Climax (Ecological) Encyclopedia Article

Climax (Ecological)

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.



Contents

Climax (Ecological) Encyclopedia Article.....1

Contents.....2

Climax (Ecological).....3

Climax (Ecological)

Referring to a community of plants and animals that is relatively stable in its **species** composition and **biomass**, ecological climax is the apparent termination of directional succession—the replacement of one community by another. That the termination is only apparent means that the climax may be altered by periodic disturbances such as **drought** or stochastic disturbances such as volcanic eruptions. It may also change extremely slowly owing to the gradual immigration and emigration—at widely differing rates—of individual species, for instance following the retreat of ice sheets during the postglacial period. Often the climax is a shifting mosaic of different stages of **succession** in a more or less steady state overall, as in many climax communities that are subject to frequent fires. Species that occur in climax communities are mostly good competitors and tolerant of the effects (e.g., shade, root **competition**) of the species around them, in contrast to the opportunistic colonists of early successional communities. The latter are often particularly adapted for wide dispersal and abundant reproduction, leading to success in newly opened habitats where competition is not severe.

In a climax community, productivity is in approximate balance with **decomposition**. Biogeochemical cycling of inorganic nutrients is also in balance, so that the stock of **nitrogen**, **phosphorus**, calcium, etc., is in a more or less steady state.

Frederic E. Clements was the person largely responsible in the early twentieth century for developing the theory of the climax community. Clements regarded **climate** as the predominant determining factor, though he did recognize that other factors—for instance, fire—could prevent the establishment of the theoretical "climatic climax." Later ecologists placed more stress on interactions among several determining factors, including climate, **soil** parent material, **topography**, fire, and the **flora** and **fauna** able to colonize a given site.

Resources

Books

Hagen, J. B. *An Entangled Bank: The Origins of Ecosystem Ecology*. New Brunswick, NJ: Rutgers University Press, 1992.