04. Vegetation characteristics varied significantly with treatment. Burned-only plots had more native plant species and a higher percentage of bare ground compared to other treatments, while grazed plots tended to have fewer shrubs. Bird response to habitat restoration varied with treatment and species life history traits. Obligate grassland species, such as the Grasshopper Sparrow, Dickcissel, and Western Meadowlark, were consistently less abundant in burned treatments. In contrast, edge species, such as the Lark Sparrow, were more abundant in these areas. These responses suggest that grassland dependent birds may be more sensitive to the amount of litter, presence of shrubs, and landscape composition, than to variation in vegetation composition. We recommend a restoration approach that includes both burning and grazing for sustaining populations of threatened grassland bird species with varying habitat preferences.

935. COLLABORATIVE RESEARCH AND TRAINING TO MEET SUSTAINABLE DEVELOPMENT CHALLENGES IN ACRE, BRAZIL. WALLACE, RICHARD II.; Schminck, Marianne; Kainer, Karen A.; Stone, Samantha S. Tropical Conservation and Development Program, Center for Latin American Studies, University of Florida, 319 Grinter Hall, Gainesville, FL 32611-5530, U.S.A., wallacer@ufl.edu (RHW, MS, KAK, SSS); School of Forest Resources and Conservation, University of Florida, 210 Newins-Ziegler Hall, Gainesville, FL 32611-0410, USA (KAK).

In the state of Acre, in the southeast Brazilian Amazon located along the borders of Peru and Bolivia, nearly 90% of rainforest remains standing. Relative geographic isolation, a unique economic history linked to rubber collection, the rich cultural traditions of indigenous peoples, rubber tappers and *riberinhos* with livelihoods based on extractive resource use, a strong social movement, and most recently, a state "forest government" committed to sustainable use of Acre's forests, have created a promising context for reconciling biodiversity conservation and sustainable development. But many challenges remain, including a growing cattle sector, encroaching soybean frontier, increasingly competitive extractive sector and regional road building. Research and capacity-building efforts to address these challenges include cross-scale analysis of policies, markets, and networks; institutions and landscape changes within different land rights systems; and the dynamics of diverse livelihood systems in local communities. In