** Curriculum Vitae Caroline Nieberding **

Website: [**https://nieberdinglab.be**](https://nieberdinglab.be)

Short Bio:

Prof. C. Nieberding is a Professor of Terrestrial Ecology at UCLouvain (Belgium) since September 2008 and head of the team “Biodiversity, Ecology and Evolution”. She also teaches in the master of Ecology (since 2008) and in the Master of Sustainable development” (since 2019) at UCLouvain. Her research investigates the behavioural, physiological and molecular bases of adaptation of populations, and of speciation (appearance of new species) in animals an in particular insects and spider mites. Her research includes mostly behavioural adaptation including through learning, as well as sexual selection (as a driving force of speciation), dispersal (as a barrier or a facilitator of adaptation and of reproductive isolation), chemical communication (as the main mode of communication between living organisms). She published so far > 40 articles and reviews in peer-reviewed journals including *Trends in Ecology and Evolution (1 paper), Proceedings of the Royal Society (4 papers), Ecology Letters (2 papers),* *Functional Ecology* as well as 3 book chapters in renowed publishing groups. She was invited to present 33 plenary, symposium or oral communications and presented an additional 27 communications at international conferences and universities.

She was a scientific advisor for the International Society of Chemical Ecology (ISCE, 2015-2018). She is a scientific editor of the journal *Frontiers in Ecology and Evolution* section Chemical Ecology since 2014. She is member of the managing board of the *Peer Community in*, she helped founding PCI Zoology in 2020and she is a scientific editor for PCI Evolutionary Biology, PCI Ecology and PCI Zoology. She is the President of the Belgian FNRS *Doctoral School of Biology, Ecology and Evolution* since 2012, and she organizes yearly “Meet the expert” seminars and trainings for a group of ~100 PhD students in Wallonia. She is scientific advisor of the largest Museum about Africa in Tervuren and the National Mueum of Natural History, both hosting unique collections in natural history. She is part of the founding members of the *Louvain4Evolution* think-tank at UCLouvain since 2015 and she organizes yearly conferences to bring the Evolutionary theory to the general society. She teaches 12 courses for a total of ~150 hours every year from Bsc 1 to Msc 2 levels at UCLouvain in : Evolution, Ecology, Molecular Ecology, Animal Behaviour and Biogeography, and she is regularly invited for teaching Msc and PhD students abroad (Amsterdam University NL, Paris VI University France, Valencia university SP).

1) Academic degrees

- Oct 1997 - Sep 2001 : Master in Biological Sciences obtained with the Highest Honours every four years (“*Plus Grande Distinction*”), University of Liège, Belgium.

- Final undergraduate research in Plant Genetics (9 months), ranked 1st out of 37 students, obtained with Highest honours and the congratulations of the Jury; Award of *best Master thesis in Zoology* at University of Liège, Belgium.

- Oct 2001 – Jul 2005 : PhD in Evolutionary Ecology obtained with *with Highest Honours and Congratulations of the Jury* on July, 4th, 2005. Grant: Belgian National Scientific Research Foundation (FNRS) (one year as “boursier FRIA” and four years as “aspirante FNRS”), at University of Liège (2001-2005), Institute of Science of Evolution in Montpellier, France(2001-2003) and Centre for Biology and Management of Populations, France (2004).

**2) Scientific career**

- Aug 2005 - Aug 2008 Postdoctoral research in Evolutionary Ecology with Prof. P. M. Brakefield at the Institute of Biology, Leiden University (the Netherlands). Grants: **Marie Curie Intra-European Fellowshi**p (contract 039083 of the FP6-2005- Mobility-5) for 2006-2008, Aspirante FNRS for 2005-06 and **Chargée de Recherches FNRS: honorary position** for 2006-2009.

- From Sep 2008 Associate Professor in Terrestrial Ecology at the Université catholique de Louvain (Belgium). Head of the team “Evolutionary Ecology and Genetics”; **2 maternity leaves in 2013 (4 months) and 2016 (4 months), and one parental leave in 2019 (2 months).**

**3) Team composition**

**Supervision of a total of 12 postdocs (2 ongoing; 4 with academic permanent positions now), 6 PhD students (1 ongoing), >20 Msc students**

In 2022-2023:

- Dr. Matteo Marcantonio, PDR FNRS postdoc (2021-2023)

- Dr Stefano Masier, ARC postdoc (2022-2023)

- Doriane Muller (France), FRIA PhD student

- Simon Braem (Belgium), FRIA PhD student co-supervised with Prof. Van Dyck (2018-2022)

- Valentine Chapelle (Belgium), FNRS PhD student co-supervised with Prof. F Silvestre (2018-2022)

- Pierre Dekaezemaeker, technician permanent staff for rearing insects

- Msc students: Arkel Piret, Lauren Lecourtois, Mathilde LeLevier, Martin Coulon, Mathias Blondlet, Argyris Kourtidis, Baptise Gangneux.

Past research team members can be found at <https://nieberdinglab.be/people/>

- Dr. Raluca Voda (Romania), PDR FNRS postdoc (2021-2022)

- Dr. Bertanne Visser (the Netherlands), FRS-FNRS postdoc (2015-2019)

*Now permanent FNRS research Associate at Uclouvain (2019-ongoing)*

-Dr. Camille Turlure (France), ARC postdoc (2017-2019)

- Dr. K. Mitchell (Australia), postdoc (part 2012)

*Currently postdoc at Macquarie University (Australia)*

- Dr. E. Bitume (USA), FRIA PhD student (2008-2012) and ARC postdoc (2013)

*Currently postdoc at Colorado University (USA)*

- Dr. S. Heuskin (Belgium), FRFC postdoc (2011-2013)

*Now permanent scientific staff at Liege University (Belgium)*

- Dr. I. Dublon (UK), FRFC postdoc (2014)

- Dr. A. Arun (India), ARC postdoc (2013-2015)

*Now permanent lecturer at Puerto Rico University (USA)*

- Dr. MJ Holveck (France), FRS-FNRS postdoc (2012-2015)

*Currently postdoc at Montpellier University (France)*

- Dr. V. Baumlé (France), ARC postdoc (2013-2015)

*Currently postdoc at Namur University (Belgium)*

- G. San Martin, research assistant (2010)

*Now permanent scientific staff at the CRA-w Institute of the Region Wallonne (Belgium)*

- P. Bacquet (France), FRIA PhD student (2008-2015)

- E. Bitume (USA), FRIA PhD student (2008-2012)

- AL Gauthier (France), FRIA PhD student (2012-2015)

- G. Amelot, ARC technician (2013-2014)

*Now permanent technician in virology at Anses (Agence nationale de sécurité sanitaire) in Havre (France)*

Visiting researchers:

- L. Pereira (Portugal), visiting Msc student (2009)

- R. Callejon (Spain), visiting PhD student (2010)

- G. Perez (France), visiting MSc student (2011)

- Dr. I. Karl (Univ. Greiswald, Germany), visiting postdoc (2011)

- Dr. K. Michiyo (Soken Institute, Japan), visiting academic staff (2012)

- Dr B. Visser (Tours University, France), visiting postdoc (2014)

- Aurélien Vielfaur (France), visiting Msc student from Agro Sup Dijon (2021)

- Baptiste Gangneux (France), visiting Msc student from Agro Sup Dijon (2022)

- Argyris Kourtidis (Greence), visiting EU-Erasmus funded Msc student (2022)

4) Scientific publications

Besides the **40 published papers** in the primary literature (i.e. international journals with impact factor) and **2 peer-reviewed book chapters**, there are also another **8 manuscripts** of this category currently accepted with minor revision, in review, submitted or in preparation (data analysis has been done). Further also **3 other scientific papers** (e.g. invited reviews in national proceedings).

