Achievements (see CV for details and full list)

Positions

Since 2014: Professor (rank 1)

Since Jan. 2012: Responsible of Axe Fédérateur *Species Communities: Assembly rules, Diversification* of my Research Unit

2006-2012: Head of Group *Ecology of Diversification* (funded as Action Thématique ATIP by CNRS France)

2004: Professor (rank 2), University of Rennes1, France, in Ecology and Population Biology.

1996 Thesis / 1992 Diploma

Academic services

- Editorial Services: Oecologia (ongoing); Journal of Vegetation Science (2009-2017), Applied Vegetation Science (2009-2013)
- Commissions numerous recruiting committees; "Conseil Consultatif" + "Conseil de Direction" of Research Unit ECOBIO, numerous thesis and habilitation committees and juries
- Reviewing for 26 journals and institutions
- Project Leader: multiple projects, among others Action Thématique: "Plant diversification within habitats: from genomic causes to metabolomic and ecosystem consequences", granted by CNRS for 2006 – 2009 (postdoc, equipment)
- Meeting/workshop: "axe fédérateur" species communities at research unit; international 1 week workshop
- Teaching administration: including (co)responsibility for Master 2nd year teaching and for a major teaching unit

Funding

- As project leader: approximately **1097 kEuros** external funding (2001 – 2017)
- As co-leader: approximately **300 kEuros** external funding (2001 – 2017)

Peer-reviewed publications (https://scholar.google.fr/citations?view_op=list_works&hl=fr&user=w5Ogsc0AAAAJ)

- Since 1997 in total 66 international publications: 62 ISI journals and 4 book chapters). First or senior author on 53 of them, out of which 39 have an Impact Factor (2010) > 3 (29 with an IF > 4, 3 x IF 15), mean journal Impact Factor = 4.7.
- 32 on plants, 15 on invertebrates (insects, mites), 17 on plant-invertebrate interactions
- 18 on intraspecific and 35 on interspecific patterns and processes, 13 on comparisons of intraspecific patterns and processes across species
- 51 on evolutionary or evolutionary ecological themes, 15 on purely ecological themes

Presentations

- 37 invited presentations

Supervisions

- 31 undergraduate and graduate students
- 9 PhD students plus supports for other PhD theses
- 5 Postdocs

Teaching

- Bachelor and Master
- Microevolution and Macroevolution
- Ecology of populations and communities, conservation ecology
- Botany and Zoology (systematics, determination, excursions)
- Practicals, seminars, lectures

C.V. – Andreas Prinzing

Professor, Responsible of Axe Fédérateur *Species Communities: Assembly rules, Diversification, Functioning*
Université de Rennes 1 / Centre National de la Recherche Scientifique
Unité *Ecosystèmes - Biodiversité – Evolution* (« UMR 6553 ECOBIO »)
Campus de Beaulieu, Bâtiment 14A ; 35042 Rennes, France
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andreas.prinzing@univ-rennes1.fr

* 29th October 1966 in Stuttgart, Germany; married; one child (* 12th October 1999)

Education / Qualification

2004: Qualification for the positions of a *Professor* at French Universities and State Museums for the section 67 *Biologie des populations et écologie* and 68 *Biologie des organismes*

2003: Qualification for the positions of a *Maître de Conférences* at French Universities and State Museums for the sections 67 and 68 (see above)

1996: Ph.D. in Biology at the University of Kiel (Germany); grade: A

1992: M.Sc. (German "Diplom") in Biology at the University of Kiel (Germany); grade: B

1992: Six international courses on theoretical and experimental ecology at the University of Beersheva (Israel); grade: A

1987: B.Sc. (German "Vordiplom") in Biology at the University of Hohenheim (Germany); grade: A

1981-1985: Youth camps on field biology and nature conservation in 12 countries throughout Europe

Postdoctoral positions

October 2014: Professor (rank 1), University of Rennes1, France, in Ecology and Population Biology.

Since January 2012 Responsible of Axe Fédérateur *Species Communities: Assembly rules, Diversification, Functioning* of the Ecobio Research Unit

September 2006-2011: Head of Group *Ecology of Diversification* (funded as Action Thématique ATIP by CNRS France)

October 2004: Professor (rank 2), University of Rennes1, France, in Ecology and Population Biology.

April 2003 - September 2004: Assistant Professor (*senior docent*, non-permanent), combined with a EU Marie-Curie-Fellowship at the University of Nijmegen and ALTERRA Institute Wageningen (The Netherlands). *Research*: Relationship between the richness of dispersal opportunities and the species richness of plants. *Teaching:* master classes, lectures, M.Sc. supervisions at the universities of Nijmegen and Wageningen.

November 2001 – March 2003: Postdoctoral fellow at the Department of Ecology, Institute of Zoology, University of Mainz (Germany). *Research*: Impact of disturbances due to inundation on the mutualism between plants and seed-dispersing ants. *Teaching*: various graduate and undergraduate courses.

April 1998 – October 2001: Postdoctoral fellow at the Center of Environmental Research, Halle / S. (Germany); Department of Community Ecology. *Research*: Conceptual and statistical analysis of data bases on the biology, ecology and phylogeny of central European plants and birds.

July 1996 - March 1998: Postdoctoral fellow at the State Museum of Natural History Karlsruhe (Germany). *Research*: Relationship between species traits and ecotoxicological resistance of oribatid mites; intra- and interspecific patterns of habitat use in oribatid mites. *Teaching*: graduate courses on soil zoology.

Areas of Interest (See *Research Interests* for details).

Interface between ecology and evolution, in particular the ecology and evolution of the niche of species:

- Habitats as templates for the diversification of lineages
- Island biogeography of tree crowns
- Ecology and evolution of the niche / phylogenetic community assembly

Application of the findings to conservation biology

Academic services

- Coordinating Editor: Journal of Vegetation Science (2009-2017); Applied Vegetation Science (2009-2013)
- Handling Editor: Oecologia (from 2011-)
- Project Leader: 20 funded projects of different size, see "Funding", with three to six national or international collaborators coming from disparate disciplines such as genetics, soil ecology, statistical ecology, mite taxonomy, polar ecology and vegetation science, forest entomology, botany
- Team leader: of Group Ecology of Diversification (funded as Action Thématique ATIP by CNRS (2006-2011)
- Research animator of major Research Unit: Responsible of Axe Fédérateur *Species Communities: Assembly rules, Diversification* of the Ecobio Research Unit (2012 -)
- Administration of funds, e.g. for staff
- Commissions "Commission des spécialistes" at Université de Rennes 1 (commissions responsible for recruiting faculty staff) ; "Conseil Consultatif" (advisory committee) of Research Unit ECOBIO, "Conseil de Direction" of Research Unit ECOBIO. (2006 – 2011)
- Thesis committees : nine at Universities of Rennes 1, Orleans (France) and Lausanne (Switzerland), and at Paris National Museum
- Juries : Five theses (universities Paris 6, Montpellier (2x), Orleans, Lausanne), three habilitations (universities Paris 6 (2x), Rennes 1)
- Meetings/workshop: "axe fédérateur" species communities at research unit; international 1 week workshop at German Centre of Integrative Biodiversity Research
- Reviewing for *American Naturalist; Apidology; Avian Biology*; *Bioform Editors (Book chapter); Biodiversity and Conservation; Biological Invasions; Cambridge University Press* (book chapter); *Ecography; Ecological Indicators, Ecology; Ecology Letters; Evolutionary Ecology*; *European Journal of Entomology; European Journal of Soil Biology*; *Global Change Biology; Journal of Applied Ecology*; *Journal of Ecology*; *Oikos*, *New Phytologist; Oecologia*; *Perspectives in Plant Ecol. Evol. & System., PLOS One; Proceedings B*; *Quarterly Reviews in Biology; Trends in Ecology and Evolution;* German Science Foundation; Humboldt Foundation; Swiss Science Foundation; Agence National de la Recherche; French Polar Institute (many other requests turned down due to time constraints or possible conflicts of interest).
- Responsible of Teaching Unit co-responsible for Master 2nd year teaching program in *Functional, Behavioral and Evolutionary Ecology*; responsible for *Ecology of Species Communities and Functioning of Ecosystems*: approx. 200 students from six different Master parcours, 14 participating teaching staff.

Funding

As project leader: approximately **1097 kEuros** external funding (2001 – 2017)

- French Ministry of External Affairs: program EGIDE (exchange stipend) 2017 – 2019 - 7 kEuros
- French Ministry of Research: PhD fellowship, 2013-2016 – approx. 100 kEuros
- Funding for scientific exchange by University Rennes 1, 2013 and 2014, – 7 kEuros
- sDIV workshop and postdoc project on scientific synthesis 2014 – approx. 63 kEuros
- Région Bretagne: Post doc fellowship, 2013-2014 – approx. 69 kEuros
- Centre National de la Recherche Scientifique :" delegation", i.e. 50 % of my teaching time is bought by CNRS from University of Rennes: 2012-2013 – equivalent to approx. 11 kEuros
- Actions Emergents University of Rennes 1 – 2012 –10 kEuros
- Chinese Academy of Sciences / CNRS: exchange PhD stipend to M. Xu Pan 2012 – 2012 – approx. 30 kEuros
- French Ministry of External Affairs: program EGIDE (exchange stipend) 2011 – 2012 – 2.5 kEuros
- Funding by CNRS for exchange project with China. 2011 – 2.5 kEuros
- Université Européenne de Bretagne, invited PhD fellowship, 2011 – 4 kEuros
- University of Rennes 1, Invited Docent Position (3 months) to Prof. C. Martorell Delgado – approx. 12 kEuros
- Université Européenne de Bretagne, invited PhD fellowship, 2010 – 4 kEuros
- Centre National de la Recherche Scientifique :" delegation", i.e. 50 % of my teaching time is bought by CNRS from University of Rennes: 2009-2010 – equivalent to approx. 11 kEuros

