

Francesco Maria Sabatini, PhD

SENIOR ASSISTANT PROFESSOR (FIXED-TERM)

Alma Mater Studiorum - University of Bologna

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Research Interests

My interests span across plant ecology, macroecology, community ecology, land-use science and conservation. I strive to use biodiversity big data to uncover the factors behind the distribution of biodiversity on Earth across scales and how these interact to form communities. I work mostly on vascular plants, but I often venture out into other taxonomic groups. I am passionate about old-growth forests. Not only for the sense of awe that they inspire, but because they can teach us a tremendous amount on how to manage natural resources sustainably. I am concerned about global-change and aim at conducting conservation relevant research. To relax, I code in R.

Experience

Alma Mater Studiorum - University of Bologna

RICERCATORE A TEMPO DETERMINATO (RTD-B) - SENIOR ASSISTANT PROFESSOR

- Member of the research Group in Biodiversity and Macroecology (BIOME)

Bologna

Oct 2021 - Today

German Centre for Integrative Biodiversity Research (iDiv)

Martin-Luther Universität Halle-Wittenberg

WISSENSCHAFTLICHER MITARBEITER - POST-DOC

- Coordinator of sPlot - The Global Database of Vegetation Plots
Advisor: Prof. Helge Bruelheide

Halle-Jena-Leipzig

Mar 2018 - Sep 2021

Humboldt-Universität zu Berlin

WISSENSCHAFTLICHER MITARBEITER - POST-DOC

- Advisor: Prof. Tobias Kummerle

Berlin, Germany

Oct 2017 - Feb 2018

Humboldt-Universität zu Berlin

MARIE SKLODOWSKA-CURIE FELLOW - POST-DOC

- Research Project: FORESTS and CO - Co-Benefits and Conflicts between CO₂ sequestration and biodiversity conservation in European Forests
Advisor: Prof. Tobias Kummerle

Berlin, Germany

Oct 2015 - Sep 2017

Sapienza, University of Rome

ASSEGNISTA DI RICERCA - POST-DOC

- Research Project: The study of floristic diversity in Apennine beech forests as a means for implementing sustainable forest management schemes
Cofunded by LIFE+11 project FAGUS - Forests of the Apennines: Good practices to conjugate Use and Sustainability
Advisor: Prof. Carlo Blasi

Rome, Italy

Jan 2014 - Sep 2015

Qualification, Education & Training

QUALIFICATION

2018-2024 Italian National Scientific Habilitation (ASN) - 2nd Level

Botany - 05/A1

2018-2024 Italian National Scientific Habilitation (ASN) - 2nd Level

Ecology - 05/C1

EDUCATION

PhD in Ecology

SAPIENZA, UNIVERSITY OF ROME

- Dissertation: 'Structural heterogeneity, dispersal limitation and abiotic resources. Causes and determinants of plant biodiversity in Southern European old-growth forests'
Advisor: Prof. Carlo Blasi; Co-Advisor: Sabina Burrascano, PhD

Rome, Italy

Oct 2010 - Mar 2014

MSc in Environmental Sciences

SAPIENZA, UNIVERSITY OF ROME

- 110/110 *cum laude*

Rome, Italy

Jan 2007 - Feb 2009

BSc in Environmental Sciences

SAPIENZA, UNIVERSITY OF ROME

- 110/110 *cum laude*

Rome, Italy

Sep 2004 - Dec 2008

STUDY PERIODS ABROAD

Visiting PhD Student

DEPT. OF BOTANY AND ZOOLOGY, MASARYK UNIVERSITY

- Project title: Testing the use of vegetation-plot databases to assess plant diversity patterns. The case of Czech Republic
Host: Milan Chytrý

Brno, Czech Republic

February 2014

Visiting PhD Student

DEPT. OF BIOLOGY, UNIVERSITY OF TURKU

- Host: Prof. Hanna Tuomisto

Turku, Finland

Jan 2013 - May 2013

Visiting Scholar

DEPT. OF FOREST AND WILDLIFE ECOLOGY, UNIVERSITY OF WISCONSIN-MADISON

- Project title: Functional diversity of ground-layer plant communities in old-growth and managed northern hardwood forests
Host: David Mladenoff

Madison (WI), USA

Jan 2010 - Sep 2010

ADDITIONAL TRAINING

Course - Bayesian Statistics

IDIV - GERMAN CENTRE FOR INTEGRATIVE BIODIVERSITY RESEARCH

- Instructor: Dr Benjamin Rosenbaum, PhD

Leipzig, Germany

April 2019

Course - Statistical Rethinking

MAX PLANCK INSTITUTE FOR EVOLUTIONARY ANTHROPOLOGY

- Instructor: Dr Richard McElreath, PhD

Leipzig, Germany

Dec 2018 - Mar 2019

Course - Git Basics - For Beginner-Level Git Users

IDIV - GERMAN CENTRE FOR INTEGRATIVE BIODIVERSITY RESEARCH

- Instructors: Dirk Sarpe, Christian Krause

Leipzig, Germany

October 2018

Course - How to Become a Junior Group Leader

IDIV - GERMAN CENTRE FOR INTEGRATIVE BIODIVERSITY RESEARCH

- Instructors: Dr Alexander Schiller, PhD

Leipzig, Germany

November 2018

Course - Advanced Thesis and Paper Writing

DEPT. OF GEOGRAPHY, HUMBOLDT-UNIVERSITÄT ZU BERLIN

- Instructor: Dörthe Schimansky-Geyer

Berlin, Germany

June 2016

Course - Manipulating big data in R for vegetation scientists

DEPARTMENT OF BOTANY AND ZOOLOGY, MASARYK UNIVERSITY

- Instructor: Dr. Viktoria Wagner

Brno, Czech Republic

July 2015

Course - Introduction to meta-analysis in ecology

DISTAV - DIPARTIMENTO DI SCIENZE DELLA TERRA, DELL'AMBIENTE E DELLA VITA, UNIVERSITÀ DI GENOVA

- Instructors: Forenza Micheli (Stanford University), Craig W. Osenberg (University of Florida), Joachim Claudet (University of Perpignan)

Genova, Italy

May 2014

Course - How to present a successful project proposal in the framework of EU Research and Innovation