Profile at Research Gate: <https://www.researchgate.net/profile/Caroline_Nieberding2>

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| --- | --- |
| **Indicator** | **Google Scholar** |
| Number of years of scientific seniority | 15 |
| Number of published papers  | 41 |
| Total number of citations  | 2296 |
| Average number of citations | 54 |
| **H-index**  | **21** |

4.1. Publications in peer-reviewed international journals with impact factors

1. Michaux JR, Magnanou E,Paradis E, **Nieberding** **C**, Libois R (2003) Mitochondrial phylogeography of the woodmouse (*Apodemus sylvaticus*) in the western Palearctic region. **Molecular Ecology** 12 685-693. *Impact factor* (*I. F.): 6.5.*

2. **Nieberding C**, Morand S, Libois R, Michaux J (2004) A parasite reveals cryptic phylogeographic history of its host. **Proceedings of the Royal Society of London B** 271 2559-2568.*I. F. 5.7.*

3. **Nieberding C**, Libois R, Morand S, Douady C, Michaux JR (2005)Phylogeography of a Nematode (*Heligmosomoides polygyrus*) in the Western Palearctic region: persistence of Northern cryptic populations during ice ages?**Molecular Ecology** 14 765-777. *I. F. 6.5.*

4. **Nieberding CM**, Goüy de Bellocq J, Morand S (2005) The biogeography of host-parasite

 interactions: from nested assemblages to comparative phylogeography.**Mammal study** 30: S87-

 S93, Reports of the Symposia of the International Mammalogical Congress, Japan. *I. F. 0.8.*

5. Deffontaine V, Libois R,Kotlík P, Sommer R, **Nieberding C**, Searle JB, Michaux JR(2005)Beyond the Mediterranean Peninsulas: Evidence of Central European glacial refuges for a temperate forest mammal species, the bank vole (*Clethrionomys glareolus*). **Molecular Ecology** 14 1727-1739. *I. F. 6.5.*

6. **Nieberding C**, Libois, Morand S, Michaux J (2006) Parasites and the insular syndrome: the colonisation of the western Mediterranean islands by *Heligmosomoides polygyrus* (Dujardin, 1845). **Journal of Biogeography** 33: 1212-1222. *I.F. 4.8*.

7. **Nieberding C**, Olivieri I (2007) Parasites: proxies for host history and ecology? **Trends in Ecology and Evolution** 22 156-165.*I.F. 17.1*

8. **Nieberding C**, Durette-Desset MC, Libois R, Vanderpoorten A, Deffontaine V, Feliu C, Morand S, Michaux JR (2008) Geography and host biogeography matter for understanding the phylogeography of a parasite. **Molecular Phylogenetics and Evolution** 47 538-554. *I. F. 4.4.*

9. **Nieberding C**, Schneider MV, de Vos H, Lassance JM, Estramil N, Andersson J, BångJ, Hedenström E, Lofstedt C, Brakefield P (2008) Male sex pheromones in the butterfly *Bicyclus anynana*: towards an evolutionary analysis. **PLoS ONE** 3(7):e2751. *I.F. 4.4*

10. Callejón R, de Rojas M, **Nieberding C**, Foronda P, Feliú C, Guevara D, Cutillas C (2010) Molecular evolution of *Trichuris muris* isolated from different Muridae hosts in Europe. **Parasitology Research,** 107: 631-641 *I. F. 1.47*

11*.* Bitume EV, Bonte D, Magalhaes S, Van Dongen S, San Martin, G, Olivieri I, **Nieberding C**

 (2011) Heritability and artificial selection on ambulatory dispersal in *Tetranychus urticae*.

 **PLoS ONE** 6(10): e26927. *I. F. 4.4*

12.San Martin G, Bacquet P, **Nieberding CM** (2011) Mate choice and sexual selection in a model butterfly species, *Bicyclus anynana*: state of the art, **Proc. Neth. Entomol. Soc. Meet.** 22: 9-22

13. **Nieberding C**, Fischer K, Saastamoinen M, Allen C, Wallen E, Hedenström E, Brakefield P (2012)

 Cracking the olfactory code of a butterfly: the scent of ageing. **Ecology Letters** 15: 415–424.

 *I. F. 17.5*

*Scored by Gabriele Sorci, a Member of the Faculty of 1000 (F1000), as a “must read” in the top 2% of published articles in biology and medicine in 2012. The F1000 rating is widely used to find significant new research articles (see* [*http://f1000.com*](http://f1000.com)*).*

14. Perez G, Libois R, **Nieberding CM** (2013) Phylogeography of the European dormouse. **Journal of Mammalogy** 91(1)**:** 233–242. *I. F. 2.3.*

15. Bitume E, Olivieri I, Ronce O, Bonte D, **Nieberding CM** (2013) Density and genetic

 relatedness increase dispersal distance in a sub-social organism. **Ecology letters** 16: 430-

 437 *I.F. 17.5*

16. Van Bergen E, Brakefield PM, Heuskin S, Zwaan B\*, **Nieberding CM\*** (2013) The scent of

 inbreeding: a male sex pheromone betrays inbred males. **Proceedings of the Royal Society of**

 **London B** 280 : 1471-2954.*I.F. 5.5* (\*co-last authors)

17. Bitume E, Ronce O, Olivieri I, Bonte D, **Nieberding CM** (2014) Dispersal distance is

 influenced by parental and grand-parental density. **Proceedings of the Royal Society of**

 **London**. 281: 20141061. *I.F. 5.5*

18. Heuskin S, Vanderplanck M, Bacquet P, Holveck MJ, Kaltenpoch M, Engl T, Taverne C,

Lognay G, Nieberding CM (2014) The composition of cuticular compounds indicates body parts, sex and age in the model butterfly *Bicyclus anynana* (Lepidoptera). **Frontiers in Ecology and Evolution** 2:37. No I.F. yet.

19. Arun A, Baumlé V, Amelot G, Nieberding CM (2015) Selection and validation of reference genes for qRT-PCR expression analysis of candidate genes involved in olfactory communication in the butterfly *Bicyclus anynana*. **PLoS ONE** 10(3): e0120401*. I.F. 3.5.*

20. Bacquet\* P, Brattström\* O, Wang H-L, Löfstedt C, Brakefield P, **Nieberding CM** (2015) Selection on male sex pheromone composition drives butterfly reproductive isolation. \* co-first authors. **Proceedings of the Royal Society of London**, 282 20142734. *I.F. 5.7.*

21. Holveck MJ, Gauthier AL, **Nieberding CM** (2015) Dense, small and male-biased cages exacerbate male–male competition and reduce female choosiness in *Bicyclus anynana*. **Animal Behaviour** 104: 229–245. *I. F. 3.0.*

22. Bacquet PMB, De Jong M, Brattström O, Wang HL, Molleman F, Heuskin S, Lognay G, Löfstedt C, Brakefield PM, Vanderpoorten A\*, **Nieberding CM**\* (**2016**) Differentiation in putative male sex pheromone components across and within populations of the African butterfly *Bicyclus anynana* as a potential driver of reproductive isolation. \* co-last authors. **Ecology and Evolution** 6064-6084. *I. F. 2.5*

23. **Nieberding CM**, van Alphen JM (**2017**) Culture in Bumblebees. **Peer Community in Evolutionary Biology.** doi: 10.24072/pci.evolbiol.100001

24. **Nieberding CM**, Holveck MJ (**2017**) Laboratory social environment biases mating outcome: a first

 quantitative synthesis in a butterfly. **Behavioral Ecology and Sociobiology** 71: 117. *I.F. 2.4*

25. **Nieberding CM**, Holveck MJ (2018) Unnatural experimental conditions inflate the importance of

 male courtship activity on mating success in a butterfly. Commentary on Kehl et al.“Young male

 mating success is associated with sperm number but not with male sex pheromone titres”. **Frontiers**

 **in Zoology**, 15:18. *I.F. 2.4*

26. **Nieberding CM** and Visser B (2018) Incestuous insects in nature despite occasional fitness costs.

