# Divya Vasudev, Ph. D.

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# **Professional Interests**

My work lies at the interface of species ecology and behaviour, and conservation biology in large complex landscapes. I am particularly interested in the application of novel quantitative models based on empirical data to better understand species conservation requirements in heterogeneous landscapes; and the integration of scientific knowledge on species ecology and behaviour, as well as people's perspectives towards the environment, into informed conservation decision-making. Primates and elephants are my taxa of interest and my work is focussed in Northeast India and the Western Ghats. I am keen to develop capacity, skill and interest amongst the next generation. Towards this aim, I co-founded Conservation Initiatives, focussing on Northeast India, a region that has relatively few opportunities for aspiring conservationists. My work has tangible applications for biodiversity conservation, sustainable development and the improvement of human well-being.

### Education

**Doctor of Philosophy.** 2013. Wildlife Ecology and Conservation. University of Florida. Dissertation: Species dispersal behavior and connectivity in fragmented landscapes

Master of Science. 2006. Wildlife Biology and Conservation. Manipal Academy of Higher Education.

Bachelor of Science. 2004. Stella Maris College. Major: Zoology

## **Professional Experience**

Senior Scientist. 2019 to present. Conservation Initiatives.

Senior Scientist. 2020 to 2021. Wildlife Conservation Trust.

DST–INSPIRE Faculty. 2014 to 2020. Centre for Wildlife Studies.

Senior Scientific Consultant. 2014 to 2019. Wildlife Conservation Society India Program.

Graduate Assistant. 2008-2013. University of Florida.

Research Associate. 2007-2008. Wildlife Conservation Society–India Program.

Research Assistant. 2007. Eco-systems India, Pygmy Hog Conservation Program.

## **Professional Affiliations**

Affiliate Senior Scientist, Centre for Wildlife Studies Affiliate Faculty, National Centre for Biological Sciences Member, IUCN Connectivity Conservation Specialist Group Member, IUCN Section on Small Apes Member, Society for Conservation Biology Member, Researchers for Wildlife Conservation Member, Association for Tropical Biology and Conservation

# Scientific Publications and Book Chapters

- Goswami, V. R., **Vasudev**, **D.**, Joshi, B., Hait, P., & Sharma, P. (2021) Coupled effects of climatic forcing and the human footprint on wildlife movement and space use in a dynamic floodplain landscape. Science of the Total Environment, 758, 144000. <u>DOI</u>
- **Vasudev, D.**, Goswami, V. R., & Oli, M. K. (2021) Detecting dispersal: A spatial dynamic occupancy model to reliably quantify connectivity across heterogenous conservation landscapes. Biological Conservation, 253, 108874. DOI | In the news
- **Vasudev, D.,** et al. (2020) Conservation opportunities and challenges emerge from assessing nuanced stakeholder attitudes towards the Asian elephant in tea estates of Assam, Northeast India. Global Ecology and Conservation, 22, e00936. <u>DOI</u>
- **Vasudev, D.\*** & Goswami, V. R. (2019) A Bayesian hierarchical approach to quantifying stakeholder attitudes towards conservation in the presence of reporting error. Biological Conservation, 34, 515–526. DOI
- Joshi, B., Syiem, B. L. N., Kuotsu, R., Menon, A., Gogoi, J., Goswami, V. R. & Vasudev, D.\* (2019) Records of the Marbled Cat *Pardofelis marmorata* and the Asiatic Golden Cat *Catopuma temminckii* (Mammalia: Carnivora: Felidae) from the community forests surrounding the Dzükou Valley in Nagaland, India. Journal of Threatened Taxa, 11, 14363–14367. <u>In the news</u>
- Goswami, V. R., Yadava, M. K., Vasudev, D., Prasad, P. K., Sharma, P. & Jathanna, D. (2019)
   Towards a reliable assessment of Asian elephant population parameters: the application of photographic spatial capture– recapture sampling in a priority floodplain ecosystem.
   Scientific Reports, 9, 8758. DOI

