

Raoul Manenti

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Born in Genova on 30/06/1979
C.F. MNNRLA79H30D969O

General information

Naturalist, PhD in Animal Biology, I'm interested in the study of freshwater and subterranean environments, amphibians, planarians and freshwater crayfish. Currently I'm researcher at the Department of Environmental Science and Policy of the University of Milan (Italy).

Education

- 2010-.....PhD in Animal Biology, Doctorate School "Earth, Environment and Biodiversity", Università degli Studi di Milano, Milan (Italy). Thesis title: "DEVELOPMENT OF THE LARVAL PERIPHERAL NERVOUS SYSTEM IN THE ASCIDIAN *CIONA INTESTINALIS*: ROLE OF THE RETINOIC ACID AND FGF/WNT SIGNALLING PATHWAYS AND OF THE POU TRANSCRIPTION FACTORS." PhD **grant** from the Italian Ministry for University and Research
- 2006 **Master Degree**, in Natural Sciences – Management and conservation of nature , University of Milan. Dissertation title : "The astacological patrimony of the Lecco District". Grade: 102/110

Work experiences

- 2018 – ongoing: researcher at the Department of Environmental Science and Policy of the University of Milan.
- 2019 – ongoing: principal investigator of the project: Do groundwater ecosystem services reflect subterranean key organisms' adaptations? A molecular interdisciplinary case project with planarians. Project Financed by LifewatchItaly.
- 2018 -ongoing: principal investigation of the project "Conservation, description and assessment of *Dendrocoelum* planarians of Italy" with a personal grant issued by the Mohamed bin Zayed Species Conservation Found project number 180520056.
- 2017- 2018: principal investigator of the project "Conservation assessment of the subterranean aquatic planarians of Italy", with a personal grant issued by the Mohamed bin Zayed Species Conservation Found project number 162514520, in collaboration with the Università degli Studi di Milano. Grant obtained: 20000 \$.

- 2016- 2017: principal investigator of the project “Freshwater crayfish conservation in northern Italy: prevention of extinctions and restoration of a key population of *Austropotamobius pallipes*”, with a personal grant issued by the Mohamed bin Zayed Species Conservation Found project number 162512949, in collaboration with the Università degli Studi di Milano and the local ong WWF Lecco. Grant obtained: 7500 \$.
- 2016 – ongoing: herpetologist for the Stazione Sperimentale Regionale per lo Studio e la Conservazione degli Anfibi - Comunità Montana Laghi Bergamaschi - LIFE14 IPE/IT/018 – GESTIRE 2020 – Actions A.14 ed E8.
- 2015- ongoing: Member of the Scientific Committee of the Riserva Naturale Regionale Pian di – Gembro.
- 2003 – ongoing: Several collaborations with the Laboratory of Freshwaters of the University of Pavia, with some regional parks and private practitioners on herpetological, astacological and ecological surveys and researches. Experiences also in the restoration of wetlands.
- 2012 – 2015: Postdoc at Department of Biology of “Università degli Studi” of Milan. Performing a project on the study if microRNA occurrence and role in the ascidian *Ciona intestinalis* and several studies on biospeleology, eco-ethology of the fire salamander *Salamandra salamandra*.
- 2007- 2017: I’ve performed or participated at different evaluation of impact in Sites of Community Importance in Lombardy
- 2003 – 2018 Several activities of environmental education performed through a number of institutions and environmental associations.
- 2004: Teacher of natural Sciences at “Enaip Lombardia, Centro servizi Formativi FLESIP”, Lecco (Italy).

Academic Activity

- 2007 – ongoing: Advisor of several first-certificate and master thesis students and teaching activity at the University of Milan and at University of Milan-Bicocca such as lectures, laboratory exercitations, practical field surveys.
- 2018 –ongoing: teaching activity at the University of Milan for the master thesis courses of “wildlife management” and of “experimental biology”.
- 2018 –ongoing: member of the academic board of the Ph.D. Course in Environmental Sciences of the University of Milan.
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- 2017 – ongoing: **Associate Editor** of the journal Acta Herpetologica.

Invited speaker hosted for a **plenary lecture** on biodiversity assessment and conservation at the “I Jornada Técnica sobre biodiversitat i pedra en sec” organized by the Servei of Medi ambient of Mallorca - November 27 -28 2015;

Chair at the 18th European congress of Herpetology [7-12 September 2015] of the session Physiology and at the 9th World Congress of Herpetology [-10 January 2020] session behavioural ecology.

Member of three Ph.D. juries , 2 at the Université de Liège, and 1 at the University of Oviedo

Member of the scientific committee of the X, XI and XII, Italian National Congress of Herpetology (*Societas Herpetologica Italica*) and of “Herpethon 2015, the Herpetological Marathon”.

Member of the scientific committee "Nangeroni" of the Italian Alpine Club / Milan section

Languages

Italian (native); French (fluent); English (fluent), Russian (basic)

Technical skills and competences

In the field I have specific competences in the application of Extended Biotic Index in running waters quality evaluation, in the use of Abrahamsson code in crayfish marking and in study population of Amphibians, Reptiles and freshwater crayfishes.