 **Peer Community in Evolutionary Biology**. doi: 10.24072/pci.evolbiol.100047

27.**Nieberding CM**, Van Dyck H, Chittka L (2018) Adaptive learning in non-social insects: from theory to

 field work, and back. Invited review in **Current Opinion in Insect Science** 27: 75-81 *I.F. 3.7.*

28. Visser B, Hance T, Noël C, Pels C, Kimura MT, Stökl J, Geuverink E, **Nieberding CM** (2018) Variation in lipid synthesis, but genetic homogeneity, among Leptopilina parasitic wasp populations. **Ecology and Evolution** 8:7355–7364.

29. **Nieberding CM**, San Martin G, Saenko S, Brakefield PM, Visser B (2018) Sexual selection contributes to partial restoration of phenotypic robustness in a butterfly. **Scientific Reports** 8 : 14315

30. Visser B\*, Dublon I\*, Heuskin S, Laval F, Bacquet PM, Lognay G, **Nieberding CM** (2018) Common practice tissue extraction in solvent does not reflect actual emission of a sex pheromone during courtship in a butterfly.\* co-first authors. **Frontiers Ecology and Evolution** 6:154**.**

31.Dion E, Monteiro A, **Nieberding CM** (**2019**) The Role of Learning on Insect and Spider Sexual Behaviors, Sexual Trait Evolution and Speciation. Invited review in **Frontiers Ecology and Evolution** 6:225**.**

32. Muller D, Elias B, Collard L, Pels C, Holveck MJ\*, **Nieberding CM\*** (2019) Visual and chemical secondary sexual wing traits of across seasonal forms in the polyphenic butterfly *Bicyclus anynana*: how different are intermediate forms? **PLoS ONE** 14(11):e0225003.\* last co-authors.

33. Visser B, Alborn HT, Rondeaux S, Haillot M, Hance T, Rebar D, Riederer JM, Tiso S, van Eldijk TJB, Weissing FJ, **Nieberding CM** (2021) Phenotypic plasticity explains apparent reverse evolution of fat synthesis in parasitic wasps. **Scientific Reports**: 7751.

34. Braem S, Turlure C, **Nieberding CM**, Van Dyck H (**2021**) Oviposition site selection and learning in a

 butterfly under niche expansion: an experimental test. **Animal Behaviour** 180: 101e110.

35. **Nieberding CM**, Marcantonio M, Voda R, Enriquez T, Visser B (2021) The Evolutionary Relevance of Social Learning and Transmission in Non-social Arthropods with a Focus on Oviposition-Related Behaviors. Invited review, **Genes** 12: 1466. <https://doi.org/10.3390/genes12101466>

36. **Nieberding CM**, Kaisin A, Visser B (2022) Inbreeding and learning affect fitness and colonization

 of new host plants, a behavioral innovation in the spider mite *Tetranychus urticae*. **Entomologia**

 **generalis, in press.**

37. Enriquez T, Lievens V, **Nieberding CM** & Visser B (2022) Pupal size as a proxy for lipid content in lab-reared and field-collected Drosophila species. **Scientific Reports**, In Press.

38. **Nieberding CM** (2022) Pandémie COVID-19 et crise de biodiversité : causes, conséquences et transition vers une coexistence durable entre humains et écosystèmes naturels. Article de synthèse invité par **Unesco Belgique**, en français, sous presse.

39. **Nieberding CM**, Beldade P, Baumlé V, San Martin G, Arun A, Lognay G, Montagné N, Bastin-

 Héline J, Jacquin-Joly E, Noirot C, Klopp C, Visser B (**2022**) Mosaic evolution of molecular

 pathways for sex pheromone communication in a butterfly. **Genes, in press.**

40. Holveck MJ, Muller D, Timmerman A, Visser B, Pels C, Timmermans A, Colonval L, Jan F, Crucifix

M, **Nieberding CM** (**2023**) Warmer temperature produces maladaptive learning of sexual

preference in a butterfly. **Functional Ecology**. In press.

Peer-reviewed Book chapters

41. **Nieberding C**, Morand S (2006) Comparative phylogeography: the use of parasites for insights into host history, in **Micromammals and macroparasites: from evolutionary ecology to management.** S. Morand, B. R. Krasnov and R. Poulin Eds, **Springer Editions**, pp. 277-293.

42. **Nieberding C**, Jousselin E, Desdevises Y (2010) The use of co-phylogeographic patterns to predict the nature of interactions, and vice-versa. In: **The geography of host-parasite interactions**. S. Morand and B. Krasnov Eds, **Oxford Univ. Press**.

Other scientific publications

 43. **Nieberding CM**, Morand S, Libois R, Michaux JR (2005)A parasite reveals cryptic phylogeographic history of its host: the colonization of the Western Mediterranean islands. Proceedings of the IX European Multicolloquium of Parasitology (EMOP IX), Valencia Spain, in **Multidisciplinarity for parasites, vectors and parasitic diseases volume I**, Articles of Keynote speakers, Ed. S. Mas-Coma, 279-286.

Additional manuscripts submitted / in review in peer-reviewed journals:

44. Holveck MJ, Saastamoinen M, Heuskin S, Lognay G, **Nieberding CM** (in prep) Condition-dependence of multimodal secondary sexual signals in a butterfly.

45. Bitume E, San Martin G, Ophélie Ronce, Bonte D, Isabelle Olivieri, **Nieberding CM** (in prep) Evolvability of dispersal and its plasticity in response to heterogeneity in density.

46. Bitume E, **Nieberding CM** (in prep) Absence of evolution in dispersal propensity in response to artificial selection in the spider mite *Tetranychus urticae.*

47. Bitume E, **Nieberding CM** (in prep) Density and not number of individuals matter to induce dispersal in the spider mite *Tetranychus urticae*.

