



Assistant Professor

Dr. Karan Rana

School of Science

Qualifications

BSc, MSc, MPhil, PhD

- PhD Botany (2019), Title: 'Status of endemic and threatened angiosperms of Gujarat', The Maharaja Sayajirao University of Baroda
- MPhil Biotechnology (2014), M.Phil. Title: 'DNA barcoding of Gamopetalae members with special emphasis on threatened plants of Gujarat', Hemchandracharya North Gujarat University
- MSc (2012) Botany, The Maharaja Sayajirao University of Baroda
- BSc (2010) Botany, The Maharaja Sayajirao University of Baroda

Contact Details

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Areas of Expertise

Angiosperm Taxonomy, IUCN Red List Assessments

Profile

Research Projects

- Rufford Small Grant (July 2016)
- IDEA WILD equipment grant (October 2016)
- Minnesota Landscape Arboretum - BGCI Grant (May 2017)

Research Experience

- Research Scholar in Indo-German GIZ project on 'Floristic Diversity of Khijadia Bird Sanctuary and Gosabara Wetland Complex' at The Maharaja Sayajirao University of Baroda, Vadodara from 1/12/2015 to 30/6/2016.
- Research Scholar in Gujarat Ecological Commission consultancy project on 'Ecorestoration of Amba forests, Dharampur' at The Maharaja Sayajirao University of Baroda, Vadodara from 1/4/2015 to 30/11/2015.

- Project Fellow in Gujarat Biodiversity Board project on 'Status of Endemic and Threatened Angiosperms of Gujarat' at The Maharaja Sayajirao University of Baroda, Vadodara from 1/2/2014 to 31/3/2015.
- Project Fellow in Saurashtra Cement Limited project on 'Impact of Mining on Biodiversity of Barda Wildlife Sanctuary' at The Maharaja Sayajirao University of Baroda, Vadodara from 1/9/2012 to 31/1/2014.

Invited Speaker/Expert Lecture

- Expert lecture on 'Plant Biodiversity and Conservation (IUCN Listing)' at the CSIR NET Crash Course Workshop at PG-N-BT-CBC, South Gujarat, organised by Division of Biomedical and Life Sciences, Navrachana University, on 21st October 2020.
- Invited as a Speaker to deliver lectures on 'Survey of endemic and threatened plants based on IUCN criteria' at the Advance course in Parataxonomy under the 'Green Skill development programme', organised by Department of Botany, The Maharaja Sayajirao University of Baroda, from 11th - 13th November 2018.
- Invited as a Speaker to deliver talk on 'Ozone Friendly Products' at a webinar on 'Ozone for Life' organised by MoEF & CC's ENVIS Resource Partner, Consumer Education & Research Centre, on the occasion of World Ozone Day on 16th September 2020.
- Invited to deliver a virtual lecture on 'Plant Taxonomy' organised by Amrit Vidyalyaya on 4th January 2021.

Publications

- Karan, R., U. Kartik & S. Azaz (2020). Record of melanistic Five-striped Squirrel from Vadodara, Gujarat. *Small Mammal Mail* #430, In: *Zoo's Print* 35(11): 01-02.
- Rana, K. 2020. *Ceropegia odorata*. The IUCN Red List of Threatened Species 2020: e.T120413156A120413178.
- Rana, K. 2020. *Helichrysum cutchicum*. The IUCN Red List of Threatened Species 2020: e.T96239079A96239904.
- Rana, K. 2020. *Spodiopogon aristatus*. The IUCN Red List of Threatened Species 2020: e.T134039859A134040370.
- Rana, K. 2020. *Tamarix kutchensis*. The IUCN Red List of Threatened Species 2020: e.T134039191A134040355.
- Rana, K. 2020. *Solanum purpureilineatum*. The IUCN Red List of Threatened Species 2020: e.T96361061A96362920.
- Patel, R. & Rana, K. 2020. *Commiphora stocksiana*. The IUCN Red List of Threatened Species 2020: e.T96361107A96362925.
- Gosavi V.K., Auti S.G., Rana K. & S.S. Kambale (2019) Rediscovery of *Dicliptera leonotis* (Acanthaceae) from Maharashtra, India. *Rheedea* 29(2): 186-189.
- Rana K. and Nagar P. (2019) *Unifoliolate Butea monosperma* conserved by local people. *Annals of Plant Sciences* 8(5): 3549-3550.
- Rana, K. (2017) *Tephrosia jamnagarensis*. The IUCN Red List of Threatened Species: e.T96238744A96239894.
- Rana K. and Nagar P. (2017) Diversity and distribution of endemic angiosperms in Gujarat. *Int. J. of Adv. Res.* 5 (6): 730-758
- Vanzara A., Rana K., Ali T. and Nagar P. (2016) *Begonia picta* Smith (Begoniaceae), New Addition To The Flora Of Gujarat, India. *The Begonian*. 83: 143-145.
- Rana K., Pokar R., Jayswal S., Joshi P., Nagar P. and Singh A. (2015) Rediscovery of *Olex nana* (Olacaceae) for Gujarat state. *J. Econ. Taxon. Bot.* 39 (2): 297-299.

