

CURRICULUM VITAE

Renee Maria Borges

Centre for Ecological Sciences, Indian Institute of Science, Bangalore 560 012, India

DATE OF BIRTH: 25 February 1959

POSITIONS HELD:

1. Associate Professor
2005. Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India
2. Assistant Professor
1997 – 2005. Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India
3. Deputy Director (Research)
1992-1995. Bombay Natural History Society, India
4. Adjunct Faculty
1990-Present. Wildlife Institute of India, Dehradun, India.

EDUCATION:

1. Ph.D. in Biology (Ecology, Evolution and Behaviour)
1989. University of Miami, Florida, USA
Thesis title: "Resource heterogeneity and the foraging ecology of the Malabar Giant Squirrel *Ratufa indica*"
2. Master of Science in Zoology (Animal Physiology)
1982. Institute of Science, University of Bombay
First Class
3. Bachelor of Science in Zoology and Microbiology
1979. St. Xavier's College, University of Bombay
First Class with Distinction

HONOURS AND AWARDS:

1. Nominated as member of Expert Panel on Western Ghats, Ministry of Environment and Forests, Government of India, 2010
2. Elected as Fellow of the Indian Academy of Sciences, 2009
3. Recipient of the Sunderlal Baghai Gold Medal Award for Science, Rotary

Club, Bangalore, 2005

4. Elected to the Council of the Association of Tropical Biology (ATB) (2001-2003) – the only international association of scientists exclusively devoted to the study of tropical systems, based in USA. This association produces the widely read scientific journal *Biotropica*.
5. Given the “Outstanding Teaching Assistant” award of the College of Arts and Science, University of Miami, for 1987
6. Graduate Fellowship from College of Arts and Sciences, University of Miami. 1982-1985.
7. First Rank in M. Sc. (Part I) Examination. University of Bombay. 1981
8. First Rank in B. Sc. Examination in Zoology. University of Bombay. 1979
9. Second Rank in B. Sc. Examination in Microbiology. University of Bombay. 1978

RESEARCH INTERESTS:

Behavioural Ecology (including chemical ecology and visual ecology) and Plant-animal Interactions especially:

- Ant-plant interactions
- Fig biology
- Evolution of sexual displays in plants
- Phytochemicals and their role in food selection by herbivores
- Ant-mimicking spiders and floral mimicry in crab spiders
- Phylogenetics and phylogeography

Conservation biology especially:

- Pollination in fragmented forests

History and philosophy of science especially:

- Ethics and evolution

FIELD EXPERIENCE:

- Western Ghats, Eastern Ghats, and Central India
- Costa Rica
- Panama

PUBLICATIONS:

A. Technical Papers in Peer-reviewed Journals and Books:

1. Borges, R. M. The sacred in forests, trees and seeds: boon or bane of ecosystem services? Book Chapter in: Anthropology, Nutrition and Wildlife Conservation (Editors: Edmond Dounias, Igor de Garine and Valérie de Garine), Publisher: Estudios del Hombre, University of Guadalajara (Mexico) (in press)
2. Borges, R. M. The behaviour and ecology of the Malabar Giant Squirrel *Ratufa indica*. In: Mammals of South Asia: Ecology and Conservation. (A. J. T. Johnsingh and N. Manjrekar, editors). Universities Press, Hyderabad (in press).
3. Shenoy, M. and Borges, R.M. Geographical variation in an ant–plant interaction correlates with domatia occupancy, local ant diversity and interlopers. Biological Journal of the Linnean Society (in press)
4. Krishnan, A., Muralidharan, S., Sharma, L., and Borges, R. M. A hitchhiker's guide to a crowded syconium: how do fig nematodes find the right ride? Functional Ecology (in press).
5. Ranganathan, Y. and Borges, R. M. Reducing the babel in plant volatile communication: Using the forest to see the trees, Plant Biology (in press).
6. Ghara, M. and Borges, R. M. 2010. Comparative life-history traits in a fig wasp community: implications for community structure. Ecological Entomology DOI: 10.1111/j. 1365-2311.2010.01176.x
7. Somanathan H. S., Warrant E. J., Borges R. M., Wallén R., Kelber A. 2009. Resolution and sensitivity of the eyes of the Asian honeybees *Apis florea*, *Apis cerana* and *Apis dorsata*. Journal of Experimental Biology 212: 2448-2453.
8. Bhaskara R. M., Brijesh C M, Ahmed S. and Borges R. M. 2009 Perception of ultraviolet by crab spiders and its role in selection of hunting sites. Journal of Comparative Physiology A 195:409-417
9. Borges, R. M. 2009. Phenotypic plasticity and longevity in plants and animals: cause and effect? Journal of Biosciences 34(4) 605-611.
10. Borges, R. M. 2009. Organic evolution. Chapter 2 in History of Science, Philosophy and Culture in Indian Civilization, volume XII Part 6: Life and Organicism, edited by NS Rangaswamy. Centre for Studies in Civilizations, New Delhi, pp. 41-78.
11. Ranganathan Y and Borges RM. 2009 Predatory and trophobiont-tending ants respond differently to fig and fig wasp volatiles. Animal Behaviour 77: 1539-1545

12. Somanathan, H. S., Kelber A., Borges, R. M., Wallén R., Warrant E. J. 2009. Visual ecology of Indian carpenter bees II: adaptations of eyes and ocelli to diurnal and nocturnal lifestyles. *Journal of Comparative Physiology A* 195:571-583
13. Borges, R. M, Bessière, J-M, Hossaert-McKey M. 2008. The chemical ecology of seed dispersal in monoecious and dioecious figs. *Functional Ecology* 22: 484-493
14. Borges, R. M. 2008. Plasticity comparisons between plants and animals: concepts and mechanisms. *Plant Signaling and Behavior* 3: 367-375 [Invited Review]
15. Borges, R. M. 2008. The objection is sustained: A defence of the defense of beanbag genetics. *International Journal of Epidemiology* 37:451-454 [Invited Commentary]
16. Borges, R. M. 2008. Why are there so many giants, including giant squirrels, in the Old World tropics? *Current Science* 95:866-970 [Invited paper in Special Section on Arboreal Squirrels]
17. Somanathan H., Borges, R. M., Warrant, E. J., Kelber, A. 2008. Nocturnal bees learn landmark colours in starlight. *Current Biology* 18:R996-997
18. Somanathan H, Borges, R. M., Warrant E. J., and Kelber, A. 2008. Visual ecology of Indian carpenter bees I: Light intensities and flight activity. *Journal of Comparative Physiology A* 194:97–107
19. Shenoy, M and Borges, R. M. 2008. A novel mutualism between an ant-plant and its resident pollinator. *Naturwissenschaften* 95:61-65
20. Borges, R. M., Ahmed, S. and Prabhu, V. (2007). Male ant-mimicking salticid spiders choose between retreat silks of sympatric females: implications for pre-mating reproductive isolation. *Journal of Insect Behavior* 20:389-402.
21. Somanathan, H., Mali, S., and Borges, R. M. 2007. Arboreal larder-hoarding in the tropical Indian giant squirrel *Ratufa indica*. *Ecoscience* 14:165-169.
22. Proffit, M., Schatz, B., Borges, R. M. and Hossaert-McKey, M. 2007. Chemical mediation and resource partitioning in non-pollinating fig wasp communities. *Journal of Animal Ecology* 76:296-303.
23. Vignes, H., Hossaert-McKey, M., Beaune, D., Fevre, D., Anstett, M.-C., Borges, R. M., Kjellberg, F. and Chevallier, M. H. 2006. Development