48. Turlure C, Van Dyck H\*, **Nieberding CM**\* (in prep) Social learning for habitat selection for

 oviposition in a butterfly with positive demographic trends, *Pararge aegeria*. (\* co-last authors)

**5) Main research grants**

**Total budget obtained 2,270,000 euros functioning, 170,000 euros equipement ; 160, 000 euros salary; 40,000 teaching development**

1. Marie Curie IEF (European) funding for my postdoc position (Leiden Univ., 2006-2008, Budget: salary + functioning 15.000 euros)
2. Chargé de recherches (FNRS) funding for my postdoc position (Leiden Univ., 2006-2009, Budget: functioning 15.000 euros
3. FSR (UCL) Start funding « Jeune académique » (FSR UCL, 2008, Budget: 45.000 euros)
4. ADPI (UCL) funding: “Alternative ways of constructing climate cells in order to reduce their environmental impact (UCL, 2009, Budget : 10,850 euros)
5. FRFC-project (FNRS) in coll. with Dr. A. Vanderpoorten (ULg) : “Neutral or adaptive evolution? Relative contribution of the two processes in reproductive isolation and diversification using the model butterfly genus Bicyclus (Nymphalidae)” (FNRS Project, Period: 2010-2015, **Budget: 80.000 euros**)
6. ARC-Research Grant (UCL): “Integrating evolution into ecological responses: changing life styles of organisms in changing environments” (PIs: H. Van Dyck, N. Schtickzelle, C. Nieberding; Spokesman: H. Van Dyck) (Period: 2010-2015; **Budget: 873.000 euros**)
7. FRFC-project (FNRS) in coll. with Pr. G. Lognay (ULg): “Analysis of Semiochemicals in Lepidoptera” (FNRS Project, Period: 2011-2016, **Budget: 130.000 euros**)
8. CDR funding (FNRS): “Molecular analysis of adaptive phenotypic plasticity in olfactory communication” (FNRS, Period: 2013, Budget: **30.000 euro**s)
9. CDR funding (FNRS): “Investigating the olfactory perception machinery in insects using transcriptomics and functional genetics in the butterfly *Bicyclus anynana*” (FNRS, Period: 2014, Budget: **30.000 euros**)
10. Coordinator of CDR funding (FNRS): “The evolutionary loss and regain of lipid synthesis” (Period: 2017-2019, Budget: **60.000 euros**)
11. ARC-Research Grant (UCL): “Learning as a key driver of adaptation to human-induced rapid environmental change: a behavioural biogeographic approach” (PIs: H. Van Dyck, C. Nieberding, Michel crucifix, Sophie Vanwambecke; Spokesman: H. Van Dyck) (Period: 2017-2022; **Budget: 670.000 euros**)
12. PDR project (FNRS) in coll. with Dr. Bertanne Visser (UCLouvain): “Plastic lipid synthesis in parasitic wasps” (period: 2020-2024, **Budget: 272,000 euros**).
13. FDP (UCL) funding to renovate the Bsc course LBIO1231A “Compléments de Biologie animale” in collaboration with Profs. JF Rees, C. Remacle, T. Hance (UCL, Period: 2010-2012, **Budget: 40.000 euros**)
14. PDR project (FNRS) (UCLouvain): “Survival of the smartest: rapid adaptation of butterflies to reduced habitat suitability in Belgium” (period: 2021-2025, **Budget: 252,000 euros**).

Funding for education:

1. FSR (UCL) funding to organize “meet the expert” seminars for the doctoral school Biology, Ecology and Evolution (FNRS, Period: 2009, Budget: 1.800 euros)
2. FDP (UCL) funding to renovate the Bsc course LBIO1231A “Compléments de Biologie animale” in collaboration with Profs. JF Rees, C. Remacle, T. Hance (UCL, Period: 2010-2012, Budget: 40.000 euros)
3. FNRS funding to organize training for the Doctoral School in “Biodiversity, Evolution, Ecology” (BEE) (FNRS, Period: every year, Budget: 3.750 euros).

**6) International research collaborations**

- Collaboration on olfactory communication and chemical ecology

Prof. P. Brakefield (since 2005) Cambridge Univ. (UK)

Prof. C. Löfstedt (since 2005) Lund Univ. (Sweden)

Prof.E. Hedenström (since 2006) Sundsvall Univ. (Sweden)

Prof. K. Fischer (since 2006) Greifswald Univ. (Germany)

Prof. G. Lognay (since 2009) Liège Univ. (Belgium)

Prof. A. Monteiro (since 2015) YALE-NUS-College (Singapore)

- Collaboration on the evolution of dispersal

Prof. I. Olivieri (since 2005) and Dr. O. Ronce; Montpellier Univ. (France)

Prof. D. Bonte (since 2008); Ghent University

- Collaboration on evolutionary genetics and transcriptomics

Dr. P. Beldade (since 2008) Gulbenkian Institute for Science, Lisbon (Portugal)

Dr C. Klopp (since 2010) INRA Toulouse (France)

- Collaboration on molecular phylogenetics

Dr. C. Douady (2005) Lyon Univ. (France)

Dr. A. Vanderpoorten (since 2006) Liège Univ. (Belgium)

- Collaboration on host-parasite interactions

Prof. S. Morand (since 2004) Montpellier Univ. (France)

Dr. Y. Desdevises et Dr. E. Jousselin (since 2008) Paris VI and Montpellier Univ.

Prof. M.-C. Durette-Desset (since 2004) Museum national d´Histoire naturelle (France)

Prof. C. Feliu (since 2003) Barcelona Univ. (Spain)

- Collaboration on statistical issues

Dr. S. Van Dongen (2006) Antwerp Univ.

**7) International communications**

**- 3 plenary or symposium international invited seminars**

**- 30 invited seminars at international conferences and universities**

**- 27 oral communications at international conferences and universities**

**- Invited teaching lectures:**

- as undergraduate assistant in *Zoolog* at Liège Univ.(Belgium) in 1999-2001.

- Lectures on host-parasite evolution and on sexual selection at the Bsc level in *Animal biology* and at the Msc level in *Evolutionary biology* in Leiden Univ. (supervised by Drs. P. Brakefield, B. Zwaan and P. Beldade) in 2006-2008.

- Invited lecturer for the Master *Biodiversity; conservation and evolution* in Valencia Univ. (Spain) (supervised by Prof. E. Barba) in 2007.

- Invited lecturer in 2010-2011 for the course BIO1352A, integrated Field Ecology, at UCL (Bsc 3 level, 0+35 hours)

* Invited lecturer at Paris VI University (2019) and at Amsterdam university (2020)

**Plenary and Symposium Keynote speaker**

**Nieberding C** (2010) Pheromones and reproductive isolation; the butterfly *Bicyclus anynana* as a model; ***Plenary invited talk*** for the “Entomologendag” workshop, Ede, **Wageningen** (the Netherlands), December 17th.

**Nieberding C** (2016)Plasticity and the evolution of adaptive traits involved in reproductive isolation**. *Plenary invited talk*** at the « Journées Scientifiques de l’Institut d'écologie et des sciences de l'environnement », **Paris** **Sorbonne** (France), December 1st.

**Nieberding C** (2019) Maladaptive learning of mate preference in a butterfly facing climate change; ***Plenary invited talk*** for the Zoology 2019 & NVG conference “Learning and Memory in the Animal Kingdom – from nematodes to humans”, **Groningen** (the Netherlands), Novermber 29th.

**Invited seminars**

**Nieberding C**, Libois R, Douady C, Morand S, Michaux JR (2004) A parasite reveals cryptic phylogeographic history of its host. Museum of Natural history in **Bucharest**, Romania, May 13th.

**Nieberding C**, Libois R, Morand S, Michaux JR (2005) A parasite reveals cryptic phylogeographic history of its host. “Spotlight” seminars of the Institute of Biology of **Leiden** University, the Netherlands, October 6th.