- Région Bretagne: PhD fellowship (co-funding), 2009-2012 – approx. 49 kEuros
- Centre National de la Recherche Scientifique : PhD fellowship (co-funding), 2009-2012 – approx. 49 kEuros
- Centre National de la Recherche Scientifique : "Action Thématique (ATIP)", 2006-2009 – approx. 260 kEuros
- French Ministry of Research: PhD fellowship, 2007-2010 – approx. 100 kEuros
- French Ministry of Employment: "CAE" recruitment contract, 2008-2009 – 19.5 kEuros
- Région de Bretagne : "Accueil des Compétences en Bretagne", 2006 - 2009 - 96 kEuros
- French Ministry of External Affairs: program EGIDE (exchange stipend) 2007 – 2009 - 5 kEuros
- Université de Rennes 1: « Invited Professor » position to Matty Berg, 2006 – 8 kEuros
- Université de Rennes 1: "Bonus Qualité de Recherche", 2006 – 15 kEuros
- European Community, Marie-Curie Individual Fellowship, 2002-2004 – 140 kEuros
- Ministry of Science, Sachsen, Germany (2 month guest postdoc – not realized due to illness of postdoc), 2002 - very approx. 6kEuros
- Centre for Environmental Research Leipzig-Halle, Germany (3 month postdoc– not realized due to illness of postdoc), 2002 - very approx. 9kEuros

As co-leader: approximately **300 kEuros** external funding (2001 – 2017)

- University of Tartu, PhD fellowship 2017-2020 – approx. 45 kEuros
- French Ministry of Research: PhD fellowship, 2014-2017 – approx. 100 kEuros
- French Ministry of Research: PhD fellowship, 2013-2016 – approx. 100 kEuros
- Univ. Of Shanghai, one year stay of PhD student Anna Qi Zhao, supervised by D. Cluzeau in collaboration with A. Prinzing, 2010 – approx. >30 kEuros
- Université de Rennes 1: "Bonus Qualité de Recherche", with David Renault, 2005 – 20 kEuros
- Centre of Environmental Research at the University of Mainz, Germany (2x), with Katrin Böhning-Gaese, 2002 – very approx. 5kEuros

Further participation in successful proposals to:

- Centre of Wetland Ecology, The Netherlands
- State Department of Forestry, Baden-Württemberg, Germany
- Project Centre for Ecology, Baden-Württemberg, Germany
- Humboldt Foundation

Peer-reviewed publications (https://scholar.google.fr/citations?view_op=list_works&hl=fr&user=w5Ogsc0AAAAJ)

- Since 1997 in total 66 international publications: 62 ISI journals and 4 book chapters). First or senior author on 53 of them, out of which 39 have an Impact Factor (2010) > 3 (29 with an IF > 4, 3 x IF 15), mean journal Impact Factor = 4.7.
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- 51 on evolutionary or evolutionary ecological themes, 15 on purely ecological themes

⁺ macroecology / macroevolution

***** population ecology / microevolution

° community ecology / functional aspects of biodiversity

^ applied ecology (note that implications to conservation biology are also discussed in most other papers)
Final authorship means senior author.

[In brackets: ISI Impact Factor for 2010; Impact-Factor-rank of journal / total no. of journals in its "subject category" (using 2010 avoids some of the post-publication shifts in IF, but I am happy to provide 2016 IFs)]

+ Bonnefoi, S., Aïnouche, A, Bartish, I.V., **Prinzing, A**. Angiosperm families of intermediate ploidy show highest species richness in Central Europe, reflecting low-temperature niches. Invited for resubmission in *Ecography*, [Impact factor 2010 4.4; Impact factor rank 20/129 in "Ecology"]

+° Barbe L., Mony C., Jung V., Santonja M., Bartish I. & **Prinzing A.** Functionally or phylogenetically distinct neighbors turn antagonism among decomposing litter species into synergy. Minor revision in *Journal of Ecology* [5.3; 11/130 in "Ecology"]

*° Molleman, F.; Javoiš, J.; Davis, R.; Whitaker, M.; Tammaru, T.; **Prinzing, A.**; Õunap, E.; van Velzen, R.; Wahlberg, N.; Kodandaramaiah, U.; Aduse-Poku, K.; Kaasik, A.; Carey, J.. Quantifying the effects of species traits on predation risk in nature: a comparative study of butterfly wing damage. Invited for resubmission *Journal of Animal Ecology* [4.6; 21/130 in "Ecology"]

+° Ait Mouheb, H., Kadik, L., Albert, C.H., Berrached, R., & **Prinzing, A.** in press How do steppe plants follow their optimal environmental conditions or persist under suboptimal conditions? The differing strategies of annuals and perennials. In press in *Ecology and Evolution* [now IF 2.4; 57/153 in "Ecology"]

*° Deniau, M; Vincent, J; Le Lann, C; Kellner, H; Béchade, B; Morra, T; **Prinzing, A.** Janzen-Connell patterns can be induced by fungal-driven decomposition and compensated by ectomycorrhizal fungi accumulated under a closely related canopy. In press in *Functional Ecology*. [4.9; 19/140 in Ecology"]

° Berrached, R., Kadik, L., Ait Mouheb, H. & **Prinzing, A.** Deep Roots Delay Flowering and Relax the Impact of Floral Traits and Associated Pollinators in Steppe Plants. In press in *Plos One*. [3.5; 8/55 in "Multidisciplinary Sciences"]

°^ Pan, X., Ping, Y., Cui, L, Li, W., Zhang, X. Zhou, J. Yu, F.-H, **Prinzing A**. Plant litter submergence affects the water quality of a constructed wetland. In press in *Plos One*. [3.5; 8/55 in "Multidisciplinary Sciences"]

° Barbe, L., Jung, V, **Prinzing, A*** (* these authors contributed equally), Bittebière, A.-K., Butenschoen, O.& Mony, C. Functionally dissimilar neighbors accelerate ecosystem functioning of two focal plant species: experimental evidence on decomposition of grass litter. In press in *New Phytologist*. [2010 6.5; 9/198 in "Ecology"]

+*°^ **Prinzing A.**, Ozinga, W. Brändle, M. Courty, P.-E. Hennion F., Labandeira C., Parisod C., Pihain, M., Bartish I. (2017) Benefits From Living Together? Clades Whose Species Use Similar Habitats May Persist as a Result of Eco-Evolutionary Feedbacks. *New Phytologist*.213: 66-82 [6.5; 9/198 in "Ecology"]

*° Deniau, M, Jung, V., Le Lann, C., Morra, T., Murray, P. & **Prinzing, A.** (2017) Janzen-Connell patterns are not the result of Janzen-Connell process: oak recruitment in temperate forests. In press in *Perspectives* in *Plant Ecology, Evolution and Systematics,* [4.5; 13/188 in "Plant Sciences"]

+° Yguel, B.; Jactel, H.; Pearse, S. I.; Moen, D.; Winter, M.; Hortal, J.; Helmus, R. M.; Kühn, I. Pavoine, S.; Purschke, O.; Weiher, E.; Violle, C.; Ozinga, W.; Brändle M.; Bartish I.; **Prinzing, A**. (2016) The evolutionary legacy of diversification predicts ecosystem function. in press in *American Naturalist*. [4.7; 17/129 in "Ecology"]

+*° Molleman F., Depoilly A., Vernon P., Müller J., Bailey R., Jarzabek-Müller A. & **Prinzing A**. (2016) The island rule of body size demonstrated on individual hosts: phytophagous click-beetle species grow larger and predators smaller on phylogenetically isolated trees. *Journal of Biogeography* 43, 1388–1399 [4.3; 24/129 in "Ecology"]

+° Bartish, I.V., Ozinga, W.A, Bartish, M. & Hennekens, S.M. & **Prinzing, A**. (2016) Different habitats within a region contain evolutionary heritage from different epochs depending on the abiotic environment. *Global Ecology and Biogeography*, 25: 274-285 [5.3; 11/129 in "Ecology"]

*° Hennion, F., Litrico, I., Bartish, I., Weigelt, A., Bouchereau, A. & **Prinzing, A.** (2016) Ecologically diverse and distinct neighbourhoods trigger persistent phenotypic consequences, and amine metabolic profiling detects them. *Journal of Ecology*, 104: 125-137 [5.3; 11/129 in "Ecology"]

+° **Prinzing, A.** (2016) On the opportunity of using phylogenetic information to ask evolutionary questions in functional community ecology. In press in *Folia Geobotanica*. [1.6; 86/199 in "Plant Biology"]

+° **Prinzing, A.**, Powrie, L.W., Hennekens, S.M., Bartish I.V., Ozinga W.A. (2016) "High co-occurrence genera": weak but consistent relationships to global richness, niche partitioning, hybridization and decline. *Global Ecology and Biogeography* 25: 55-64 [5.3; 10/129 in "Ecology"]

+ Zhao, Q., Cluzeau, D. Jiang, J., Petit, E.J., Briard, C., Sun, J. **Prinzing, A.** & Qiu, J. 2015 1Molecular Phylogeny of Pheretimoid Earthworms (Haplotaxina:Megascolecidae) Based on Mitochondrial DNA in Hainan Island, China.. Molecular Biology 4-4.