- and characterization of microsatellite markers for a monoecious *Ficus* species, *Ficus insipida*, and cross-species amplification among different sections of *Ficus*. *Molecular Ecology Notes* 6: 792–795
24. Gaume, L., Shenoy, M., Zacharias, M. and Borges R. M. 2006. Co-existence of ants and an arboreal earthworm in a myrmecophyte of the Indian Western Ghats: anti-predation effect of the earthworm mucus. *Journal of Tropical Ecology* 22: 1-4
 25. Guru Prasad B R and Borges, R. M. 2006. Searching on patch networks using correlated random walks: Space usage and optimal foraging predictions using Markov chain models. *Journal of Theoretical Biology* 240:241-249
 26. Schatz, B., Proffit, M., Rakhi, B. V, Borges, R. M. and Hossaert-McKey, M. 2006. Complex interactions on fig trees: ants capturing parasitic wasps as possible indirect mutualists of the fig/fig wasp interaction. *Oikos* 113:344-352.
 27. Borges, R. M. 2005. Ernst Mayr and evolutionary biology: polemics and synthesis. *Current Science* 89:947-954
 28. Gaume, L., Zacharias, M., Grosbois, V. and Borges, R. M. 2005 . The fitness consequences of bearing domatia and having the right ant partner: experiments with protective and non-protective ants in a semi-myrmecophyte. *Oecologia* 145:76-86
 29. Gaume, L., Zacharias, M. and Borges, R. M. (2005). Ant-plant conflicts and a novel case of castration parasitism in a myrmecophyte. *Evolutionary Ecology Research* 7:435-452
 30. Borges, R. M. 2005. Do plants and animals differ in phenotypic plasticity? *Journal of Biosciences* 30: 41-50.
 31. Somanathan, H., Borges, R. M. and V. S. Chakravarthy. 2004. Does neighbourhood floral display matter? Fruit set in carpenter bee-pollinated *Heterophragma quadriloculare* and beetle-pollinated *Lasiosiphon eriocephalus*. *Biotropica* 36:139-147
 32. Borges, R. M. 2003. Conservation of pollinator services in rain forests. In: *Conservation of Rainforests in India* (A. K. Gupta, A. Kumar and V. Ramakantha, editors). Chapter 16; pp 229-242; ENVIS Publication, Wildlife Institute of India.
 33. Borges, R. M. 2003. The anatomy of ignorance or Ecology in a fragmented landscape: do we know what really counts? Pages 56-85 in

Battles Over Nature. Science and the Politics of Conservation. V. Saberwal and M. Rangarajan, editors. Permanent Black, New Delhi.

34. Mali, S. and Borges, R. M. 2003. Phenolics, alkaloids, saponins, and cyanogenic glycosides in a species-poor cloud forest in India. *Biochemical Systematics and Ecology* 31: 1221-1246
35. Borges, R. M., Gowda, V. and Zacharias, M. 2003. Butterfly pollination and high-contrast visual signals in a low-density distylous plant. *Oecologia* 136:571-573
36. Michener, C. D., Borges, R. M., Zacharias, M. and Shenoy, M.. 2003. A new parasitic bee of the genus *Braunsapis* from India (Hymenoptera: Apidae: Allodapini). *Journal of the Kansas Entomological Society* 76:518-522.
37. Somanathan, H. and Borges, R. M. 2001. Nocturnal pollination by the carpenter bee *Xylocopa tenuiscapa* (Apidae) and the effect of floral display on fruit set of *Heterophragma quadriloculare* (Bignoniaceae) in India. *Biotropica* 33:78-89.
38. Borges, R. M. 2000. The anatomy of fragmentation. *J. Indian Institute of Science* 80:601-608.
39. Somanathan, H. and Borges, R. M. 2000. Influence of exploitation on population structure, plant spacing and reproductive success in dioecious tree species within a fragmented cloud forest in India. *Biological Conservation* 94:243-256.
40. Borges, R. M. 1998. Leviathan, natural selection, and ethics. *Current Science* 74:750-758.
41. Borges, R. M. 1998. Spatiotemporal heterogeneity of food availability and dietary variation between individuals of the Malabar Giant Squirrel *Ratufa indica*. In: *Ecology and Evolutionary Biology of Tree Squirrels* (J. F. Merritt and D. A. Zegers, editors). Special Publication, Virginia Museum of Natural History, USA. Pp. 99-111.
42. Borges, R. M. 1997. Ethics and evolution: Thomas Henry Huxley and the problem of evil. In: *Proceedings of the National Seminar on Bioethics. Indian Perspectives.* Organised by the Indian Council of Philosophical Research and the Department of Philosophy, Goa University. Pp. 61-66.
43. Borges, R. M., Somanathan, H. and Mali, S. 1997. Alternations of sexes in a deciduous tree: temporal dioecy in *Bridelia retusa*. *Current Science* 72:940-944.

44. Borges, R. M. 1997. Contributions to the identification, distribution, and ecology of some Indian species of endangered mammals. (I. Mallik, editor). TRAFFIC-India Identification Manual, WWF(India), New Delhi.
45. Borges, R. M. 1996. Joint management of Bhimashankar Wildlife Sanctuary. In: Towards Participatory Conservation in India. (A. Kothari, N. Singh, and S. Suri, editors). Sage Publications, New Delhi. Pp. 151-166.
46. Borges, R. M. 1993. Figs and Malabar Giant Squirrels in two tropical forests in India. *Biotropica* 25: 183-190.
47. Borges, R. M. 1992. Biodiversity conservation in the sacred groves of Bhimashankar Wildlife Sanctuary – a need for research and scientific management. In: Proceedings of the Consultation/Workshop on Biodiversity Conservation in the Western Ghats. Centre for Ecological Sciences, Indian Institute of Science and WWF-India. Pp. 130-140.
48. Borges, R. M. 1992. A nutritional analysis of foraging in the Malabar Giant Squirrel (*Ratufa indica*). *Biological Journal of the Linnean Society* 47: 1-21.
49. Borges, R. M. 1990. Sexual and site differences in calcium consumption by the Malabar Giant Squirrel *Ratufa indica*. *Oecologia* 85:80-86.
50. Rane, U. V. and Borges, R. M. 1987. Sighting of the Blackcrested Baza (*Aviceda leuphotes*) at Bhimashankar. *Journal of the Bombay Natural History Society* 84:679.
51. Borges, R. M. 1986. On the occurrence of the Ceylon Frogmouth (*Batrachostomus moniliger*) in North Kanara, Karnataka. *Journal of the Bombay Natural History Society* 83:200
52. Borges, R. M. 1986. Possible play between the Indian Giant Squirrel (*Ratufa indica indica*) and the Common Langur (*Presbytis entellus*). *Journal of the Bombay Natural History Society* 83: 197.
53. Borges, R. M. 1986. Predation attempt by the black eagle (*Ictinaetus malayensis perniger*) on the Indian Giant Squirrel (*Ratufa indica elphinstonei*). *Journal of the Bombay Natural History Society* 83 (Suppl.): 203.

