Nickel biopathways in tropical nickel hyperaccumulating trees from Sabah (Malaysia)

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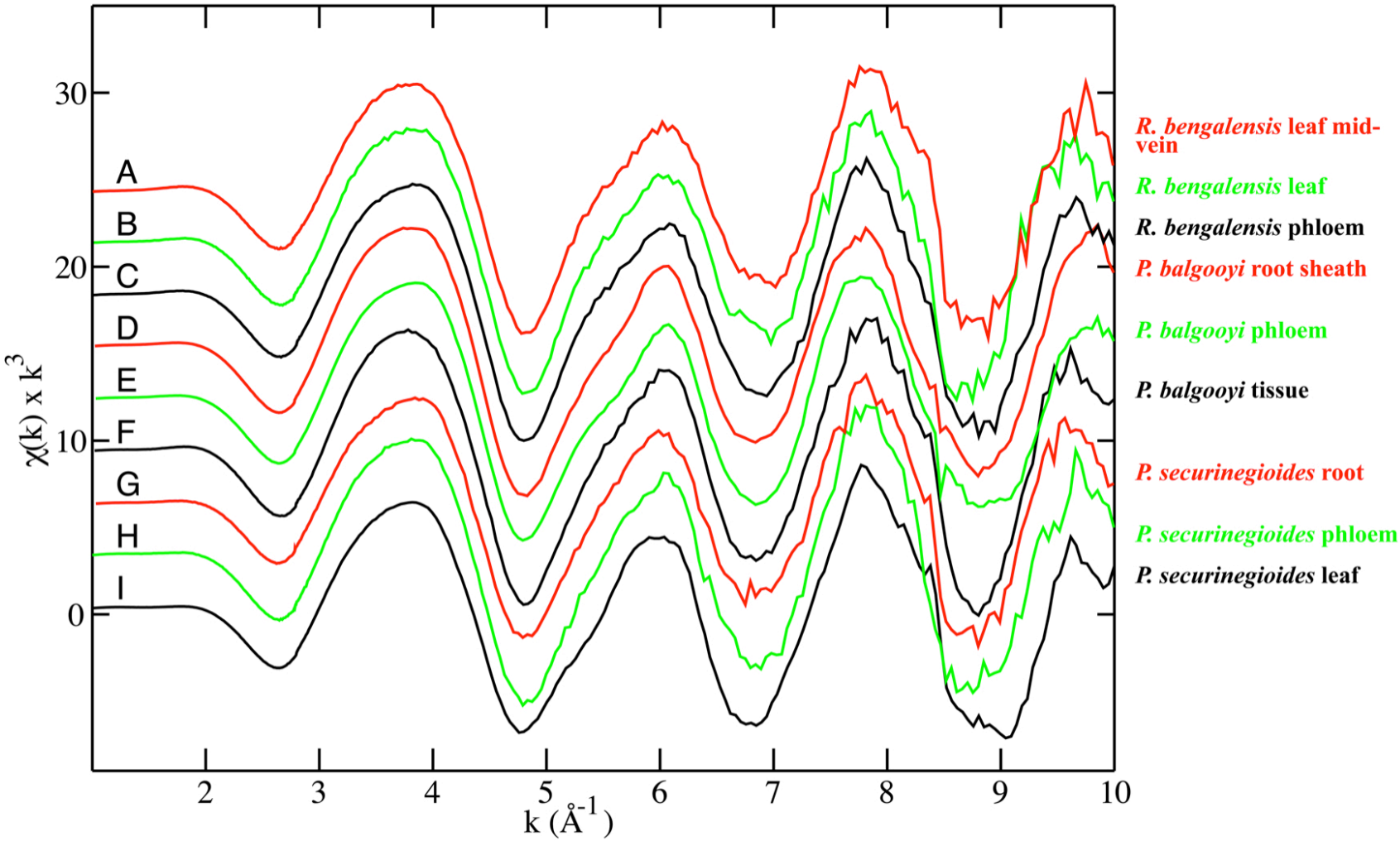
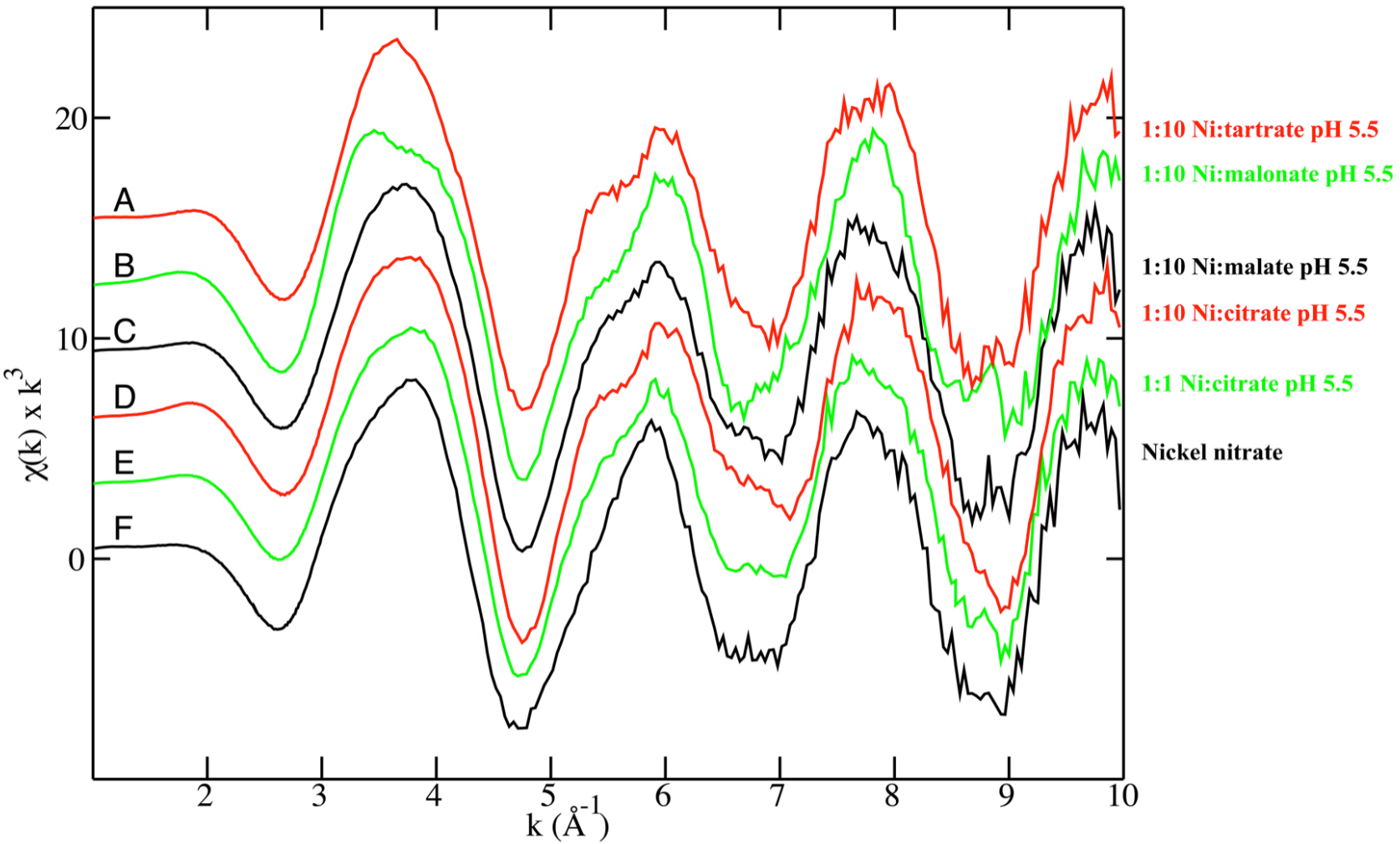
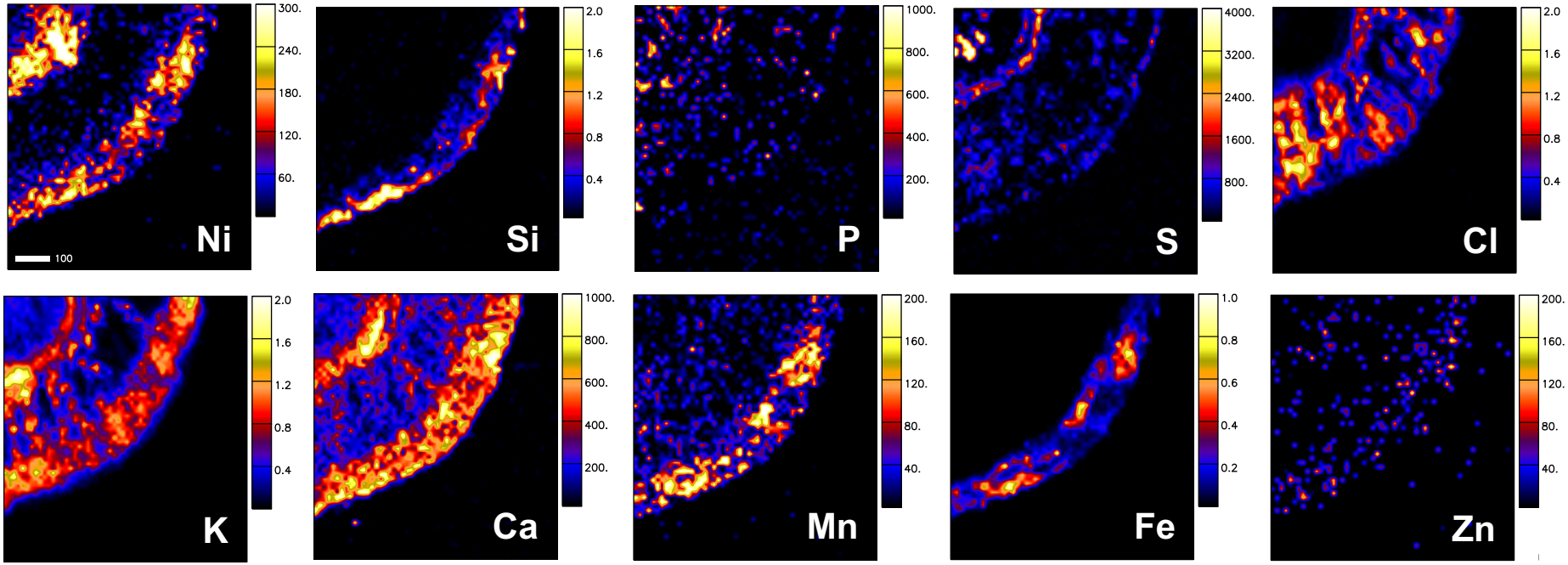