Responsibilities

Member of the European Amphibian Red List Authority Working Group of the IUCN Species Survival Commission (SSC) Amphibian Red List Authority (RLA) since September 2013; member of the Cave Invertebrate Specialist Group for the assessment of cave-dwelling planarians since January 2018.

Member of the scientific committee of the Riserva Naturale Regionale Pian di Gembro from 2015 -2016.

Member of *Societas Herpetologica Italica* from 1996 and, starting from 1997, coordinator of the Lecco district for the project of “Herpetological Atlas of Lombardy”. From September 2012 to December 2016 I was the coordinator of the Conservation Committee.

Member of *Societas Europea Herpetologica* from 2011 I’m member of the European Conservation Committee from August 2013.

Publications

109 peer reviewed publications in international journals indexed by ISI/SCOPUS

51 peer reviewed publications including conferences proceedings and papers in not indexed journals

Relevant publications

- A1. BARZAGHI B., PENNATI R., DEGIORGI D., MANENTI R., 2021. Planarians, a Neglected Component of Biodiversity in Groundwaters. *Diversity*, 13: 178.
- A2. MANENTI R., BARZAGHI B., 2021. Diel activity of *Niphargus* amphipods in spring habitats. *Crustaceana*, 94: 705-721.
- A3. WYNNE J. J., HOWARTH F., [...] MANENTI R., [...] ZHAO Y., 2021. A conservation roadmap for the subterranean biome. *Conservation Letters*, 14: e12834.
- A4. MANENTI R., BARZAGHI B., NESSI A., CIOCCARELLI S., VILLA M., FICETOLA G. F., 2021. Not Only Environmental Conditions but Also Human Awareness Matters: A Successful Post-Crayfish Plague Reintroduction of the White-Clawed Crayfish (*Austropotamobius pallipes*) in Northern Italy. *Frontiers in Ecology and Evolution*, 9: 621613.
- A5. BATES A., PRIMACK R. B., [...] MANENTI R., [...] RUTZ C., DUARTE C. M., 2021. Global COVID-19 lockdown highlights humans as both threats and custodians of the environment. *Biological Conservation*, 263: 109175.
- A6. MANENTI R., MORI E., DI CANIO V., MERCURIO S., PICONE M., CAFFI M., BRAMBILLA M., FICETOLA G. F., RUBOLINI D., 2020. The good, the bad and the ugly of COVID-19 lockdown effects on wildlife conservation: Insights from the first European locked down country. *Biological Conservation*, 249: 10878.
- A7. MELOTTO A., MANENTI R., FICETOLA G. F., 2020. Rapid adaptation to invasive predators overwhelms natural gradients of intraspecific variation. *Nature Communications*, 11: 3608.
- A8. MANENTI R., FALASCHI M., DELLE MONACHE D., MARTA S., FICETOLA G. F., 2020. Network-scale effects of invasive species on spatially-structured amphibian populations. *Ecography*, 43: 119 -127.
- A9. MANENTI R., MELOTTO A., GUILLAUME O., FICETOLA G. F., LUNGHI E., 2020. Switching from mesopredator to apex predator: how do responses vary in amphibians adapted to cave living? *Behavioural Ecology and Sociobiology*, 74: 126.
- A10. MANENTI R., BARZAGHI B., TONNI G., FICETOLA G. F., MELOTTO A., 2019. Even worms matter: cave habitat restoration for a planarian species has increased environmental suitability but not population density. *Oryx*, 53: 216-221.
- A11. MANENTI R., GHIA D., FEA G., FICETOLA G. F., PADOA-SCHIOPPA E., CANEDOLI C., 2019. Causes and consequences of crayfish extinction: stream connectivity, habitat changes, alien species and ecosystem services. *Freshwater Biology*, 64: 284-293.
- A12. MANENTI R., BARZAGHI B., LANA E., STOCCHINO G. A., MANCONI R., LUNGHI, E., 2018. The stenoendemic cave-dwelling planarians (Platyhelminthes, Tricladida) of the Italian Alps and Apennines: conservation issues. *Journal for Nature Conservation*, 45: 90-97.
- A13. BARZAGHI B., FICETOLA G.F., PENNATI R., MANENTI R., 2017. Biphasic predators provide biomass subsidies in small freshwater habitats: a case study of spring and cave pools. *Freshwater Biology*, 62: 1637–1644.
- A14. MANENTI R., MELOTTO A. DENOEL M., FICETOLA G. F., 2016. Amphibians breeding in refuge habitats have larvae with stronger anti-predatory responses. *Animal Behaviour*, 118: 115-121.
- A15. MANENTI R., 2014. Dry stone walls favour biodiversity: a case- study from the Apennines. *Biodiversity and Conservation*, 23: 1879 – 1893.

- A16. MANENTI R., FICETOLA G.F, BIANCHI B., DE BERNARDI F., 2009. Habitat features and distribution of *Salamandra salamandra* in underground springs. Acta Herpetologica, 4: 143-151.
- A17. MANENTI R., FICETOLA G.F., DE BERNARDI F., 2009. Water, stream morphology and landscape: complex habitat determinants for the fire salamander *Salamandra salamandra*. Amphibia-Reptilia, 30: 7-15.

Milano, February, 26 2022

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