B: Books:

1. Borges, R. M. (in preparation). *The Behaviour and Ecology of the Malabar Giant Squirrel Ratufa indica*.

2. Borges, R. M. 1997. *Evolution – the story of life*. National Council for Science and Technology, New Delhi.

C: Technical Reports:

1. The Status, Ecology and Conservation of the Malabar Giant Squirrel *Ratufa indica*. 1999. Prepared with S. Mali and H. Somanathan. United States Fish and Wildlife Service and Wildlife Institute of India.
2. Endangered rodents of India. 1994. Prepared with Ishwar Prakash and V. C. Agarwal for IUCN's Asian Rodent Specialist Group.
3. Conservation Problems of the Mookambika Wildlife Sanctuary, Dakshin Kannada, Karnataka. 1993. Invited report prepared for the Karnataka Forest Department.
4. Status of the Indian Giant Squirrel and its associated forests. 1993. Submitted to Forest Departments of Andhra Pradesh, Gujarat, Madhya Pradesh, Maharashtra and Tamil Nadu.
5. People/Wildlife Conflicts: The Bhimashankar Wildlife Sanctuary as a case study. 1992. Submitted to WWF-India and the Bombay Natural History Society.

D: Book reviews:

1. Borges, R. M. 2008. Annual Review of Entomology Vol. 52 (2007). M. R. Berenbaum, R. T., Cardé and G. E. Robinson (eds). Current Science 95:675-677.
2. Borges, R. M. 2006. *Annual Review of Entomology*. Vol. 51 (2005). M. R. Berenbaum, R. T. Cardé and G. E. Robinson (eds). Current Science 91:969-971.
3. Borges, R. M. 2005 *Pheromones and Animal Behaviour. Communication by Smell and Taste*. By Tristram D. Wyatt. Cambridge University Press, Cambridge UK, 2003. Current Science. 88: 826-828.
4. Borges, R. M. (2003). *Return of the Crazy Bird – The Sad Strange Tale of the Dodo*. C. Pinto-Correia. Springer-Verlag, New York. Current Science 85:1090-1093
5. Borges, R. M. 2002. *Annual Review of Entomology*. Vol. 46 (2001). M. R. Berenbaum, R. T. Cardé and G. E. Robinson (eds). Current Science 82:97-99.

6. Borges, R. M. 2000. *Levels of Selection in Evolution*. L. Keller (editor). Princeton University Press, 1999. *Current Science* 79:383-385.
7. Borges, R. M. 2000. *Ecology – A Pocket Guide*. Ernest Callenbach. Universities Press (India) Ltd, 1999. *Resonance* 5:99-102.
8. Borges, R. M. 1999. *The Ecology and Evolution of Inducible Defenses*. Ralph Tollrian and C. Drew Harvell (editors). Princeton University Press, 1999. *Current Science* 77:825-826.
9. Borges, R. M. 1998. *Evolutionary Ecology of Freshwater Animals: Concepts and Case Studies*. B. Streit, T. Städler and C. M. Lively (editors), Birkhäuser Verlag, 1997. *Current Science* 75:628-630.
10. Borges, R. M. 1994. *Mammals of the Thar Desert*. I. Prakash. Scientific Publishers, Jodhpur, 1994. Hornbill
11. Borges, R. M. 1994. *Indian Birds*. R. K. Gaur. Brijbasi Printers, New Delhi. Hornbill.
12. Borges, R. M. 1993. *The Discovery of Evolution*. D. Young. British Museum of Natural History. *Journal of the Bombay Natural History Society*.
13. Borges, R. M. 1987. *The Fall of a Sparrow*. S. Ali. Oxford University Press. *Florida Field Naturalist*.

E: General articles:

1. Borges, R. M. 2009. Revolutions in evolutionary thought: Darwin and after. *Resonance* Feb:102-123.
2. Borges, R. M. 2009. Of pungency, pain and naked mole rats: chili peppers revisited. *Journal of Biosciences* 34: 349-351.
3. Borges, R. M. 2006. Pictures at an exhibition: bees view Van Gogh's *Sunflowers*. *Journal of Biosciences* 31:503-505.
4. Borges, R. M. 2005. Polemics and synthesis: Ernst Mayr and evolutionary biology. *Resonance* 10:21-33.
5. Borges, R. M. 2005. The frontiers of India's biological diversity. *Tropinet* 16:1-3

6. Borges, R. M. 2002. Stephen Jay Gould: A view of life. 1941-2002. *Resonance* 7:2-5.
7. Borges, R. M. 2002. Warring ants: Lessons from Lanchester's laws of combat? *J. Biosciences* 27:75-78.
8. Borges, R. M. 2001. Ant and human farmers face similar problems. *J. Biosciences* 26:121-124.
9. Borges, R. M. 2001. Why are chillies pungent? *J. Biosciences* 26:289-291.
10. Borges, R. M. 2000. Feverish honeybees. *Journal of Biosciences* 25:215-216
11. Borges, R. M. 2000. How asymmetrical before it's asymmetrical? *Journal of Biosciences* 25:121-122.
12. Borges, R. M. 1998. Gender in plants. Part I. Why do plants change sex? *Resonance* 3 (4):64-71.
13. Borges, R. M. 1998. Gender in plants. Part II. More about why and how plants change sex. *Resonance* 3 (11):30-39.
14. Borges, R. M. 1998. Clonal versus sexual fish – who wins? *Journal of Biosciences* 23:166-167.
15. Borges, R. M. 1998. One size does not fit all (caveats for conservation from the Bhimashankar Wildlife Sanctuary). *Seminar* 466:31-36 (Special issue on Indian wildlife)

SYMPOSIUM ORGANISATION:

1. Organised an International Workshop on **Nocturnal Pollination: Patterns and Processes**, March 23rd -27th 2009, Indian Institute of Science, Bangalore.
2. Organised a National Workshop on Critical Tiger Habitat and Critical Wildlife Habitats, May 8th – 9th 2008, Indian Institute of Science, Bangalore.
3. Organised symposium in the First Conference of the Asian Chapter of the Association for Tropical Biology and Conservation, Mahabalipuram, on "Averting Biodiversity Meltdown in the Asian Tropics", March 2007. **Symposium title: Endangered Ecosystem Services.**

4. Organised symposium in the Second Western Ghats Forum Conference on “Integrating Science and Management of Biodiversity in the Western Ghats”, Coimbatore. **Symposium title: Ecosystem Services.**
5. Organised a symposium in the International Annual meeting of the Association for Tropical Biology, Bangalore, 2001. **Symposium title: Mammal-plant Interactions.** 6 speakers: 3 US speakers representing work from Mexico, Africa, Brazil; 1 French speaker representing work from French Guyana; and 2 Indian participants.

