

Scientific achievements & progress of

Dr. R.K. Gupta,
Scientist ‘D’

BSI Cryptogamic Unit, HQ., Howrah.

Date of Joining:
15.01.1991 as Junior Scientific Assistant.

Ph. D. Title:

Taxonomic studies of Euglenophyceae and
Dinophyceae of Ranchi and surroundings.

(Ph.D. awarded from Ranchi University in January 1992.)

BSI, Shillong

15.01.1991 – 01.01.1995 (As Junior Scientific Assistant)

02.01.1995 – 11.08.1997 (Scientist Assistant Level -II)

Algal Flora of Shillong.

- Gupta R.K. 2002. A checklist of algal flora of Shillong, Meghalaya., *J. Econ. Taxon. Bot.* **26(2)** 464 -468
- Gupta R.K. 1995. *komvophoron umiamellai* sp. nov. from India. *J. Econ. Taxon. Bot.* **19(2)** 461 -463.

Diversity and conservation of algae in England : Funded by ODA & British Council. Report submitted to University of Bradford, England.

Multiplication of Orchid through tissue culture (Jointly Project)

- Singh, D.K., Mao, A.A., Gupta, R.K. and Sinha, G.P. 1991. Axenic seed germination of some rare, threatened and ornamental species of orchids of North Eastern India - A preliminary study. In: *National Seminar on Biology, Improvement, Propagation and Commercialization of Indian Orchids*, Bangalore. pp. 33-35.

BSI, Dehradun

12.08.1997 - 19.05.2002 (As Botanist)

Algal Flora of Dehradun District, Uttarakhand.

- Gupta, R.K. 2005. *Algal Flora of Dehradun District, Uttarakhand*. Botanical Survey of India, Kolkata.p.298.
- Gupta, R.K. and Uniyal, B.P. 1998. Plant Diversity of Asan Reservoir and its Environs - A preliminary study. *Ann. For.* **6**(1): 31-38.
- Gupta, R.K. 2001. A new species of *Petalonema* Berk. from Dehra Dun, India. *Indian J. Forestry* **24**(4): 500-502.

Studies on Diatoms in Schirmacher Oasis, East Antarctica. (XVIII Expedition, 1998-99)

- Gupta, R.K. 2002. Morpho-taxonomical Survey of Diatoms in Schirmacher Oasis, East Antarctica, Eighteen Indian Expedition to Antarctica, Scientific report, Department of Ocean Development. Technical Publication No. **16**: 213-226.
- Gupta, R.K., Sinha, G.P. and Singh, D.K. 1999. A note on Lichens of Schirmacher Oasis, East Antarctica. *Indian J. Forest.* **22**(3): 292-294.
- Gupta, R.K. and Singh, D.K. 2001. Microalgae in the rhizoidal zone of moss communities in Schirmacher Oasis, East Antarctica. *Phytotaxonomy* **1**: 57-62.
- Gupta, R.K. 2001. Additions to Algal flora of Schirmacher Oasis, East Antarctica. National Seminar on New Challenges in Taxonomy for Utilization and Conservation of Plant Diversity. 13.
- Chapter in edited book:

Singh, D.K. , J.R. Sharma, R.K. Gupta and M. Palnisamy, 2013. Plant diversity in Schirmacher Oasis, East Antarctica with special reference to bryophytes, fungi and diatoms. In: *Studies in Biological Sciences and human physiology, three decades of Indian Scientific activities in Antarctica*. (Eds. S.C. Tripathi, R.K. Mishra, R. Mohan and N. Khare.). National Centre for Antarctic & Ocean research (NCAOR), Headland sada, Vasco-da-gama, Goa. pp. 117-138.

Collection in Antarctica



Antarctica a view



BSI, HQ. Working Place CNH (As Scientist 'B')

20.05.2002 - 31-03-2003

- Preparation of Data Base: Prepared 1750 data sheets of CAL belonging to families Ranunculaceae, Delinlaceae, Berberidaceae, Nymphaeaceae, Primulaceae.