SAPIENZA, UNIVERSITÀ DI ROMA

- APRE - Agency for the Promotion of European Research

Rome, Italy

November 2013

Workshop - Public Speaking

SITE - SOCIETÀ ITALIANA DI ECOLOGIA

- Instructor: Jacopo Pasotti

Rome, Italy

February 2012

Course - GIS - Advanced training course in GIS and Remote Sensing

IPT S.R.L., - INFORMATICA PER IL TERRITORIO

- Instructor: Stefano De Corso

Rome, Italy

January 2012

Course - Analysis of Ecological data in R Program

UNIVERSITY 'ROMA TRE'

- Instructor: Dr David Zeleny, PhD

Rome, Italy

June 2011

Intensive Training Workshop on LANDIS-II Forest Landscape Model

UNIVERSITY OF WISCONSIN, MADISON (USA)

- Instructor: Dr Robert Scheller PhD

Madison (WI), USA

January 2010

Additional Work Experience

University of Life Science - Faculty of Forestry and Wood Sciences

SCIENTIFIC CONSULTANT

- Identification of patterns of plant biodiversity in European Old-growth forests. Support on statistical analysis, data preparation and visualization

Prague, Czech Republic

Oct 2023 - Dec 2023

FZS - Frankfurter Zoological Society

SCIENTIFIC CONSULTANT

- Update and expand the map of Primary forest for Europe (contract: ETN-WIE-GR1-001)

Frankfurt, Germany

Feb 2019 - Sep 2020

SBI - Società Botanica Italiana ONLUS

SCIENTIFIC AND TECHNICAL ADVISOR

- Technical and scientific support to research and publication activities

Rome, Italy

May 2009 - Feb 2010

eGeos s.p.a.

TRAINEE

- Testing automatic techniques for the extraction of thematic information from remote sensed imagery with Definiens Developer 7.0 (eCognition)

Rome, Italy

Apr 2009 - Jul 2009

Telespazio s.p.a.

TRAINEE

- Involved in the creation of the 'Map of natural and semi-natural Vegetation Types through the improvement of Latium Land Cover map to the 4th and 5th CLC level'

Rome, Italy

Dec 2007 - Jun 2008

Awards & Achievements

AWARDS

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|------|---|-------------------------------|
| 2024 | Frontiers Planet Prize - Finalist https://magazine.unibo.it/archivio/2024/02/15/un-ricercatore-unibo-tra-i-finalisti-italiani-per-il-frontiers-planet-prize | Frontiers Research Foundation |
| 2023 | 'Marin Drăcea' Award – for silviculture, ecology and forest science - https://acad.ro/institutia/acte/premii/2021.pdf | Romanian Academy of Sciences |
| 2016 | The Reviewer Prize - Winner - www.peerageofscience.org/the-reviewer-prize-2016/ | Peerage of Science |
| 2015 | The Reviewer Prize - Honorary Mention - www.peerageofscience.org/reviewer-prize-2015/ | Peerage of Science |

GRANTS

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|------|--|---|
| 2021 | Rita Levi Montalcini fellowship 2019 | Italian Ministry of Education,
University and Research |
| 2019 | Kongressreisen #57445178 | German Academic Exchange Service |
| 2015 | Marie Skłodowska-Curie actions fellowship - Grant No. 658876 | European Commission |
| 2014 | Research start-up grant - C26N14JZMA | Sapienza, University of Rome |
| 2012 | Research start-up grant - C26N12ESSE | Sapienza, University of Rome |
| 2010 | International Post-degree Scholarship | Sapienza, University of Rome |

Publication

PRE-PRINTS

1. Siefert, A., Laughlin, D. C., & Sabatini, F. M. (2023). *You shall know a species by the company it keeps: Leveraging co-occurrence data to improve ecological prediction*. bioRxiv. <https://doi.org/10.1101/2023.02.15.528518>

ISI JOURNALS

1. Jandt, U., Bruelheide, H., Jansen, F., Bonn, A., Grescho, V., Klenke, R. A., Sabatini, F. M., Bernhardt-Römermann, M., Blüml, V., Dengler, J., Diekmann, M., Doerfler, I., Döring, U., Dullinger, S., Haider, S., Heinken, T., Horchler, P., Kuhn, G., Lindner, M., ... Wulf, M. (2022). More losses than gains during one century of plant biodiversity change in Germany. *Nature*. <https://doi.org/10.1038/s41586-022-05320-w>

