

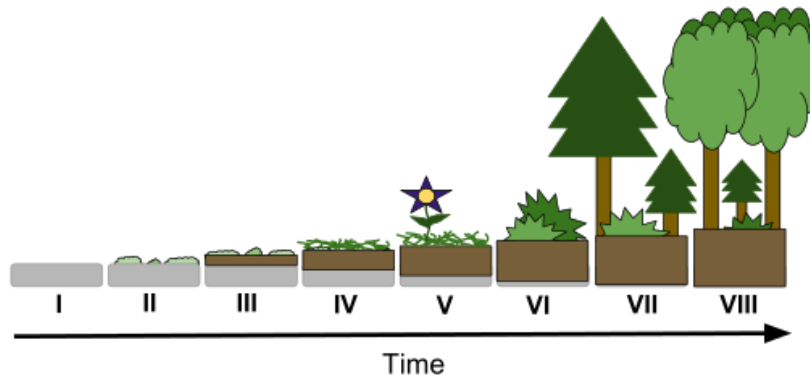
When the field of ecology was young, it was viewed that communities are more or less stable in structure and species composition. But as we know, some communities experience **disturbances** such as storms, fires, floods, or human activities that change the community by removing organisms or altering the availability of resources. Disturbances vary in frequency and severity in different communities.

Although we might think of disturbances as negative, small-scale disturbances often have positive effects. Think of a tree in a forest being uprooted, it will open space for small seedlings or allow light to reach the forest floor in that area.

Severe disturbances, however, could alter communities drastically which may lead to different species colonizing the disturbed area and would again alter the community structure. The gradual replacement by a series of other species is the process known as **ecological succession**.

### Primary Succession.

Ecological succession begins in a virtually lifeless area, without soil, and is called **primary succession**. Examples would be areas left by a recent volcanic lava flow. Often, autotrophic bacteria are initially present. Lichens and moss which are blown as spores are the larger photosynthetic organisms that would grow there next.

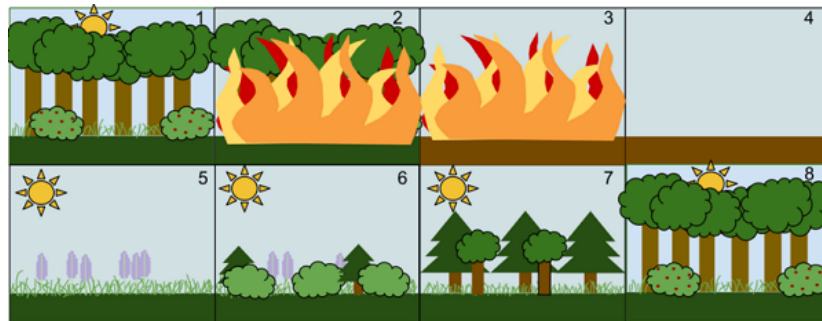


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Soil develops gradually as rocks break down and organic matter accumulates from the decomposed remains of the early colonizers. These would then be overgrown by larger plants that would sprout from seeds carried from nearby areas or introduced by animals into the area. Eventually, the area is colonized by larger plants that become the community's most common form of vegetation.

### Secondary succession.

**Secondary succession** occurs when a disturbance takes place and clears the existing community but leaves the soil intact. For example, we mentioned how chaparrals have periodic fires. Areas that are recovering from these types of disturbances show secondary succession.



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Some disturbances that lead to secondary succession are caused by human activities and understanding the effects of disturbance in communities is especially important in the present because people are more widespread and can become significant agents of disturbances.

A community is situated in an ecosystem. In the next topic, we will take a look at an ecosystem's structure and the interactions that comprise it.