BSI, IBG (As Scientist 'B')

01.04.2003 - 13.01.2008

BSI, IBG (As Scientist 'C')

14.01.2008 – 31.03.2008

- Maintenance and development of AJCB Indian Botanic Garden, Howrah (Joint Project)
- Bark algae of AJCB Indian Botanic Garden, Howrah

Gupta, R.K. 2008. Bark algae of Indian Botanic Garden, Howrah. *Bull. Bot. Surv. India* 50(1-4): 119 – 128.



Trentepohlia aurea (L.) Mart.

BSI, HQ. Cryptogamic Unit (As Scientist 'C')

01.04.2008 – 27.01.2015

➤ 2008-2010

Chlorophyceae of India – A Checklist.

➤ 2010-2011

Xanthophyceae and Chrysophyceae of India – A Checklist.

➤ 2011-2012

Euglenophyceae of India – A Checklist

Publication:

- Gupta, R.K. 2012. *Algae of India: A checklist of Cholorophyceae, Xanthophyceae, Chrysoiphyceae and Euglenophyceae* vol. 2 Botanical Survey of India, Kolkata.p.428.
- Rao, P.S.N. and R.K.Gupta. 2015. *Marine Algae of India (excluding diatoms and dinoflagellates)* vol. 3. Botanical Survey of India, Kolkata.p.93.