**Nieberding C**, de Vos H, Schneider V, Lassance JM, Lofstedt C, Brakefield P (2007) Role of male sex pheromones in the courtship success of the butterfly *Bicyclus anynana*. Department of Biology, **Copenhagen** University, Denmark, July, 27th.

**Nieberding C**,Olivieri I (2007) Parasites: proxies for host history and ecology? Seminar for the Master Biodiversity; conservation and evolution. **Valencia** University, Spain, November 29th.

**Nieberding C**, de Vos H, Schneider MV, Lassance JM, Estramil N, Andersson J, Bang J, Hedenström E, Löfstedt C, Brakefield P (2008) Male sex pheromones of the butterfly *Bicyclus anynana*: role in sexual selection? “Spotlight” seminars of the Institute of Biology of **Leiden**, the Netherlands, January 10th.

**Nieberding C,** Olivieri I (2008) Parasites: proxies for host history and ecology? Seminar for the GDR “ComEvol” of the INRA of Versailles, **Paris**, France, March 26th.

**Nieberding C**, de Vos H, Schneider MV, Lassance JM, Estramil N, Andersson J, Bang J, Hedenström E, Löfstedt C, Brakefield P (2008) Male sex pheromones of the butterfly *Bicyclus anynana*: role in sexual selection? **Montpellier**, France, April 10th.

**Nieberding C,** Olivieri I (2008) Parasites: proxies for host history and ecology? Seminar for the “Groupe d’animation scientifique” of the Centre for Management and Biology of Populations (CBGP), **Montpellier**, France, April 12th.

**Nieberding** C (2008)Sexual selection in the butterfly *Bicyclus anynana*: what do females choose and how? Seminar for **Lille** (France), December 12th

**Nieberding** C (2009) Reproductive isolation and speciation; the butterfly Bicyclus anynana as a model; Seminar for the Institute des Sciences de la Vie at **UCL**, February 20th

**Nieberding** C (2009) Reproductive isolation and speciation; the butterfly Bicyclus anynana as a model; Seminar for the research group URBO, University of **Namur** (FUNDP), May 18th.

**Nieberding** C (2010) Pheromones and reproductive isolation; the butterfly Bicyclus anynana as a model; Seminar for the 150th anniversary of **Gembloux** Univ., May 5th.

**Nieberding C** (2010) Sexual selection on olfactive communication and diversification in the African butterfly genus *Bicyclus*; Free University of **Brussel** (ULb), May 15th.

**Nieberding C** (2010) Sexual selection on olfactive communication and diversification in the African butterfly genus *Bicyclus*; seminar for the symposium “Speciation” organised for the presentation of the 2010 Dutch Zoology Prize and Annual Meeting of the Royal Dutch Zoological Society, Natural Museum of **Leiden** (the Netherlands), June 11th.

**Nieberding C** (2010) Evolution of the *Bicyclus* genus through sexual selection on male sex pheromones?; Seminar at the Biobutterfly congress, **Edmonton** (Canada), June 29th.

**Nieberding C** (2010) Evidence of sexual selection on olfactory communication by means of

male sex pheromone production in a butterfly. Seminar at the Zoology Department in **Cambridge** (UK), November 2nd.

**Nieberding C** (2012) Sexual selection on olfactory communication. Seminar at the Institute of Evolution at **Montpellier** Univ. (ISEM, France), January 20th.

**Nieberding C** (2012) Cracking the olfactory code of a butterfly: From sexual selection to species diversification. Seminar at the Institute Gulbenkian for Cienca (IGC, **Lisbon**, Portugal), May 28th.

**Nieberding C** (2012) Mechanisms of reproductive isolation and species diversification. Seminar for the PhD course 'Frontiers in Evolution' at the K.U.Leuven (**Leuven**, Belgium), June 8th.

**Nieberding C** (2013) Transcriptomics of olfactory communication: a first case study in butterflies. Seminar at the workshop “Pararge Eco-evo-devo” (**London**, UK), January 22th.

**Nieberding C** (2013) Selection on male sex pheromone composition drives butterfly diversification. Seminar at the Institute of Evolution at **Montpellier** Univ. (ISEM, France), March 15th.

**Nieberding C** (2014) Evolution of olfactory communication. Seminar at **Brno** University (Czeck Republic), April 17th.

**Nieberding C** (2017) Plasticity and the evolution of adaptive traits involved in reproductive isolation**.** Invited seminar at **Alnarp University** (Sweden), April 6th.

**Nieberding CM** (2016) Chemical communication in speciation : From mate choice to species diversification using the butterfly *Bicyclus anynana* as a model. Invited seminar in Prof Lars Chittka’s laboratory “Bee sensory and behavioural ecology”, at Queen Mary University, **London**, UK, June 16th.

**Nieberding CM** (2016) Plasticity and the evolution of adaptive traits involved in reproductive isolation. Invited plenary seminar at the Scientific Day of the Institute of Ecology and Environmental sciences of Paris, France, December 1st.

**Nieberding CM** (2017) Let’s bring (back) ecological complexity in sexual selection studies. Invited seminar in the Faculty of Science and Engineering at **Groningen** University, The Nertherlands, October 12th.

**Nieberding CM** (2017) Let’s bring (back) ecological complexity in sexual selection studies. Invited seminar in the Department of Ecology at **Lille** University, France, November 11th.

**Nieberding CM (2019) “**We Change for Life”: the climate and biodiversity crises for **CBC Bank** investors, in tandem **with Prof JP van Ypersele** (climatologist), **Liège** University, November 12th.

**Nieberding CM** (2020) Maladaptive learning of mate preference in a butterfly facing climate change. Invited seminar at **Amsterdam** university (the Netherlands), May 12th.

**8) Supervision of PhD theses**

Main supervisor of 4 PhD projects:

- Ellyn Bitume (2008-2012), FRIA grant, for the research project “Genetic and environmental contributions to dispersal distance in the two-spotted spider mite, *Tetranychus urticae*”. Co-tutelle with Prof. I. Olivieri (ISEM, Montpellier, France).

- Paul Bacquet (2008-2012), FRIA grant, for the research project “Importance of male sex pheromone in the processes of reproductive isolation and speciation in the butterfly genus *Bicyclus*”. Co-promotor : Prof. Paul Brakefield (Cambridge, UK).

- Anne-Laure Gauthier (2011- 2013): FRIA grant application for the research project “Sélection sexuelle en communication olfactive: importance de la plasticité phénotypique dans le choix de partenaire chez *Bicyclus anynana*”.

- Doriane Muller (2014-ongoing) : FRIA grant for the project : “Adaptive value of plasticity under sexual selection in changing environments in the butterfly *Bicyclus anynana*”.

Co-supervisor of 5 PhD projects:

- Sohini Vanjari (2011 – 2015): Prestigious Indian *Man Mohan Singh Scholarship*, “Pheromonal communication during courtship in *Heliconius melpomene*”. Main promotor: Dr. C. Jiggins in Cambridge (UK).

- Virginie Tuillier (ARC 2011, FRIA 2012-2016): FRIA, “Contributions of genotype, environment and their interaction in dispersal in the protist *Tetrahymena thermophylla”*. Main promotor Prof N. Schtickzelle (UCLouvain).