2. Wolf, S., Mahecha, M. D., Sabatini, F. M., Wirth, C., Bruelheide, H., Kattge, J., Moreno Martínez, Á., Mora, K., & Kattenborn, T. (2022). Citizen science plant observations encode global trait patterns. *Nature Ecology & Evolution*. <https://doi.org/10.1038/s41559-022-01904-x>
3. Sabatini, F. M., Jimenez-Alfaro, B., Jandt, U., Chytry, M., Field, R., Kessler, M., Lenoir, J., Schrod, F., Wiser, S. K., Arfin Khan, M. A. S., Attorre, F., Cayuela, L., De Sanctis, M., Dengler, J., Haider, S., Hatim, M. Z., Indreica, A., Jansen, F., Pauchard, A., ... Bruelheide, H. (2022). Global patterns of vascular plant alpha diversity. *Nature Communications*, *13*(1), 4683. <https://doi.org/10.1038/s41467-022-32063-z>
4. Davoli, M., Ghoddousi, A., Sabatini, F. M., Fabbri, E., Caniglia, R., & Kuemmerle, T. (2022). Changing patterns of conflict between humans, carnivores and crop-raiding prey as large carnivores recolonize human-dominated landscapes. *Biological Conservation*, *269*, 109553. <https://doi.org/10.1016/j.biocon.2022.109553>
5. Graco-Roza, C., Aarnio, S., Abrego, N., Acosta, A. T. R., Alahuhta, J., Altman, J., Angiolini, C., Aroviita, J., Attorre, F., Baastrop-Spohr, L., Barrera-Alba, J. J., Belmaker, J., Biurrun, I., Bonari, G., Bruelheide, H., Burrascano, S., Carboni, M., Cardoso, P., Carvalho, J. C., ... Soininen, J. (2022). Distance decay 2.0 – A global synthesis of taxonomic and functional turnover in ecological communities. *Global Ecology and Biogeography*, *31*(7), 1399–1421. <https://doi.org/10.1111/geb.13513>
6. Pärtel, M., Sabatini, F. M., Morueta-Holme, N., Kreft, H., & Dengler, J. (2022). Macroecology of vegetation — Lessons learnt from the Virtual Special Issue. *Journal of Vegetation Science*, *33*(2), e13121. <https://doi.org/10.1111/jvs.13121>
7. Kambach, S., Sabatini, F. M., Attorre, F., Biurrun, I., Boenisch, G., Bonari, G., Čarni, A., Carranza, M. L., Chiarucci, A., Chytry, M., Dengler, J., Garbolino, E., Golub, V., Güler, B., Jandt, U., Jansen, J., Jašková, A., Jimenez-Alfaro, B., Karger, D. N., ... Bruelheide, H. (2023). Climate-trait relationships exhibit strong habitat specificity in plant communities across Europe. *Nature Communications*, *14*(1), 712. <https://doi.org/10.1038/s41467-023-36240-6>
8. Rocchini, D., Tordoni, E., Marchetto, E., Marcantonio, M., Barbosa, A. M., Bazzichetto, M., Beierkuhnlein, C., Castelnuovo, E., Gatti, R. C., Chiarucci, A., Chieffallo, L., Da Re, D., Di Musciano, M., Foody, G. M., Gabor, L., Garzon-Lopez, C. X., Guisan, A., Hattab, T., Hortal, J., ... Malavasi, M. (2023). A quixotic view of spatial bias in modelling the distribution of species and their diversity. *Npj Biodiversity*, *2*(1), 1–11. <https://doi.org/10.1038/s44185-023-00014-6>
9. Weigelt, A., Mommer, L., Andraczek, K., Iversen, C. M., Bergmann, J., Bruelheide, H., Freschet, G. T., Guerrero-Ramírez, N. R., Kattge, J., Kuyper, T. W., Laughlin, D. C., Meier, I. C., Plas, F. van der, Poorter, H., Roumet, C., Ruijven, J. van, Sabatini, F. M., Semchenko, M., Sweeney, C. J., ... McCormack, M. L. (2023). The importance of trait selection in ecology. *Nature*, *618*(7967), E29–E30. <https://doi.org/10.1038/s41586-023-06148-8>
10. Laughlin, D. C., Siefert, A., Fleri, J. R., Tumber-Dávila, S. J., Hammond, W. M., Sabatini, F. M., Damasceno, G., Aubin, I., Field, R., Hatim, M. Z., Jansen, S., Lenoir, J., Lens, F., McCarthy, J. K., Niinemets, Ü., Phillips, O. L., Attorre, F., Bergeron, Y., Bruun, H. H., ... Bruelheide, H. (2023). Rooting depth and xylem vulnerability are independent woody plant traits jointly selected by aridity, seasonality, and water table depth. *New Phytologist*. <https://onlinelibrary.wiley.com/doi/abs/10.1111/nph.19276>
11. Sabatini, F. M., Hähn, G., Speziale, K., Cingolani, A. M., Damasceno, G., & Bruelheide, H. (2023). Vegetation of southern patagonia in the 1970s – digitization of a gray-literature data set as a monitoring baseline in a changing world. *Journal of Vegetation Science*, *34*(5), e13209. <https://doi.org/10.1111/jvs.13209>
12. Testolin, R., Attorre, F., Bruzzaniti, V., Guarino, R., Jimenez-Alfaro, B., Lussu, M., Martellos, S., Di Musciano, M., Pasta, S., Sabatini, F. M., Santi, F., Zannini, P., & Chiarucci, A. (2023). Plant species richness hotspots and related drivers across spatial scales in small Mediterranean islands. *Journal of Systematics and Evolution*, *n/a*(n/a). <https://doi.org/10.1111/jse.13034>
13. Engel, T., Bruelheide, H., Hoss, D., Sabatini, F. M., Altman, J., Arfin-Khan, M. A. S., Bergmeier, E., Cerny, T., Chytry, M., Dainese, M., Dengler, J., Dolezal, J., Field, R., Fischer, F. M., Huygens, D., Jandt, U., Jansen, F., Jentsch, A., Karger, D. N., ... Pillar, V. (2023). Traits of dominant plant species drive normalized difference vegetation index in grasslands globally. *Global Ecology and Biogeography*, *32*(5), 695–706. <https://doi.org/10.1111/geb.13644>
14. Mikolas, M., Piovesan, G., Ahlström, A., Donato, D. C., Gloor, R., Hofmeister, J., Keeton, W. S., Muys, B., Sabatini, F. M., Svoboda, M., & Kuemmerle, T. (2023). Protect old-growth forests in Europe now. *Science*, *380*(6644), 466–466. <https://doi.org/10.1126/science.adh2303>
15. Weigelt, A., Mommer, L., Andraczek, K., Iversen, C. M., Bergmann, J., Bruelheide, H., Fan, Y., Freschet, G. T., Guerrero-Ramirez, N. R., Kattge, J., Kuyper, T. W., Laughlin, D. C., Meier, I. C., Plas, F. van der, Poorter, H., Roumet, C., Ruijven, J. van, Sabatini, F. M., Semchenko, M., ... McCormack, M. L. (2021). An integrated framework of plant form and function: The belowground perspective [Journal Article]. *New Phytologist*, *232*(1), 42–59. <https://doi.org/https://doi.org/10.1111/nph.17590>
16. Mikolas, M., Svitok, M., Bace, R., Meigs, G. W., Keeton, W. S., Keith, H., Buechling, A., Trotsiuk, V., Kozak, D., Bollmann, K., Begovic, K., Cada, V., Chaskovskyy, O., Ralhan, D., Dusatko, M., Ferencik, M., Frankovic, M., Gloor, R., Hofmeister, J., ... Svoboda, M. (2021). Natural disturbance impacts on trade-offs and co-benefits of forest biodiversity and carbon [Journal Article]. *Proceedings of the Royal Society B: Biological Sciences*, *288*(1961), 20211631. <https://doi.org/doi:10.1098/rspb.2021.1631>

