

NOSO GEOGRAPHY, ENDEMIC SPECIES, AREAS TO SETTLE IN INDIA

MEDICAL ACADEMY NAMED AFTER S.I.GEORGIVSKY”CFU NAMED BY V.I.VERNADSKIY”
DEPARTMENT OF MEDICAL BIOLOGY



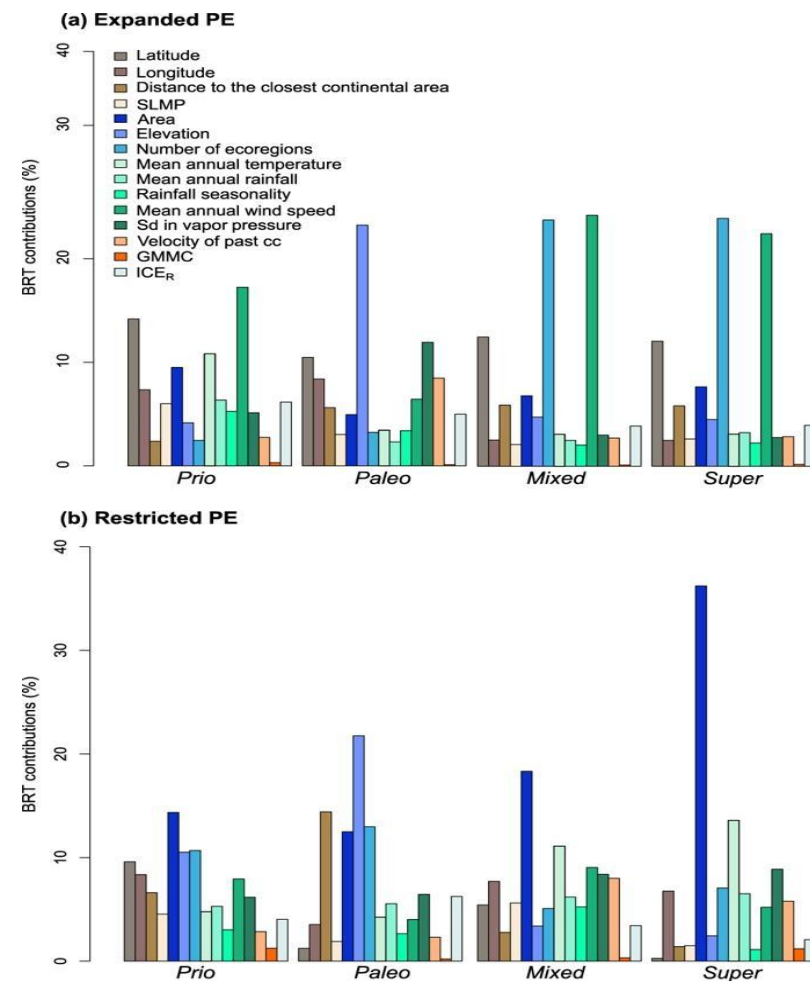
Student: Sunny Ashley Mary
Course conducted by: Svetlana
Smirnova