- Mangalorkar P., Rana K., Parikh R. and Nagar P. (2014) The Effect of Different Chemical Treatments and Salt Stress on the Germination Potential of *Taverniera cuneifolia* (Roth) Ali seeds. *J. Chem. Biol. Phy. Sci.* 4 (1): 369-374.
- Rana K., Bhatt M. and Nagar P. (2013) *Cleome brachycarpa* (Forssk.) Vahl ex DC. (Cleomaceae) - A new record for the flora of Saurashtra. *J. Econ. Taxon. Bot.* 37 (4): 741-743.

E-books Published

- Nagar P., Rana K. and Vanzara A. (2017) *Unique Trees of Gujarat, India*. Lambert Academy Publishing (ISBN: 978-3-330-33641-4).

Workshops Attended

- Attended the online workshop on 'Academic Book writing and related topics' organised by Springer Nature on 13th May 2020.
- Attended the One Day Workshop on 'Plant Nomenclature' conducted by Department of Botany, The Maharaja Sayajirao University of Baroda on 20th March 2019.
- Attended the National workshop on 'Botanical Nomenclature Course' organised by Botanical Survey of India, at Pune from 9th - 12th February 2017 and successfully completed the course comprising lectures, exercise and assignments.
- Attended the 'HPLC and GC - Hands-on Training' workshop conducted by Department of Botany, The Maharaja Sayajirao University of Baroda, in collaboration with Indian Science Congress Association (Baroda Chapter), during 4th - 10th July 2016.
- Attended the National workshop on 'Technical Writing in Plant Taxonomy' conducted by Goa University in Association with Indian Association for Angiosperm Taxonomy (IAAT) during 26th - 28th February 2015 at Department of Botany, Goa University.
- Attended state-level workshop on 'Survey and documentation of Orchids in Gujarat (SDOG)' and 'Status of endemic and threatened angiosperms of Gujarat (SETAG)' during 14th - 15th July 2014, conducted by Department of Botany, The Maharaja Sayajirao University of Baroda and Gujarat Biodiversity Board, Gandhinagar.
- Attended the National Workshop on 'Botanical Nomenclature' conducted by the Department of Botany, University of Calicut during 17th - 19th March 2014.

Conferences

- Participated at 'International Virtual Conference on Emerging Frontier for Healthcare and Delivery (EFHD-2020)' organised by Department of Biology, School of Applied Sciences, KIIT Deemed to be University, between 12th - 14th September 2020.
- Presented poster at the 'International Conference on Ecohealth and Environmental Sustainability (ICEES 2020)' organised by Navrachana University, Vadodara in association with the University of Calgary, Canada between 24th - 26th February, 2020.
- Participated at 'National Green Mentors Conference - 2019' held at Karnavati University, Ahmedabad on 30th June 2019.
- Presented poster at the 'International Conference on International Conference on Reproduction, Endocrinology and Development (ICRED) and 37th Meeting of The Society for Reproductive Biology and Comparative Endocrinology (SRBCE)' organised by Division of Life Sciences, Navrachana University, Vadodara from 18th - 21st January 2019.