17. Munteanu, C., Senf, C., Nita, M. D., Sabatini, F. M., Oeser, J., Seidl, R., & Kuemmerle, T. (2021). Leveraging historical spy satellite photographs and recent remote sensing data to identify high conservation value forests [Journal Article]. *Conservation Biology*, *n/a(n/a)*. <https://doi.org/https://doi.org/10.1111/cobi.13820>
18. Sabatini, F. M., Bluhm, H., Kun, Z., Aksenov, D., Atauri, J. A., Buchwald, E., Burrascano, S., Cateau, E., Diku, A., Duarte, I. M., Lopez, A. B. F., Garbarino, M., Grigoriadis, N., Horvath, F., Keren, S., Kitenberga, M., Kis, A., Kraut, A., Ibsch, P. L., ... Kuemmerle, T. (2021). European primary forest database (EPFD) v2.0 [Journal Article]. *Scientific Data*. <https://doi.org/10.1038/s41597-021-00988-7>
19. Sabatini, F. M., Lenoir, J., Hattab, T., Arnst, E. A., Chytry, M., Dengler, J., De Ruffray, P., Hennekens, S. M., Jandt, U., Jansen, F., Jimenez-Alfaro, B., Kattge, J., Levesley, A., Pillar, V. D., Purschke, O., Sandel, B., Sultana, F., Aavik, T., Acic, S., et al.others. (2021). sPlotOpen - an environmentally-balanced, open-access, global dataset of vegetation plots [Journal Article]. *Global Ecology and Biogeography*, *30(9)*, 1740–1764. <https://doi.org/https://doi.org/10.1111/geb.13346>
20. Laughlin, D. C., Mommer, L., Sabatini, F. M., Bruelheide, H., Kuyper, T. W., McCormack, M. L., Bergmann, J., Freschet, G. T., Guerrero-Ramirez, N., Iversen, C. M., Kattge, J., Meier, I. C., Poorter, H., Roumet, C., Semchenko, M., Sweeney, C. J., Valverde-Barrantes, O. J., Plas, F. van der, Ruijven, J. van, ... Weigelt, A. (2021). Root traits explain plant species distributions along climatic gradients yet challenge the nature of ecological trade-offs. *Nature Ecology & Evolution*, *in press*.
21. Bruelheide, H., Jansen, F., Jandt, U., Bernhardt-Roemermann, M., Bonn, A., Bowler, D., Dengler, J., Eichenberg, D., Grescho, V., Kellner, S., Klenke, R. A., Luett, S., Luettgert, L., Sabatini, F. M., & Wesche, K. (2021). A checklist for using Beals' index with incomplete floristic monitoring data [Journal Article]. *Diversity and Distributions*, *27(7)*, 1328–1333. <https://doi.org/https://doi.org/10.1111/ddi.13277>
22. Testolin, R., Attorre, F., Borchardt, P., Brand, R. F., Bruelheide, H., Chytry, M., De Sanctis, M., Dolezal, J., Finckh, M., Haider, S., Hemp, A., Jandt, U., Kessler, M., Korolyuk, A. Yu., Lenoir, J., Makunina, N., Malanson, G. P., Montesinos-Tubee, D. B., Noroozi, J., ... Jimenez-Alfaro, B. (2021). Global patterns and drivers of alpine plant species richness [Journal Article]. *Global Ecology and Biogeography*, *30*, 1218–1231.
23. Testolin, R., Carmona, C. P., Attore, F., Borchardt, P., Bruelheide, H., Dolezal, J., Finckh, M., Haider, S., Hemp, A., Jandt, U., Korolyuk, A. Yu., Lenoir, J., Makunina, N., Malanson, G. P., Mucina, L., Noroozi, J., Nowak, A., Peet, R. K., Peyre, G., ... Jimenez-Alfaro, B. (2021). Global functional variation in alpine vegetation [Journal Article]. *Journal of Vegetation Science*, *32*, e13000.
24. Cai, Q., Welk, E., Ji, C., Fang, W., Sabatini, F. M., Zhu, J., Zhu, J., Tang, Z., Attorre, F., Campos, J. A., Carni, A., Chytry, M., Coban, S., Dengler, J., Dolezal, J., Field, R., Frink, J. P., Gholizadeh, H., Indreica, A., ... Bruelheide, H. (2021). The relationship between niche breadth and range size of beech (*fagus*) species worldwide. *Journal of Biogeography*, *48*, 1240–1253.
25. Padulles Cubino, J., Jimenez-Alfaro, B., Sabatini, F. M., Willner, W., Lososova, Z., Biurrun, I., Brunet, J., Campos, J. A., Indreica, A., Jansen, F., Lenoir, J., Skvorc, Z., Vassilev, K., & Chytry, M. (2021). Plant taxonomic and phylogenetic turnovers increase towards climatic extremes and depend on historical factors in European beech forests. *Journal of Vegetation Science*, *32*, e12977.
26. Asbeck, T., Sabatini, F., Augustynczyk, A. L. D., Basile, M., Helbach, J., Jonker, M., Knuff, A., & Bauhus, J. (2021). Biodiversity response to forest management intensity, carbon stocks and net primary production in temperate montane forests. *Scientific Reports*, *11(1)*, 1625.
27. Pillar, V. D., Sabatini, F. M., Jandt, U., Camiz, S., & Bruelheide, H. (2021). Revealing the functional traits linked to hidden environmental factors in community assembly. *Journal of Vegetation Science*, *32(1)*, e12976.
28. Sabatini, F. M., Keeton, W. S., Lindner, M., Svoboda, M., Verkerk, P. J., Bauhus, J., Bruelheide, H., Burrascano, S., Debaive, N., Duarte, I., Garbarino, M., Grigoriadis, N., Lombardi, F., Mikolas, M., Meyer, P., Motta, R., Mozgeris, G., Nunes, L., Odor, P., ... Kuemmerle, T. (2020). Protection gaps and restoration opportunities for primary forests in Europe. *Diversity and Distributions*, *26*, 1646–1662.
29. Angelstam, P., Manton, M., Green, M., Jonsson, B.-G., Mikusinski, G., Svensson, J., & Sabatini, F. M. (2020). Sweden does not meet agreed national and international forest biodiversity targets: A call for adaptive landscape planning. *Landscape and Urban Planning*, *202*, 103838.
30. Bruelheide, H., Jimenez-Alfaro, B., Jandt, U., & Sabatini, F. M. (2020). Deriving site-specific species pools from large databases. *Ecography*, *43*, 1215–1228.
31. Sabatini, F. M., Andrade, R. B. de, Paillet, Y., Odor, P., Bouget, C., Campagnaro, T., Gosselin, F., Janssen, P., Mattioli, W., Nascimbene, J., et al. (2019). Trade-offs between carbon stocks and biodiversity in European temperate forests. *Global Change Biology*, *25(2)*, 536–548.
32. Bruelheide, H., Dengler, J., Jimenez-Alfaro, B., Purschke, O., Hennekens, S. M., Chytry, M., Pillar, V. D., Jansen, F., Kattge, J., Sandel, B., et al. (2019). sPlot-a new tool for global vegetation analyses. *Journal of Vegetation Science*, *30(2)*, 161–186.
33. Sabatini, F. M., Burrascano, S., Keeton, W. S., Levers, C., Lindner, M., Potzschner, F., Verkerk, P. J., Bauhus, J., Buchwald, E., Chaskovsky, O., et al. (2018). Where are Europe's last primary forests? *Diversity and Distributions*, *24(10)*, 1426–1439.
34. Sabatini, F. M., Jimenez-Alfaro, B., Burrascano, S., Andrea, L., & Chytry, M. (2018). Beta-diversity of central European forests decreases along an elevational gradient due to the variation in local community assembly processes. *Ecography*, *41(6)*, 1038–1048.
35. Bruelheide, H., Dengler, J., Purschke, O., Lenoir, J., Jimenez-Alfaro, B., Hennekens, S. M., Botta-Dukat, Z., Chytry, M., Field, R., Jansen, F., et al. (2018). Global trait-environment relationships of plant communities. *Nature Ecology & Evolution*, *2(12)*, 1906.

