

# LICHENS OF CENTRAL WESTERN GHATS

Sumesh N. Dudani<sup>1,2</sup>, M. K. Mahesh<sup>2</sup>, Sanjeeva Nayaka<sup>3</sup>, M. D. Subash Chandran<sup>1</sup> and T. V. Ramachandra<sup>1</sup>

<sup>1</sup>Energy and Wetlands Research Group, Centre for Ecological Sciences, Indian Institute of Science, Bangalore – 560 012

<sup>2</sup>Department of Botany, Yuvaraja's College (Autonomous), University of Mysore, Mysore – 570005

<sup>3</sup>Lichenology laboratory, CSIR-National Botanical Research Institute, Rana Pratap Marg, Lucknow – 226001





<b>Hotspot Original Extent (km<sup>2</sup>)</b>	<b>189,611</b>
<b>Hotspot Vegetation Remaining (km<sup>2</sup>)</b>	<b>43,611</b>
<b>Endemic Plant Species</b>	<b>3,049</b>
<b>Endemic Threatened Birds</b>	<b>10</b>
<b>Endemic Threatened Mammals</b>	<b>14</b>
<b>Endemic Threatened Amphibians</b>	<b>87</b>
<b>Extinct Species†</b>	<b>20</b>
<b>Human Population Density (people/km<sup>2</sup>)</b>	<b>261</b>
<b>Area Protected (km<sup>2</sup>)</b>	<b>26,130</b>
<b>Area Protected (km<sup>2</sup>) in Categories I-IV*</b>	<b>21,259</b>

Source of picture – [www.cepf.net](http://www.cepf.net)

Biennial symposium - Lake 2014: Conference on Conservation and Sustainable Management of Wetland