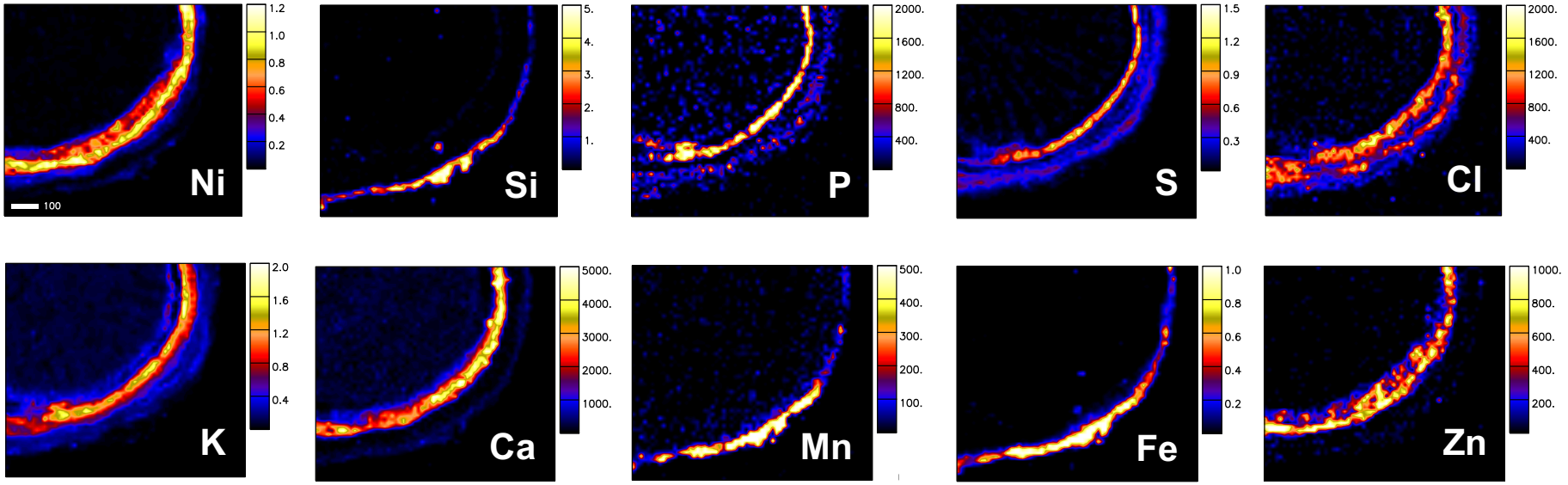
Supplementary Figure 1. Ni K-edge extended X-ray absorption structure for **A**, *Rinorea bengalensis* leaf mid-vein tissue; **B**, *Rinorea bengalensis* leaf tissue; **C**, *Rinorea bengalensis* phloem tissue; **D**, *Phyllanthus balgooyi* root sheath tissue; **E,** *Phyllanthus balgooyi* phloem tissue; **F**, *Phyllanthus balgooyi* leaf tissue; **G**, *Phyllanthus securinegioides* root tissue; **H**, *Phyllanthus securinegioides* phloem tissue; **I**, *Phyllanthus securinegioides* leaf tissue.



