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

Yazi Li1, Shuhong Zhang1, Yumei Guo2, Ke Xu1, Xiqing Zhang3, Mengfei Pan3, Qiaoping Sun4, Yanfang Zhang4, Yongshan Fan1\*

1. Department of Life Sciences, Hebei Key Laboratory of Plant Biotechnology Research and Application, Tangshan Normal University, Tangshan, Hebei, China.

2. Institute for Microbiological Examination, Shijiazhuang Center for Disease Control and Prevention, Shijiazhuang, Hebei, China.

3. College of Life Sciences, Agricultural University of Hebei, Baoding, Hebei, China.

4. Hebei Green Dream Environmental Science & Technology Co., Ltd, Tangshan, Hebei, China

\*Corresponding Author:

Yongshan Fan1

Tangshan, Hebei 063000, China

Email address: [lyz19920105@163.com](mailto:lyz19920105@163.com)

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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 |