# BIODIVERSITY OF WESTERN GHATS

**Angiosperms**



**Gymnosperms**

**Pteridophytes**

**Bryophytes**



**Lichens**

**Fungi**

**Algae**



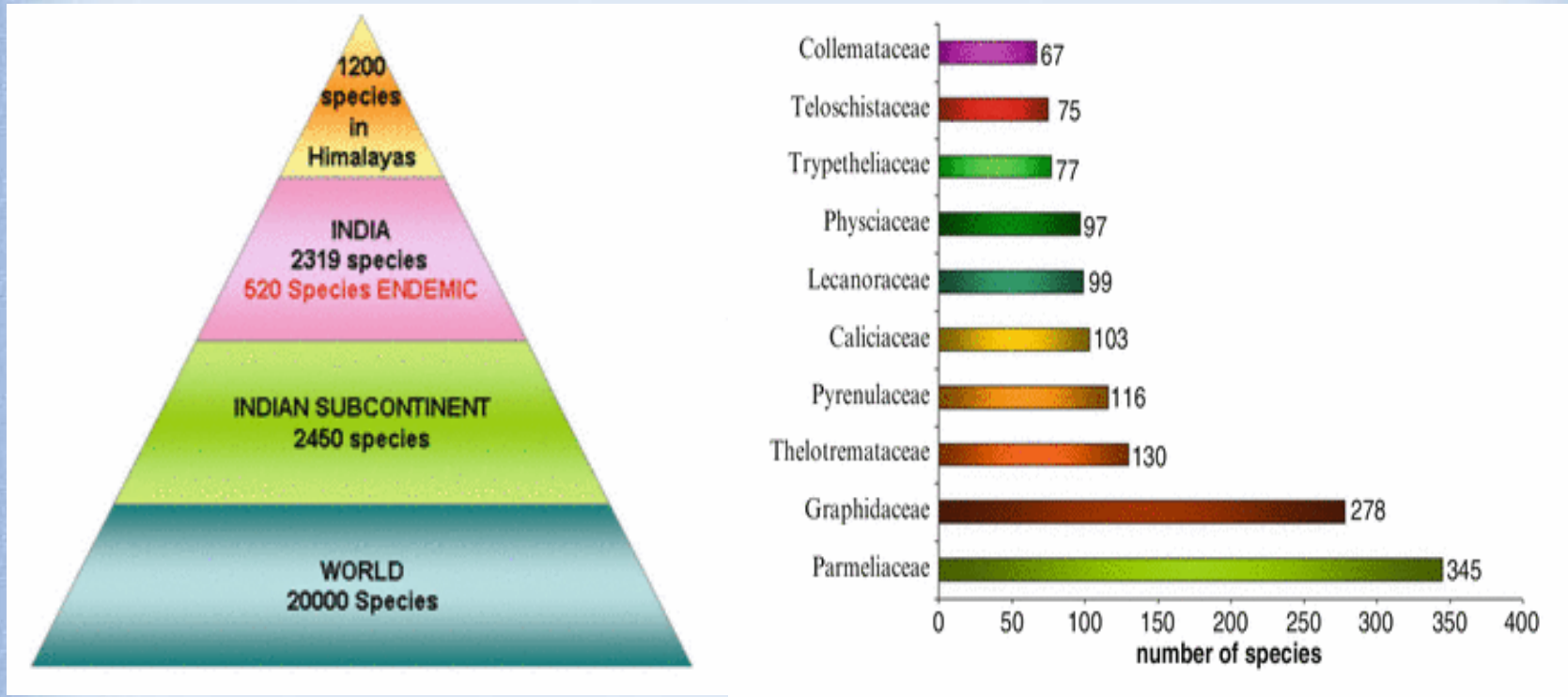
# SACRED GROVES



# LICHENS

- Lichens = Fungi (Mycobiont) + Algae (Phycobiont)
- Lichen substrates - Bark (corticolous), Leaf (follicolous), Rock (saxicolous), Soil (terricolous) and Moss (muscolous).
- Licheno-geographic regions in India - Himalayas, Western Ghats, Eastern Ghats, Central India and Andaman Islands.

