

Curriculum vitae: KATERINA SAM

Personal Information:

Nationality: Czech

DOB: 28 October 1984

Status: Married (maiden name **Tvardikova**); 1 child (carrier break from 15 March 2014 for 12 months)

Address: Biology Centre CAS, Branisovska 31, 37011 Ceske Budejovice, Czech Republic

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Professional Preparation:

- 2009 MSc in Zoology, at Faculty of Sciences, University of South Bohemia,
- 2009 MSc in Ecosystem Biology, at Faculty of Sciences, University of South Bohemia,
- 2013 PhD in Ornithology at Department of Ecology and Conservation Biology, Biology Centre CAS and Department of Zoology, Faculty of Sciences, University of South Bohemia, supervisor: V. Novotny

Professional Appointments:

Biology Centre CAS, Ceske Budejovice: • Researcher 2011-2016 • Senior Researcher 2016 • Head of Laboratory of Multitrophic Interactions 2017-present,

Faculty of Biological Sciences, University of South Bohemia, Czech Republic: • Researcher 2011-present

Fellowships: • Research fellowship (1 month, April 2013) with Carsten Rahbek, Department of Biology, Ecology and Evolution, The University of Copenhagen and Center for Macroecology, Evolution and Climate, • January 2014 – December 2015 - Research fellowship with Nigel Stork and Roger Kitching at Griffith School of Environment, Griffith University & Environmental Futures Research Institute, Griffith University, Queensland, Australia

Research Associate: • Griffith University (Brisbane) – external co-supervision of two PhD students • University of Papua New Guinea (Port Moresby) – external supervision of 3 students

Synergistic activities: • Member of the Association for Tropical Biology and Conservation, 2009-present
• Member of the Ornithology Association of Czech Republic, 2008-present • Member of the Czech Association for Ecology, 2009-present

Editorial activities and reviews: • Reviewer for research journals – 12 journals including *Ecology Letters*, *Ecography*, *Biotropica*, *Oikos*, *Journal of Tropical Ecology* ([Ppublons.com/a/444858/](https://publons.com/a/444858/))

Oral presentations of conferences: • 17 international conferences – e.g. ATBC, GTO, INTECOL, BES

Invited plenary lectures and key-notes at conferences: European Conference of Tropical Ecology in Gottingen, 2016 (+ chaired the following session); Zoological Conference in Brno 2016 (+ chaired the following session); Czech Association for Ecology in Prague, 2017 (+ chaired the following session), Plant-insect food webs along latitudinal and altitudinal gradients in the Czech Republic 2013

Seminars invited at recognized institutions: Invited talks at 6 universities in Australia, Denmark, Germany, Czech Republic • On average, 2 invited seminars a year • In 2017: invited seminar at Charles University in Prague, Czech Republic and XTBG, China, Kunming Institute of Botany

Postgraduate students and PhD researchers: • **B.Sc.:** Univ. of South Bohemia: 1 finished, 1 current, • **Honours:** University of Papua New Guinea: 1 finished, • **M.Sc.:** Univ. of South Bohemia: 2 finished, Univ. of Papua New Guinea: 2 current; • **Ph.D.:** Univ. of South Bohemia: 3 current; external supervision Ph.D. University of Sussex: 1, Griffith University: 1. (<http://tvardikova.weebly.com/team.html>)

Teaching: University of South Bohemia: Ecological measurements and analyses, Community Ecology, Field practical, Vertebratological Excursion, Ethological Practicals.

Organization skills: • I supervised research station in Papua New Guinea (ca. 30 parataxonomist) for a year in 2010 • I co-organised Land module of Our Planet Reviewed in Papua New Guinea in 2013 and supervised activities of botanical team (7 parataxonomists) • I supervise ornithological section of National Forest Inventory of Papua New Guinea, where 6 teams of ornithologist (trained by myself) survey 1000 locations across the whole country. I wrote the bid, selected team members, organised trainings and methodological trainings, developed database and I coordinate the teams from distance now (2015-present)

Bibliography: I have authored 28 publications in peer-reviewed journals (+5 in print), 1 peer-reviewed book-chapter. An up-to date full list of publications can be found in ResearchID under I-2209-2014 or Orcid 0000-0002-3436-0579 or at Google Scholar (Citations = 403, Hirsch H = 13, Publications = 29)

The elementary bibliometry:

Publications: 22

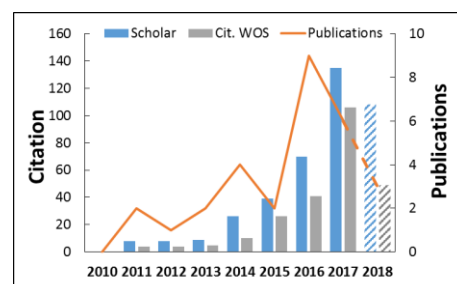
Number of times cited without self-citations: 224

