Jérôme Marcel Walter GIPPET, PhD

Birth date: July 6th, 1989

Citizenship:
French
Swiss permit C

Situation:
Civil partnership
One child

Languages:
French (native)
English (fluent)
Spanish (fluent)

RESEARCH INTERESTS

Biostatistics
Biotic interactions
Conservation
Culturomics
Ecology
iEcology
Machine learning
Modelling
Spatial ecology
Urban ecology

CONTACT

Department of Ecology and Evolution

Le Biophore
University of Lausanne
1015 Lausanne
Switzerland

0000-0002-1952-028X

EDUCATION

2013-2016

PhD in Ecology, University of Lyon, France
"*Patterns of distribution, human-mediated dispersal and intraspecific variations in urbanized landscapes: Responses of ants to urbanization*"
Supervisors: Pr. Nathalie MONDY and Dr. Bernard KAUFMANN

2011-2013

MSc – Ecology, Evolution, Biometry, University of Lyon, France

Second year internship: "*Secondary spread of the invasive ant Lasius neglectus in an urbanized landscape*"
Supervisor: Dr. Bernard Kaufmann

First year internship: "*Environmental factors shaping ants assemblages in a biological invasion context*"
Supervisor: Dr. Bernard Kaufmann

2007-2011

BSc – Biology of Organisms and Populations, University of Lyon, France

PROFESSIONAL EXPERIENCE

2019-present

Postdoctoral researcher
Bertelsmeier group - Department of Ecology and Evolution
University of Lausanne, Switzerland

2017-2018

Relocation to Costa Rica for supporting partner's career
Research assistant: *Effect of artificial light pollution on toads' behaviour and physiology* - La Selva, Costa Rica
Freelance personal research project: *Uncovering the emerging global trade in ants as pets*

SELECTED PUBLICATIONS

Gippet JMW and Bertelsmeier C. (2021). Invasiveness is linked to greater commercial success in the global pet trade. ***PNAS*** 118: e2016337118.

Rocabert C, Fenet S, Kaufmann B, **Gippet JMW** (2023). IAccounting for the topology of road networks to better explain human-mediated dispersal in terrestrial landscapes. ***Ecography*** e07068.

Gippet JMW, Liebhold AM, Fenn-Moltu G, and Bertelsmeier C. (2019). Human-mediated dispersal in insects. ***Curr Opin Insect Sci*** 35: 96–102.

SKILLS

Field

Systematic sampling of arthropods (Hand collection, Baiting, Pitfall trap, Berlese trap, Digging)
Geotagging (field measurements, GPS/GNSS pointing)
Field experiments (ant-plant interactions, invasive ant control)

Lab

Taxonomic identification of arthropods
Behavioural experiments in ants (foraging behaviour, aggressiveness)
Common garden experiments
Morphometry (Olympus SZX16 stereomicroscope, Olympus DP25 camera, cellD® software)
DNA extraction

GIS

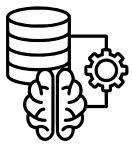
Geographic Information System and Land Cover Classification
- ArcGIS 10.1 (Spatial analysist)
- Qgis
- R (packages ecospat, irr, raster, rgdal, RStoolbox, sf, sp, tmap, ...)

Data analysis

Statistical analyses with R
- Generalized mixed models, incl. zero-inflation, overdispersion, phylogenetic
- Machine learning models, incl. Random forest, BRTs, Neural networks
- Multivariate analysis (GLM, PCA, NMDS)

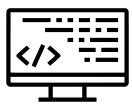
R packages (ade4, gbm, glmmTMB, DHARMa, mgcv, phylolm, randomForest, vegan, ...)
Other softwares: Structure, CircuitScape, GitHub Desktop

Data mining & processing



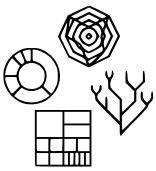
Collection, harmonization and compilation of large databases
- LEMIS database (>5 million records)
- CITES wildlife trade database (> 2 million records)
- Social media data (>40,000 textual contents from Instagram posts)
- Species trait databases (COMBINE, AntProfiler, BirdLife)

Coding & Programm.



Advanced programming in R and Python
- Task automation and code optimization
- Web scraping (in Python BeautifulSoup, Requests, Selenium)
- Taxonomic harmonization (in R taxize, taxizedb)
- Text analysis (in R and Python)

Visualization & reporting



Advanced scientific visualization in R and Python
- Raw data visualization
- Methodological guides
- Temporal and spatial patterns
- Variations and correlations
- Models' outputs (marginal effects, standardized effect size, predictions)
- Artistic rendering of scientific representations

TEACHING

2019-2023

Teaching assistant - University of Lausanne (~100h)
Botany (B.S.)
Introduction to data analysis (B.S.)
Predicting Species Distribution (M.S.)
Scientific writting (M.S.)

