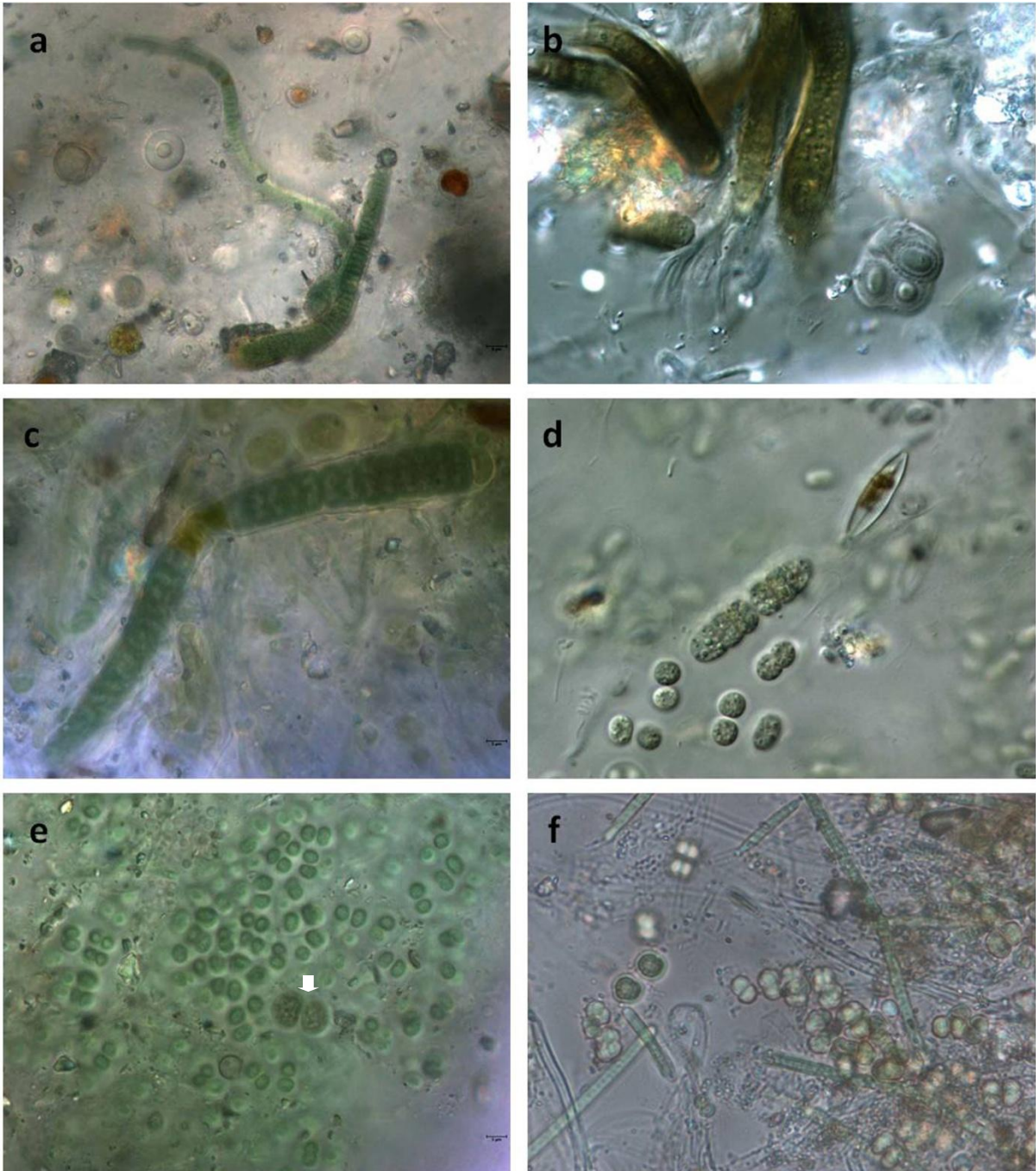
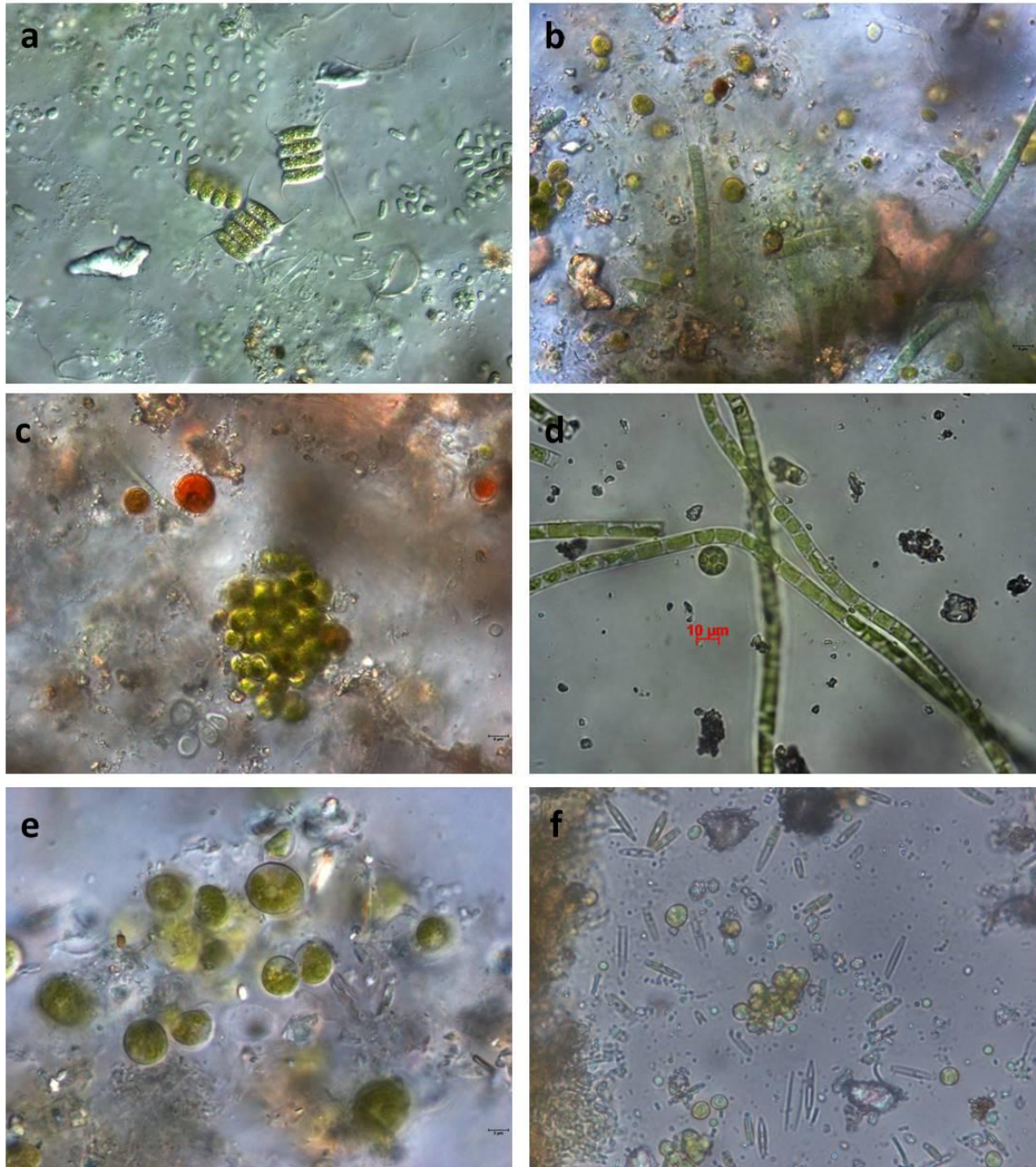


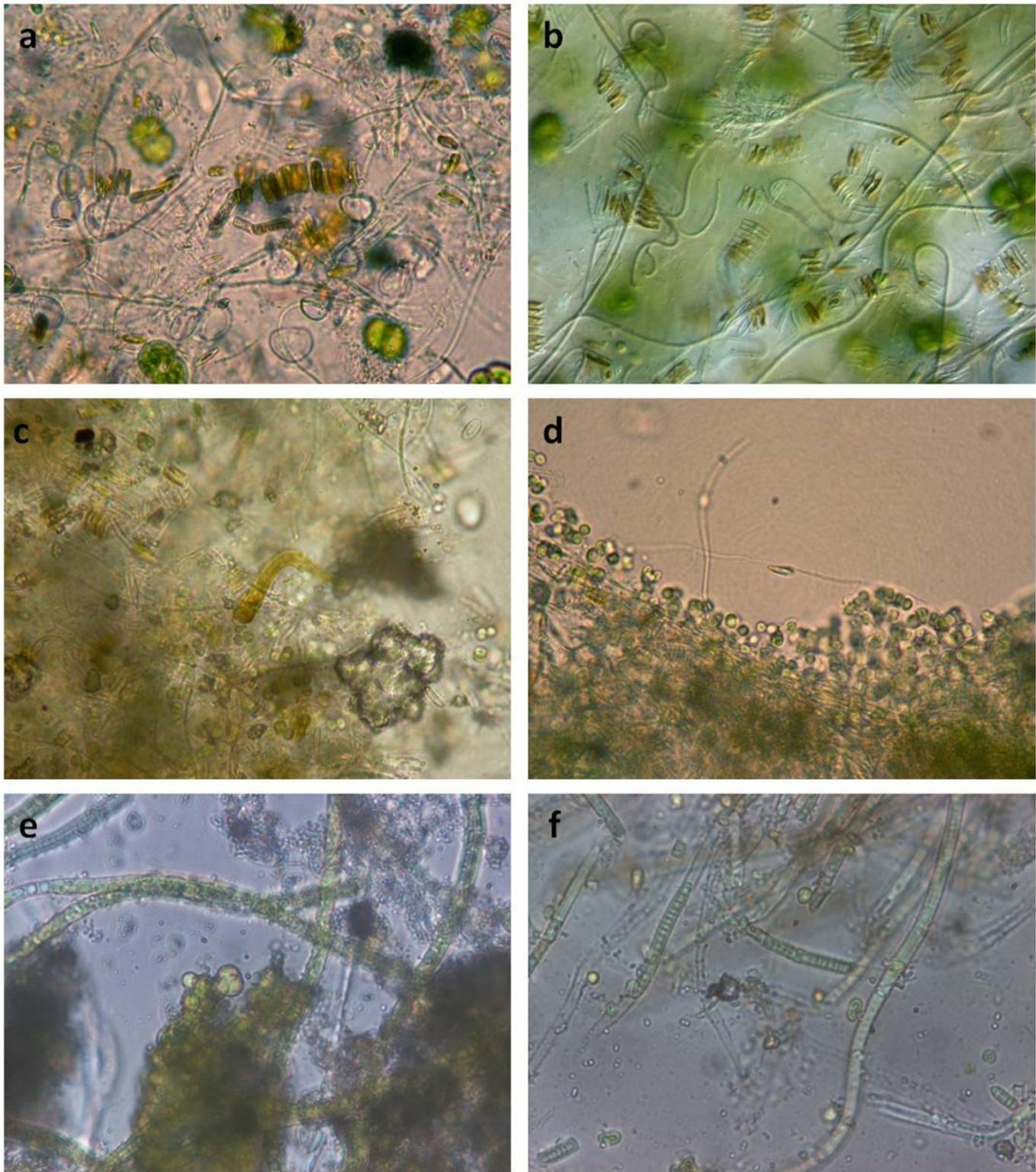
**Figure S1.** Microscopic observations of different samples taken from Sultana Fountain (a-d) and North “guitar” fountain of the Court of the Myrtles (e-f), both in the Alhambra complex, Spain. Different phototrophic genera (belonging to green algae and cyanobacteria) were observed in the same community: *Apatococcus* sp. and *Phormidium* sp. (a); *Cosmarium* sp. and *Apatococcus* sp. (b); *Phormidium* sp., *Achnantes* sp. and