Citing articles: 187

Average citation per item: 11.14

h-index: 10

[26/6/2018 WoS All Databases for OrcidID]



Publications (selected important publications are listed, *corresponding author, **PI in bold**):

Roslin, T.*, Hardwick, B., Novotny, V., ...**Sam, K.**, ... T.C. Cameron, E.K., 2017. Higher predation risk for insect prey at low latitudes and elevations. *Science*, 356(6339): 742-744. (IF=37.205, Cit. 30)

- This is first global experiment studying trophic food-webs between insectivorous predators and herbivorous insect. We showed that predation decreased toward higher latitudes and higher elevations. The predatory arthropods seemed to drive the observed pattern, while we observed no pattern in bird predation. I helped to develop the design of the experiment (methods are based on my below-mentioned paper), conducted the field work in Czech Republic and Australia. I wrote the manuscript and advised on analyses.

Sam, K.*, Koane, B., Novotny, V. 2015. Herbivore damage increases avian and ant predation of caterpillars on trees along a complete elevational forest gradient in Papua New Guinea. *Ecography* 38(3): 393-300. (IF=5.776, Cit. 27)

- This is first study showing that herbivorous damage on foliage attracts predators, and increases predation risk for herbivorous insect in natural conditions of tropical forest. The predation rate decreased with increasing elevation and predatory arthropods were relatively more dangerous predators in lowland, while birds were dominant predators at high elevations. I designed the project, conducted the field work. I analysed the data and wrote the manuscript.

Colwell, R.*, Gotelli, N., ...,**Sam, K.**, ... 2016. Midpoint attractors and species richness: Modelling the interaction between environmental drivers and geometric constraints. *Ecology Letters* 19(9), 1009-1022 (IF=10.689, Cit. 15)

- We introduced new model for discordant patterns of species richness along geographical gradients. We conjectured that elevational range midpoints of species may be drawn towards a single midpoint attractor. I contributed one dataset (results of my PhD), helped to analysed data, and contributed to writing.

Sam, K.*, Koane, B., Jeppy, S., Sykorova, J., & Novotny, V. 2017. Diet of land birds along an elevational gradient in Papua New Guinea. *Scientific Reports*, 7. (IF = 5.228)

- We studied food preferences of birds, size and identify of preferred prey along an elevational gradient. I designed the study, developed the method, conducted field work, analysed data and wrote the manuscript.

Mrazova, A. & **Sam, K.***. 2017. Application of methyl jasmonate to grey willow (*Salix cinerea*) attracts insectivorous birds in nature. *Arthropod-Plant Interactions*, 12, 1-8. (IF = 1.4, , Cit. 1)

- We were first to show that application of methyl jasmonate on trees in nature triggered production of herbivore induced volatile compounds, which attracted significantly more wild insectivorous birds in comparison to untreated trees. We did not detect any significant response of predatory arthropods. I designed the project, supervised my Ph.D. student in the field, and supervised her analyses and writing.

Bodawatta, K. H., **Sam, K.**, Jønsson, K.A., Poulsen, M. *. 2018. Comparative analyses of the digestive tract microbiota of New Guinean passerine birds. *Frontiers in Microbiology* (in print, IF = 4.07).

- We provided the first insights into New Guinean passerine microbial gut fauna and brought unique data on how the microbial gut fauna changes along the digestive tract. We argued that freshly collected dissected guts enable a better understanding of the evolution of digestive tract microbiota.

Tvardikova, K. and Novotny, V., 2012. Predation on exposed and leaf-rolling artificial caterpillars in tropical forests of Papua New Guinea. *Journal of Tropical Ecology*, 28, 331-341. (IF = 2.23, Cit. 40).

- We tested new methodology for studies of predation and parasitism in tropical forests. We showed that exposed caterpillars are 3times more often predated than leaf-rolling caterpillars. We further revealed changes in relative importance of predators, with ants attacking more caterpillars in lowlands and birds attacking more of them in highlands. We also provided insight into niche partitioning of birds and ants.

Popularization of science: ● Reports on research in Czech media (radio, TV, newspapers, journals, >20 items in past 5 years) ● Public talks (more than 5 per year) ● Talks & workshops for young students

Book chapter: ● Leponce, M., et al. Land module of Our Planet Reviewed-Papua New Guinea: aims, methods and first taxonomical results. (2016): 11-48.

Research grants: PI of 4 Czech grant projects: the Grant Agency of University of South Bohemia – 20K EUR, 2012-2014; the Grant Agency of the Czech Republic – 176K EUR in 2013-2016; 380K EUR in 2018-2021, the Ministry of Education and the Ministry of Foreign Affairs of the Czech Republic - 40,000 EUR, 2017-2019

Other grants: ● New Guinea Birds (<http://pngbirds.myspecies.info>) 50,000 EUR ● National Forest Inventory of Papua New Guinea, Biodiversity part - leading ornithological survey