SEMINARS AND WORKSHOPS:

1. Ranganathan Y and Borges R. M. 2009. Reducing the babel in plant volatile communication: using the forest to see the trees. Poster presented at Gordon Research Conference on Floral and Vegetative Volatiles, Oxford, UK.
2. Borges R. M. 2008. The scent of a fig: how do birds, bats, wasps and ants like it? Plenary lecture delivered at Annual Meeting of the Association for Tropical Biology and Conservation (ATBC), Paramaribo, Suriname
3. Borges R. M. 2008. Ultraviolet perception in crab spiders. Second International Conference on Invertebrate Vision, Sweden, and at Pan-Asian Conference on Photobiology, Benares Hindu University, Varanasi.
4. Borges R. M., Ghara M, Krishnan A, Muralidharan S and Ranganathan Y 2008. Chemical signaling and evolutionary conflicts in an ancient nursery pollination system: mutualists, parasites, predators, and hitchhikers in fig/wasp interactions. Paper presented at Conference on Plant Life Through the Ages at Birbal Sahni Institute of Paleobotany, Lucknow.
5. Borges, R. M. 2008. The chemical ecology of seed dispersal in monoecious and dioecious figs: role of plant volatiles. UGC sponsored Biovistas Conference on Plant Sciences, St Joseph’s College, Bangalore
6. Somanathan, H, Borges, R. M., Kelber A., and Warrant, E. 2008. Orientation to artificial landmarks and colour discrimination in a nocturnal carpenter bee in India. Paper presented at conference on: Orientation and Navigation. Birds, humans and other animals. Organised by Royal Institute of Navigation, University of Reading, UK.

7. Borges, R. M. 2007. Comparative longevity of a fig wasp community. Paper presented at VIII Annual Discussion Meeting in Entomology: Facets of Cecidology: Intricacies of Insect-plant interactions (Birth centenary celebrations of MS Mani), December, Chennai, India
8. Borges, R. M. 2007. Revisiting differences in phenotypic plasticity between plants and animals. Paper presented at International Conference on Phenotypic and Developmental Plasticity, organized by Vidyanand Nanjundiah, Stuart Newman, and Rajiv Gandhi Institute of Biotechnology, December, Trivandrum, India
9. Borges, R. M, Bessière, J-M, Hossaert-McKey, M. 2007. Scents to attract and to repel: The volatiles of seed-bearing and pollinator-breeding dioecious figs. Presented at Gordon Conference on Floral & Vegetative Volatiles. Les Diablerets, Switzerland, October 2007.
10. Ghara, M. and Borges, R. M. 2007. Comparative longevity of a fig wasp community: parasitoids live longer. Poster presented at X European Workshop on Insect Parasitoids, September, Sicily, Italy.
11. Ranganathan, Y and Borges, R. M. 2007. Eavesdropping ants in an obligate insect-plant mutualism. Poster presented at 23rd Meeting of the International Society of Chemical Ecology. Jena, Germany. July 2007
12. Somanathan, H., Kelber, A., Warrant, E. J. and Borges, R. M. 2007. Nest specificity and pollen utilization by carpenter bees in India. Paper presented at Annual Meeting of the Association for Tropical Biology and Conservation (ATBC), Mexico. July 2007
13. Somanathan, H., Kelber, A., Warrant, E. J. and Borges, R. M. 2007. Visual ecology of Indian carpenter bees. Poster presented at Eighth International Congress of Neuroethology, Vancouver, Canada. July 2007
14. Borges, R. M. 2007. The sacred in forests, trees and seeds: boon or bane of ecosystem services? Paper presented in First Conference of the Asian Chapter of the Association for Tropical Biology and Conservation, Mahabalipuram, on "Averting Biodiversity Meltdown in the Asian Tropics", March 2007.
15. Borges, R. M. 2006. Chemical mediation of mutualism and parasitism: examples from figs and ant-plants. Paper presented at Workshop on Proteomic Insights into Plant-insect Interactions. Max-Planck Society-India Partnership Program, National Chemical Laboratory, Pune, December 2006.

16. Somanathan, H. S., Kelber, A., Warrant, E. J., and Borges, R. M. 2006. Divided, we don't fall: partitioning of time and food resources in a carpenter bee community in India. Paper presented at Annual Meeting of the Association for Tropical Biology and Conservation (ATBC), Chinese Academy of Sciences, Kunming, China, July 2006
17. Shenoy, M, Radhika, V, and Borges, R. M. 2006. The evolution of myrmecophytism: spatial variation in ant partners and in chemical composition of ant rewards in the unspecialized myrmecophyte *Humboldtia brunonis*. Paper presented at Annual Meeting of the Association for Tropical Biology and Conservation (ATBC), Chinese Academy of Sciences, Kunming, China, July 2006
18. Borges, R. M., Hossaert-McKey, M. and Bessièrè, J-M. 2006. Bird-versus mammal-dispersed figs: do they differ in dispersal-phase volatile organic compounds? Paper presented at Seventh International Symposium on Fig-Fig Wasp Biology, Chinese Academy of Sciences, Xishuangbanna Botanical Garden, China, July 2006
19. Hossaert-McKey, Bessièrè, J-M., Profitt, M., Chen C. and Borges, R. M. 2006. Pollinator attraction and intersexual mimicry in dioecious fig species. Paper presented at Seventh International Symposium on Fig-Fig Wasp Biology, Chinese Academy of Sciences, Xishuangbanna Botanical Garden, China, July 2006
20. Borges, R. M. 2006. Why do giants occur in the Old World? Plenary talk delivered at Fourth International Tree Squirrel Colloquium, India. Organised by National Institute of Advanced Studies, Coimbatore, February 2006.
21. Borges, R. M., Guru Prasad, B. R., Mali, S., and H. Somanathan. 2006. How do foraging path statistics in the Malabar Giant Squirrel, *Ratufa indica*, vary across timescales? A comparison of consecutive day variation with long-term variation. Paper presented at Fourth International Tree Squirrel Colloquium, India. Organised by National Institute of Advanced Studies, Bangalore.
22. Guru Prasad, B. R., Mali, S., Somanathan, H. and Borges, R. M. 2006. Detecting central place bias in the foraging movements of Malabar Giant Squirrels: Insights from vector field analysis. Paper presented at Fourth International Tree Squirrel Colloquium, India. Organised by National Institute of Advanced Studies, Bangalore.
23. Guru Prasad, B. R., Mali, S., Somanathan, H. and Borges, R. M. 2006. Power-law disparities in tree usage by the Malabar Giant Squirrel, *Ratufa*

- indica*: Some trees in the territory are much more important than others. Paper presented at Fourth International Tree Squirrel Colloquium, India. Organised by National Institute of Advanced Studies, Bangalore.
24. Somanathan, H., Mali, S. and Borges, R. M. 2006. Home range size and territory overlap in the Malabar giant squirrel, *Ratufa indica*, in relation to fruit availability. Paper presented at Fourth International Tree Squirrel Colloquium, India. Organised by National Institute of Advanced Studies, Bangalore.
 25. Somanathan, H., Mali, S. and Borges, R. M. 2006. Intraspecific variability in seed hoarding behaviour in the Malabar giant squirrel (*Ratufa indica*) correlates with small-scale habitat disturbance: implications for conservation. Paper presented at Fourth International Tree Squirrel Colloquium, India. Organised by National Institute of Advanced Studies, Bangalore.
 26. Mali, S., Somanathan, H., and Borges, R. M. 2006. Variation in phytochemicals within classes of food items and its influence on food selection by the Malabar Giant Squirrel *Ratufa indica*. Paper presented at Fourth International Tree Squirrel Colloquium, India. Organised by National Institute of Advanced Studies, Bangalore.
 27. Mali, S., Somanathan, H., and Borges, R. M. 2006. An endangered tree squirrel caught between insensitive forest management and research neglect: the importance of lianas to giant squirrels. Paper presented at Fourth International Tree Squirrel Colloquium, India. Organised by National Institute of Advanced Studies, Bangalore.
 28. Somanathan, H. and Borges, R. M. 2005. Insect pollination services in natural and semi-natural landscapes is affected by pollinator type and inter-plant distance. Paper presented at Second Western Ghats Forum Conference on "Integrating Science and Management of Biodiversity in the Western Ghats", Coimbatore, India
 29. Borges, R. M. 2005. To be or not to be (plastic): Is this **the** question? Implications for plant resistance. Paper presented at VI Discussion Meeting on: Emerging Technologies and Resistance Dynamics in Insects and Crop Plants, COSTED, Chennai, India
 30. Shenoy, M. and Borges, R. M. 2005. Latitudinal variation in ant-plant characters in the semi-myrmecophyte *Humboldtia brunonis* (Fabaceae) in India. Paper presented at Annual meeting of the Association for Tropical Biology and Conservation, Uberlandia, Brazil.