a green unicellular alga (c); *Phormidium* sp. and *Apatococcus* sp. (d, f); *Phormidium* sp., *Apatococcus* sp. and *Chroococciopsis* sp. (e).



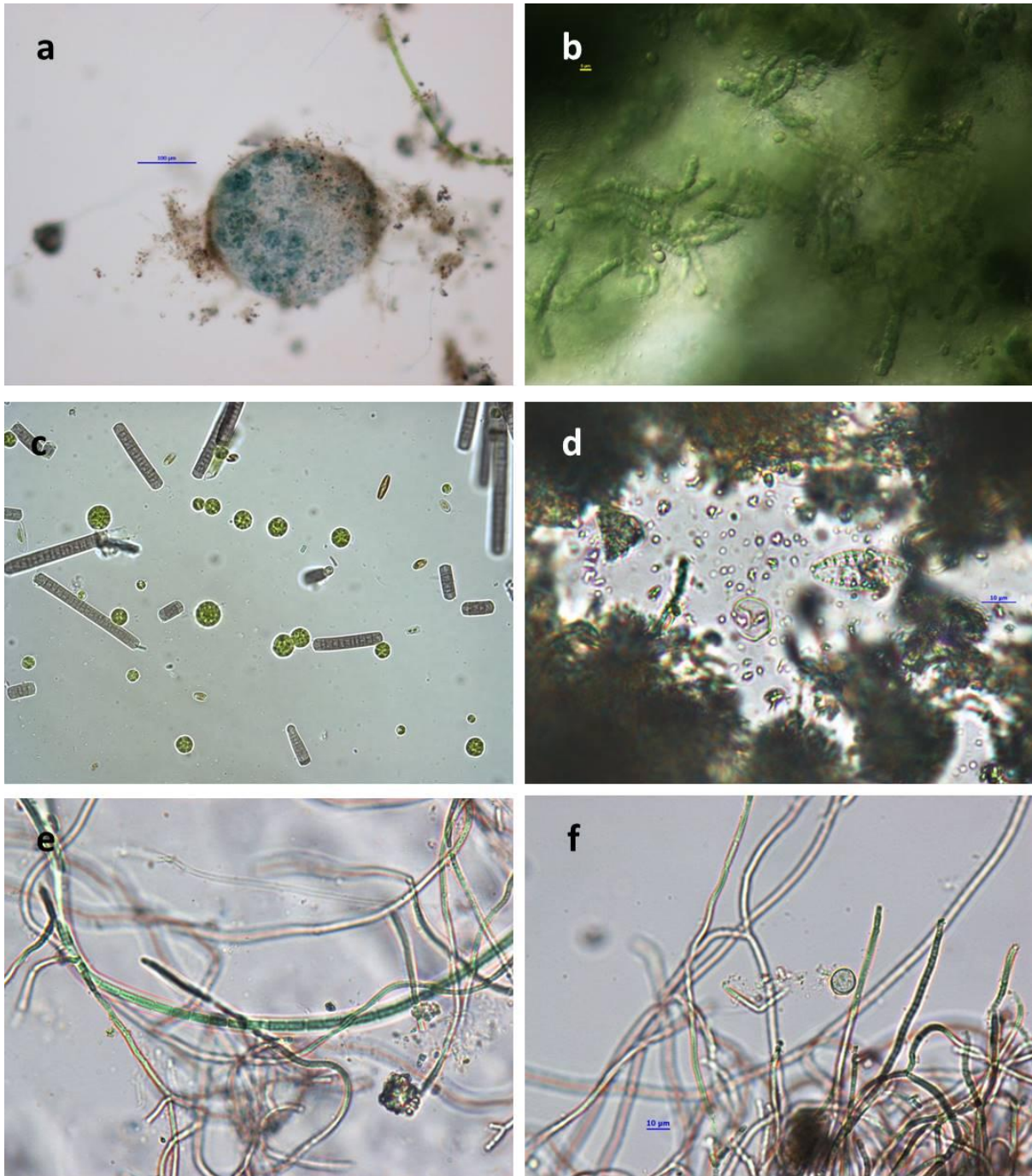
**Figure S2.** Microscopic observations of different samples taken from Sultana Fountain in the Alhambra complex, Spain (a, c, e), Villa la Pietra Fountain from Florence (b, d) and the Lions Fountain in the Alhambra complex, Spain (f), in which different phototrophic genera (belonging to green algae, cyanobacteria and diatoms) were observed