2013-2016

Teaching assistant - University of Lyon (192h)
Animal Biology (B.S.)
Behavioral Ecology (M.S.)
Biodiversity Conservation (B.S.)
Entomology (B.S.)
Sustainable development (B.S.)

COMMUNICATIONS

2023

Gippet JMW, Schweizer M & Bertelsmeier C. ***Invasive and zoonotic species predominate in the global wildlife trade*.** TiBE 2023 international conference, Vila do Conde (Portugal).

Gippet JMW, Sherpa Z, Gutierrez L, Arvela Cardona C & Bertelsmeier C. ***Les fourmis, de nouveaux animaux de compagnie... envahissants*.** IUSSI-sf 2023, Toulouse (France).

Gippet JMW. ***Socio-ecological traps in the global wildlife trade.*** Invited seminar - LEHNA seminars, University of Lyon (France).

2022

Gippet JMW, Sherpa Z & Bertelsmeier C. "***Are social media data reliable for monitoring emerging pet trades***". INTECOL 2022 international conference, Geneva (Switzerland).

2021

Gippet JMW & Bertelsmeier C. ***When pests become pets: invasive species are favoured in the global pet trade***. Invited seminar - Biology and diseases of wild animals - Lectures series - University of Zurich (Switzerland).

2020

Gippet JMW & Bertelsmeier C. ***Invasiveness increases commercial success in the global pet trade***. Invited seminar - Journée suisse des Hyménoptères 2020, Berne (Switzerland).

2019

Gippet JMW, Keller L & Bertelsmeier C. ***The online pet trade disperses highly invasive ant species and potential future invaders***. ESA 2019 international conference, Louisville, Kentucky (USA).

2018

Gippet JMW & Bertelsmeier C. ***New opportunities for future ant invasions: Global trade in living ants as non-traditional pets.*** Invited seminar, Department of Ecology and Evolution, University of Lausanne, Lausanne (Switzerland).

2016

Gippet JMW, Mondy N, Dumet A, Henri H, Gibert P, Ślipiński P, Pomorski JJ, Kowalewska K, Kaufmann B. ***Phenotypic shifts between urban and rural conspecifics: Responses to urbanization in the ant Lasius niger***. Poster, BioEnviS, Lyon (France).

Gippet JMW, Fenet S, Dumet A, Kaufmann B & Rocabert C. ***MoRIS: Model of Routes of Invasive Spread. Human-mediated dispersal, road network and invasion parameters.*** IENE 2016 international conference, Lyon (France).

2015

Gippet JMW, Dumet A, Mondy N & Kaufmann B. ***Impact de l'urbanisation sur la composition des communautés de fourmis.*** IUSSI-sf 2015, Tours (France).

Gippet JMW, Rocabert C, **Fenet S**, Dumet A & Kaufmann B. ***Modeling human mediated spread at the landscape scale: road network and invasion parameters. The example of the Invasive ant Lasius neglectus.*** RMA 2015 international conference, Bordeaux (France).

2014

Gippet JMW, Rocabert C & Kaufmann B. ***Modéliser la propagation d'origine humaine à l'échelle du paysage : réseau routier et paramètres d'invasion.*** Colloque de lancement du GdR InvaBio, Rennes (France).

GRANTS

2018

Grant "Biologie évolutive 2018" (2500 €)
From the country snail to the town snail: understanding spatial-genetic patterns in *Helix aspersa*?

2015

Research project Grants (5000 €) from the Institute of Complex Systems (IXXI), Lyon
MoRIS: Modeling human-mediated secondary spread of invasive species

2014

Inter-Labs research funding (5000 €) from FR41 (Bio Environnement Santé, Lyon)
HSP genes expression in urban and rural populations of the ant *Lasius niger*

2013

Intra-Lab transversal grant (1700 €) from UMR5023, Villeurbanne
Eco-physiological and genetic variation in urban and rural populations of the ant *Lasius niger*

2013

Three years PhD grant (~100,000 €), French Ministry of Higher Education and Research (ED 341)

