Preliminary results of a biodiversity of Blue-green algae (Cyanobacteria) along the karstic river Cetina (Croatia)

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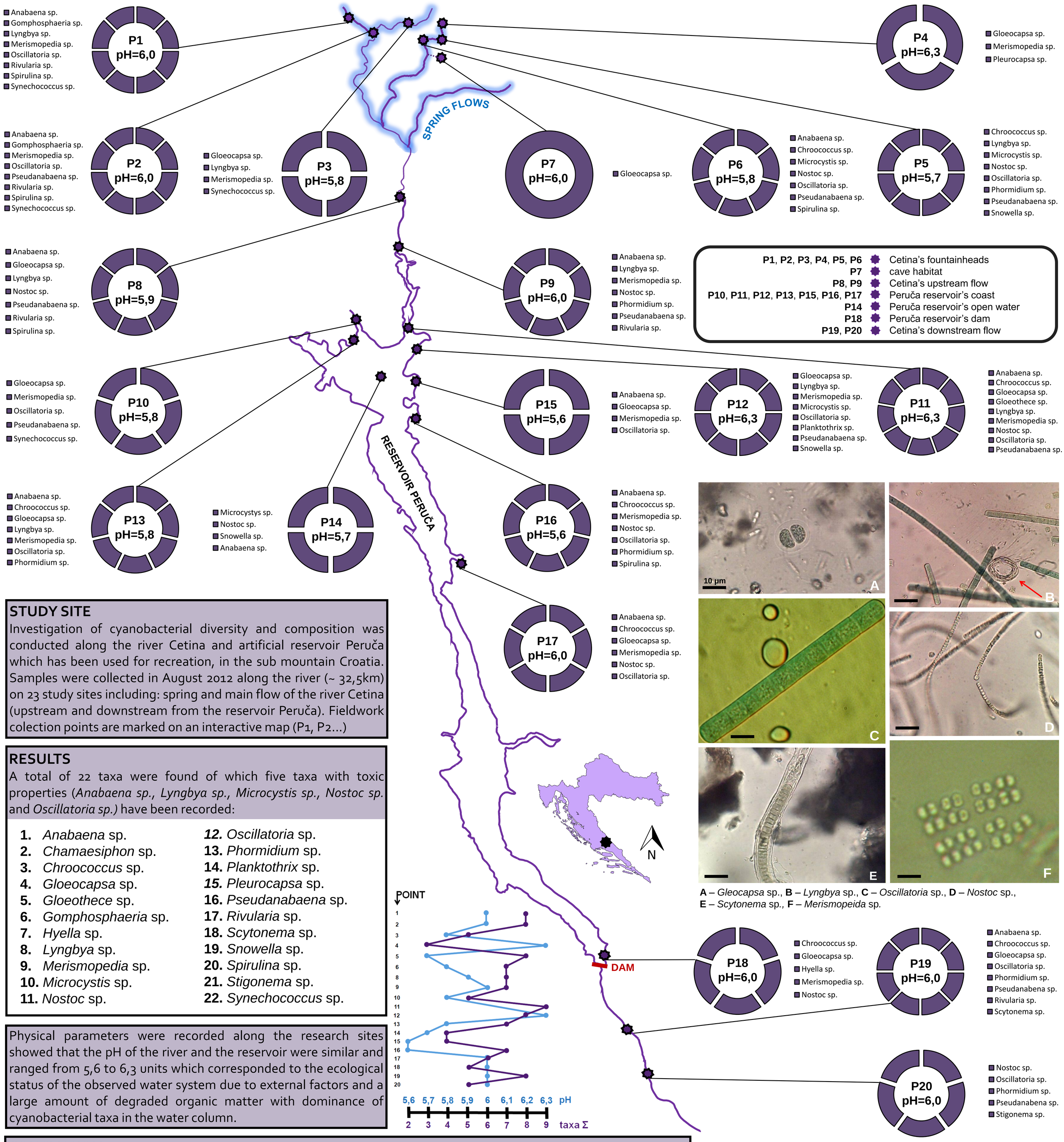

A – *Gleocapsa* sp., **B** – *Lyngbya* sp., **C** – *Oscillatoria* sp., **D** – *Nostoc* sp., **E** – *Scytonema* sp., **F** – *Merismopeida* sp.

STUDY SITE

Investigation of cyanobacterial diversity and composition was conducted along the river Cetina and artificial reservoir Peruča which has been used for recreation, in the sub mountain Croatia. Samples were collected in August 2012 along the river (~ 32,5km) on 23 study sites including: spring and main flow of the river Cetina (upstream and downstream from the reservoir Peruča). Fieldwork colection points are marked on an interactive map (P1, P2...)

RESULTS

A total of 22 taxa were found of which five taxa with toxic properties (*Anabaena sp.*, *Lyngbya sp.*, *Microcystis sp.*, *Nostoc sp.* and *Oscillatoria sp.)* have been recorded:

1. *Anabaena* sp.
2. *Chamaesiphon* sp.
3. *Chroococcus* sp.
4. *Gloeocapsa* sp.
5. *Gloeothece* sp.
6. *Gomphosphaeria* sp.
7. *Hyella* sp.
8. *Lyngbya* sp.
9. *Merismopedia* sp.
10. *Microcystis* sp.
11. *Nostoc* sp.
12. *Oscillatoria* sp.
13. *Phormidium* sp.
14. *Planktothrix* sp.
15. *Pleurocapsa* sp.
16. *Pseudanabaena* sp.
17. *Rivularia* sp.
18. *Scytonema* sp.
19. *Snowella* sp.
20. *Spirulina* sp.
21. *Stigonema* sp.
22. *Synechococcus* sp.

Physical parameters were recorded along the research sites showed that the pH of the river and the reservoir were similar and ranged from 5,6 to 6,3 units which corresponded to the ecological status of the observed water system due to external factors and a large amount of degraded organic matter with dominance of cyanobacterial taxa in the water column.

CONCLUSION

Research on the river Cetina indicates how this type of habitat operates and it can point out how some similar ecosystems can function. Climate change predictions suggest that over a longer term, changes in weather patterns may increase the cyanobacterial blooms. This in turn may increase the scale of risk to human health by cyanotoxins. Cyanobacteria adapts to environmental physical conditions and the pH is not critical for the species richness.

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