Dr. Subhasis Panda

Designation- Associate Professor
Qualification- M.Sc., Ph.D.
Title of Ph.D. Thesis, Institution & Year:
Title: "Taxonomic Revision of Some Selected Genera of Ericaceae Juss. in india"
Institution: Vidyasagar University (Working Place: Central national Herbarium, BSI)
Year: 24/09/2008.

Brief Introduction-

Dr. Subhasis Panda did his Graduation from Jhargram Raj College affiliated to Vidyasagar University in 1993 with 1st Class 3rd rank. He got National Merit Scholarship from MHRD, New Delhi for his B.Sc. result. He did his Post-graduation from Vidyasagar University in 1996 with 1st Class 4th rank. He also worked as JRF & SRF at Central National Herbarium, Botanical Survey of India (1999-2003) under Flora of India Project, MOEF, New Delhi. He got "K.S. Manilal National Award" in Angiosperm Taxonomy in 2007 by IAAT, Calicut University for discovering 10 new plant species from Indian eastern Himalaya. He visited *Erfurt Naturkunde Museum in Germany in 2017* on Invited Lecture in 6th Symposium Himalaya on "Biodiversity and Natural Heritage of the Himalaya". He was selected and deputed to visit Mohammed -I University in Morocco by Indian National Science Academy (INSA) under International Bilateral Exchange Programme-2014. He is Life Member in Indian Association For Angiosperm Taxonomy (IAAT-since 2006) & East Himalayan Society For Spermatophyte Taxonomy, Botany Deptt. North Bengal University (Since 2007). He is the *Reviewers in International Journals* (2008-2015): *Flora (Elseivier), PLOSOne, Journal of Threatened Taxa.* He has been Selected to participate in a Symposium entitled "Biology Teaching in 2025" based on Write-up competition held in Jawaharlal Nehru University from 12-14th February, 2014, conducted by the School of Life Sciences, JNU.

Current Teaching –

Angiosperm Taxonomy incl. Biosystematics, Plant Ecology, Algae, Plant Anatomy, Archegoniates, Plant Physiology, Pharmacognosy and Environmental Science.

Experience –

Teaching: UG-more than 16 Years; PG-9.5 Years. He has served different Government Colleges under West Bengal Education Service since August, 2006 (Barasat Govt. College, Darjeeling Govt College & presently at Maulana Azad College) and Govt-aided College (Bankura Christian College) from July 2003 to August 2006.

Research: He has more than 20 years of research experience since 1999 when he joined as JRF at Central National Herbarium under "Flora of India Project", MOEF, New Delhi on the topic "*Taxonomic Revision of the family Ericaceae in India excl. Agapetes & Rhododendron*". After Ph.D. (Sept. 2008), he again began his research work in Post-graduate Dept of Botany at Barasat Govt College under UGC minor Research Project (2009-2011) and PG Dissertation Projects (2007-2011). He continued his research work in PG Dept of Botany at Darjeeling Govt College (2011-2016) under three research Projects (UGC, WBBB) as well as PG Dissertation Projects (2012-2015). He is continuing his research work in the Dept of Botany, Maulana Azad College (since 2016) under two ongoing Projects.

Research Interest –

Floristics of Angiosperms, Ethnobotany, Bioprospection, Biodiversity & Conservation, Pollinators of *Rhododendron* L. (along with Dr. Dipak Kumar Som, Associate Prof of Zoology & Entomologist, Maulana Azad College), Polyherbal Formulations (along with Dr. Palash Mandal of North Bengal University) and Sacred Groves.

Research linking with Other Institutes

1. *Central National Herbarium, Botanical Survey of India, Howrah-711103.*

2. Department of Pharmaceutical Technology, Jadavpur University.

3. Department of Botany, North Bengal University

Research Linking with Scientists of other Institutes

1. Research Linking with **Prof. Kanchi N. Gandhi**, Sr. Nomenclatural Registrar, Havard University Herbarium On Nomenclature Of Ericaceae Since January, 2013.

2. Research Linking With **Prof. Sujata Bhargava**, University Of Pune On "Molecular Markers On Some Selected Group Of Angiosperm" Since 2010.

3. Agreed To Work Jointly With **Prof. Lulu** (Kunming Institute In China) & **Prof. Fritsch** (University Of Florida, Usa) On "Asiatic Origin Of *Gaultheria*".