BSI, HQ. Cryptogamic Unit (As Scientist ‘D’)

28.01.2015 – till date

➤ 2012-2017

Algal Flora of Jharkhand

Publications:

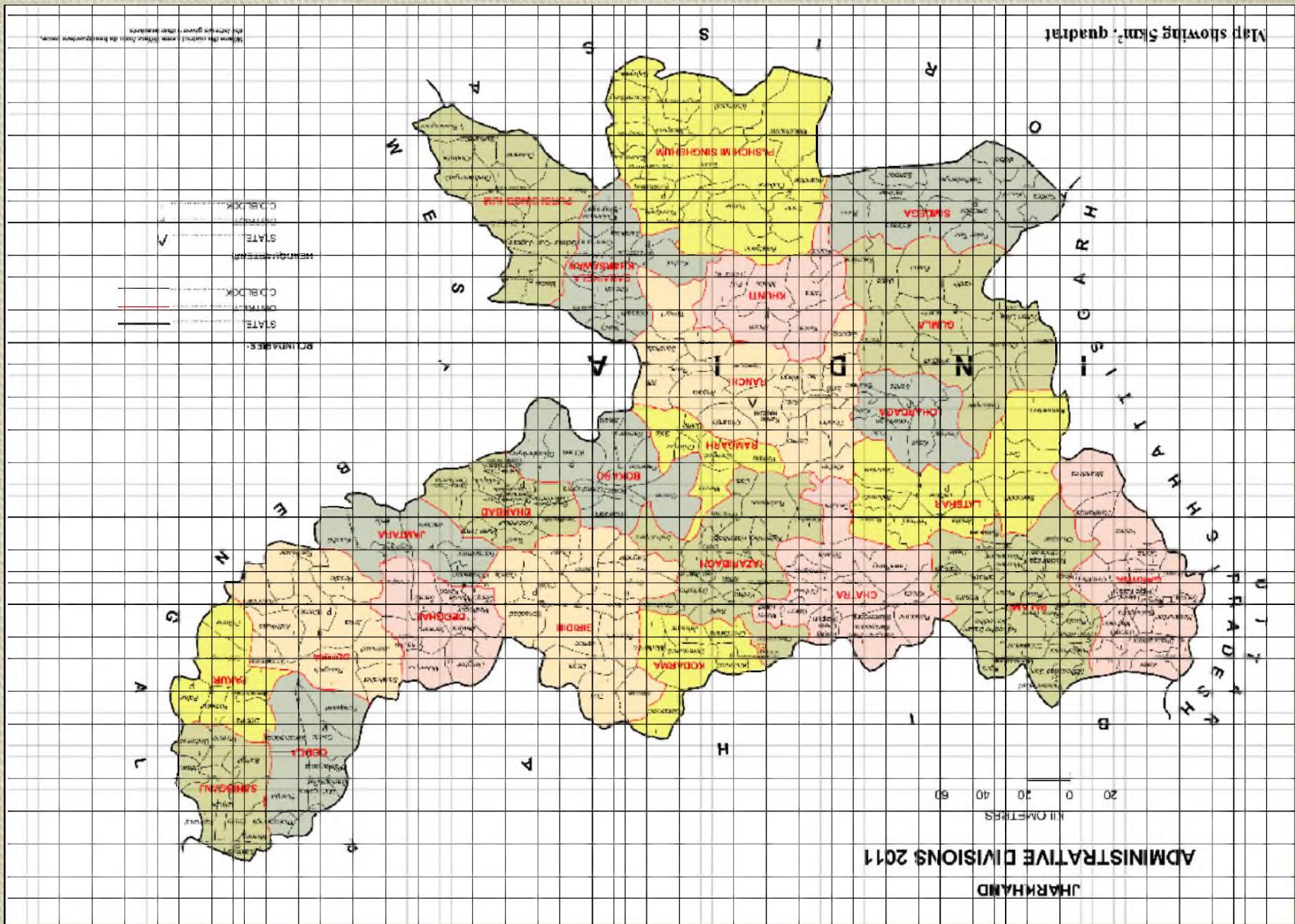
- Gupta, R.K. and K. Majumdar 2013 Notes on algal association on the roots of *Drosera burmanni*. *Nelumbo* 55: 2011-2013.
- Gupta, R.K. and S.K. Das 2016 Notes on the occurrence of two species of *Volvox* (Volvocales, Chlorophyceae) from Jharkhand India. *Nelumbo* 58: 175-177
- Das S.K. and R.K. Gupta 2016 Taxonomic status of *Ecballocystopsis himalayensis* (Chlorococcales: Chloraphyceae) and description of *Ecballocystopsis dichotomus* var. *lateharii* var. nov. from India: *Feddress Reportoum.* (Communicated)
- Das, S.K. & R.K. Gupta, 2015 Cyanobacterial Diversity and their colonization at different temperature gradient in a remote hot spring of Jharkhand, India., *Bioglobia*. 2(2): 12-17.