31. Shenoy, M. and Borges, R. M. 2005. How do utilization of sugars and amino acids by ant communities relate to extrafloral nectar compositions of a myrmecophyte? Poster presented at the 21st Annual Meeting of the International Society for Chemical Ecology, Washington DC
32. Borges, R. M. 2005. From functional ecosystems to the valuation of natural products: the gaps in our knowledge. Paper presented at conference on Biodiversity: Science and Governance, organized by the French Ministry of Research in collaboration with UNESCO, Paris
33. Hossaert-McKey, M. and Borges, R. M. 2004. Pollinator attraction and inter-sexual mimicry in dioecious fig species. Paper presented at Symposium on Insect-Plant Interactions, 20th Annual meeting of the International Society of Chemical Ecology, Berlin
34. Borges, R. M., Mali, S. and Somanathan, H. 2004. Fruit resource attributes and aggression at fruiting trees in the Malabar giant squirrel *Ratufa indica* within a fragmented cloud forest in India. Workshop on Seed Dispersal and Frugivory in Asia. Kunming, China, Organised by the Chinese Academy of Sciences
35. Borges, R. M. 2003. Do plants and animals differ in phenotypic plasticity? Discussion meeting on Genetic Determinism, Pelling, Sikkim. Organised by Vidyanand Nanjundiah, sponsored by the Indian Academy of Sciences, and the Wellcome Trust.
36. Borges, R. M. 2003. The Idea of Symbiosis. Presented in the History of Ideas Series conducted by the National Institute of Advanced Studies, Bangalore.
37. Prasad, B. R. G. and Borges, R. M. 2003. The consequences of walking on a graph: the case of the Malabar Giant Squirrel, *Ratufa indica*. 1) Annual Meeting of the Society for Mathematical Biologists, Dundee, UK, and 2) Second Alcala International Conference on Mathematical Ecology, Alcala, Spain.
38. Veena, C. P. and Borges, R. M. 2003. Looking for cryptic species: male response to female silks in ant-mimicking salticid spiders in India. Annual meeting of Association for Tropical Biology and Conservation and Special Symposium of British Ecological Society, University of Aberdeen, UK.
39. Gaume, L., Zacharias, M. and Borges, R. M. 2002. Castration parasitism in a plant ant and roles of morphological devices against plant-ant conflicts. In Symposium entitled: Funktionelle Aspekte der Evolution der Pflanzen (Functional aspects of evolution in plants) in Botanikertagung:

Conference of the Deutsche Botanische Gesellschaft (German Botanical Society), Freiburg i. Br. (Germany), September 2002.

40. Borges, R. M., Zacharias, M. and Shenoy, M. 2002. Ant diversity in two sites dominated by the myrmecophyte *Humboldtia brunnonis* in India. Paper presented at: International Conference on Tropical Forests: Past, Present and Future; Annual meeting of the Association for Tropical Biology, Panama City, Panama.
41. Borges, R. M. 2001. The biology of laughter. Paper presented at: International Conference on Science and Metaphysics, National Institute of Advanced Studies, Bangalore.
42. Borges, R. M. Plant-animal interactions: through the looking glass. Paper presented at: Workshop on Research Priorities in Rainforest Fauna, Salim Ali School of Ornithology and Natural History and State Forest College, Coimbatore.
43. Borges, R. M., Gowda, V. and Zacharias, M. 2001. Effect of bract removal on visitation to the flowers of *Mussaenda frondosa* by the southern birdwing butterfly *Troides minos*. Poster presented at: International Conference on Invertebrate Vision, Sweden, organized by University of Lund, Sweden.
44. Borges, R. M., Talwar, M. and Zacharias, M. 2001. Retreat or die: the perils of mimicry when the model preys on the mimic. Paper presented at: 27th International Ethological Conference, Tuebingen, Germany.
45. Borges, R. M. and Mali, S. 2001. Hotspots in nutrient landscapes and herbivory by giant squirrels in an Indian seasonal cloud forest. Pages 485-488 in *Tropical Ecosystems: Structure, Diversity and Human Welfare*. K.N. Ganeshiah, R. Uma Shaanker and K. S. Bawa (eds). Proceedings of the International Conference on Tropical Ecosystems. Oxford-IBH, New Delhi.
46. Gowda, V., Zacharias, M. Vishveshwara, and Borges, R. M. 2001. Do 'pollinator flags' aid in floral visitation in *Mussaenda frondosa*? Pages 207-210 in *Tropical Ecosystems: Structure, Diversity and Human Welfare*. K.N. Ganeshiah, R. Uma Shaanker and K. S. Bawa (eds). Proceedings of the International Conference on Tropical Ecosystems. Oxford-IBH, New Delhi. (V. Gowda won the 'Best Poster Award')
47. Shenoy, M. and Borges, R. M. 2001. Is the richome-rich leaf surface of the aggressive weed *Broussonetia papyrifera* (paper mulberry) a successful means of impeding herbivores? Pages 473- 476 in *Tropical Ecosystems: Structure, Diversity and Human Welfare*. K.N. Ganeshiah,