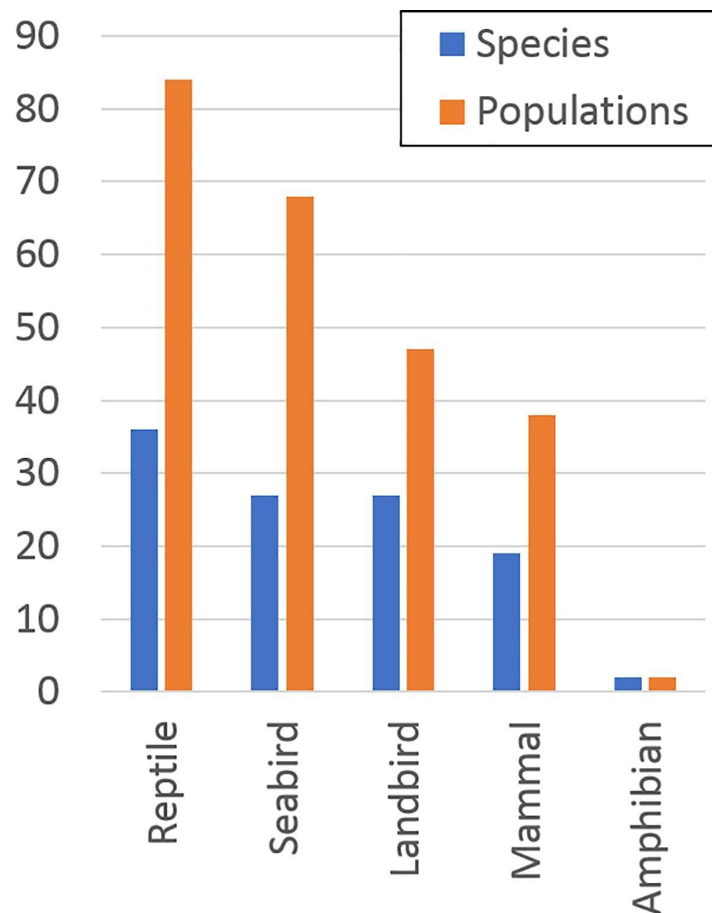
WHAT IS
NOSOGEOGRAPHY????

NOSO GEOGRAPHY


- It is the study of the geographical causes and distribution of diseases.
- Geographical causes: Geographic isolation is a primary cause for species endemism. When an animal or plant species is said to be endemic to a certain location, it means that the said species is unique to that place, appearing nowhere else on the planet. Geographic isolation is a primary cause for species endemism. Changes in the climate due to the atmospheric changes in earth. Changes in the availability of adaptations for species.



NOSO GEOGRAPHY



- Distribution of disease: Endemic. a disease that exists in a certain region or population. Epidemic. a widespread occurrence of a disease that attacks many species at the same time and can spread through one or multiple communities.



WHAT ARE ENDEMIC SPECIES????
WHAT ARE THE CAUSES OF
ENDEMICISM????
HOW TO CONSERVE ENDEMIC
SPECIES????

ENDEMIC SPECIES

■ Endemic

species are plants and animals that exist only in one geographic region. Species can be endemic to large or small areas of the earth: some are endemic to a particular continent, some to part of a continent, and others to a single island. For example, kangaroos are originally endemic to Australia and are found nowhere else in the world.



ENDEMISM



- Endemism is the ecological state of a species being unique to a defined geographic location, such as an island, nation, country or other defined zone, or habitat type; organisms that are indigenous to a place are not endemic to it if they are also found elsewhere. For example, the orange-breasted sunbird is exclusively found in the fynbos vegetation zone of southwestern South Africa and the glacier bear is endemic to Southeast Alaska. An alternative term for a species that is endemic is precinctive, which applies to species (and other taxonomic levels) that are restricted to a defined geographical area.

SOME ENDEMIC SPECIES OF INDIA

- Asiatic lion
- Sangai deer
- Lion tailed macaque
- Kashmir stag
- Nilgiri tahr
- Purple frog
- Pygmy hog
- Namdpaha flying squirrel
- Anaimalai gliding frog
- Malabar civet
- Nilgiri blue robin
- Bronze back vine snake



