

## Manuela D'Amen



Born in Rome (Italy) on 07/09/1980

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**Current Position:** Post Doc.

Supervisor: Dr. Ernesto Azzurro  
Appointed on project: MPA Engage

### **Affiliation:**

Section IME, Stazione Zoologica Anton Dohrn, Napoli (Italy)

### **Education**

<b>Institute and Location</b>	<b>Degree / Function</b>	<b>Year</b>	<b>Field of Study</b>
University of Padua (Italy)	Master	2017	Science Communication
Department of Animal Ecology, University of Roma Tre (Italy), in collaboration with the Swiss Federal Institute for Forest, Snow and Landscape Research, Zurich, (Switzerland)	Ph.D.	2007-2010	Animal Ecology and Ecological Modelling
Department of Animal Ecology, University of Roma Tre (Italy)	Master Degree	1999-2004	Biology

### **Training/Experience**

<b>Institute and Location</b>	<b>Function</b>	<b>Year</b>	<b>Field</b>
Stazione Zoologica Anton Dohrn, Dip. EMI, Fano (PU) Italy	Post-doc	2020-	Ecology, Science Communication
Mincio River Regional Park, Mantova, Italy	Coordination, Communication and scientific consultant	2018-2019	Applied ecology and conservation
Gazzetta di Mantova Newspaper Mantova, (Italy)	Scientific journalist	2017-2020	Science Communication

ISPRA - Istituto Superiore Per La Protezione E La Ricerca Ambientale, Livorno (Italy)	Post-doc	2018-2019	Ecology
Ecology and Evolution Dept., University of Lausanne, Lausanne (Switzerland)	Post-doc	2015-2016	Ecology, Bioinformatics
Ecology and Evolution Dept., University of Lausanne, Lausanne (Switzerland)	Post-doc (Marie Curie IEF Grant)	2013-2015	Ecology, Bioinformatics
Dept. IBAF, CNR - National Research Council (Rome, Italy)	Post-doc	2011-2013	Ecology, Biodiversity indicators
Swiss Federal Institute for Forest, Snow and Landscape Research, Zurich, (Switzerland)	Post-doc	2011	Ecology, Bioinformatics
ISPELS, (Istituto Superiore Prevenzione e Sicurezza sul Lavoro) Rome (Italy)	Research Grant	2009	Ecology, Risk assessment
WWF OASI, Rome (Italy)	Consultant	2008	Ecology, GIS
Department of Animal Ecology, University of Roma Tre (Italy)	Research Grant	2007-2008	Animal Ecology
Department of Animal Ecology, University of Roma Tre (Italy)	Research Grant	2005-2006	Animal Ecology

### **Appointments and awards**

Certificate of Professional Competence obtained in 2006 (Tuscia University, Viterbo, Italy) and registered with the Biologist Professional Order from June 2018.

Scientific Qualification to the role of Associate Professor in the sector 05/C1 from 2018

Awards:

- 2005 Prize for the Degree Thesis “Ostia Cultura - Una laurea d’oro”
- 2013 Marie Curie della Commissione Europea grant (FP7-PEOPLE-2012-IEF).
- 2015 “Fondation pour l’Université de Lausanne” grant for funding the workshop “Theories and Methods in spatial community modelling” I co-organized with my supervisor
- 2018 Prize for the best thesis in the Communication Science Master awarded by Padua University.

### **Other matters relevant to scientific career**

From 2010 referee for several journals in Ecology, Macroecology, Conservation and Evolution (e.g. Div Distr, J Biogeogr, Global Ecol Biogeogr, Biol Cons, Afr J Ecol, J Env Manag, BMC Evol Biol).

Computer and programming skills:

GIS: ArcGIS 10.x, ENVI 4.2, DIVA-GIS, IDRISI, Biomapper.

Data management and analysis: R, Tinn-R, R-studio, EcoSim, StatSoft Inc. Statistica, SPSS inc. SPSS, Microsoft Access, C-plan;

Other: Microsoft Internet Explorer; Microsoft Office; Adobe Photoshop, Adobe Illustrator.

