

南岭小坑小红栲-荷木群落的地上生物量

谢亭亭¹, 李根², 周光益^{1**}, 吴仲民¹, 赵厚本¹, 邱治军¹, 梁瑞友³(1中国林业科学研究院热带林业研究所, 广州 510520; ²上海森语景观绿化工程有限公司, 上海 201703; ³韶关市曲江区国营小坑林场, 广东小坑 512162)Aboveground biomass of natural *Castanopsis carlesii*-*Schima superba* community in Xiaokeng of Nanling Mountains, South China.XIE Ting-ting¹, LI Gen², ZHOU Guang-yi¹, WU Zhong-min¹, ZHAO Hou-ben¹, QIU Zhi-jun¹, LIANG Rui-you³(1Research Institute of Tropical Forestry, Chinese Academy of Forestry, Guangzhou 510520, China; ²Shanghai Senyu Landscape Engineering Co. Ltd, Shanghai 201703, China; ³Xiaokeng State Forest Farm in Qujiang, Shaoguan, Xiaokeng 512162, Guangdong, China)

摘要

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摘要

采用皆伐法对南岭小坑800 m²小红栲-荷木次生群落(24 a)的生物量进行实测,并建立了生物量回归模型,分析群落地上部总生物量(AGB)在森林各层次、各树种及乔木层各器官中的分配规律.结果表明:在亚热带次生常绿阔叶林,构建混合树种生物量模型的标准木数量最好在12株以上.基于伐倒实测265株阔叶乔木树种的群落混合阔叶树种地上生物量模型为: $AGB=0.128D^{2.372}$ 和 $AGB=242.331(D^2H)^{0.947}$,并且获得小红栲、荷木和萌条杉木单个树种的生物量模型.群落地上部总生物量为115.20 t·hm⁻²,其中,乔木层和下木层分别为111.25和1.01 t·hm⁻²,层间植物0.36 t·hm⁻²,凋落物层2.58 t·hm⁻².小红栲和荷木分别占乔木层地上部总生物量的39.1%和28.7%.树干和枝叶生物量分别占乔木层地上部总生物量的81.0%和19.0%.

关键词: 生物量 小红栲-荷木群落 亚热带 次生林 南岭

Abstract:

By the method of clear cutting, a measurement was made on the aboveground biomass (AGB) of 24-year old natural *Castanopsis carlesii*-*Schima superba* community in an 800 m² plot in Xiaokeng of Nanling Mountains, South China. The distribution patterns of the total AGB in different forest layers, tree species, and tree layer organs were investigated, and the AGB regression models were constructed. The results showed that when constructing the AGB regression models, more than 12 samples would be feasible. Based on the measured AGB of 265 felled trees, the AGB models of mixed broadleaved species were $AGB=0.128D^{2.372}$ and $AGB=242.331(D^2H)^{0.947}$. The single tree's AGB model of *C. carlesii*, *S. superba*, and *Cunninghamia lanceolata* was also established. The total AGB of the forest community was 115.20 t·hm⁻², of which, the AGB of tree layer, understory layer, liana, and litter layer was 111.25, 1.01, 0.36, and 2.58 t·hm⁻², respectively. The AGB of *C. carlesii* and *S. superba* took up 39.1% and 28.7% of the tree layer AGB, respectively. The AGB of tree stem and branch-leaf occupied 81.0% and 19.0% of the tree layer AGB, respectively.

Key words: biomass *Castanopsis carlesii*-*Schima superba* community subtropics secondary forest Nanling Mountains.

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