

Table S1 ICP-OES settings I.

| | |
|--------------------|--------------------------|
| Replicates | 3 |
| Pump speed | 15 rpm |
| Uptake time | 15 sec |
| Rinse time | 30 sec |
| Read time | 10 sec |
| RF power | 1.20 kW |
| Stabilization time | 15 sec |
| Nebulizer flow | 0.70 L min ⁻¹ |
| Plasma flow | 12.0 L min ⁻¹ |
| Aux flow | 1.0 L min ⁻¹ |
| Viewing height | 8 mm |

Table S2. *Table 2* ICP-OES settings II.

| Element | Wavelength | Viewing mode | Stabilization time (sec) |
|---------|------------|--------------|--------------------------|
| Al | 396.152 | axial | 10 |
| B | 249.772 | axial | 10 |
| Ba | 455.403 | axial | 10 |
| Bi | 223.061 | axial | 10 |
| Ca | 445.478 | radial | 3 |
| Cd | 226.502 | axial | 10 |
| Co | 228.615 | axial | 10 |
| Cr | 267.716 | axial | 10 |
| Cu | 324.754 | axial | 10 |
| Fe | 238.204 | axial | 10 |
| K | 766.491 | radial | 3 |
| Li | 670.783 | axial | 10 |
| Mg | 279.800 | radial | 3 |
| Mn | 257.610 | axial | 10 |
| Na | 589.592 | radial | 3 |
| Ni | 216.555 | axial | 10 |
| Pb | 220.353 | axial | 10 |
| Sr | 421.552 | axial | 10 |
| Zn | 213.857 | axial | 10 |

Table S3 Concentration (mg l⁻¹) of the analyzed elements in the Steinberg medium on the first (0 day) and last day (3 days) of the heavy metal treatments. Mean±SD of n=6 samples. Bold figures indicate significantly different median concentrations of the respective element within a given treatment (control, Cr(VI) and Ni, respectively) on the 3rd day as compared to the 0th day, according to the Mann-Whitney test. <LoD denotes that the concentration of the given element was below the limit of detection.

| | B | Ca | Cr | Cu | Fe | K | Mg | Mn | Na | Ni | Sr | Zn | |
|------------------------|-----------------|-------------------------|------------------------|-------------------------|-----------------|-------------------------|-----------------------|------------------------|-------------------------|-------------------------|-------------------------|-----------------|-------------------------|
| control 0 day | 0.084 ±0.002 | 54.11 ±0.33 | <LoD | 0.006 ±0.001 | 0.155 ±0.008 | 162.6 ±4.7 | 10.04 ±0.12 | 0.031 ±0.000 | 0.635 ±0.014 | <LoD | 0.014 ±0.000 | 0.055 ±0.005 | |
| Cr(VI) 0 day | 0.086 ±0.002 | 53.90 ±0.01 | 3.668 ±0.046 | 0.006 ±0.001 | 0.152 ±0.006 | 163.0 ±3.6 | 9.96 ±0.08 | 0.031 ±0.001 | 1.034 ±0.152 | <LoD | 0.014 ±0.000 | 0.056 ±0.001 | |
| Ni 0 day | 0.084 ±0.003 | 53.76 ±0.32 | <LoD | 0.006 ±0.001 | 0.151 ±0.004 | 161.2 ±3.5 | 9.99 ±0.09 | 0.031 ±0.000 | 0.635 ±0.008 | 2.368 ±0.052 | 0.014 ±0.000 | 0.069 ±0.008 | |
| Le. minor 3 days | control | 0.085 ±0.002 | 55.62 ±0.33 | <LoD | 0.006 ±0.000 | 0.136 ±0.002 | 166.3 ±1.4 | 10.40 ±0.08 | 0.017 ±0.001 | 0.601 ±0.008 | <LoD | 0.014 ±0.001 | 0.049 ±0.007 |
| | Cr(VI) | 0.092 ±0.002 | 55.43 ±0.46 | 3.717 ±0.044 | 0.006 ±0.000 | 0.147 ±0.001 | 169.1 ±1.8 | 10.31 ±0.06 | 0.029 ±0.000 | 0.900 ±0.104 | <LoD | 0.014 ±0.000 | 0.053 ±0.005 |
| | Ni | 0.051 ±0.004 | 55.01 ±0.35 | <LoD | 0.005 ±0.001 | 0.142 ±0.001 | 166.0 ±1.7 | 10.30 ±0.02 | 0.029 ±0.001 | 0.625 ±0.003 | 2.287 ±0.031 | 0.014 ±0.000 | 0.044 ±0.003 |
| La. punctata 3 days | control | 0.086 ±0.004 | 55.46 ±0.60 | <LoD | 0.006 ±0.001 | 0.145 ±0.003 | 166.3 ±1.9 | 10.35 ±0.10 | 0.014 ±0.002 | 0.613 ±0.018 | <LoD | 0.014 ±0.001 | 0.051 ±0.005 |
| | Cr(VI) | 0.093 ±0.003 | 54.98 ±0.16 | 3.704 ±0.047 | 0.006 ±0.000 | 0.147 ±0.001 | 167.5 ±1.8 | 10.24 ±0.04 | 0.028 ±0.001 | 0.966 ±0.122 | <LoD | 0.014 ±0.000 | 0.051 ±0.002 |
| | Ni | 0.085 ±0.002 | 55.29 ±0.24 | <LoD | 0.006 ±0.001 | 0.143 ±0.001 | 166.2 ±1.7 | 10.32 ±0.05 | 0.028 ±0.001 | 0.615 ±0.005 | 2.338 ±0.038 | 0.014 ±0.000 | 0.037 ±0.007 |
| S. polyrhiza 3 days | control | 0.084 ±0.002 | 55.24 ±0.39 | <LoD | 0.006 ±0.001 | 0.133 ±0.002 | 164.8 ±2.0 | 10.26 ±0.03 | 0.017 ±0.002 | 0.627 ±0.009 | <LoD | 0.014 ±0.000 | 0.050 ±0.005 |
| | Cr(VI) | 0.098 ±0.003 | 55.14 ±0.18 | 3.719 ±0.037 | 0.006 ±0.001 | 0.149 ±0.003 | 167.6 ±2.0 | 10.26 ±0.05 | 0.031 ±0.000 | 1.043 ±0.164 | <LoD | 0.014 ±0.000 | 0.062 ±0.006 |
| | Ni | 0.084 ±0.003 | 55.44 ±0.55 | <LoD | 0.006 ±0.001 | 0.141 ±0.001 | 166.4 ±1.2 | 10.41 ±0.07 | 0.032 ±0.000 | 0.639 ±0.014 | 2.316 ±0.014 | 0.015 ±0.001 | 0.057 ±0.004 |

