**Supplement 1.** Results of habitat parameter measurement (mean ± standard deviation (SD), maximum (Max) and minimum (Min) in *Stratiotes aloides* ditches of the Hunte-Weser lowland (Germany).
N: number of observations, presence = presence of *Aeshna viridis* exuviae, Water quality classified by LAWA (1998): I: anthropogenically unpolluted; I–II: very low pollution; II: moderately polluted; II–III: considerably polluted; III: increasingly polluted; III–IV: highly polluted; IV: very highly polluted.

| **Sampled parameter** | **Observations** | **N** | **Mean** | **SD** | **Min.–Max.** | **Water quality** |
| --- | --- | --- | --- | --- | --- | --- |
|  |   |   |   |   |   |   |
| Total coverage of *S. aloides* (%)a | all | 165 | 52.6 | 31.6 | 0–100 |   |
|   | presence | 80 | 75.2 | 22.1 | 4–100 |   |
| Coverage of submerged *S. aloides* stands (%)a | all | 165 | 6 | 11.2 | 0–70 |   |
|   | presence | 80 | 4 | 9.4 | 0–70 |   |
| Coverage of emerged *S. aloides* stands (%)a | all | 165 | 48.5 | 33 | 0–100 |   |
|   | presence | 80 | 72.2 | 23.6 | 1–100 |   |
| Total coverage of aquatic vegetation (%)b | all | 165 | 82.9 | 12.6 | 20–87.5 |   |
|   | presence | 80 | 85.3 | 8.1 | 37.5–87.5 |   |
| Coverage of submerged vegetation (%)b | all | 165 | 31.5 | 29.6 | 0–87.5 |   |
|   | presence | 80 | 19.8 | 24.3 | 0–87.5 |   |
| Coverage of emerged vegetation (%)b | all | 165 | 53.6 | 33.5 | 0–87.5 |   |
|   | presence | 80 | 74.2 | 23.4 | 0–87.5 |   |
| Emerged vegetation height (cm) | all | 165 | 19.6 | 11.5 | 0.1–77.5 |   |
|   | presence | 80 | 21 | 9.2 | 0.1–60.3 |   |
| Sediment thickness (cm) | all | 165 | 64.4 | 39.7 | 0–149.3 |   |
|   | presence | 80 | 66.8 | 38.1 | 5.8–149.3 |   |
| Water depth (cm) | all | 165 | 50.1 | 19.2 | 16.5–126 |   |
|   | presence | 80 | 46.9 | 14.8 | 21.3–105.3 |   |
| Width of the ditches (m) | all | 165 | 2.4 | 1.5 | 1.1–9.5 |   |
|   | presence | 80 | 2.8 | 1.7 | 1.3–9.3 |   |
| Shading (%) | all | 165 | 12 | 17 | 0–85 |   |
|   | presence | 80 | 9 | 15 | 0–70 |   |
| Water temperature in March (°C) | all | 156 | 7.1 | 3.9 | 0.9–18.8 |   |
|   | presence | 78 | 7.6 | 4 | 2.2–18.8 |   |
| Water temperature in August (°C) | all | 165 | 18.3 | 1.7 | 14.3–23.6 |   |
|   | presence | 80 | 18.2 | 1.8 | 14.3–23.6 |   |
| Water temperature in November/December (°C) | all | 165 | 4.1 | 2.3 | 0.3–8.5 |   |
|   | presence | 80 | 4.1 | 2.1 | 1.0–8.5 |   |
| pH c | all | 165 | 7.1 | 0.3 | 6.2–8.6 |   |
|   | presence | 80 | 7.1 | 0.3 | 6.2–8.6 |   |
| Conductivity (μS cm-1) c | all | 165 | 501 | 179 | 197–1027 |   |
|   | presence | 80 | 516 | 209 | 197–1027 |   |
| Oxygen content (mg l-1) c | all | 165 | 7 | 2 | 2–15 |   |
|   | presence | 80 | 7 | 2 | 3–15 | III |
| Oxygen saturation (%)c | all | 165 | 59 | 18 | 15–114 |   |
|   | presence | 80 | 59 | 17 | 29–106 |   |
| Chloride (mg l-1) c | all | 165 | 75.283 | 49.137 | 18.136–314.479 |   |
|   | presence | 80 | 83.315 | 56.768 | 18.759–314.479 | II - III |
| Total hardness c | all | 165 | 9 | 3 | 3–23 |   |
|   | presence | 80 | 9 | 4 | 3–23 |   |
| Calcium (mg l-1) c | all | 165 | 47.367 | 15.895 | 15.396–120.576 |   |
|   | presence | 80 | 46.497 | 17.433 | 15.396–120.576 |   |
| Magnesium (mg l-1) c | all | 165 | 9.462 | 5.866 | 2.388–25.406 |   |
|   | presence | 80 | 9.619 | 6.659 | 2.388–25.406 |   |
| Total nitrogen (mg l-1) c | all | 165 | 2.419 | 1.01 | 1.083–7.353 |   |
|   | presence | 80 | 2.147 | 0.712 | 1.238–5.183 | II |
| Total phosphate (mg l-1) c | all | 165 | 0.106 | 0.044 | 0.038–0.317 |   |
|   | presence | 80 | 0.113 | 0.038 | 0.058–0.273 | II - III |
| Nitrite (mg l-1) c | all | 165 | 0.031 | 0.052 | 0.016–0.44 |   |
|   | presence | 80 | 0.028 | 0.049 | 0.016–0.44 | I - II |
| Sulphate (mg l-1) c | all | 165 | 60.941 | 38.79 | 23.425–369.956 |   |
|   | presence | 80 | 60.904 | 39.472 | 28.246–369.956 | II |
| Ortho-phosphate (mg l-1) c | all | 165 | 0.124 | 0.084 | 0.026–0.605 |   |
|   | presence | 80 | 0.12 | 0.072 | 0.026–0.355 | II |
| Nitrate (mg l-1) c | all | 165 | 4.181 | 1.602 | 1.588–12.377 |   |
|   | presence | 80 | 3.874 | 1.404 | 1.588–10.338 | I - II |
| Ammonium (mg l-1) c | all | 165 | 0.591 | 0.839 | 0.04–4.569 |   |
|   | presence | 80 | 0.278 | 0.468 | 0.049–3.503 | II - III |
| Iron (mg l-1) c | all | 165 | 1.282 | 0.957 | 0.039–4.864 |   |
|   | presence | 80 | 0.98 | 0.805 | 0.039–4.184 |   |

a Measured scale (1% = <5% (1 individual), 2% = <5% (2 to 5 individuals), 4% = <5% (6 to 50 individuals), 10% = 5–15%, 20% = 15–25%, 30% = 25–35%, 40% = 35–45%, 50% = 45–55%, 60% = 55–65%, 70% = 65–75%, 80% = 75–85%, 90% = 85–95%, 100% = 95–100%)

b Measured scale (2.5% = <5%, 8.8% = 5–12.5%, 20.0% = 12.5–25%, 37.5% = 25–50%, 62.5% = 50–75%, 87.5% = 75–100%)

c Mean of measurements from March, August and November/December