**Electronic supplementary information 1**

Leaf elemental concentrations in mg kg$^{-1}$ dry mass from each treatment and ecotype. Values represent the mean concentration from three biological replicates.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Ni</th>
<th>Zn</th>
<th>Cd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Le Bleynard</td>
<td>0.9</td>
<td>1030</td>
<td>3.8</td>
</tr>
<tr>
<td>Control Basadre</td>
<td>2.5</td>
<td>1060</td>
<td>11</td>
</tr>
<tr>
<td>Control Prayon</td>
<td>0.7</td>
<td>650</td>
<td>8.9</td>
</tr>
<tr>
<td>Control Bradford Dale</td>
<td>1.1</td>
<td>870</td>
<td>1.2</td>
</tr>
<tr>
<td>Cd Le Bleynard</td>
<td>160</td>
<td>1400</td>
<td>680</td>
</tr>
<tr>
<td>Cd Basadre</td>
<td>8.4</td>
<td>1800</td>
<td>940</td>
</tr>
<tr>
<td>Cd Prayon</td>
<td>0.6</td>
<td>1700</td>
<td>62</td>
</tr>
<tr>
<td>Cd Bradford Dale</td>
<td>4.0</td>
<td>1700</td>
<td>520</td>
</tr>
<tr>
<td>Ni Le Bleynard</td>
<td>380</td>
<td>1100</td>
<td>22</td>
</tr>
<tr>
<td>Ni Basadre</td>
<td>870</td>
<td>1400</td>
<td>18</td>
</tr>
<tr>
<td>Ni Prayon</td>
<td>77</td>
<td>810</td>
<td>25</td>
</tr>
<tr>
<td>Ni Bradford Dale</td>
<td>740</td>
<td>1300</td>
<td>4.7</td>
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<tr>
<td>Zn Le Bleynard</td>
<td>0.3</td>
<td>4000</td>
<td>21</td>
</tr>
<tr>
<td>Zn Basadre</td>
<td>1.4</td>
<td>3500</td>
<td>7.9</td>
</tr>
<tr>
<td>Zn Prayon</td>
<td>1.6</td>
<td>8000</td>
<td>5.5</td>
</tr>
<tr>
<td>Zn Bradford Dale</td>
<td>2.2</td>
<td>2300</td>
<td>58</td>
</tr>
</tbody>
</table>

**Electronic supplementary information 2**

Elemental image of the Zn treated Prayon ecotype. The full top section of the leaf (left hand side) was not collected. The same pattern can still be observed however with high concentrations of Zn in the leaf tip (left hand side).
Electronic supplementary information 3
Elemental analysis of the *N. caerulescens* Bradford Dale population, grown hydroponically with four different Zn treatments. (A) The mean (n=10) concentration of Zn in dried leaves of *N. caerulescens* with increasing Zn treatment; (B) the mean (n=10) concentration of Mn in the same leaves. Error bars represent standard deviation.
**Electronic supplementary information 4**

Elemental images detected from *N. caerulescens* plants grown in giffy pots watered with normal nutrient media (control) or amended with 250 µM Ni$^{2+}$, 500 µM Zn$^{2+}$ or 10 µM Cd$^{2+}$. Intensity bar on right of image, blue low intensity, red high intensity.

Leaf elemental images from **control** non-treated plants

- **carbon**
- **manganese**
- **cadmium**
- **molybdenum**
- **copper**
- **sodium**
- **iron**
- **nickel**
- **potassium**
- **phosphorus**
- **magnesium**
- **sulfur**
- **zinc**
Leaf elemental images from zinc treated plant

carbon

manganese

cadmium

molybdenum

copper

sodium

iron

nickel

potassium

phosphorus

magnesium

sulfur

zinc
Leaf elemental images from **nickel** treated plant

carbon

manganese

cadmium

molybdenum

copper

sodium

iron

nickel

potassium

phosphorus

magnesium

sulfur

nickel

zinc
Leaf elemental images from cadmium treated plant

carbon

cadmium

copper

iron

potassium

magnesium

manganese

molybdenum

sodium

nickel

phosphorus

sulfur

zinc