- Simon Braem (ARC 2017, FRIA 2017-2021): FRIA “Habitat selection in the speckled wood butterfly *Pararge aegeria*”. Main promotor: Prof. H. van Dyck (UCLouvain).

- Valentine Chapelle (FNRS 2018-2022) “Epigenetic basis of reproductive behaviours in a self-fertilizing fish”. Main promoter: Prof. F. Silvestre (UNamur).

Member of 17 PhD commissionsat UCLouvain and in international commissions:

1) Robert Kisasa (2007-2010), « Eco-éthologie comparée des martins-pêcheurs des genres Alcedo et

 Ceryle de la région de Kinshasa, République Démocratique du Congo », Supervisor: Prof. R.

 Libois, a collaboration between Kinshasa and Liège Univ.

2) Olou Toussaint Lougbegnon (2004-2008), “Synécologie des oiseaux de forêts et des milieux de

 substitution dans le sud du Bénin”. Supervisor: Prof. R. Libois, ULg.

3) Gualbert Houemenou (2007-2012), « Caractérisation du rôle des micromammifères de la ville de

 Cotonou (Bénin) dans la transmission d’anthropozoonoses », Supervisor: Prof. R. Libois, a

 collaboration between Cotonou and Liège Univ.

4) Anne Laudisoit (2004-2009), « Contribution à l’épidémiologie de la peste dans un foyer

 endémique, le district de Lushoto (Tanzanie) », Supervisor: Prof. R. Libois, Liège Univ.

5) Grégoire Motte (2007-2011), « Etude des régimes alimentaires des chauves-souris en Wallonie,

 Supervisor : Prof. R. Libois, Liège univ.

6) Frank Pennekamp (2009-2013), « Metapopulation dynamics and viability in Tetrahymena

 thermophila microcosms », Supervisor: Prof. N. Schtickzelle, UCL.

7) Loulou Al Bittar (2010-2015), « Analyse de l’influence d'un contrôle biologique des pucerons en

 culture de betteraves à l'aide d'Hyménoptères parasitoïdes sur la propagation des maladies

 virales », Supervisor: Prof. T. Hance, UCL.

8) Arnaud Henrard (2010-2015) « Systématique et phylogénie des araignées Zodariidae (Araneae)

 inféodées aux forêts africaines dans un contexte biogéographique », Supervisor: Prof. T. Hance,

 UCL.

9) Benoît Tichoux (2011-2013) « Plasticité phénotypique adaptative des styles de vie du papillon

 Pararge aegeria (L.) relative à la latitude et au type d’habitat: Approche via analyse de normes de

 réaction thermiques », Supervisor: Prof. H. Van Dyck.

10) Marie Verheye (2011-2015) « Biogéographie historique de deux familles d'amphipodes cuirassés

 (Iphimediidae, Epimeriidae) de l'océan Austral", supervisor: Prof. J. Mallefet.

11) Virginie Tuillier (ARC 2011, FRIA 2012-2016): “Contributions of genotype, environment and

 their interaction in dispersal in the protist *Tetrahymena thermophylla*” Co-supervisors : Profs. N.

 Schtickzelle and C. Nieberding.

12) Anne-Sophie Voisin (2013-2017) « Plasticité phénotypique du poisson et aspects

 épigénétiques. Supervisor: Prof. F. Sylvestre (FUNDP).

13) Cassandra Marinosci (2013-2017) « Evolution des traits d'histoire de vie chez l'acarien

 phytophage Tetranychus urticae : evolution des stratégies d’allocation sexuelle de

 traits impliqués dans l'adaptation à un nouvel hôte ». Supervisor: Prof. Isabelle

 Olivieri, Drs. Ophélie Ronce, Sara Magalhães (Université de Montpellier II, France).

14) Aurélien Kaiser (2014-2018), “Pace-of-life syndrome in anthropogenic environments: an

 experimental test with a butterfly under habitat expansion”. Supervisor: Prof. Hans Van Dyck.

Member of 28 national and international PhD defense juries

1. Valérie Deffontaine (2008), « Histoire évolutive du campagnol roussâtre (Myodes glareolus) en

 Eurasie », Liège Univ. (Belgium). PhD supervisor : Prof. R. Libois.

2. Audrey Coppée (2010), « *Bombus terrestris* : a complex of species or a species complex ?”, Mons

 Univ. (Belgium). PhD supervisor : Prof. P. Rasmont.

3. Christophe Meskens (2011), “Interactions among Neotropical beetles (Coleoptera) and host plants:

 from feeding niche and host specificity to food web structure”, UCL (Belgium) and Smithsonian

 Tropical Research Institute (USA - Panama). PhD supervisor: Prof. T. Hance.

4. Frédéric Hourlay (2011) « Etude phylogéographique du cincle plongeur, Cinclus cinclus, en région

 paléarctique », Liège univ. (Belgium). PhD supervisor: Prof. R. Libois.

5.Grégory Motte (2011), « Etude des régimes alimentaires des chauve-souris en Wallonie », Liège

 Univ. (Belgium). PhD supervisor: Prof. R. Libois.

6. Delphine Bourdais (2012), “Mating strategies of the aphid parasitoïd Aphidius matricariae

 (Hymenoptera, Aphidiinae). UCL (Belgium). PhD supervisor: Prof. T. Hance.

7. Charlotte Havermans (2012) “DNA barcoding, phylogeography and phylogeny of the

 Lysianassoidea (Crustacea : Amphipoda) from the Southern ocean and the world’s deep seas” UCL

 (Belgium). PhD supervisor: Prof. J. Mallefet.

8. Laurent Natalis (2013) Reproductive barriers and their role in asymmetric Rhinantus hybridization.

 UCL (Belgium). PhD supervisor: Prof. R. Wesselingh.

9. Gualbert Houemenou (2013) « Caractérisation du rôle des micromammifères de la ville de

 Cotonou (Bénin) dans la transmission d’anthropozoonoses ». Cotonou and Liège Univ (Belgium).

 PhD supervisor: Prof. R. Libois.

10. Simon Dellicour (2013) « Etude de l’histoire évolutive d’insectes phytophages, approche

 phylogéographique et développements méthodologiques ». University of Brussels

 (UlB, Belgium). PhD supervisor : Prof. P. Mardulyn.

11. Frank Pennekamp (2014) “Swimming with ciliates - Dispersal and movement ecology of

 Tetrahymena thermophile”. UCL (Belgium). PhD Supervisor : Prof. N. Schtickzelle.

12. Wasimuddin (2014) “Genetic variation of selected pathogens in the house mouse hybrid zone.”

 Masaryk Univ.and the Academy of Science (Czech Republic). PhD supervisor: Prof. J; Bryja.

13. Anna Chuine (2014) « Des mécanismes aux conséquences adaptative du choix du partenaire

 sexuel pour la comptabilité génétique». Université Claude Bernard à Lyon 1 (France). PhD

 Supervisor: Prof. Emmanuel Desouhant.

14. Annelies de Roissart (2015) « The spatial and community context of dispersal

 and life history evolution in the spider mite *Tetranychus urticae* ». University of Ghent (Belgium).

 PhD supervisor: Prof. Dries Bonte.

15. Nina Wauters (2015) “Genetical and ecological aspects of the invasion of the tropical fire ant

 *Solenopsis geminata* in the Galápagos Islands”. University of Brussels (Belgium), PhD supervisor:

 Dr. Denis Fournier.