in the same community: *Calothrix* sp. and green algae (a); *Calothrix* sp. and *Gloeocapsa* sp. (b); *Calothrix* sp. and other unidentified phototrophs (c); *Borzia* sp. and *Achnantes* sp. (d); *Chroococcus* sp. (see the arrow) and *Gloeocapsa* sp. (e); *Cyanosarcina* sp. and *Phormidium* sp. (f).



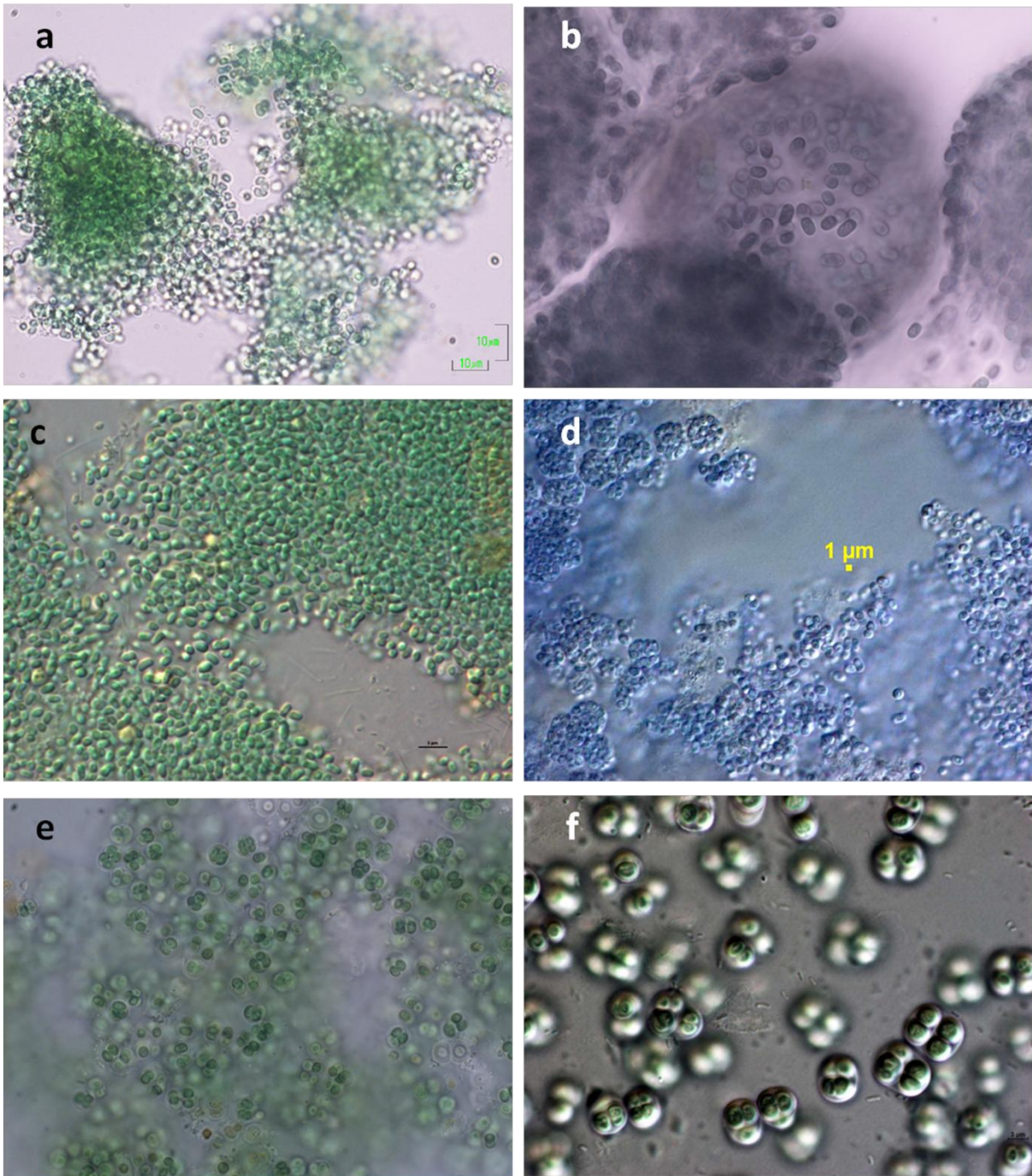
**Figure S3.** Microscopic observations of different samples taken from Villa la Pietra Fountain from Florence (a) and from different fountains from the Alhambra complex, Spain (b-f), in which