

Into the bowels of tropical earth: leaf-cutting ants and the colonial making of agrarian Brazil



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ABSTRACT

In this article, I build upon Warren Dean's hypothesis that if there were more effective means to combat leaf-cutting ants in the colonial era the agrarian history of Brazil would have been entirely different. Using the wealth of scientific research that emerged in the last thirty years, along with experiential accounts from colonial times, I try to portray leaf-cutting ants as non-human actors that actively participated in the drama of the Portuguese colonization of America. Biogeographically restricted to the Neotropics, leaf-cutting ants and their horticultural system – underground fungal gardens grown with compost made of freshly cut pieces of leaves, flowers and fruits – posed a major challenge for Portuguese farmers, who were completely unfamiliar with those social insects. The analysis of how the ant activity has shaped the European croplands – including the native crops grown by Europeans, such as cassava – casts a new light on certain fundamental developments of the rural economy, such as the resounding success of sugarcane plantations and the widespread adoption of the slash-and-burn system. On a higher level of abstraction, it points to the importance of challenging the subtle but pervasive notion that New World lands were lifeless and isotropic surfaces for European colonial settlement. As far as the actual tilling of the earth is concerned, Brazilian native lands were not the blank background in colonial cadastral maps, but vibrant life-sites in whose bosom local and adventitious species and cultures negotiated their coexistence.

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'What we call land is an element of nature inextricably interwoven with man's institutions'

—Karl Polanyi, *The Great Transformation* (1951)

'[...] leaf-cutting ants [*saúva*] are a fact of the Brazilian land. And so is killing them, as one who pulls out weeds from a cornfield [...]'

—Response from the mayor of São João Evangelista (Minas Gerais) to an inquiry from the federal government (1930)

'Brazil is one great ants' nest!'

—Hamlet Clark, *Letters Home from Spain, Algeria and Brazil* (1867)

One of the most biologically diverse regions of the world, the Atlantic Forest biome is the cradle of modern Brazil. Once extending from 3° to 30° S, and, in its widest zone, expanding inland up to

60° W, this mosaic of tropical and subtropical forests plus associated ecosystems was the first South America biome occupied by the Portuguese in the sixteenth century. As depicted in Fig. 1, the Atlantic Forest was a sort of springboard from which the invaders later set out to conquer the savannas, swamps and prairies to the west and south, and even the great Amazon jungle to the north-west. After engaging in the brazilwood trade (*Caesalpinia echinata*, a dyewood), the colonizers established large sugar plantations, initiating a sustained – though unsustainable – process of socio-environmental change.¹ Successive economic surges killed hundreds of thousands of native people – infected by exotic pathogens, slaughtered in wars of conquest, overworked and mistreated in captivity² – while importing millions of Europeans and Africans for controlling and cultivating the emptied forests. Based on the

¹ W. Dean, *With broadax and firebrand: The destruction of the Brazilian Atlantic Forest*, Berkeley, 1995; G. Freyre, *Nordeste: Aspectos da Influência da Cana sobre a Vida e a Paisagem do Nordeste do Brasil*. 7th ed. São Paulo, 2004; D.C. Cabral, *Na Presença da Floresta: Mata Atlântica e História Colonial*, Rio de Janeiro, 2014.

² J. Hemming, *Red Gold: The conquest of the Brazilian Indians*, London, 1978.