+° Pan, X. Song, Y.-B, Liu, G.-F., Ye, X.-H., Xie, X.-F., Hu, Y.-K. Zhao, W.W., Cui, L., Cornelissen, J.H.C., Dong, M., **Prinzing; A.** (2015) Changes of leaf litter chemical traits during decomposition and their phylogenetic similarities are predictable: evidence from a common garden experiment across 48 species. *Plos One, 10: e0143140.* [3.5; 8/55 in "Multidisciplinary Sciences"]

+° Pan, X , Song, Y.-B , Liu, G.-F. , Hu, Y-K., Ye, X., Cornwell, W.K., **Prinzing, A.**, Dong, M. & Cornelissen, J.H.C. (2015) Functional traits drive the contribution of solar radiation to leaf litter decomposition among multiple arid-zone species. *Scientific Reports 5, Article number: 13217* [5.1; 5/55 in "Multidisciplinary Sciences"]

+° Pan, X.,· Berg, M.P., Butenschoen, O., Murray, PJ, Bartish, .IV., Cornelissen, J.H.C., Dong, M. & **Prinzing, A**. (2015) Larger phylogenetic distances in litter mixtures: Lower microbial biomass and higher C/N ratios but equal mass loss. *Proceedings of the Royal Society, Series B*, *282,* 20150103 [5.1; 9/85 in "Biology"]

+ Winkworth, R.C., Hennion, F., **Prinzing, A**. & Wagstaff, S.J. (2015) The impacts of late Cenozoic climate change on the evolution of Southern Hemisphere floras. In press in *Journal of Biogeography, 41,* 353-365 [4.3; 24/129 in "Ecology"]

+° Gerhold, P., Cahill, J.F. Jr, Winter, M., Bartish, I.V. & **Prinzing, A.** (2015) Phylogenetic patterns are not proxies of community assembly mechanisms (they are far better). *Functional Ecology, 29,* 600-614. [4.9; 19/140 in "Ecology"]

*° Yguel, B.; Courty, P.-E.; Jactel, H. & **Prinzing, A.**· (2014) Below-ground mutualists support oaks growing in a phylogenetically distant neighbourhood. *Soil Biology & Biochemistry, 78, 204-212* [3.2; 1/32 in "Soil Sciences"]

*° Yguel, B., Bailey, R., Villemant, C., Brault, A., Jactel, H. & **Prinzing, A.** (2014) Enemy release of insect herbivores on phylogenetically isolated trees: why phytophages should follow plants escaping their relatives? *Oecologia*, *176,* 521-532. [3.5: 30/129 in "Ecology"]

+° Pan, X., Cornelissen, JHC, Zhao, W.-W., Liu, G.-F., Hu, Y.-K., **Prinzing, A.**, Dong, M., Cornwell, W.K.. (2014) Experimental evidence that the Ornstein-Uhlenbeck model best describes the evolution of leaf litter decomposability. *Ecology and Evolution 4,* 3339-3349 [1.2; 99/136 in "Ecology"]

*° **Prinzing, A.** (2014) Competition might produce pairwise negative correlations of genetic richness, not of abundance. *Journal of Vegetation Science, 23,* 698-708. [2.5; 39/188 in "Plant Sciences"]

+ **Prinzing, A.**, D'Haese, C. A. Pavoine, S. & Ponge, J.-F. (2014) Stress tolerators are phylogenetically basal and localized on former Laurasian continents - the case of Willemia (Collembola). *Journal of Biogeography, 41,* 353-365 [4.3; 24/129 in "Ecology"]

+* Hermant M., **Prinzing A.**, Vernon P., Convey P. and Hennion F. (2013) Endemics species have highly integrated phenotypes, environmental distributions and phenotype/environment relationships. *Journal of Biogeography 40,* 1583-1594 [4.3; 24/129 in "Ecology"]

+ ^ Ozinga, W., Colles, A., Bartish, I.V., Hennion, F., Hennekens, S.M., Pavoine, S., Poschlod, P., Hermant, M., Schaminée, J.H.J. & **Prinzing, A.** (2013) Specialists leave less descendants within a region than generalists. *Global Ecology and Biogeography*. *22, 213–222* [5.3; 10/129 in "Ecology"].

+ Hermant M., Hennion F., Bartish I.V., Yguel, B. & **Prinzing A.** (2012) Disparate relatives: life histories vary more in genera occupying intermediate environments. *Perspectives* in *Plant Ecology, Evolution and Systematics, 14,* 281-301. [4.5; 13/188 in "Plant Sciences"].

+° ^ Mouquet, N., Devictor, V., Meynard, C.N., Munoz, M., Bersier, L.-F., Chave, J. Couteron, P., Dalecky, A., Fontaine, C., Gravel, D., Hardy, O.J., Jabot, F. Lavergne, S. Leibold, M., Mouillot, D., Münkemüller, T. Pavoine, S., **Prinzing, A.**, Rodrigues, A.S.L., Rohr, R.P., Thébault, E., & Thuiller, W. (2012) Ecophylogenetics: advances and perspectives. *Biological Reviews*, 87, 769–785. [6.5; 2/86 in "Biology"]

+* Hennion F., Bouchereau A., Gauthier C., Brumbt C., Hermant M. & **Prinzing A.** (2012) Variation in amine composition in plant species: how it integrates macroevolutionary and environmental signals. *American Journal of Botany,* 99, 36-45. [3.1; 27/188 in "Plant Sciences"]

° Yan, B., Zhang, J., Liu, Y., Li, Z. Huang, X. Yang, W. & **Prinzing, A**. (2012) Trait assembly of woody plants in communities across subalpine gradients: Identifying the role of limiting similarity within a guild. *Journal of Vegetation Science,* 23, 698-708. [2.5; 39/188 in "Plant Sciences"]

*° Yguel, B., Bailey, R., Everhart, D., Vialatte, A., Vasseur, C., Vitrac, X. & **Prinzing, A.** (2011). Phytophagy on phylogenetically isolated trees: why hosts should escape their relatives. *Ecology Letters*, 14, 1117–1124 [15.3; 1/129 in "Ecology"]

+ ° Kattge, J. and 133 others (2011) TRY – a global database of plant traits. *Global Change Biology Global Change Biology 17, 2905–2935,* [6.3; 6/129 in "Ecology"]

+° ^ Gerhold, P., Pärtel, M., Tackenberg, O., Hennekens, S.M., Bartish, I.V., Schaminée, J.H.J., Fergus, A.J.F. Ozinga, W.A., & **Prinzing, A.** (2011). Phylogenetically poor plant communities receive more alien species, which more easily coexist with natives. *American Naturalist, 177*, 668-680 [4.7; 17/129 in "Ecology"]

+° Bartish, I., Hennekens S., Aidoud A., Hennion, F. & **Prinzing, A.** (2010). Species pools along contemporary environmental gradients represent different levels of diversification. *Journal of Biogeography,* 37, 2317-2331 [4.3; 24/129 in "Ecology"]

°* Vialatte, A., Bailey, R., Vasseur, C., Matocq, A., Goßner, M., Everhart, D., Vitrac, X., Belhadj, A., Ernoult, A.; & **Prinzing, A.** (2010) Phylogenetic isolation of host trees affects assembly of local Heteroptera communities. *Proceedings of the Royal Society, Series B, 227,* 2227-2236 [5.1; 9/85 in "Biology"]

+* ^ Colles, A., Liow, L.H. & **Prinzing, A.** (2009) Are specialists at risk under environmental change? – Neoecological, paleoecological and phylogenetic approaches. *Ecology Letters,* 8, *849 - 863* [15.3; 1/129 in "Ecology"]

+° Goßner, M., Chao, A., Bailey, R. & **Prinzing, A.** (2009) Native fauna on exotic trees: Phylogenetic conservatism and geographic contingency in two lineages of phytophages on two lineages of trees. *American Naturalist,* 173,599-614 [4.7; 17/129 in "Ecology"]

+ Ozinga, W.A., Römermann, C., Bekker, R.M., **Prinzing, A.**, Tamis, W.L.M., Schaminee, J.H.J., Hennekens, S.M., Thompson, K., Poschlod, P., Kleyer M., Bakker, J.P. & van Groenendael, J.M.. (2009) Dispersal failure contributes to plant losses in NW Europe. *Ecology Letters, 12, 66-74*. [15.3; 1/129 in "Ecology"]

*° Jung, F., Böhning-Gaese, K. & **Prinzing, A.** (2008): Intermediate levels of habitat disturbance favour sexual reproduction in the ant-dispersed clonal herb *Ranunculus ficaria*. *Ecography,* 6, 776 – 786 [4.4; 22/129 in "Ecology"].

+ °^ Gerhold, P., Pärtel, M, Liira, J, Zobel, K. & **Prinzing, A.** (2008): Species pool size and phylogenetic structure in ecological communities. *Journal of Ecology, 96*, 709-712. [5.3; 11/129 in "Ecology"].

+ ° **Prinzing A.**, Reiffers, R., Braakhekke, W.G., Hennekens, S.M., Tackenberg, O., Ozinga, W.A., Schaminée, J.H.J. & van Groenendael, J.M. (2008): Less lineages – more trait variation: phylogenetically clustered plant communities are functionally more diverse. *Ecology Letters, 11*, 809–819. [15.3; 1/129 in "Ecology"].

*° Boedeltje, G., Ozinga, W.A.. & **Prinzing, A.** (2008): Diaspore pressure across landscapes: constrained by the trade-off between vegetative and generative reproduction? *Global Ecology and Biogeography,* 17, 50-58. [5.3; 10/129 in "Ecology"].