- R. Uma Shaanker and K. S. Bawa (eds). Proceedings of the International Conference on Tropical Ecosystems. Oxford-IBH, New Delhi.
48. Somanathan, H., Mali, S. and Borges, R. M. 2001. Effect of tree stratum on flowering synchrony in a seasonal cloud forest in the Bhimashankar Wildlife Sanctuary, India. Pages 750-753 in Tropical Ecosystems: Structure, Diversity and Human Welfare. K.N. Ganeshiah, R. Uma Shaanker and K. S. Bawa (eds). Proceedings of the International Conference on Tropical Ecosystems. Oxford-IBH, New Delhi.
 49. Talwar, M., Zacharias, M., Gowda, V., Kapoor, V., Raychaudhuri, S., Sridhar, H., Lokhandwala, Z. and Borges, R. M. (2001). Understanding ant-avoidance behaviours in the myrmecomorphic spider *Myrmarachne plataleoides*, mimic of the weaver ant *Oecophylla smaragdina* Pages 649-653 in Tropical Ecosystems: Structure, Diversity and Human Welfare. K.N. Ganeshiah, R. Uma Shaanker and K. S. Bawa (eds). Proceedings of the International Conference on Tropical Ecosystems. Oxford-IBH, New Delhi.
 50. Zacharias, M., Gaume, G, and Borges, R. M. (2001). How effective are ants in protecting the myrmecophyte *Humboldtia brunonis* (Fabaceae) against herbivory? Pages 645-648 in Tropical Ecosystems: Structure, Diversity and Human Welfare. K.N. Ganeshiah, R. Uma Shaanker and K. S. Bawa (eds). Proceedings of the International Conference on Tropical Ecosystems. Oxford-IBH, New Delhi.
 51. Invited lecture in one-day symposium to commemorate Stephen Jay Gould. Organized by Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), at Jakkur, August 2002. Lecture title: Stephen Jay Gould: A View of Life.
 52. Participant in Discussion Meeting on the Origin and Evolution of Life, Organised by V. Nanjundiah, sponsored by Indian Academy of Sciences, Bangalore, at Coorg, December 2000
 53. Invited speaker in symposium on Behavioural Ecology at XXVI International Conference on Ethology. Presented paper entitled "Insect-plant interactions and the evolution of plant secondary sexual characters". August, 1999, Bangalore
 54. Invited speaker at National Seminar for Wildlife, Wildlife Institute of India. Participated in debate on "Whither conservation research in India?". August, 1998, Dehradun.

55. Discussion Meeting titled "Concepts and Models in Developmental Biology". Sponsored by DST and organised by Prof. V. Nanjundiah, IISc. Gave lecture entitled "The development of bird song". April, 1998, Nainital.
56. III Congress of the International Union for the Study of Social Insects (IUSSI, Indian Chapter) and National Symposium on Diversity of Social Insects and Other Arthropods and the Functioning of Ecosystems. Presented paper with H. Somanathan entitled "Effect of floral display and carpenter bee visitation and fruit set in *Heterophragma quadriloculare* (Bignoniaceae)". H. Somanathan received the award for the "Best Paper Presentation". March, 1998, Mudigere.
57. Participant in workshop titled "Natural Resource Monitoring with GIS and Remote Sensing". Organised by K. N. Ganeshiah and R. Uma Shaanker for the Ashoka Trust for Research in Ecology and Environment. December, 1997, Bangalore.
58. National Seminar on Bioethics: Indian Perspectives. Organised by the Indian Council of Philosophical Research and the Department of Philosophy, Goa University. Presented paper entitled "Ethics and evolution: Thomas Henry Huxley and the problem of evil". November, 1997, Goa.
59. Invited participant in Seminar entitled "Science, Tradition and Scientific Tradition" organised by the Philosophy of Science Group, National Institute of Advanced Studies, Bangalore. 1996
60. Invited participant in DST-sponsored Discussion Meeting on Evolutionary Biology organised by V. Nanjundiah, Indian Institute of Science, Mangalore University. 1995
61. Invited to send guidelines on "Constraints on the success of biodiversity conservation and sustainable use" to International Development and Research Centre, New Delhi. This paper was used in a follow-up workshop on Joint Protected Area Management. 1994.
62. Invited participant in Workshop on Nature Education, Gujarat Ecology and Environment Research Foundation, Gandhinagar. 1994.
63. Invited speaker at Workshop on Joint Protected Area Management by Indian Institute of Public Administration (IIPA), New Delhi. Presented case-study of people/wildlife conflicts at Bhimashankar Wildlife Sanctuary. Chairperson of concluding session. 1994.

64. Invited participant in Workshop on Global Biodiversity Assessment organised by Madhav Gadgil, Centre for Ecological Sciences, and United Nations Environment Program (UNEP). Bangalore 1994.
65. Invited participant in Interaction Meeting on Evolutionary Ecology organised by Radhavendra Gadagkar on behalf of Program Advisory Committee (PAC) – Behaviour, Ecology, and Evolution – of the Department of Science and Technology (DST). Indian Institute of Science, Bangalore. Presented research proposal on cliff swallow reproductive strategies. Subsequently invited by DST to prepare detailed research proposal for funding consideration (temporarily postponed). 1994.
66. Invited participant in Interaction Meeting on Pollination and Dispersal ecology organised by Drs K. Ganeshiah and Umashaanker on behalf of Program Advisory Committee (PAC) – Plant Sciences – of DST. Presented research proposal on sexual displays of plants. 1993.
67. Participant in International Symposium on Pollination in the Tropics organised by the International Union for the Study of Social Insects. Bangalore, 1993.
68. Invited participant in Workshop on Methodology for Assessing Biodiversity organised by Madhav Gadgil, Centre for Ecological Sciences, Bangalore 1993.
69. Invited speaker at Workshop on Biodiversity Conservation in the Western Ghats organised by WWF-India, at the Indian Institute of Science, Bangalore. Presented paper on the need for scientific research in sacred groves. Chairperson for one session. 1992.
70. Invited participant in Workshop on Rodent Population Control organised by Central Arid Zone Research Institute (CAZRI), Jodhpur. Presented paper on life-history strategies in rodents based on data from the Malabar Giant Squirrel *Ratufa indica*. 1991
71. Participant in International Meeting of Fig Biologists, University of Miami, Florida, 1988.
72. Participant in Annual Meeting of the American Society of Mammalogists, University of Florida, Gainesville. 1985.
73. Selected as participant in two-month field course in Tropical Ecology conducted by the Organisation for Tropical Studies (OTS) in Costa Rica. 1983. Subsequently spent two weeks at Smithsonian Tropical Research Institute, Barro Colorado Island, Panama. 1983.

74. Selected for one-month Training Programme in Wildlife Management conducted by the United States Fish and Wildlife Service and the Department of Environment (DOEn), at Kanha National Park, Madhya Pradesh. 1982.

TEACHING EXPERIENCE:

Graduate and Post-graduate degrees:

1. Currently teaching courses in a) Plant-Animal Interactions, b) Evolutionary Biology, and c) Frontiers of Biology, at Centre for Ecological Sciences, Indian Institute of Science, for Ph.D. students.
2. Currently have six Ph.D students who are researching on plant-animal interactions. 1) B R Guru Prasad: Modelling the foraging movements of giant squirrels *Ratufa indica* in the forest canopy, 2) R Yuvaraj: The role of ants in mediating the mutualism between figs and fig wasps, 3) Mahua Ghara: The community ecology of non-pollinating fig wasps within fig syconia. 4) Joyshree Chanam: Stable isotopes in the study of ant-plant interactions using *Humboldtia brunonis* as a case-study 5) Anusha Krishnan: Population biology of the fig/wasp mutualism. 6) Lakshy Kataria: Defences of fungus-growing termites against parasites of their mutualistic fungus
3. Post-doctoral students: 1) CM Brijesh: Visual ecology of crepuscular butterflies, 2) Suma Arundev: Molecular ecology of monoecious and dioecious figs
4. Post-doctoral student Laurence Gaume from Centre d'Ecologie Fonctionnelle et Evolutive (CEFE), CNRS, Montpellier, France. Research on Ant-plant Interactions in *Humboldtia brunonis* (Fabaceae) in the Western Ghats of India. January 1999- August 1999.
5. Co-supervisor for MSC project of R. Abdul Hakkim, M Sc student from Department of Microbiology, PSG College of Arts and Sciences, Coimbatore. Thesis topic: "The role of anti-microbial peptides in the cultivation of a specialized fungus by fungus-growing termites". 2004.
6. M. Sc Thesis guide for Vena Kapoor, student from Salim Ali School of Ecology, Pondicherry; Co-guide: Priya Davidar, Salim Ali School of Ecology, Pondicherry: Thesis title: "Exploring the possible relationship between the green lynx spider *Peucetia viridans* (Oxyopidae) and the glandular undershrub *Jatropha gossypifolia* (Euphorbiaceae)". 2002
7. Project guide for Nandini Rajamani; post-MSc student from Salim Ali School of Ecology, Pondicherry. Project Title: "The biology of the flying squirrels of the Western Ghats". Funded by: Karnataka Forest Department, 2002

