

Annual Scientific Meet February, 2017



Sural waterfall

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**Ph.D. thesis title: Systematic, Phytogeography and Habitat Ecology
of Orchids in Uttaranchal**

From

Kumaun University, Nainital

**All India Coordinated Project on the Taxonomy
(AICOPTAX) on orchids**

at

Wildlife Institute of India, Dehradun

Date of joining in BSI- 26th August 2011

Annual Action Plan Project
**Studies on the Orchids of Maharashtra with ecological aspects,
population status of endemics and GIS mapping**

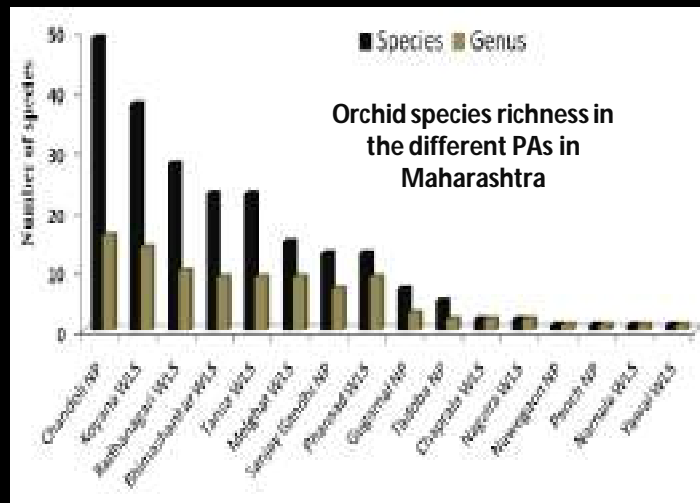
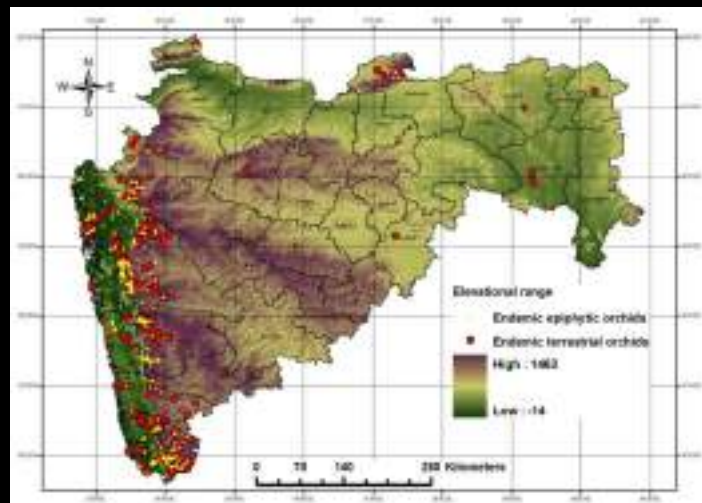
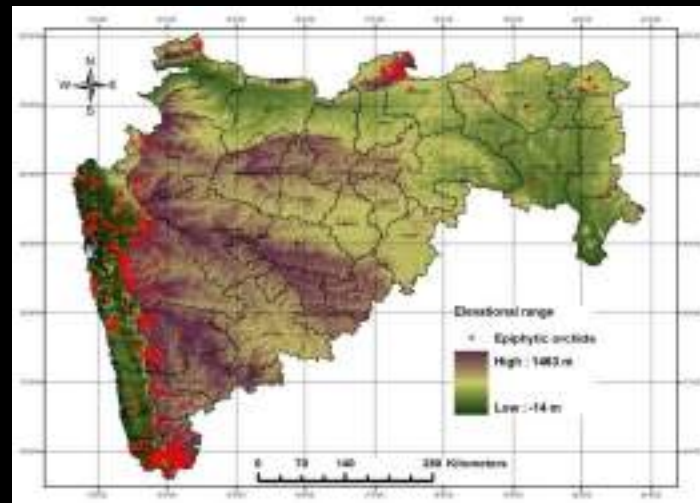
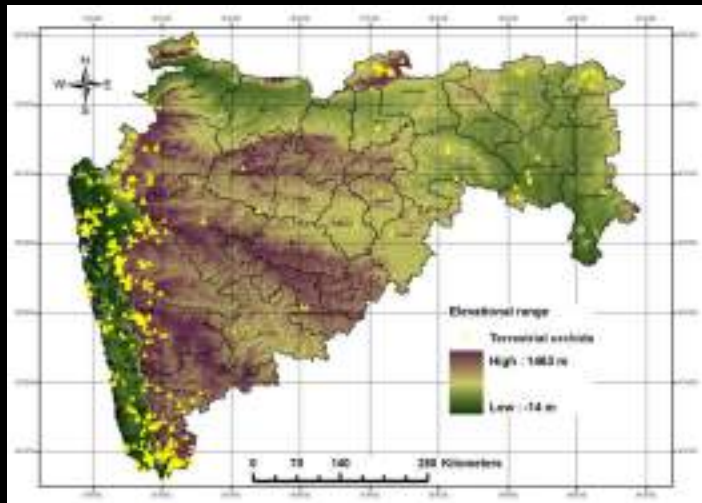
Total of **nine field** tours and **three HCT** were conducted during the period 2011 – 2014.

