Oikos

OIK-05517

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Appendix 1

Table A1. The selected information for nine forests from tropical to cold-temperate region in eastern China.

Table A2. Changes in the content of nitrogen (N) and phosphorus (P) among different organs in the nine typical forests of China.

Table A3. Key parameters for the allometric equations of N and P allocation in the nine typical forests of China.

Fig. A1. Locations of the nine typical forests HZ, Huzhong; LS, Liangshui; CB, Changbai; DL, Dongling; TY, Taiyue; SN, Shennongjia; JL, Jiulian; DH, Dinghu; JF, Jianfengling.

Fig. A2. Coefficient of variation (*CV*, %) of nitrogen (N), phosphorus (P), and N:P ratio in tree, shrub, and herb in leaves, twigs, and roots. Different letters indicate the significant differences. ns indicate non-significant difference at $p < 0.05$.

Fig. A3. Allometric relationships between nitrogen (N) and phosphorus (P) in different plant functional groups. The parameters of the lines were calculated by the reduced major axis tests. In Fig. 4 (c), the relationship between log N and log P of tree roots is denoted with a blue dotted line because of $p > 0.05$. No significant difference among the three functional groups regardless of organs.

Fig. A4 The relationship between N:P and biomass. With the data of N:P ratios of different plant organs in different plant functional groups and corresponding biomass.

Fig. A5. Mechanisms underlying the allocation strategies for nitrogen (N) and phosphorus (P) in forest communities.

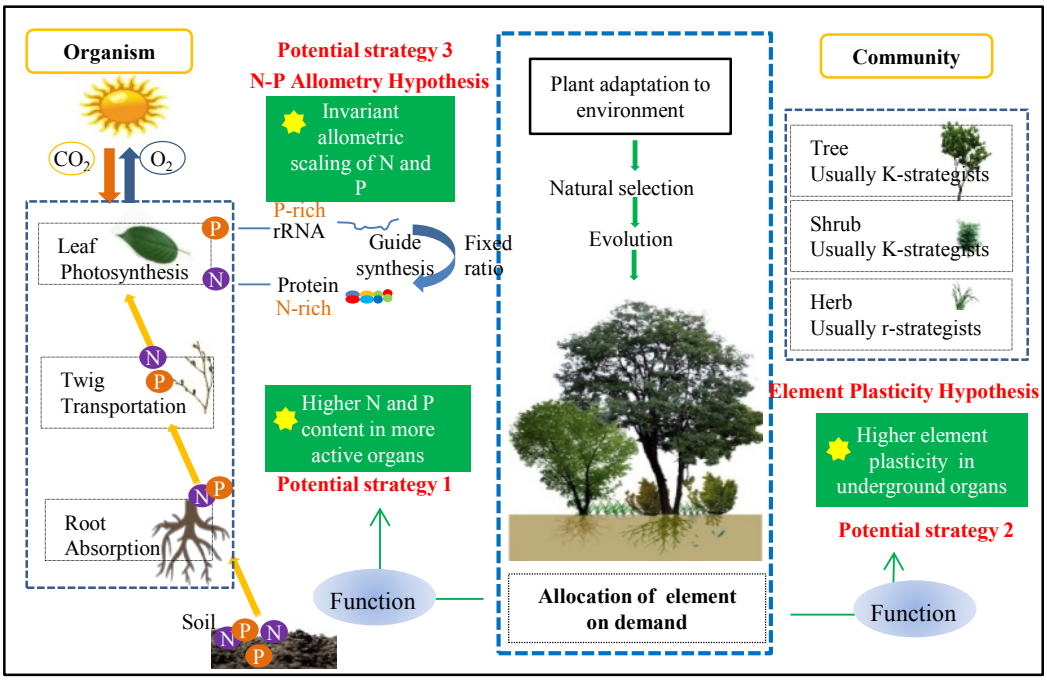

Figure 1. Theoretical framework for the allocation strategies of nitrogen (N) and phosphorus (P) in typical forests. The potential strategies are that the different plant organs arrange interactively through invariant allometric scaling of N and P, more active organs have higher content of the limiting elements, and higher elemental plasticity is observed for the underground organ.

