

Violette Chiara

Researcher in Biology

Personal information

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Academic curriculum

2019 : Ph.D. in ethology, "Ontogenesis and sociality in spiders", University of Toulouse 3 (France).

2016 : Master "Animal and Human Behavior", option Ecology. University of Rennes 1 (France).

2014 : Licence "Sciences de la Vie et de l'Environnement", option Biologie des Organismes. University of Lorraine (France).

Scientific activities

September 2023 – August 2026: Museum and Institute of Zoology PAS (Polish Academy of Science), Wrasaw, Poland. PI.

Mai 2023 – April 2024: Lund and Cambridge Universities, Sweden/UK. Post-Doc

December 2023: Museum and Institute of Zoology PAS (Polish Academy of Science), Wrasaw, Poland. Participation in a scientific project as a temporary team member.

2020-2022: Department of Ecology and Animal Biology, University of Vigo, Vigo, Spain (Granted by the Fyssen Foundation). Post-Doc

2016-2019: CRCA (CBI), University Toulouse 3, UMR 5169, France. Supervisor Dr. Raphaël Jeanson. Ph.D.

January-June 2016: EthoS Laboratory, University of Rennes 1, UMR 6552, France. Supervisor Pr. Marie Trabalon. Master 2 internship.

Avril-Mai 2015: EthoS Laboratory, University of Rennes 1, UMR 6552, France. Supervisor Pr. Marie Trabalon. Master 1 internship.

August 2014: Institute of Genetics, Environment and Plant Protection, University of Rennes 1, UMR 1349, France. Supervisor Dr. Fabrice Lamy. Voluntary internship of Licence 3.

International stay

Decembre 2018 : Interdisciplinary Center for Nonlinear Phenomena and Complex Systems, Université Libre de Bruxelles. Supervisor Pr. Jean-Louis Deneubourg (from December 5 to 11).

Scholarships and Awards

Mai 2023 - Young Researcher Award of the French Society for the Study of Animal Behavior.

2019 - 2-year post-doctoral fellowship granted by the Fyssen Foundation (France).

2018 - UIEIS travel grant to participate in the 18th International Congress of the UIEIS (International Union for the Study of Social Insects) in Guarujá, Brazil.

2016 - Doctoral scholarship granted by the Ministry of Higher Education, Research and Innovation (SEVAB doctoral school competition).

Published scientific articles

Kim S.Y., **Chiara V.**, Álvarez-Quintero N., da Silva A. & Velando A. (2023). Maternal effect senescence via reduced DNA repair ability in the three-spined stickleback. *Molecular Ecology*. 00, 1– 12.

Chiara V. & Kim S.Y. (2023). AnimalTA: a highly flexible and easy-to-use program for tracking and analyzing animal movement in different environments. *Methods in Ecology and Evolution*. 14, 1699– 1707.

Sanmartín-Villar I., Cruz da Silva E., **Chiara V.**, Cordero-Rivera A. & Lorenzo-Carballa MO. (2022) Genetic divergence and aggressiveness within a supercolony of the invasive ant *Linepithema humile*. *NeoBiota*. 77: 125-153.

Chiara V., Arrufat P. & Jeanson R. (2022). A variable refractory period increases collective performance in noisy environments. *PNAS*. 119, e2115103119.

Kim SY., **Chiara V.**, Álvarez-Quintero N., & Velando A. (2022). Mitochondrial DNA content in eggs as a maternal effect. *Proceedings of the Royal Society B*. 289, 20212100.

Chiara V., Velando A. & Kim SY. (2022). Relationships between male secondary sexual traits, physiological state and offspring viability in the three-spined stickleback. *BMC Ecology and Evolution*. 22, 4.

Álvarez-Quintero N., **Chiara V.** & Kim SY. (2021). Trap versus net: behavioural sampling bias caused by capture method in three-spined sticklebacks. *Behavioural Processes*. 92, 104504.

Chiara V. & Jeanson R. (2020). Influence of past and current social contexts on hunting behaviour in spiderlings. *Behavioral Ecology and Sociobiology*. 74, 87.

Chiara V., Ramon-Portugal F. & Jeanson R. (2019). Social intolerance is a not a cause, but a consequence of dispersal in spiders. *PLOS Biology*. 17, e3000319.

Ruhland F., **Chiara V.** & Trabalon M. (2016). Age and egg-sac loss determine maternal behavior and locomotor activity of wolf spiders (Araneae, Lycosidae). *Behavioral Processes*. 132, 57-65.