Total of **728 field numbers** were collected and a total of 1700 photographs were also taken.

A total of **821 herbarium specimens** were mounted, accessioned, label details along with GPS data were filled and incorporated into the herbarium under this project.



GIS maps were prepared for 101 orchid species and they were assessed as per IUCN regional guidelines



Project was completed and report submitted in March 2015.



Semi-evergreen forest



Mountain grassy slopes



Moist Deciduous forest



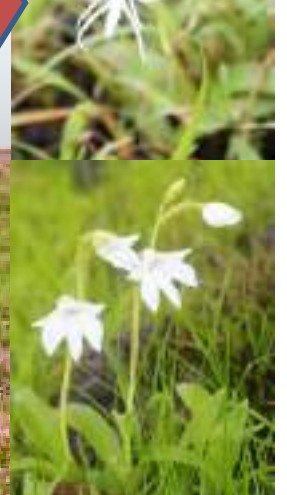
Lateritic plateau



Dry Deciduous forest



Lateritic plateau



An assessment of Orchid Diversity of Central-Western Ghats: Goa (Ongoing AAP)

Goa is located on the West Coast (N 14° 49' – 15° 52' Lat. E 73° 38' – 74 24' Long.)

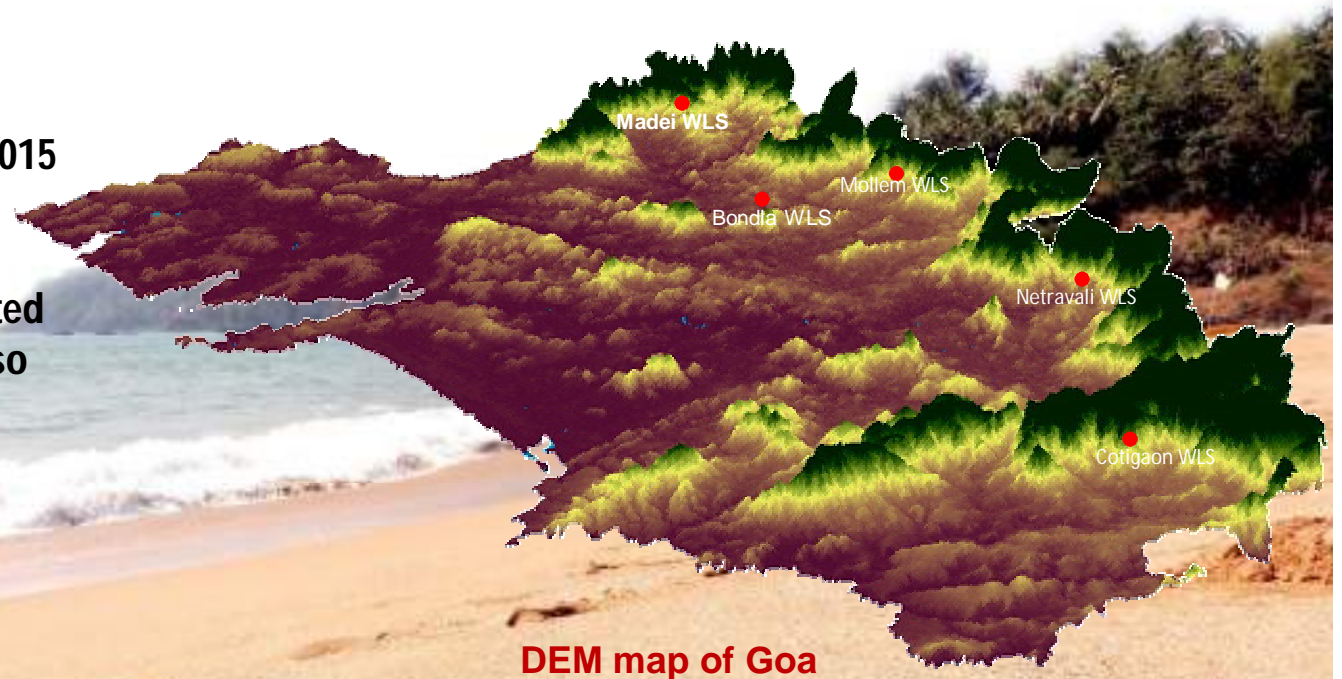
Area 3702 sq. km, of which 755 sq. km area is declared as PA.

The total forest cover of the state is approximately 60% of its total geographic area.

A total of **four field tours** were conducted during the period 2015 – 2016

187 field numbers were collected and 350 photographs were also taken

Total of **524 GPS locations** for orchids were also taken for mapping



Study area divided into 2 x 2 km grid cells

323 grid cells were selected for orchid sampling and so far 61 grid cells sampled

