Supplementary table 1

**Table S1** – Emergence of insect taxa from different depths of Lake Lunz, Lake Mittersee, and Lake Obersee. n = number of samples over which taxon was found in a sample; Seasonal emergence = range of days over which taxon was found in a sample; Emerged biomass (g m²) = Biomass emerged from 1 m²; Emerged biomass per lake (g) = Biomass emerged from the total lake surface area.

**Table S1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Depth (m) | Taxa order | Identified taxa | n | Seasonal emergence (day) | Emerged biomass (g m²) | Emerged biomass per lake (g) |
| Lake Lunz | 1 | Diptera | Chironomidae indet. | 33 | 117 | 1.9 | 146945.6 |
| 1 | Diptera | Other diptera | 3 | 35 | < 0.01 | 294.5 |
| 1 | Ephemeroptera | Ephemeroptera indet.  | 3 | 111 | 0.01 | 1030.7 |
| 1 | Lepidoptera | Micro-Lepidoptera indet. | 11 | 54 | 0.01 | 368.1 |
| 1 | Lepidoptera | *Microsema* sp. | 9 | 32 | 0.2 | 16343.7 |
| 1 | Plecoptera | Plecoptera indet.  | 1 | 4 | < 0.01 | 73.6 |
| 1 | Trichoptera | *Rhyacophila* sp. | 6 | 111 | 0.4 | 29595.3 |
| 1 | Trichoptera | Other Trichoptera | 3 | 82 | < 0.01 | 147.2 |
| 1 | Strepsiptera | Strepsiptera indet.  | 17 | 83 | 0.1 | 8171.8 |
| 1 | Other indetermined insects | Other insects | 1 | 3 | < 0.01 | 73.6 |
| 3 | Diptera | Chironomidae indet. | 33 | 117 | 1.6 | 41757.6 |
| 3 | Diptera | Other diptera | 1 | 3 | < 0.01 | 52.9 |
| 3 | Diptera | Empididae indet. | 1 | 3 | < 0.01 | 26.4 |
| 3 | Ephemeroptera | Ephemeroptera indet.  | 2 | 17 | 0.02 | 502.1 |
| 3 | Lepidoptera | Micro-Lepidoptera indet. | 9 | 58 | 0.01 | 185.0 |
| 3 | Lepidoptera | *Microsema* sp. | 6 | 24 | 0.09 | 2352.2 |
| 3 | Plecoptera | Plecoptera indet.  | 2 | 80 | 0.01 | 264.3 |
| 3 | Strepsiptera | Strepsiptera indet.  | 1 | 4 | < 0.01 | 0 |
| 3 | Trichoptera | Limnephilidae indet. | 1 | 3 | 0.1 | 2827.9 |
| 3 | Trichoptera | Other Trichoptera | 10 | 76 | 0.1 | 2854.3 |
| 3 | Trichoptera | *Rhyacophila* sp. | 6 | 70 | 0.2 | 5576.5 |
| 5 | Diptera | Chironomidae indet. | 33 | 117 | 1.2 | 50206.3 |
| 5 | Diptera | Other diptera | 2 | 55 | 0.01 | 287.4 |
| 5 | Diptera | Empididae indet. | 2 | 7 | < 0.01 | 82.1 |
| 5 | Ephemeroptera | Ephemeroptera indet.  | 10 | 56 | 0.06 | 2381 |
| 5 | Lepidoptera | Micro-Lepidoptera indet. | 3 | 14 | < 0.01 | 164.2 |
| 5 | Lepidoptera | *Microsema* sp. | 7 | 24 | 0.07 | 2873.6 |
| 5 | Plecoptera | Plecoptera indet.  | 3 | 106 | 0.01 | 205.3 |
| 5 | Trichoptera | Other Trichoptera | 9 | 83 | 0.02 | 985.2 |
| 5 | Trichoptera | *Rhyacophila* sp. | 6 | 73 | 0.2 | 7799.8 |
| 5 | Other indetermined insects | Other insects | 2 | 104 | 0.02 | 656.8 |