# STATUS OF LICHENS IN INDIA

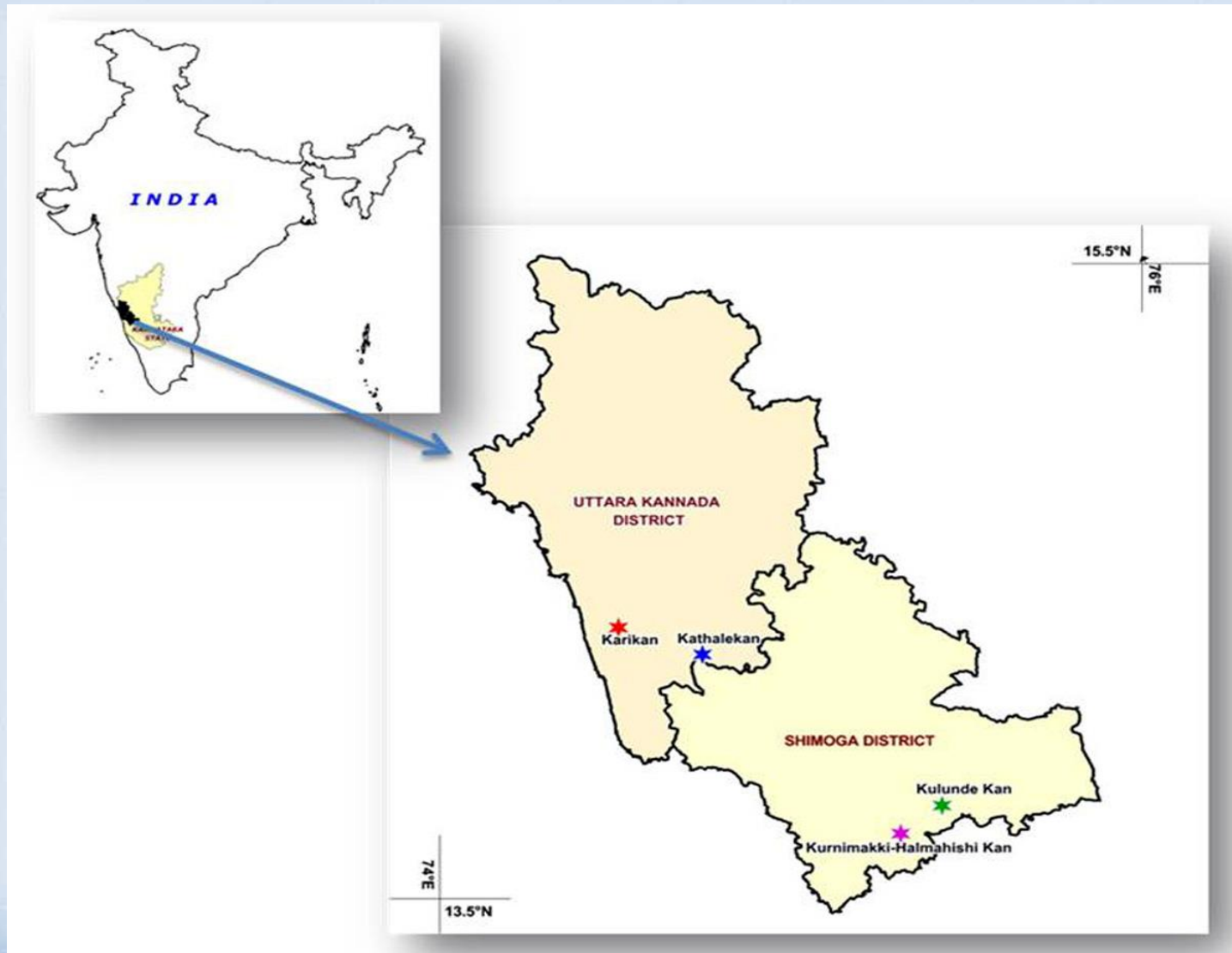


Contribution of Indian lichens to the World Lichen flora

Dominant Lichen families in India

Source – V. Shukla et al. *Lichens to biomonitor the Environment*, 2014, Springerlink

# STUDY AREA



# SWAMPY RELIC FOREST OF KATHALEKAN





# DIPTEROCARP RICH FOREST OF KARIKAN



# DISTURBED EVERGREEN FOREST OF KURNIMAKKIKAN



## KULUNDEKAN DISTURBED FOREST



# LICHEN COLLECTION

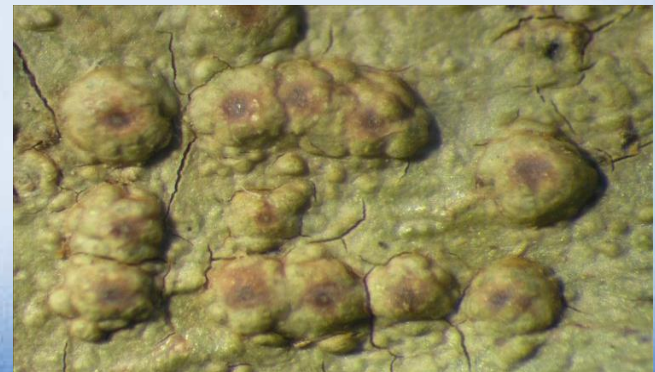


# LICHEN SPECIES RECORDED

□ SPECIES – 53

□ GENERA – 30

□ FAMILIES – 15



□ CRUSTOSE - 30



□ FOLIOSE - 20



□ FRUTICOSE - 1



# NEW RECORD FOR INDIA



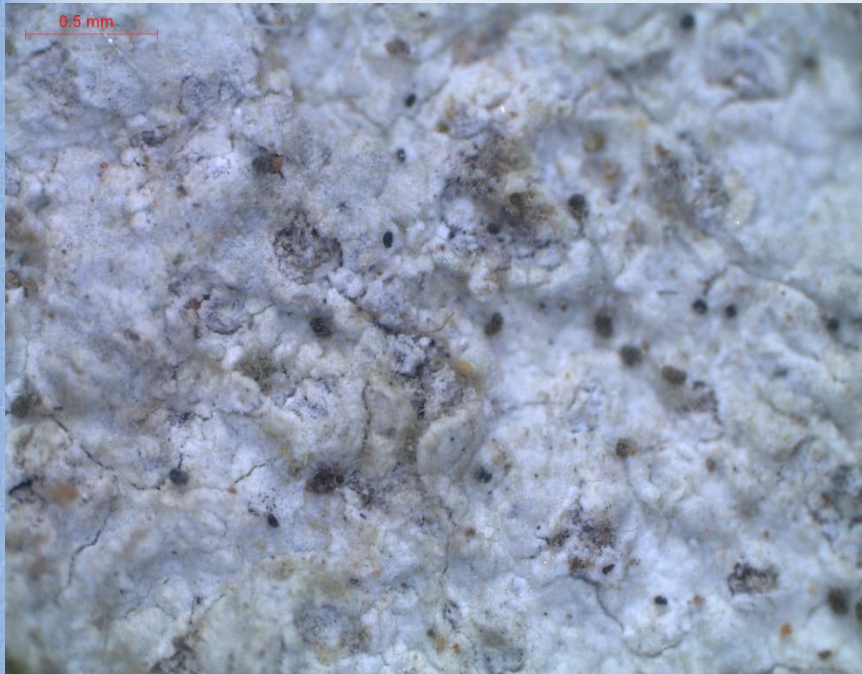
*Gymnacranthera canarica* (King) Warb.

