

Francesca Raffini



Born in Bologna (Italy) on 19.03.1988

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Current Position: Full Scientific Researcher (Ricercatore III° livello)

Current Affiliation:

Department of Biology and Evolution of Marine Organisms (BEOM), Stazione Zoologica Anton Dohrn, Napoli (Italy)

Education/Training/Experience

Institute and Location	Degree / Function	Year	Field of Study
Department of Mathematical, Physical and Natural Sciences, Bologna University, Bologna, Italy	Bachelor of Science	2007-2010	Biological Sciences
Department of Mathematical, Physical and Natural Sciences, Bologna University, Bologna, Italy	Master of Science	2010-2012	Biodiversity and Evolution
Department of Biology, Universität Konstanz, Konstanz, Germany International Max Planck Research School for Organismal Biology, Seewiesen, Germany	Ph.D.	2014-2018	Natural Sciences
Max Planck Institute for Ornithology (Germany), Seewiesen, Germany	Postdoc	2018	Evolutionary Biology
Department of Animal and Plant Sciences, The University of Sheffield, Sheffield, UK	Postdoc	2018-2019	Evolutionary Biology

Department of Animal and Plant Sciences, The University of Sheffield, Sheffield, UK	Visiting Researcher	2019-present	Evolutionary Biology
Department of Life Sciences and Biotechnology, Ferrara University, Ferrara, Italy	Postdoc	2019-2022	Conservation Genomics
Department of Integrated Marine Ecology, Stazione Zoologica Anton Dohrn, Napoli, Italy	Postdoc	2022	Bioinformatics
Department of Biology and Evolution of Marine Organisms, Stazione Zoologica Anton Dohrn, Napoli, Italy	Full Researcher	2022 - present	Evolutionary Biology, Animal Behaviour

Awards

2019: Best reviewing service, *Evolution* journal

2016: Best paper award, International Max Planck Research School for Organismal Biology

2015: Preise für das beste Poster (best poster award), Deutsche Zoologische Gesellschaft

Grants & Scholarships

2020: ISEB - EMBO Scholarship (travel grant), Italian Society for Evolutionary Biology and European Molecular Biology Organization

2019: Assemble Plus Transnational Access Programme Grant 3rd call, Assemble Plus

2018: Assemble Plus Transnational Access Programme Grant 2nd call, Assemble Plus

2018: Early-Bird Postdoctoral Grant, International Max Planck Research School for Organismal Biology

2017: Bridge Funding Grant, International Max Planck Research School for Organismal Biology

2016: Zukunftskolleg Doctoral Scholarship, Zukunftskolleg Konstanz

2015: DAAD Research Grant, Deutscher Akademischer Austauschdienst

2015: Equipment Grant, University of Konstanz Reinvestitionsprogramm

2015: Project Grant, International Max Planck Research School for Organismal Biology

2015: Project Grant, International Max Planck Research School for Organismal Biology

2015: Travel Grant, Leipzig University

2015: Travel Grant, International Max Planck Research School for Organismal Biology

2014: Travel Grant, International Max Planck Research School for Organismal Biology

2011: Travel Grant, Bologna University

Additional Scientific and Editorial Services

2020 - 2021: Guest Editor for the Journal of Nature Conservation, “Biological uniqueness: tools and advances to protect endemism” Special Issue

2018 - present: Associate Editor for the Journal of Zoology

2016 - present: Reviewer for international peer-reviewed scientific journals (*Evolutionary Applications*, *Molecular Ecology*, *Molecular Ecology Resources*, *Evolution*, *Heredity*, *Journal of Evolutionary Biology*, *Ecology and Evolution*, *Biological Journal of the Linnean Society*, *Hydrobiologia*,

Mammalian Biology, MDPI Biology, Ecological Informatics, Frontiers Ecology and Evolution, PLoS ONE, Thalassas)

2015 - 2018: Swim tunnel system set-up and management

2014 - 2018: Sequencers' backup management

2014 - present : Reviewer and judging panel member for the Max Planck Institute for Ornithology (now Animal Behaviour) and International Max Planck Research School for Organismal Biology grants

Invited Talks

2019: Of snails, crabs and waves: a tale of adaptation through the lens of genomics, ECIMAT University of Vigo, Spain

2018: Exploring the origin and maintenance of biodiversity: insights from cichlid fishes, GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany

2017: Towards understanding the basis of mouth asymmetry in the scale-eating cichlid *Perissodus microlepis*, Max Planck Institute for Ornithology, Germany

2017: Academia and invalidity. Challenges and benefits of employers and disabled employees in doing research with disability, University of Konstanz Equal Opportunity and Employment Office, Germany

