Five New Species of Allographa

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Why in News?

Recently, Researchers from the MACS Agharkar Research Institute, Pune (DST) have discovered five new species of lichen-forming fungi belonging to the genus Allographa in the Western Ghats.

Allographa

- **Genus –** Script lichens or lichen-forming fungi (a fungus that teams up with algae or cyanobacteria to create a lichen).
- **Family –** Graphidaceae.
- **Traits –** Elongated fruiting bodies; >200 species globally.
- **Ecological Role –** Sensitive to pollution and habitat changes indicators of forest health and environmental quality.
- **Research Approach –** Combined traditional taxonomy with ***molecular phylogenetics.***

Molecular phylogenetics – Study of evolutionary relationships among biological entities using genetic data like DNA, RNA, and protein sequences.

- 1st comprehensive molecular phylogenetic investigation of Allographa in Western Ghats.
- **Phylogenetic Insights –** Morphologically similar species not always closely related evolutionarily; molecular data clarified species boundaries.
- **Methods –** Morphological and chemical analyses + multi-locus DNA sequencing using 3 genetic markers (mtSSU, nrLSU, RPB2).

New Species Identified

1. Allographa keralensis
2. Allographa nayakae
3. Allographa paraconsanguinea.
4. Allographa persistinspersa.
5. Allographa semicarbonisata.

New molecular data generated for known species – A. calcea, A. macella, A.

aquilonia, A. rimulosa, A. effusosoredica.

Reference

DST | Allographa