36. Semper-Pascual, A., Macchi, L., Sabatini, F. M., Decarre, J., Baumann, M., Blendinger, P. G., Gomez-Valencia, B., Mastrangelo, M. E., & Kuemmerle, T. (2018). Mapping extinction debt highlights conservation opportunities for birds and mammals in the south american chaco. *Journal of Applied Ecology*, *55*(3), 1218–1229.
37. Burrascano, S., De Andrade, R., Paillet, Y., odor, P., Antonini, G., Bouget, C., Campagnaro, T., Gosselin, F., Janssen, P., Persiani, A., et al. (2018). Congruence across taxa and spatial scales: Are we asking too much of species data? *Global Ecology and Biogeography*, *27*(8), 980–990.
38. Burrascano, S., Ripullone, F., Bernardo, L., Borghetti, M., Carli, E., Colangelo, M., Gangale, C., Gargano, D., Gentilesca, T., Luzzi, G., et al. (2018). It is a long way to the top: Plant species diversity in the transition from managed to old-growth forests. *Journal of Vegetation Science*, *29*(1), 98–109.
39. Sabatini, F., Burrascano, S., Azzella, M., Barbati, A., De Paulis, S., Di Santo, D., Facioni, L., Giuliarelli, D., Lombardi, F., Maggi, O., et al. (2016). One taxon does not fit all: Herb-layer diversity and stand structural complexity are weak predictors of biodiversity in fagus sylvatica forests. *Ecological Indicators*, *69*, 126–137.
40. Burrascano, S., Chytry, M., Kuemmerle, T., Giarrizzo, E., Luysaert, S., Sabatini, F. M., & Blasi, C. (2016). Current European policies are unlikely to jointly foster carbon sequestration and protect biodiversity. *Biological Conservation*, *201*, 370–376.
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43. Burrascano, S., Copiz, R., Del Vico, E., Fagiani, S., Giarrizzo, E., Mei, M., Mortelliti, A., Sabatini, F., & Blasi, C. (2015). Wild boar rooting intensity determines shifts in understorey composition and functional traits. *Community Ecology*, *16*(2), 244–253.
44. Sabatini, F., Jimenez-Alfaro, B., Burrascano, S., & Blasi, C. (2014). Drivers of herb-layer species diversity in two unmanaged temperate forests in northern Spain. *Community Ecology*, *15*(2), 147–157.
45. Sabatini, F. M., Burton, J. I., Scheller, R. M., Amatangelo, K. L., & Mladenoff, D. J. (2014). Functional diversity of ground-layer plant communities in old-growth and managed northern hardwood forests. *Applied Vegetation Science*, *17*(3), 398–407.
46. Sabatini, F. M., Burrascano, S., Tuomisto, H., & Blasi, C. (2014). Ground layer plant species turnover and beta diversity in southern-European old-growth forests. *PLoS One*, *9*(4), e95244.
47. Burrascano, S., Keeton, W. S., Sabatini, F. M., & Blasi, C. (2013). Commonality and variability in the structural attributes of moist temperate old-growth forests: A global review. *Forest Ecology and Management*, *291*, 458–479.
48. Burrascano, S., Anzellotti, I., Carli, E., Del Vico, E., Facioni, L., Pretto, F., Sabatini, F. M., Tilia, A., & Blasi, C. (2013). Drivers of beta-diversity variation in bromus erectus semi-natural dry grasslands. *Applied Vegetation Science*, *16*(3), 404–416.
49. Burrascano, S., Sabatini, F., & Blasi, C. (2011). Testing indicators of sustainable forest management on understorey composition and diversity in southern Italy through variation partitioning. *Plant Ecology*, *212*(5), 829–841.
50. Foster, J. R., Burton, J. I., Forrester, J. A., Liu, F., Muss, J. D., Sabatini, F. M., Scheller, R. M., & Mladenoff, D. J. (2010). Evidence for a recent increase in forest growth is questionable. *Proceedings of the National Academy of Sciences*, *107*(21), E86–E87.

NON-ISI JOURNALS

1. Sabatini, F. M. (2014). An intuitive way to assess forest management intensity. Potential and caveats. *ProcPos*, *1*(e7).
2. Mattioli, W., Barbati, A., Portoghesi, L., Ferrari, B., Burrascano, S., Sabatini, F. M., Di Santo, D., De Vita, A., Gioiosa, M., & Giuliarelli, D. (2014). Il progetto LIFE+ FAGUS: Sperimentazione di approcci selvicolturali per coniugare uso e conservazione della biodiversità nelle faggete appenniniche. *Proceedings of the Second International Congress of Silviculture. Florence*, *1*, 315–322.
3. Burrascano, S., Azzella, M., Bonacquisti, S., Copiz, R., Del Vico, E., Facioni, L., Lattanzi, E., Rosati, L., Sabatini, F., Tilia, A., & Blasi, C. (2011). Biodiversità e indicatori nei boschi vetusti italiani. *INFORMATORE BOTANICO ITALIANO*, *43*, 108–108.
4. Sabatini, F. M., Burrascano, S., & Blasi, C. (2010). Niche heterogeneity and old-growth forests conservation value. *Italian Journal of Forest and Mountain Environments*, *65*(5), 621–636.