8. Ph. D student Subhash Mali was awarded degree for thesis entitled "Plant chemical profiles and their influence on food selection in the Malabar Giant Squirrel *Ratufa indica*". University of Bombay, July 1999.
9. Ph. D student Hema Somanathan was awarded degree for thesis entitled "Community phenology and reproductive success of some insect-pollinated plants in Bhimashankar Wildlife Sanctuary, Western Ghats". University of Bombay, February 1999.
10. Guide for several summer research fellows from Centre for Theoretical Studies, IISc, and Jawaharlal Nehru Centre for Advanced Scientific Research.
11. Visiting faculty at Wildlife Institute of India, Dehradun. Since 1990, teaching courses every year in Community Ecology and Population Biology for M. Sc. (Wildlife Biology), Wildlife Institute of India. Responsible for setting and evaluation of examination papers. Contributed to two revisions of M.Sc syllabus. Conducted entrance examinations for M.Sc. candidates in Bombay in 1993 and in Bangalore, 1999.
12. Independently wrote syllabus for proposed M. Sc. in Conservation Biology to be offered by University of Bombay. 1994.
13. Member, B. Sc. Syllabus Revision Committee, University of Bombay. Part of three-member sub-committee to write syllabus for newly introduced special papers in Wildlife Biology. 1994.
14. Faculty and co-organiser with Priya Davidar of field course in Island Ecology and Biogeography for M. Sc. students of the Salim Ali School of Ecology, Pondicherry, at Ritchie's Archipelago, Andaman Islands. Designed field projects on the model of the field course conducted by the Organisation for Tropical Studies (OTS) in Costa Rica. 1989.

Diploma and Certificate Courses:

1. Member, Course Development Core Group, SNDT Women's University Certificate Correspondence Course in Environment Management, Bombay 1995.
2. Independently developed and co-ordinated Post-Graduate Diploma in Conservation Biology organised by the Bombay Natural History Society for the first time in India in 1994. Supervised oral presentations and written assignments for 12 students. Conducted one-week field training for students at Melghat Tiger Reserve. Four of these students pursued Ph. D. degrees in Ecology/Conservation Biology at American Universities.
3. Co-ordinator of Post-graduate Diploma Course in Science and Technology

Communications, Xavier Institute of Communication, Saint Xavier's College, Bombay. 1990-1992. Taught introductory courses in a) history and philosophy of science, and b) the scientific method, and guided students on science communication projects using print and audiovisual media.

**Refresher Courses/Lecture Series/Miscellaneous Lectures:
(selected sample)**

1. Lecture on: The Descent of a Man: The influence of Erasmus Darwin on his grandson. Delivered at one-day symposium on Darwin, organized by Department of Molecular Reproduction and Developmental Genetics (MRDG) and Indian Academy of Sciences, November 2009
2. Evolutions of Mutualisms. Plenary lecture delivered at International Conference on Darwinism – A Sesqui-Centennial Celebration, Karnatak University, Dharwad. 2009.
3. Co-evolution: Patterns and Processes. Plenary lecture delivered during workshop on Evolution and Natural Selection organized by Indian Academy of Science at Mar Athanasios College for Advanced Studies, Tiruvalla. 2009.
4. Chemical signaling and evolutionary conflicts in an ancient nursery pollination system: mutualists, parasites, predators, and hitch-hikers in fig/wasp interactions. Lecture delivered at Madurai Kamaraj University, Department of Animal Behaviour during Summer School in Animal Behaviour and Chronobiology.2009.
5. What's in an eye? Colour vision at starlight in bees and Exploitation of the ultraviolet by hunting crab spiders. Lecture delivered at Madurai Kamaraj University, Department of Animal Behaviour during Summer School in Animal Behaviour and Chronobiology. 2009.
6. Chemical signaling between fig and fig wasps. Lecture delivered at Sophia College, Mumbai, during workshop on Darwinism. 2009.
7. Evolutionary ethics: Patterns and Processes. Lecture delivered at the Centre for Knowledge Culture and Innovation Studies, Department of Philosophy and the School of Medicine, University of Hyderabad during the workshop on Charles Darwin. 2009.
8. Revolutions in evolutionary thought: Darwin and after. Lecture delivered on occasion of Darwin Bicentennial at Maharani College, Bangalore. 2009.
9. Chemical signaling and evolutionary conflicts in an ancient nursery pollination system: mutualists, parasites, predators and hitch-hikers in fig/wasp

interactions. Lecture delivered on occasion of Darwin Bicentennial at School of Biosciences, Rajiv Gandhi University, Kotayyam, Kerala. 2009.

10. What's in an eye? Colour vision at starlight in bees and Exploitation of the ultraviolet by hunting crab spiders. Lecture delivered on occasion of Darwin Bicentennial at School of Biosciences, Rajiv Gandhi University, Kotayyam, Kerala. 2009.
11. Delivered lecture on chemical signalling at Workshop on Taxonomy, Reproductive Biology and Conservation, at Centre for Environmental Management of Degraded Ecosystems (CEMDE), February 2009.
12. Invited lecture on occasion of receipt of Sunderlal Bahgai Gold Medal, Rotary Club (Bangalore). Lecture title: The global pollination market and food security. 2005.
13. Lecture entitled: The future of plant-animal interactions: a perspective from pollination, in a symposium to honour Prof. Madhav Gadgil on the occasion of his retirement from the Centre for Ecological Sciences, Indian Institute of Science. 2005.
14. Regular invited resource person in annual or bi-annual workshops entitled: "Methods in Behavioural Ecology", conducted by Prof. Raghavendra Gadagkar, sponsored by DST. 1998 onwards
15. UGC Refresher Course (Academic Staff College) in Department of Philosophy, Goa University, 6 lectures on Philosophy of the Mind and Environmental Ethics, March 1998.
16. Invited lectures on miscellaneous topics in Evolutionary Biology at a) Bangalore University Zoology Teachers's Forum Refresher Course in Zoology (sponsored by the University Grants Commission), b) Bangalore Science Forum, National College, c) Bangalore Association for Science Education, Bangalore Planetarium. 1998 onwards
17. Resouce person at University Grants Commission Refresher Course in Neurobiology, Behavioural Rhythms and Ethology, Academic Staff College, Madurai Kamraj University. 5 lectures on Behavioural Ecology and Evolution. 1995.
18. Invited to lecture on "Tropical rain forest conservation" to the Botanical Society, Indian Institute of Science, Bombay, 1995.
19. Invited to lecture on "Biodiversity conservation" to the Science Club, Ramnarain Ruia College, Bombay. 1995.