+*°^ Filser, J., Koehler, H., Ruf, A., Römbke, J., **Prinzing, A.** & Schaefer, H. (2008): Ecological theory meets terrestrial ecotoxicology: a challenge and a chance. *Basic and Applied Ecology*, 9, 346-355. [2.2; 52/129 in "Ecology"]

*° **Prinzing, A.**, Dauber, J., Hammer, E., & Böhning-Gaese, K. (2008): Does an ant-dispersed plant, Viola reichenbachiana, suffer from reduced seed dispersal under inundation disturbances? *Basic and Applied Ecology,* 9, 108-116. [2.2; 52/129 in "Ecology"]

*° **Prinzing, A.**, Dauber, J., Hammer, E., Hammouti, N. & Katrin Böhning-Gaese, K. (2007): Perturbed partners: opposite responses of plant and animal mutualist guilds to inundation disturbances. *Oikos*, 116, 1299-1310 [3.4; 33/129 in "Ecology"]

+ ^ Ozinga, W. Hennekens, S. M., Schaminée, J. H. J., Bekker, R., **Prinzing, A.** & Groenendael, J. M. v (2005): Assessing the relative importance of dispersal in plant communities using an ecoinformatic approach. *Folia Geobotanica 40*, 53-67 [1.2; 91/187 in "Plant Sciences"]

* **Prinzing, A.** (2005): Corticolous arthropods under climatic fluctuations – compensation is more important than migration. *Ecography*, 18, 17-28. [4.4; 20/129 in "Ecology"]

+ ^ **Prinzing, A.**, Durka, W., Klotz, S. & Brandl, R. (2005): How to characterize and predict alien species? A response to Pyšek et al. (2004). *Diversity and Distributions*, 11, 121–123. [4.3; 5/33 in "Biodiversity Conservation"]

+ **Prinzing, A.,** Ozinga, W. & Durka, W. (2004): The relationship between the global and regional distribution of species changes during phylogeny. *Evolution*, 58, 2622–2633. [5.7; 6/45 in "Evolutionary Biology"]

* **Prinzing, A.**, Lentzsch, P., Voigt, F. & Woas, S. (2004): Habitat stratification stratifies populations: ecomorphological evidence from a bisexual, mobile invertebrate (*Carabodes labyrinthicus*; Acari). *Annales Zoologici Fennici*, 41, 399-412. [1.1; 62/145 in "Zoology"]

^ Beck, L. Römbke, J., Ruf, A., **Prinzing, A.** & Woas, S. (2004): Effects of diflubenzuron and Bacillus thuringiensis var. kurstaki toxin on soil invertebrates of a mixed deciduous forest in the Upper Rhine Valley, Germany. European Journal of Soil Biology, 40, 55-62. [1.9; 11/32 in "Soil Sciences"]

+ **Prinzing, A.** (2003): Are generalists pressed for time? An interspecific test of the Time-limited Disperser Model. *Ecology,* 84, 1744-1755. [5.1; 11/129 in "Ecology"]

* **Prinzing, A.** (2003): Accessibility of high temperature and high humidity for the mesofauna of a harsh habitat - the case of exposed tree trunks. *Journal of Thermal Biology,* 28, 403-412. [1.3; 51/145 in "Zoology"]

+ ^ **Prinzing, A.**, Klotz, S., Stadler, J. & Brandl , R. (2003): Woody plants in Kenya: expanding the Higher-Taxon Approach. *Biological Conservation,* 110, 307-314. [3.5; 6/33 in "Biodiversity Conservation"]

+ **Prinzing, A.** & Woas, S. (2003): Habitat use and stratification of Collembola and oribatid mites. In: Y. Basset, R. L. Kitching, S. E. Miller & V. Novotny [eds]: *Arthropods of tropical forests – spatio-temporal dynamics and resource use in the canopy,* 271-281. Cambridge University Press, Cambridge.

+* ^ **Prinzing, A.**, Kretzler, S., Badejo, A. & Beck, L. (2002): Traits of oribatid mite species that tolerate habitat disturbance due to pesticide application. *Soil Biology & Biochemistry*, 34, 1655-1661. [3.2; 1/32 in "Soil Sciences"]

+ **Prinzing, A.**, Durka, W., Klotz, S. & Brandl, R. (2002): Geographic variability of ecological niches of plant species – are competition and stress relevant? *Ecography*, 25, 721-729. [4.4; 22/129 in "Ecology"]

+ Brändle, M., **Prinzing, A.**, Pfeifer, R. & Brandl, R. (2002): Dietary niche breadth for Central European birds: correlations with species specific traits. *Evolutionary Ecology Research*, 4, 643-657. [1.5; 76/129 in "Ecology"]

+ ^ **Prinzing, A.**, Durka, W., Klotz, S. & Brandl, R. (2002): Which species become aliens? *Evolutionary Ecology Research*, 4, 385-405. [1.5; 76/129 in "Ecology"]

+ ^ **Prinzing, A.,** Brändle, M., Pfeifer, R. & Brandl, R. (2002): Does sexual selection influence population trends of European bird species? *Evolutionary Ecology Research*, 4, 49-60. [1.5; 76/129 in "Ecology"]

+ **Prinzing, A.** (2002) Phylogenetic patterns in the analysis of ecological data bases: source of information and source of error. In: S. Klotz, I. Kühn & W. Durka [eds]: *BIOFLOR: a database on biological and ecological traits of the German flora*, 27-40. *Bundesamt für Naturschutz* (in German).

+ **Prinzing, A.,** Durka, W., Klotz, S. & Brandl, R. (2001): The niche of higher plants: evidence for phylogenetic conservatism. *Proceedings of the Royal Society, Series B*, 268, 2383-2389. [5.1; 9/85 in "Biology"]

* **Prinzing, A.** (2001): Use of shifting microclimatic mosaics by arthropods on exposed tree trunks. *Annals of the Entomological Society of America,* 94, 210-218. [1.0; 34/83 in "Entomology"]

+* ^ **Prinzing, A.**, Kretzler, S. & Beck, L. (2000): Resistance to disturbance is a diverse phenomenon and does not increase with abundance: the case of oribatid mites. *Ecoscience,* 7, 452–460. [1.6; 72/129 in "Ecology"]

° **Prinzing, A.** (1999): Wind-acclimated thallus morphogenesis in a lichen (*Evernia prunastri*, Parmeliaceae) probably favored by grazing disturbances. *American Journal of Botany*, 86, 173-183. [3.1; 27/187 in "Plant Sciences"]

* **Prinzing, A.** (1997): Spatial and temporal use of microhabitats as a key strategy for the colonization of tree bark by *Entomobrya nivalis* L. (Collembola: Entomobryidae). In: N. Stork, J. Adis & R. Didham [eds]: *Canopy arthropods*, 453-476. Chapman & Hall, London.

° **Prinzing, A.** & Wirtz, H.-P. (1997): Epiphytic lichens (*Evernia prunastri* L. 1753) as a habitat for arthropods: shelter from desiccation, food-limitation and indirect mutualism. In: N. Stork, J. Adis & R. Didham [eds]: *Canopy arthropods*, 477-494. Chapman & Hall, London.

Conferences

(Most presentations as first or senior author; T = talk, P = poster)

- German Society of Ecology; congresses 1992 at Zürich – *T*, 1995 at Dresden – *T*, 1997 at Müncheberg – *T P P P*, 1999 at Bayreuth – *T*, 2000 at Kiel – *T*, 2001 at Basel – *T P*, 2002 at Cottbus – *P P P*, 2003 at Halle/S – *T T P P* , 2009 Bayreuth – *T*, 2011 Oldenburg – *T*; 2012 Lüneburg – *T*, 2013 Potsdam – *T*, 2015 Göttingen – *T T P*; 2016 Marburg– *T*
- German Society of General and Applied Entomology; congresses 1994 at Hochrhön – *T*, 2001 at Düsseldorf – *P*, and 2003 at Halle/S – *T*
- Intecol; congresses 1994 at Manchester – *T* and 1998 at Firenze – *T*
- Evolution of natural structures – principles, strategies and models in architecture and nature; international symposium 1994 at Stuttgart – *T*
- Soil Mesofauna Group; colloquium 1995 at Bremen – *T*
- European Ecological Society; congress 1995 at Budapest – *T,* 2008 at Leipzig – *T T T T P,* 2011 at Avila – *T P P*
- British Ecological Society and Société française d'écologie; joint congress 2014 at Lille, F – *T T P P*
- British Ecological Society and American Ecological Society; joint congress 2000 at Orlando, USA – *P P*
- British Ecological Society; congress 2002 at York, UK – *T P P,* 2005 at Hatfield – *T P*
- British Ecological Society; seminar 2006 at Sheffield, UK – *P*
- Fédération internationale de Phytosociologie; congress 2000 at Rinteln – *P P P*
- International Colloquium on Soil Zoology; 2000 at Ceske Budejovice – *P*
- German Botanical Society; Symposium on biodiversity and evolutionary biology 2001 at Bochum – *T P*
- German Zoological Society, congresses 2002 at Halle/S – *T*, 2003 at Berlin – *T* and 2010 at Hamburg – *T*
- Institute of Macroecology, congress 2006 at Potsdam - *P*
- Biology of Invasive Species meeting, 2007 at Rennes – *T*
- EcoVeg meeting, 2007 at Rennes – *T*
- ComEvol meeting, 2007 at Versaille – *T*
- Petit Poid Déridé meeting on evolutionary biology, 2008 at Rennes – *P*
- Ecologie – National ecology conference in France, 2010 at Montpellier – *T,P, P,* 2014 at Lille – *P, P, T*, 2016 at Marseille – *T, T*
- International Botanical Congress; 2017 at Shenzhen (China) – *T*
- 25 years international meeting of French Permanent Forest Plot Program; 2017 at Beaune (France) – 5 *P*

Invited presentations

- Nature conservation in the *Middle Oder* region, international symposium 1991 at Zielona Gora, (Poland)
- Synergy colloquium at the Institute of Physics, 1992 at the University of Stuttgart (Germany)
- German Science Foundation, special symposium on tropical biodiversity, 1995 at Würzburg (Germany)
- Karlsruhe Club of Natural Sciences, 1996 at Karlsruhe (Germany)
- Illinois Natural History Survey, 2001 at Champaign (IL, USA)
- Scottish Crop Research Institute, 2001 at Dundee (UK)
- Centre of Environmental Research of the Univ. of Mainz, 2003 at Obermoschel (Germany)
- Ecotoxicology Workshop of the German Ecological Society, 2003 at Bredbeck (Germany)
- University of Zürich, Zoological Colloquium, 2003 at Zürich (Switzerland)
- Muséum National d'Histoire Naturelle, Dept. Entomology, 2003 at Paris (France)
- University of Nijmegen, Ecological Colloquium, 2003 at Nijmegen (The Netherlands)
- Muséum National d'Histoire Naturelle, Dept. Conservation Biology, 2003 at Paris (France)
- University of Wageningen, Ecological Colloquium, 2004 at Wageningen (The Netherlands)
- University of Rennes 1, 2004 Rennes (France)
- University of Lyon, 2004 Lyon (France)
- University of Paris Sud, 2004 Orsay (France), 2x
- University of Lille, 2004 Lille (France)
- University of Rennes 1, Colloquium on biological invasions, 2005 Rennes (France)
- University of Zürich (ETHZ), 2007 Zürich (Switzerland)
- University of Tartu, 2007 Tartu (Estonia)
- University of Dijon, 2007 Dijon (France)
- University of Montpellier II / CNRS, 2008 (France)
- Institut National de la Recherche en Agronomie, Lusignan, 2009 (France)
- University of Zürich (ETHZ): Conference „Niche Evolution", 2009 Zürich (Switzerland)
- Ecological Society of America Conference, Symposium on phylogenetic community ecology, 2009, Albuquerque (USA)
- University of Tübingen, 2009 Tübingen (Germany)
- Université de Rennes 1 / CNRS, 2009, Rennes (France)
- University of Frankfurt, 2010 Frankfurt (Germany)
- University of Frankfurt, 2010, special seminary, Frankfurt (Germany)
- University of Berne, 2009, Berne (Switzerland)
- CNRS / Univ Montpellier 2 – Phylocom Conference, 2010, Montpellier (France)
- Ecologie 2010 – First comprehensive national ecology conference in France, Montpellier (France)
- European Ecological Society; congress 2011 at Avila –*T*
- University of Vienna; seminar 2012–*T*
- University of Lausanne; seminar 2013–*T*
- University of Fribourg; seminar 2013–*T*
- German Centre of integrative Biodiversity Research; seminar 2014–*T*
- German National Park Bavarian Forest; seminar 2016–*T*

