Aquatic Mesocosm Studies in Ecological Risk Assessment: A SETAC Special

Aquatic mesocosms are outdoor experimental ecosystems that can be used to study the effects of toxicants and other stressors on aquatic organisms in a more realistic setting than a laboratory. Mesocosms are typically used when the results of laboratory toxicity tests are insufficient or need to be confirmed in a more complex ecosystem.

Mesocosm studies can be used to evaluate the effects of toxicants on a variety of ecological endpoints, including survival, growth, reproduction, and behavior. Mesocosms can also be used to study the effects of stressors on ecosystem processes, such as nutrient cycling and energy flow.

Advantages of Mesocosm Studies

Aquatic Mesocosm Studies in Ecological Risk Assessment (Setac Special Publications Series)

by Christina Dodd

4.8 out of 5

Language	: English
File size	: 88781 KB
Screen Reader	: Supported
Print length	: 736 pages

- Mesocosms provide a more realistic environment for studying the effects of toxicants than laboratory tests.
- Mesocosms allow for the study of complex interactions between organisms and their environment.
- Mesocosms can be used to study the effects of toxicants on ecosystem processes.

Disadvantages of Mesocosm Studies

- Mesocosms can be expensive and time-consuming to construct and maintain.
- Mesocosms are not always representative of natural ecosystems.
- The results of mesocosm studies may not be directly applicable to field situations.

Applications of Mesocosm Studies

Mesocosm studies have been used to study a wide range of environmental issues, including:

- The effects of pesticides and other pollutants on aquatic organisms
- The effects of climate change on aquatic ecosystems
- The effects of oil spills on marine ecosystems
- The development and evaluation of new environmental technologies

SETAC Special on Aquatic Mesocosm Studies

The Society of Environmental Toxicology and Chemistry (SETAC) recently published a special issue of its journal Environmental Toxicology and Chemistry on aquatic mesocosm studies. This special issue includes 10 papers that provide an overview of the current state of the science of mesocosm studies and discuss the future of this important research tool.

The papers in this special issue cover a wide range of topics, including:

- The design and construction of mesocosms
- The use of mesocosms to study the effects of toxicants on aquatic organisms
- The use of mesocosms to study the effects of climate change on aquatic ecosystems
- The use of mesocosms to develop and evaluate new environmental technologies

The SETAC special issue on aquatic mesocosm studies is a valuable resource for scientists, regulators, and environmental managers who are interested in using mesocosms to study the effects of toxicants and other stressors on aquatic ecosystems.

Aquatic mesocosms are a powerful tool for studying the effects of toxicants and other stressors on aquatic ecosystems. Mesocosm studies can provide more realistic results than laboratory tests and can help to identify the potential risks of environmental pollutants. The SETAC special issue on

aquatic mesocosm studies is a valuable resource for scientists, regulators, and environmental managers who are interested in using this important research tool.

References

- **SETAC Special Issue on Aquatic Mesocosm Studies**. Environmental Toxicology and Chemistry, Volume 39, Issue 7, July 2020.

Alt Attribute Keywords

- Aquatic mesocosms
- Ecological risk assessment
- SETAC
- Environmental toxicology
- Water pollution

Aquatic Mesocosm Studies in Ecological Risk Assessment (Setac Special Publications Series)

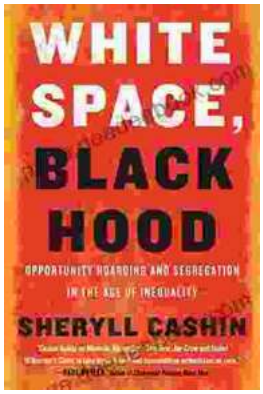
by Christina Dodd

4.8 out of 5

Language	: English
File size	: 88781 KB
Screen Reader	: Supported
Print length	: 736 pages

Every Cowgirl Loves Rodeo: A Western Adventure

Every Cowgirl Loves Rodeo is a 2021 American Western film directed by Catherine Hardwicke and starring Lily James, Camila Mendes, and Glen...



Opportunity Hoarding and Segregation in the Age of Inequality

In an age marked by profound inequality, the concepts of opportunity hoarding and segregation have emerged as pressing concerns. These phenomena...