20. Gave lecture series at the Bombay Natural History Society on evolution and behaviour. 1994-1995.
 - Patterns in primate evolution
 - Landscapes in evolution and the Red Queen Hypothesis
 - The faithful and the philanderer – the evolution of mating systems
 - Some games plants play
 - Sexual selection or what makes the comb of the junglefowl so red?
 - Why do helpers help? Cooperative breeding in animals
 - The prisoner's dilemma – selfishness and altruism in animal societies
 - The logic of animal conflict
21. Resource person in Training Programme for Indian Forest Service (IFS) personnel on People's Participation in Forest Management. Focus on tribal-forest interface. Tata Institute of Social Sciences, Bombay. 1994, 1995, 1996.
22. Resource person in Training Programme for Managers of Biosphere Reserves organised by Madhav Gadgil, Centre for Ecological Sciences, and Tamil Nadu Forest Department. Mudumalai. 1993
23. Resource person in Workshop in Methods in Behavioural Ecology organised by Raghavendra Gadagkar, Centre for Ecological Sciences, Indian Institute of Science, Bangalore. 1992
24. Conducted a 2-day workshop on "How to write a research proposal" for Bombay Natural History Society scientists. 1991.
25. Organised a 2-day workshop on Animal Census Methods conducted by Bombay Natural History Society. 1991. Candidates from workshop participated in annual wildlife census conducted by the Maharashtra State Forest Department at Bhimashankar Wildlife Sanctuary.
26. Resource personnel in DST-sponsored workshop on Vertebrate Ecology organised by Bombay Natural History Society at Mudumalai. Gave lectures and assisted with field projects and data analysis. Lecture titles: a) How to be a herbivore: the animal's point of view, b) How to avoid being eaten: the plant's point of view. 1990.

Undergraduate:

1. Graduate Teaching Assistant in Department of Biology, University of Miami. 1987-1989. Taught undergraduate courses in General Biology and supervised laboratory practicals.

OTHER ACADEMIC ACTIVITIES:

1. Member of group selected to write White Paper for Indian National Science Academy (INSA), New Delhi, on Vision for Indian Science (2009).
2. Associate Editor, *Acta Oecologica*, 2008 onwards
3. Member, Editorial Board, *Journal of Biosciences*. 1997 – present
4. Member, Editorial Board, *Journal of the Indian Institute of Science*, 2008 onwards
5. Member, Editorial Board, *Biotropica: The Journal of Tropical Biology and Conservation*, 2003 – 2007.
6. Founder Member and Member, Editorial Board, *Conservation and Society*. 2001 – 2007.
7. Member, Interim Governing Council, *Conservation and Society* journal, 2007-present
8. Member, Post-graduate Board of Studies in Biosciences, University of Mysore, 2003-present.
9. Reviewer of scientific papers for:
1) *Acta Oecologica*, 2) *Biotropica*, 3) *Ecological Applications*, 4) *Biodiversity and Conservation*, 5) *Conservation and Society*, 6) *Current Science*, 7) *Journal of Biosciences*, 8) *Proceedings of Indian National Academy of Sciences*, 9) *Journal of the Bombay Natural History Society*, 10) *Resonance*, 11) *Oryx*, 12) *Conservation Biology*, 13) *Heredity*, 14) *Journal of Genetics*, 15) *Plant Systematics and Evolution*, 16) *Philippine Agricultural Scientist*, 17) *Functional Ecology*, 18) *Journal of Theoretical Biology*, 19) *Ecology*, 20) *Journal of Tropical Biology*, 21) *Oecologia*, 22) *Gayana Botanica*, 23) *Naturwissenschaften*, 24) *Biological Journal of the Linnean Society*
10. Reviewer of research proposals for: 1) Ministry of Environment and Forests, Government of India, 2) Council for Scientific and Industrial Research (CSIR), Government of India, 3) Indo-US Science Forum, DST, India, 4) National Science Foundation (NSF), USA, 5) Kothari Postdoctoral Scheme of UGC, Government of India
11. Examiner for: a) Ph.D theses at: 1) Salim Ali School of Ecology, Pondicherry; 2) Aligarh Muslim University; 3) Shivaji University, Kolhapur, 4) Saurashtra University, 5) Indira Gandhi Forest Research Institute,

- Dehradun, 6) Bangalore University, 7) University of Mysore
- b) M. Sc. theses at 1) Salim Ali School of Ecology, Pondicherry; 2) Wildlife Institute of India, Dehradun; 3) Agricultural University, Bangalore
- c) Indian Forest Services Wildlife Diploma candidates (Wildlife Institute of India, Dehradun)
12. Member, Evaluation Committee for School of Humanities, National Institute of Advanced Studies, Bangalore, 2007
 13. Nominated Associate, National Institute of Advanced Studies, Bangalore, 2007
 14. Invited Participant in Discussion meeting of Tiger Task Force, Wildlife Institute of India, Dehradun, 2007
 15. Member, Search Committee for Council Members and President, Association for Tropical Biology, USA. 2002
 16. Member, Search Committee for Chief Editor, Biotropica. 2002.
 17. Member, Local Organizing Scientific Committee, Association for Tropical Biology's Annual Meeting, 2001, held at Bangalore.
 18. Member, Program Advisory Committee in Animal Sciences, Department of Science and Technology, Government of India. 1995-1997.
 19. Member, Research Advisory Council, Worldwide Fund for Nature (WWF)-India. 2005 onwards
 20. Member, Research Advisory Council, Ashoka Trust for Ecology and Environment (ATREE), Bangalore, 2004 onwards
 21. Member, Examination Paper setting committee, CSIR NET examination, 2006
 22. Member, Editorial board of "Hornbill" – a periodical published by the Bombay Natural History Society. 1994-1995.
 23. Member, Working Group for Conservation of Wild Animal Diversity, National Biodiversity Action Plan. Special focus on conservation of mutualisms. 2000-2003.
 24. Member, Steering Committee, Western Ghats Forum. 2002-present

25. Membership of Scientific Societies: a) Life member: Ethological Society of India and b) Life Member: International Union for the Study of Social Insects (Indian Chapter), c) Association for Tropical Biology and Conservation, d) American Association for Botany.
26. Member, IUCN South Asian Invertebrate Specialist Group, 2003 onwards
27. Member, IUCN Declining Pollinator Task Force (based at University of Guelph, Canada), 2003 onwards
28. Member, IUCN Asian Rodent Specialist Group. 1991-1995.
29. Consultant, Maharashtra State Forest Department. 1989 onwards
30. Independently wrote proposal for "Capacity Building of the Bombay Natural History Society under Capacity 21 of Agenda 21". Submitted to the Ministry of Environment and Forests. 1994. (subsequently this proposal was awarded to the Society)
31. Member, Advisory Committee, Indo-German project on sustainable development and conservation of biological diversity in sacred groves and catchment areas of dams in the Western Ghats of Maharashtra. 1991
32. Consultant to the Bronx Zoo, New York, on the captive management of the Malayan giant squirrel *Ratufa bicolor*. 1987.
33. Section editor, Annelid Section, Encyclopedia of Indian Natural History, published for the Bombay Natural History Society by Oxford University Press. 1986.