different phototrophic genera (belonging to green algae, cyanobacteria and diatoms) were observed in the same community: *Scenedesmus* sp. and *Aphanothece* sp. (a); *Phormidium* sp. and a green alga (b); green unicellular algae and a filamentous cyanobacteria (c); *Ulothrix* sp. and *Chlorella* sp. (d); *Chlorella* sp. (e); *Bracteacoccus* sp. and *Navicula* sp. (f).



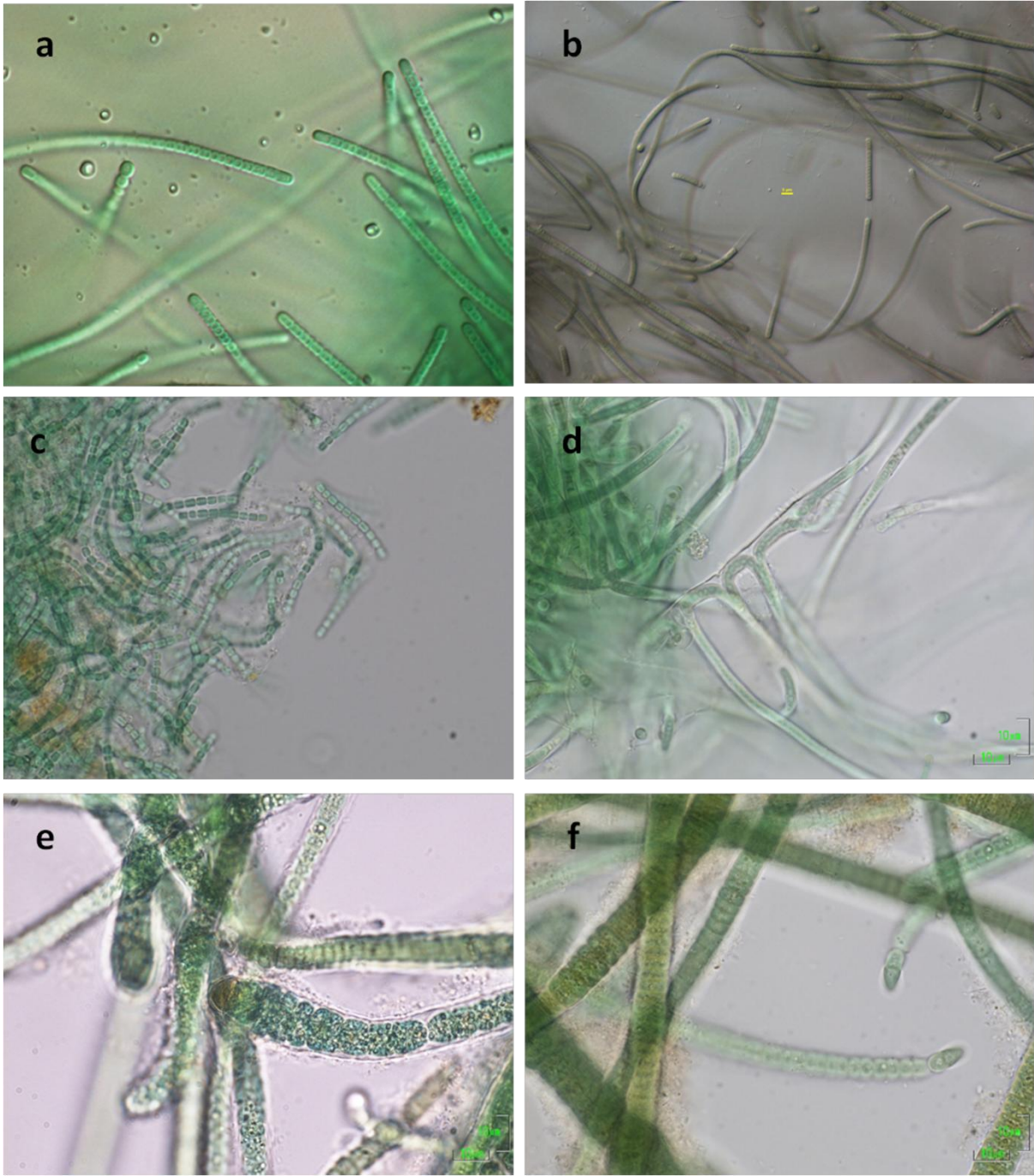
**Figure S4.** Microscopic observations of different samples taken from Tacca Fountain from Florence (a-d) and from two fountains