Table S4 Concentrations of the analyzed elements in the biomass of the three tested duckweed species on dry weight basis (g kg^{-1} or mg kg^{-1}), on the 3rd day of heavy metal treatments. Mean \pm SD of n=6 samples. Lower cases denote significantly different ($p<0.05$) median concentrations of the respective element across different treatments (control, Cr(VI) or Ni) with regard to the given duckweed species. Capitals denote significantly different ($p<0.05$) median concentrations of the respective element across different species with regard to the given treatment (control, Cr(VI) or Ni). Figures in red indicate that the concentration of the respective element was below the limit of detection in at least one sample and, therefore, those data were not subjected to statistical comparisons. <LoD indicate that the concentration of the respective element was below the limit of detection in all 6 samples.

| Species | treatment | B (mg kg^{-1}) | Ca (g kg^{-1}) | Cr (mg kg^{-1}) | Cu (mg kg^{-1}) | Fe (mg kg^{-1}) | K (g kg^{-1}) | Mg (g kg^{-1}) | Mn (mg kg^{-1}) | Na (g kg^{-1}) | Ni (mg kg^{-1}) | Sr (mg kg^{-1}) | Zn (mg kg^{-1}) | K+Na+Mg+Ca (g kg^{-1}) |
|---------------------|-----------|---------------------------------|---------------------------------|--------------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|---------------------------------|----------------------------------|---|---|---------------------------------|--------------------------------------|
| <i>Le. minor</i> | control | 175.3 $\pm 12.7^{\text{bA}}$ | 7.22 $\pm 0.67^{\text{cc}}$ | <LoD | 6.47 $\pm 1.32^{\text{bAB}}$ | 260.9 $\pm 30.5^{\text{aA}}$ | 78.9 $\pm 7.5^{\text{aA}}$ | 1.71 $\pm 0.14^{\text{bC}}$ | 373.3 $\pm 34.1^{\text{aB}}$ | 0.74 $\pm 0.06^{\text{bA}}$ | 0.826 2 ±1 | 0 | 253.7 $\pm 45.9^{\text{bA}}$ | 88.5 $\pm 8.3^{\text{Aa}}$ |
| | Cr(VI) | 137.4 $\pm 8.8^{\text{cA}}$ | 10.79 $\pm 0.28^{\text{ac}}$ | 686.6 $\pm 20.2^{\text{A}}$ | 2.45 $\pm 0.84^{\text{cB}}$ | 109.9 $\pm 14.6^{\text{bAB}}$ | 67.6 $\pm 2.2^{\text{bA}}$ | 2.00 $\pm 0.04^{\text{aA}}$ | 178.9 $\pm 15.7^{\text{bA}}$ | 1.87 $\pm 0.19^{\text{aA}}$ | <LoD | 0.876 ±0.088 | 255.7 $\pm 22.3^{\text{bB}}$ | 82.2 $\pm 2.4^{\text{Aa}}$ |
| | Ni | 475.9 $\pm 40.9^{\text{aA}}$ | 8.50 $\pm 0.68^{\text{bc}}$ | <LoD | 14.06 $\pm 1.78^{\text{aA}}$ | 135.1 $\pm 35.1^{\text{bB}}$ | 59.1 $\pm 3.9^{\text{cA}}$ | 2.02 $\pm 0.07^{\text{aA}}$ | 147.9 $\pm 20.7^{\text{cB}}$ | 0.32 $\pm 0.05^{\text{cB}}$ | 1554 $\pm 179^{\text{B}}$ | 0.704 $\pm 0.148^{\text{c}}$ | 445.5 $\pm 53.1^{\text{aB}}$ | 69.9 $\pm 4.5^{\text{Ab}}$ |