2016: Towards understanding the genetic basis of mouth asymmetry in the scale-eating cichlid *Perissodus microlepis*, Max Planck Institute for Ornithology, Germany

2013: Barriers to gene flow in marine coastal invertebrates: a multi-species and multi-scale approach. How can Genetics help Ecology? Pavia University; Pavia, Italy

Outreach

2021: Science Animated - ENDEMIXIT la genetica per studiare e tutelare la biodiversità, YouTube video - https://www.youtube.com/watch?v=AkAj63_KixA

2020-present: Regular contributions to the ENDEMIXIT's blog posts (<https://endemixit.com/blog-2-2/>)

2019: Science Animated - A snail's tale on the origin of species, YouTube video animation - <https://youtu.be/XDAuQQzQuWg>

2019: Discovery Night – The University of Sheffield, Sheffield, UK

2019: Preto dunha vintena de investigadores estranxeiros elixen a Ecimat para desenvolver os seus proxectos, Interview on the newspaper *Duvi*

2017: Wenn Einseitigkeit besser ist. Konstanzer Studentin geht Merkwürdigkeit auf den Grund, Interview on the newspaper *Südkurier*

Publications

Journal Papers

(*equal contribution)

Bosso L, Smeraldo S, Russo D, Chiusano ML, Bertorelle G, Johannesson K, Butlin RK, Danovaro R, Raffini F (2022) The rise and fall of an alien: why the successful colonizer *Littorina saxatilis* failed to invade the Mediterranean Sea. *Biological Invasions* 24:3169-3187, doi: <https://doi.org/10.1007/s10530-022-02838-y>.

Bertorelle G*, Raffini F*, Bosse M, Bortoluzzi C, Iannucci A, Trucchi E, Morales HE*, Van Oosternhout C* (2022) Genetic load: genomic estimates and applications in non-model animals. *Nature Reviews Genetics* 23: 492-503, doi: <https://doi.org/10.1038/s41576-022-00448-x>.

- Trucchi E, Benazzo A, Lari M, Iob A, Vai S, Nanni L, Bellucci E, Bitocchi E, Raffini F, Xu C, Jackson SA, Lema V, Babot P, Oliszewski N, Gil A, Neme G, Michieli CT, De Lorenzi M, Calcagnile L, Caramelli D, Star B, de Boer H, Boessenkool S, Papa R, Bertorelle G (2021) Ancient genomes reveal early Andean farmers selected common beans while preserving diversity. *Nature Plants* 7: 123-128, doi: <https://doi.org/10.1038/s41477-021-00848-7>.
- Raffini F, Bertorelle G, Biello R, D'Urso G, Russo D, Bosso L (2020) From nucleotides to satellite imagery: approaches to identify and manage the invasive pathogen *Xylella fastidiosa* and its insect vectors in Europe. *Sustainability* 12 (11): 4508, doi: <https://doi.org/10.3390/su12114508>.
- Raffini F*, Schneider RF *, Franchini P, Kautt A, Meyer A (2020) Diving into divergence: differentiation in swimming performances, physiology and gene expression between locally adapted sympatric cichlid fishes. *Molecular Ecology* 29 (7): 1219-1234, doi:<https://doi.org/10.1111/mec.15304>.
- Raffini F and Meyer A (2019) A comprehensive overview on the developmental and evolutionary basis of adaptation in a textbook model: the cichlid fish *Perissodus microlepis*. *Hydrobiologia* 832(2): 65-84, doi: <https://rdcu.be/98ze>.
- Raffini F, Fruciano C, Meyer A (2018) Gene(s) and individual feeding behaviour: exploring eco-evolutionary dynamics underlying left-right asymmetry in the scale-eating cichlid fish *Perissodus microlepis*. *Ecology and Evolution* 8(11):5495-5507, doi: <https://doi.org/10.1002/ece3.4070>.
- Raffini F*, Fruciano C*, Meyer A (2018) Morphological and genetic correlates in the left-right asymmetric scale-eating cichlid fish of Lake Tanganyika. *Biological Journal of the Linnean Society* 124(1): 67-84, doi: <https://doi.org/10.1093/biolinnean/bly024>.
- Raffini F, Fruciano C, Franchini P, Meyer A (2017) Towards understanding the genetic basis of mouth asymmetry in the scale-eating cichlid *Perissodus microlepis*. *Molecular Ecology* 26 (1): 77-91, doi: 10.1111/mec.13699.
- Fruciano C, Franchini P, Raffini F, Fan S, Meyer A (2016) Are sympatrically speciating Midas cichlid fish special? Patterns of morphological and genetic variation in the closely related *Archocentrus centrarchus*. *Ecology and Evolution* 6 (12): 4102-4114, doi:10.1002/ece3.2184.