19 species are reported as a new addition for Goa

Dendrobium aequum

Dendrobium herbaceum

Dendrobium microbulbon

Dendrobium nanum

Dendrobium peguanum

Eria exilis

Diplocentrum congestum

Geodorum densiflorum

Habenaria elwesii

Habenaria foliosa

Habenaria rariflora

Habenaria suaveolens

Malaxis spp

Nervilia crociformis

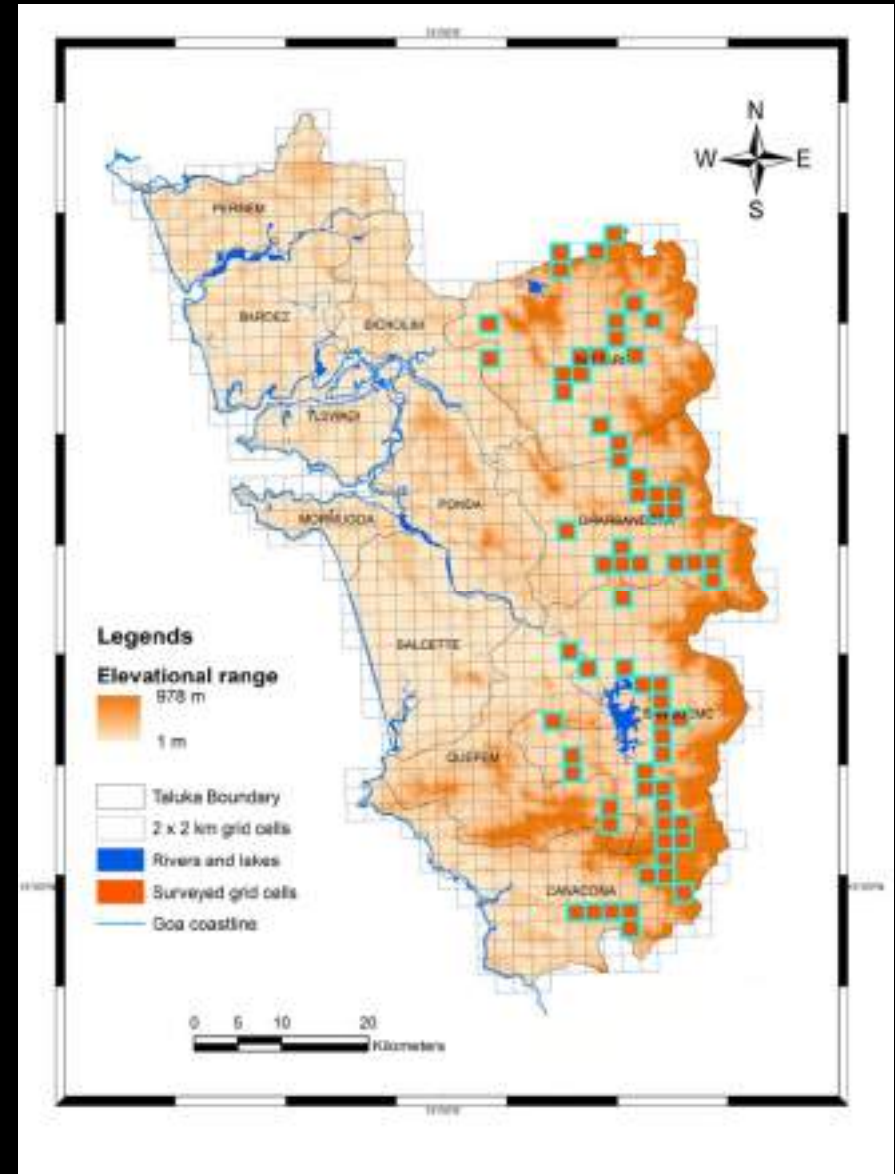
Oberonia mucronata

Oberonia verticillata

Peristylus aristatus

Peristylus stocksii

Vanda wightii



State Flora: Family Orchidaceae for Flora of Uttarakhand vol.5
(September 2015 to March 2017)

71 genera and 242 species; nomenclature, author citation, taxonomic descriptions, flowering & fruiting, ecological notes, distribution and representative specimens were updated as per flora format.

Final Manuscript will be submitted on March, 2017.

ADMINISTRATIVE WORKS

Drawing & Disbursing Officer (DDO)- 01.09.2015 to till date

CPWD In-charge- 01.09.2015 to till date

Garden (Mundhwa) In-charge- 03.06.2014 to till date

Herbarium in-charge during 02.09.2011 to 02.06.2014

DDO- All the day to day duties which includes verification and signing of various bills e.g., medical bills, T.A. Bills, Salary bills, GPF, weekly expenditure statements etc.

Preparation of monthly challan of NPS and its submission and rectification of problems when comes.

Income Tax- Preparation and keeping monthly TDS record of each staff, preparation and generation of challan statement of 26G for every month and submission to NSDL. Preparation of 24Q and 26Q for every quarter and validation through FVU and submission to NSDL.

Keeping track record of TDS through TRACES, generation of FORM 16 (Part-A) form TRACES Preparation of FORM 16 (Part-B) for all the employees

Keeping updation to PFMS, Bhavishya portal and other works related to DDO.

CPWD In-charge: Correspondence with local CPWD office, preparation of justification of proposal submitted in connection to general maintenance, renovation, any other work in related to CPWD.

