

Table S1. Seasonal distribution of genus and species of diatoms in Danjiangkou Reservoir.

| Number | Genus | Species | spring | summer | autumn | winter |
|--------|---------------------------------|-------------------------------------|--------|--------|--------|--------|
| 1 | g__Acanthoceras | s__Acanthoceras_sp._6vii09-1A | + | + | + | + |
| 2 | g__Achnanthidium | s__Achnanthidium_catenatum | + | + | | |
| | | s__Achnanthidium_pyrenaicum | + | + | | |
| | | s__Achnanthidium_daonense | + | | | |
| 3 | g__Actinocyclus_f_Hemicyclaceae | s__Actinocyclus_actinochilus | + | | + | |
| 4 | g__Amphora | s__Amphora_coffeiformis | | + | + | |
| 5 | g__Asterionella | s__Asterionella_formosa | + | + | + | |
| 6 | g__Aulacoseira | s__Aulacoseira_granulata | + | + | + | + |
| | | s__Aulacoseira_subarctica | | | | + |
| 7 | g__Caloneis | s__Caloneis_fontinalis | | | + | |
| | | s__Caloneis_amphisbaena | | | + | |
| 8 | g__Chaetoceros | s__Chaetoceros_tenuissimus | | | + | |
| 9 | g__Cocconeis | s__Cocconeis_placentula | + | + | | + |
| | | s__Cocconeis_pediculus | + | | | + |
| 10 | g__Conticriba | s__Conticriba_weissflogiopsis | | | + | |
| 11 | g__Craticula | s__Craticula_cf._cuspidata_KEL-2015 | + | | + | |
| | | s__Craticula_accomoda | | | + | |
| 12 | g__Cyclotella | s__Cyclotella_meneghiniana | + | + | | + |
| | | s__Cyclotella_cf._ocellata | + | | | |
| | | s__Cyclotella_cryptica | + | | | |
| 13 | g__Cylindrotheca | s__Cylindrotheca_gracilis | + | | | |
| | | s__Cylindrotheca_closterium | | | + | |
| 14 | g__Cymatopleura | s__Cymatopleura_solea | | | + | |
| 15 | g__Cymbella | s__Cymbella_affinis | + | + | | |
| | | s__Cymbella_heterogibbosa | + | + | + | |
| 16 | g__Cymbopleura | s__Cymbopleura_naviculiformis | | | | + |
| 17 | g__Dipioneis | s__Dipioneis_sp. | + | | | + |
| 18 | g__Discostella | s__Discostella_woltereckii | + | + | + | + |
| | | s__Discostella_nipponica | + | + | + | + |
| | | s__Discostella_sp._HYK0210-A2 | | | | |
| 19 | g__Encyonema | s__Encyonema_silesacum | | + | | + |
| 20 | g__Encyonopsis | s__Encyonopsis_sp._TN-2014 | + | + | + | |
| 21 | g__Entomoneis | s__Entomoneis_paludosa | + | | | |
| 22 | g__Epithemia | s__Epithemia_contorta | | + | + | |
| 23 | g__Fistulifera | s__Fistulifera_saprophiila | | + | | |
| 24 | g__Fragilaria | s__Fragilaria_nanana | + | | + | |
| | | s__Fragilaria_bidens | + | | + | |
| | | s__Fragilaria_famelica | + | | | |
| | | s__Fragilaria_sp._AT-124.05b | + | | | |
| | | s__Fragilaria_crotonensis | | + | | |
| | | s__Fragilaria_perminuta | | | + | |

