



Livia Chavko

WORK EXPERIENCE

"Charles Darwin" Department of Biology and Biotechnology - La Sapienza University of Rome

City: Rome | **Country:** Italy

[01/12/2024 - Current]

Research fellow - marsican brown bear (*Ursus arctos marsicanus*) project

Research activity on the endangered marsican brown bear's population viability using Vortex software.

EDUCATION AND TRAINING

[10/04/2024 - 29/07/2024]

Wildlife field technician intern (beaver and moose project, mountain hare phenology project)

Inland Norway University Of Applied Sciences, Evenstad, Innlandet, Norway

City: Evenstad campus | **Country:** Norway |

[01/10/2021 - 22/03/2024]

Master degree in Ecobiology

UNIVERSITÀ DEGLI STUDI DI ROMA "LA SAPIENZA"

Address: Piazzale Aldo Moro, 5, 00185, Rome, Italy | | **Final grade:** 110 / 110 with laude | **Thesis:** Aggiornamento dei confini dell'areale centro-meridionale italiano della lontra euroasiatica (*Lutra lutra*) ed analisi delle potenzialità di espansione nel breve-medio termine - Update on the distribution range of the Eurasian otter (*Lutra lutra*) in Italy and connectivity analysis using Circuitscape software

[01/10/2017 - 23/03/2021]

Bachelor degree in Natural Sciences

UNIVERSITÀ DEGLI STUDI DI ROMA "LA SAPIENZA"

Address: Piazzale Aldo Moro, 5, 00185, Rome, Italy | | **Final grade:** 110 / 110 with laude | **Type of credits:** ECTS | **Number of credits:** 180 | **Thesis:** La sindrome embolica nei cetacei: il ruolo dei sonar nell'inquinamento acustico degli oceani - The embolic syndrome in cetaceans: the role of sonars in the noise pollution of the oceans

Ecology, etology, wildlife conservation, botanics, geology, paleontology, mineralogy and petrology.

[15/09/2012 - 06/07/2017]

High school leaving qualification in classical studies

Liceo Ginnasio Statale Dante Alighieri

Address: Via Ennio Quirino Visconti, 13, 00193, Rome, Italy | | **Final grade:** 95 / 100

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

english

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

SKILLS

KOBO Collect | Agouti | Vortex | Microsoft office softwares | GPS devices | Circuitscape

more

Software: R | Software GIS (QGIS) | SNAP software

PUBLICATIONS

[2025] **Expansion dynamic of the Eurasian otter (*Lutra lutra*) in central Italy and implications for the conservation of the species**

Reference: Livia Chavko, Simone Giovacchini, Enrico Mirone, Cecilia De Sanctis, Anna Loy (2025). Expansion dynamic of the Eurasian otter (*Lutra lutra*) in central Italy and implications for the conservation of the species. ECR 2025, 6-9 May 2025, L'Aquila, Italy

Abstract: After a dramatic decline peaked in Italy during the 1970s and mainly confined in the southern part of the peninsula, the Eurasian otter (*Lutra lutra*) is slowly recovering its former range, expanding towards the north. As listed in the Annex II and IV of the Habitats Directive (92/43/EEC), it is mandatory for EU members to report every six years on the status of populations.

In order to update the current distribution of otters, we carried out a standard survey in 13 hydrographic basins of Abruzzo region (expansion zone), for a total of 74 10x10km LAEA grid cells and 250 sampling sites.

Otter's presence signs were detected at 39 out of the 250 visited sites (15,6%) and in 9 out of 13 river basins, for a total of 21 new positive cells (47,2%) to be included in this year's 5th National Habitat Directive report. Compared to previous surveys the species presence was recorded for the first time in six river basins, and it was confirmed in three. The Tronto river, natural border between Abruzzo and Marche region, was established as the new northern boundary of the otter population living in South-central Italy. New presence data suggest an increasing expansion rate of the species in the last years, possibly due to carrying capacity (K) rapidly reached in the neighbouring river basins. A more accurate outlook on the expansion dynamic of the species in Central Italy and implications for conservation of the species according to the Habitats Directive will be further discussed.

