

## **Curriculum vitae**

### **Palatty Allesh Sinu PhD**

Assistant Professor, Department of Animal Science,  
Central University of Kerala, Padannakad, Kasaragod, Kerala  
[sinu@cukerala.ac.in](mailto:sinu@cukerala.ac.in); +91 8547887834

### **Raman Post-Doctoral Fellow (August 2016 – August 2017)**

Bronstein Lab  
Department of Ecology and Evolutionary Biology  
University of Arizona, Tucson, USA  
[sinu@email.arizona.edu](mailto:sinu@email.arizona.edu) ; +1 520 247 5892

### **Educational qualification**

1998, B.Sc. Zoology, Christ College, Irinjalakuda  
2000, M.Sc. Applied Zoology, University of Calicut  
2006, Ph.D. Zoology, University of Calicut

### **Work experience**

2001-2006, Research Associate, ATREE-Bangalore (Projects handled: Mac Arthur Foundation project; Karnataka State Forest Department project specific to Rajiv Gandhi National Park, Nagarahole; National Agricultural Technology Program-ICAR Project (PhD research)  
2006 – 2009, Post-Doctoral Fellow & DST Young Scientist, ATREE-Bangalore  
2009 – 2012, Asst. Entomologist (Scientist-C), Tea Research Association, Tocklai Tea Research Institute (formerly, Tocklai Experimental Station), Jorhat (Assam) & North Bengal Regional Research Institute, Nagrakata, (West Bengal)  
2012 – present, Asst. Prof., Department of Animal Science, Central University of Kerala  
2016 – present, Raman Post Doctoral Fellow, Department of Ecology and Evolutionary Biology, University of Arizona, USA

### **Current research and academic profile**

My current research interests are terrestrial ecology of insects, ecology and evolution of plant-pollinator interactions, systematics of insects, and conservation biology studies. I currently work in the natural and agricultural landscapes of the Western Ghats biodiversity hotspot, central Himalayas and Southwestern subtropical deserts of the USA. Prior to joining my current job as an Assistant Professor of Central University of Kerala, I was an Entomologist (Scientist-C) at Tocklai Tea Research Institute, Jorhat, and post-doctoral fellow scientist and research associate at ATREE-Bangalore. I received my M.Sc. and PhD in Zoology from University of Calicut in 2000 and 2006, respectively. I was the nominated INSPIRE faculty of Central Universities in the In-Residence program at Rashtrapati Bhawan, New Delhi. The President of India hosted me during 6-12 June 2015 in the President's palace. Currently I am a Raman Post-Doctoral Fellow of University Grant Commission and on study leave to University of Arizona in Tucson, USA (2016 – 2017).

## Peer activities

Review College Member of British Ecology Society's grant programs (2012 onwards); Mentor of Science Academies Summer Research Fellowship Program (2013 onwards); Peer reviewer of *Insect Conservation and Diversity* (Blackwell), *Biological Conservation* (Elsevier), *Environment Development and Sustainability* (Springer), *Journal of Applied Entomology* (Blackwell); *Journal of Natural History* (Taylor & Francis), *Apidologie* (Springer), *Biocontrol Science and Technology* (Taylor & Francis), *International Journal of Pest Management* (Springer), *African Journal of Ecology* (Blackwell), *International Journal of Tropical Insect Science* (Cambridge), *Biological Control* (Elsevier), *Current Science* etc.

Fellow of Royal Entomological Society, London (2009 onwards)

Member: British Ecological Society (2005-onward); Association for Tropical Biology and Conservation (ATBC; 2006 onward); Association for Advancement of Entomology, Trivandrum (lifetime)

Visiting fellow: Department of Entomology, University of Arizona (2003), US National Museum of Natural History (2003), California Academy of Science, San Francisco (2008 & 2016), Department of Agroecology, University of Gottingen, Germany (2006), British Natural History Museum, London (2005 & 2006).

## Publications

### Books:

Sinu, P.A. and K.R. Shivanna (Editors) *Mutualistic interaction between flowering plants and Animals*, 338 pp (Manipal University Press; ISBN-13: 978-9382460268) available at [www.amazon.in](http://www.amazon.in) and [www.flipkart.com](http://www.flipkart.com)

## Journal Articles

### Under review

Manoj, K., Rajesh, T. P., Prashanth Ballullaya, U., Meharabi, K. M., Shibil, V. K., Rajmohana, K., and Palatty Allesh Sinu., (2017), Diversity of Platygasteridae in Leaf Litter and Understorey Layers of Tropical Rainforests of the Western Ghats Biodiversity Hotspot, India, *Environmental Entomology* 46: 685 – 692.

