

# LICHENS OF CENTRAL WESTERN GHATS

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<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<sup>†</sup></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



Pteridophytes



Bryophytes



Lichens

Fungi

Algae

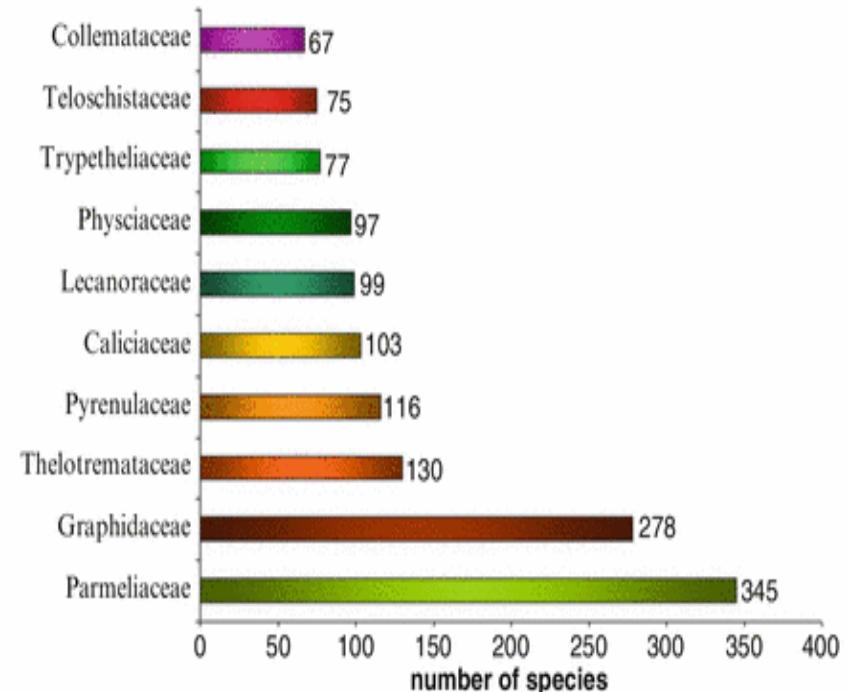
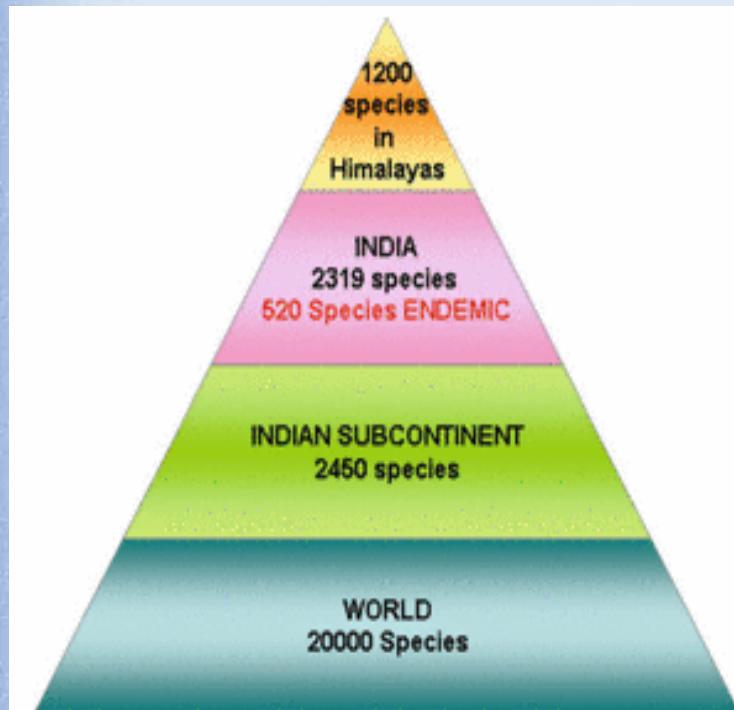
# SACRED GROVES