Winner of the Best Poster Award.

Journal Name: 2nd Conference of Conservation Biology for Early Career Researchers organized by SCB Italy

[2024] **Assessing landscape connectivity and potential range expansion for the Eurasian otter (*Lutra lutra*) in Italy**

Chavko L., Jamwal P.S., Giovacchini S., Di Febbraro M., Loy A. (2024). Assessing landscape connectivity and potential range expansion for the Eurasian otter (*Lutra lutra*) in Italy. 7th European Congress of Conservation Biology (ECCB 2024) organized by SCB Italy, 17-21 June 2024, Bologna, Italy (Poster).

The Eurasian otter (*Lutra lutra*) is a semi-aquatic mammal that has undergone a dramatic reduction of range distribution in Europe since 1970. As it is sensitive to habitat fragmentation assessing the ecological corridors existing in human-dominated landscapes is a conservation priority. Our aim is to identify the connectivity routes between and within river basins that could play a fundamental role in the re-expansion of the south-central population of otters towards the north of Italy. First, we collected presence data in south-central Italy and produced a species distribution model to identify

suitable areas. Then we used the Circuitscape software to consider all pathways existing across the landscape, also including the sea as a possible connection route between basins. The model identifies multiple corridors existing in the southern and northern parts of Italy, and confirmed the sea as a good connection route, in contrast to large cities and mountain areas. Highest connectivity values are observed in the central (north-south direction) portion of Italy and lowest ones among river basins in the southern part of the peninsula, within the western portion of the Po basin, and in Marche region. Implications for future dispersal and management will be further discussed.

[2024] **Range dynamic and carrying capacity of the Eurasian otter in the expansion area of Central Italy.**

Giovacchini S., Chavko L., Jamwal P.S., De Sanctis C., Mirone E., Di Febbraro M., Loy A. (2024). Range dynamic and carrying capacity of the Eurasian otter in the expansion area of Central Italy. XIII Congresso Italiano di Teriologia, 3-5 Luglio 2024, Pesche (IS), Italy.

Link: https://www.mammiferi.org/wp-content/uploads/2024/06/ABSTRACTS_XIII-Congresso-ATIt.pdf

[2024] **La lontra nelle Marche: distribuzione storica e monitoraggio dello stato attuale - The eurasian otter (Lutra lutra) in the Marche region (Italy): distribution and monitoring of current population status**

Giovacchini S., Chavko L. (2024). La lontra nelle Marche: distribuzione storica e monitoraggio dello stato attuale. In: Canu A., Galaverni M., Giovacchini S., Di Febbraro M., Loy A (A cura di) 2024. La lontra in Italia. WWF Italia.

We run a systematic otter survey along the river Tronto in Marche Region visiting 10 cells having a size of 10x10 km (ETRS89 LAEA projection). We searched for the otter presence signs by walking along 600 m of river shore. We found otter signs at 3 out of 21 sites checked, included in 3 grid cells out of 10 (30%). Positive sites are located in the middle course of the river Tronto, whereas the mouth and the upper stretches were devoided of otter signs. These new findings confirm the expansion of otter range along the Adriatic side of the peninsula and establish a new northern boundary of the southern population.

Link: https://www.wwf.it/uploads/A4_WWF_la_Lontra_in_Italia_SMART.pdf

[2023] **Genetica non invasiva, fototrappolaggio, analisi della dieta e censimento della metapopolazione di lontra (Lutra lutra) residente nel Parco Nazionale d'Abruzzo Lazio e Molise e nelle aree limitrofe.**

Loy A., Giovacchini S., Agostini G., Chavko L., D'Aloise S., De Sanctis C., Gentile G., Mirone E., Papaleo L., Colangelo P. (2023). Genetica non invasiva, fototrappolaggio, analisi della dieta e censimento della metapopolazione di lontra (Lutra lutra) residente nel Parco Nazionale d'Abruzzo Lazio e Molise e nelle aree limitrofe. Accordo di ricerca tra Università del Molise, CNR-IRET e Parco Nazionale d'Abruzzo, Lazio e Molise 'Studio di genetica non invasiva sulla popolazione di lontra (Lutra lutra) residente nel Parco Nazionale d'Abruzzo Lazio e Molise e censimento della specie nelle aree limitrofe di potenziale espansione'. Rapporto finale.