JHARKHAND

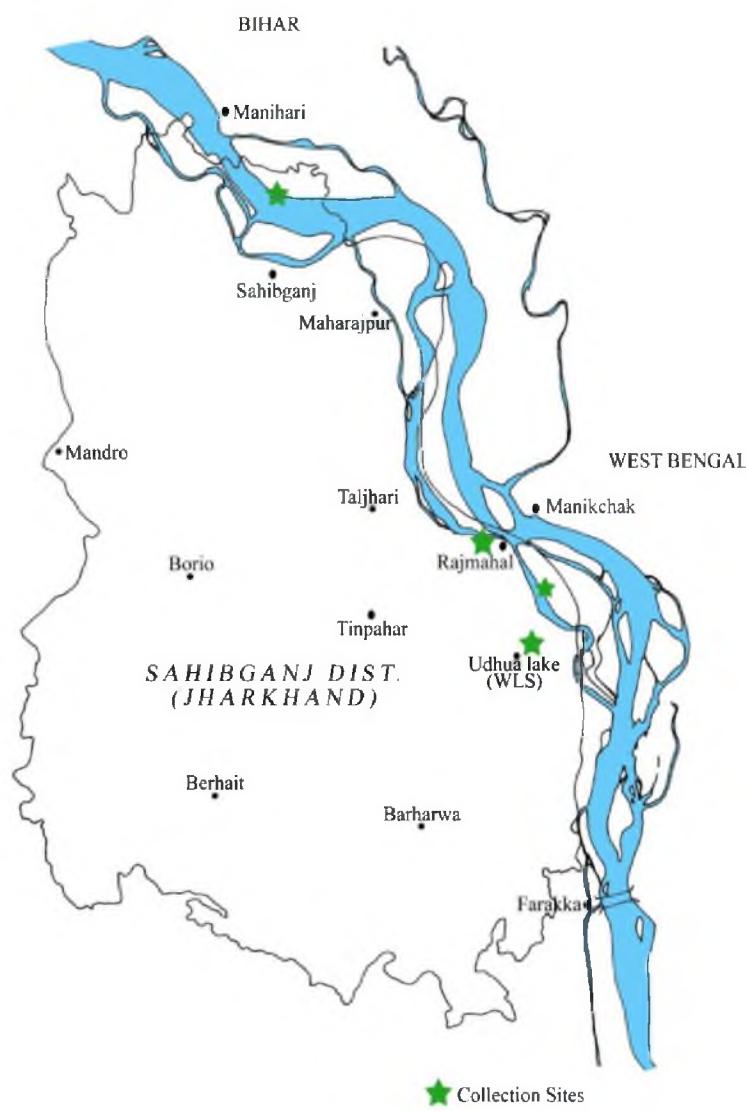
ADMINISTRATIVE DIVISIONS 2011

20 0 20 40 60
KILOMETRES

Map showing 5 km² quadrat



N



Flow of Ganga River in Jharkhand

MAP OF JHARKHAND

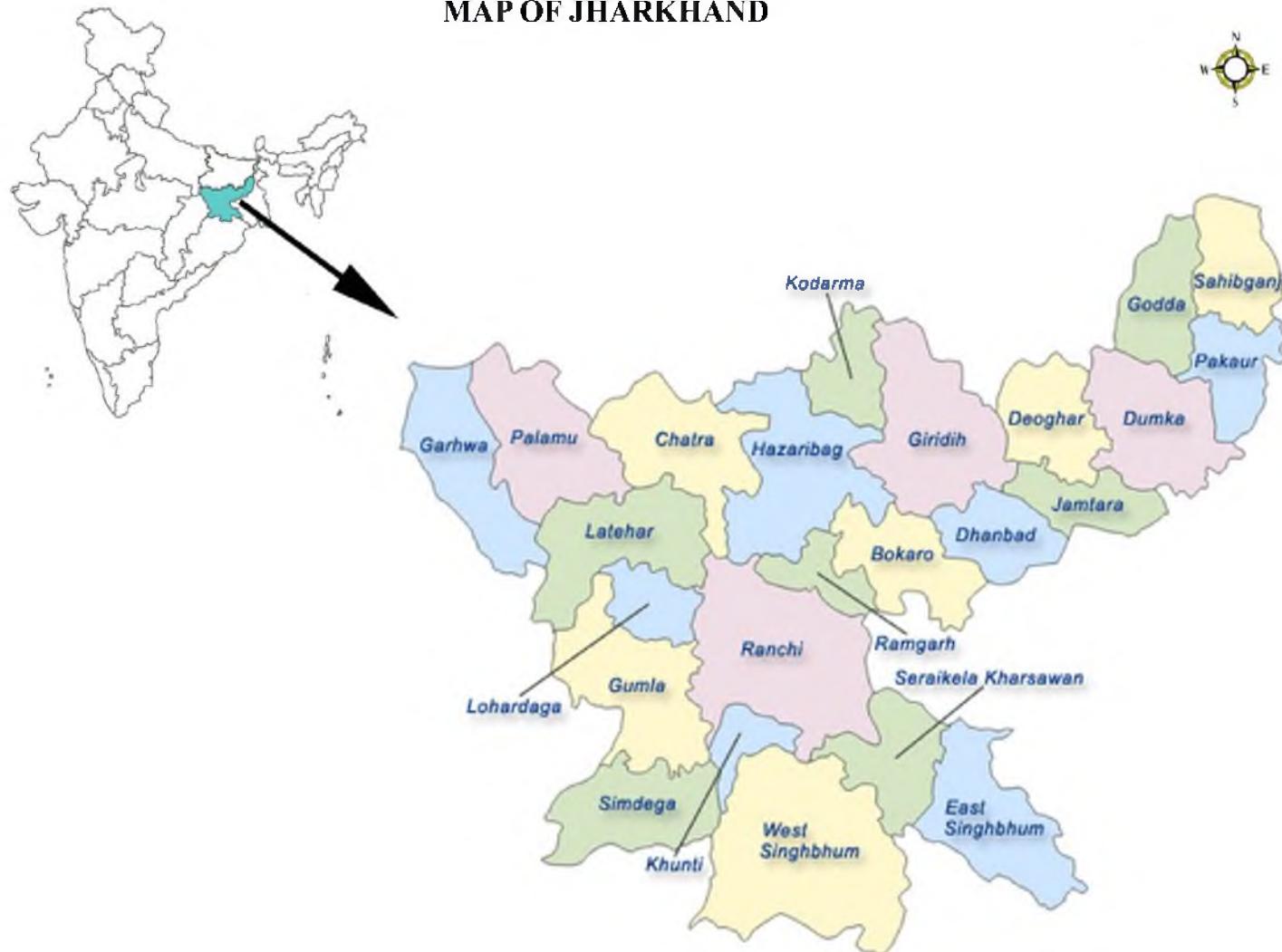


Table – 1:
Location, GPS and field numbers of different sampling sites (S) around Jharkhand.

Sites	Habit	Locality	District	Co-ordinates	Field no.	Date of collection
S1	Pond	Dhurwa (HEC)	Ranchi	23°18' 42.1"E N 85°18' 6.9"E	71110-71118	18.5.2012
S2	Pond	Dhurwa (near Jagarnath temple)	Ranchi	23°18' 46.9"E N 85°16' 57.7"E	71119-71126	18.5.2012
S3	Reservoir	Dhurwa Dam	Ranchi	23°17' 31.9"E N 85°15' 39.4"E	71127-71134	18.5.2012
S4	Waterfall	Johna	Ranchi	23°20' 27.3"E N 85°36' 38.0"E	71135-71150	19.5.2012
S5	Waterfall	Hundru	Ranchi	23°20' 25.3"E N 85°36' 38.2"E	71151-71153	19.5.2012
S6	Reservoir	Gatelshood Dam	Ranchi	23°27' 0.4"N 85°40' 12.8"E	71154-71158	19.5.2012
S7	Pond	Gonda	Ranchi	23°23' 47.4"E N 85°19' 21.6"E	71159-71160	20.5.2012
S8	Pond	Divian	Ranchi	23°23' 48.0"E N 85°20' 24.0"E	71161-71162	20.5.2012

Table1: Class-wise representatives of algae from Jharkhand.

Sl.	Class	Order	Family	Genera	Species	Varieties	Forma
1.	Chlorophyceae	9	27	70	290	16	-
2.	Xanthophyceae	4	08	12	21	1	-
3.	Chrysophyceae	1	2	2	4	-	-
4.	Bacillariophyceae	2	8	23	119	58	2
5.	Dinophyceae	1	2	2	4	-	-
6.	Euglenophyceae	1	2	12	47	3	-
7.	Rhodophyceae	2	2	2	2	-	-
8.	Cyanophyceae	5	13	43	174	2	1
		25	64	166	661	80	3

Administrative work:

- Performed as a DDO at BSI, Dehradun & AJCBIBG as and when required.
- Performed as a member of purchasing committee at Dehradun & AJCBIBG.