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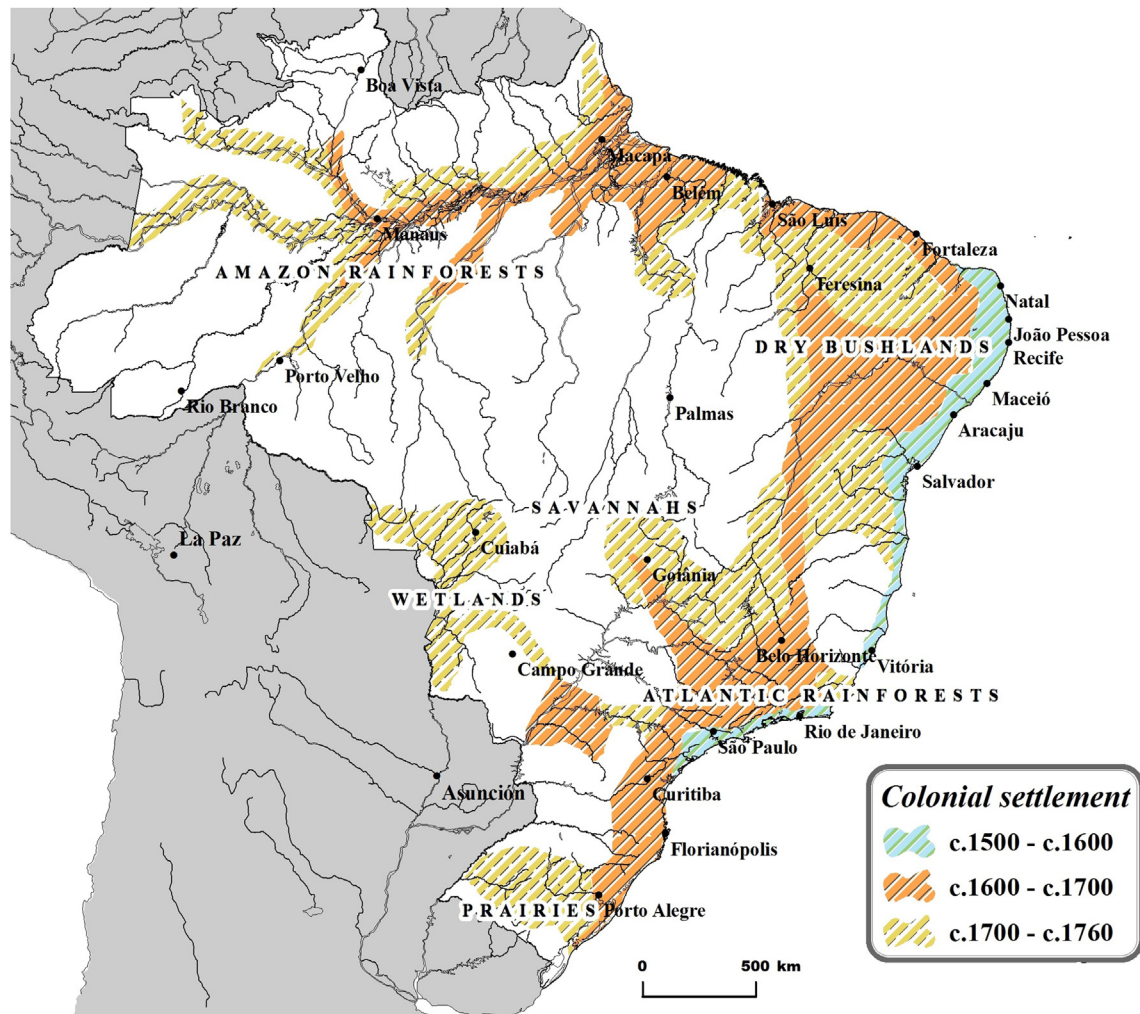


Fig. 1. Portuguese occupation of Brazil, according to J. Hemming, *Red Gold: The Conquest of the Brazilian Indians*, London, 1978.

grabbing of land and people for the production of exportable goods (local plant biomass as agricultural fertilizer and enslaved Amerindians and Africans as human machines of energy conversion), the Portuguese built up a socially stratified, economically dependent and ecologically parasitic agrarianism in the Atlantic Forest.³

With regard to land, the challenge was not only ensuring formal ownership, but mainly turning those legally bounded rainforests – partially altered by the native occupants – into agroecosystems completely alien to the local biogeographical history, either in terms of cultivated species, or in terms of cropland scale and diversity. Transforming tropical lands into huge monocultures of sugar cane, tobacco, cotton, coffee, or else pastures for cattle, horses, pigs, among other domesticated mammals, was a complex process of environmental appropriation that encompassed both legal-ideological engineering and farming practices. While including an official apparatus for the production of property rights – an extremely lavish land system that granted huge tracts of forest

to petitioners willing and supposedly able to cultivate them in a maximum of three years⁴ – this political ecology operated primarily by reshaping the structure and dynamics of rainforest ecosystems. To a large extent, the results of these agronomic experiments with tropical environments determined the position that the colony and later the independent empire managed to achieve within the world economy.⁵

In this sense, the widely used idea of an ‘open frontier’ – or the ‘low costs of the land factor’⁶ – as a basic characteristic of the colonial economy should be put into perspective.⁷ One should not confuse susceptibility of the land to legal appropriation (characterized by the lack of previous property titles, which was obviously the case of all the land taken from the Amerindians) or even the land grants themselves with susceptibility of that land to agricultural conversion – as if the European agricultural settlement had spread like ink on paper. If on the

³ Cabral, *Presença*, passim; C. Prado Jr., *Formação do Brasil Contemporâneo*, 9th ed., São Paulo, 1969; J. Fragoso, M. Florentino, *O Arcaísmo como Projeto: Mercado Atlântico, Sociedade Agrária e Elite Mercantil em uma Economia Colonial Tardia*, Rio de Janeiro, c.1790–c.1840, 4th ed., Rio de Janeiro, 2001.

⁴ M.A. Abreu, A apropriação do território no Brasil colonial, in: I.E. Castro, P.C.C. Gomes, R.L. Corrêa (Eds), *Explorações Geográficas*, Rio de Janeiro, 1997, 197–245.

⁵ W. Dean, A botânica e a política imperial: a introdução e a domesticação de plantas no Brasil, *Estudos Históricos* 4 (1991) 217.

⁶ Fragoso and Florentino, *Arcaísmo*, 159.

⁷ A. Soffiati, Destruição e proteção da Mata Atlântica no Rio de Janeiro: ensaio bibliográfico acerca da eco-história, *História, Ciências, Saúde – Manguinhos* 4 (1997) 317; S.C. Faria, *A Colônia em Movimento: Fortuna e Família no Cotidiano Colonial*, Rio de Janeiro, 1998, 121; D.C. Cabral, Entre o machado e o tição: agricultura tropical extensiva e exploração madeireira no Rio de Janeiro colonial tardio, *História & Perspectivas* 36–37 (2007) 313–62.

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