Camera trapping and diet analysis of the Eurasian otter (*Lutra lutra*) metapopulation in the Abruzzo, Lazio and Molise National Park (Italy) and distribution of the species in neighbouring areas.

[2023] **Struttura di popolazione, flusso genico e valutazione dell'inbreeding della popolazione di lontra (*Lutra lutra*) del Parco Nazionale d'Abruzzo, Lazio e Molise**

Agostini G, Gentile G, Giovacchini S, Loy A, De Sanctis C, Mirone E, Papaleo L, Chavko L, Colangelo P. (2023). Struttura di popolazione, flusso genico e valutazione dell'inbreeding della popolazione di lontra (*Lutra lutra*) del Parco Nazionale d'Abruzzo, Lazio e Molise. Accordo di collaborazione scientifica tra Università del Molise, CNR-IRET e PNALM "Studio di genetica non invasiva sulla popolazione di lontra (*Lutra lutra*) residente nel Parco Nazionale d'Abruzzo, Lazio e Molise e censimento della specie nelle aree limitrofe di potenziale espansione", Relazione finale.

Population structure, gene flow and inbreeding evaluation for the Eurasian otter (*Lutra lutra*) population in the Abruzzo, Lazio and Molise National Park (Italy).

DRIVING LICENCE

Cars: B

CONFERENCES & SEMINARS

- [06/05/2025 - 09/05/2025] **2nd Conference of Conservation Biology for Early Career Researchers (ECR2025) organized by SCB Italy**
L'Aquila, Abruzzo, Italy
Partecipazione al congresso e presentazione del poster. Vincitore del Best Poster Award.
- [17/06/2024 - 21/06/2024] **7th European Congress of Conservation Biology (ECCB2024), organized by SCB Italy**
Bologna, Italy
Partecipazione al congresso e presentazione del poster.
- [11/10/2023 - 11/10/2023] **"Flowing Nature - Freshwater habitats: value, conservation strategies, threats and biodiversity" workshop, organized by WWF**
Isernia, Italy
Partecipazione al workshop.
- [26/04/2023] **"Monk seal: biology, ethology, methods for monitoring and data collection" seminar**
online
Seminario di formazione del WWF Italia in collaborazione con il Gruppo Foca Monaca APS.
- [08/06/2022 - 31/08/2022] **"GIS and remote sensing on wildlife" seminars**
online, hosted by Master in GIScience e Sistemi a Pilotaggio Remoto - University of Padova
"CLIMATE CHANGE AND EXTREME EVENTS: SAR DATA FOR MONITORING THE HYDROGEOLOGICAL RISK WITH THE USE OF GOOGLE EARTH ENGINE" - June 8th 2022.
"GIS E REMOTE SENSING FOR WILDLIFE: MAPPING AND INTERPRETING WILDLIFE MOVEMENTS AND ETIOLOGY" - July 6th 2022.

"PROFESSIONAL MEASUREMENTS ON FIELD: FROM QGIS TO QFIELD, TOWARDS GIS MOBILE" - August 31st 2022.

[26/03/2022 - 27/03/2022] **"2 days with sea turtles" seminars, organized by Tartalazio regional network**

Castello di Santa Severa, Rome (Italy)

12 ore di teoria ed attività pratica svolte in presenza finalizzate all'acquisizione delle conoscenze necessarie al riconoscimento delle specie di tartarughe marine presenti nel Mediterraneo, al loro recupero e tutela, individuazione dei nidi e delle tracce sulla terraferma.