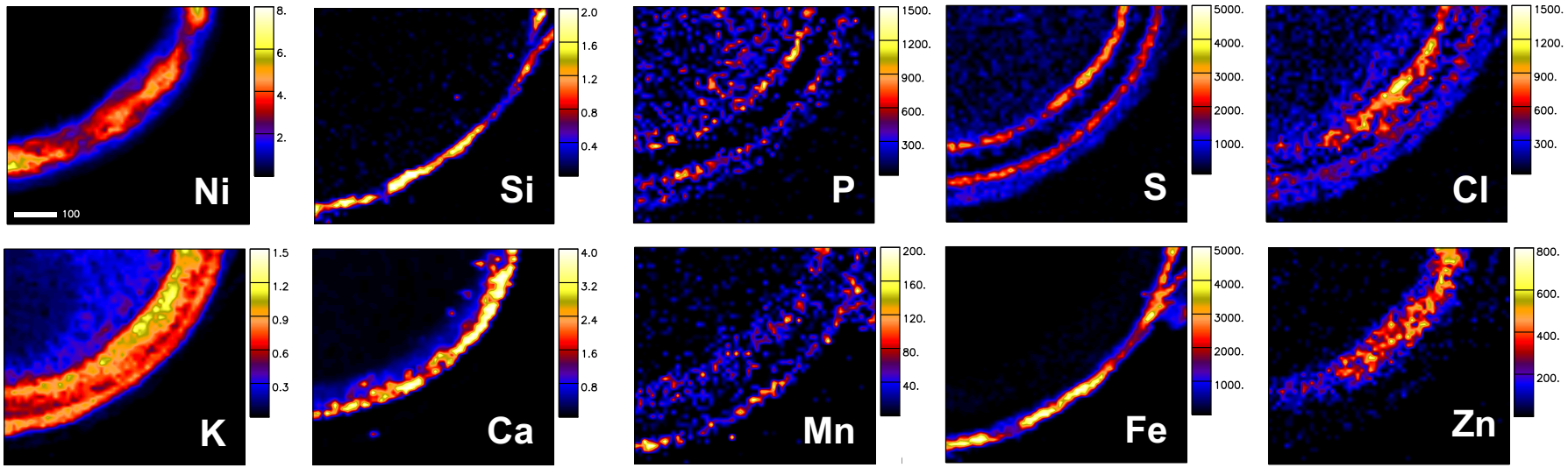
Supplementary Figure 2. Ni K-edge extended X-ray absorption structure for **A**, 1:10 Ni:tartrate in aqueous solution at pH 5.5; **B**, 1:10 Ni:malonate in aqueous solution at pH 5.5; **C**, 1:10 Ni:malate in aqueous solution at pH 5.5; **D**, 1:10 Ni:citrate in aqueous solution at pH 5.5; **E**, 1:1 Ni:citrate in aqueous solution at pH 5.5; **F**, Ni:nitrate in aqueous solution (*i.e.* $[Ni(H_2O)_6]^{2+}$.



