DOWNLOAD PDF ECOLOGY OF NEOTROPICAL SAVANNAS

Chapter 1 : Savanna Biome - Ecology - Oxford Bibliographies

Ecology of Neotropical Savannas Emilio conducting field work at Panga Ecological Station outside UberlÃ¢nida, Minas Gerais, Brazil (Photo by Laura V. B. Silva). Decades of research have demonstrated plant communities in African and Asian savannas are regulated by a combination of pervasive top-down and bottom-up effects.

The authors have also provided a Portuguese translation of this post. Old-growth savannas are ancient fire-prone systems, with high endemism and species diversity. The richness of these systems is mainly represented by the ground layer. In the Brazilian Cerrado, for example, for each tree species, there are approximately 5 non-arboreal species. Although they are small above ground, these species usually have roots systems more than 1 meter deep and can live up to a thousand years. Regenerating savanna four years after pasture abandonment. Cava Unfortunately, these systems have stood out, not only due to their high diversity, but also because of the high rates of destruction they have suffered. Among all savannas, the Cerrado is the richest and also the most threatened in the world. Formerly covering an area equivalent to western Europe, today the Cerrado has been reduced to half of its original territory. In a recent study, Strassburg and colleagues exposed an obscure projection for the Cerrado: However, those authors point out the possibility of creating a more promising future for the Cerrado and emphasize that among the initiatives to consolidate this desirable future is the implementation of existing public policies aimed at ecological restoration of savannas. It is estimated that in the coming decades, more than 6 million hectares of land where the Cerrado has already been converted must be restored. Despite this demand, little is known about savanna restoration techniques, a reality that makes it very difficult to achieve the goals established in global agreements or expected by Brazilian legislation. The first step to be taken is to define where active restoration interventions are needed or whether there is potential for natural regeneration of the ecosystem. Here begins the story of our article, recently published in Journal of Applied Ecology. We verified that most of the already converted Cerrado areas are used as planted pastures and will be the main restoration target. Therefore, we decided to study the dynamics of spontaneous recovery of the Cerrado vegetation in 29 pastures that were abandoned for periods ranging from 3 to 25 years. If natural regeneration is possible, the proposed goals become feasible. Regenerating savanna 25 years after pasture abandonment. Cava Main findings Despite the rapid natural regeneration presented by Cerrado vegetation after pasture abandonment, we verified that the system does not spontaneously recover the attributes of the old-growth savanna existing before land conversion. After five decades of abandonment and fire protection, the system becomes a low-diversity forest alternative state. This is mainly due to the inability of native herbaceous species especially grasses to colonize abandoned pastures and also due to the inevitable woody encroachment that follows the suppression of fire, that is a natural factor for the maintenance of savannas. Thus, practitioners who want to restore ecosystem attributes and services provided by old-growth savannas in abandoned pastures should roll up their sleeves and adopt measures to reintroduce fire in these areas, control invasive grasses, and reintroduce small plants that cover the ground of undisturbed native vegetation. Policy makers, in turn, should create legal instruments that make the necessary actions possible.

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Chapter 2 : Ecology of Neotropical Savannas â€“ The Bruna Lab | UF

Savanna ecosystems play a major role in the natural landscape and in the economic life of vast areas of the tropics. These grasslands are inherently fragile, yet Third World economic development makes human exploitation inevitable.