from the Alhambra complex in Spain: Lindaraja fountain (e) and "Guitar" fountain of the Ladies Tower (f). Different phototrophic genera (belonging to green algae, cyanobacteria and diatoms) were observed in the same community: *Achnantes* sp., *Cosmarium* sp. and filamentous cyanobacteria (a, b); *Calothrix* sp., diatoms and round shaped cyanobacteria (c); *Synechocystis* sp., filamentous cyanobacteria and diatoms (d); *Klebsormidium* sp. and a round green alga (e); *Phormidium* sp. and *Pleurastrum* sp. (f).



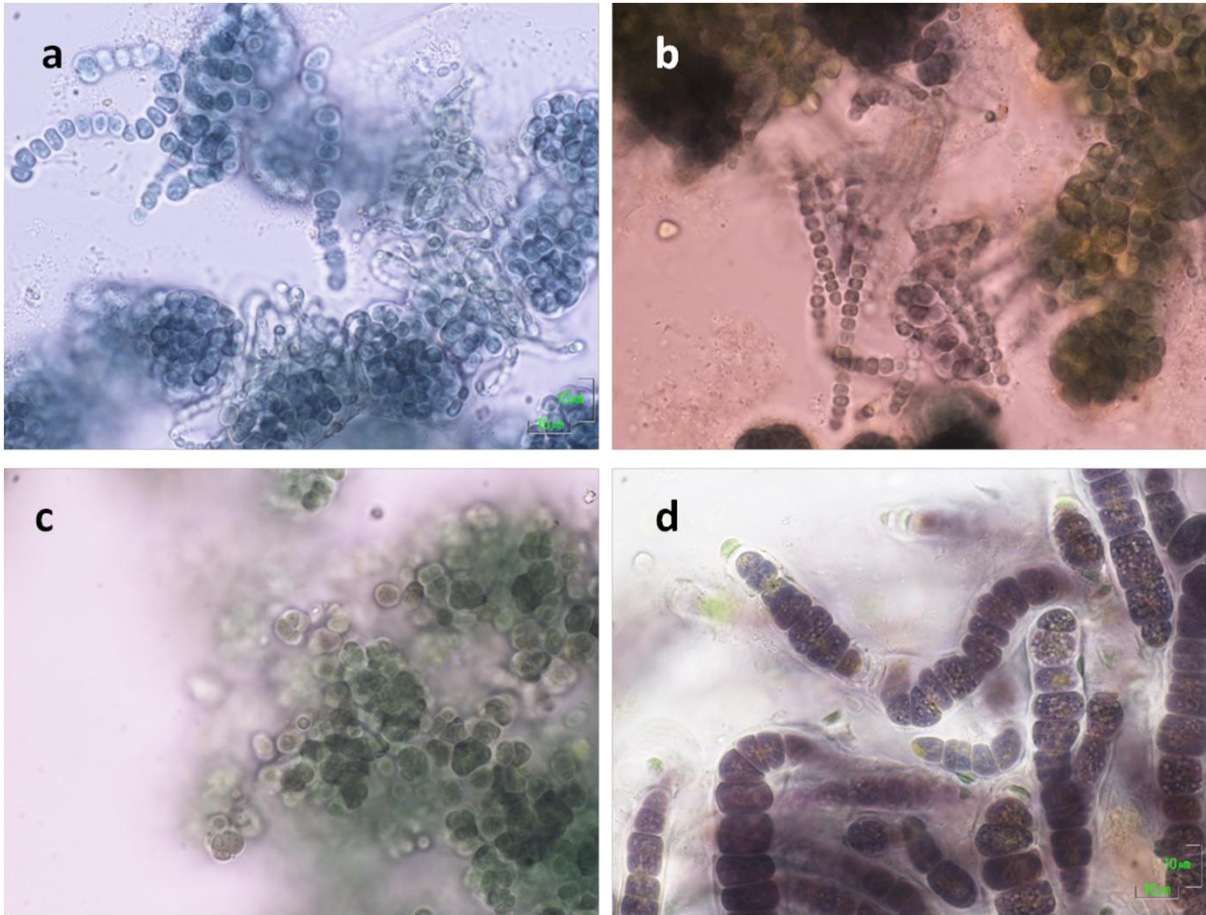
**Figure S5.** Microscopic observations of different samples taken from different fountains from the Alhambra complex, Spain (a-c) and from thermal waters of Civil Agorà in Hierapolis (d-f, reproduced with permission) in which different phototrophic genera were observed in the same community: *Nostoc* sp. colony (a); detail of a *Nostoc* sp. (b); *Lyngbya* sp., *Chlorella* sp. and diatoms (c); *Surirella* sp. (d); *Pseudophormidium* sp. and *Leptolyngbya* sp. (e); *Leptolyngbya* sp. and a green unicellular alga (f).