| <i>La. punctata</i> | control | 128.4 $\pm 7.1^{\text{bB}}$ | 12.08 $\pm 0.68^{\text{ab}}$ | <LoD | 5.43 $\pm 0.52^{\text{bB}}$ | 128.5 $\pm 23.4^{\text{bB}}$ | 57.8 $\pm 2.8^{\text{abB}}$ | 1.96 $\pm 0.09^{\text{aB}}$ | 456.4 $\pm 39.4^{\text{aA}}$ | 0.56 $\pm 0.05^{\text{bB}}$ | 6 ±5 | 1.703 ±0.468^{\text{aB}} | 308.7 $\pm 22.6^{\text{bA}}$ | 72.4 $\pm 3.4^{\text{Ba}}$ |
| | Cr(VI) | 80.1 $\pm 6.4^{\text{cB}}$ | 12.87 $\pm 1.23^{\text{ab}}$ | 640.3 $\pm 36.3^{\text{B}}$ | 3.71 $\pm 2.06^{\text{bAB}}$ | 101.7 $\pm 15.0^{\text{cB}}$ | 59.5 $\pm 3.3^{\text{aB}}$ | 2.03 $\pm 0.12^{\text{aA}}$ | 221.9 $\pm 58.7^{\text{bA}}$ | 1.11 $\pm 0.19^{\text{aB}}$ | 9 ±7 | 1.595 ±0.481 | 346.0 $\pm 58.6^{\text{bA}}$ | 75.5 $\pm 4.5^{\text{Ba}}$ |
| | Ni | 147.6 $\pm 15.0^{\text{aC}}$ | 9.85 $\pm 1.25^{\text{bB}}$ | <LoD | 11.84 $\pm 2.26^{\text{aAB}}$ | 157.1 $\pm 17.2^{\text{aAB}}$ | 49.3 $\pm 6.5^{\text{bB}}$ | 1.51 $\pm 0.16^{\text{bB}}$ | 184.8 $\pm 19.8^{\text{bA}}$ | 0.46 $\pm 0.07^{\text{cA}}$ | 1532 $\pm 192^{\text{B}}$ | 1.185 $\pm 0.543^{\text{aB}}$ | 707.3 $\pm 84.6^{\text{aA}}$ | 61.2 $\pm 7.9^{\text{Bb}}$ |
| <i>S. polyrhiza</i> | control | 133.7 $\pm 17.1^{\text{bB}}$ | 14.96 $\pm 1.64^{\text{bA}}$ | <LoD | 7.25 $\pm 1.21^{\text{bA}}$ | 228.0 $\pm 15.9^{\text{aA}}$ | 51.5 $\pm 4.8^{\text{abC}}$ | 2.29 $\pm 0.20^{\text{aA}}$ | 231.1 $\pm 21.5^{\text{aC}}$ | 0.25 $\pm 0.07^{\text{bC}}$ | 1 ±0 | 3.247 $\pm 0.860^{\text{aA}}$ | 174.7 $\pm 36.0^{\text{bB}}$ | 69.0 $\pm 6.4^{\text{Bab}}$ |
| | Cr(VI) | 63.4 $\pm 9.4^{\text{cC}}$ | 1.71 $\pm 1.20^{\text{abA}}$ | 480.4 $\pm 17.1^{\text{c}}$ | 4.19 $\pm 0.86^{\text{cA}}$ | 129.8 $\pm 25.4^{\text{bA}}$ | 46.9 $\pm 2.9^{\text{bC}}$ | 2.13 $\pm 0.19^{\text{aA}}$ | 112.4 $\pm 11.1^{\text{bB}}$ | 0.34 $\pm 0.55.6^{\text{aC}}$ | 3 ±0 | 3.303 $\pm 0.537^{\text{a}}$ | 144.6 $\pm 30.2^{\text{bC}}$ | 66.5 $\pm 4.2^{\text{Cb}}$ |
| | Ni | 263.2 $\pm 13.5^{\text{aB}}$ | 18.09 $\pm 1.12^{\text{aA}}$ | <LoD | 9.73 $\pm 0.54^{\text{aB}}$ | 197.1 $\pm 41.3^{\text{aA}}$ | 54.1 $\pm 2.0^{\text{aB}}$ | 1.50 $\pm 0.05^{\text{bB}}$ | 106.3 $\pm 12.2^{\text{bC}}$ | 0.18 $\pm 0.36^{\text{bC}}$ | 1840 $\pm 46^{\text{A}}$ | 3.257 $\pm 0.647^{\text{aA}}$ | 368.7 $\pm 31.6^{\text{aC}}$ | 73.9 $\pm 2.9^{\text{Aa}}$ |