Garden (Mundhwa) In-charge: Monitoring of garden work, plantation program on various occasions (with assistance from Mr. R.K.Vishnoi, Bot. Asst.). 63 species including 24 endemic orchids were introduced in the office garden

Herbarium in-charge during 02.09.2011 to 02.06.2014

Summary

a. Number of projects carried out individually as well as jointly-	EIGHT (DST -Young Scientist-1; SDCOS, USA-3; Rufford Foundation, UK-3; Annual Action Plan Project-1
b. Number of Books written/compiled/edited individually as well as jointly-	NIL
c. Number of papers published /Individually/first author/Co-author-	87
d. Number of new taxa	3
e. Number of new combination-	1
f. New reports for states/regions-	11

Future Plan

Predicting Potential Habitats for Threatened and Endemic Orchids Using species distribution model

Predicting Suitable Habitat for *Habenaria suaveolens* Dalzell.- A case study

Input data

Species location information



BIOCLIMATIC VARIABLES (raster format)

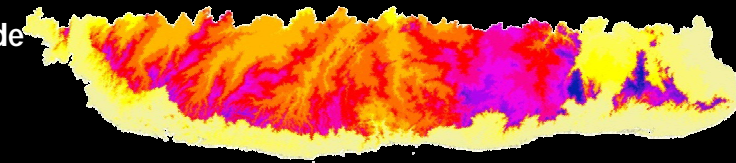
BIO1



BIO19



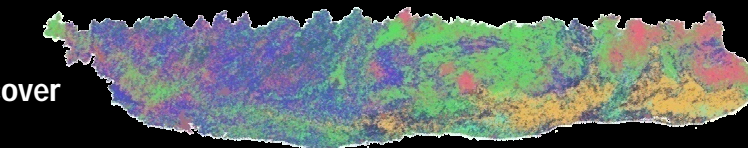
Altitude



Aspect

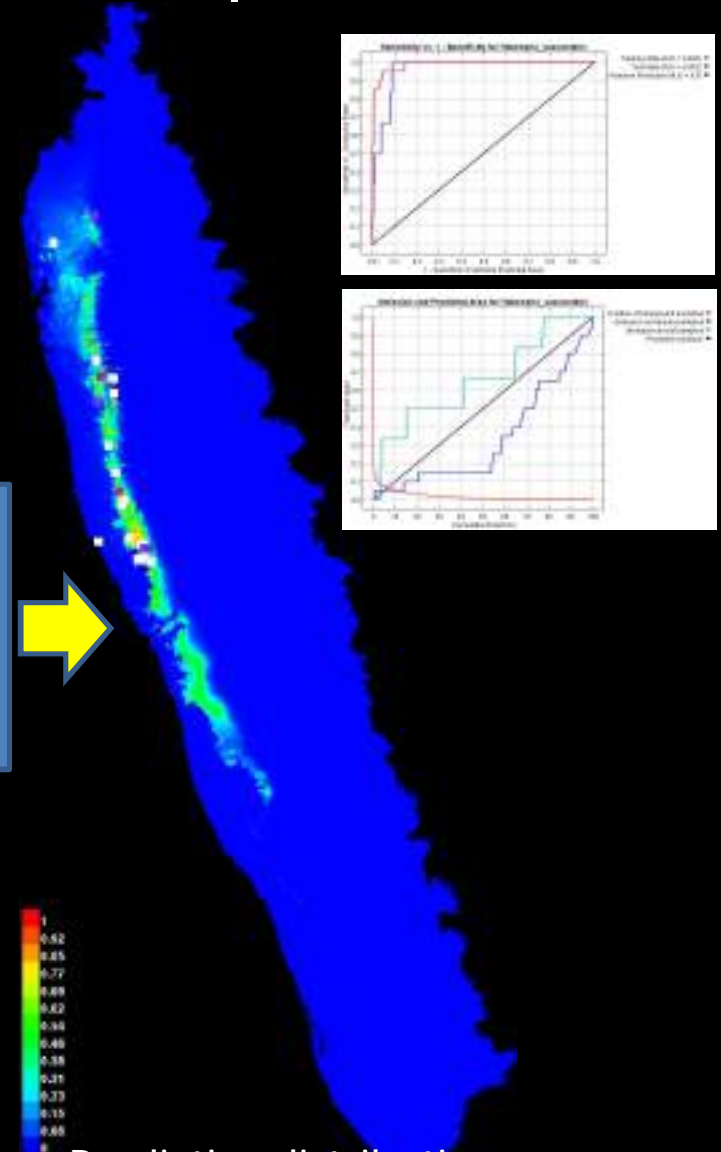


Land cover

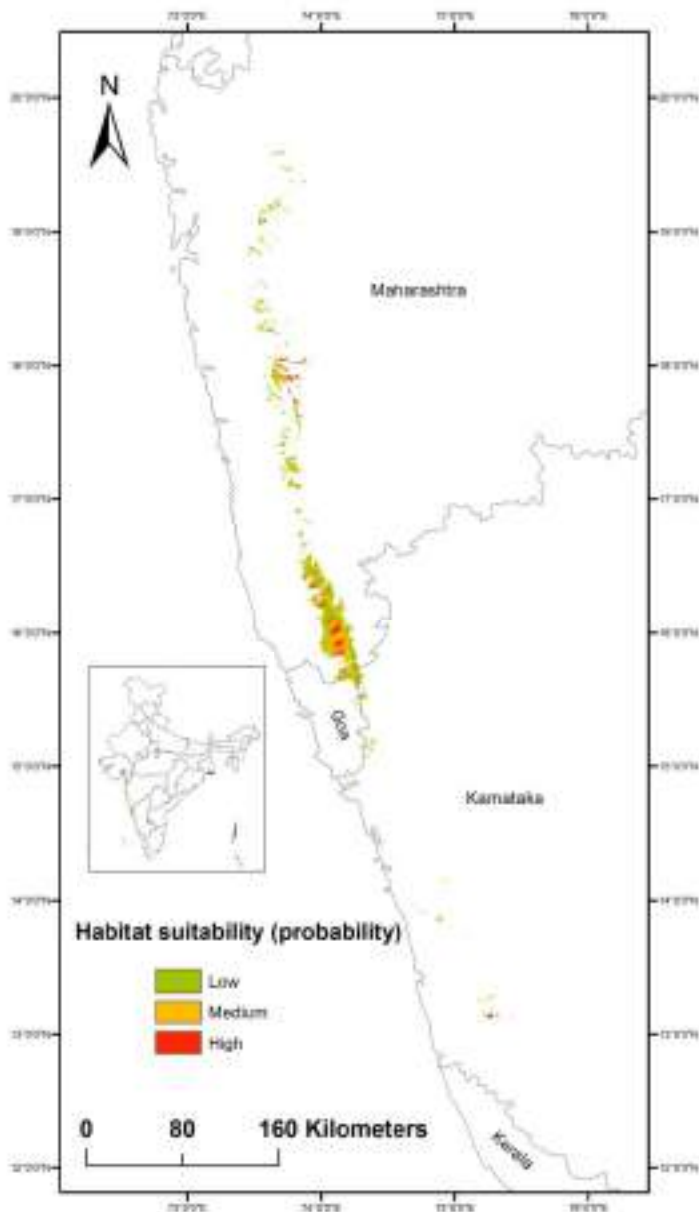


MaxENT
GARP
BIOMOD2

Output



Predictive distribution



Low probability Area 1668 sq km

Medium probability Area 615 sq km

High probability Area 189 sq km

Extent of occurrence (EOO)- 2472
(Based on threshold of 0.5)



Acknowledgements

I am grateful to the Director,

Head of Office (WRC),

Head of Office (Hqrs),

Head of Office (CNH),

Technical Section in-charge, Hqrs & Technical Team,

Committee & Sub-committee members of this scientific meet,

All colleagues.





THANK YOU...