Supplementary Figure 3. Elemental maps of root cross-section of *Phyllanthus balgooyi.* Concentration scale in wt% dry weight (for Si, Cl, K and Fe) and µg g^{-1} dry weight (for Ni, P, S, Ca, Mn and Zn). Scale bar – 100 µm.

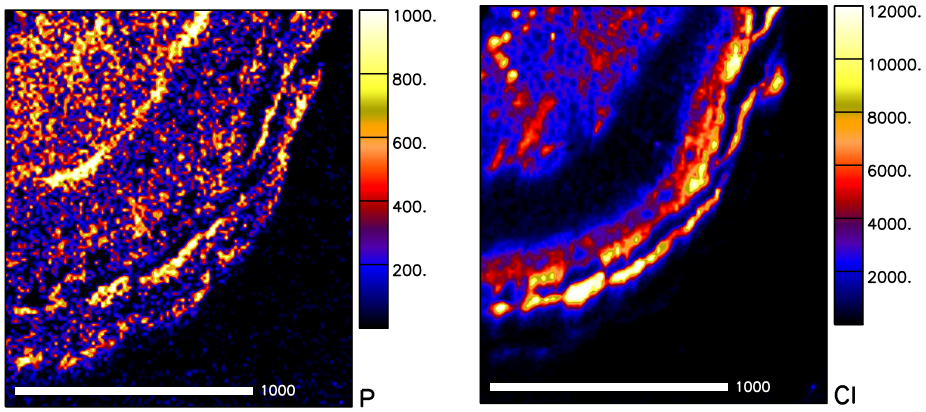


Supplementary Figure 4. Elemental maps of root cross-section of *Phyllanthus securinegioides.* Concentration scale in wt% dry weight (for Ni, Si, S, K and Fe) and µg g^{-1} dry weight (for P, Cl, Ca, Mn and Zn). Scale bar – 100 µm.

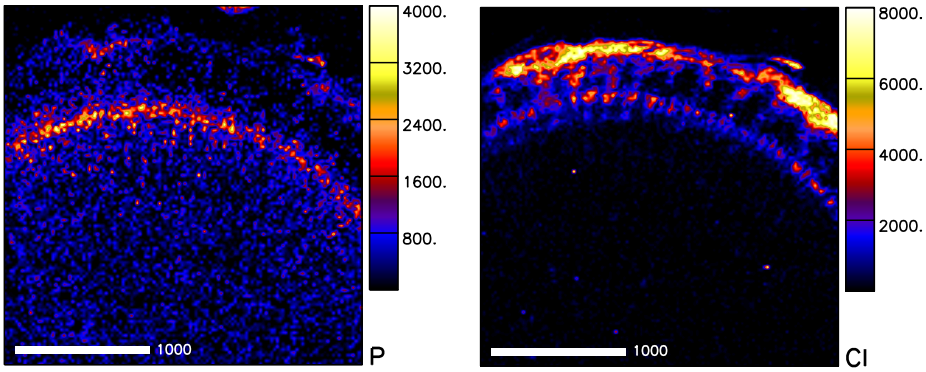


Supplementary Figure 5. Elemental maps of root cross-section of *Rinorea bengalensis.* Concentration scale in wt% dry weight (for Ni, Si, K and Ca) and µg g^{-1} dry weight (for P, S, Cl, Mn, Fe and Zn). Scale bar – 100 µm.

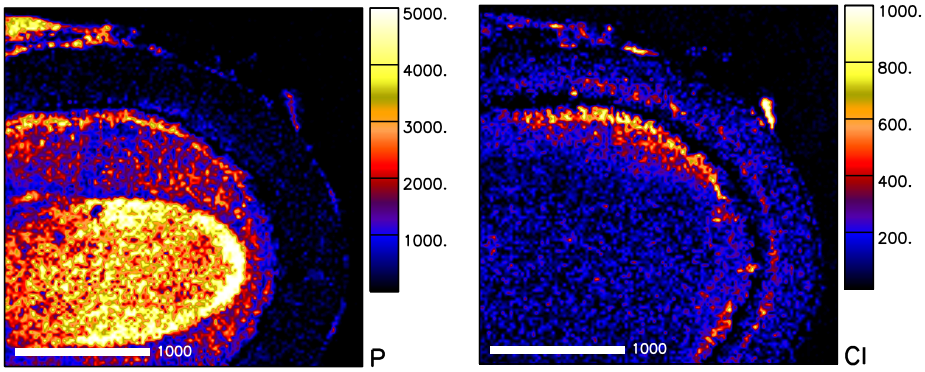
Phyllanthus balgooyi (stem section)