Research

Research: "*Habitats as templates for the diversification of lineages" (ongoing)*

The major hypothesis for the project is that habitat types drive evolutionary diversification of lineages.
Most evolutionary biologists have a hierarchical view of local species communities: Communities are assembled from a regional pool of already-evolved species via a habitat filter acting on already-evolved traits. In our project we explore the opposite view: whether and how the ecological conditions within different types of habitats may affect the pattern and pace of evolutionary diversification of phylogenetic lineages across geological time scales. We particularly account for effects of habitats on genetic variation, divisions of gene pools, and local persistence of genetic isolates. We are especially interested in effects mediated by genomic and life history traits of the species. This research will allow us to explore how mechanisms of diversification depend on the ecological context. We will hence try to explain the pattern and pace of evolution reflected in modern molecular phylogenies by the ecological setting in which most plant speciations occur.
The major methodological approach is the analysis of databases on the phylogeny, habitat use, co-existence and life history of central European plant species, in order to reconstruct ancestral habitats, traits and how they triggered the pace and pattern of evolution. We aim for collecting additional information on the genome size of species, a still under-recorded trait linked to both environment and diversification.
Key words: diversification, habitat, immigration; isolation; life history, macroevolution, phyloinformatics, plants, speciation

Selected publications:

Bartish, I.V., Ozinga, W.A, Bartish, M. & Hennekens, S.M. & Prinzing, A. (2016) Habitat decline threatens the evolutionary heritage from past geological epochs. In press in Global Ecology and Biogeography.

Gerhold, P., Cahill, J.F. Jr, Winter, M., Bartish, I.V. & **Prinzing, A.** (2015) Phylogenetic patterns are not proxies of community assembly mechanisms (they are far better). Functional Ecology, 29, 600-614.

Hermant M., Hennion F., Bartish I.V., Yguel, B. & **Prinzing A.** (2012) Disparate relatives: life histories vary more in genera occupying intermediate environments. Perspectives in Plant Ecology, Evolution and Systematics, 14, 281-301.

Hennion F., Bouchereau A., Gauthier C., Brumbt C., Hermant M. & **Prinzing A.** (2012) Variation in amine composition in plant species: how it integrates macroevolutionary and environmental signals. American Journal of Botany, 99, 36-45.

Yan, B., Zhang, J., Liu, Y., Li, Z. Huang, X. Yang, W. & **Prinzing, A.** (2012) Trait assembly of woody plants in communities across subalpine gradients: Identifying the role of limiting similarity within a guild. Journal of Vegetation Science, 23, 698-708.

Gerhold, P., Pärtel, M., Tackenberg, O., Hennekens, S.M., Bartish, I.V., Schaminée, J.H.J., Fergus, A.J.F. Ozinga, W.A., & **Prinzing, A.** (2011). Phylogenetically poor plant communities receive more alien species, which more easily coexist with natives. *Americ an Naturalist, 177*, 668-680

Bartish, I., Hennekens S., Aidoud A., Hennion, F. & **Prinzing, A.** (2010). Species pools along contemporary environmental gradients represent different levels of diversification. *Journal of Biogeography,* 37, 2317-2331

Colles, A., Liow, L.H. & **Prinzing, A.** (2009) Are specialists at risk under environmental change? – Neoecological, paleoecological and phylogenetic approaches. *Ecology Letters,* 8, *849 - 863*

Gerhold, P., Pärtel, M, Liira, J, Zobel, K. & **Prinzing, A.** (2008): Species pool size and phylogenetic structure in ecological communities. *Journal of Ecology, 96*, 709-712.

Prinzing A., Reiffers, R., Braakhekke, W.G., Hennekens, S.M., Tackenberg, O., Ozinga, W.A., Schaminée, J.H.J. & van Groenendael, J.M. (2008): Less lineages – more trait variation: phylogenetically clustered plant communities are functionally more diverse. *Ecology Letters, 11*, 809–819.

Research: "*Evolutionary Island Biogeography of tree crowns" (ongoing)*

Arthropods in the tree canopy represent one of the highly diverse and most widespread communities in temperate regions. However, it remains unclear which factors drive this diversity and what its consequences are for ecosystem interactions among arthropods and plants. Given the very particular spatial structure of the canopy we suggest that its arthropod diversity depends strongly on (i) island-biogeographic mechanisms, leading to an increase of diversity with the age of the crowns and the entire canopy; (ii) atmospheric stress, leading to a decline of diversity in crowns exposed to increasing desiccation due to climate change, as well as to a decline of diversity in crowns exposed to increasing pollution by NH_3. We moreover suggest that arthropod diversity affects the function of arthropods as herbivores of trees and epiphytic lichens and as dispersers of the lichens. To understand these determinants and consequences of arthropod diversity in the canopy, diversity has to be measured not only by counting species but also by using the novel concept of phylogenetic diversity. We thus foresee the first experimental manipulation of phylogenetic diversity of host trees. Moreover, we envisage various transplant experiments and sophisticated, spatially explicit observational studies. The results will be important for foresters to develop biodiversity-friendly structure and succession of the forest canopy. Moreover, the results may permit to predict the future trajectory of diversity and functioning in other ecosystem compartments still less exposed to climate change and air pollution.

Key words: arthropods, biodiversity, canopy, climate, dispersal, forestry, herbivory, niche, island biogeography, pollution, tree crowns

Selected publications:

Molleman F., Depoilly A., Vernon P., Müller J., Bailey R., Jarzabek-Müller A. & **Prinzing A.** (2016) The island rule of body size demonstrated on individual hosts: phytophagous click-beetle species grow larger and predators smaller on phylogenetically isolated trees. In press in Journal of Biogeography

Yguel, B.; Courty, P.-E.; Jactel, H. & **Prinzing, A.**. (2014) Below-ground mutualists support oaks growing in a phylogenetically distant neighbourhood. Soil Biology & Biochemistry, 78, 204-212 [3.2; 1/32 in "Soil Sciences"]

Yguel, B., Bailey, R., Villemant, C., Brault, A., Jactel, H. & **Prinzing, A.** (2014) Enemy release of insect herbivores on phylogenetically isolated trees: why phytophages should follow plants escaping their relatives? Oecologia, 176, 521-532. [3.5: 30/129 in "Ecology"]

Yguel, B., Bailey, R.; Everhart, D.; Vialatte, A., Vasseur, C., Vitrac, X. & **Prinzing, A.** (2011). Phytophagy on phylogenetically isolated trees: why hosts should escape their relatives. *Ecology Letters*, 14, 1117–1124

Vialatte, A., Bailey, R., Vasseur, C., Matocq, A., Goßner, M., Everhart, D., Vitrac, X., Belhadj, A., Ernoult, A.; & **Prinzing, A.** (2010) Phylogenetic isolation of host trees affects assembly of local Heteroptera communities. *Proceedings of the Royal Society, Series B, 227,* 2227-2236

Goßner, M., Chao, A., Bailey, R. & **Prinzing, A.** (2009) Native fauna on exotic trees: Phylogenetic conservatism and geographic contingency in two lineages of phytophages on two lineages of trees. *American Naturalist,* 173,599-614

Research: "*Ecology and Evolution of the Niche" (projects mostly terminated)*

The niche of a species is at the interface between evolutionary systems such as phylogenetic lineages which generate the species, and ecological systems in which species have a functional role. Studies on the niche of species can therefore provide insights into the interaction between evolutionary and ecological systems. I have investigated three aspects of the niche: (i) niches in a fluctuating environment; (ii) factors determining the flexibility of the niche in ecological systems; (iii) dispersal-niche and biodiversity.

Key words: Behavioral ecology, biodiversity, dispersal, disturbance, ecomorphology, life history, macroevolution, mutualism, plant-animal interactions, phylogenetic ecology, sexual selection.

Niches of species in a fluctuating environment: a study on bark biota

Key question: *How can arthropods and lichens persist under harsh tree-trunk climates?*

Abstract: Tree bark and other exposed habitats are colonized by a number of phylogenetically old organisms, such as lichens or Collembola. Many of these organisms show only little physiological or morphological resistance against the fluctuating, harsh environmental conditions in these habitats. I found that behavioral flexibility in the utilization of microhabitats and microclimatic gradients is the major strategy of arthropods to survive harsh tree-trunk climates (Prinzing 1997, 2001, 2003). The corresponding strategy of lichens is morphogenetic flexibility (Prinzing 1999). Interestingly, lichens provide the different microhabitats flexibly utilized by the arthropods, and arthropod grazing is the trigger of the morphogenetic flexibility of the lichens (Prinzing & Wirtz 1997, Prinzing 1999). Hence, an indirect mutualism exists between arthropods and lichens.