International communications

Oral communications

1. Groups are choosier than individuals: shoaling preference for kin and the effect of maternal age. V. Chiara, J. Comesaña Rodríguez & SY. Kim. ECBB 2022 "All life is Social". (Groningen, The Netherlands, 2022)
2. What triggers the decline of social tolerance in solitary spiders? V. Chiara & R. Jeanson. 18th international congress of the IUSI (International Union for the Study of Social Insects). Guarujá, Brazil, 2018.

National Communications

Oral communications

1. Comment des règles comportementales simples façonnent le comportement collectif. V. Chiara. 52^{ème} colloque de la Société Française pour l'Étude du Comportement Animal, Tours, France, 2023.
2. How do social spiders achieve synchronization during collective hunting? V. Chiara, P. Lacoste, P. Arrufat, J-L. Deneubourg, R. Jeanson. 19^{ème} congrès de Biologie de l'Insecte, Albi, France, 2019
3. From social to solitary life: which mechanisms trigger the loss of tolerance in spiderlings? V. Chiara & R. Jeanson. 14^{ème} congrès d'Écologie et Comportement, Toulouse, France, 2019
4. Expérience sociale précoce et déclin de la tolérance chez les juvéniles d'une araignée solitaire. V. Chiara & R. Jeanson. 48^{ème} congrès de la SFECA (Société Française d'Étude du Comportement Animal). Rennes, France, 2018
5. Aggregation and dispersal in spiderlings of the solitary spider *Agelena labyrinthica*. V. Chiara & R. Jeanson. 29^{ème} congrès de l'UIEIS-SF (Union Internationale pour l'Étude des Insectes Sociaux – Section française). Paris, France, 2017.

Posters

1. Activité locomotrice, comportements de soins et de recherche du cocon chez l'araignée errante *Pardosa saltans* (Lycosidae). V. Chiara, F. Ruhland, N. Morris & M. Trabalon. 46^{ème} congrès de la SFECA (Société Française d'Étude du Comportement Animal). Caen, France, 2016.

2. Mise en évidence de composés diminuant la ponte de *Delia radicum* au champ et au laboratoire. F. C. Lamy, A. M. Cortesero, D. Poinot, C. Ridard, E. Gazengel, V. Chiara & S. Dugravot. GDR d'Écologie Chimique. France, 2014.

Awareness and popularization work

- Intervention in a student club (Warsaw, Poland) to present the social behavior of spiders (28/11/2022).
- Publication of an article in the popularization journal *The Science Breaker*. V. Chiara & R. Jeanson (2022). The mechanisms behind synchronized hunts in spiders. *The Science Breaker*
- Participation in a radio interview on the theme of social spiders (Quirks and Quarks, CBC, Canada, 2022).
- Intervention in an elementary school (Paul Dottin school, Toulouse) to introduce social insects to students (2018).
- Four oral presentations on the theme of arthropod behavior with the association Les Etoiles Brillant Pour Tous, an association aiming to facilitate access to scientific culture for impeded audiences (2017-2019).
- Presentation of the characteristics of spider silk during a scientific mediation day organized by the Natural History Museum of Toulouse (2017).

Teaching

2022. Intervention in the TMBI (Toulouse Mind and Brain Institute, Toulouse, France) fall school.

2022. One-hour course on the emergence of sociality in a university program for retirees.

2021. Supervision of a Master student.

2016-2019. **Teaching** at the University of Toulouse 3. Licence 1 and 3 / Master 1 - Ethology, Ecology, Programming with R, Statistics and Animal Anatomy (total : 150 hours).

2017-2019 : Supervision of one Master student and two Bachelor students.

Licenses and patents

I developed the AnimalTA software. The goal of this software is to provide researchers with an all-in-one video tracking program that allows to prepare videos (conversion, cutting), to track them and to analyze the obtained trajectories. The program is free of charge, does not require the installation of any third-party application and offers a user-friendly interface allowing easy use even for people with little or no knowledge of video analysis. AnimalTA has been specially designed for tracking many videos recorded in difficult conditions (camera instability, changes in brightness, inhomogeneous background...). The program is protected by an MIT license.

More information: <http://vchiara.eu/index.php/animalta>

Languages

French : Mother tongue

English: written and spoken fluently (TOEIC, 930/990)

Spanish: Beginner

Galician: Beginner

Computer skills

Pack Microsoft Office, ImageJ, Gimp, Photoshop, Adobe Animate.

Programmation : R, Python, Actionscript, Netlogo, Java (bases).