I collaborated to the release of the “ecospat” package writing different functions for the analysis of community patterns and modelling

## **Publications**

Author of 37 publications on ISI-journals and 3 book chapters

### ***List of publications of the last 10 years***

#### ***Journal Papers***

- D'Amen M. & Azzurro E. 2020. Lessepsian fish invasion in Mediterranean Marine Protected Areas: a risk assessment under climate change scenarios. *ICES Journal of Marine Science* 77(1), 388–397. doi:10.1093/icesjms/fsz207
- D'Amen M. & Azzurro E., 2020. Integrating univariate niche dynamics in species distribution models: a step forward for marine research on biological invasions *Journal of Biogeography* 47: 686–697 DOI: 10.1111/jbi.13761
- Guisan A., Mod H. K., Scherrer D., Münkemüller T., Pottier J., Alexander J.M., D'Amen M. 2019. Scaling the linkage between environmental niches and functional traits for improved spatial predictions of biological communities. *Global Ecology and Biogeography* 28: 1384-1392 <https://doi.org/10.1111/geb.12967>
- Vincent, C., Fernandes, R.F., Cardoso, A., Broennimann, O., Di Cola, V., D'Amen M., Ursenbacher, S., Schmidt, B., Guisan, A. 2019. Climate and land-use changes reshuffle politically-weighted priority areas of mountain biodiversity *Global Ecology and Conservation* e00589 doi: <https://doi.org/10.1016/j.gecco.2019.e00589>.
- Di Febbraro, M., D'Amen M., Raia, P., De Rosa, D., Loy, A. & Guisan, A. 2018. Using macroecological constraints on spatial biodiversity predictions under climate change: the modelling method matters. *Ecological Modelling*, 390: 79-87.
- Bastos, R., D'Amen M., Marcos, B. et al. 2018. Towards functional biodiversity predictions: a hierarchical modelling framework from primary productivity to biomass of upper trophic levels. *Landscape Ecology* 33, 2221–2237 doi.org/10.1007/s10980-018-0735-8
- Scherrer D., D'Amen M., Fernandes R.F., Mateo R.G., Guisan, A. 2018 How to best threshold and validate stacked species assemblages? Community optimisation might hold the answer. *Methods in Ecology and Evolution*. <https://doi.org/10.1111/2041-210X.13041>
- D'Amen M., Mod H., Gotelli, N, Guisan, A., 2018. Disentangling biotic interactions, environmental filters, and dispersal limitation as drivers of species co-occurrence. *Ecography* 41: 1233-1244
- Regos, A., Clavero, M., D'Amen M., Guisan, A., & Brotons, L. 2017. Wildfire–vegetation dynamics affect predictions of climate change impact on bird communities. *Ecography* 41: 982-995 doi: 10.1111/ecog.02990
- D'Amen M., Mateo, R. G., Pottier, J., Thuiller, W., Maiorano, L., Pellissier, L., Ndiribe C, Salamin N. & Guisan, A. 2017. Improving spatial predictions of taxonomic, functional and phylogenetic diversity. *J. Ecology* 106: 76-86 DOI: 10.1111/1365-2745.12801.
- Di Cola, V., Broennimann, O., Petitpierre, B., Breiner, F. T., D'Amen M., Randin, C., ... & Pellissier, L. 2017. ecospat: An R package to support spatial analyses and modeling of species niches and distributions. *Ecography*, 40(6), 774-787.
- D'Amen M., Rahbek C., Zimmermann N.E., Guisan A. 2017. Spatial prediction of community structure: state of the art and future perspectives. *Biological Reviews* 92: 169–187 doi: 10.1111/brv.12222
- Bastos R., D'Amen M., Vicente J., Santos M., Yu H.; Eitelberg, D., Gonçalves J., Civantos E., Honrado J., Cabral J.A. 2016. Anticipating ecological responses to land use dynamics: a multi-scale looping approach to predict the spatially dynamic occurrence patterns of ecological traits in changing habitats. *Ecological Indicators* 64, 92-104.