Thesis: The structural interactions between lichens and arthropods enable both to colonize climatically fluctuating environments such as the bark of solitary, exposed tree trunks.

Application to conservation biology: Humans reduce microhabitat diversity and interfere with the above-mentioned survival strategies. This may threaten species diversity on bark, as well as in other climatically harsh habitats (rocks, littoral).

Selected publications:

Prinzing, A. (2003): Accessibility of high temperature and high humidity for the mesofauna of a harsh habitat - the case of exposed tree trunks. *Journal of Thermal Biology,* 28, 403-412.

Prinzing, A. (2001): Use of shifting microclimatic mosaics by arthropods on exposed tree trunks. *Annals of the Entomological Society of America,* 94, 210-218.

Prinzing, A. (1999): Wind-acclimated thallus morphogenesis in a lichen (*Evernia prunastri*, Parmeliaceae) probably favored by grazing disturbances. *American Journal of Botany*, 86, 173-183.

Prinzing, A. (1997): Spatial and temporal use of microhabitats as a key strategy for the colonization of tree bark by *Entomobrya nivalis* L. (Collembola: Entomobryidae). In: N. Stork, J. Adis & R. Didham [eds]: *Canopy arthropods*, 453-476. Chapman & Hall, London.

Prinzing, A. & Wirtz, H.-P. (1997): Epiphytic lichens (*Evernia prunastri* L. 1753) as a habitat for arthropods: shelter from desiccation, food-limitation and indirect mutualism. In: N. Stork, J. Adis & R. Didham [eds]: *Canopy arthropods*, 477-494. Chapman & Hall, London.

The niche of species: determinants of flexibility in ecological systems

Key question: *What determines the flexibility of species?*

Abstract: A flexible species can opportunistically use and finally adapt to spatial and temporal changes of the environment. This ability is crucial for the ecological and evolutionary options of species in an environment which is increasingly modified by humans. Classically, flexibility has been explained as the result of life form, life history, population density, competition pressure, physiological stress, and lack of sexual selection. However, the evidence was often anecdotal or confounded by uncritical comparisons of species from different habitats or different phylogenetic lineages.

We found that the flexibility of species is determined by their life history, even if habitat and phylogeny are taken into account: short generation time increases the ability or oribatid mite species to persist and recover after a disturbance due to pesticide application (Prinzing et al. 2002 a). Diet, and thereby life form, is also relevant (ditto). In contrast, abundance, competition pressure, physiological stress and sexual selection may be much less relevant: high abundance does not increase the ability of oribatid mite species to persist and re-colonize after habitat disturbance due to pesticide application (Prinzing et al. 2000); interspecific competition and physiological stress do not increase the geographic flexibility of the habitat niche of plant species (Prinzing et al. 2002 b); and sexual selection does not reduce the ability of oribatid mites to adapt to human impact (Prinzing et al. 2002 c, Brändle et al. 2002).

We then explored the effect of a number of factors that have hardly been considered before. We found that flexibility indeed crucially depends on:

- the optimal foraging behavior of individuals: arthropods under time pressure have to be flexible in their habitat use (Prinzing 2003)
- the investment of individuals into mutualistic interactions: ants that can flexibly colonize sites after inundation disturbance show a high motivation to disperse seeds of myrmecochorous plants. And most plant species and plant individuals at the disturbed sites produce seeds that are attractive for ants (Prinzing et al 2007 and in press). the between-phenotype niche-breadth: differentiation of a local population between habitat strata increases the flexibility of a mite species in habitat use (Prinzing et al. 2004 a)
- the geographic position: microarthropod species in tropical forests seem to be less flexible in their utilization of habitat strata than those in temperate forests (Prinzing & Woas 2003)
- the environment of the ancestors: the flexibility of plant species is strongly constrained by phylogenetic inertia (Prinzing et al. 2001, Prinzing 2002). This partly translates to the community-level where species richness is strongly constrained by the richness of phylogenetic lineages. Albeit the species composition and spatial structure of communities seems to be phylogenetically much more flexible (Prinzing et al. 2003)
- the phylogenetic position: phylogenetically derived oribatid mite species seem to be more flexible to ecotoxicological disturbance; and among plants only derived species can be widely distributed at both regional and global scales (Prinzing et al. 2004 b)

Thesis: The flexibility of a species' niche is surprisingly little influenced by its abundance, by competition pressure or microevolution. In contrast, several previously overlooked factors are of crucial importance. These factors operate at the level of individuals (optimal habitat use), species communities (dispersal-mutualisms) as well as macroevolution (biogeographic distribution, phylogeny).

Application to conservation biology: First, it seems feasible to predict which species are most susceptible to human impact (the "functional type" approach). However, many classical criteria, such as abundance, may fail. Instead, the phylogenetic position of species turns out as an important, and simple, predictor. Second, the fact that phylogeny and geography determine the flexibility of species indicates that species will not become more flexible to the current human impact by microevolutionary selection alone. Such an adaptation will also require macroevolutionary processes and will thus take place only extremely slowly. Too slowly in many instances.

Selected publications:

Ozinga, W., Colles, A., Bartish, I.V., Hennion, F., Hennekens, S.M., Pavoine, S., Poschlod, P., Hermant, M., Schaminée, J.H.J. & **Prinzing, A.** (2013) Specialists leave less descendants within a region than generalists. Global Ecology and Biogeography. 22, 213–222

Colles, A., Liow, L.H. & **Prinzing, A.** (2009) Are specialists at risk under environmental change? – Neoecological, paleoecological and phylogenetic approaches. Ecology Letters, 8, 849 - 863

Prinzing, A., Dauber, J., Hammer, E., & Böhning-Gaese, K. (2008): Does an ant-dispersed plant, Viola reichenbachiana, suffer from reduced seed dispersal under inundation disturbances? *Basic and Applied Ecology 9*, 108-116.

Prinzing, A., Dauber, J., Hammer, E., Hammouti, N. & Katrin Böhning-Gaese, K. (2007): Perturbed partners: opposite responses of plant and animal mutualist guilds to inundation disturbances. *Oikos*, 116, 1299-1310.

Prinzing, A., Lentzsch, P., Voigt, F. & Woas, S. (2004 b): Habitat stratification stratifies populations: ecomorphological evidence from a bisexual, mobile invertebrate (*Carabodes labyrinthicus*; Acari). *Annales Zoologici Fennici*, 41, 399-412.

Prinzing, A., Ozinga, W. & Durka, W. (2004 a): The relationship between the global and regional distribution of species changes during phylogeny. *Evolution*, 58, 2622–2633.

Prinzing, A. (2003): Are generalists pressed for time? An interspecific test of the Time-limited Disperser Model using corticolous arthropods. *Ecology,* 84, 1744-1755.

Prinzing, A. & Woas, S. (2003): Habitat use and stratification of Collembola and oribatid mites. In: Y. Basset, R. L. Kitching, S. E. Miller & V. Novotny [eds]: *Arthropods of tropical forests – spatio-temporal dynamics and resource use in the canopy,* 271-281. Cambridge University Press, Cambridge.

Prinzing, A., Klotz, S., Stadler, J. & Brandl , R. (2003): Woody plants in Kenya: expanding the Higher-Taxon Approach. *Biological Conservation,* 110, 307-314.

Prinzing, A. (2002) Phylogenetic patterns in the analysis of ecological data bases: source of information and source of error. In: S. Klotz, I. Kühn & W. Durka [eds]: *BIOFLOR: a database on biological and ecological traits of the German flora*, 27-40. *Bundesamt für Naturschutz* (in German).

Prinzing, A., Kretzler, S., Badejo, A. & Beck, L. (2002 a): Traits of oribatid mite species that tolerate habitat disturbance due to pesticide application. *Soil Biology & Biochemistry*, 34, 1655-1661.

Prinzing, A., Durka, W., Klotz, S. & Brandl, R. (2002 b): Geographic variability of ecological niches of plant species – are competition and stress relevant? *Ecography*, 25, 721-729.

Brändle, M., **Prinzing, A.**, Pfeifer, R. & Brandl, R. (2002): Dietary niche breadth for Central European birds: correlations with species specific traits. *Evolutionary Ecology Research*, 4, 643-657.**Prinzing, A.,** Brändle, M., Pfeifer, R. & Brandl, R. (2002 c): Does sexual selection influence population trends of European bird species? *Evolutionary Ecology Research*, 4, 49-60.

Prinzing, A., Klotz, S. & Brandl, R. (2001): The niche of higher plants: evidence for phylogenetic conservatism. *Proceedings of the Royal Society, Series B*, 268, 2383-2389.

Prinzing, A., Kretzler, S. & Beck, L. (2000): Resistance to disturbance is a diverse phenomenon and does not increase with abundance: the case of oribatid mites. *Ecoscience,* 7, 452–460.

Dispersal-niches and biodiversity

Key question: *Is the richness and composition of local species communities determined by regional dispersal processes?*

Abstract: Species not only depend on certain resources, they also depend on certain dispersal opportunities (their *dispersal-niche*). Hence the richness and composition of communities may be determined by the richness and composition of dispersal opportunities. We found, for instance, that dispersal opportunities crucially determine the composition of an alien flora (Prinzing et al. 2002). We also found that, contrary to the common wisdom, dispersal by ants strongly increases the chance of plants to colonize disturbed habitats (see above). Currently we investigate the macroecology of the Dutch flora. We ask: Are there many species where there are many dispersal opportunities? Is dispersal more important in phylogenetically diverse than in monotonous communities, in phylogenetically derived than in basal communities? Is dispersal more important in dynamic than in static landscapes?

Thesis: The concept of the Dispersal Niche may fundamentally contribute to our understanding of the ecology and evolution of communities.

Application to conservation biology: Humans drastically influence the regime of dispersal opportunities. Our awareness of these changes is much lower than for changes of resource conditions. The consequences of these impacts on species communities are still largely unclear. We hypothesize for instance, that human interference with seed dispersal-mutualists might strongly alter the richness of both the flora and the fauna.

