**Analysis of Microbial Diversity and Functions in Sediments and Overlying Water of Shiliu River**

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Supplementary Table 1-4

**Supplementary Table 1** Statistics of the sequencing data processing results of bacterial samples from sediments (B1, B2, B3) and overlying water (D1, D2, D3).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group | Sample | SeqNum | BaseNum | MeanLen | MinLen | MaxLen |
| B | B1 | 52992 | 22159775 | 418.17 | 352 | 441 |
| B | B2 | 59213 | 24698844 | 417.12 | 350 | 464 |
| B | B3 | 58570 | 24362868 | 415.96 | 353 | 469 |
| D | D1 | 66646 | 27784248 | 416.89 | 350 | 472 |
| D | D2 | 51638 | 21473986 | 415.86 | 352 | 470 |
| D | D3 | 63295 | 26242776 | 414.61 | 350 | 443 |

**Supplementary** Table 2 Statistics of the sequencing data processing results of fungal samples from sediments (B1, B2, B3) and overlying water (D1, D2, D3).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group | Sample | SeqNum | BaseNum | MeanLen | MinLen | MaxLen |
| B | B1 | 192571 | 45304369 | 235.26 | 105 | 451 |
| B | B2 | 122682 | 28249737 | 230.27 | 105 | 450 |
| B | B3 | 160558 | 37191308 | 231.64 | 102 | 450 |
| D | D1 | 107075 | 26007021 | 242.89 | 108 | 451 |
| D | D2 | 147133 | 34958026 | 237.59 | 102 | 450 |
| D | D3 | 131222 | 29534446 | 225.07 | 105 | 447 |

**Supplementary Table 3** Statistical analysis of the Alpha diversity index of bacteria in sediment (B1, B2, B3) and overlying water (D1, D2, D3) samples

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sample | Shannon | Chao1 | Ace | Simpson | Shannoneven | Coverage |
| B1 | 6.510 | 2828.844 | 2939.549 | 0.005 | 0.827  | 0.987  |
| B2 | 6.600 | 3060.748 | 3188.698  | 0.004 | 0.830 | 0.986  |
| B3 | 6.487 | 2967.011 | 3076.203  | 0.005 | 0.820  | 0.986  |
| D1 | 5.001 | 1239.679 | 1280.152 | 0.015 | 0.712 | 0.996  |
| D2 | 4.738 | 1631.004 | 1754.111  | 0.023 | 0.661  | 0.990  |
| D3 | 4.548 | 1635.618 | 1774.890  | 0.030 | 0.632  | 0.991  |

**Supplementary Table 4** Statistical analysis of the Alpha diversity index of fungal in sediment (B1, B2, B3) and overlying water (D1, D2, D3) samples

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sample | Shannon | Chao1 | Ace | Simpson | Shannoneven | Coverage |
| B1 | 4.731  | 947.439  | 918.602  | 0.026  | 0.699  | 0.999  |
| B2 | 4.821  | 1031.204  | 1037.732  | 0.024  | 0.699  | 0.999  |
| B3 | 4.294  | 930.000  | 928.520  | 0.053  | 0.632  | 0.999  |
| D1 | 4.140  | 533.071  | 637.249  | 0.040  | 0.698  | 0.994  |
| D2 | 3.563  | 572.706  | 565.621  | 0.078  | 0.583  | 0.998  |
| D3 | 2.657  | 243.955  | 242.182  | 0.142  | 0.496  | 0.999  |