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|----|--------------------------------|---------------------------------|---|---|---|---|
| 25 | g__Fragilariopsis | | | | | |
| 26 | g__Gomphonema | s__Fragilariopsis_cylindrus | | + | | |
| 27 | | s__Gomphonema_angustum | + | + | | + |
| 28 | | s__Gomphonema_parvulum | + | + | + | |
| 29 | g__Grammatophora | s__Grammatophora_sp._B_LG-2014 | | | | + |
| 30 | g__Gyrosigma | s__Grammatophora_limosum | | + | + | |
| 31 | g__Halamphora | s__Halamphora_catenufafalsa | + | | | |
| 32 | g__Hantzschia | s__Halamphora_montana | | + | + | |
| 33 | g__Licmophora | s__Hantzschia_sp._LFS-2014 | | + | | |
| 34 | g__Melosira | s__Hantzschia_amphioxys | | | | + |
| 35 | g__Navicula | s__Licmophora_flabellata | | | | + |
| 36 | | s__Melosira_varians | + | + | + | + |
| 37 | | s__Navicula_sp. | + | + | + | |
| 38 | | s__Navicula_cari | + | | | |
| 39 | | s__Navicula_cincta | | + | + | |
| 40 | | s__Navicula_sp._AT-201Gel01 | + | + | + | |
| 41 | | s__Navicula_cryptocephala | | | + | + |
| 42 | g__Nitzschia_f__Bacillariaceae | s__Nitzschia_linearis | | + | | |
| 43 | | s__Nitzschia_cf._pusilla | + | | | + |
| 44 | | s__Nitzschia_supralitorea | + | + | + | |
| 45 | | s__Nitzschia_dubiiiformis | + | | | |
| 46 | | s__Nitzschia_palea | + | + | + | |
| 47 | | s__Nitzschia_draeillensis | + | | | |
| 48 | | s__Nitzschia_amphibia | | | | + |
| 49 | | s__Nitzschia_acidoclinata | | | | + |
| 50 | | s__Nitzschia_bizertensis | | | | + |
| 51 | | s__Nitzschia_pusilla | | | | + |
| 52 | | s__Nitzschia_dissipata | | | | + |
| 53 | g__Nupela | | | | | |
| 54 | g__Pauliella | s__Nupela_sp._NA-2016a | | + | | |
| 55 | g__Pinnularia | s__Pauliella_taeniata | | + | | |
| 56 | g__Pleurosigma | s__Pinnularia_sp._NE-L29 | | + | | |
| 57 | g__Prestauroneis | s__Pinnularia_sp._NE-L26 | | | + | |
| 58 | g__Sellaphora | s__Pleurosigma_intermedium | | | | + |
| 59 | g__Skeletonema | s__Prestauroneis_integra | + | + | | + |
| 60 | | g__Pseudo-nitzschia | | | | |
| 61 | | s__Pseudo-nitzschia_fraudulenta | | | | + |
| 62 | g__Stephanodiscus | s__Sellaphora_seminulum | | | | + |
| 63 | | s__Sellaphora_pupula | | | | |
| 64 | g__Surirella | s__Skeletonema_grevillei | | + | | |
| 65 | | s__Skeletonema_potamos | + | | | + |
| 66 | | s__Skeletonema_costatum | + | | + | + |
| 67 | | s__Stephanodiscus_cf._akanensis | | + | | + |
| 68 | | s__Stephanodiscus_suzukii | | | | + |
| 69 | g__Synedra | s__Surirella_sp. | + | + | | |
| 70 | | s__Surirella_angusta | | | | + |
| 71 | | s__Surirella_biseriata | | | | + |
| 72 | | s__Surirella_sp._heteropolar | | | | + |
| 73 | g__Tabularia | s__Synedra_ulna | | + | + | |
| 74 | | s__Tabularia_fasciculata | | | | + |

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|----|--------------------------------------|--------------------------------------|---|---|---|---|
| 47 | g__Thalassiosira | | | | | |
| | | s__Thalassiosira_weissflogii | + | | | |
| | | s__Thalassiosira_gessneri | | | + | |
| 48 | g__unclassified_c__Bacillariophyceae | | | | | |
| | | s__uncultured_Bacillariophyceae | + | + | + | + |
| | | s__Bacillariophyceae_sp_Ys-2016a | | | + | + |
| 49 | g__unclassified_c__Mediophyceae | | | | + | + |
| | | s__uncultured_Mediophyceae | | | + | + |
| 50 | g__unclassified_p__Bacillariophyta | | | | | |
| | | s__uncultured_diatom | + | + | + | + |
| | | s__Peridiniopsis_jiulongensis_diatom | + | | + | + |
| | | _endosymbiont | | | | |
| 51 | g__Urosolenia | | | | | |
| | | s__Urosolenia_eriensis | + | + | | |