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## Distribution characteristics of SOM and nitrogen on the eastern slope of Gongga Mountain

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The distribution of soil organic matter (SOM) and nitrogen on Gongga Mountain was studied in this paper. The results showed that the content of SOM and nitrogen (N) of A horizon had an ascending trend with the increase of the elevation. The vegetation types distributed higher than the mixed broad-leaved and coniferous forest have the irregular trends. In the transitional zone vegetation such as mixed trees and treeline, the content of SOM and N is higher than other vegetation types. The distribution of SOM and N of A horizon is dependent on the synthetic effect of climate and vegetation types. The vertical distribution of SOM and N in soil profiles has the similar trends for all kinds of vegetation types, i.e., the content of A horizon is higher than that of the B and C horizons, which is the same to the distribution of dead animal and plant in soil. The soil C:N is between 7 and 25, which is relatively low comparing to the appropriate C:N of 25-30. The ratio of soil carbon to nitrogen (C:N) increases with the increase of the elevation, but its vertical distribution in soil horizons varies with different vegetation types. The N exists in SOM mainly in the form of organic nitrogen, and the soil C:N correlates significantly with SOM.

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**关键词:** Gongga Mountain; vertical gradient; soil organic matter; nitrogen doi: 10.1360/gso40411