# LICHENS

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

# STATUS OF LICHENS IN INDIA

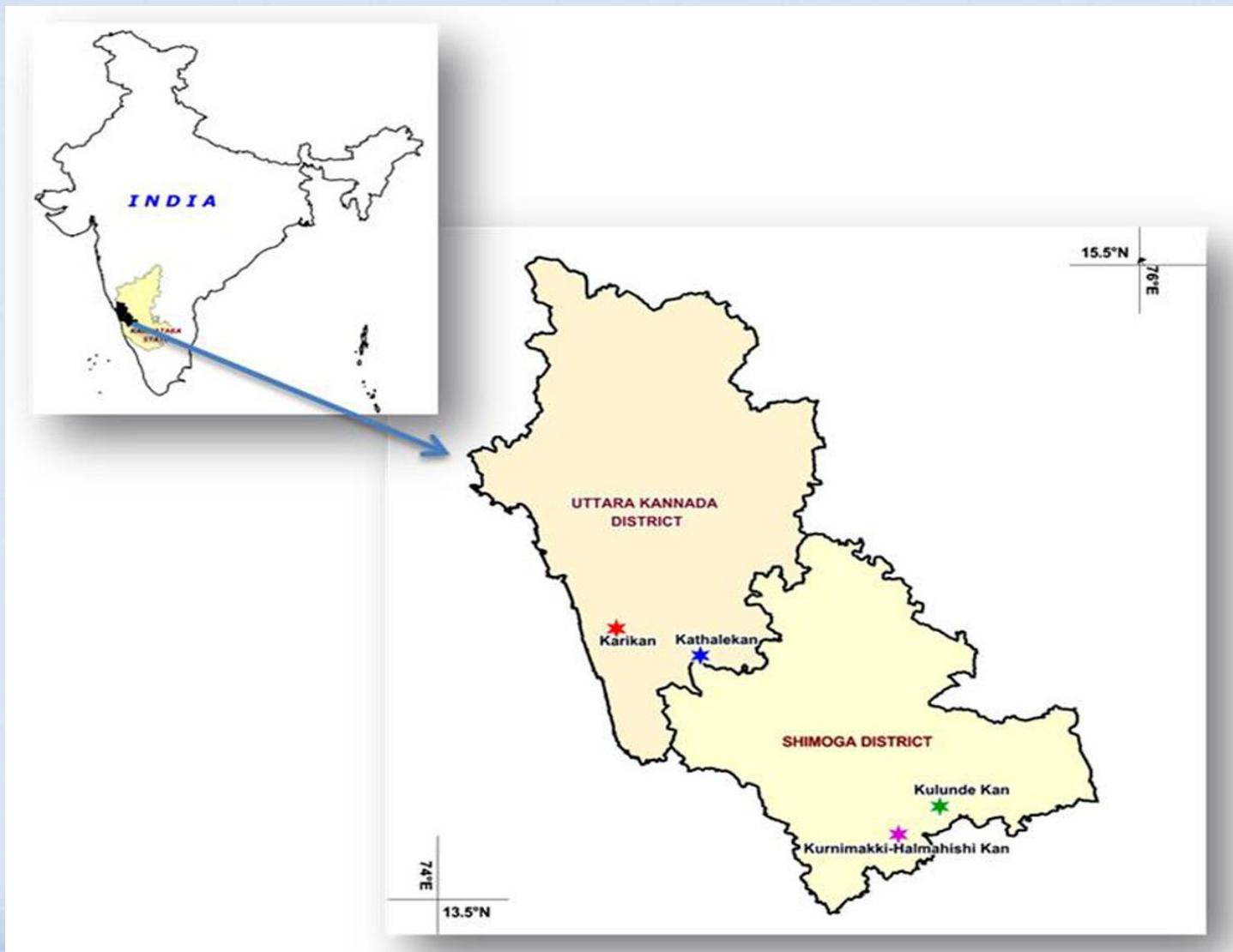


Contribution of Indian lichens  
to the World Lichen flora

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



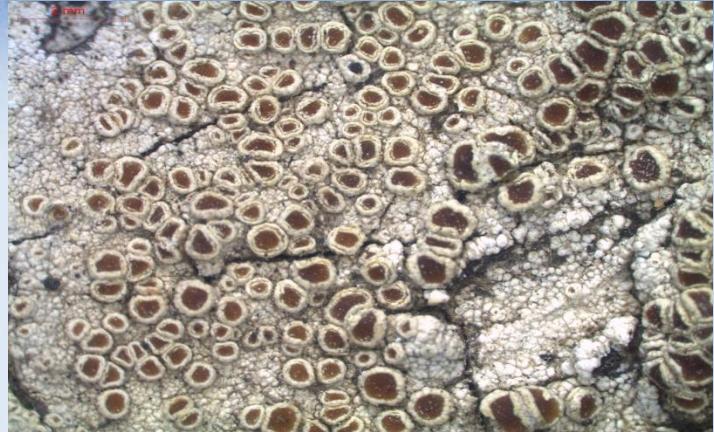
□ GENERA - 30



□ FAMILIES - 15



CRUSTOSE - 30



FOLIOSE - 20



FRUTICOSE - 1





*Gymnacranthera canarica* (King) Warb.  
(HOST PLANT)

NEW RECORD FOR INDIA

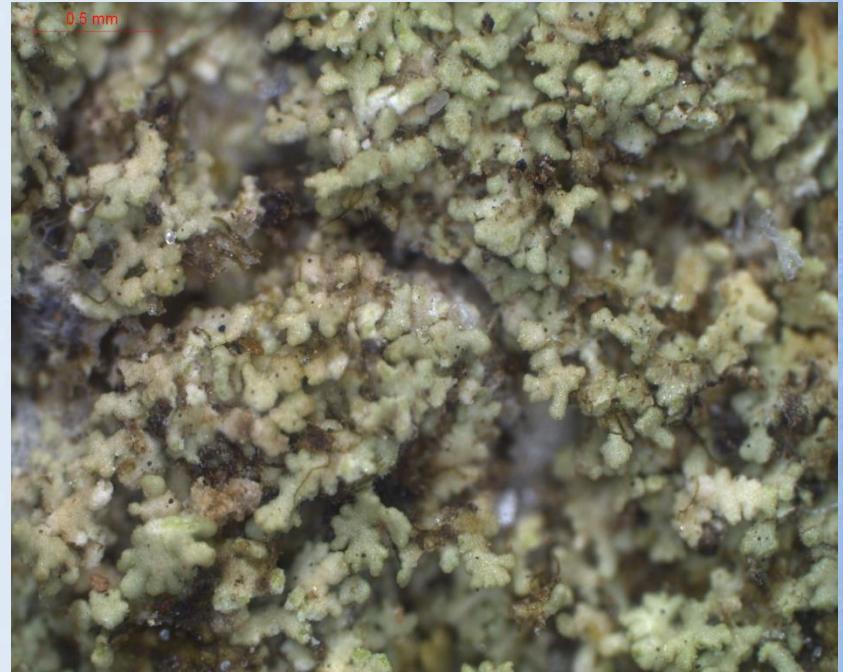


*Opegrapha robusta* Vain.

## 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.
- ❖ Thelotremales 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

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