

Geographical distribution of Conifers in India

WEEK - 06

The Conifers of the Gymnosperms with more than 60 genera and over 500 species distributed among 6 Extant and 3 Extinct families constitute naturally the world's most extensive forest belts today.

They are distributed over northern and southern temperate zones, extending from the arctic to antarctic regions with a good representation in the tropics and reaching their greatest display in the colder zones where the winter is so severe that the branches droop with snow and ice.

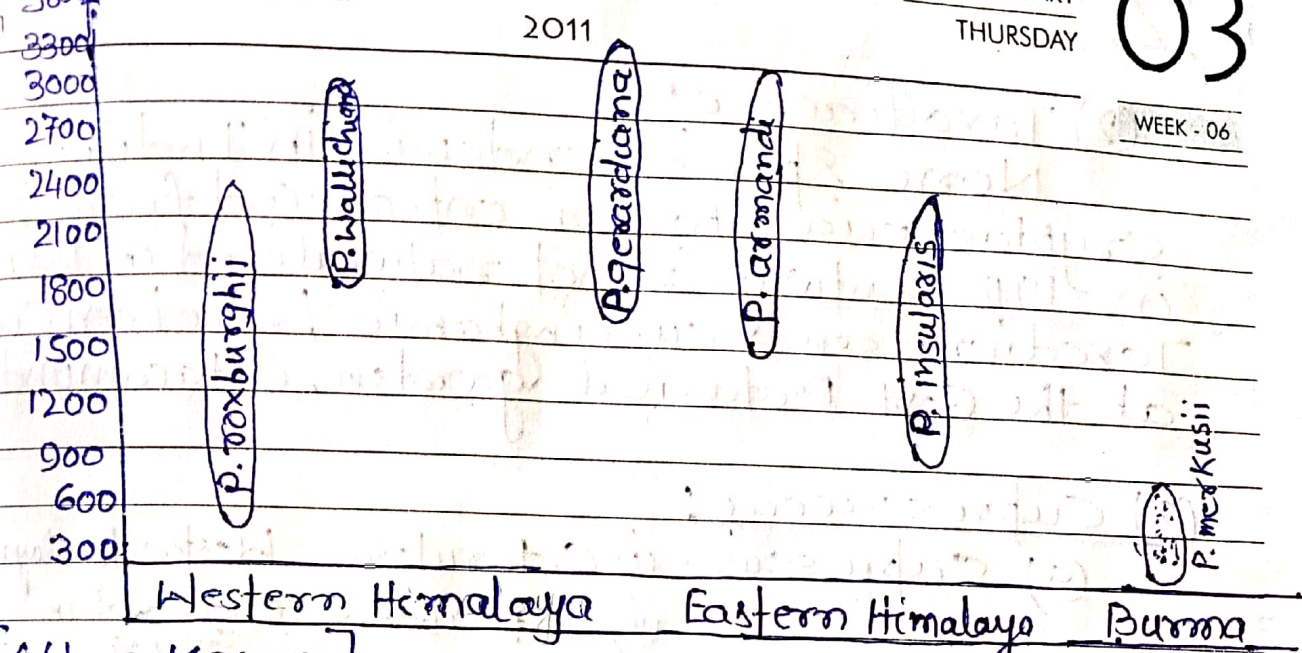
From such a wide range of distribution India also not remain untouched and there is a rich coniferous flora in the Himalayas represented by some 13 genera and over 25 species. It has been noted that many exotic conifers have been introduced in Indian gardens and hill stations and they have been become naturalized.

The distribution is as follows:

1. Pinaceae:

Predominant of Northern Hemisphere in the temperate to colder zones.