Publication:

Jung, F., Böhning-Gaese, K. & **Prinzing, A.** (2008): Intermediate levels of habitat disturbance favour sexual reproduction in the ant-dispersed clonal herb *Ranunculus ficaria*. *Ecography 6*, 776 – 786

Boedeltje, G., Ozinga, W.A.. & **Prinzing, A** (2008): Diaspore pressure across landscapes: constrained by the trade-off between vegetative and generative reproduction? *Global Ecology and Biogeography*. 17, 50-58

Prinzing, A., Dauber, J., Hammer, E., Hammouti, N. & Katrin Böhning-Gaese, K. (2007): Perturbed partners: opposite responses of plant and animal mutualist guilds to inundation disturbances. *Oikos*, 116, 1299-1310.

Ozinga, W. Hennekens, S. M., Schaminée, J. H. J., Bekker, R., **Prinzing, A.** & Groenendael, J. M. v (2005): Assessing the relative importance of dispersal in plant communities using an ecoinformatic approach. *Folia Geobotanica 40*, 53-67.

Prinzing, A., Durka, W., Klotz, S. & Brandl, R. (2005): How to characterize and predict alien species? A response to Pyšek et al. (2004). *Diversity and Distributions*, 11, 121–123.

Ozinga, W. Hennekens, S. M., Schaminée, J. H. J., Bekker, R., **Prinzing, A.** & Groenendael, J. M. v (2005): Assessing the relative importance of dispersal in plant communities using an ecoinformatic approach. *Folia Geobotanica 40*, 53-67.

Prinzing, A., Durka, W., Klotz, S. & Brandl, R. (2002): Which species become aliens? *Evolutionary Ecology Research*, 4, 385-405.

Approaches

Field experiments • field observations and experimentation at millimeter to km scale • boundary-layer climatology • morphometrics • ecoinformatics and phyloinformatics on extensive databases • computerintensive statististics (cladistics, coupling of phylogenetic and ecological information, generalized linear models, bootstrap, null models, meta analyses, spatial statistics etc.) • toxicology (via co-operation) • population genetics (via co-operation)

Teaching

Usual teaching load: 192 contact hours per year

Teaching philosophy: I try to *teach by discovery*. That is, I confront the students with scientific questions and we find the answers in discussions and research projects. In doing so, I try to teach the students the necessary skills for doing science, such as observing like a detective, keeping a major goal, scientific writing, and statistics. I consider research-based teaching as the most important way of teaching, eve though it is often more laborious for both teachers and students than pure off-the-textbook teaching. During the courses I also ask the students for criticism on both the teaching as well as my own research (which has already profited considerably from the students' comments). In undergraduate courses teaching by discovery is often not feasible. But even then I try to impart the fascination for biological diversity to the students, and make them understand and independently think about what they are learning.

Institutions: *Germany* – University of Kiel (*UniKiel*), University of Karlsruhe (*UniKa*), University of Mainz (*UniMz*); *The Netherlands* – University of Nijmegen (*KUN*), Wageningen University (*WUR*); *France* – Université de Rennes 1 (UR1)

Teaching is quantified as hours per week ("Semesterwochenstunden") for teaching in Germany and Holland, and as absolute hours for teaching in France.

Approximate teaching levels are indicated (German "Grund- and Hauptstudium" included in "Bachelor" and "Master", respectively)

Taxon-focused courses (mainly undergraduate level)

- *Course on arthropod diversity (Bachelor).* The students trained arthropod determination and acquired a feeling for the evolutionary trends among arthropods. My teaching load: approx. 1.5 hrs/week; winter semester 2002/03*; UniMz*
- *Zoological excursion on wintering birds (Bachelor)*. Students were asked to answer ecological questions based on observations during the excursion and write a short essay. One day; winter semester 2002/03; *UniMz*
- *Zoological excursion on arthropods in their habitats (Bachelor)*. Students were asked to see the world with the eyes of an arthropod, and to answer a questionnaire. Then, we checked whether we find the arthropods in the places where we would expect them. One day; summer semester 2002; *UniMz*
- *Courses on soil invertebrate zoology (Bachelor)*. The students learned about the fascinating biodiversity of soil invertebrates, their taxonomy and methods of investigation; the students also tested a novel method for studying migrations of soil invertebrates. 2 hrs/week, winter semesters 1996/97 and 1997/98; *UniKA*
- *Plant Systematics (Bachelor).* Students were introduced to the plant diversity in a forest (establishment of a herbarium),and to the evolution from aquatic to terrestrial plant lineages with a particular focus on their traits; seminar 8hrs, practicals 27 hours; semester 2004; 2016, *UR1*
- *General Vegetation Ecology (Bachelor).* Students were introduced to different types of vegetation, adaptations of plants to their environment and the relation between soil, vegetation and succession; field course 30 hrs; semesters 2004, 2005, 2011; *UR1*
- *Ecological Excursions (Vegetation) for future teachers (Bachelor).* As "General Ecology" above, but training in how to introduce kids to the observation of nature; Practical 21 hrs ; semester 2004 and 2005; *UR1*

Concept-focused courses on ecology, conservation biology and the scientific method (graduate level)

- *Population Ecology (Master – applied science/management)*. Introducing the phenomenon « population », its emergent properties and population dynamics; studying factors shaping abundance dynamics, in particular the role of species life histories. Lectures, 14 hrs; semesters 2004 and 2005; *UR1*

- *Population Ecology (Master – applied – teaching for professionals)*. As above. 6 hrs; semester 2005; *UR1*
- *Population Ecology (Master – research)*; Introduction to species life history and the processes shaping life histories: adaptations, trade-offs, allometries and phylogenetic conservatism. Developing novel hypotheses and research projects to test these hypotheses. Lectures 4 – 6 hrs, Seminars 8 hrs. 2004 - 2017; *UR1*.
- *Evolutionary Biology – phenotypic changes (Master)*. Identifying the conditions under which species can adapt to environmental change, as opposed to conditions of ecological sorting, i.e. the migration of species with their environment. Developing novel hypotheses and research projects to test these hypotheses. Lectures (6 hrs), seminars (8 – 12 hrs), field and lab practicals (16 – 28 hrs); semesters 2004 - 2017 *UR1*
- *Community Ecology and Ecosystem Functioning (Master,* responsible*)*. Lecture: the notion of the community, the big debates, local niche determination of community richness and structure, determination by dispersal limitation between localities, determination by evolutionary histories of species pools across regions, evolutionary community ecology. Seminars on (i) the function of species for ecosystem processes, functional groups, (ii) conservation of evolutionary functions of species communities as museum and cradle. Practicals on (i) excursions and field practicals, (ii) hypothesis formulations and statistical analysis, (iii) project presentation, (iv) how to scientifically manage the restoration of a wetland?; 2004 (8 hrs) -2017 (<72hrs); *UR1*
- *Evolutionary Biology – Diversification (Bachelor)*. Why do lineages and communities differ in richness? Speciation and Extinction as a function of species traits and the environment of species. Lecture 2 hrs; semesters 2005 - 2017; *UR1*
- *Master classes on ecology and evolution of flexibility (Master).* Introduction to recent concepts and methodologies, discussion of results and further directions. 1 hr/week; semesters 2002, *WUR; 2*-5 hrs; semesters 2004 - 2017; *UR1*
- *Master classes on ecological contingency and phylogenetic determinism of species communities (Master).* Introduction to phylogenetic determination of species niches, species interactions and the assembly of local communities*;* 2 hrs; 2015-2017; *UR1*
- *Discussion seminar on conservation biology (Master)*. The students read both original publications and textbook chapters and discussed the reasoning, the implications and the needs for future research. 0.3 hrs/week; winter semester 2002/03; *UniMz*
- *Course on community ecology (Master).* Supervision of a botanical project on the investment of an ant-dispersed plant species into seed production along a disturbance gradient. 10 hrs/week; winter semester 2002/03; *UniMz*
- *Course on community ecology (Master).* Supervision of a zoological and of a botanical project on seed dispersal by ants, and the distribution of seedlings, along a disturbance gradient. 6 hrs/week; summer semester 2002; *UniMz*
- *Course on experimental and quantitative ecology (Master).* In a field experiment the students tested the effect of small-scale habitat structure on seed predation. On a more theoretical basis we also investigated other types of ecological interaction. 2 hrs/week; winter semester 2001/02; *UniMz*
- *Bioindication (Bachelor)*. Introduction to lichens as bioindicators: how to assess the potential of an organism as bioindicator based on its biology? How to establish a sampling design? Seminar and application in a field practical. 16 to 21 hours; semesters 2004, 2005, 2007, 2011; *UR1*
- *Course on applied ecology (Master)*. The students explored whether certain morphological structures of a lichen correlate to air pollution. 1 hr/week, winter semester 1992; *UniKiel*
- *Scientific English and Communication (Master)*; How to present in English: *clear, convincing, coherent, consistent, concise*. Criticizing my own presentations, mini-congress. seminar, 6 hrs, practicals, 8-16 hrs; 2004 - 2010; 2015-2017 *UR1*
- Obligatory practicals (Master): « distance supervision » of students in addition to their local supervisors, 23 hrs, 2004 2017; *UR1*
- *Paper club (Thesis)*. Students presented their results in manuscripts. 0.5 hrs/week; winter semester 2001/02, summer semester 2002, winter semester 2002/03; *UniMz, UFZ Leipzig-Halle*

Seminars in which students presented their research in talks were given regularly since 1998 (approx. 1 hrs/week).

Outreach

- *Teaching of pupils at the State Museum of Natural History Karlsruhe, Germany* (1996, 1997*)*

- *Excursions for the general public* on field biology, birds, arthropods or lichens in Stuttgart, Germany (1983 - 1988*)*
- *Nature discovery tours for children* for the Department of Youth at Stuttgart (1985, 1986)

Students

Undergraduate and graduate students (supervisions)

Célia Bodin (M.Sc. student (master 2); Université de Rennes 1, supervision, 2017) – Does niche conservatism impede niche conservatism?