16. Youri Martin (2015) “Predicting future species distributions: from correlations toward a better

 understanding of underlying processes”. University of Louvain-la-Neuve, PhD supervisor: Prof. H.

 Van Dyck.

17. Francisco Gonzalez (2017) “Smells of Sociality: Insect Chemoreceptors, Sex and Habitat Cues”.

 Alnarp University (Sweden), on April 7, 2017. PhD supervisor: Prof. P. Witzgall.

18. Samuel Caro, PhD (2017) « Habilitation à diriger des recherches” Sciences du Vivant (HDR Life

 Sciences) for becoming a PhD promotor : « Mécanismes de la phénologie reproductrice chez les

 oiseaux : au carrefour du proximal et de l’ultime » at Centre for Functional and Evolutionary

 Ecology (CEFE), Montpellier University (France) on June 30th, 2017. President of the examination

 jury.

19. Raissa de Boer (2017) “Inbreeding-Environment interactions throughout the life of a songbird”.

 Antwerp University (Belgium), on Sept 29th, 2017. PhD supervisors: Profs. W. Müller and M. Eens.

20. Laura Gajdzik (2017) « Assessement of adaptive capacities in damselfishes (Pomacentridae)”. On Sept 8th, 2017 at University of Liege (Belgium). Promotors: Dr. B. Frederich and Prof. E. Parmentier.

21. Verheye Marie (2017) “Systematics, phylogeography and historical biogeography of Eusiroidea

 (Crustacea, Amphipoda) from the Southern Ocean, with a special focus on the families

 Epimeriidae and Iphimediidae”, on Sept 19th, 2017 at UClouvain and RBINS (Belgium). Promotors:

 Dr. C d’Udekem d’Acoz and Prof. J. Mallefet.

22. Dubois Q (2017) “The conservation of the Cranberry Fritillary Boloria aquilonaris across space and

 over time: study of a boreo-montane butterfly from distribution to demography”. On Nov 30th,

 2018 at UClouvain (Belgium). Promotors: Dr. C. Turlure and Prof. N. Schtickzelle.

23. Cherasse S (2019) “Reproduction and immunity in ant queens”. At University of Brussels ULb

 (Belgium). Promotor: Prof. S. Aron.

24. Henrard A (2019) “Systematics and phylogeny of the ant-eating spiders (Araneae ;

 Zodariidae) : a total evidence analysis”. On June 24th, 2019 at UCLouvain and Musée Royal

 d’Afrique Centrale (Belgium). Promotors: Dr. Rudy Jocqué and Prof. T. Hance.

25. Timothée Zidat (2019) “Communication chimique chez un mammifère social et

 monogame: rôle dans la sélection sexuelle et les relations entre groupes? ». On June 26th,

 2019 at University of Lyon (France). Promotors : Profs. D. Allainé and G. Comte.

26. Stefano Masier (2020) “Dispersal heterogeneity and eco-evolutionary dynamics in experimental populations”. On June 11th 2020 at Universtity of Ghent (Belgium). Promotor: Prof. D. Bonte.

Supervision of >20 Bsc and >20 Msc thesis projects

Member of >20 master thesis juries

9) Scientific distinctions

- Award of the *University of Liège* for the best Master thesis in Zoology (250 euros).

- Grant from the *French Community of Belgium (Concours des bourses de voyage*), for a training

in the laboratory of Prof. Douzery in Montpellier, France (4000 euros).

- Grant from the *Royal academy of Sciences of Belgium (Agathon De Potter foundation)*, for

attending the IX International Congress of Mammalogy in Japan, August 1st to 5th, 2005

(1000 euros).

- Grant from the *Royal academy of Sciences of Belgium (Agathon de Potter foundation)* for a field

trip in Cameroun in April 2009 (400 euros).

10. Study stays

- May 2003: Study of morphological systematics of *Heligmosomoides* genus (1 week)

Barcelona Univ. (Spain), Prof. C. Feliu

- June 2004: Study of morphological variability in *Heligmosomoides* genus (2 weeks), Natural

History National Museum of Paris (France), Prof. M.C. Durette-Desset

- Nov 2005-Aug 2007: Study of pheromone composition in *Bicyclus* butterflies (4 weeks)

Use of gas chromatography coupled to electro-antennograms (GC-EAD) and to mass

spectrometry (GC-MS) Lund Univ. (Sweden), Prof. C. Löfstedt.

Copenhagen Univ. (Denmark), Dr. P. D’Ettorre

- Feb 2007: Course on statistical computing using the R language (3 weeks) Imperial College of

Ascot (England), Prof. M. Crawley

- Aug 2007: Course on statistical genetics (1 week): Liège Univ. Quantitative Genetics (3 days),

Profs. W. Muir & B. Walsh. QTL mapping (3 days), Profs. R. Doerge & Z.-B. Zeng

- March-Apr 2010: Development of a EST subtractive database for investigating the genetic bases of

Olfactory communication in *B. anynana* (2 months): Leiden Univ., Dr. P. Beldade.

- July 2011: Analysis of transcriptome data for investigating the genetic bases of pheromone production and androconia development in *B. anynana* (4 days): INRA Toulouse, Dr. C. Klopp.

- May 2012 : Analysis of transcriptome data for investigating the genetic bases of pheromone production and androconia development in *B. anynana* (2weeks): Gulbenkian Institute of Science, Lisbon, Dr. P. Beldade.

- 2011-2013: Frequent 1-week stays for the analysis of evolution of dispersal in the spider mite *Tetranychus urticae* : at Institute of Evolutionary Sciences (ISM), Montpellier, Prof. I. Olivieri.

- 2016: three-week sabbatical stay at Queen Mary Unversity in London in the laboratory of Prof. L. Chittka (UK).

9) Lecturing

On an annual basis: - 130 hours of main lectures and 66 hours of practical classes, respectively;

 ~ 300 students from first (Bsc1) to last (Msc2) year.

Current lecture program: - LBIO1110 : Evolution et diversité (Bsc 1, 15 +10 hours; ~ 200 students/yr), - LBIO1114: Introduction à la Biologie (Bsc 1, 10 + 0 hours; ~ 12 students/yr), - LGEO1332 Biogéographie (Bsc 3, 22.5 + 12 hours; ~ 30 students/yr), - LBIO1317 Functionel Ecology (Bsc 3, 17.5 + 0 hours ; ~ 50 students/yr), - LSC2004 Evolution humaine (Bsc3, 10 + 0 hours; ~ 40 students/yr), - LBOE2191: Sustainable solutions for protecting the biodiversity in Wallonia and worldwide (Msc, 24 + 0 hours; ~ 25 students/ yr), - LBOE2111 Evolution (Msc1, 12 + 0 hours; ~ 20 students/yr), - LBOE2124 Molecular Ecology (Msc, 18 + 28 hours; ~ 20 students/yr)

Past lecturing courses:

- LBOE2121: Terrestrial biomes for Msc students (from 2010 to 2020)

- LBOE2165 Transcriptomics for Msc (from 2014 to 2020)

- LBIO1231 Invertebrate zoology for Bsc students (from 2010 to 2014)

**10) Services to the society**

10.1. Main positions in national, federal or regional institutions

**\*** 2013 – ongoing : **President of the Belgian FNRS doctoral school** in “Biodiversity, Ecology and Evolution”

**\***2017- ongoing (2023):Member of the scientific commission of the **Royal Museum of Central Africa,** which has a large collection in the Biology and Geology sections.