MONOGRAPHS/BOOKS

1. Barredo Cano, J. I., Brailescu, C., Teller, A., Sabatini, F. M., Mauri, A., & Janouskova, K. (2021). *Mapping and assessment of primary and old-growth forests in Europe*. EUR 30661 EN, Publications Office of the European Union. <https://doi.org/10.2760/797591>
2. Mattioli, W., Di Santo, D., Barbati, A., Portoghesi, L., Burrascano, S., Sabatini, F., & Giuliarelli, D. (2017). *Manuale di buone pratiche per la gestione degli habitat 9210* e 9220**. Ente Parco Nazionale del Cilento, Vallo di Diano e Alburni.
3. Barbati, A., Burrascano, S., Paulis, S. de, De Vita, A., Di Santo, D., Gioiosa, M., & Sabatini, F. (2014). *FAGUS. Buone pratiche per coniugare uso e sostenibilità delle foreste dell'Appennino - FAGUS. Forests of the Apennines: Good practices to conjugate use and sustainability*.

4. Blasi, C., Burrascano, S., Maturani, A., & Sabatini, F. (2010). Foreste vetuste in Italia. *Ministero Dell'Ambiente e Della Tutela Del Territorio e Del Mare: Rome, Italy*.
5. Blasi, C., Burrascano, S., Maturani, A., & Sabatini, F. (2010). Old-growth forests in Italy. *Palombi Editori, Rome, Italy*.

Conferences

KEYNOTE SPEAKER OR CHAIR OF SYMPOSIUM

1. Sabatini, F. (2019). Primary forests and forest reserves in a changing world: Status, trends and perspectives. In *Temperate and boreal primeval forests in the face of global change. 2-4 september 2019. Lviv, Ukraine*. WSL.
2. Sabatini, F., Kuemmerle, T., & Svoboda, M. (2018). Biodiversity strongholds in a tamed landscape: New approaches to locate and conserve the last primary forests in Europe. In *5th European congress of conservation biology. 12-15 June 2018. Jyväskylä, Finland*. ECCB.

INVITED SPEAKER

1. Sabatini, F. (2021). Protection gaps and restoration opportunities for primary forests in Europe. In *Webinar on primary and old-growth forests - open to the commission working group on forests and nature sub-working group of the cgbn. 21 January 2021. Virtual meeting*. EC DG-ENV.
2. Sabatini, F. (2021). Protection gaps and restoration opportunities for primary forests in Europe. In *Protecting old growth forests in Europe - a review of scientific evidence to inform policy implementation. 16 February 2021. Virtual meeting*. European Forest Institute.
3. Sabatini, F., De, R., Andrade, Paillet, Y., Odor, P., Bouget, C., Campagnaro, T., Gosselin, F., Janssen, P., Mattioli, W., Nascimbene, J., Sitzia, T., Kuemmerle, T., & Burrascano, S. (2019). Maximizing carbon stock and multi-taxon diversity in European temperate forests: Can we fill two needs with one deed? In *ConFoBi symposium 2019 - conservation of forest biodiversity in multiple-use landscapes of central Europe. 5-6 February 2019. Freiburg, Germany*. ConFoBi.
4. Sabatini, F. (2019). Launch of old growth/primary forest mapping with follow up actions: An early warning system. In *New initiatives from a decade of progress - a conference for an action plan to protect and restore wilderness and old growth/primary forest in Europe. 20-21 November 2019. Bratislava, Slovakia*. Wild Europe.
5. Sabatini, F., Burrascano, S., Keeton, W., Levers, C., Lindner, M., Potzschner, F., Verkerk, H., & Kuemmerle, T. (2017). Europe's last primary forests. In *UNFCCC COP24 - side-events - forests and climate policy under the Paris agreement. 7 December 2017. EU pavilion, Katowice, Poland*. European Commission's Joint Research Centre; the Swedish University of Agricultural Sciences.
6. Sabatini, F., & Fritz, S. (2017). The current situation with old growth forest - where is it located - how much is left, mapping for protection. In *Conference for protection of old growth forest in Europe. 13-14 September 2017. EU committee of the regions, Brussels, Belgium*. Wild Europe.

SPEAKER

1. Sabatini, F. (2023). Succession and interannual variability in the herb-layer composition of European beech forests. *65th IAVS Annual Symposium. 3-8 September 2023. Coffs Harbor, Australia*.
2. Sabatini, F., Di, M., Marco, Bruelheide, H., & sPlot, C. (2022). Impacts of land use change on plant species composition across ecoregions. *64th Annual Symposium: International Association for Vegetation Science. 27 June - 7 July 2022. Madrid, Spain*.
3. Sabatini, F., Jimenez-Alfaro, J., B, Chytry, M., Field, R., Kessler, M., Lenoir, J., Schrodte, F., Wiser, S., Bruelheide, H., & sPlot, C. (2022). Global patterns of vascular plant alpha diversity. *VIII International Plant Science Conference (IPSC). 7-10 September 2022. Bologna, Italy*.
4. Sabatini, F., Jimenez-Alfaro, B., Jandt, U., & Bruelheide, H. (2019). Using sPlot - the global vegetation plot database - to explore global patterns of plot-specific plant species pools. *Macro 2019 - 13th Annual Meeting of the Specialist Group Macroecology of the Ecological Society of Germany, Austria, and Switzerland. Bridging Local Patterns and Global Challenges. 11-14 March 2019. Wurzburg, Germany*.
5. Sabatini, F., Jimenez-Alfaro, B., Jandt, U., Bruelheide, H., & sPlot, Consortium. (2019). Using sPlot - the global vegetation plot database - to explore global patterns of plot-specific plant species pools. *62nd IAVS Annual Symposium: Vegetation Science and Biodiversity Research. 14-19 July 2019. Bremen, Germany*.
6. Sabatini, F., Jimenez-Alfaro, B., Jandt, U., & Bruelheide, H. (2018). Using sPlot - the global vegetation plot database - to explore global patterns of plot-specific plant species pools. *iDiv Annual Conference 2018. 11-12 December 2018. Leipzig, Germany*.
7. Sabatini, F., Chytry, M., Dengler, J., Jansen, F., Jimenez-Alfaro, B., Pillar, V., Bruelheide, H., & sPlot, C. (2018). sPlot - the global vegetation-plot database. *10th International Conference on Ecological Informatics. Translating Ecological Data into Knowledge and Decisions in a Rapidly Changing World. 24-28 September 2018. Jena, Germany*.