Roshnath, R., Sinu, P.A. (2017) Nesting tree characteristics of heronry birds of urban ecosystems in peninsular India: implications for habitat management. *Current Zoology* (Online early: DOI: 10.1093/cz.zox006)

Sinu P.A., V.C. Sibisha, M.V. NikhilaReshmi, K.S. Reshmi, T.V. Jasna, K. Aswathy, P.P. Megha Invasive ant (*Anoplolepis gracilipes*) disrupts pollination in pumpkin. *Biological Invasions* (online early: DOI: I 10.1007/s10530-017-1470-9)

Kambli S., Aiswarya, M. S., Manoj, K., Sangeetha Varma, Asha, G., Rajesh, T. P., and Palatty Allesh Sinu., (2017), Leaf foraging sources of leafcutter bees in a tropical environment: implications for conservation, *Apidologie* 48: 473-482.

Mohan P, Sinu PA (2017) Parasitoid wasp usurps its host to guard its pupa against hyperparasitoids and induces rapid behavioral changes in the parasitized host. *PLoS ONE* 12(6): e0178108.

<https://doi.org/10.1371/journal.pone.0178108>

Rajesh, T.P., Manoj, K., Prashanth Ballulaya U., Surendran, P., **Sinu, P.A. (2017)** Ants indicate urbanization pressure in sacred groves of India. *Current Science* (in press)

**Sinu, P.A.**, Bronstein, J. L. Foraging preference of leafcutter bees in three contrasting geographic zones. *Diversity and Distributions* (under review)

**Sinu, P.A.**, Nikhilareshmi, M.V., Reshmi, T.V., Jasna, K., Aswathy, K., Megha, P.P., Anusree, T., Abhina, C., Lishiba, P.P., Rasna, T.V., Varma, S. Differential effects of flower sex expression and honeybee visits on crop pollination. *Basic and Applied Ecology* (Submitted)

Prashanth Ballulaya, U., Reshmi, K.S., Rajesh, T.P., Manoj, K., Lowman, M.D., **Sinu P.A.** Stakeholder motivation for conservation of sacred groves: an analysis of environmental perceptions of rural and urban neighborhood communities. *Land Use Policy* (under review)

Roshnath R., **Sinu, P.A.** Predation pressure drives heronry birds to nest in urban landscape. *Canadian Journal of Zoology* (Under review)

**Sinu, P.A.** and Lowman, M.D. (2017) Can the spiritual values of the forests effect conservation? *BioScience* (online early: doi:10.1093/biosci/bix057)

Manoj, K., Rajesh, T.P., Mehrabi, K., Prashanth Ballulaya U., Shibil, V.K., Rajmohana, K., **Sinu, P.A.** (2017) Diversity of Platygastriidae in leaf litter and understory layers of tropical rainforests of the Western Ghats biodiversity hotspot, India. *Environmental Entomology*

<https://doi.org/10.1093/ee/nvx080>

Kambli, S., Aiswarya S., Manoj, K., Varma, S., Asha, G., Rajesh, T.P. & Sinu, P.A. (2017) Leaf foraging sources of leafcutter bees in a tropical environment: implications for conservation. *Apidologie* (doi:10.1007/s13592-016-0490-2).

Roshnath, R., **Sinu, P.A. (2017)** Nesting tree characteristics of heronry birds of urban ecosystems in peninsular India: implications for habitat management. *Current Zoology* (

<https://doi.org/10.1093/cz/zox006>)

**Sinu, P. A., & Shivanna, K. R. (2017)** Factors Affecting Recruitment of a Critically-Endangered Dipterocarp Species, *Vateria indica* in the Western Ghats, India. *Proceedings of the National Academy of Sciences, India Section B* 86: 857 – 862

Garibaldi, L. A., ...**Sinu, P.A.** et al. (2015) Trait matching of flower visitors and crops predicts fruit set better than trait diversity. *Journal of Applied Ecology* 52: 1436-1444. (Editor's choice)

**Sinu, P. A.,** Talukdar, T., Mallick, S., Mandal, P., & Dasgupta, S. (2015). In situ mortality of *Hyposidra talaca* (Geometridae: Lepidoptera) by its nucleopolyhedrovirus and comparison of tea production in untreated and chemical insecticide-treated plots. *Biocontrol Science and Technology* 25: 352-358.

