

- [14] Niemelä J, Haija Y, Punttilä P. The Importance of Small Scale Heterogeneity in Boreal Forests: Variation in Diversity in Forest-floor Invertebrates Across the Succession Gradient. *Ecography* 1996, 19: 352 ~ 368.

Research on Soil Fauna Community Characteristics at Different Vegetation Successions in the Karst Plateau of Guizhou Province

FAN Yunlong, XIONG Kangning, SU Xiaoliang, CHEN Hu, ZOU Xixia

(Institute of South China Karst, Guizhou Normal University, Guiyang 550001, China)

Abstract: Soil fauna community was studied at different vegetation successions in the Karst Plateau of Guizhou Province in May 2009. A total of 3 992 individuals of soil animals belonging to 5 phyla, 10 classes and 24 orders were collected and sorted into macro and meso/micro fauna. The dominant orders were Collembola, Oribatida, Mesostigmata, the frequent orders were Prostigmata, Hymenoptera, Coleoptera, Hemiptera, Plesioptera, Diptera and Dipura, the remnant orders were rare orders. The results show that with increasing degradation of Karst vegetation, the numbers of individuals and groups soil fauna declined: from forest stage > shrub community > grassland > rock desertification. The analysis of soil fauna diversity indicated that the diversity index of meso/micro fauna declined from the forest stage to the rock desertification.

Key words: Karst Plateau, soil fauna, rocky desertification, succession stage, community characteristics, biodiversity, Guizhou.

封面照片说明: 汶川映秀莲花心沟地震滑坡

莲花心沟属四川省汶川县映秀镇张家坪村, 为岷江上游右侧支流牛圈沟 (又称牛眠沟) 的左支沟, 处于龙门山主中央断裂带上。莲花心沟上游山坡主要由坚硬的花岗岩构成, 坡度陡峭, 相对高度达 500 ~ 600 m。2008—05—12 14:28 汶川 8.0 级特大地震发生, 处于地震震中的莲花心沟, 其地震烈度达 XI 度。地震的强烈震动作用使山体边坡失稳, 莲花心沟上游大范围发生了极其强烈的地表岩石破坏, 并形成规模巨大的高速滑坡。顺坡高速滑动的花岗岩体碰撞碎裂, 即刻演化为滑坡碎屑流, 涌入沟道; 飞速向前的岩石碎块在沟谷中左碰右撞, 冲出莲花心沟, 高速进入牛圈沟。最后, 在牛圈沟下游形成约 $200 \times 10^4 \text{ m}^3$ 的花岗岩碎块石堆积体, 其前端距岷江仅约 200 m, 整个滑流程在 2 km 以上。照片为莲花心沟上游地震滑坡发生区。

(山水)