- Syiem, B. L. N., Goswami, V. R. & **Vasudev, D.** (2018) "In a tree by the brook, there's a songbird who sings": Woodlands in an agricultural matrix maintain functionality of a wintering bird community. PLoS ONE 13, e0201657. <u>DOI</u> | <u>In the news</u>
- **Vasudev, D.\***, Nichols, J. D., Ramakrishnan, U., Ramesh, K. & Srinivas V. (2018) Assessing landscape connectivity for tigers: concepts and practice. In: Methods for Monitoring Tiger and Prey Populations (K. U. Karanth and J. D. Nichols, eds). Springer, India.
- Karanth, K. U., Srivathsa, A., Vasudev, D.\*, Puri, M., Parameshwaran, R. & Kumar, N. S.
  (2017) Spatio-temporal interactions facilitate large carnivore sympatry across a resource gradient. Proceedings of the Royal Society B: Biological Sciences, 284, 20161860. DOI
- Goswami, V. R. & **Vasudev**, **D.** (2017, invited paper) Triage of conservation needs: the juxtaposition of conflict mitigation and connectivity considerations in heterogeneous, human-dominated landscapes. Frontiers in Ecology and Evolution 4, 144. <u>DOI</u> | <u>In the news</u>
- Fletcher, R. J., Burrell, N. S., Reichert, B. E., **Vasudev**, **D.** & Austin, J. D. (2016) Divergent perspectives on landscape connectivity reveal consistent effects from genes to communities. Current Landscape Ecology Reports 1, 67–79. <u>DOI</u>
- Vasudev, D.\* & Fletcher, R. J. (2016) Mate choice interacts with dispersal limitations to shape effective dispersal between populations. Ecological Modelling 327, 65-53. DOI | In the news
- Jathanna, D., Karanth, K.U., Kumar, N.S., Goswami, V.R., Vasudev, D. & Karanth, K.K. (2015) Reliable monitoring of elephant populations in forests: analytical and practical considerations. Biological Conservation 187, 212-220. DOI
- **Vasudev, D.\*** & Fletcher, R. J. (2015) Incorporating movement behavior into conservation prioritization in fragmented landscapes: an example of western hoolock gibbons in Garo Hills, India. Biological Conservation, 181, 124-132. <u>DOI</u>
- Vasudev, D.\*, Fletcher, R. J., Goswami, V.R. & Krishnadas, M. (2015) From dispersal constraints to landscape connectivity: lessons from species distribution modeling. Ecography, 38, 967–978. DOI
- Goswami, V.R., **Vasudev, D.** & Oli, M.K. (2014) The importance of conflict-induced mortality in designing multiple-use reserves for wide-ranging species of conservation concern. Biological Conservation, 176, 191–198.
- **Vasudev, D.**, Kumar, A. & Sinha, A. (2008) Resource distribution and group size in the common langur Semnopithecus entellus in South India. American Journal of Primatology, 70, 680–689.

\* corresponding author

# **Reviewing and Editorial Experience**

Handling Editor, Conservation Biology.

Reviewer, Conservation Biology, Biological Conservation, Ecological Modelling, Methods in Ecology and Evolution, Ecography, and other journals.

Publons: https://publons.com/researcher/1538577/divya-vasudev/

### Selected Teaching Experience

- Advanced Course in Landscape Ecology. 2015, 2017 & 2019. Wildlife Conservation Society– National Centre for Biological Sciences. (Instructor)
- Population Ecology and Estimation. 2015, 2017 & 2019. Wildlife Conservation Society– National Centre for Biological Sciences. (Co-Instructor)
- Occupancy sampling, modelling and estimation: what, why and how? 2016, Student Conference on Conservation Science (Co-Instructor)
- Advanced Course in Population Ecology and Estimation. 2015. Wildlife Conservation Society, India Program–National Centre for Biological Sciences training course for students from Wildlife Institute of India (Co-Instructor)
- Quantitative Wildlife Ecology. 2013. University of Florida (Teaching Assistant)
- Introduction to Wildlife Population Ecology. 2009 & 2013. University of Florida (Teaching Assistant)

### **Mentoring Experience**

Bhavendu Joshi. 2017–ongoing. Centre for Wildlife Studies, Manipal University. PhD Guide.

Sikha Hariharan. 2018–ongoing. Centre for Wildlife Studies, Manipal University (CSIR Fellow). PhD Guide.

Biang La Nam Syiem. 2019–ongoing. Deakin University. PhD Co-guide.

Parvathi Prasad. 2017–ongoing. Centre for Wildlife Studies, Manipal University. PhD Committee Member.

Marishia Rodrigues. 2019-ongoing. National Centre for Biological Sciences. M.Sc. Guide.

Aditya Banerjee. 2017–2018. National Centre for Biological Sciences. M.Sc. Co-guide.

Ryan Rodriguez. 2017–2018. National Centre for Biological Sciences. M.Sc. Co-guide.

Biang La Nam Syiem. 2015–2016. National Centre for Biological Sciences. M.Sc. Guide.

