

Flavia Giunta – Curriculum Vitae

32 Maple St., Apt. B / Potsdam, NY 13676 / (315) 244-0396

bluebird93@hotmail.it / [LinkedIn](#) / [Google Scholar](#)

Summary

Experienced Ph.D. with seven years of dedicated academic laboratory and field experience, specializing in environmental biology, wildlife toxicology, detection of trace elements in biological matrices, and use of bioindicators in environmental analysis. Proficient in project management and data analysis, with a proven track record of successfully coordinating and executing research projects.

Education

2020-2025: Ph.D., Interdisciplinary Bioscience & Biotechnology at CLARKSON UNIVERSITY
(Successfully defended: April 16th, 2025) – Potsdam, NY, USA

Dissertation: “Trace elements pollution in bats from museums and in the field from the NY State”.

Advisors: Dr. Michael R. Twiss, Dr. Tom A. Langen, and Dr. Beatrice V. Hernout

Professional skills achieved: Principles of Toxicology and Epidemiology; Molecular Biotechnology; Environmental Policy; Conservation Biology; Biochem. & Biotech. Lab; Advanced Cell Biology; Molecular Genetics; Essentials of Biostatistics.

2016-2018: M.S., Environmental Biology at UNIVERSITY OF STUDIES OF CATANIA – Catania, Sicily, Italy

Dissertation: “Trace elements in the European Stone Curlew (*Burhinus oedicephalus* Linnaeus, 1758) from three areas in South-Eastern Sicily”.

Professional skills achieved: Ecotoxicology; Genetic Analysis of Biodiversity; Biodiversity of Animal Biocoenosis; Landscape Ecology; Floral Biodiversity and Conservation; Geology of the Environment and Territory with Thematic Cartography; Eco-Physiological Adaptations to the Environment; Methodologies for the Study of Flora and Fauna in the Environment and in a Laboratory; Museology; Environmental Evaluation and Thematic Cartography; Environmental Impact of Volcanoes; Environmental Bioindicators.

2012-2016: B.S., Environmental and Natural Sciences at UNIVERSITY OF STUDIES OF CATANIA – Catania, Sicily, Italy

Dissertation: “Preliminary data on bird ringing sessions in the Pergusa Lake Natural Reserve, Sicily, Italy”.

Professional skills achieved: preparatory subjects (Mathematical Analysis, General Physics, Inorganic Chemistry, Organic Chemistry); biological subjects (General Biology, Genetics, Human Physiology, Comparative Anatomy with Elements of Embryology, Environmental Hygiene); zoological subjects (General Zoology, Laboratory of Zoological Methods, Ethology); botanical subjects (Botany, Phylogeny of Plants, Geobotany); geological subjects (General Geography, Petrography and Mineralogy, Geology, Paleontology); Ecology; Astronomical Geography.

Teaching Experience

2021–2025: GRADUATE TEACHING ASSISTANT at CLARKSON UNIVERSITY – Potsdam, NY, USA

- Completed STEM 501 Teaching Assistantship Bootcamp conducted to train graduate students for mentoring and teaching undergraduate students at Clarkson University (Summer 2020).
- Instructor and grader for BY162 Cell and Molecular Biology lab: Spring 2021, Spring 2022, Spring 2023, Spring 2024, and Spring 2025.
- Instructor and grader for BY142 Ecology, Evolution, and Diversity lab: Fall 2021, Fall 2022, Fall 2023, and Fall 2024.
- Supervisory Teaching Assistant for BY162 Cell and Molecular Biology lab: Spring 2024.
- Provide weekly feedback to students on homework and lab reports.

- Conduct office hours to tutor.
- Responsible for supervising and overseeing all sections with the main course instructor to ensure labs run successfully.
- Occasionally lectured for BY140 Biology I Lecture, for BY222 Ecology, and for BY328 Conservation Biology.

2017-2018: UNIVERSITY OF STUDIES OF CATANIA – Catania, Sicily, Italy

- Teaching Assistant for the M-Z Section of the Zoology class of the B.S. Biological Sciences degree course.
- Provide visual help during lectures; provide consultation for students; participate in outdoors educational activities.