Table S5 Correlations of the corresponding elements with the principal components

| | PC 1 | PC 2 | PC 3 | PC 4 | PC 5 | PC 6 | PC 7 | PC 8 | PC 9 | PC 10 | PC 11 | PC 12 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| B | 0.6962 | 0.28978 | 0.11911 | 0.52976 | -0.21835 | -0.10033 | 0.13789 | -0.20309 | -0.06863 | -0.011422 | -0.0022718 | 0.11683 |
| Ca | -0.04582 | -0.86588 | -0.16679 | 0.10349 | 0.23275 | 0.26331 | 0.18311 | -0.058085 | -0.024169 | 0.21978 | -0.0025967 | 0.018053 |
| Cr | -0.13652 | 0.7063 | -0.28131 | 0.25069 | 0.36024 | 0.343 | -0.15566 | -0.24056 | -0.077846 | -0.030377 | -0.028748 | -0.056495 |
| Cu | 0.89258 | 0.12543 | 0.2287 | 0.13733 | -0.15772 | 0.16185 | -0.020698 | 0.14979 | -0.12328 | 0.038467 | 0.13374 | -0.088901 |
| Fe | 0.093164 | -0.044247 | 0.85293 | 0.12455 | 0.37803 | -0.036965 | -0.29572 | 0.019651 | 0.074703 | 0.07864 | 0.0015852 | 0.049897 |
| K | -0.36035 | 0.66903 | 0.30329 | 0.39098 | 0.19414 | -0.091247 | 0.26297 | 0.22661 | -0.0033633 | 0.040446 | -0.079205 | -0.057064 |
| Mg | -0.48711 | -0.25724 | -0.12555 | 0.49753 | -0.54707 | 0.25584 | -0.19471 | 0.15224 | 0.076605 | 0.0061193 | -0.03668 | 0.013098 |
| Mn | -0.47232 | 0.43191 | 0.53174 | -0.24855 | -0.178 | 0.37242 | 0.20322 | -0.096992 | 0.13468 | -0.036937 | 0.066066 | 0.029751 |
| Na | -0.55965 | 0.53882 | -0.5114 | 0.12534 | 0.24589 | -0.082388 | -0.03169 | 0.14895 | 0.015454 | 0.041706 | 0.13774 | 0.088489 |
| Ni | 0.82231 | -0.14059 | -0.30161 | 0.21115 | 0.24367 | 0.037054 | 0.057421 | 0.022843 | 0.31474 | -0.063049 | 0.010941 | -0.027617 |
| Sr | -0.23115 | -0.81422 | 0.17018 | 0.21078 | 0.33775 | 0.13809 | 0.076743 | 0.10304 | -0.11579 | -0.21361 | 0.023475 | 0.031461 |
| Zn | 0.7181 | 0.41206 | -0.15616 | -0.35224 | 0.0726 | 0.29343 | -0.0197 | 0.23501 | -0.053053 | -0.0025983 | -0.088664 | 0.09171 |