Special Issue

Mechanisms of Forest Defense against Abiotic Stress and Genetic Evolution

Message from the Guest Editors

Forest ecosystems, as one of the most complex ecological units on Earth, face a series of abiotic stress factors, challenging their survival and prosperity. Forests are not just a collection of individual plant entities, but as a whole, they have developed complex sensing and response mechanisms to counter external pressures through their constituent plant populations. These mechanisms span from the molecular regulation of individual plants to the dynamic adaptability of the entire forest ecosystem. To adapt to diverse stress conditions, forests have evolved a variety of regulatory pathways through genetic evolution, enabling them to respond to different stress signals. Therefore, exploring the response of forests to abiotic stress as well as their genetic evolutionary mechanisms is of great significance for understanding the adaptability, stability, and biodiversity maintenance of forest ecosystems. This Special Issue warmly welcomes the latest research results on the defense mechanisms of forests against abiotic stress and genetic evolution, with the goal of advancing research in forest ecology, genetics, biodiversity conservation, and other related fields.

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