| 10 | Diptera | Chironomidae indet. | 32 | 114 | 0.71 | 39399.4 |
| 10 | Diptera | Other diptera | 1 | 4 | < 0.01 | 0 |
| 10 | Diptera | Empididae indet. | 1 | 3 | < 0.01 | 166.0 |
| 10 | Ephemeroptera | Ephemeroptera indet.  | 10 | 84 | 0.02 | 1106.7 |
| 10 | Lepidoptera | Micro-Lepidoptera indet. | 3 | 60 | < 0.01 | 55.3 |
| 10 | Lepidoptera | *Microsema* sp. | 8 | 27 | 0.1 | 7525.7 |
| 10 | Plecoptera | Plecoptera indet.  | 3 | 34 | < 0.01 | 332. |
| 10 | Strepsiptera | Strepsiptera indet.  | 2 | 42 | < 0.01 | 55.38 |
| 10 | Trichoptera | Other Trichoptera | 6 | 75 | 0.06 | 3375.5 |
| 10 | Trichoptera | *Rhyacophila* sp. | 8 | 111 | 0.2 | 12616.7 |
| 10 | Other indetermined insects | Other insects | 2 | 111 | < 0.01 | 110.7 |
| 20 | Diptera | Chironomidae indet. | 30 | 114 | 0.2 | 18067.23 |
| 20 | Diptera | Other diptera | 3 | 35 | < 0.01 | 106.3 |
| 20 | Diptera | Empididae indet. | 3 | 25 | < 0.01 | 212.6 |
| 20 | Ephemeroptera | Ephemeroptera indet.  | 3 | 55 | < 0.01 | 743.9 |
| 20 | Lepidoptera | Micro-Lepidoptera indet. | 2 | 16 | 0.0 | 0 |
| 20 | Lepidoptera | *Microsema* sp. | 6 | 21 | 0.01 | 1275.3 |
| 20 | Plecoptera | Plecoptera indet.  | 5 | 107 | 0.02 | 1594.2 |
| 20 | Strepsiptera | Strepsiptera indet.  | 7 | 42 | < 0.01 | 318.8 |
| 20 | Trichoptera | Other Trichoptera | 3 | 52 | 0.04 | 3719.7 |
| 20 | Trichoptera | *Rhyacophila* sp. | 2 | 35 | 0.04 | 4888.8 |
| 20 | Other indetermined insects | Other insects | 4 | 106 | < 0.01 | 318.8 |
| 33 | Diptera | Chironomidae indet. | 27 | 107 | 0.12 | 16830.6 |
| 33 | Diptera | Empididae indet. | 5 | 32 | 0.01 | 1555.8 |
| 33 | Ephemeroptera | Ephemeroptera indet.  | 7 | 107 | 0.02 | 2262.9 |
| 33 | Lepidoptera | Micro-Lepidoptera indet. | 2 | 40 | 0.0 | 0 |
| 33 | Lepidoptera | *Microsema* sp. | 2 | 6 | < 0.01 | 282.9 |
| 33 | Strepsiptera | Strepsiptera indet.  | 5 | 49 | < 0.01 | 141.4 |
| 33 | Trichoptera | Other Trichoptera | 3 | 52 | 0.03 | 3535.8 |
| 33 | Trichoptera | *Rhyacophila* sp. | 1 | 3 | 0.03 | 3677.3 |
| 33 | Other indetermined insects | Other insects | 2 | 37 | 0.09 | 12304.7 |
| Lake Mittersee | 1 | Diptera | Chironomidae indet. | 24 | 104 | 3.0 | 11751 |
| 1 | Lepidoptera | *Microsema* sp. | 2 | 8 | 0.01 | 43.4 |
| 1 | Plecoptera | Plecoptera indet.  | 1 | 7 | < 0.01 | 15.8 |
| 1 | Strepsiptera | Strepsiptera indet.  | 1 | 8 | 0.0 | 0 |
| 1 | Trichoptera | Limnephilidae indet. | 1 | 7 | 0.08 | 319.5 |
| 1 | Trichoptera | Other Trichoptera | 2 | 36 | 0.02 | 86.8 |
| 1 | Other indetermined insects | Other insects | 4 | 54 | 0.15 | 595.6 |