Mickael Pihain (M.Sc. student (master 2); Université de Rennes 1, supervision, 2016) – Do phylogenetically proximite neighbourhoods select for more defended, but climatically less tolerant, genotypes?

Benoît Béchade (M.Sc. student (master 1); Université de Rennes 1, co-supervision, 2015) – Mycorrhiza on oak seedlings depending on spatial and phylogenetic distance of adults

Margot Brunellière (M.Sc. student (master 1); Université de Rennes 1, co-supervision, 2015) – Enemy pressure on oak seedlings depending on spatial and phylogenetic distance of adults

Hadjira Benmebarek (University of Alger, Algeria) on vegetation dynamic in arid regions and its consequences for community assembly (since 10/2012)

Emeline Chesneau (M.Sc. student (master 2); Université de Rennes 1, co-supervision, 2014) – Role of phenotypic integration in the response of species to environmental change.

Lou Barbe (M.Sc. student (master 2); Université de Rennes 1, supervision, 2014) – Biotic neighborhood driving species traits driving decomposition: time to close the loop

Thiebault Morra (M.Sc. student (master 1); Université de Rennes 1, supervision, 2014) – More enemies close to mother tree? Interacting effects of canopy composition and mutualist support.

Alexandre Depoilly (M.Sc. student (master 1); Université de Tours, supervision, 2013) – Does the island rule of body size apply to macroevolutionary island trees?

Thomas Cohen (M.Sc. student (master 1); Université de Rennes 1, supervision, 2013) – Same micro-environment, different phenotypes due to phylogenetic isolation of host trees : mines on oaks

Maud Deniau (M.Sc. student (master 2); Université de Rennes 1, supervision, 2013) – Does phylogenetic isolation of mothers trigger Janzen-Connel effects of seedlings?

Aurore DeCauwer (M.Sc. student (master 1); Université de Rennes 1, supervision, 2012) Does phylogenetic isolation of host trees favour intraspecific phenotypic diversity of their insect colonisers?

Chloé Chabert (M.Sc. student (master 2); Université de Rennes 1, co-supervision, 2012) – Trait assembly of vegetation in anthropogenic wetland grasslands: sorting of idiosyncratic lineages or ubiquitous evolutionary trade-offs?

Elisa Gregoire (M.Sc. student (master 1); Université de Rennes 1, 2011) – Do hosts that leave their ancestral niche profit from enemy release?

Amaury Brault (M.Sc. student (master 2); Université de Rennes 1, 2010) – Colonizing a novel host: effect of tree age and tree relatedness on niche us of phytophages.

Salomé Bonnefois (M.Sc. student (master 2); Université de Rennes 1, 2009) – Relationship between genome size and diversification of plants. *Two first-author conference presentations.*

Chloë Vasseur (M.Sc. student (master 2); Université de Rennes 1, 2007) – Dispersal limitation in a mosaic of niches: richness and composition of arthropod communities on tree crowns.

Audrey Colles (M.Sc. student (master 2); Université de Rennes 1, 2006) – Is ecological specialization an evolutionary constraint?

Mathias Teulé (M.Sc. student (master 2); co-supervision; Université de Rennes 1, 2005) – Trade-off between reproduction and chill resistance in a subantarctic insect.

Thomas Jenkins (M.Sc. student (master 1); co-supervision; Université de Rennes 1, 2006) – Characterizing life-history traits and biochemical phenotypes along environmental gradients in the subantarctic.

Reineke Reiffers (M.Sc student; supervision; University of Wageningen, 2004) – Trait diversity: effects of phylogeny on local and regional scales.

Peer Janssen (M.Sc. student; co-supervision; University of Kiel, 1993) – self organization of benthos communities.

Charlène Briard (B.Sc. student (Licence 3); Université de Rennes 1, 2007) – Oribatid mite diversity on branches of young and old trees – an experimental approach.

Sebastien Chouinard (B.Sc. student (Licence 3, 2007); co-supervision, Université de Rennes 1) – Effect of pollution on arthropod communities in tree crowns.

Sandra Kretzler (research student; State Museum of Natural History Karlsruhe, and University of Karlsruhe, 1997) – Life history, abundance and ecotoxicological sensitivity of mites.

Friederike Voigt (research student; State Museum of Natural History, Karlsruhe, 1997) – Ecomorphology and population differentiation in mites.

Claire Nicolazo, John Switzer-Haagensen, Denise Everhart (research students; co-supervision, 2006) – Effect of canopy structure on richness of arthropod communities in tree crowns.

Edith Hammer, Ruth Schmidt-Hoffmann, Axel Schönhofer, Katharina Wollenberg (research students; University of Mainz, 2001) – Effect of habitat disturbance on myrmecochorous seed dispersal in *Viola reichenbachiana*.

Nasera Hammouti (research student; University of Mainz, 2001) – Effect of habitat disturbance on the representation of mutualists in communities. Frederik Jung (research student; University of Mainz, 2001) – Effect of disturbance on reproductive mode in an ant-dispersed, clonal herb. Sabrina Hutter (research student; University of Mainz, 2001) – Relationship between small-scale habitat structure and seed predation.

Plus 4 co-supervisions at Rennes

In addition to these major supervisions I have contributed to many stages of other M.Sc. theses by providing consultancy on the design of the studies (Lukasz Kaczmarek – Univ. of Poznan), and on the statistical analysis (e.g., Nina Fahrwig and Susanne Schick – Univ. of Mainz), and by extensively revising the structure and prose of theses (e.g., Eddy Klein and Franziska Jaenicke-Rößler - UFZ Leipzig-Halle; Nina Fahrwig and Christian Meyer – Univ. of Mainz, multiple students at Rennes).

Ph.D. students

Mickael Pihain; Université Tartu, co-supervision with Pille Gerhold – Do good neighbours compensate for bad climate? (2017-)

José Hidasi Neto (Universida de Federal de Goiás, Brasil – invited PhD student) – Diversity and homogenization of invertebrate faunas within tree crowns (three months in 2015).

Rachda Berrached (University of Alger, Algeria– co-supervision with Lila Kadic) - What controls species phenology in a steppe environment? (since 12/2013)

Hocine Aitmouheb (University of Alger, Algeria – co-supervision with Lila Kadic) - Niche occupancy and fate of species under climate change in a steppe environment. (since 12/2013)

Lou Barbe (Université de Rennes 1, supervision with V. Jung et C. Mony) – Impact of functional and phylogenetic neighborhood on litter decomposition across scales (10/2014 - 12/2017). Currently postdoctoral teaching and research assistant.

Bastien Labarrere (Université de Rennes 1, co-supervision with F. Hennion) – How plants respond and adapt to climat change: a study at the cold margin (10/2013 - 01/2017)

Maud Deniau (Université de Rennes 1) – Leaving the ancestral niche to respond to environmental change – a problem of recruitment? (10/2013 - 12/2016). Currently tenured school teacher.

Benjamin Yguel (Université de Rennes 1) – Leaving your ancestral niche: consequences for tropic interactions (Oct 2009 – Dec 2012). *C*urrently postdoc at National Natural History Museum Paris.

Xu Pan (Chinese Academy of Sciences – invited PhD student, co-supervision) – Impacts of leaf traits and plant phylogeny on leaf litter decomposition (July 2011 – March 2014). Currently tenured researcher at Academy of Sciences Beijing.

Alexander Fergus (University of Zürich – invited PhD student) – Phylogenetic assembly rules in experimental grasslands (four months in 2010). Currently Landcare Research New Zealand.

Marie Hermant (Université de Rennes 1) – Where do plants respond to climate change ? (10/2007-2/2011), Followed by postodoc at University Lille.

Wim Ozinga (University of Nijmegen; co-supervision) – Species diversity in fragmented landscapes. Currently Senior Researcher Alterra Wageningen

In addition, I have supported Ph.D. students by structurally revising manuscripts and often also extensive conceptional and statistical consultancy, e.g. Jörg Spelda (Univ. of Ulm), Martin Schädler (Univ. of Halle/S.), Friederike Voigt (Univ. of Mainz) and Peter Horchler (Univ. of Leipzig).

Postdocs

Dr. Richard Bailey – June 2006 – August 2007, Postdoc (now postdoc at Uppsala University, Sweden), funded by Région Bretagne. Title: Arthropods in Breton tree crowns: predicting diversity and function under human impact. Currently postdoc / statistical consultant.

Dr. Aude Vialatte –September 2007 - October 2008 (now on a permanent docent position at « ENSAT » Agricultural University at Toulouse), funded by Région Bretagne. Title: Arthropods in Breton tree crowns: predicting diversity and function under human impact. Currently tenured researcher at Ecole Nationale Superiore Agronomique de Toulouse.

Dr. Igor Bartish –June 2007 - April 2009 (since then: tenure track position at Czech Academy of Sciences), funded by Centre National de la Recherche Scientifique. Title : Diversification of plant lineages within habitats. Currently tenured Senior Researcher at Czech Academy of Sciences.

Dr. Freerk Molleman –August 2013 – February 2015 (currently postdoc at School of Biology, Indian Institute of Science Education and Research, Thiruvananthapuram, Kerala, India), funded by Région Bretagne. Title : Phylogenetic diversity of vegetation affecting decomposition processes. Currently tenured Assistant Professor at Poznan University.

Dr. Benjamin Yguel –November 2013 – October 2014 (currently postdoc at Museum National d-Histoire Naturelle, Paris); Review and synthesis project at German Centre of Integrative Biodiversity Research. Currently postdoc at National Museum of Natural History, Paris.

Multiple external co-supervisions of / co-senior-publications with postdocs Dr. Pille Gerhold (University of Tartu, Estonia): Dr. Michael Gossner (University of Jena, Germany), Dr. Ger Boedeltje (University of Nijmegen, NL). In addition, I have facilitated the 2 year-fellowship of Prof. M.A. Badejo (Univ. of Ile-Ife, Nigeria) at the State Museum of Natural History Karlsruhe in many ways