Research Experience

2020-2025: Ph.D. project: “Trace Elements Pollution in Bats from Museums and in the Field from the New York State” at CLARKSON UNIVERSITY – Potsdam, NY, USA

- Investigated patterns of trace element contamination in hair of bats (Chiroptera) – both archived and fresh samples, all from NY.
- Performed work in the field – mist-netting of bat specimens, species identification, measurements on individual specimens, sampling (hair and droppings), proper handling and decontamination protocols.
- Performed mass spectrometry analysis (ICP-Ms and graphite furnace) on hair samples, as well as sample preparation procedures (washing techniques and acid digestion), on hair and feathers.
- Performed statistical analysis for the interpretation of results (Excel, XL-STAT, R).
- Performed cortisol analysis in hair of bats (ELISA assay).
- Systematic review published (2024) as 1st author; 1 paper published as 3rd author (2024); 2 research papers as 1st author currently in process of publication.

2016-2018: M.S. Project: “Trace elements in the European Stone Curlew (*Burhinus oedicephalus* Linnaeus, 1758) from three areas in South-Eastern Sicily” at UNIVERSITY OF STUDIES OF CATANIA – Catania, Sicily, Italy

- Investigated patterns of trace element contamination in feathers of an Eurasian bird species, the Stone curlew, from 3 different rural areas in Sicily.
- Performed work in the field – location and identification of nesting areas, measurements on individual specimens and eggs, sampling (feathers, droppings, and soil samples).
- Performed mass spectrometry analysis (ICP-Ms), as well as sample preparation procedures (acid digestion), on feather, blood, and soil samples.
- Published a paper on research results (2020).

Awards

- Biology Department Graduate Teaching Award. Award presented to a graduate student who has demonstrated excellence as a teaching assistant or instructor of biology. Clarkson University, April 2025.
- Best Oral Presentation in the Biomedical and Health Sciences (Graduate) category Research and Project Showcase (RAPS), Clarkson University, April 2023.

Publications

- Giunta, F., Hernout, B. V., Langen, T. A., & Twiss, M. R. (2024). A systematic review of trace elements in the tissues of bats (Chiroptera). *Environmental Pollution*, 124349.
<https://doi.org/10.1016/j.envpol.2024.124349>
- Giunta, F., Hernout, B. V., Langen, T. A., & Twiss, M. R. (2024). Supplementary information from: A systematic review of trace elements in the tissues of bats (Chiroptera) [Dataset]. Dryad.
<https://doi.org/10.5061/dryad.sxksn03bb>

- Keute, J., Rizzo, J., Giunta, F., & Hernout, B. V. (2024). Evaluating washing techniques to eliminate external contamination of trace elements in bat fur and bird feathers. *Ecotoxicology and Environmental Safety*, 283, 116819. <https://doi.org/10.1016/j.ecoenv.2024.116819>
- Copat, C., Ferrante, M., Hernout, B. V., Giunta, F., Grasso, A., Messina, A., Grasso, R., & Spena, M. T. (2020). Trace element bioaccumulation in stone curlew (*Burhinus oedicnemus*, Linnaeus, 1758): a case study from Sicily (Italy). *International Journal of Molecular Sciences*, 21(13), 4597. <https://doi.org/10.3390/ijms21134597>

Reviewing Experience

Peer-reviewer for scientific articles in the following journals:

- Ecotoxicology (2025)
- Biodiversitas Journal of Biological Diversity (2024)
- Environmental Science and Pollution Research (2024)
- Biological Trace Element Research (2024)

Skills

LAB SKILLS:

Good Lab Practice (GLP), Mass Spectrometry (ICP-MS and graphite furnace), Washing Techniques to Avoid External Contamination in Trace Element Analysis of biological matrices, Cortisol ELISA Assay, Spectrophotometry, Protein Purification, Polyacrylamide Gel Electrophoresis, Imaging (Bio-Rad), PCR, Western Blot, Bacterial Cell Culture, Genetic Manipulation of Bacterial Cells, Microscopy (compound and stereoscopic), Paper Chromatography, Microbiological Techniques and Aseptic Handling.

FIELD WORK SKILLS:

Mist-netting, Conservation Projects, Data Collection, GPS, Species Identification, Examine Plant and Animals Characteristics, Sampling (hair, feathers, droppings, soil), Morphometric Measurements (bats and birds), Conduct Environmental Surveys, Wildlife Tracking, Field Monitoring, Bird Banding Assistance, Speleology.

COMPUTER SKILLS:

Microsoft Office Suite (Word, PowerPoint, Excel and XL-STAT expansion pack, Outlook, Skype), Database Management, Spreadsheets, ArcGIS, General Biostatistics, R-Studio, SPSS, Email Management, Social Media, Digital Calendars.