MENTORING

Summary (2014-2023): 25 internships, 22 students, including 18 Masters

Legend
- Master, 2nd year
- Master, 1st year
- Bachelor, 3rd year

2023

Catarina Arvela Cardona
Understanding temporal changes in commercial parameters in the global pet trade in ants

2022

Mattéo Schweizer
The unintended consequences of current international wildlife trade regulations on invasion and epidemic risks

Catarina Arvela Cardona
Prediction of commercial success in pet ants based on consumer's preferences, budget and market accessibility

Inès Moreno *(co-supervion with P.J. Stephenson & L. Fumagalli)*
Factors affecting biodiversity data availability and use in East Africa

2021

Zoé Sherpa
Quantifying the global pet trade in invertebrates and associated risks of biological invasions

Laura Gutierrez
What ecological, morphological and aesthetical characteristics favor the trade in ants as pets

Clément Mottier *(co-supervion with J. Isaïa, O. Glaizot & P. Christe)*
The repellent effect of *Tapinoma magnum* secretion on other pests such as mosquitoes and bed bugs

2020

Jérémie Moulin
The Giant African Land Snail, a new trendy pet with important risks for public health

Zoé Sherpa
Risks of invasion associated with the global pet trade in ants

Aymeric Bonnamour *(co-supervion with C. Bertelsmeier)*
Plant and insect invasions follow two waves of globalisation

2019

Lorena George
Ecological impacts of a new alien ant species in Switzerland

Marc Bastardot *(co-supervion with W. Heim & P. Christe)*
Identifying priority sites for the conservation of the East-Asian migratory songbirds

Aymeric Bonnamour *(co-supervion with C. Rocabert)*
Combining landscape genetics and numeric simulation to understand how humans disperse invasive species at landscape scale

2016

Benoit Bunouf & Baptiste Richoux
Morphologic variation between urban and rural populations of the ant *Lasius niger*

2015

Camille Blain, Tommy Faure-Brac, Django Maurel & Jérémie Monsimet
Impact of urbanization on ant colonies density

2014

Jordan Galli & Sylvètre Rivière
Impact of urbanization on ant communities

Elliot Cugnon, Ndèye Licka Dieye & Julie Verrier
Effect of urbanization on foundation success in the urban tolerant ant *Lasius niger*

Fiona Winkler
Prevalence of the alien ectoparasitic fungus *Laboulbenia formicarum* in native and invasive *Lasius* ants species

POPULAR SCIENCE AND OUTREACH

- Journée Oser tous les Métiers (JOM) - University of Lausanne 2021
  Climate change awareness-raising on Lausanne's market - Lausanne 2021 (3 events)
- Mystères de l'UNIL (ants-related activities for 7-10 yo) - Lausanne 2019, 2021
- Sauvageons en ville (urban conference on ants) - Lausanne 2019
- Opération Fourmis (ant collecting tutorial) - Lausanne 2019

- Actor (as a mymecologist) in the theater piece "Société en Chantier" by Stephan Kaegi
  Théâtre de Vidy - International tour 2020-2023
  (~40 representations in Clermont-Ferrand, Mulhouse, Lille, Chambéry, Lausanne, Toulouse, Strasbourg, Rennes)
- RTS radio - CQFD - 2021
- RTS television - Temps présent - 2021

- Ouest France (in French, 2015)
- Forbes (online only, 2021)
- Frankfurter Allgemeine Zeitung (in German, 2021)
- The conversation (online only, 2021)
- Natur Magazin (in German, July 2023)

MEMBERSHIPS / AFFILIATIONS

Founding member of the science popularizing association L'aude au Nat' (since 2014)
Member of the International Union for the Study of Social Insects (IUSSI) (since 2015)
Member of Swiss league for the protection of nature Pro Natura (since 2020)

REVIEWING ACTIVITIES

Scientific journals

Apidologie
Behavioral Ecology and Sociobiology
Biodiversity and Conservation
Biological Invasions
Conservation Biology
Diversity and Distributions
Ecology Letters
Global Ecology and Conservation
Insect Conservation and Diversity
Insectes Sociaux
Journal of Applied Ecology
MDPI ijerph, insects, life, sustainability
Myrmecological News
Scientific Reports

Funding agencies

BIENVENÜE project - Brittany Region, France
The Czech Science Foundation (GACR)

MAJOR COLLABORATIONS

Prof. **Cleo Bertelsmeier** - University of Lausanne (Switzerland)
Dr. **Hugo Cayuela** - University of Lyon (France)
Dr. **Bernard Kaufmann** University of Lyon (France)
Dr. **Charles Rocabert** - Heinrich Heine University Düsseldorf (Germany)
Dr. **Simon Tragust** - Martin Luther University Halle-Wittenberg (Germany)

List of publications – Jérôme Gippet – January 2024

Coding:
***** > First author
****** > Last author
° > co-first author
Supervised student

In preparation

24**. °**Bonnamour A.**, °Rocabert, C., Fenet, S., Garnas, J., Kaufmann, B., & **Gippet, J. M. W.** (2024). Human-mediated dispersal predicts spatial patterns of genetic differentiation at regional scale. *In preparation*.