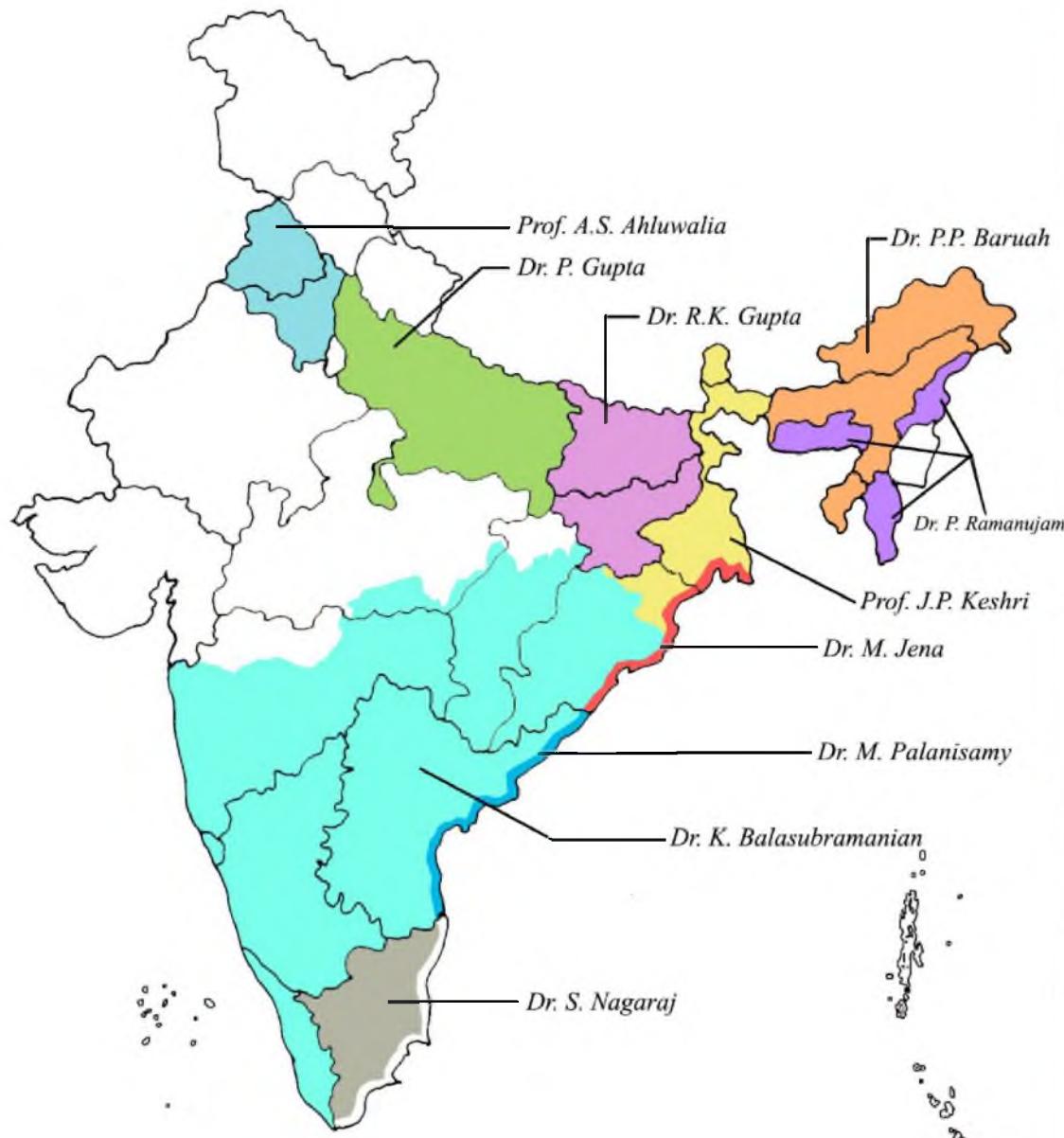
Summary of the Scientific achievements

- Individual project carried out: 09
- Joint project: 02
- Books published : 02 (individually)
- Book published : 01 (jointly)
- Paper published: 70/05
- New taxa published: 04
- Gold medal received: 02