Phyllanthus securinegoides (stem section)

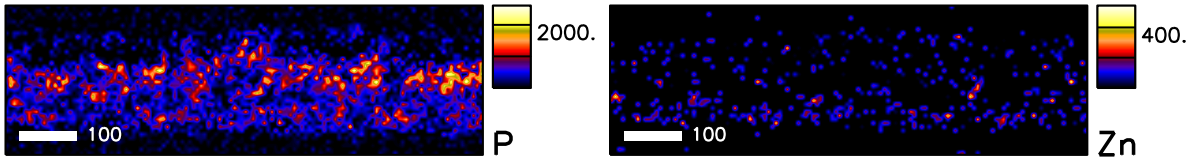


Rinorea bengalensis (stem section)

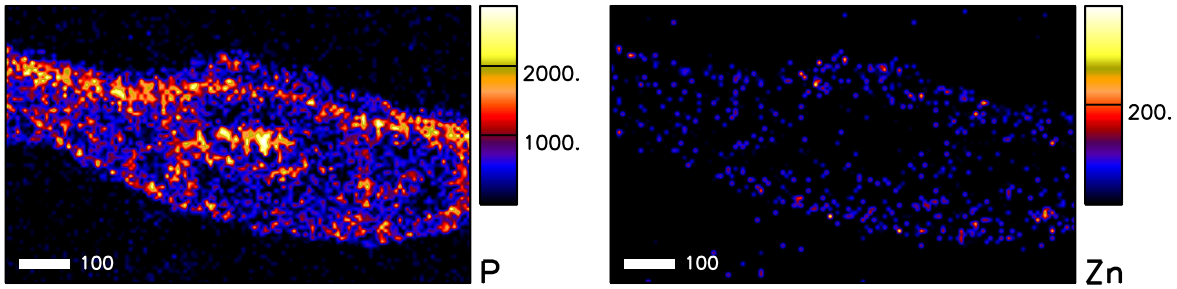


Supplementary Figure 6. Elemental maps of stem cross-sections of *Phyllanthus balgooyi, Phyllanthus securinegioides* and *Rinorea bengalensis.* Concentration scale in µg g^{-1} dry weight. Scale bar – 1000 µm.

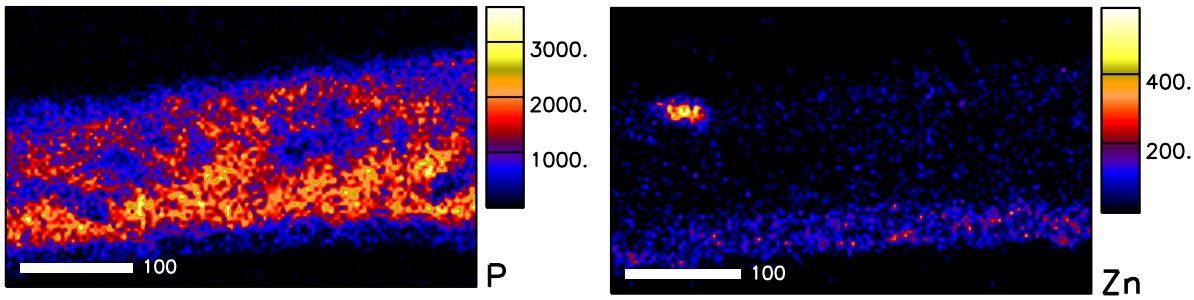
Phyllanthus balgooyi (leaf section)



Phyllanthus securinegioides (leaf section)



Rinorea bengalensis (leaf section)



Supplementary Figure 7. Elemental maps of leaf cross-sections of *Phyllanthus balgooyi, Phyllanthus securinegioides* and *Rinorea bengalensis.* Concentration scale in µg g^{-1} dry weight. Scale bar – 100 µm.