

Central Davis Sewer District Algal ID and Enumeration Report

Prepared: July 16, 2019

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Samples: 2 (Collected on 6/27/19)

1. FB1
2. FB4

Sample 1: FB1

Total cell numbers in the FB1 sample collected on 6/27/19 were 9,271 cells/mL. Green algae (Chlorophyta; 3,253 cells/mL) were the most abundant algal group in the sample accounting for 35.1% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 343 cells/mL), cryptophytes (Cryptophyta; 1,728 cells/mL), blue-green algae (Cyanobacteria; 1,906 cells/mL) euglenophytes (Euglenophyta; 31 cells/mL) and microflagellates (Miscellaneous; 2,011 cells/mL). The most abundant algae in the sample were microflagellates (2,011 cells/mL; Fig. 1), a small cryptophyte species (1,728 cells/mL; Fig. 2), the filamentous cyanophyte *Pseudanabaena* sp. (1,382 cells/mL; Fig. 3) and small spherical chlorophyte unicells (1,319 cells/mL; Fig. 4). A total of 33 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 1,472 cells/mL (15.9% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (1,382 cells/mL), *Phormidium* sp. (77 cells/mL; Fig. 5) and *Phormidium* sp. (13 cells/mL; Fig. 6).

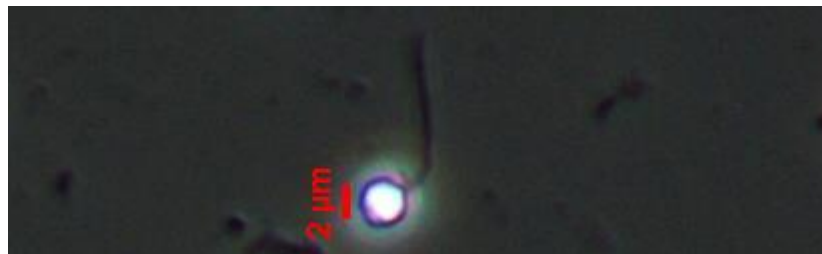


Fig. 1 microflagellate sp. 400X (scale bar = 2 μ m)

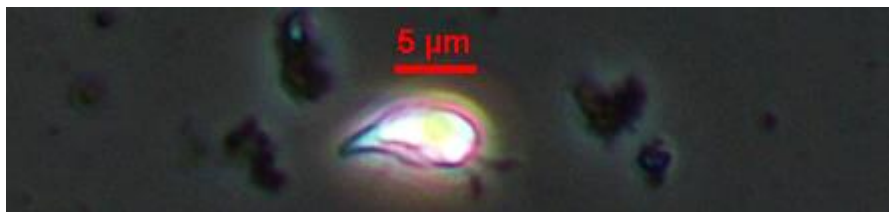


Fig. 2 cryptophyte sp. 400X (scale bar = 5 μ m)

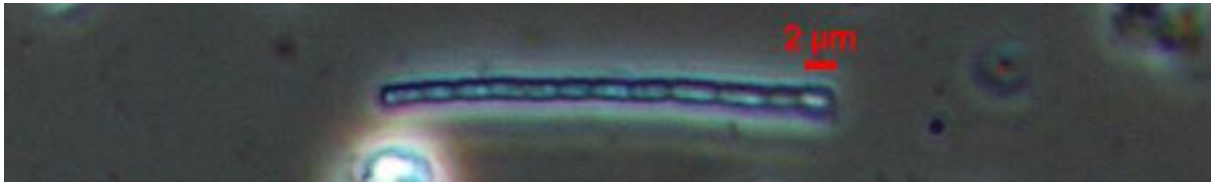


Fig. 3 *Pseudanabaena* sp. 400X (scale bar = 2µm)



Fig. 4 chlorophyte unicell sp. 400X (scale bar = 2µm)



Fig. 5 *Phormidium* sp. 400X (scale bar = 5µm)