- Regos A., D'Amen M., Guisan A., Brotons L. 2016. Predicting the future effectiveness of protected areas for bird conservation in Mediterranean ecosystems under climate change and novel fire regime scenarios. *Diversity and Distribution* 22: 83–96 doi: 10.1111/ddi.12375
- Regos A., D'Amen M., Herrando S., Guisan A., Brotons L. 2015. Fire management, climate change and their interacting effects on birds in complex Mediterranean landscapes: dynamic distribution modelling of an early-successional species - the near-threatened Dartford Warbler (*Sylvia undata*). *Journal of Ornithology* 156: 275–286 doi: 10.1007/s10336-015-1174-9
- D'Amen M., Pradervand J-N, Guisan, A. 2015. Predicting richness and composition in mountain insect communities at high resolution: a new test of the SESAM framework. *Global Ecology and Biogeography* 24: 1443–1453
- D'Amen M., Dubuis A., Fernandes R.F., Pottier J., Pellisser L., Guisan, A. 2015. Using species richness and functional traits predictions to constrain assemblage predictions from stacked species distribution models. *Journal of Biogeography* 42, 1255–1266
- Udroiu I., Sgura A., Vignoli L., Bologna M.A., D'Amen M., Salvi D., Ruzza A., Antoccia A., Tanzarella C. 2015. Micronucleus Test on *Triturus carnifex* as a Tool for Environmental Biomonitoring. *Environ Mol Mutagen* 56, 412–417
- Vignoli L., D'Amen M., Della Rocca F., Bologna M.A., Luiselli L. 2014. Contrasted influences of moon phases on the reproduction and movement patterns of four amphibian species inhabiting different habitats in central Italy. *Amphibia-Reptilia* 35(2): 247-254
- Bombi P., D'Amen M., Luiselli L. 2013. From Continental Priorities to Local Conservation: A Multi-Level Analysis for African Tortoises. *PlosOne* 8(10): e77093
- D'Amen M., Bombi P., Campanaro A., Zapponi L., Bologna M.A., Mason F. 2013. Possible directions in the protection of the neglected invertebrate biodiversity. *Animal Conservation* 16, 383–385
- D'Amen M., Birtele D., Zapponi L., Hardersen S. 2013. Patterns in diurnal co-occurrence in an assemblage of hoverflies (Diptera: Syrphidae). *European Journal of Entomology* 110(4), 649–656
- D'Amen M., Bombi P., Campanaro A., Zapponi L., Bologna M.A., Mason F. 2013. Protected areas and insect conservation: questioning the effectiveness of Natura 2000 network for saproxylic beetles in Italy. *Animal Conservation* 16, 370–378
- D'Amen M., Zimmermann N.E., Pearman P.B. 2013. Conservation of phylogeographic lineages under climate change. *Global Ecology and Biogeography* 22, 93-104
- Dorr A.J.M., Elia A.C., Rodolfi M., Garzoli L., Picco A.M., D'Amen M., Scalici M. 2012. A model of co-occurrence: segregation and aggregation patterns in the mycoflora of the crayfish *Procambarus clarkii* in Lake Trasimeno (central Italy). *Journal of Limnology* 71 (1), 14
- 12 Bombi P., D'Amen M., 2012. Scaling down distribution maps from atlas data: a test of different approaches with virtual species. *Journal of Biogeography* 39, 640–651
- Bombi P., D'Amen M., Salvi D., Bologna M.A., Marcone F., Maggio C., Canu A. 2012. Amphibians' conservation in Italy: the contribution of the WWF Oases network. *Italian Journal of Zoology* 79 (2), 287-295
- Bombi P., Capula M., D'Amen M., Luiselli L. 2011. Climate change threatens the survival of highly endangered Sardinian populations of the snake *Hemorrhois hippocrepis*. *Animal Biology* 61, 239-248
- D'Amen M., Bombi P., Pearman P.B., Schmatz D.R., Zimmermann N.E., Bologna M.A. 2011. Will climate change reduce the efficacy of protected areas for amphibian conservation in Italy? *Biological Conservation* 144, 989–997
- Bombi P., Luiselli L., D'Amen M. 2011. When the method for mapping species matters: defining priority areas for conservation of African freshwater turtles. *Diversity and Distribution* 17, 581-592
- D'Amen M., Pietrangeli B., Bologna M.A. 2010. Human provoked amphibian declines in central Italy and the efficacy of protected areas. *Wildlife Research* 37, 547–557

Pearman P.B., D'Amen M. (co-first authors), Graham C., Thuiller W., Zimmermann N.E. 2010. Within-taxon niche structure: Niche conservatism, divergence and predicted effects of climate change. *Ecography* 33, 990-1003

### ***Book chapters***

Guisan A., Broennimann O., Buri A., Cianfrani C., D'Amen M., Di Cola V., Fernandes R., Gray S., Mateo R.G., Pinto E., Pradervand J.-N., Scherrer D., von Däniken I., Yashiro E., Vittoz P. 2019. Climate change impact on mountain biodiversity. In: *Climate change & Biodiversity: Transforming the Biosphere*, 2nd Edition, Lovejoy T.E. and Hannah L. (Eds), Yale University Press <https://yalebooks.yale.edu/book/9780300206111/biodiversity-and-climate-change>

D'Amen M., Mateo R.G., Guisan A. 2017. Species Assemblages, Macroecology, and Global Change. In: *Module in Life Sciences*. Elsevier Ltd, ISBN: 978-0-12-809633-8

Bologna M.A., D'Amen M., Salvi D., Vignoli L., Bombi P., 2012. Insorgenze di malformazioni in due specie di tritoni (*Triturus carnifex* e *Lissotriton vulgaris*) in tre siti dell'Italia centrale: descrizione e possibili cause, pp.89-91. In: Tinelli A., Folletto A., Manfredi Frattarelli F., Maffei L., Musicanti A., Recanatesi F. *Il sistema ambientale della Tenuta Presidenziale di Castelporziano. Le zone umide*. Segretario Generale della Presidenza della Repubblica italiana. Accademia nazionale delle Scienze detta dei Quaranta. Duemme Grafica, Roma, 240 pp.