- Presented paper on 'Studies on Endemic and Threatened Angiosperms of Gujarat' for the theme 'Phytogeography, Endemism and Threatened Plant Diversity' at the XXVIII Annual Conference of IAAT & International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow, organised by Department of Botany, The Maharaja Sayajirao University of Baroda from 29th - 31st October 2018.
- Participated at 'Awareness Program on Plant Systematics' held on 30th October 2018 at Navrachana University, Vadodara.
- Presented poster on 'Impact of Climate Change on Floral Diversity of Gujarat' at the National Seminar on Impact of Climate Change on Biodiversity-III, organised by Department of Botany, The Maharaja Sayajirao University of Baroda on 29th November 2017.
- Presented on 'IUCN Red List Assessments of endemic species of Gujarat' at the International Symposium on Emerging Biological Trends in 21st Century sponsored by GSBTM, organised by School of Sciences, P.P. Savani University, Gosamba, Gujarat, on 5th November 2017.
- Presented oral paper entitled 'Endemic and threatened flora of Gujarat' at the 2nd National Conference on Innovating for Development and Sustainability, organised by Navrachana University, Vadodara, during 5th - 6th October 2017.
- Participated at the XXXX All India Botanical Conference of the Indian Botanical Society & National Symposium on 'Evaluation and Conservation of Plant Germplasm' held at Department of Botany, Punjabi University, Patiala from 15th - 17th September 2017.
- Presented a speed-talk on 'Status of endemic and threatened angiosperms in Gujarat and conservation practices' at Rufford India Conference: Fostering Grass-roots Conservation in India - A Rufford Initiative, held by Foundation for Ecological Research, Advocacy and Learning in collaboration with the Rufford Foundation, UK and Forest Department, Rajasthan, during 23rd - 26th April 2017 at Sawai Madhopur, Rajasthan.
- Presented poster on 'Endemic flora of Gujarat' at the XXVI Annual Conference of Indian Association for Angiosperm Taxonomy and International seminar on 'Conservation and Sustainable Utilization of Biodiversity' conducted by the Department of Botany, Shivaji University, Kolhapur, during 7th - 9th November 2016.
- Presented on 'Endemic and threatened angiosperms of Gujarat' at the silver jubilee conference of IAAT and council meeting of IAPT & International seminar on 'Advancements in angiosperm systematics and conservation' conducted by the University of Calicut, IAAT and IAPT, during 19th - 21st November 2015, at Department of Botany, University of Calicut.
- Presented poster in National seminar on 'Recent Trends in Environmental Protection: Concerns & Challenges (RTEPC)' on 5th October 2015, conducted by BCUD, North Maharashtra University and B.S.S.P.M's Arts, Commerce and Science College, Songir, Dhule.
- Participated in National seminar on 'Conservation Biotechnology & DNA Barcoding' during 18-19th May 2015, conducted by Gujarat State Biotechnology Mission at TRO campus, Gandhinagar, Gujarat.
- Presented in national seminar on 'Impact of climate change on Biodiversity' on 25th March 2015, conducted by Indian Society of Geomatics (Vadodara chapter) and Department of Botany, The Maharaja Sayajirao University of Baroda.
- Presented in one day national seminar on 'Animal DNA Barcoding: Current status, trends and prospects' sponsored by Gujarat State Biotechnology Mission (GSBTM) on 17th January 2015, conducted by Department of Botany, Hemchandracharya North Gujarat University, Patan.
- Participated as a delegate in 'Sorath Vanaushadh darshan (Dravyaguna Shibir)' during 21st - 23rd November 2014, conducted by Sorath Ayurved Parishad at Girnar forest, Junagadh (Gujarat).

- Volunteered in XXXV All India Botanical Conference on 'Role of Plants and Microbes for the betterment of Mankind in Changing Climate' during 8th - 10th December 2012, conducted by Department of Botany, The Maharaja Sayajirao University of Baroda.
- Presented on 'Jungle Journal: Digital Documentation of Plant Diversity of University Campus' at the regional science congress for shaping the future of India conducted by The Maharaja Sayajirao University of Baroda and Indian Science Congress Association (Baroda Chapter) during 15th - 16th September 2012, at The Maharaja Sayajirao University of Baroda.
- Presented on 'Diversity and documentation of street trees in Vadodara' and 'Effect of salt stress on the germination of *Taverniera cuneifolia* (Roth) Arn. seeds.' at the regional science congress on 'Science for Shaping the Future of India' jointly organised by The Maharaja Sayajirao University of Baroda and Indian Science Congress Association (Baroda Chapter), held on 15th - 16th September 2012, at The Maharaja Sayajirao University of Baroda.
- Volunteered in national conference on 'Biodiversity conservation: challenges ahead' and exhibition during 18th - 23rd December 2010, conducted by Department of Botany, The Maharaja Sayajirao University of Baroda.
- Participated in elocution competition on 'Climate change and challenges regarding water management' on 10th August 2010, conducted by International Society for Naturalists (INSONA) and Department of Botany, The Maharaja Sayajirao University of Baroda.
- Participated in seminar cum exhibition on 'Amla: An indigenous tree with enormous potentialities' & IPS symposium on clinical research in traditional medicine sponsored by National Medicinal Plant Board, New Delhi held on 4th August 2009, conducted by Indian Pharmacological Society and Department of Botany, The Maharaja Sayajirao University of Baroda.