4. Research Linking With **Prof. Mostafa Elachourie**, Mahammad 1st University, Oujda, Morocco Since 2012.

Ongoing/Completed Projects with Funding Agency-

Ongoing Projects

1. Department of Science & Technology and Biotechnology, Govt of West Bengal-sponsored major Research project ***"Phenological Diversity, Altitudinal variation, Quantitative Ethnobotany and Pollinators***" initiated since 3rd May, 2019. JRF. Rajat Thakuri, M.Sc. in Botany. (Approved **Rs. 11,37000**/-). Vide Ref No. 325(Sanc)/ST/P/S&T/5G-5/2018 dt. 06/03/2019

2. West Bengal Biodiversity Board-sponsored Minor Research project "*Inventorization of Sacred Grove in Jalpaiguri and Alipurduar districts in West Bengal***" since September, 2017 till March, 2020 (extended 6 months due to 2nd installment late disbursement by WBBB). (Approved** Rs. 4,00,000/-). Vide Ref. No. 489/5K(Bio)-6/2017 dt. 29/6/2017 & 301/5K(Bio)-6/2017 dt. 21/02/2019.

Completed Projects

1. West Bengal Biodiversity Board-sponsored Minor Research project "*Inventorization of Sacred Groves in Darjeeling district of West Bengal*" from June 2014 to Jan 2016. (Approved Rs 2,00,000/-). Letter No.140/5K(Bio)-1/2014 dt. 26/02/14.

2. UGC-sponsored Minor Research Project title "*Exploration, Documentation, Bioprospection and Conservation of Ethnomedicinal plants in Singalila National park of Darjeeling Himalaya*". From April 2013 to March 2015. (Approved Rs. 1,94,000/-). Letter No.F.PSW-78/12-13 (ERO) dt. 05.02.2013.

3. West Bengal Biodiversity Board-sponsored Minor Research project "Documentation of flora, fauna and related Traditional knowledge in Darjeeling Municipality (32-Wards)" from April 2012 to March 2013. (Approved Rs. 1,89,000/-). Letter No. **61/5K(Bio)-1/2010** dated 1.2.2012.

4. UGC-sponsored Minor Research Project title "Detailed Floristic survey and Ethnomedicinal investigation of the family Ericaceae of West Kameng district in Arunachal Pradesh" from October 2009 to April 2011. (Approved 91500/-). No. *F. PSW-157/09-10 dt. 08.10.2009.*

Selected Recent Publications –

Journal Papers:

Accepted in Journal of Threatened Taxa in July, 2019 (for December Issue):

1. S. Panda. 2019 (Accepted): Recollection, Extended Distribution And Amplified description of *Vaccinium paucicrenatum* Sleumer (Vaccinium Sect. Aethopus Airy Shaw: Ericaceae) From Arunachal Himalaya In India.

Recent Publication

1. **Panda, S**. 2019. Taxonomical Identification and Amplified Description of Three Commonly Used Threatened Ethnomedicinal Species of *Abutilon* Mill. (Malvaceae) from India: An Exomorphological Analysis. *World Scientific News* 115: 41-51. EISSN 2392-2192. UGC Journal Sr No. 62921. A Refereed multidisciplinary Indexed Journal from Poland. Index Copernicus IC value for 2015: 90.87.

2. Panda, S., Pati, C.K., Bhattacharjee A. and Samanta S. 2019. Technique for the retention of leaf senescence of six ericoid wild plant taxa using ascorbic acid. *World Scientific News* 115: 128-137. UGC Journal Sr No. 62921. A Refereed multidisciplinary Indexed Journal from Poland. Index Copernicus IC value for 2015: 90.87.

3. Pati, C.K., Bhattacharjee, A., Roy, P., Mahanty, D.S. and **Panda, S**. (Corresponding author). 2018 (December). Chemical-induced seed germination and enhancement of seed potential of seven wild plant taxa of Ericaceae in India. *World Scientific News* 114: 249-255. UGC Journal Sr No. 62921. A Refereed multidisciplinary Indexed Journal from Poland. Index Copernicus IC value for 2015: 90.87.

4. Roy P., Mandal P., Panda, S., Roy S.M. and Subba A. 2018. Pharmacognosy and Phytochemical Screening of some plant derived medicine to treat Dysmenorrheal pain by the Rajbanshi Community. *Pharmacogn J.* 10(4): 738-746. ISSN No. 0975-3575. Indexed and Abstracted in : SCOPUS, Scimago Journal Ranking, EMBASE, Google Scholar, Index Copernicus etc. SJR Impact factor = 0.45

5. Maiti P.P., Bhardwaj, LK., Agarwal, N., **Panda, S**., De B. and Mandal, SC. 2018. Histological Evaluation of Calotropis gigantea (L.) R.Br. --- Leaf, Root and Stem. Journal of Medicinal Plants studies 6(4): 110-116. ISSN No. 2320-3862; 2394-0530. UGC Sr No. RG IF = 0.95

