

*Commentary*

## Note on natural chemical science and its importance

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### OVERVIEW

Chemical ecology is the study of the chemical interactions between living organisms, as well as the effects of those interactions on the demographics, behavior, and biodiversity involved. Chemical ecology has helped to understand the ecosystems of the earth. How bees pollinate flowers, how birds find their nests and the personal attraction of their partners are just some of the many examples of chemical mediation. Chemical ecology has helped to understand the ecosystems of the earth. How bees pollinate flowers, how birds find their nests and the personal attraction of their partners are just some of the many examples of chemical mediation. It is not hard to imagine the catastrophic consequences of the absence of such an important relationship. Imagine the same situation without the interaction of chemicals in the ocean environment. Species will no longer be able to identify their food, find their prayers, see their spouses, certain types of chemicals can shape social processes such as season sequence, niche formation, selected nutrition and human flexibility.

### Importance

The following reasons explain the importance of ecology:

**Conservation:** Ecology helps us to understand how our actions affect the environment. It shows people the extent of the damage we are doing to the environment. Misconceptions about ecology have led to the destruction of the earth and the environment. It has also led to the extinction and extinction of some species of animals. For example, dinosaurs, white sharks, mammoths, etc. Thus, studying the environment and living things helps us to protect ourselves from harm and danger. Resource Allocation With the knowledge of ecology, we are able to know what resources are needed to support biodiversity. Lack of environmental knowledge has led to shortages and deprivation of these resources, which has led to competition.

**Energy Conservation:** All living things need energy to grow and thrive. Lack of understanding of nature leads to excessive use of energy sources such as light, nutrients and radiation, which in turn leads to their reduction. Proper knowledge of environmental needs prevents unnecessary wastage of energy resources, thus saving energy for future purposes.

**Eco-friendly:** Ecology promotes coexistence between species and adopts a way of life that protects ecological ecology.

**The chemical nature of plants:** Plant chemical ecology focuses on the role of chemical signals and signals in regulating plant interactions with their habitat eg microorganisms, phytophagous insects, and pollinators. Chemical ecology of plant and insect interactions is an important part of chemical ecology. In particular, plants and insects are often involved in evolution. As plants improve the chemical defenses in herbivory, the insects that feed on them alter the protection against these toxins and in some cases, they reuse this toxin to protect the chemical from predators. For example, the monarch butterfly sequester cardenolide toxins from their milkweed host-plant plants and are able to use them as protection against predators. Natural chemists also study the chemical interactions involved in indirect plant protection, such as the attraction of predators and parasitoids through herbivore-induced organic compounds. Chemical Marine Environment Chemical use is often used as a means of survival in marine ecosystems. Some crustaceans and mesograzers, such as *Pseudamphithoides incurvaria*, use certain algae and seaweed as a preventive measure by closing their bodies to these plants. These plants produce alcohols such as pachydictyol-A and dictyol-E, which inhibit crustacean consumption. In the absence of this seaweed or in the presence of other seaweed-free seaweed, the level of consumption of these crustaceans is very high. Some crustaceans use their natural defenses in combination with synthetic chemicals to protect themselves. The chemicals in their urine help to combine them into groups. This combination with their spikes makes it very difficult to target predators.

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