**\*** 2018 – ongoing: Member of the steering committee of the interdisciplinary **“Louvain4Evolution” think-tank, UCL**, dedicated to transfer transdisciplinary evolutionary thinking to the Belgian Society

**\*** 2018 – ongoing : Member of the coordinating scientific team of the **Peer Community in (PCI)** dedicated to highlight excellent, peer-reviewed, open access and free to publish science in biological sciences (<https://evolbiol.peercommunityin.org/about/about>)

**\*** 2018 – ongoing:Member of the scientific board of the **Royal Belgian Zoological Society** (<http://rbzs.be/?page_id=121>), wich organizes a yearly conference and delivers prizes to Msc and PhD students in Zoology.

**\*** 2019-ongoing (2025):Member of the scientific commission of the **National Museum of Natural Sciences of Belgium** (arrêté royal publié au moniteur C 2019-13/683)

**\*** 2019- ongoing: **President** (2020-2021) and **Vice-president** (2019) of the **FRIA scientific committee** for PhD applications in the Fédération Wallonie-Bruxelles, at the Fonds national de la Recherche Scientifique (FNRS)

\* 2016-2018: Member of scientific **commission on wildlife trade for the Federal Public Service Health, Food Chain Safety and Environment**, and dedicated to quantify the impacts of wildlife trade at global and local levels.

10.2. Main organiser of conferences

\* 2019: Coordination of the **conference on the climate and biodiversity crises** “How human activities cause biodiversity loss : Interactions and relative contributions of human activities; What do we know, what do we need to know ?” at UCLouvain on October 24th, **2019** (300 participants). <https://uclouvain.be/fr/node/64037>

\* 2019: Coordination of the “**We Change For Life” initiative** at <https://wechangeforlife.org/>, in which 250 Belgian scientists testify about their lifestyle changes for protecting the planet in **2019** (in NL, FR anf EN). This is an initiative led together with Prof. JP van Ypersele (climatologist and former vice-president IPCC) and Lucette Flandroy (Biologist expert at the federal government).

\* 2019: **Scientific Presidency** of the “One World One Health” Conference “**Dead or Alive: Towards a Sustainable Wildlife Trade**” organised by the Federal Public Service Health, Food Chain Safety and Environment and the Belgian Biodiversity Platform, December 4th, 2019, and dedicated to quantify the impacts of wildlife trade at global and local levels.).

**\* 2019:** Organisation with the Louvain4Evolution interdisciplinary group at UCLouvain of the 1-day **conference for the general citizens on the Theory of Evolution “Les preuves irréfutables de l'Evolution biologique, au cœur de la biologie moderne”,** Brussels – Woluwé, April 1st (<https://uclouvain.be/fr/chercher/louvain4evolution/les-preuves-de-l-evolution-biologique.html>).

\* 2018: Organisation with the Louvain4Evolution interdisciplinary group at UCLouvain of the 2-day **conference for the general citizens on the Theory of Evolution “Coopération ou compétition, qui mène la danse? Deux moteurs de l’évolution des espèces et de nos sociétés”,** Brussels – Woluwé, May 28th and 29th (<https://uclouvain.be/fr/chercher/louvain4evolution/cooperation-ou-competition-qui-mene-la-danse-deux-moteurs-de-l-evolution-des-especes-et-de-nos-societes.html>).

 10.3. Peer-Review assessment of scientific quality in national and international instances

**\*** 2014 - ongoing **Scientific Editor** for the **journal Frontiers in Ecology and Evolution**, section “Chemical Ecology”

**\* 2016-ongoing: Scientific Editor** for the peeri-review, open access and free to publish initiative **Peer Community in**, in Evolutionary Biology (PCI Evol Biol), in Ecology (PCI Ecol) and in Entomology (PCI Entomology).

*\* 2008- ongoing:* **Referee** for the following **international science foundations:**

\* FRB, Fondation pour la recherche sur la biodiversité (France) in 2009

\* FRIA-FNRS for the PhD grant attributions at FRIA (Belgium) in 2009

\* Estonian Science Foundation in 2010

\* French Action Nationale de la Recherche (ANR) since 2011

\* French Scientific Council Cefipra in 2012

\* Czeck Science Foundation in 2014

\* French Institute of national agronomy (INRA) in 2015

\* NERC (UK) in 2019

\* 2003- ongoing: **Referee** **for the peer reviewed journals** **(> 60 manuscripts**):

*Since 2016, I have declined most requests to become to peer-review manuscripts (as for Nature Communications) because I have decided to serve the open access peer reviewing system, such as Peer Community in Evolutionary Biology, Ecology and Entomology.*

Biological Journal of the Linnaean Society; BMC Evolutionary Biology; Ecological Entomology; Entomologia Generalis, Evolution; Evolutionary Applications; Heredity; Frontiers in Ecology and Evolution; International Journal for Parasitology; Journal of Animal Ecology; Journal of Economic Entomology; Journal Evolutionary Biology; Journal of Chemical Ecology; Journal of Insect Science; Journal of Biogeography; MEEGID journal; Molecular Biology and Evolution; Molecular Phylogenetics and Evolution; Molecular Ecology; New Phytologist; PLoS Genetics; PCI Evol Biol; Scientific Reports; Veterinary Parasitology; Zoologica Scripta,…

Best “1000 referee” for the journal Molecular Ecol in 2010.

\* 2017-2020: **member of the scientific panel from the “Action nationale de la Recherche” (ANR) of the French National Scientific Centre (CNRS).** This involves 6 days a year in the commission in Paris and about 10 days of peer-reviewing of about 160 large scale grant applications for the panel avery year.

\*2014 -1017 **Scientific advisor** (Councillor) of the **International Society of Chemical Ecology**, organizer of the annual international *congress of Chemical Ecology* and publisher of the flagship *Journal of Chemical Ecology*

10.4. Services to the institution, to the Belgian society

\* 2016-ongoing: Involved in the r**enovation of the Bachelor and Master programs at UCLouvain** notably for investing in statistical update tools and approaches (using R) from Bsc 1 year and for investing in disseminating the Evolution theory since Bsc 1 (course LBIO1110 Evolution et Diversity, LBIO1310 Evolution), which used to be taught only to Msc students in Ecology.

\* 2010- ongoing: **Expertise through interviews provided regularly to journalists from the European journals *Le Soir*, *Le Monde,* an Belgian radio *La Premièr*e – RTBF**.

**\*** 2019: **Presentation of the “We Change For Life” Initiative to the Queen Mathilde of Belgians,** at the “Day of Transition” at UCLouvain (with TV braoadcast), December 12th

\* 2019: **Presentation of the “WeChangeForLife” Initiative for a large audience of general citizens in an evening conference** organised by CBC banque with Prof. JP van Ypersele (climatologist and forme vice-chair of the IPCC panel), Liège, November 12th

\* 2020-ongoing: **Member of the Carta Academica (**[www.cartaacademica.org](https://www.cartaacademica.org/?fbclid=IwAR2tPW-DHdLzsnH181UCE7j6Wk7hylQOthj9NJ3BbXOVk3mj5hd4WGxdMwE)), a Belgian group of experts from the academic field who involves time and energy to communicate their expertise to the Belgian society, notably through a weekly article published in the journal Le Soir.