TRANSFERABLE SKILLS:

Research, Documentation, Scientific Writing, Teaching and Mentoring, Collaboration, Literature Search, Project Management, Managing Undergraduate Lab Assistants, Analytical Thinking, Critical Thinking, Data Analysis, Strategic Planning, Innovation.

LANGUAGE SKILLS:

Italian (Native), English (Advanced; C1).

Presentations and Conferences

- F. Giunta, "Trace elements in bats from NY". Research and Projects Showcase (RAPS), Clarkson University, April 2025.
- F. Giunta, "Trace elements and cortisol in bats from NY". Biology Department Seminar, Clarkson University, April 2025.
- F. Giunta, "Trace elements in bats - a matter of pollution... and wildfires". Wildlife Toxicology Interest Group Meeting, SETAC, October 2024.

- F. Giunta, “Trace elements in bats - a matter of pollution... and wildfires”. Research and Projects Showcase (RAPS), Clarkson University, April 2024.
- F. Giunta, “Trace elements in bats - a matter of pollution... and wildfires”. Biology Department Seminar, Clarkson University, March 2024.
- F. Giunta, “Trace elements in bats of the New York State”. Research and Projects Showcase (RAPS), Clarkson University, April 2023.
- F. Giunta, “Trace elements in bats”. Biology Department Seminar, Clarkson University, March 2023.
- F. Giunta, “Trace elements in bats: review and a case study in NY State”. Biology Department Seminar, Clarkson University, April 2022.
- F. Giunta, B. V. Hernout, “Trace metal contamination in bats: an overview from literature data”. [Poster.] Research and Projects Showcase (RAPS), Clarkson University, July 2021.
- F. Giunta, “Trace elements bioaccumulation in Stone Curlew (*Burhinus oedicnemus* Linnaeus, 1758): a case study from Sicily (Italy)”. Biology Department Seminar, Clarkson University, April 2021.

Certifications

- Completion of Responsible Conduct of Research (Curriculum and Course Learner Group) 1- Basic Course by CITI Program. Completion date: Feb 8th, 2023. Record ID: 57343517.
- Completion of Wildlife Research (Curriculum and Course Learner Group) 1 – Basic Course by CITI Program. Completion date: May 31st, 2023. Record ID: 55784022.
- Rabies vaccine administered by St. Lawrence County Public Health Department, Canton, NY, USA. 1st shot: Sept 1st, 2021; 2nd shot: Sept 8th, 2021; 3rd shot: Sept 22nd, 2021.
- Professional Biologist Qualifying Exam passed – Dec 2019, University of Studies of Catania, Catania, Sicily, Italy.
- Completion of 1° Level Speleology Course – Iblean Speleo Club, Ragusa, Sicily, Italy. Issued by the National Committee for Speleology Schools. Completion date: Oct 7th, 2019.

Volunteering

- **2018-2019:** Participated in a 2-years Life volunteering project issued by the EU: “Life ChooNa!”, in association with the LIPU association (Italian League for the Protection of Birds), aimed at the protection of three bird species in an area of ecological interest in Sicily (Italy), the Gela plain. Ensured the protection of local populations of white stork (*Ciconia ciconia*), Kentish plover (*Charadrius alexandrinus*), and Bonelli’s eagle (*Aquila fasciata*) through activities of monitoring in the field, patrolling of nesting sites in order to deter the presence of poachers, and through the coordination of social activities aimed at raising the awareness of the public towards wildlife conservation.
- **2018:** Participated as a volunteer in a WWF project aimed at the monitoring of loggerhead sea turtle’s (*Caretta caretta*) nesting sites in Catania, Sicily, Italy.
- **2018:** Participated in the SHARPER NIGHT – European Night of Researchers (Catania, Sicily, Italy), a citizen science event.
- **2012-2013:** Participated as a volunteer in three bird banding campaigns, lasting one week each, related to the “Small Islands” project issued by ISPRA (Superior Institute for the Environmental Protection and Research) for the monitoring of passerines migration in the Mediterranean islands surrounding Sicily, Italy – both Ustica and Lampedusa islands in 2012; Ustica island in 2013.
- **2007-Present:** Participated as a volunteer in bird banding sessions for wild birds in various nature reserves of Sicily, Italy: the “Pergusa Lake” reserve (Enna township); the “Immacolatelle and Micio Conti Park” reserve (Catania township); the “Vendicari” reserve (Syracuse township); the “Priolo’s Salt Pans”, focused on banding Greater flamingo’s chicks (*Phoenicopterus roseus*) (Syracuse township).