23. Destour, G., Kaufmann, B., Centanni, J., Tauru, H., **Gippet, J. M. W.**, Dumet, A., Doums, C., Labacci, A., Lucas, A., Vergnes, A., Blatrix, R., & Javal, M. (2024). Genetic tracing reveals the role of ornamental plant trade in the simultaneous spread of three invasive ant species in Western Europe. *In preparation*.

22. Cayuela, H., **Gippet, J. M. W.**, […], & Lena, J-P. (2024). Eco-evolutionary drivers of the remarkable variability of amphibian adult survival. *In preparation*.

21*. **Gippet, J. M. W.**, **Schweizer, M.**, & Bertelsmeier, C. (2024). Invasive and zoonotic species predominate in the global wildlife trade. *In preparation*.

Published

20**. Rocabert, C., Fenet, S., Kaufmann, B., & **Gippet, J. M. W.** (2023). Accounting for the topology of road networks to better explain human-mediated dispersal in terrestrial landscapes. **Ecography**, e07068. https://doi.org/10.1111/ecog.07068

19*. **Gippet, J. M. W.**, Bates, O. K., **Moulin, J.**, & Bertelsmeier, C. (2023). The global risk of infectious disease emergence from giant land snail invasion and pet trade. **Parasites & Vectors**, 16(1), 363. https://doi.org/10.1186/s13071-023-06000-y

18. Cayuela, H., Gaillard, J.-M., Vieira, C., Ronget, V., **Gippet, J. M. W.**, Conde García, T., Marais, G. A. B., & Lemaître, J.-F. (2023). Sex differences in adult lifespan and aging rate across mammals: A test of the 'Mother Curse hypothesis.' **Mechanisms of Ageing and Development**, 212, 111799. https://doi.org/10.1016/j.mad.2023.111799

17*. **Gippet, J. M. W.**, **Sherpa, Z.**, & Bertelsmeier, C. (2023). Reliability of social media data in monitoring the global pet trade in ants. **Conservation Biology**, 37(3), e13994. https://doi.org/10.1111/cobi.14041

16. **Moreno, I.**, **Gippet, J. M. W.**, Fumagalli, L., & Stephenson, P. J. (2023). Factors affecting the availability of data on East African wildlife: The monitoring needs of conservationists are not being met. **Biodiversity and Conservation**, 32(1), 249–273. https://doi.org/10.1007/s10531-022-02497-4

15. Cayuela, H., Monod-Broca, B., Lemaître, J.-F., Besnard, A., **Gippet, J. M. W.**, Schmidt, B. R., Romano, A., Hertach, T., Angelini, C., Canessa, S., Rosa, G., Vignoli, L., Venchi, A., Carafa, M., Giachi, F., Tiberi, A., Hantzschmann, A. M., Sinsch, U., Tournier, E., … Léna, J.-P. (2022). Compensatory recruitment allows amphibian population persistence in anthropogenic habitats. **Proceedings of the National Academy of Sciences**, 119(38), e2206805119. https://doi.org/10.1073/pnas.2206805119

14*. **Gippet, J. M. W.**, Rocabert, C., Colin, T., Grangier, J., Tauru, H., Dumet, A., Mondy, N., & Kaufmann, B. (2022). The observed link between urbanization and invasion can depend on how invasion is measured. **Diversity and Distributions**, 28(6), 1171–1179. https://doi.org/10.1111/ddi.13509

13. Cayuela, H., Dorant, Y., Forester, B. R., Jeffries, D. L., Mccaffery, R. M., Eby, L. A., Hossack, B. R., **Gippet, J. M. W.**, Pilliod, D. S., & Chris Funk, W. (2022). Genomic signatures of thermal adaptation are associated with clinal shifts of life history in a broadly distributed frog. **Journal of Animal Ecology**, 91(6), 1222–1238. https://doi.org/10.1111/1365-2656.13545