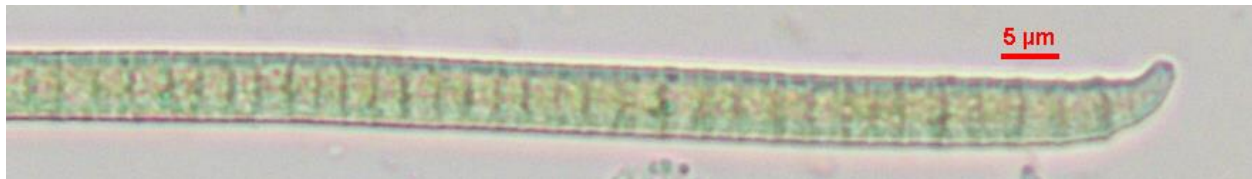


Fig. 6 *Phormidium* sp. 400X (scale bar = 5µm)

Sample 2: FB4

Total cell numbers in the FB4 sample collected on 6/27/19 were 86,019 cells/mL. Green algae (Chlorophyta; 77,491 cells/mL) were the dominant algal group in the sample accounting for 90.1% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 517 cells/mL), cryptophytes (Cryptophyta; 157 cells/mL), blue-green algae (Cyanobacteria; 7,383 cells/mL), microflagellates (Miscellaneous; 314 cells/mL) and yellow-green algae (Xanthophyceae; 157 cells/mL). The most abundant alga in the sample was the colonial chlorophyte *Pseudopediastrum boryanum* (24,347 cells/mL; Fig. 7). A total of 34 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 628 cells/mL (0.7% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (628 cells/mL; Fig. 8).

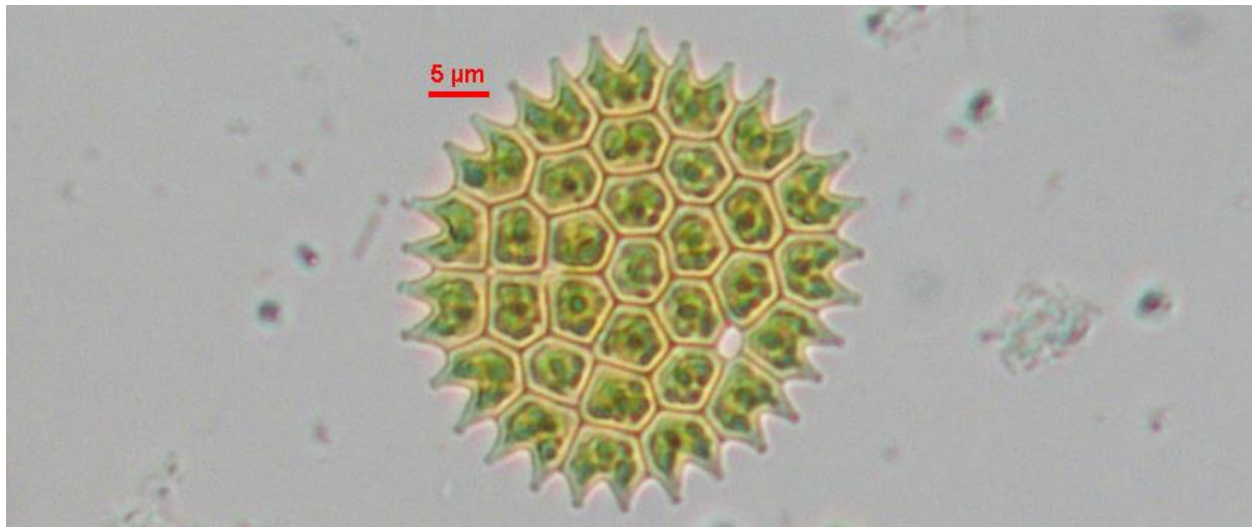


Fig. 7 *Pseudopediastrum boryanum* 400X (scale bar = 5μm)

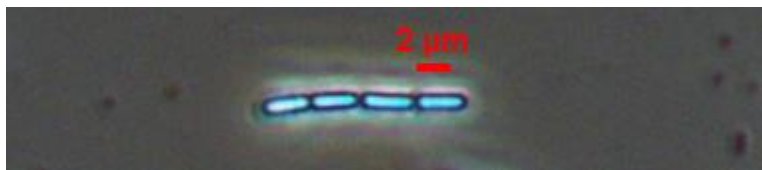


Fig. 8 *Pseudanabaena* sp. 400X (scale bar = 2μm)