Anusree, T., Abhina, C., Lishiba, P. P., Rasna, T. V., Varma, S., & **Sinu, P. A.** (2015). Flower sex expression in cucurbit crops of Kerala: implications for pollination and fruitset. *Current Science* 109: 2299-2302.

Nasreem, A., **Sinu, P. A.,** & Nasser, M. (2014). The medicinal annual legume *Senna* (= *Cassia*) *tora* (L.) Roxb. and its insect associations in Kerala, India. *Entomon* 39: 183-190.

**Sinu, P. A.,** Mallick, S., Mandal, P., & Talukder, T. K. (2013). Egg-laying pattern of *Hyposidra talaca* (Lepidoptera: Geometridae) in Northeastern Indian tea plantations: implications for pest management. *International Journal of Tropical Insect Science* 33: 8-13.

Sinu, P.A., Sharma, M.V. (2013) Insect functional guilds in the flowering canopy of *Myristica fatua* in a lowland swamp, central Western Ghats, India. *Tropical Conservation Science* 6: 653 – 662.

**Sinu, P. A.,** Mandal, P., Banerjee, D., Mallick, S., Talukdar, T., & Pathak, S. K. (2013). Moth pests collected in light traps of tea plantations in North East India: species composition, seasonality and effect of habitat type. *Current Science* 104: 646-651.

**Sinu, P. A.,** Kent, S. M., & Chandrashekara, K. (2012). Forest resource use and perception of farmers on conservation of a usufruct forest (*Soppinabetta*) of Western Ghats, India. *Land Use Policy* 29: 702-709.

Antony, B., **Sinu, P. A.,** & Rehman, A. (2012). Looper caterpillar invasion in North East Indian tea agro-ecosystem: change of weather and habitat loss may be possible causes? *Journal of Tea Science Research* 2: 1-5

**Sinu, P. A.** (2012). Seed predators of an old-world tropical deciduous tree (*Terminalia bellirica*: Combretaceae) in wet habitats of the Western Ghats, India. *Current Science* 103: 309-314.

- Sinu, P. A.**, Shivanna, K. R., & Kuriakose, G. (2012). Frugivorous bird diversity and their post-feeding behaviour in fruiting *Syzygium cumini*(Myrtaceae) in fragmented forests of central Western Ghats, India. *Current Science 103*: 1146-1148.
- Sinu, P. A.**, Sinu, N., & Chandrashekara, K. (2012). Ecology and population structure of a terrestrial mycoheterotrophic orchid, *Aphyllorchis montana* Rchb. f.(Orchidaceae) in Soppinabetta forests of the Western Ghats, India. *Journal of Threatened Taxa 4*: 2915-2919.
- Antony, B., **Sinu, P. A.**, & Das, S. (2011). New record of nucleopolyhedroviruses in tea looper caterpillars in India. *Journal of invertebrate pathology 108*: 63-67.
- Sinu, P. A.** (2011). Avian pest control in tea plantations of sub-Himalayan plains of Northeast India: Mixed-species foraging flock matters. *Biological Control 58*: 362-366.
- Sinu, P. A.**, Kuriakose, G., & Shivanna, K. R. (2011). Is the bumblebee (*Bombus haemorrhoidalis*) the only pollinator of large cardamom in central Himalayas, India?. *Apidologie 42*: 690-695.
- Sinu, P. A.**, Mandal, P., & Antony, B. (2011). Range expansion of *Hyposidra talaca* (Geometridae: Lepidoptera), a major pest, to Northeastern Indian tea plantations: change of weather and anti-predatory behaviour of the pest as possible causes. *International Journal of Tropical Insect Science 31*: 242-248.
- Sinu, P. A.**, Kuriakose, G., & Chandrashekara, K. (2011). Epiphytic orchid diversity in farmer-managed Soppinabetta forests of Western Ghats: implications for conservation. *Current Science 101*: 1337-1346.
- Sinu, P. A.** (2010). Nectar robbery in mangroves. *Current Science 99*: 558-558.
- Sinu, P. A.**, & Shivanna, K. R. (2007). Pollination biology of large cardamom (*Amomum subulatum*). *Current Science, 93*(4), 548-552.
- Kuriakose, G., **Sinu, P. A.**, & Shivanna, K. R. (2009). Domestication of cardamom (*Elettaria cardamomum*) in Western Ghats, India: divergence in productive traits and a shift in major pollinators. *Annals of botany, 103*(5), 727-733.
- Sinu, P. A.**, & Shivanna, K. R. (2007). Pollination ecology of cardamom (*Elettaria cardamomum*) in the Western Ghats, India. *Journal of Tropical Ecology, 23*(04), 493-496.
- Sinu, P.A.**, Nasser, M., & Dharmarajan, P. (2007). Host searching behavior and potential of an aquatic ichneumonid pupal parasitoid of rice caseworm (*Parapoynx stagnalis*) in an upland rice paddy agro-ecosystem of the Western Ghats, India. *Biocontrol Science and Technology, 17*(10), 1037-1045.