(HOST PLANT)

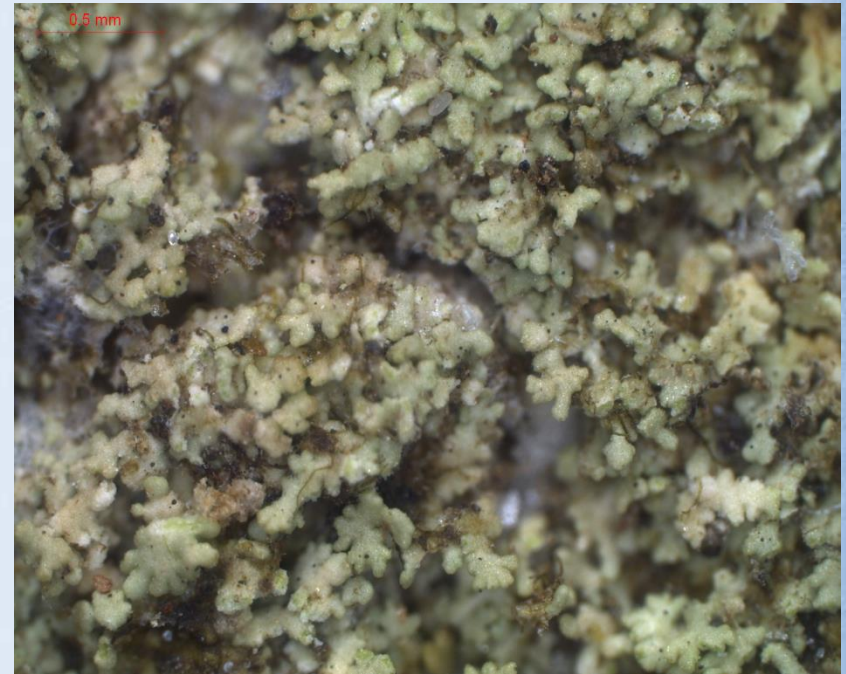


*Opegrapha robusta* Vain.

## ENDEMIC LICHEN SPECIES



*Arthothelium chiodectoides*



*Phyllopsora manipurensis*



# LICHENS AS ECOLOGICAL INDICATORS

- ❖ Dominance of Parmeliaceae and Physciaceae lichens indicating canopy openings.
- ❖ Pyrenocarpous and Graphidaceous lichens indicating moist and humid conditions.
- ❖ Thelotremataceae and Porinaceae lichens characteristic of undisturbed and old growth forests.

## THREATS

- Environmental Changes
- Habitat Destruction
- Over exploitation

## CONSERVATION

- Diversity and Population estimation
- Habitat identification and conservation
- Awareness creation



## SAHYADRI E-NEWS: Issue XXXIV

Sahyadri: Western Ghats Biodiversity Information System  
ENVIS @CES, Indian Institute of Science, Bangalore

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# Sahyadri Shilapushpa

- > **Shilapushpa - Lichens: General characteristics**
- > **Lichen Chemistry**
- > **Lichens of Western Ghats**



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# THANK YOU

**EMAIL: [sumeshdudani@gmail.com](mailto:sumeshdudani@gmail.com)**