8. Sabatini, F., Jimenez-Alfaro, B., Dengler, J., Jansen, F., Chytry, M., Pillar, V., Bruelheide, H., & sPlot, C. (2018). An invitation to join sPlot, the global vegetation database. *Macro 2018 - 12th Annual Meeting of the Specialist Group Macroecology of the Ecological Society of Germany, Austria, and Switzerland*. 10-13 April 2018. Zurich, Switzerland.
9. Sabatini, F., Burrascano, S., Keeton, W., Levers, C., Lindner, M., Potzschner, F., Verkerk, H., & Kuemmerle, T. (2017). The last primary forest remnants in Europe: Their spatial distribution and determinants. *125th IUFRO Anniversary Congress*. 18-22 September 2017. Freiburg, Germany.
10. Burrascano, S., Antonini, G., Bouget, C., Campagnaro, T., De, R., Andrade, Fuhr, M., Gosselin, F., Janssen, P., Maggi, O., Mattioli, W., Nascimbene, J., Odor, P., Paillet, Y., Sabatini, F., & Sitzia, T. (2017). More than trees: A European scientific network to assess the relationships between forest structural heterogeneity, multi-taxon biodiversity, and carbon storage. *125th IUFRO Anniversary Congress*. 18-22 September 2017. Freiburg, Germany.
11. Sabatini, F., Burrascano, S., Keeton, W., Levers, C., Lindner, M., Potzschner, F., Verkerk, H., & Kuemmerle, T. (2017). Finding the last wild forests: Understanding the distribution of primary forest in Europe. *60th IAVS Annual Symposium: Vegetation Patterns in Natural and Cultural Landscapes*. 20-24 June 2017. Palermo, Italy.
12. Sabatini, F., Burrascano, S., Jimenez-Alfaro, B., Lora, A., & Chytry, M. (2015). The decrease of beta diversity with increasing altitude in central European forests. *58th Annual Symposium of the International Association for Vegetation Science: Understanding Broad-Scale Vegetation Patterns*. 19-24 July 2015. Brno, Czech Republic.
13. Sabatini, F., Burrascano, S., Tuomisto, H., & Blasi, C. (2013). Causes and determinants of ground-layer plant species turnover in southern-European old-growth forests. *Primeval Beech Forests: Reference Systems for the Management and Conservation of Biodiversity, Forest Resources and Ecosystem Services*. 2-9 June 2013. Lviv, Ukraine.
14. Sabatini, F., Burrascano, S., & Blasi, C. (2012). Causes and determinants of beta diversity in Apennine old-growth forests. *VIII Incontro Dei Dottorandi in Ecologia e Scienze Dei Sistemi Acquatici*. 27 February-1 March 2012. Rome, Italy.
15. Sabatini, F., Burrascano, S., & Blasi, C. (2011). Causes and determinants of beta-diversity in southern European old-growth forests. *Symposium of the Federation Internationale de Phytosociologie*. 13-17 September 2011. Valencia, Spain.

AS CO-AUTHOR

1. Alessi, N., Zannini, P., Di, M., Musciano, Jimenez-Alfaro, B., Agrillo, E., Attorre, F., Bonari, G., Canullo, R., Casella, L., Cervellini, M., Guarino, R., Martellos, S., Sabatini, F., Testolin, R., Venanzoni, R., & Chiarucci, A. (2022). The protected and non-protected forest diversity of Italy. In *64th annual symposium: International association for vegetation science*. 27 June - 7 July 2022. Madrid, Spain. IAVS.
2. Hoss, D., Engel, T., Velez-Martin, E., Sabatini, F., Bruelheide, H., & Pillar, V. (2022). A global assessment on the effects of plant functional redundancy on grassland ecosystems' stability during climatic anomalies. In *64th annual symposium: International association for vegetation science*. 27 June - 7 July 2022. Madrid, Spain. IAVS.
3. Burrascano, S., De, R., Andrade, Paillet, Y., Antonini, G., Bouget, C., Campagnaro, T., Fuhr, M., Giarrizzo, E., Janssen, P., Persiani, A., Nascimbene, J., Odor, P., Sabatini, F., Sitzia, T., & Blasi, C. (2017). Vascular plants as indicators of species diversity in European temperate forests: Are they effective for multiple taxa at multiple scales? In *60th IAVS annual symposium: Vegetation patterns in natural and cultural landscapes*. 20-24 June 2017. Palermo, Italy. IAVS.
4. Burrascano, S., Chytry, M., Kuemmerle, T., Giarrizzo, E., Luysaert, S., Sabatini, F., & Blasi, C. (2015). Conflicts between climate change mitigation and biodiversity conservation in Europe: Can carbon sink without sinking grassland biodiversity? In *58th annual symposium of the international association for vegetation science: Understanding broad-scale vegetation patterns*. 19-24 July 2015. Brno, Czech Republic. IAVS.
5. Burrascano, S., Keeton, W., Sabatini, F., & Blasi, C. (2013). Commonality and variability in the structural attributes of moist temperate old-growth forests: A global review. In *Primeval beech forests: Reference systems for the management and conservation of biodiversity, forest resources and ecosystem services*. 2-9 June 2013. Lviv, Ukraine. WSL.
6. Burrascano, S., Sabatini, F., & Blasi, C. (2011). Towards a southern European old-growth forests network. In *Symposium of the federation internationale de phytosociologie*. 13-17 September 2011. Valencia, Spain. FIP.

POSTERS

1. Sabatini, F., Barbati, A., Burrascano, S., Portoghesi, L., Di, D., Santo, De, S., Paulis, Mattioli, W., & Blasi, C. (2015). A life+ nature project for the enhancement of structural heterogeneity in priority habitat (9210* and 9220*) Apennine beech forests. In *58th annual symposium of the international association for vegetation science: Understanding broad-scale vegetation patterns*. 19-24 July 2015. Brno, Czech Republic. IAVS.
2. Maggi, O., Lunghini, D., Pecoraro, L., Sabatini, F., & Persiani, A. (2015). Safeguarding saproxylic fungal biodiversity in Apennine beech forest priority habitats. In *General assembly of the European geosciences union*. 1 Apr 2015. Vienna, Austria. EGU.