**Sinu, P.A.**, Nasser, M. and Priyadarsanan, D.R. 2006. Feeding ecology of two economically important tiger beetles from Paddy agro – ecosystems in central Western Ghats, India, *Biotropica* 38 (4): 500 – 507.

### **Insect systematic papers**

Narendran T.C., S.K Thomas and **P.A. Sinu** 2006. A revision of Indian species of *Parurios Girault* with a new record of *Papuopsia Bouček* (Hymenoptera: Pteromalidae) from India. *Journal of Bio-Science* 14: 17 – 23.

Narendran, T.C., K.Sudheer, **P.A. Sinu** and Priyadarsanan, D. 2006. A new genus of Chalcididae (Hymenoptera:Chalcidoidea) from Karnataka,India, *Journal of Ecobiology* 18 (2) 155 – 159.

Narendran, T.C., K.Fousi, P.Girish Kumar, S.Santhosh and **P.A.Sinu** 2005. A taxonomic study of *Anaprostocetus Graham* (Hymenoptera :Eulophidae), *Oriental Insects* 39: 273 – 280.

Narendran,T.C., Kumar, P.G., Santhosh, S. and **P.A. Sinu** 2005. A Study on the taxonomy of *Diglyphomorphomyia Girault* (Hymenoptera:Eulophidae) of India, *Journal of Advanced Zoology* 26 (1): 29 – 34.

Narendran T.C. and **P.A. Sinu**. 2003. A new genus and a new species of Eulophidae (Hymenoptera: Chalcidoidea) from India, *Zoos' Print Journal* 18 (3): 1031-1033.

Narendran T.C., Hayat, M. and **P.A. Sinu** 2003. A new species and a new record of genus *Australomymar Girault* (Hymenoptera: Mymaridae) from the Oriental Region, *Zoos' Print Journal* 18 (4): 1059-1060.

Narendran T.C, **P.A. Sinu** and Priyadarsanan, D.R. 2003. A new genus and a new species of Tetrastichinae (Hymenoptera: Eulophidae) from India. *Uttar Pradesh journal of Entomology* 23 (2): 113-116.

### **Popular articles**

**Sinu, P. A.**, Prasad, E., Nair, S. S., & Nagarajan, M. (2012). Teaching in Central Universities. *Current Science* 103: 1137-1138.

**Sinu, P.A.** & M. Nagarajan (2015) Human wildlife conflict or coexistence: what do we want? *Current Science* 108: 1036 – 1038.

**Sinu, P.A.** (2015) Ecology of plant-animal interactions: pollination, seed dispersal, and tritrophic interactions. *Current Science* 108: 154 – 155.

### **Sponsored research projects/ awards**

DST, SERB-DST Young Scientist (2006, 2013), UGC Start-up grant (2013), Conservation, Research, and Exploration awardee of National Geographic Society, USA (2006, 2013), British Ecological Society outreach grant, UK (2005, 2014), National Tea Research Foundation (2011), Kerala State Economic and Planning Affairs (2014), Lakeside Fellowship, USA (2016), Museum of Comparative Zoology, Harvard University (2005), Royal Entomological Society outreach grant (2005, 2006, 2011)

### **International Conferences attended (selected)**

International Congress of Ecology 2013, Excel London (18-24 Aug. 2013)  
7<sup>th</sup> World Symposium on the Family Zingiberaceae, Chiang Mai, Thailand (17-20 Aug 2015)  
6<sup>th</sup> World Symposium of the Family Zingiberaceae, Calicut, India (June 2012)  
ATBC annual general meeting, Arusha City, Tanzania (12-16 June 2012)  
ATBC Asia-Pacific Chapter meeting, Mamallapuram, India (March 2007)  
5<sup>th</sup> World Canopy Conference, Bangalore, India (October 2010)  
British Ecological Society's Annual General Meeting (September 2005; University of Hertfordshire, UK; September 2006; University of Oxford, UK)  
9<sup>th</sup> European Workshop on Insect Parasitoids (Cardiff University, Sept. 2005)  
Ento 2005 & Royal Entomological Society's Annual General Meeting, (University of Sussex, UK; Sept, 2005)  
ATBC Annual general meeting (Bangalore, June 2001)

