

Figure 1. Geographic location of Santa Maria del Oro crater lake.



**Figure** 2-5. Cyanobacterial bloom in Santa Maria del Oro crater lake. 2. Panoramic view of the crater lake showing the uneven distribution of the cyanobacterial bloom. 3. Swimming competition during March 2015. 4. Cyanobacteria scum at the shores of the crater lake. 5. Clusters of cyanobacteria observed in the centre of the crater lake.



**Figure** 6-13. Microscope micrographs of the bloom-forming species in Santa Maria del Oro Crater lake. 6. *Limnoraphis robusta* filaments. 7. *Microcystis aeruginosa* colony. 8. Microscopic view of scums and clusters showing *L. robusta* and *M. aeruginosa* intermingled. 9. Aerotopes not distributed regularly along the trichome (arrow). 10. Hormogonia with variable cell number (arrows). 11-12. Differences in filament and trichome width during the most intense part of the bloom (11, April) and after the bloom (12, November), note difference in the scale bar. 12-13. Sheath surpassing trichome, and differences in sheath width. Unless otherwise indicated, scale bar 20 μm.



0.020

**Figure** 14. Maximum likelihood tree based on the 16S rRNA gene sequences (640 bp) showing the clustering of strains of the genus *Limnoraphis* and *Microcystis*. Numbers near nodes indicate bootstrap values of ML/NJ over 50%.