



Croatian Science Foundation



Accumulation, Subcellular Mapping and Effects of Trace Metals in Aquatic Organisms (AQUAMAPMET)

- Biodiversity and ecological status -



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„Biodiversity team“

Collaborators from the University of Zagreb, Faculty of Science,
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Marko Miliša, PhD, Assistant Professor

Mirela Sertić Perić, PhD, post-doc, senior teaching assistant



1) Water sampling and measurements of water physico-chemical parameters

- In situ:

- Water temperature
- Concentration and saturation of dissolved oxygen (DO)
- Conductivity
- Total dissolved solids (TDS)
- pH

- Laboratory:

- Alkalinity
- Total water hardness
- Nitrite
- Nitrate
- Orthophosphate
- Chemical oxygen demand (COD)

2) Periphyton



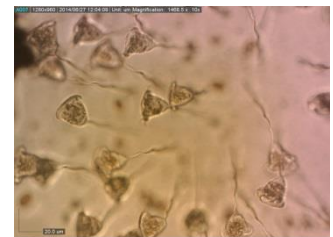
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Research interests:

Ecology of freshwater periphyton. Tufa deposition.
Influence of eutrophication on periphyton and macrozoobenthos.
Protozoa of peat bogs.

Current projects:

Assessment of the role of animal organisms and periphyton in tufa deposition (NP Krka).
Short-term effects of peat bog restoration on protozoans.



2) Periphyton

AQUAMAPMET project responsibilities:

- **field work:** measurement of physical and chemical water parameters, periphyton sampling using scraping or corer on representative substrata

- **lab work:** analysis of periphyton (chlorophyll *a*, identification and enumeration of periphytic protozoans and mico-metazoans) → biological quality element



3) Macrozoobenthos



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Research interests:

Macroinvertebrates, Environmental assessment.

Mediterranean, karst. Tufa (travertine).

Matter and energy flux in aquatic and connected ecosystems.

Current projects:

Plant litter processing in intermittent streams.

Aquatic ecosystems reaction to urban stress.

3) Macrozoobenthos

AQUAMAPMET project responsibilities:

- **field work:** macroinvertebrate benthos sampling



- **lab work:** genera/species identification of macroinvertebrates with the goal of ecological status assessment of the watercourses within our study sites

4) Macroinvertebrate drift



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Research interests:

Freshwater ecology. Stream macroinvertebrates.

Spatio-temporal dynamics of macroinvertebrate communities in running waters. Macroinvertebrate drift. Lake outlets. Ecology of karst and tufa-precipitating waters.

Hydromorphological, anthropogenic and global change influences on the structure and function of aquatic ecosystems.

Ecology of alpine/glacier-fed streams. Ecological consequences of glacier retreat.

4) Macroinvertebrate drift

AQUAMAPMET project responsibilities:

- **field work:** measurement of physical and chemical water parameters, macroinvertebrate drift sampling (drift sampler modified for simultaneous sampling at three cross-sectional depths) → supplementary bioassessment parameter



- **lab work:** laboratory analysis of water physico-chemical parameters; identification of drifting taxa