12*. °**Gippet, J. M. W.**, °**George, L.**, & Bertelsmeier, C. (2022). Local coexistence of native and invasive ant species is associated with micro-spatial shifts in foraging activity. **Biological Invasions**, 24(3), 761–773. https://doi.org/10.1007/s10530-021-02678-2

List of publications – Jérôme Gippet – January 2024

11. Cayuela, H., Lemaître, J.-F., Muths, E., McCaffery, R. M., Frétey, T., Le Garff, B., Schmidt, B. R., Grossenbacher, K., Lenzi, O., Hossack, B. R., Eby, L. A., Lambert, B. A., Elmberg, J., Merilä, J., **Gippet, J. M. W.**, Gaillard, J.-M., & Pilliod, D. S. (2021). Thermal conditions predict intraspecific variation in senescence rate in frogs and toads. **Proceedings of the National Academy of Sciences**, 118(49), e2112235118. https://doi.org/10.1073/pnas.2112235118

10. Secondi, J., Mondy, N., **Gippet, J. M. W.**, Touzot, M., Gardette, V., Guillard, L., & Lengagne, T. (2021). Artificial light at night alters activity, body mass, and corticosterone level in a tropical anuran. **Behavioral Ecology**, 32(5), 932–940. https://doi.org/10.1093/beheco/arab044

9. **Bonnamour, A.**, **Gippet, J. M. W.**, & Bertelsmeier, C. (2021). Insect and plant invasions follow two waves of globalisation. **Ecology Letters**, 24(11), 2418–2426. https://doi.org/10.1111/ele.13863

8*****. **Gippet, J. M. W.**, Colin, T., Grangier, J., **Winkler, F.**, Haond, M., Dumet, A., Tragust, S., Mondy, N., & Kaufmann, B. (2021). Land-cover and climate factors contribute to the prevalence of the ectoparasitic fungus *Laboulbenia formicarum* in its invasive ant host *Lasius neglectus*. **Fungal Ecology**, 51, 101045. https://doi.org/10.1016/j.funeco.2021.101045

7*****. **Gippet, J. M. W.**, & Bertelsmeier, C. (2021). Invasiveness is linked to greater commercial success in the global pet trade. **Proceedings of the National Academy of Sciences**, 118(14), e2016337118. https://doi.org/10.1073/pnas.2016337118

6. Bujan, J., Charavel, E., Bates, O. K., **Gippet, J. M. W.**, Darras, H., Lebas, C., & Bertelsmeier, C. (2021). Increased acclimation ability accompanies a thermal niche shift of a recent invasion. **Journal of Animal Ecology**, 90(2), 483–491. https://doi.org/10.1111/1365-2656.13381

5. Cayuela, H., Prunier, J. G., Laporte, M., **Gippet, J. M. W.**, Boualit, L., Guérold, F., Laurent, A., Foletti, F., & Jacob, G. (2021). Demography, genetics, and decline of a spatially structured population of lekking bird. **Oecologia**, 195(1), 117–129. https://doi.org/10.1007/s00442-020-04808-4

4******. Charrier, N. P., Hervet, C., Bonsergent, C., Charrier, M., Malandrin, L., Kaufmann, B., & **Gippet, J. M. W.** (2020). Invasive in the North: New latitudinal record for Argentine ants in Europe. **Insectes Sociaux**, 67(2), 331–335. https://doi.org/10.1007/s00040-020-00762-9

3*****. **Gippet, J. M. W.**, Liebhold, A. M., Fenn-Moltu, G., & Bertelsmeier, C. (2019). Human-mediated dispersal in insects. **Current Opinion in Insect Science**, 35, 96–102. https://doi.org/10.1016/j.cois.2019.07.005

2*****. **Gippet, J. M. W.**, Piola, F., Rouifed, S., Viricel, M.-R., Puijalon, S., Douady, C. J., & Kaufmann, B. (2018). Multiple invasions in urbanized landscapes: Interactions between the invasive garden ant *Lasius neglectus* and Japanese knotweeds (*Fallopia* spp.). **Arthropod-Plant Interactions**, 12(3), 351–360. https://doi.org/10.1007/s11829-017-9589-2

1*****. **Gippet, J. M. W.**, Mondy, N., Diallo-Dudek, J., Bellec, A., Dumet, A., Mistler, L., & Kaufmann, B. (2017). I'm not like everybody else: Urbanization factors shaping spatial distribution of native and invasive ants are species-specific. **Urban Ecosystems**, 20(1), 157–169. https://doi.org/10.1007/s11252-016-0576-7