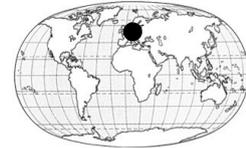


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AGENTS OF DEFORESTATION OR FOREST ADVANCEMENT? IMPACTS OF THE INVADERS, *CHROMOLAENA ODORATA* AND *IMPERATA CYLINDRICA* AT THE TROPICAL FOREST - SAVANNAH BOUNDARY IN CENTRAL CAMEROON

In central Cameroon, the landscape is a mosaic of cropped land, fallows and patches of secondary forest. The common discourse is that this area was previously contiguous forest. The discourse continues that grass-dominated areas are a result of increasingly shortening fallow periods in the commonly used slash and burn system and are an indicator of soil degradation. Yet, farmers report that forest cover was less during their youth and that forest colonisation of savannah has occurred, accelerated by cultivation along the forest savannah boundaries, and by the appearance in the 1960s of *Chromolaena odorata*, an exotic shrubby weed, now a dominant fallow type in central Africa. To understand the role of *C. odorata*, a replicated factorial experiment was designed to: 1) assess the weed seed bank of the forest, savannah sides and *C. odorata* dominated fringe of the forest-savannah boundaries; 2) assess the effects of shade level on community composition and, 3) mimic the competition between *C. odorata*, the most aggressive broadleaf and *Imperata cylindrica*, a invasive grass present in the savannah. Three boundaries were selected with three contrasting soils, a sandy soil, a clayey soil and a silty soil. At each boundary, vegetation was assessed and canopy cover estimated in each of the 3 sites: the forest, savannah and the *C. odorata* fringe area. Topsoil from all 3 sites was transported to Mbalmayo and placed in 30-l basins in an area away from seed rain, and subjected to 3 shade treatments (full light, 70 % and 33 % light) and incubation of the rhizomes of *I. cylindrica* and root stocks of *C. odorata* at various proportions. Once a community had developed, all plants were harvested, the species identified, number of individuals of each species, dry mass and leaf area recorded. The importance of the results in explaining competition at such forest-savannah boundaries is discussed.

keywords: *Chromolaena odorata*, *Imperata cylindrica*, humid tropics