6. Watthana, S., **Panda, S.,** Srisanga, P., Fujikawa, K and Unwin R. 2017. *Vaccinium lamellatum* P.F. Stevens (Ericaceae), a new addition to Flora of Myanmar. *Thai J. Bot*. 9(2): 107-109. (Thailand).
[Watthana & others (2017) discovered *Vaccinium lamellatum* from Myanmar as wrongly identified species, whereas I correctly identified it and so included my name during publication]

7. **Panda, S. 2017**. Sacred Grove of Devi Satkanya at Lebong in Darjeeling Himalaya (India): A Traditional Way of Biodiversity Conservation since Time Immemorial. *World Scientific News* 90: 51-61. eISSN No. 2392-2192. (UGC listed Journal no. 62921). Scientific Publishing House, Poland. Multidisciplinary Journal.

8. Roy, P., Mandal, P. and **Panda, S**. (corresponding Author) 2017. An Ethnomedininal Survey with the Rajbanshi community of Terai and Duars region in West Bengal part of India for the treatment of primary Dysmenorrhea. *World Scientific News* 90: 243-250.

9. Maiti, P.P., Ghosh, N., Kundu, A., **Panda, S**., De, B. and Mandal, S.C. 2017. Evaluation of anti-inflammatory and antinociceptive activity of methanol extract of Calotropis gigantean root. *International J. Green Pharmacy* 11 (3): 198-205. **ISSN No. 0973-8258; 1998-4103**. [***UGC Journal no. 22851; UGC Sr No. 10819.* IF: SJR (0.14). H Index = 18.** The journal is indexed with SCOPUS, Web of Science, ProQuest, CAB Abstracts, DOAJ, EMBASE, Google Scholar, Index Copernicus, SCOLOAR etc.]

10. Roy, P, **Panda, S**. and Mandal P. 2016. Traditional Healing Practices by some polyherbal Formulations of Rajbanshi Community. ***Journal of Chemical & Pharmaceutical Research*** 8(10): 146-150. ISSN No. 0975-7384. SJR 0.4, H index-21. ISSN No. 0975-7384.
[Journal of Chemical & Pharmaceutical Research. Included in UGC Listed Journal No.44986. **IF: SJR 0.12, H index-21.]**

11. Panda, S. & Kirtania, I. 2016 (June Issue). Variation in *Rhododendron arboreum* Sm. complex (Ericaceae): Insights from exomorphology, leaf anatomy and pollen morphology. *Modern Phytomorphology* 9: 27-49. ISSN 2226-3063 (eISSN 2227-9555).
[Index Copernicus Journals Master List 2016: **99.39** points, h5-index: **6**, h5-median: **6** [A Refereed Journal from State Natural History Museum NAS of Ukraine, Included in UGC Listed Journal Sr. no. **1816** & J. No.**43327.** Indexed in Emerging Sources Citation

Index, algaeBASE, CABI, CNKI Scholar, CORE, DOAJ, EBSCO, E-journals, EZB, Genamics JournalSeek, Google Scholar, Index Copernicus, IPNI, WorldCat, WorldWideScience].

12. P.R. Kshirsagar, N.B. Gaikwad, **S. Panda**, H.V. Hegde & S.R. Pai. 2016. Reverse Phase-ultra Flow Liquid Chromatography-diode Array Detector Quantification of Anticancerous and antidiabetic Drug Mangiferin from 11 species of *Swertia* from India. *Pharmacognosy Mag*. 12 (45): S32-S36. Peer Reviewed Indexed Journal. ISSN No. 0973-1296. **[Pharmacognosy Magazine** (**Phcog Mag**) Indexed in SCOPUS. Included in UGC Listed Journal no. **30570.** IF: 0.831 (Thomson Reuter) & Peer reviewed. H index=19].

13. Panda, S., Roy, P & Mahanty, DS. 2016. Inventorization and Documentation of Herbal Black Salt Preparation by the Apatanese (Abo-Tani) of Apatani Valley in Lower Subansiri District of Arunachal Pradesh (India) using 'Gonde Unio' plant (*Ambrosia artemisiifolia* L.—Asteraceae). *World Scientific News* 47 (2): 254-266. (already mentioned).

