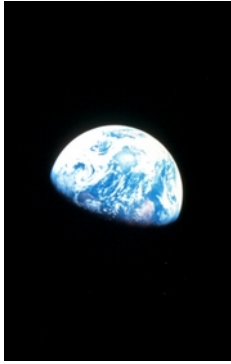


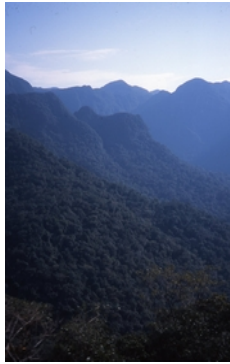
# Biodiversity, Insects and the Monarch Butterfly (1)

## What is Biodiversity?

**Biodiversity** the **variety** of **life** on **Earth**. It includes all the different kinds or **species** of living things, as well as the larger **communities** that are composed of them and the smaller **populations** and **genes** that they contain. It is essential to the **functioning** of all ecosystems and to the continuing **evolution** of ecological communities as they respond to environmental change.



Bill Anders - NASA



P.G. da Silva

## Why Is Biodiversity Important?

The **ecosystem services** that humans depend on for **food** and **health** depend on biodiversity. These include **pollination**, **waste recycling**, **replenishment of soil fertility**, **pest and disease control**, **erosion control** and **provision of clean air and water**. When **biodiversity** is **reduced**, **efficiency** of these processes is **reduced**, harming humans and other species.

## What is the Role of Insects in Biodiversity?

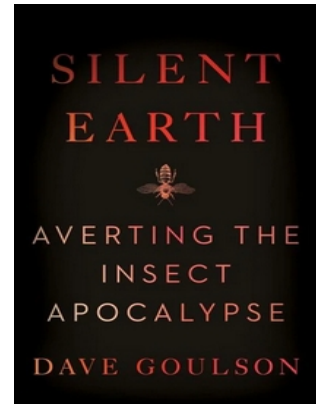
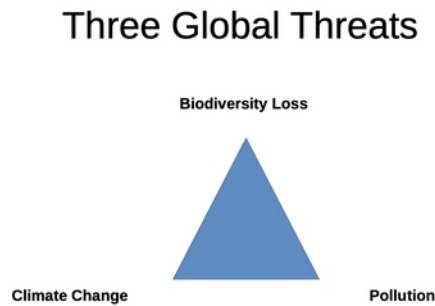
Of all of the **species** or **kinds** of **living things** that have been named, over **half** (58%) are insects. Especially on land, in fresh water, and in the air, the **variety** of different **body forms** and **special structures** of insects allow them to **do work** and **perform tasks** that no other species can. If just a few key **ecological groups** or **guilds** of insects were to **disappear**, most **terrestrial and freshwater ecosystems** would **collapse**, **ruining human civilization**.



## Biodiversity, Insects and the Monarch Butterfly (2)

### What is the Biodiversity Crisis?

The **Biodiversity Crisis** is the **sudden and unprecedented decline** in biodiversity due to human activities. According to the landmark 2021 United Nations report *Making Peace With Nature*, it is one of the **three main environmental threats** to our civilization, along with **climate change** and **pollution**.



### What is the Insect Apocalypse?

The **Insect Apocalypse** is the popular name given to the **recent rapid decline** noted for **many species** of insects. This decline may be the cause of declines in other kinds of animals, particularly birds.

### What is a Flagship Species?

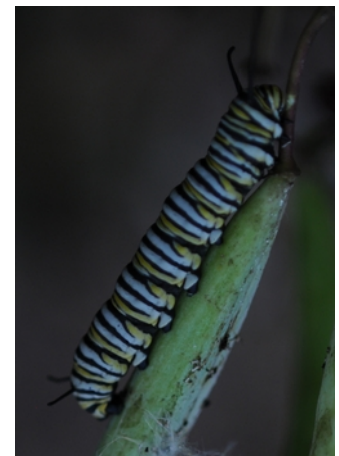
A **flagship species** is one that is **large, colorful, or charismatic** enough to attract **widespread public attention**. **Conservation of these species may help** conservation of **other species** that share the **same habitats**.

### Why is it Important to Save Monarch Butterflies?

**Monarch butterflies** have unique **ecological** and **cultural importance**. They are important **pollinators**, and their **migrations** link **Canada, the United States, and Mexico**. They are an important **flagship species**.



M.A. Garcia



P.G. da Silva