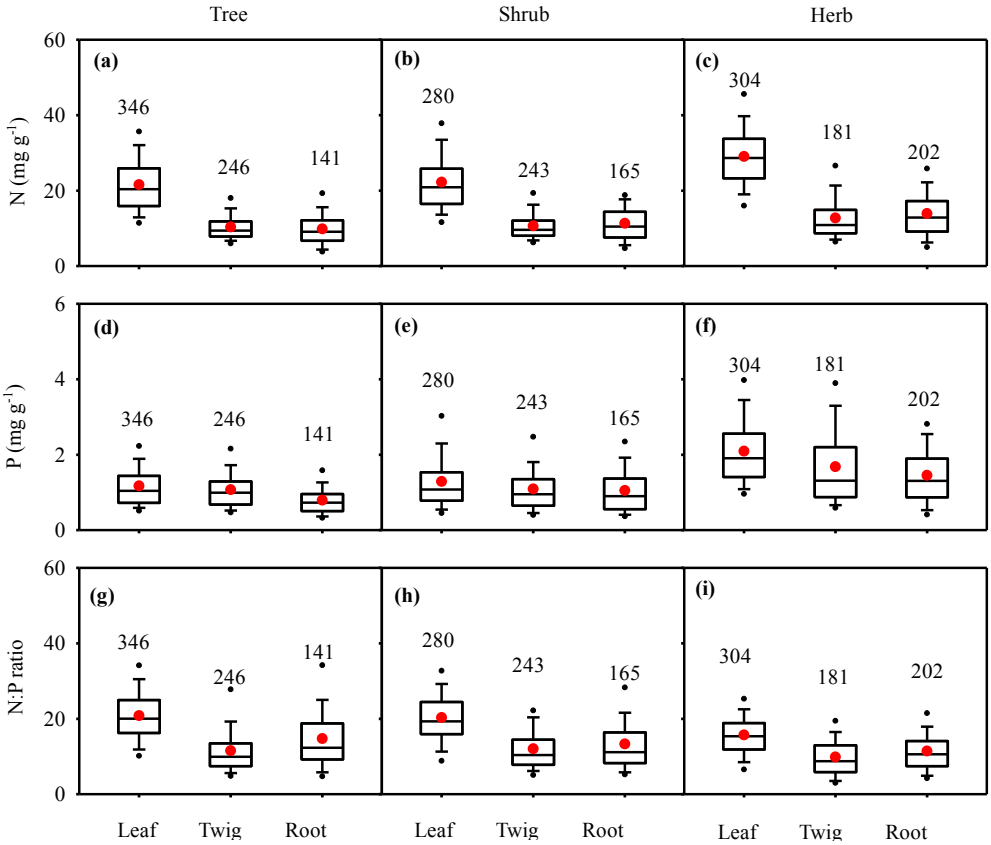

Figure 2. Box plots of median, geometric mean (red point), interquartile range, and value range for nitrogen (N), phosphorus (P), and N:P ratio in leaf, twig, and root in the different functional groups (trees, shrubs, and herbs) of plants. The numbers on the top of the range line denote the numbers of plant species.