Book Chapter:

2018

1. Title of the Chapter: Threatened Ethnomedicinal Plants of Singalila National Par in Darjeeling Himalaya incl their Ethnic drug dosimetry: A report on an extensive field survey , page no.1-83 **"Biodiversitat und Naturausstattund im Himalaya vo. VI "** Edited by M. Hartmann, M. Barclay & J. Weipert, Pub. By Erfurt Naturkunde Museum, Germany October, 2018
By Erfurt Naturkunde Museum, Germany. ISBN No. 978-3-000-59576-9.

2016

2. Title of the Chapters:
a. Chapter 5: "Current Scenario of Indian Eastern Himalayan Vanishing *Gaultheria* L."—32-39.
b. "Chapter 9: "Exomorphological diversity of the genus *Rubus* L. in Darjeeling Himalaya"---81-89
c. **Chapter 18**:"Exomorphological diversity of the genus *Hedychium* J. Koenig in Darjeeling Himalaya" –162-168
d. **Chapter 21**:"A Checklist of the genus *Polygonum* L. in Darjeeling Himalaya"---189-196
Title of the Edited Book:
"***Advances in Biology: Eastern Himalayan Perspective***" [A UGC-sponsored Proceeding BOOK]. Pages:1-193. N.L. Publishers, Siliguri, West Bengal. December, 2016. ISBN No. 2016978-93-85375-05-7

Seminar/Conference Presentations/Participation –

1. 6th India Biodiversity Meet 2019 (International Conference) from 14th -16th Feb. 2019 organized by Agriculture & Ecology Unit, Indian Statistical Institute, Kolkata. Title of the Lecture: *Helwingia himalaica* (Helwingiaceae): A Threatened Ethnomedicinal Plant on the Verge of Extinction from Darjeeling Himalaya—A Field Observational Report (2011-2018).

2. 6th international Meeting & Symposium on "Biodiversity & Natural Heritage of the Himalaya" 21st — 23rd April, 2017. Organized by Naturkunde Museum Erfurt/Thuringia, Germany [*visited Erfurt & Presented invited Lecture there*]. Invited Lecture on: "Threatened Ethnomedicinal Plants of Singalila National Park in Darjeeling Himalaya including their ethnic drug dosimetry and their delayed conservation due to misidentification: A Report on extensive Field Survey (2011-2016)".

3. Two Days National Seminar on "Biodiversity Conservation: A Philosophical and attitudinal perspective" organized by Dept of Botany and Dept of Philosophy, Moyna College, 1st & 2nd November, 2019. Title of the Lecture (ACCEPTED): "Kardo Hill Shri Sidheswar Nath Shiva Temple Sacred Grove: A Biodiversity Treasure Trove well-managed by the Apatanis of Apatani Valley in Lower Subansiri District of Arunachal Pradesh since time immemorial".

4. 1st International Symposium *on Plant Taxonomy and Ethnobotany (Feb. 13-14, 2020) organized by Botanical Survey of India, Central National Herbarium, Howrah. Title of the Lecture (ACCEPTED):* "Inventorization of Biodiversity Treasure Trove in 'Unique Sacred Groves' in erstwhile Darjeeling Hills: A Traditional way of Biodiversity Conservation in relic patches by the Nepalese since time immemorial".

Awards/Recognitions/Invited Talks-
Award
1. K.S. MANILAL NATIONAL AWARD in 2007 in Floristics of "Angiosperm Taxonomy" by Indian Association of Angiosperm Taxonomy (IAAT), Calicut University, Kerala in 2007.
2. Awarded a Certificate of Reviewing (Best) in recognition of the review made for the journal in November, 2015 by the Editors of the Journal FLORA, Elsevier Journal, Amsterdam, The Netherlands in Nov. 2015.
3. JRF (Junior Research Fellow) by the Director, Botanical Survey of India, MOEF, New Delhi (23/7/1999-22/7/2001)
4. SRF (Senior Research Fellow) by the Director, Botanical Survey of India, MOEF, New Delhi (23/7/2001-16/7/2003)

Recognitions
1. Invitation to visit KUNMING INSTITUTE of BOTANY, Chinese Academy of Sciences for 1 month collaborative Research Programme by the Director on 24th May, 2017 for trained their research students "Practical mode of Correct Identification Procedure" instead KUN will train me to learn Alpine Plant Diversity with special ref to Asiatick Gaultheria L.

2. As an Expert to identify Threatened Plants during Ecological Survey Work at 4000 MW Ultra Mega Power Project in Banka District in Bihar on 28th & 29th January 2017. Conducted by DESEIN PVT LTD, New Delhi.

