Supplementary Figures S1-S4

Title: Differential controls on soil carbon density and mineralization among contrasting forest types in a temperate forest ecosystem

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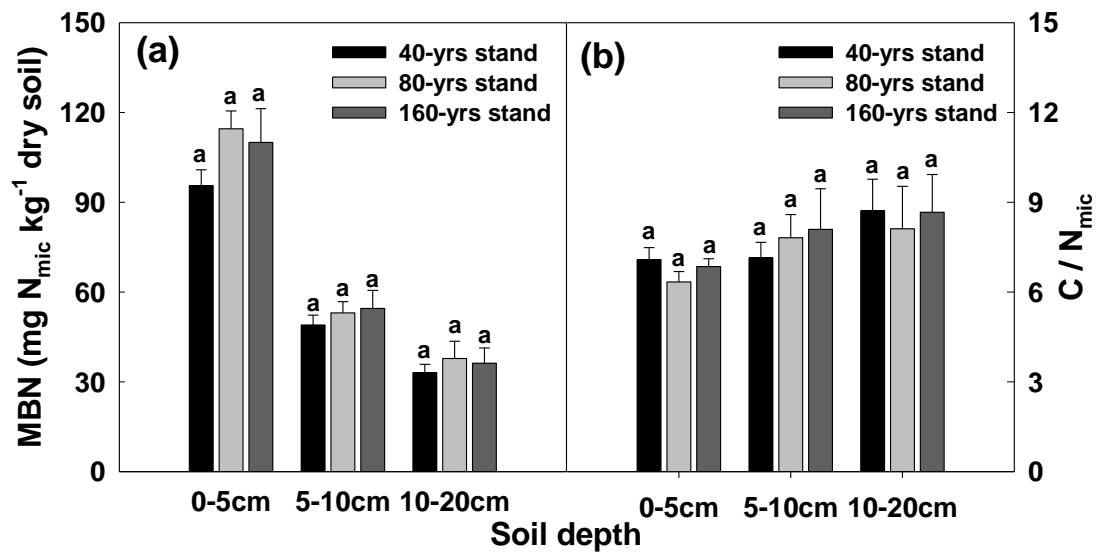
Author for correspondence:

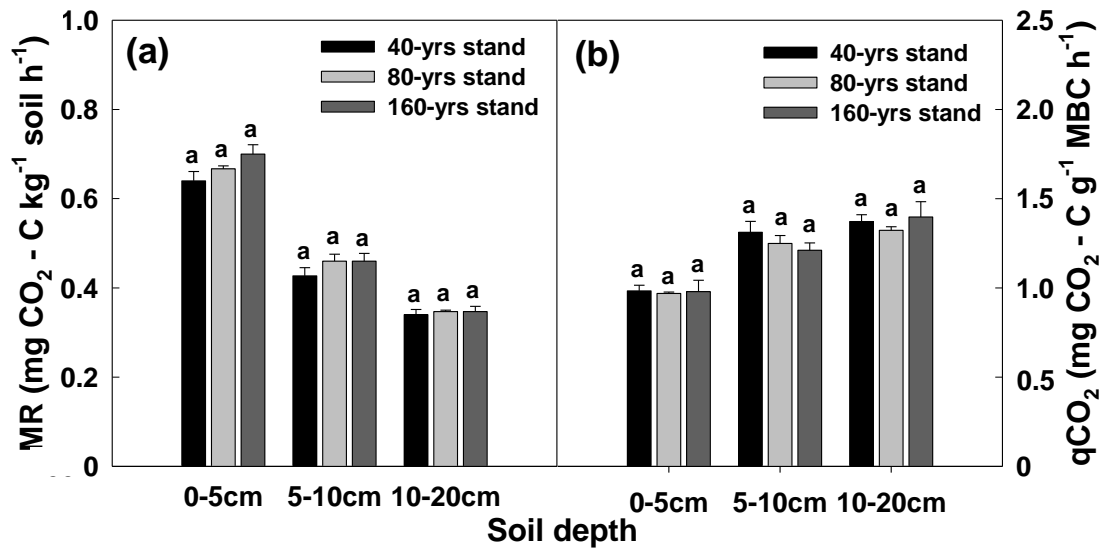*Osbert Jianxin Sun*

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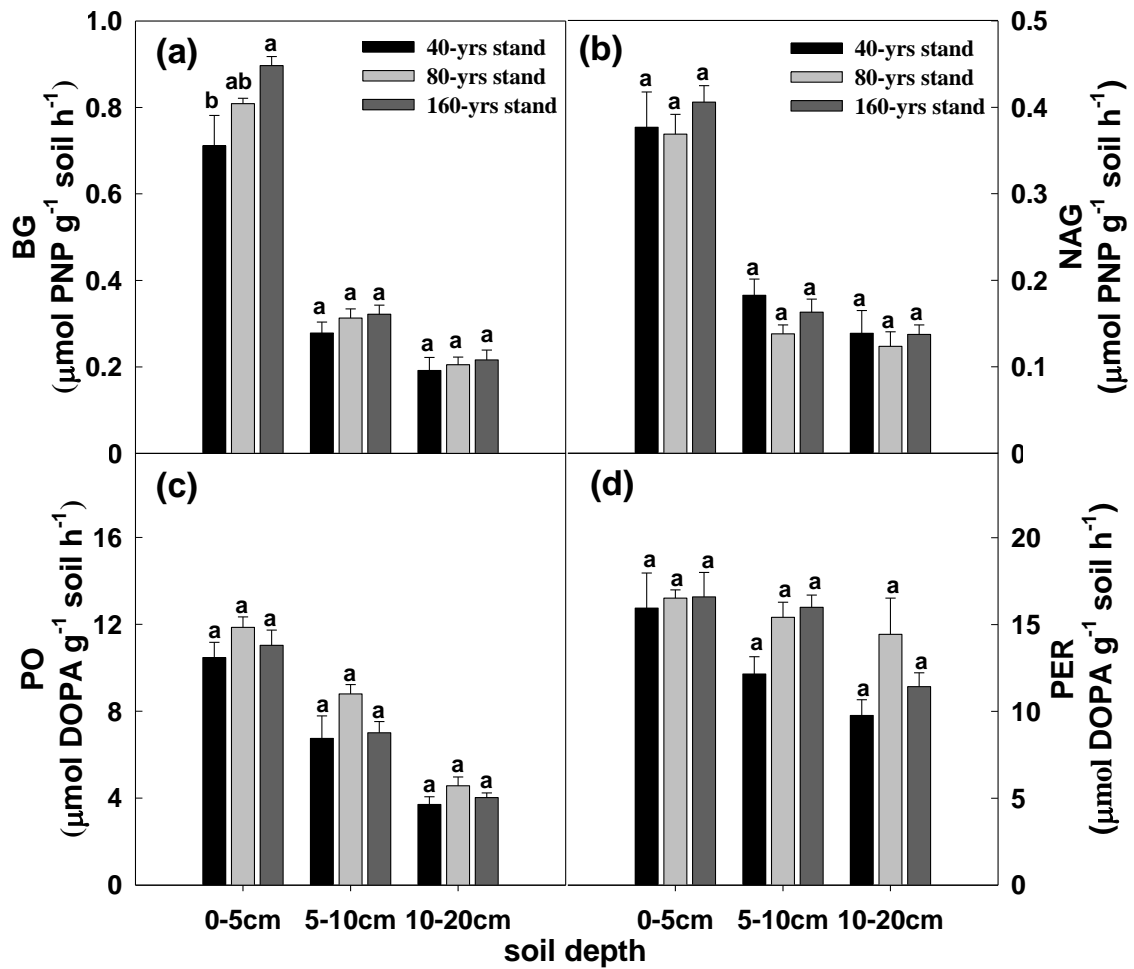**These authors contributed equally to this work.*

Figure S1 Mean values of microbial biomass N (MBN) and microbial C to N ratio (C/N_{mic}) in 0-5, 5-10, 10-20 cm soil layers in plots of contrasting stand age classes of *Q. aliena* forest during the growing seasons from 2011 to 2012. Error bars represent 1 SE (n = 3). Same letters above the error bars indicate no significant differences among stand age classes within given soil layers ($P > 0.05$).

Figure S2 Mean values of soil microbial respiration (MR) and microbial metabolic quotient (qCO_2) in the 0-5, 5-10 and 10-20 cm soil layers in plots of contrasting stand age classes of *Q. aliena* forest during the growing seasons from 2011 to 2012. Error bars represent 1 SE (n = 3). Same letters above the error bars indicate no significant differences among stand age classes within given soil layers ($P > 0.05$).

Figure S3 Mean values of activities of β-1,4-glucosidase (BG), β-1,4-N-acetylglucosaminidase (NAG), phenol oxidase (PO) and peroxidase (PER) in the 0-5, 5-10, 10-20 cm soil layers in plots of contrasting stand age classes of *Q. aliena* forest during the growing seasons from 2011 to 2012. Error bars represent 1 SE (n = 3). Different letters above the error bars indicate significant differences among stand age classes within given soil layers ($P <$ 0.05).

Figure S4 Mean values of specific activities of β-1,4-glucosidase (BG), β-1,4-N-acetylglucosaminidase (NAG), phenol oxidase (PO) and peroxidase (PER) in the 0-5, 5-10, 10-20 cm soil layers in plots of contrasting stand age classes of *Q. aliena* forest during the growing seasons from 2011 to 2012. Error bars represent 1 SE (n = 3). Same letters above the error bars indicate no significant differences among stand age classes within given soil layers (*P* > 0.05).