Whereas the lay observer could usually identify a forest or grassland, the savanna biome would provide a challenge, greatly influenced by the scale of observation, since it is characterized by high variability in density, arrangement, clumping, and structure of grassland and trees. The large-scale savannas of the world are quite different on the major continents of Africa, South America, and Australia, and distributed in smaller, highly variable arrangements and formations in North America and Eurasia. The nature and stability of the savanna biome has received increasing attention because of its perceived dependence on disturbance by fire and herbivory to maintain tree-grass balance and because some savannas are biodiversity hotspots. Evolution of savannas is thought to be associated with a lower CO2world where tropical grasses gain advantage from highly efficient photosynthetic systems and fire and grazing control woody encroachment. The explorer botanists of the early 20th century paid significant attention to the neotropical and peri-Amazonian savannas of South America with their extraordinary biodiversity. In the s, the West African savannas became the terrestrial focus of the genesis of remote sensing of land systems and the development of the Normalized Difference Vegetation Index NDVI as a global monitoring tool. During the early to midth century, many temperate savannas were heavily converted to agriculture in the New World, and a similar trend is now continuing and potentially accelerating in tropical savannas of South America and Africa. The Australian tropical savanna has remained largely intact as it is generally too arid for agricultural conversion. As a result it has become increasingly important for ecological and process studies on tree-grass ecosystem function across spatial scales. Tropical tall grass-tree systems in Asia tend to have been extirpated by dense human activity but have also been treated differently in vegetation classifications and so do not clearly appear in global land cover maps. There has been limited attention paid to these systems in the literature. With global population and food demand potentially ballooning in the 21st century, accelerated conversion of savannas is likely to intensify both concerns about decline in ecosystem function, and competition for ecosystem services that will necessitate a significant expansion in integrated, interdisciplinary research, sophisticated modeling and future scenario development and research on restoration ecology and amelioration of land degradation. General Overviews The savanna biome has been the subject of a number of broad overviews. Mistry provides the most accessible and integrated current treatment of the ecology and human use of the savanna biome. The current status of measurement of fluxes and vegetation dynamics, modeling and remote sensing of tropical savannas is comprehensively covered in Hill and Hanan Shorrocks covers the animal and plant life, interactions and dynamics of African savannas in some detail. Furley provides a concise recent review of tropical savannas that includes treatment of plant biology, savanna biogeography and tree-grass coexistence and is a good initial introduction to the wider literature. Tropical Savannas Ecosystems of the World Tropical savannas and associated forests: Vegetation and plant ecology. Progress in Physical Geography Ecosystem function in savannas: Measurement and modeling at landscape to global scales. Ecology of tropical savannas. Relatively succinct and broad overview of vegetation and plant ecology of the global savannas and dry forests that briefly covers touches on most issues surrounding the biogeography, ecology, and vegetation dynamics. Ecology and human use. Provides a relatively comprehensive overview of global tropical savannas including those in west, east, and southern Africa, Australia, South America, and Southeast Asia. It does not cover temperate savannas of North America. The biology of African savannahs. Biology of Habitat series. For the most part, the book is focused on description of animals and vegetation and their interaction in African savannas. Biodiversity and savanna ecosystem processes:

Chapter 3 : CiteSeerX â€” COMMUNITY ECOLOGY Ecological release in lizard assemblages of neotropic

Sarmiento is an unquestionable authority on the grasslands of the New World. His book is the first modern, integrated

view of the genesis and function of this important natural system -- a synthesis of savanna architecture, seasonal rhythms, productive processes, and water and nutrient economy.

Chapter 4 : Search Results for â€œthe dry forests and woodlands of africaâ€• â€“ calendrierdelascience.c

*The Ecology of Neotropical Savannas [Guillermo Sarmiento, Otto T. Solbrig] on calendrierdelascience.com *FREE* shipping on qualifying offers. Savanna ecosystems play a major role in the natural landscape and in the economic life of vast areas of the tropics.*

Chapter 5 : The Ecology of Neotropical Savannas â€” Guillermo Sarmiento | Harvard University Press

Physiological Ecology of Neotropical Savanna Plants. Medina, E. Pages Preview Buy Chapter $ Water Relations of Southern African Savannas. Bate, G. C.

Chapter 6 : The Ecology of Neotropical Savannas

This books gives a general view of the genesis and function of neotropical savanna ecosystems, a synthesis of savanna architecture, seasonal rythms, productive processes, and water and nutrient economy.

Chapter 7 : Ecology of Tropical Savannas : B. J. Huntley :

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Ecology of Tropical Savannas. Editors Physiological Ecology of Neotropical Savanna Plants. Characteristic Features of Tropical Savannas.

Chapter 9 : The ecology of neotropical savannas.

Pollination ecology of Neotropical savannas is reviewed in relation to pollination agent classes, pollination systems and times of pollination activity in the Venezuelan Central Plain.