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Short Communication

A Short Communication on Forest Ecology

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DESCRIPTION

Forest ecology is the scientific study of the interrelated patterns, processes, flora, fauna and ecosystems in forests. The management of forests is known as forestry, silviculture, and forest management [1]. A forest ecosystem is a natural woodland unit consisting of all plants, animals, and micro-organisms (Biotic components) in that area functioning together with all of the non-living physical (abiotic) factors of the environment. Forests serve an extremely vital function in the global environment. Forests supply about 28% of the oxygen on the planet (the great majority being produced by oceanic plankton), and they provide homes for millions of people, with billions relying on them in some form. Similarly, forests are home to a great number of animal species. That is why we must safeguard them at all costs. Forest ecology aids in the comprehension of forest life. It demonstrates how living organisms act, live, and thrive. Forest ecology also aims to provide an understanding of the forest's prospering process. Many forests are used for economic purposes as well, such as fuel and wood products. As a result, forest ecology aims to understand how forests are managed [2].

Relationship to other branches of ecology

Forest ecology is one of the fields of ecology that is biotically oriented (as opposed to a fields oriented towards the organisational level or complexity of ecological systems, for example population or community ecology) [3]. Forests are so investigated at several organisational levels, ranging from the individual organism to the ecosystem. Forest ecology, on the other hand, focuses on the population, community, or ecosystem level, as the term forest connotes an area inhabited by more than one organism. Although trees are logically significant in forest studies, the enormous range of other life forms and abiotic components found in most forests means that other aspects, such as wildlife or soil nutrients, are frequently the focus [4-5]. As a result, forest ecology is a broad and significant branch of science. Forest ecology shares many characteristics and methodological approaches with other areas of terrestrial plant ecology; however, the presence of trees distinguishes forest ecosystems and their study in numerous ways, owing to the potential for a wide variety of forest structures created by trees' uniquely large size and height compared to other terrestrial plants [6-7]. The forest is varied (78 species) and contains two distinct associations: the highland portion is in the 'tulip poplar' and the wet zones are of the 'river birch-sycamore' group. The shrub spicebush (*Lindera benzoin*) statistically dominates, mainly in the lower elevations. Biomass is controlled by tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*) and American beech (*Fagus grandifolia*). It has a total of 33427 stems of which 7.07% are dead [8].

CONCLUSION

There is the potential for a vast range of forest architecture since trees can grow larger than other plant life-forms. The unlimited number of conceivable spatial configurations of trees of various sizes and species creates a complex and diversified micro-environment in which environmental factors like sun radiation, temperature, relative humidity, and wind speed can vary dramatically across vast and small distances. Furthermore, a significant percentage of the biomass in a forest ecosystem is often found underground, where soil structure, water quality and quantity, and levels of various soil nutrients can all vary substantially. As a result, compared to other terrestrial plant communities, forests are frequently highly heterogeneous environments. This heterogeneity, in turn, can support a high diversity of plant and animal species. Some structures, for example, tree ferns may be keystone species for a diverse range of other species.

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