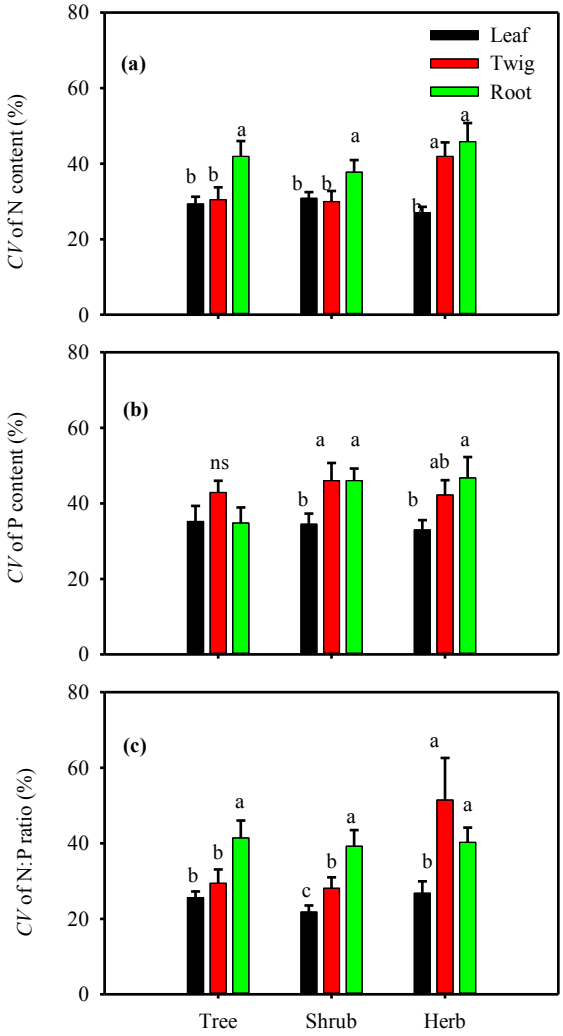

Figure 3. Coefficient of variation (*CV*, %) of nitrogen (N), phosphorus (P), and N:P ratio in leaf, twig, and root in trees, shrubs, and herbs. Different letters indicate the significant differences. ns indicate a non-significant difference at $p < 0.05$.

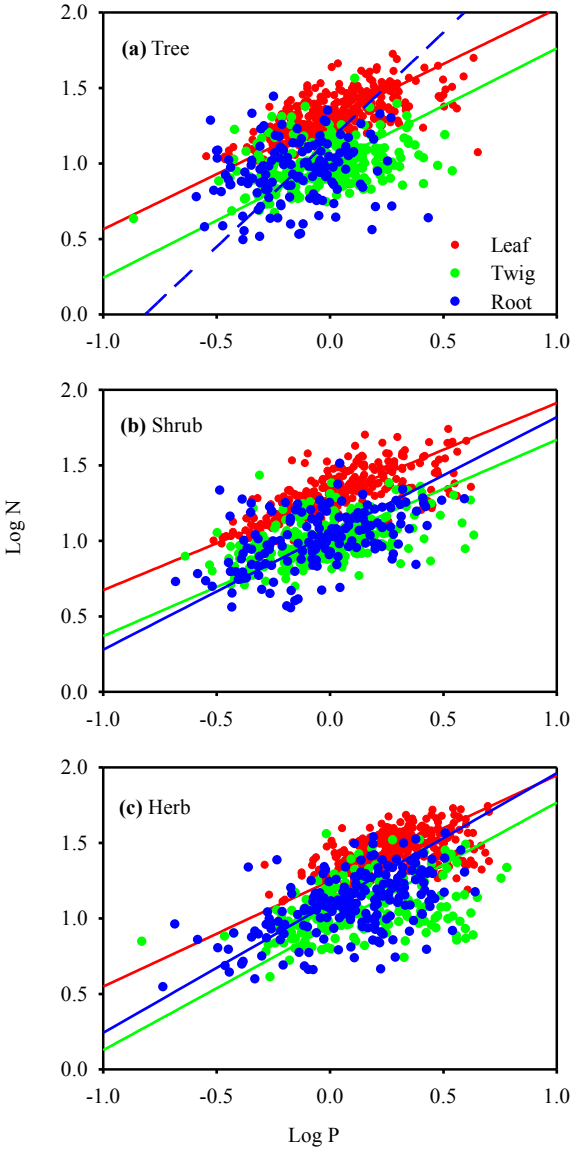

Figure 4. Allometric relationships between nitrogen (N) and phosphorus (P) in different organs (leaf, twig, and root) in different plant functional groups [tree (a), shrub (b), and herb (c)]. The parameters of the lines were calculated by the reduced major axis tests. In Fig. 4 (a), the relationship between log N and log P of tree roots is denoted with a blue dotted line because of $p > 0.05$. (a) No significant difference between leaf and twig; (b) no significant difference between leaf and twig; (c) no significant difference among the three organs.