3. International Travel Grant for presenting Paper in Germany by UGC, New Delhi (F.No. 6-39/2014(TG) dated 12/2/2014).

4. Nominated to visit Mahammad 1st University in Morocco under INSA Bilateral Exchange Programme-2014.

5. Selected to participate in a Symposium entitled "Biology Teaching in 2025" based on Write-up competition held in Jawaharlal Nehru University from 12-14th February, 2014, conducted by the School of Life Sciences.

6. Botanical Survey of India (Ministry of Environment, Forest and Climate Change) recognized as an Expert in the specialized area of ANGIOSPERM TAXONOMY---kindly visit www.bsienvis.nic.in (and click on Expert---Expert Outside BSI---Angiosperms—Dr. S. Panda).

7. Registered as Reviewer in Journal of Threatened Taxa (since 2015).—A SCOPUS, H-index Journal

8. Nominated to be an Expert in Threatened Plants of West Bengal (Darjeeling District) by the Member Secretary, West Bengal Biodiversity Board

Invited Talks

1. The 7th International Symposium on "Biodiversityand Natural Heritage of the Himalaya in March, 2020" organized by Erfurt Naturkunde Museum, Erfurt Germany from 27th to 29th March, 2020. Title of the Invited Lead Lecture (ACCEPTED): "Diversity of the tribe Vaccinieae Rchb. (Ericaceae) in Darjeeling Himalaya, India".

2. Delivered Lecture as Resource Person on the topic "Local Biodiversity & Its Conservation" in Two-day Science Camp Seminar at Dantan Bhattar College, Paschim Medinipur on 15th January 2017.

3. Delivered Lecture as Resource Person at **Jadavpur University** on the TOPIC: "***Identification crisis in Ethnomedicinal plants***". 4-weeks long Short-term Refresher Course on "Recent Advances & Excellences in Pharmaceutical Sciences" of Quality Improvement Programme (QIP) during the period from 10th June to 7th July, 2014.

Contact Details:

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Other Information:

1. As an External Examiner to examine M. Pharm Thesis of Mr.Siddheswar Maiti of Jadavpur University on 15th June, 2016 (Ref. No. EX/TH/M4PHA1620/29/2016 dt. 13/6/2016).Their supervisor: Prof. S.C. Mandal of this University.

2. As an Expert to teach UG & PG students on 3-day residential Field Training Programme on "Identification of Common Plants" at Visva-Bharati University, Santiniketan (22/03/2014 to 24/03/2014) conducted and sponsored by West Bengal Biodiversity Board.

3. UG Board of Studies Member, Midnapore College (Autonomous) since 2017.

4. As an Organizing Secretary to organize one Day State Level Conference on "Biodiversity Day Celebration-2014: Biodiversity and its conservation in Darjeeling Himalaya" on 21/08/2014.

5. Supervised 37 Post-Graduate Dissertation Projects on Angiosperm Taxonomy [2007-2015]

6. As an External Examiner in Practical part of Biodiversity & Conservation in MIZORAM UNIVERSITY (Central University)—Dept. of Forestry in Nov.2016; June,17.

Links to Teaching/other resources (if any):

1. Worked AS **A CONTENT WRITER** OF **e-PG PATHSHALA COURSE** OF UNIVERSITY GRANTS COMMISSION, INFLIBNET, Gujrat (2 topics already uploaded). Subject Coordinator: Prof Sujata Bhargava, University of Pune.
Paper: SYSTEMATICS-III
Module 25.

> **Speciation:** plant speciation: allopatric/ abrupt/ sympatric/ hybrid/ apomictic speciation and isolation mechanism; genus and infraspecific taxa. **Types of speciation**: quantum, myrean, catastrophic, local, geographic and phyletic. Causes of variation in population, ecotypes and ecads, evolution and differentiation of species, adaptive radiations.

Module 31.

> Tools used in taxonomy: GIS, GPS, Use of computers and online databases in angiosperms taxonomy.

2. MY CONSERVATION EFFORT ON *Gaultheria akaensis* Panda & Sanjappa (Ericaceae), A CRITICALLY ENDANGERED, ENDEMIC MEDICINAL PLANT AT AKA HILL IN ARUNACHAL PRADESH FINALLY PUBLISHED ON **31ST MAY, 2013** IN ***INDIAN BIODIVERSITY TALK*** UNDER THE HEADING "**ROAD PROJECT THREATENS TO WIPE OUT A RARE PLANT SPECIES IN ARUNACHAL PRADESH"** TO CREATE AN AWARNESS AMONG PEOPLE TO SAVE THIS SPECIES. **(Pl.visit:**at http://indianbiodiversitytalk.blogspot.in/2013/05/road-project-threatens-rare-plant-1news002.html