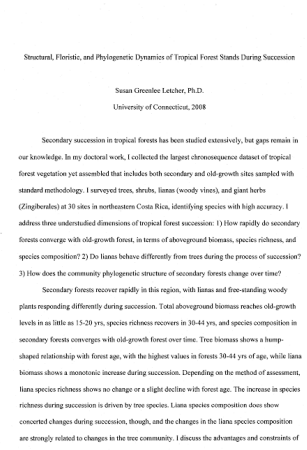

Structural, Floristic, and Phylogenetic Dynamics of Tropical Forest Stands During Succession

Susan Greenlee Letcher, Ph.D.
University of Connecticut, 2008

Secondary succession in tropical forests has been studied extensively, but gaps remain in our knowledge. In my doctoral work, I collected the largest chronosequence dataset of tropical forest vegetation yet assembled that includes both secondary and old-growth sites sampled with standard methodology. I surveyed trees, shrubs, lianas (woody vines), and giant herbs (Zingiberales) at 30 sites in northeastern Costa Rica, identifying species with high accuracy. I address three understudied dimensions of tropical forest succession: 1) How rapidly do secondary forests converge with old-growth forest, in terms of aboveground biomass, species richness, and species composition? 2) Do lianas behave differently from trees during the process of succession? 3) How does the community phylogenetic structure of secondary forests change over time?

Secondary forests recover rapidly in this region, with lianas and free-standing woody plants responding differently during succession. Total aboveground biomass reaches old-growth levels in as little as 15-20 yrs, species richness recovers in 30-44 yrs, and species composition in secondary forests converges with old-growth forest over time. Tree biomass shows a hump-shaped relationship with forest age, with the highest values in forests 30-44 yrs of age, while liana biomass shows a monotonic increase during succession. Depending on the method of assessment, liana species richness shows no change or a slight decline with forest age. The increase in species richness during succession is driven by tree species. Liana species composition does show concerted changes during succession, though, and the changes in the liana species composition are strongly related to changes in the tree community. I discuss the advantages and constraints of

Structural Floristic And Phylogenetic Dynamics Of Tropical Forest Stands During Succession

Author : / **Category :**Uncategorized / **Total Pages** : 159 pages

Summary : Free structural floristic and phylogenetic dynamics of tropical forest stands during succession pdf download - the phylogenetic structure of forest communities shows strong overdispersion at multiple scales and at multiple stem size classes individuals inhabiting a site are less closely related than would be expected by chance this pattern becomes more pronounced in later succession and mature forests if phylogenetic overdispersion is interpreted as a product of biotic filtering the observed pattern of relatedness corroborates existing models of forest succession

Pusblisher : ProQuest on 2008 / **ISBN :** 9780549958536

Download Structural Floristic And Phylogenetic Dynamics Of Tropical Forest Stands During Succession PDF

PDF STRUCTURAL FLORISTIC AND PHYLOGENETIC DYNAMICS OF TROPICAL FOREST STANDS DURING SUCCESSION

polish journal of ecology - hpsblos - polish journal of ecology vol ... richness and community productivity during succession on the loess ... of meadow patches in protected forest area: floristic