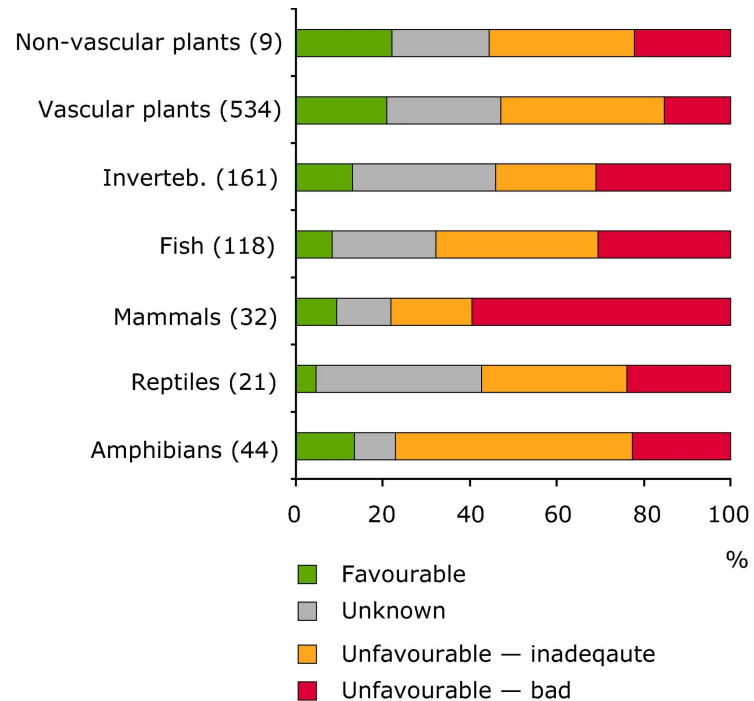


CAUSES OF ENDEMICISM

- Animals and plants can become endemic in two common ways. Some grow in a particular place, adapting to the local environment and continuing to live within the limits of that environment. This type of endemism is identified as autochthonous or native to the place where it is found.
- Changes in the Climatic conditions and geographical barriers
- Narrow ecological amplitude and poor adaptability of species



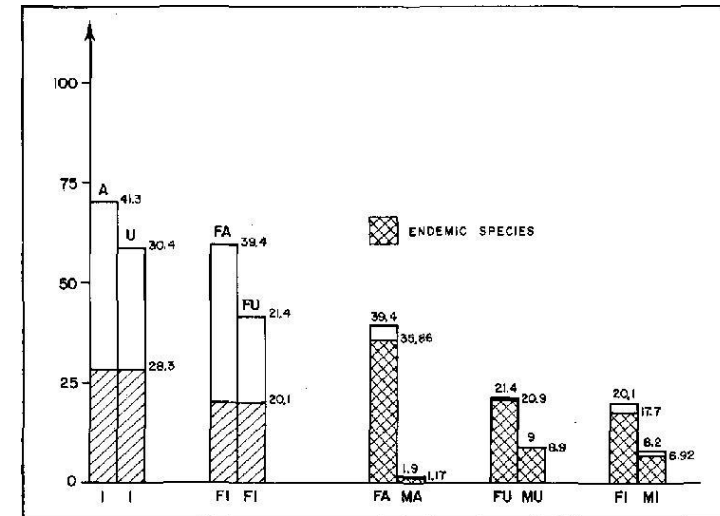
CONSERVATION OF ENDEMIC SPECIES



- Endemic species are often the most vulnerable to anthropogenic (man-made) threats due to their unique evolutionary history and relatively low population size.
- So there are many hotspots in India to reserve and protect these species for the future.

IMPORTANCE OF CONSERVATION OF ENDEMIC SPECIES

- Endemic species are important for a number of reasons.
- First, since endemic species have a generally restricted distribution, threats to endemics carry more risk of extinction than for broadly distributed species.
- Second, according to the book *Climate Change and Biodiversity*, edited by Thomas E. Lovejoy and Lee Hannah, when an endemic plant species becomes extinct, it takes with it between 10 and 30 endemic animal species.
- Third, endemics, by definition, are highly adapted to their home range. As conditions within their range change, whether from anthropogenic or natural causes, their adaptations can function as a source of competitive strength or weakness.
- Thus, endemic species are a focus for the conservation of biological diversity, or biodiversity.