**Figure S6.** Microscopic observations of different isolated species from monumental fountains: *Aphanocapsa* (a), *Aphanothece* (b), *Synechococcus* (c), *Gloeobacter* (d), *Chroococcus* (e), and *Gloeocapsa* (f)

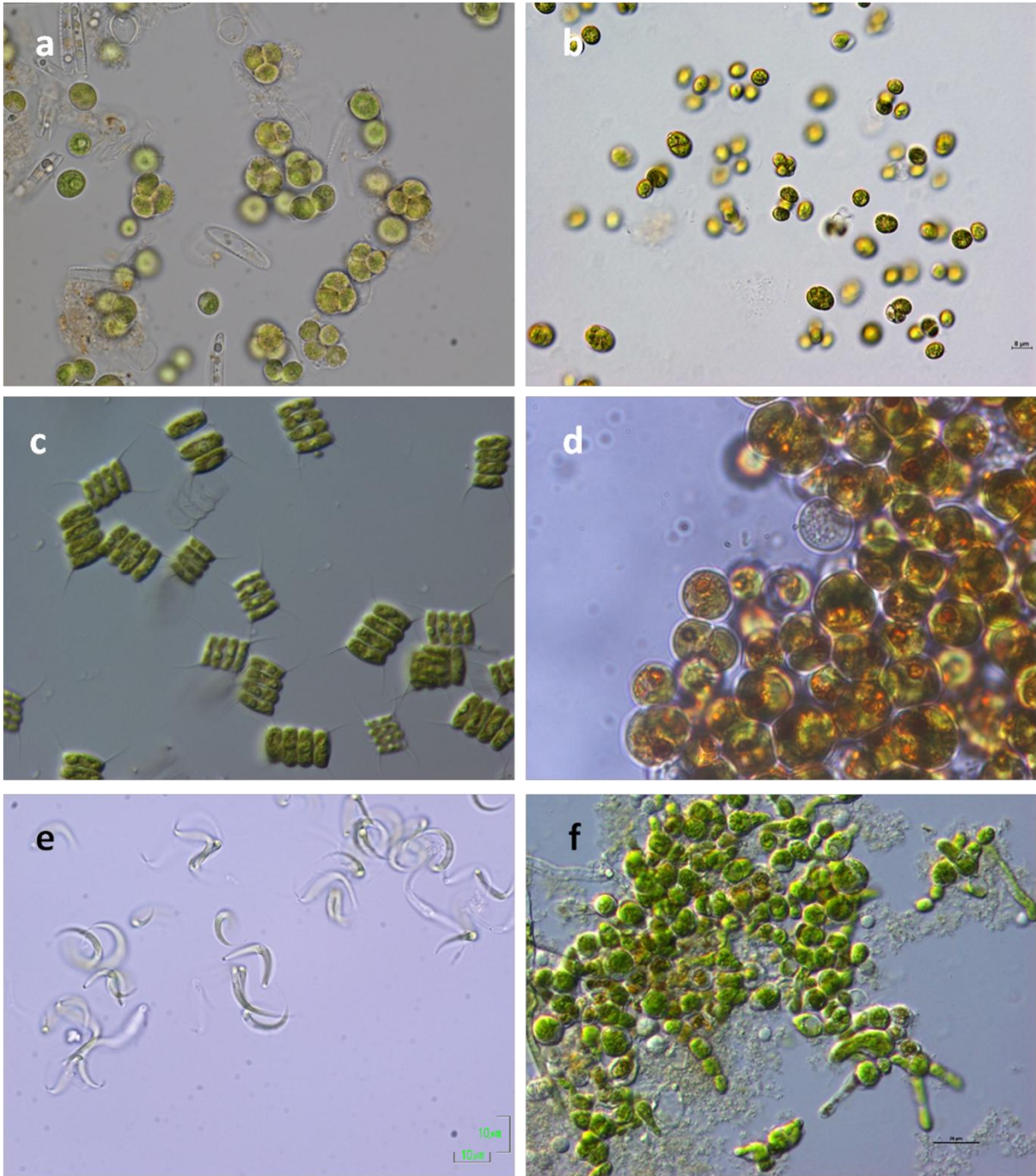


**Figure S7.** Microscopic observations of different isolated species from monumental fountains: *Leptolyngbya*, that is thinner than *Oscillatoria*, presents sheath and lacks motility (a, b), *Pseudoanabaena* (c), *Pseudophormidium* (d), *Calothrix* (e, f)

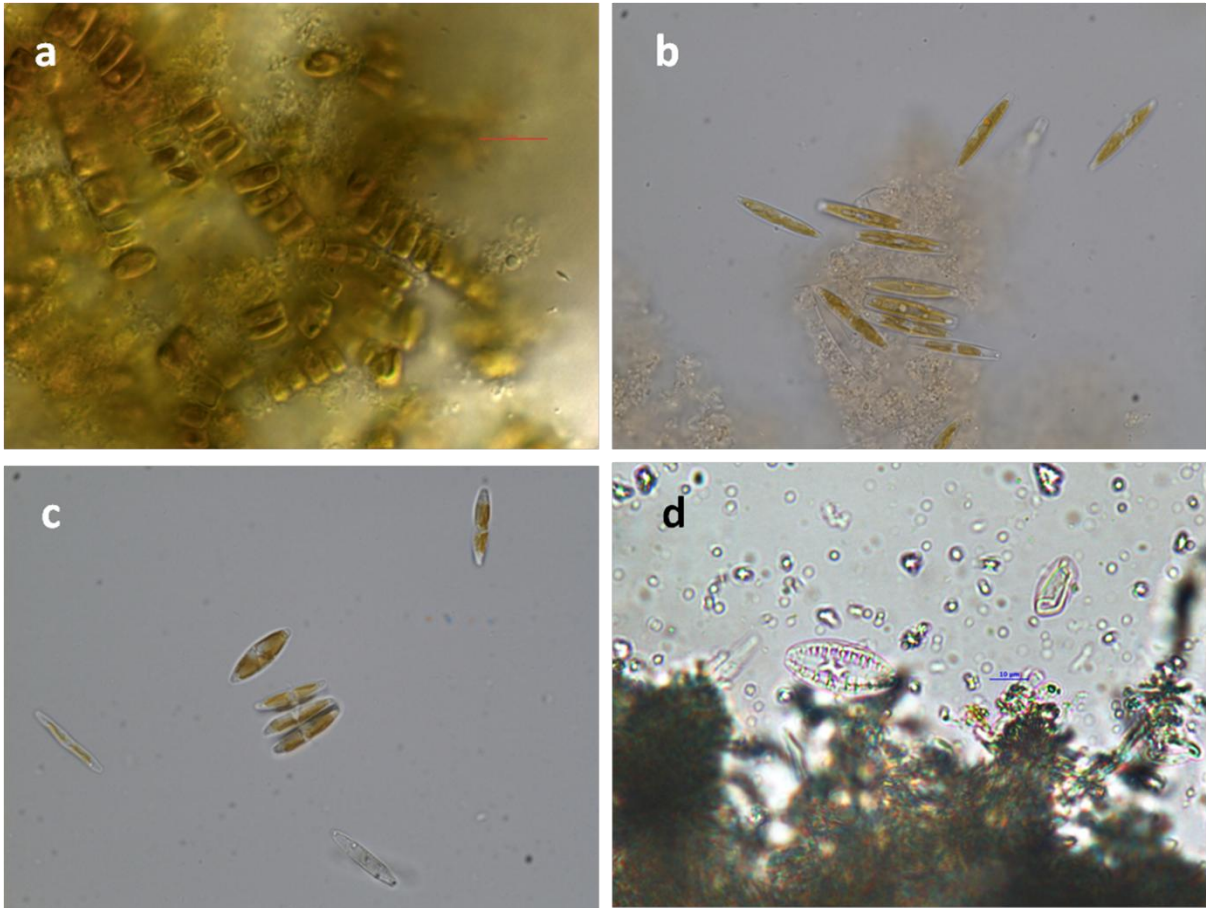


**Figure S8.** Microscopic observations of different isolated species from monumental fountains: *Nostoc* (a, b), *Pleurocapsa* (c), *Rivularia* (d)





**Figure S9.** Microscopic observations of different isolated species from monumental fountains: *Chlorella* (a, b), *Scenedesmus* (c), *Bracteococcus* (d), *Monoraphidium* (e), *Dilabifilum* (f)



**Figure S10.** Microscopic observations of different isolated species from monumental fountains: *Diatoma* (a), *Nitzschia* (b), *Achnantes* (c), *Surirella* (d)