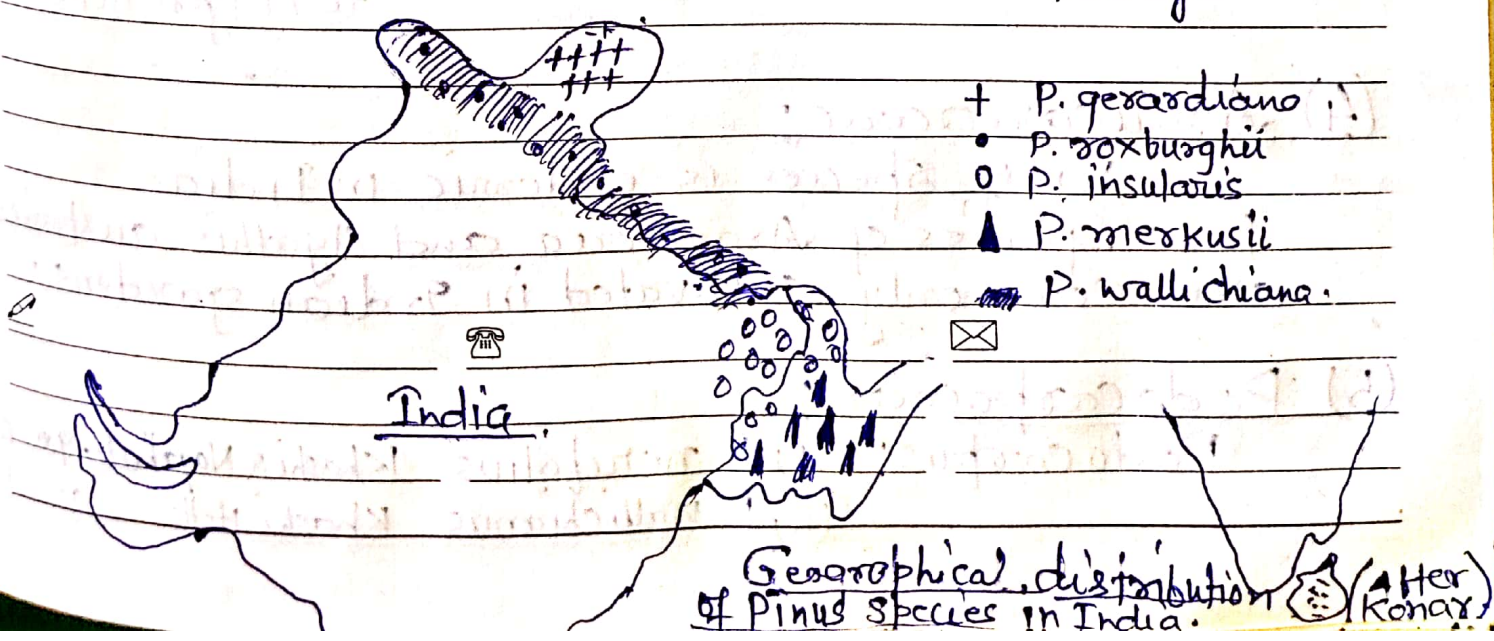
Genera	Species	Range	Altitude
(a) Pinus	P. roxburghii	Himalaya from Afghanistan to Bhutan	460 - 2300 m.
	P. wallichiana	Himalaya except Sikkim and most of Kumaon.	1800 - 3000 m
	P. gesardiana	Dry interior valley of N.W Himalaya	1800 - 3500 m.
	P. arnandi	Central NEFA	1500 - 3200 m.
	P. insularis	Chittagong, JAK Hills Assam, Nagahill, Manipur to upper Burma	1000 - 2500 m
	P. merkusii	Hillocks in Burma, East India & Bengal ex.	150 - 600 m even in plains



[After Konar]

The graph shows that their distribution is mainly governed by altitude.

- (b) Abies - 4 species Eastern & Western Himalayas, NEFA 2100-3500m
- (c) Picea - 2 species (P. smithiana) Eastern & Western Himalayas 1800-3700m
 (P. spinulosa)
- (d) Tsuga - T. dumosa Kumaon to NEFA 1900-3050m
- (e) Larix - L. grisebithiana Eastern Himalaya 2400-3700m
- (f) Cedrus - C. deodara Northern & Western Himalayas 1200-3300m



Geographical distribution of Pinus species in India (After Konar)

04

FEBRUARY
FRIDAY

24

2011

LEB	M	T	W	T	F	S	S	M	T	W	T	F	S	S
	1	2	3	4	5	6	7	8	9	10	11	12	13	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	28													

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(2) Taxodiaceae:

08

None species endemic in India.

09

Cryptomeria japonica introduced from Japan in 19th Century is not naturalized in Darjeeling. *Taxodium* and *Cunninghamia* have been cultivated at the Govt. Botanical Garden, Ootacamund, Tamil Nadu.

10

11

(3) Cupressaceae:

12

(a) *Cupressus* - (i) *C. torulosa* Western Himalaya 1800-2800 M
(ii) *C. funebris* Ornamental in Shillong

01

(b) *Juniperus*: (i) *J. communis* Western Himalaya 1700-4300 M

02

(ii) *J. ~~funebris~~ macrospora* Western Himalaya 1500-4300 M

03

(iii) *J. ~~communis~~ recurva* Temperate alpine Himalaya 1700-4600 M

04

(iv) *J. ~~macrospora~~ squamata* Eastern Himalaya 2400-4300 M
(v) *J. ~~recurva~~ wallichiana* West & East Himalaya 2800-4600 M

05

(c) *Thuja* - (i) *T. orientalis*
(ii) *T. occidentalis* } Cultivated in gardens

06

(d) *Callitris* - *C. cupressi* Introduced from Australia to Nilgiri Hills.

07

(4) Araucariaceae:

No. of species is endemic in India

Few species of *Araucaria* and *Agathis australis* are commonly cultivated in Indian gardens.

08

(5) Podocarpaceae:

Podocarpus: (i) *P. nerifolius* Khasi & Nagahills - 900-1200 M
(ii) *P. wallichianus* Khasi Hills 900-1500 M.

(6) Cephalotaxaceae:

- Cephalotaxus - (i) C. marii - Khasi & Nagahills - 1370-2600 M
 (ii) C. gibbithii - NEFA, Nagahills
 Mahapur, Mishmi hills 1520-1800 M

Distribution of Extinct Conifers: -

- | | |
|---------------------------------|-------------------|
| 1. Bursifolia Sewardiana |] Lower Gondwana. |
| 2. Moranoeladus Oldhamii | |
| 3. Pagiophyllum peregrinum |] Upper Gondwana. |
| 4. Brachyophyllum rajmahatensis | |
| 5. Palissya Conferta |] Upper Gondwana. |
| 6. Palissya indica | |
| 7. Palissya Jabalpurensis | |
| 8. 3- Araucarite species | |

Conclusion:

Thus there is a very common in the Eastern and Western range between 1200-3000M. Some are at high or lower heights also. Many exotic conifers have been introduced in Indian gardens and hill stations.

Thus conifers are very successful in evolution, so in spite of the fact that many of its members have become extinct in the past geological ages, it is still dominant forest maker of the world and its members form the dominant gymnospermous group of the present forest.