3. Barbati, A., Burrascano, S., Sabatini, F., Azzella, M., Portoghesi, L., Corona, P., & Blasi, C. (2013). A LIFE+ nature project for the enhancement of structural heterogeneity in priority habitat Apennine beech forests: Actions of education and awareness raising. In *XXIII congresso societa italiana di ecologia. September 2013. Ancona, Italy*. SITE.
4. Barbati, A., Burrascano, S., Sabatini, F., Portoghesi, L., Corona, P., & Blasi, C. (2013). A life+ nature project for the enhancement of structural heterogeneity in priority habitat (9210 and 9220) Apennine beech forests. In *Primeval beech forests: Reference systems for the management and conservation of biodiversity, forest resources and ecosystem services. 2-9 june 2013. Lviv, Ukraine*. WSL.
5. Sabatini, F., Burrascano, S., & Blasi, C. (2010). Niche heterogeneity and old-growth forests conservation value. In *National conference on old-growth forests in Italy: Identification, characterization, management. 25-26 june 2010. Pietracamela, Italy*. PNGSML.

Projects

Research project

BIODIVERSA+ 2022

ROLE: NATIONAL PRINCIPAL INVESTIGATOR - WP LEADER

2022-2025

- Title: MOTIVATE - Monitoring Of Terrestrial habitats by Integrating Vegetation Archive Time series in Europe
Project No. P2022JM3RZ
Amount: 218,506 (UNIBO) 1,705,195 (TOTAL) EUR

Research project

Italian Ministry of University and Research (PRIN 2022 PNNRR)

ROLE: PRINCIPAL INVESTIGATOR

2023-2025

- Title: BECAUSE - Plant Biodiversity and Ecosystem Change in protected Areas: land-Use impacts and Scenario Evaluation
Project No. P2022JM3RZ
Amount: 114,659 (UNIBO) 240,887 (TOTAL) EUR

Research project

EU Marie Skłodowska-Curie

ROLE: PRINCIPAL INVESTIGATOR

2015-2017

- Title: FORESTS and CO - Co-Benefits and Conflicts between CO₂ sequestration and biodiversity conservation in European Forests
Grant: 658876
Amount: 159,460.80 EUR

Research start-up grant

Sapienza, University of Rome

ROLE: PRINCIPAL INVESTIGATOR

2014-2015

- Title: Local and Regional determinants of plant diversity of Apennine and Balkan old-growth forests
Grant: C26N14JZMA
Amount: 2,500 EUR

Research start-up grant

Sapienza, University of Rome

ROLE: PRINCIPAL INVESTIGATOR

2012-2013

- Title: Structural heterogeneity, dispersal limitation and abiotic resources. Causes and determinants of plant biodiversity in Southern European old-growth forests
Grant: C26N12ESSE
Amount: 2,000 EUR

Teaching

2022-2024 Plant Ecosystems, Protected Habitats and Environmental Restoration (6 CFU - 66101)

University of Bologna

2021-2024 Plant Biodiversity and Landscape Ecology (5 CFU 96684)

University of Bologna

2021-2022 Plant-Environment Interactions & Biomonitoring (93211 3 CFU)

University of Bologna

2021 (Aug) European Natural Forest School

Frankfurter Zoological Society

2021 (Mar) Getting started with R Markdown

German Centre for Integrative

Biodiversity Research

2018-2021 Ecological data evaluation in R - Co-Lecturer

Martin-Luther Universität Halle

2017-2018 Introduction to Biogeography - Teaching assistant

Humboldt-Universität zu Berlin

2016-2017 Conservation Biogeography - Teaching assistant

Humboldt-Universität zu Berlin

2015-2017 Field Methods in Biogeography - Teaching assistant

Humboldt-Universität zu Berlin

2012-2014 Landscape Ecology - Guest lecturer

Sapienza, University of Rome

Institutional Responsibilities

2013-2014 PhD student representative of the departmental board

Sapienza, University of Rome

Editorial Roles

ASSOCIATE EDITOR

- Journal of Vegetation Science

2021-today

ASSOCIATE EDITOR

- Diversity and Distribution

2021-2023

GUEST EDITOR FOR SPECIAL ISSUE: 'MACROECOLOGY OF VEGETATION'

- Journal of Vegetation Science

2019-2020

MEMBER OF THE EDITORIAL BOARD

- Silva Fennica

2019-today

REFEREE

- 20 Peerage of Science; 15 Journal of Vegetation Science, 12 iForest; 4 Ecological Applications; 4 Forest Ecology and Management; 3 Folia Geobotanica; 3 Diversity and Distribution; 3 Scientific Reports; 2 Silva Fennica; 2 Journal of Applied Ecology; 2 Vegetation Classification and Survey; 2 Landscape Ecology; 2 Journal of Biogeography; 2 Plant Ecology; 2 Forests; 1 Ecology Letters; 1 BMC Ecology; 1 Journal of Ecology; 1 Plant Biosystems; 1 Plos One; 1 Acta Oecologica; 1 Animal Biology; 1 Forest Ecosystems; 1 Applied Vegetation Science; 1 Ecosphere; 1 Ecological Indicators; 1 Nature Sustainability; 1 Global Ecology and Biogeography; 1 Ecology and Evolution

Other Academic Services

Italian Ministry of Education, University and Research

REFEREE FOR PRIN - PROGETTI DI RILEVANZA NAZIONALE

2019-2021

NKFI - Hungarian National Research, Development and Innovation Office

REFEREE

2021

Czech Science Foundation

REFEREE

2019-2020

Languages

	Italian	<i>Native Speaker</i>
C2	English	<i>Fluent</i>
C1	German	<i>Advanced</i>
A2	French	<i>Elementary</i>
A2	Spanish	<i>Elementary</i>

Membership to Scientific Societies

since 2010 Società Botanica Italiana

SBI

since 2011 Società Italiana di Scienze della Vegetazione

SISV

since 2015 International Association for Vegetation Science

IAVS

Francesco Maria Sabatini
aprile 13, 2024