

SOFIA LICCI



UMR CNRS 5023 "Ecologie des Hydrosystèmes Naturels et Anthropisés"
(Laboratory of Ecology of Natural and Man-Impacted Hydrosystems)
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EDUCATION

From September 2013 till now: PhD Student as Marie Curie Early Stage Researcher of the HYTECH project (project website: hytech.dii.unipd.it) on the "Consequences of vegetation patterns for nutrient dynamics and feedback responses" at UMR CNRS 5023 -LEHNA.

2008-2011: Master's Degree in Environmental Sciences and Technologies 110/110 *cum laude*, at the University of Parma (Italy). Thesis: "**Radial Oxygen Loss in *Vallisneria spiralis*: ecosystem implications**", **Università degli Studi di Parma, Feb. 2011.**

2005-2008: Bachelor's Degree in Environmental Sciences and Technologies, 110/110 *cum laude*, at the University of Parma. Thesis: "**Aquatic and riparian macrophyte communities of the River Baganza: structural and ecological analysis**", **Università degli Studi di Parma, Sept. 2008 .**

PUBLICATIONS

- **Licci, S.**, Delolme, C., Marmonier, P., Philippe, M., Cornacchia, L., Gardette, V., Bouma, T. & Puijalon, S. Effect of aquatic plant patches on flow and sediment: the case of *Callitriche platycarpa* and *Elodea nuttallii*. GeoPlanet: Earth and Planetary Sciences, in press
- Cornacchia, L., **Licci, S.**, van de Koppel, J., van der Wal, D., Wharton, G., Puijalon, S. & Bouma, T. Flow velocity and morphology of a submerged patch of the aquatic species *Veronica anagallis-aquatica* L. GeoPlanet: Earth and Planetary Sciences, in press.

PUBLICATIONS, in preparation

- Savickis, J., **Licci, S.**, Zaramella, M., Puijalon, S. & Marion, A. Signatures of mass retention in streams based on vegetation and sediment patterns. In prep, for Hydrobiologia

INTERNATIONAL COMMUNICATIONS

- **Licci, S.**, Delolme, C., Marmonier, P., Philippe, M., Cornacchia, L., Gardette, V., Bouma, T. & Puijalon, S. (2015) Effects of aquatic plant patches on flow and sediment characteristics: the case of *Callitriche platycarpa* and *Elodea nuttallii*. XXXIV International School of Hydraulics (ISH), Warsaw (Poland) 11-14 May 2015. Oral communication.
- Cornacchia, L., **Licci, S.**, van de Koppel, J., van der Wal, D., Wharton, G., Puijalon, S. & Bouma, T (2015). Flow velocity and morphology of a submerged patch of the aquatic species *Veronica anagallis-aquatica* L.. XXXIV International School of Hydraulics (ISH), Warsaw (Poland) 11-14 May 2015. Oral communication.
- **Licci, S.**, Marmonier, P., Delolme, C. & Puijalon S. (2015) Interactions between submerged aquatic plant, flow and sediment: effects of patch size and trophic conditions in *Callitriche platycarpa*. 9th Symposium for European Freshwater Sciences, Geneva (Swiss), 5-10 July 2015. Oral communication.
- Savickis, J., Zaramella, M., **Licci, S.**, Puijalon, S. & Marion, A. (2015) Signature of mass retention in streams based on vegetation and sediment patterns. 14th International Symposium on Aquatic Plants, Edinburgh (UK), 14-18 September 2015. Poster.

- **Licci, S.,** Marmonier, P., Delolme, C. & Puijalon, S. (2015) The role of macrophyte patch length and trophic conditions on flow and sediment characteristics. 14th International Symposium on Aquatic Plants, Edinburgh (UK), 14-18 September 2015. Oral communication.

NATIONAL COMMUNICATIONS

- **Licci, S.,** Delolme, C., Marmonier, P., Philippe, M., Cornacchia, L., Gardette, V., Bouma, T. & Puijalon S. Effects on flow and sediment composition of two macrophytes with contrasting morphologies. Netherlands Annual Ecology Meeting (NAEM) 2015, Lunteren (The Netherlands) 10-11 February 2015. Poster.
- Puijalon, S., **Licci, S.,** Delolme, C. & Marmonier, P. (2015) Interactions entre la végétation aquatique, les écoulements et la dynamique sédimentaire. Séminaire OHM Vallée du Rhône, 22 mai 2015, Lyon. Oral communication.

SCIENCE ANIMATION ACTIVITY

- Participation to open day activities as Marie Curie ambassador:
 - "Importance of water quality and ponds conservation" to primary schools pupils, October the 24th 2013, Bradford (UK)
 - "Fluid in sciences" to primary schools pupils, May the 16th 2014, Stirling (UK)
 - "Ecology of aquatic systems" with workshops on aquatic plants, preparatory school students, October the 7th 2014, Villeurbanne (FR)
 - "Importance of fish passages and their physical model" practical activities with preparatory school students, May the 22nd 2015 Braunschweig (D)
 - "What is a river? Why aquatic plants are important?" to primary schools pupils, October the 1st 2015, Castelfranco Veneto (IT)
- Participation to the organizing committee for the conference « ECOVEG 10 », Lyon, 9th – 11th April 2014 – <http://ecoveg10.sciencesconf.org/>
- Participation to the organizing committee for HYTECH 3rd Summer School on "Ecology of aquatic system", Lyon, 3rd -13th October 2014.

RESERCH INTERESTS

- Aquatic ecology.
- Relation between vegetation and aquatic environments (flow, sediment and nutrient conditions).
- Role of submerged macrophytes on water quality and on ecosystems in general.
- Biogeochemistry, including the influence of submerged macrophytes on nitrogen, phosphorous cycling.
- Ecophysiology of aquatic plants.
- Evaluation of water quality and ecological system conditions through macrophyte indexes.
- Interest in field work, mesocosm and flume experiments, data collection and data processing with parametric and multivariate statistics, simulation modeling.

IN SITU AND LABORATORY SKILLS

- Water, sediment and macrophyte sampling.
- Incubations of water, sediment and plants for process measurements.
- Design and carry out experiments in hydraulic flumes (NIOZ- Yerseke, The Netherland).
- Measurements of flow characteristics: discharge, velocity and turbulence with Acoustic Doppler Velocimeter (ADV), Acoustic Doppler Current Profiler (ADCP) and Electromagnetic Flowmeter.
- Optimal skills and knowledge of titration, spectrophotometry, infrared spectroscopy, atomic absorption spectrometry, potentiometry and amperometry for water analysis.
- Laser granulometry for sediment characterization.
- Measurements of plant morphological traits.
- Nutrient and chlorophyll extraction from vegetal tissues.
- Leaf marking technique.
- Macrophyte and fluvial functioning indexes.
- Phytosociological survey.

LINGUISTIC and INFORMATIC SKILLS

Italian (Mother Tongue), **English**. (IELTS certification: overall band score 7/9 – test date 24/09/2011), **French** (Understanding: C1, speaking: B2, writing: A2) .

Computer skills: Microsoft Office Pack; MATLAB, statistic programs (JMP pro 12.0, SigmaPlot 11.0), WinFolia 2001 (for plant morphological traits measurements), GIS software, HTML, JavaScript.