| 3 | Diptera | Chironomidae indet. | 12 | 104 | 2.3 | 1978.9 |
| 3 | Ephemeroptera | Ephemeroptera indet.  | 1 | 10 | < 0.01 | 1.7 |
| 3 | Lepidoptera | *Microsema* sp. | 1 | 8 | 0.01 | 8.4 |
| 3 | Plecoptera | Plecoptera indet.  | 4 | 68 | 0.01 | 11.8 |
| 3 | Trichoptera | *Agrypnia* sp. | 1 | 7 | 0.08 | 64.9 |
| 3 | Trichoptera | Limnephilidae indet. | 1 | 21 | 0.1 | 87.6 |
| 3 | Trichoptera | Phryganaeidae indet. | 1 | 7 | 0.08 | 69.1 |
| 3 | Trichoptera | *Rhyacophila* sp. | 1 | 7 | 0.06 | 53.1 |
| Lake Obersee | 1 | Diptera | *Chaoborus* sp. | 1 | 14 | < 0.01 | 89.3 |
| 1 | Diptera | Chironomidae indet. | 11 | 90 | 0.7 | 64574.3 |
| 1 | Diptera | Other diptera | 3 | 19 | 0.01 | 535.9 |
| 1 | Ephemeroptera | Ephemeroptera indet.  | 10 | 104 | 0.9 | 83330.3 |
| 1 | Lepidoptera | Micro-Lepidoptera indet. | 1 | 8 | 0.2 | 1697 |
| 1 | Odonata | Odonata indet. | 9 | 82 | 1.1 | 102443.6 |
| 1 | Strepsiptera | Strepsiptera indet.  | 3 | 29 | 0.01 | 446.6 |
| 1 | Trichoptera | *Agrypnia* sp. | 2 | 57 | 0.3 | 23043.1 |
| 1 | Trichoptera | Other Trichoptera | 1 | 8 | 0.1 | 9735.3 |
| 1 | Trichoptera | Phryganaeidae indet. | 1 | 7 | 0.02 | 1964.9 |
| 1 | Other indetermined insects | Other insects | 2 | 47 | 0.01 | 625.2 |
| 3 | Diptera | Chironomidae indet. | 9 | 90 | 0.7 | 19314.3 |
| 3 | Ephemeroptera | Ephemeroptera indet.  | 4 | 65 | 0.1 | 2722.2 |
| 3 | Odonata | Odonata indet. | 3 | 39 | 0.1 | 2696.3 |
| 3 | Trichoptera | *Agrypnia* sp. | 2 | 18 | 0.1 | 2877.7 |
| 3 | Trichoptera | Other Trichoptera | 1 | 14 | 0.02 | 440.7 |
| 3 | Trichoptera | Phryganaeidae indet. | 1 | 7 | 0.07 | 1892.6 |
| 3 | Trichoptera | *Rhyacophila* sp. | 3 | 43 | 0.18 | 4692.5 |
| 5 | Diptera | Chironomidae indet. | 10 | 90 | 0.21 | 2869.5 |
| 5 | Diptera | Other diptera | 2 | 12 | < 0.01 | 41.8 |
| 5 | Ephemeroptera | Ephemeroptera indet.  | 1 | 21 | 0.1 | 1434.8 |
| 5 | Lepidoptera | *Microsema* sp. | 1 | 8 | < 0.01 | 13.9 |
| 5 | Odonata | Odonata indet. | 3 | 36 | 0.15 | 2145.2 |
| 5 | Strepsiptera | Strepsiptera indet.  | 1 | 8 | 0.0 | 0 |
| 5 | Trichoptera | *Agrypnia* sp. | 3 | 43 | 0.25 | 3468.5 |
| 14 | Diptera | Chironomidae indet. | 7 | 90 | 0.02 | 20.8 |
| 14 | Diptera | Other diptera | 2 | 29 | < 0.01 | 1. |
| 14 | Lepidoptera | *Microsema* sp. | 1 | 8 | < 0.01 | 1. |
| 14 | Odonata | Odonata indet. | 1 | 7 | 0.07 | 79.8 |
| 14 | Strepsiptera | Strepsiptera indet.  | 1 | 7 | 0.03 | 37.2 |
| 14 | Trichoptera | *Agrypnia* sp. | 2 | 18 | 0.19 | 206.6 |
| 14 | Trichoptera | Limnephilidae indet. | 1 | 7 | 0.05 | 49.2 |
| 14 | Other indetermined insects | Other insects | 1 | 8 | 0.02 | 18.6 |