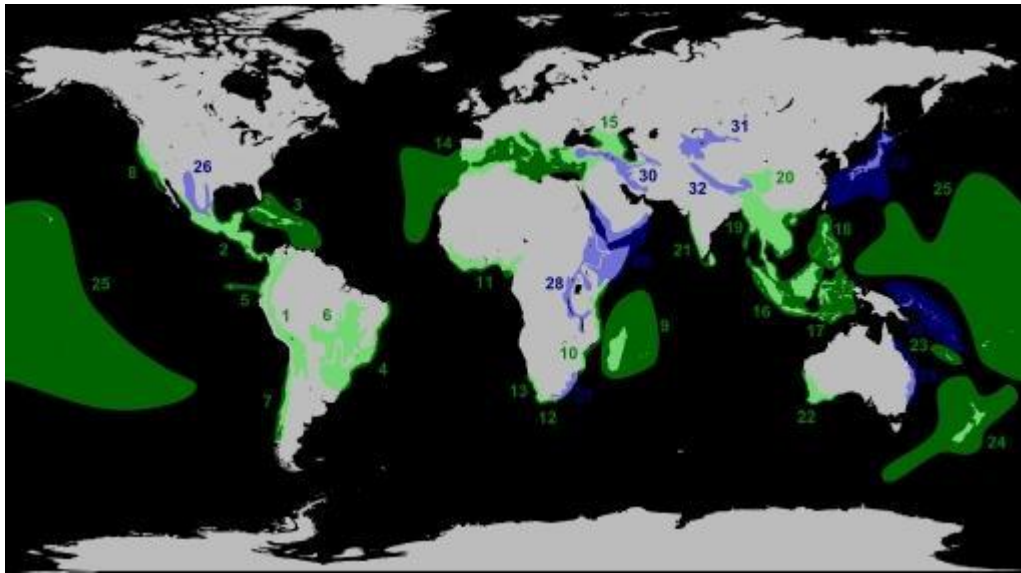




WHERE ARE AREAS

TO SETTLE DOWN IN
INDIA FOR ENDEMIC
SPECIES I.E.,
BIOLOGICAL
HOTSPOTS???