### Selected Grants and Awards

- Arcus Foundation Grant, for conservation of the western hoolock gibbon in community managed forests. 2020–ongoing.
- Department of Science and Technology—Innovation in Science Pursuit for Inspired Research Faculty Award, for landscape-scale conservation science. 2014–2020.
- Disney Conservation Fund, for a research and conservation project on lion-tailed macaques, India. 2015–2016; 2016–2019.
- Great Apes Conservation Fund, United States Fish and Wildlife Service, for landscape-scale prioritization and community-based conservation of the endangered western hoolock gibbon. 2017–ongoing.
- Asian Elephant Conservation Fund, United States Fish and Wildlife Service, for a project on connectivity and human–elephant conflict in the Kaziranga landscape, Assam, India. 2015-2016; 2016–2017; 2017–2018; 2018–ongoing.
- IUCN–KfW Integrated Tiger Habitat Conservation Programme, for transboundary conservation for tigers across Northeast India and Myanmar. 2016–ongoing.
- Amalgamated Plantations Private Limited, with Balipara Tract and Frontier Foundation, for conservation initiatives in tea gardens, Assam, India. 2014.
- University of Florida Alumni Graduate Award. 2008–2012.

### Selected Conference Presentations and Invited Talks

- Assessing stakeholder attitudes: accounting for scale, diverse beliefs and sources of error. 29<sup>th</sup> International Congress for Conservation Biology of the Society for Conservation Biology. 2019
- Human behaviour as a spatio-temporally varying barrier to species connectivity. 55<sup>th</sup> Annual Meeting of the Association for Tropical Biology and Conservation. 2018.
- Understanding large mammal corridors. WWF Landscape Corridors Workshop. 2018.
- The rolling stone: dispersing animals in dynamic human-dominated landscapes. Colorado State University. 2017.
- Striving for a balance: science and the preservation of nature in a dynamic world. Nehru Memorial Museum and Library, Science and Heritage Lecture Series. 2015.
- Forests for the future: combining efforts to conserve nature. Nehru Memorial Museum and Library Children's Centre. 2015.

- Reserve prioritization for conservation of the endangered western hoolock gibbon in community-managed forests of Garo Hills, India. The Wildlife Society Annual Conference. 2013.
- A comparison of group size and composition between two newly designated parapatric langur species, *Semnopithecus priam* and *S. achates*, in Southern India. XXII Congress of the International Primatological Society. 2008.

### Selected Reports and Other Publications

- Athreya, V. & Vasudev, D. (2015) Media workshops improve reporting of human–wildlife interactions. Oryx, 49, 577–578.
- Vasudev, D., Goswami, V. R., Eastment, R. (2015) Conserving large mammals in partnership with private landowners in Assam, north-east India. Oryx, 49, 577.
- Vasudev, D., Kumar, A., Karanth, K. U. (2015) Enhancing conservation science capacity in India: First decade of the Master's programme in wildlife biology and conservation. Oryx, 49, 16.
- Evans, J., Fletcher, R., Alavalapati, J., Geller, D., Smith, A.B., Calabria, J., Upadhyay, T.,
   Vasudev, D., Acevedo, M. & Stebbins C. (2013) Forestry bioenergy in the southeast
   United States: implications for wildlife habitat and biodiversity. Report for the National
   Wildlife Federation.
- Goswami, V.R., Vasudev, D., Karnad, D., Krishna, Y.C., Krishnadas, M., Pariwakam, M., Nair, T., Andheria, A., Sridhara, S. & Siddiqui, I. (2013) Conflict of human-wildlife coexistence.
  Proceedings of the National Academy of Sciences of the United States of America, 110, E108.
- Vasudev, D. (2013) Bringing animals back into our backyard. The Book Review XXXVII, April 2013.
- Vasudev, D. & Goswami, V.R. (2012) The myth of failing fences. Economic & Political Weekly, XLVII, 114-115.

### Selected Popular Articles and Media

The call of the gibbon. Community-conservation efforts in Meghalaya. 2020. Link

Wilderness Rekindled, Partnering Nagaland's Conservation Movement. 2019. Link

Environmental concerns do matter. The Hindu Business Line. 24 June 2014. Link

The story of the other one percent. The Hindu, Magazine Section. 9 September 2012. Link

Leap of faith. Shillong Times. 13 May 2012.

Conservation without fences: can India coexist with wildlife? Tehelka. 28 March 2012. Link

Damning the snow leopard. Governance Now, 16-29 February 2012. 47-49.

Money for nothing, tigers for free. The Hindu, Magazine Section. 5 November 2011. Link