Future Plan

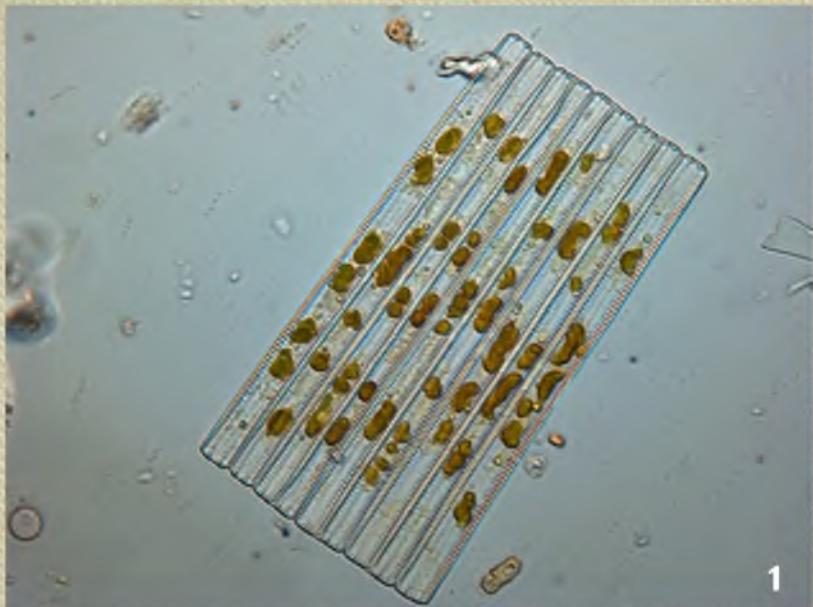
Thermal Algae of Bihar





Group wise study area





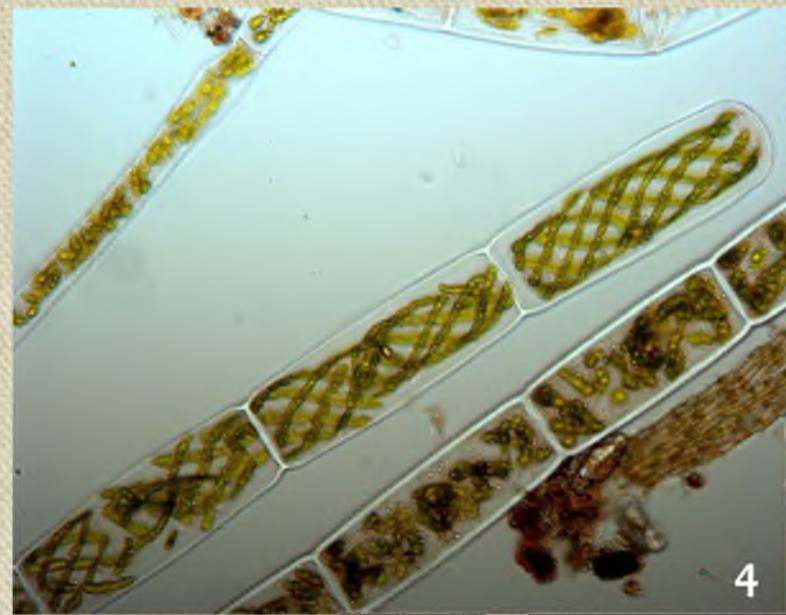
1



2



3

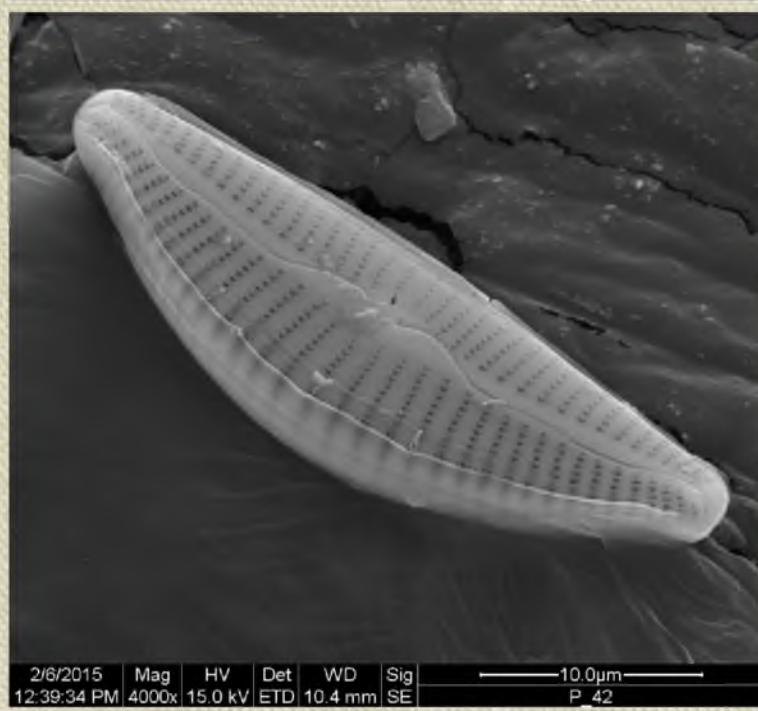


4

1. *Fragilaria capucina*, 2. *Gomphonema parvulum*, 3. *Cymbella lanceolata*,
4. *Spirogyra rivularis*



HABITAT OF *Euglena sanguinea*



THANKS_