12 hours of theory and practical activities carried out in person, aimed at acquiring the knowledge necessary for the identification of the species of sea turtles that are present in the Mediterranean, their recovery and protection, identification of nests and tracks on land.

[03/08/2021 - 10/08/2021] **Vesulus "Monviso Summer School" in the Monviso National Park (Italy)** Monviso

National Park (Piemonte region, Italy)

Workshops and hands-on sessions on wildlife (insects, amphibians, ichthyofauna, ungulates and birds) inside the Monviso National Park (Piemonte, Italy.)

[02/04/2021 - 29/06/2021] **Marine Biology course** online

Marine Biology course on the Centre of Excellence (CoE) online platform

PROJECTS

[10/04/2024 - 29/07/2024] **Wildlife research internship at Inland Norway University of Applied Sciences - Evenstad, Innlandet, Norway**

Beaver and moose project:

- Data collection in the field to detect signs of the beaver and moose presence in the Finnskogen area in Norway and Sweden. Fieldwork consisted in placing and then retrieving 40 camera-traps and walking transects along main water bodies shores (rivers and lakes), identification of woody plants and shrubs and animal tracks.
- camera-traps data analysis

Mountain hare phenology project:

The project aimed to investigate mountain hare coat colour phenology and mismatch in relation to climate change and shorter snow cover duration in order to learn about the adaptive potential of species in general towards climate change. What factors determines timing of moulting? How may mountain hares adapt towards a milder climate with less snow? Fieldwork consisted in finding radio-collared hares and record a set of parameters (vegetation cover type and cover percentage) in the place where hares are found.

[01/03/2023 - Current] **Update on the distribution range of the Eurasian otter (*Lutra lutra*) in Italy and connectivity analysis using Circuitscape**

I searched for otter's presence signs (spraints, jellies and tracks) in 13 hydrographic basins in Abruzzo region, following the standard survey method proposed by the IUCN Otter Specialist Group (Reuther et al., 2000) in order to assess the northern limit of the Italian distribution. Then I collected presence data from south-central Italy since 1980 and produced a species distribution model (SDM) and a connectivity model using the software Circuitscape, also including the sea as a possible connection route between river basin.

VOLUNTEERING

[13/04/2021 - Current] **Tartalazio** Lazio

Volontariato per la Rete regionale del Lazio per il recupero, il soccorso, l'affidamento e la gestione delle tartarughe marine ai sensi delle linee guida MATTM, oggi Ministero dell'Ambiente e della Sicurezza Energetica (MASE).

Volunteering for the regional network dedicated to the rescue, recovery and management of sea turtles in Lazio region (Italy).

[05/05/2025 - Current] **RECUP** Rome

Member of RECUP, a non-profit organization focused on reducing food waste by collecting unsold food and redistributing it to people in need.

[03/07/2024 - 05/07/2024] **XIII Congresso Italiano di Teriologia** Dipartimento di Bioscienze e Territorio, UniMol, Pesche (IS), Molise (Italia)

Participation in the organization of the Congress (helper role)

[08/03/2020 - 09/04/2024] **LIPU** Wildlife Rescue center "LIPU" in Rome

[03/10/2022 - 09/10/2022] **Cetacean Sanctuary Research Project (CRS)** Ligurian Sea

workshop and data collection on cetaceans in the Ligurian Sea, on board of Pelagos catamaran - Cetacean Sanctuary Research (CSR) hosted by Tethys Research Institute.

[08/08/2019 - 16/08/2019] **WWF** Policoro WWF Oasis

assistance to biologists in the Wildlife Rescue Center located inside the Policoro WWF Oasis (Basilicata, Italy).

La sottoscritta dichiara di essere consapevole che il presente *curriculum vitae* sarà pubblicato sul sito istituzionale dell'Ateneo, nella Sezione "Amministrazione trasparente", nelle modalità e per la durata prevista dal d.lgs. n. 33/2013, art. 15.

Luogo e data

Roma, 6 Novembre 2025

F.to

Livia Chavko