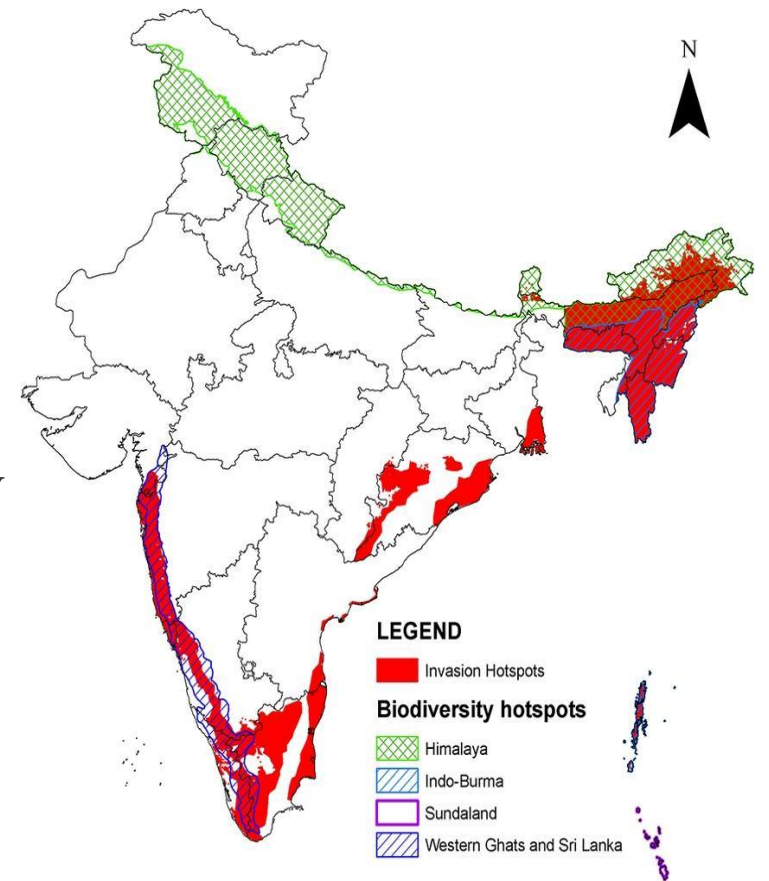
AREAS TO SETTLE IN INDIA: HOTSPOTS



- Biodiversity hotspot is a biogeographic region that is both a significant reservoir of biodiversity and is threatened with destruction. The term biodiversity hotspot specifically refers to 25 biologically rich areas around the world that have lost at least 70 percent of their original habitat.

HOTSPOTS IN INDIA

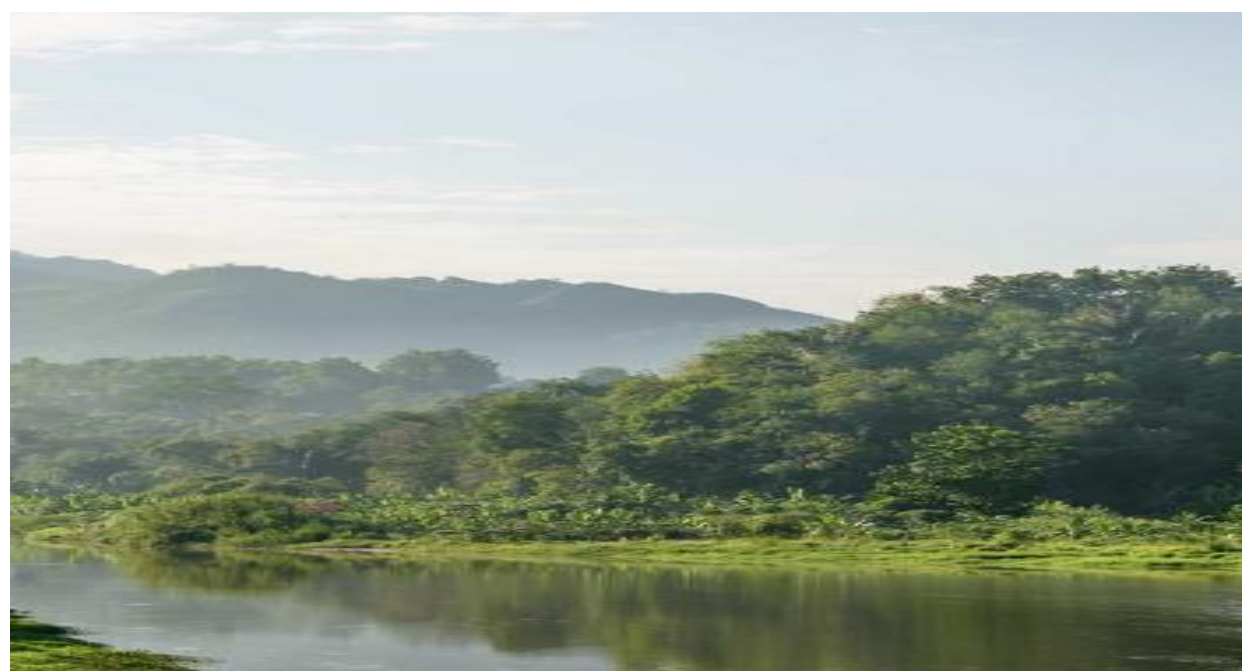
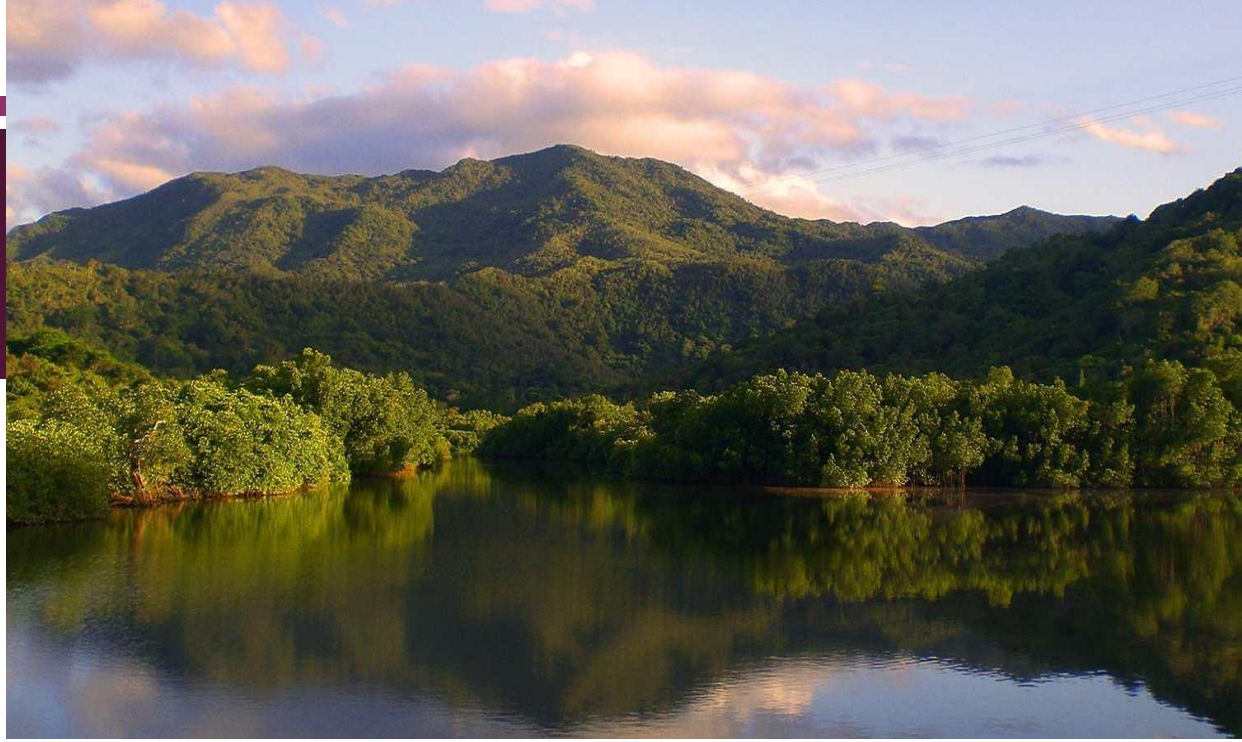
- India hosts 4 biodiversity hotspots: the Himalayas, the Western Ghats, the Indo-Burma region and the Sundaland (Includes Nicobar group of Islands). These hotspots have numerous endemic species.
- UNESCO recognized one of the global biodiversity hotspots in India, Western Ghats are completely covered by dense Rain forests. These ghats are the homelands to around 77% of the amphibians and 62% of the reptiles.



IMPORTANCE OF BIOLOGICAL HOTSPOT



- Biodiversity hotspots are a method to identify regions of the world where attention is needed to address biodiversity loss and to guide investments in conservation. Biodiversity is the major part of life on Earth, faces a crisis of historic proportions.
- Every minute organism and plant or a big mammal or tree plays an important role in the ecosystem. These biodiversity hotspots are the home to thousands of such endemic organisms, plants, and vegetation. Thus, have a huge impact on the ecosystem and biosphere.



VIDEO LINKS FOR REFERENCE

- <https://youtu.be/S30zM49t-vY>
- <https://youtu.be/Ff3FXDFRsHk>
- <https://youtu.be/9kGcylOC-es>
- <https://youtu.be/iWLvz4UmY6Y>

THANK YOU FOR YOUR ATTENTION