### **Research Guidance:**

PhD: 8 students (2013 – present)  
MPhil: 2 students (2013 – 2014)  
M.Sc.: 21 students (2012-present)  
Project fellows: 3 (2013 – present)  
Academy summer fellows: 4 (2013 – present)

### **Current Teaching**

Taxonomy and Biodiversity (ANS 511)  
Wildlife Biology and Conservation Biology (ANS 523)  
General and Applied Entomology (ANS 534)  
Methods in Field Biology (ANS 521)  
Ecology of Plant-Animal Interaction (ANS 507)  
Biostatistics (ANS 502)

### **Other activities**

Editor, "Puthumazha", the Nature magazine of Central University of Kerala  
Academic council member, Central University of Kerala (2014 – 2016)  
NAAC self-study report member, Central University of Kerala (2015)  
Mentor, Academy Summer fellowship program for students and teachers (2013 onwards)

## Honors

Two species of parasitic wasps (*Elachertus sinui* Narendran 2004 (Eulophidae); *Scenocharops sinui* (Ichneumonidae) Sudheer and Narendran 2005) are named after me by late Prof. T.C. Narendran and Dr. Sudheer to acknowledge my contribution to parasitoid insect systematic studies.

## Outreach activities

### 1. Programs organized in the University

Invited lectures in Taxonomy (6 days; March-April 2013)  
International Workshop on "Concepts and Practices of Ecology of Plant Animal Interactions" (8 days; May 2014)  
"Indian Bee Course" (5 days; August 2015)  
"Meliponiculture: an interactive training program for the apiculturists" (1 day; August 2015)  
Symposium on "Human-Wildlife Conflict or coexistence: what do we want?" (1 day; October 2015)  
"Ecomeet 2015" Face-to-face interaction between school kids and the environmentalists (as a part of Swadeshi Science Congress, 16 October 2015)  
International Symposium on "Insect biodiversity studies: where does India stand in the global map" (3 days; March 2016)  
Late Prof. T.C. Narendran Memorial lecture (1 day; March, 2016; Memorial lecture was given by Prof. Em. V.V. Ramamurthy)

### 2. Resource person/ Invited talks

World Water Day celebration; Nehru Arts & Science College, Kanhangad, Kerala  
National Seminar; Kasaragod Gov. Arts & Science College, Kasaragod, Kerala  
National Seminar; Payyannur College, Payyannur, Kerala  
National Seminar; Sir Syed College, Thaliparamba, Kannur, Kerala  
Summer camp; M.S. Swaminathan Research Foundation (MSSRF), Wayanad, Kerala  
National Seminar; Providence women's college, Kozhikode, Kerala  
National Seminar; Kodenchery Government Arts & Science College, Kodenchery, Kerala  
Refresher course for college/ University teachers; Academic Staff College, Calicut University (2013, 2014)  
Refresher course for college/ University teachers; Academic Staff College, Kerala University (2015)  
INSPIRE camp for the +2 students; Sacred Heart College, Thevara, Cochin, Kerala  
National Seminar; Fathima Mata College, Kollam, Kerala, India  
Symposium on Plant Reproductive Biology; Botany Department, Kerala University, Kariavattom, Kerala  
Indo-UK Special Interest Group meeting on Agroecology, Calcutta University, Kolkatha, West Bengal  
Entomological Society of India Annual Meeting, Pasighat, Arunachal Pradesh  
International workshop on pollination ecology, NCBS-Bangalore



National Workshop on plant reproductive biology; Institute for Bioresources and Sustainable Development (IBSD), Imphal, Manipur  
National Workshop on sexual reproduction in plants; Department of Botany, Calicut University  
Mentor, Arizona Insect Festival, The University of Arizona, Tucson (September 2016)  
Mentor, Member's night event at California Academy of Sciences, San Francisco (December 2016)

### **Collaborators**

Dr. Judith L. Bronstein (University of Arizona)  
Dr. Margaret D. Lowman (California Academy of Sciences)  
Dr. Wendy Moore Brusca (University of Arizona)  
Dr. David Kavanaugh (California Academy of Sciences)  
Dr. Michelle Trautwein (California Academy of Sciences)  
Dr. Ivette Perfecto (University of Michigan)  
Dr. Niels Holst (Aarhus University)  
Dr. K.R. Shivanna (ATREE-Bangalore)  
Dr. M. Nasser (University of Calicut)  
Dr. Rajesh Tandon (Delhi University)  
Dr. M. Nagarajan (Central University of Kerala)