



A review on the Importance of insects in the ecosystem

Zainab F. Mansowr

University of Basrah , College of Science, Department of Biology

Abstract

Insects represent one of the largest and most important groups in the phylum Arthropoda and kingdom Animalia. There are several reasons why insects are important to review the provision of ecosystem services (ESs) by insects. First, it is globally widespread, and exhibit high species richness, high biodiversity, exceeding that of other arthropods well-studied ecosystem servicing. Here we explain how these organisms are important by mentioning its effective role in the ecosystem.

Key words: Arthropoda, Ecosystem services, Insects.

Introduction

Class Insecta occupy 80% of the kingdom Animalia and considered one of the most biodiverse groups in ecosystem; they are cosmopolitan and exhibit close relationship with other living organisms (Losey and Vaughan, 2006; Noriega et al., 2018).

There is widespread concept that insects play an essential role in ecological and economic services of importance to our planet, so insects are known as ecosystem services (ESs) that are of value to society by supporting either directly or indirectly the quality of human life (Harrington et al., 2010; Brock et al., 2021). However, the scope and nature of the ecosystem services they provide are not well understood, here we provide a synthesis on how these organisms perform important ecosystem services as role as pollinators in plant reproduction, in improving soil fertility through waste bioconversion, and in natural biocontrol for harmful pest species, and they

provide a variety of valuable products for humans such as honey and silk and medical applications such as maggot therapy.

In addition, insects have assumed their place in human cultures as collection items and ornaments and in movies, visual arts and literature and we will focus on their additional services as a sustainable alternative to meat for human consumption (Kumar and Omkar, 2022).

The role of insects in ecosystem

The ecosystem services that insects provide are not only found in the natural environment, but are also found in anthropic landscapes and the semi-natural habitats (Mansowr et al., 2024). These ecosystem services are generally described as the direct or indirect benefits given by the nature to the human society (CDB, 2000; Costanza et al., 2014; IPBES, 2018).

Insects are the abundantly found living organisms on our planet. Nearly, 1 million