Articles Published in Souvenirs

- Karan G Rana and Padamnabhi S Nagar (2013) Natural restoration in the mining site of Saurashtra Cement Ltd. 21st Mines Environment & Mineral Conservation Week.
- Rahul Bhole, Karan G Rana, Dipak S. Tadvī and Padamnabhi S Nagar (2012) Jungle Journal: Digital Documentation of Plant Diversity of University Campus. Regional Science Congress on Science for Shaping the Future of India.

Articles in Media

- Gujarat Samachar on 'Yellow Bombax' on 17th February 2021.
- Times of India on 'Rare black squirrel spotted in Vadodara' on 1st June 2020.
- Chitralakha on 'Kailashpati- Cannon Ball Tree' in August 2020.
- Gujarat Samachar on 'Kailashpati and Shivlingi' in July 2020.
- Divya Bhaskar Vishesh on 'Botany Best - 2017 organised at the Waghai Botanical Garden' on 19th February 2017.
- Times of India on '3 Gujarat plants on brink of extinction' on SUNDAY TIMES OF INDIA, 11th December 2016.
- The Indian Express on '40 endangered plant species battle to survive amid growing tourist footfall, agriculture: MSU study' on 22nd April 2015.
- DNA 'Reporting *Drosera indica* from Valsad' on 22nd April 2015.
- Gujarat Samachar on 'Awareness regarding occurrence of *Drosera indica* in Gujarat' on 21st April 2015.
- City Bhaskar on 'Kon Banega Best Botanist?' on 20th December 2012.
- Gujarat Samachar on 'Jungle Journal' on 13th December 2012.
- Sandesh on 'Jungle Journal' on 13th December 2012.
- Times City on 'Jungle Journal ensures smooth ride into green MSU' on 13th October 2012.

Other Activities

- Organising committee at the 'International Conference on Public Health (ICPH) 2021' from 24th - 26th March 2021.
- Organising committee at the 'International Conference on Ecohealth and Environmental Sustainability (ICEES) 2020' from 24th - 26th February 2020.
- Organising committee at the 'International Conference on International Conference on Reproduction, Endocrinology and Development (ICRED) and 37th Meeting of The Society for Reproductive Biology and Comparative Endocrinology (SRBCE)' from 18th - 21st January 2019.
- Participated at Botany Fest - 2019, jointly organised by South Dang Forest Division, Ahwa-Dangs & Department of Botany, The Maharaja Sayajirao University of Baroda, Vadodara from 2nd - 3rd March 2019.
- Research team in development of an android application 'Jungle Journal' for the Arboretum of The Maharaja Sayajirao University of Baroda. The software carries a database of more than 250 tree species grown at the arboretum and is very useful for botany students.
- Developed an android game 'Kon Banega Best Botanist' that consists of questions from Botany syllabus arranged in the style of KBC game to create interest and is useful for botany students.
- Organised a one-day event of the 'Plant-for-the-Planet' UNEP program; it was for the first time that such a program has been carried out in the state and only the second time in India. Students from three different schools have pledged to nurture trees and have joined the effort by planting 35 threatened tree species.
- Organised BOTANY FEST 2017 at the Waghai Botanical Garden, Dangs, Gujarat; it was for the first time that such a program has been carried out in in the state. More than 120 students from 20 different institutes have participated and made the event a grand success.
- Research team in development of an android application 'Floral Safari' for the Waghai Botanical Garden of the South Dang Forest Division, Forest Department, Gujarat. The software carries a database of all the trees species conserved at the Waghai botanical garden.
- Academic Committee Member for BSc Life Science curriculum at NUV.