

ABSTRACT =>

Sugar feeding is widely found in a large number of hematophagous insects. Sugar feeding is a fundamental characteristic of mosquito life. Most evidence indicates frequent ingestion by both sexes and all ages of mosquitoes of plant sugars, usually as floral & extrafloral nectar & honey dew. Mosquitoes are generally poikilothermic and they are greatly affected by temperature of the environment which can impact host seeking, blood feeding, and flight activity as well as survival & ability to transmit pathogens. However an important aspect of mosquito biology on which the effect of temperature has not investigated is water and sugar feeding and how access to sugar might affect the insects activity and survival under different thermal condition.

# ABSTRACT

Seaweeds are one of the most important living resources of the ocean. Seaweeds cultivation, as a diversification activity in mariculture, has a tremendous potential all along the Indian coast. Seaweeds rich in vitamins and minerals and are consumed as a food in various part of the world. In spite their wide application in food, feed industries, they have gained importance as medicinal source of because of their high healing, antimicrobial, anticancer, antifungal, antioxidant properties. As a rich source of valuable chemical compounds seaweeds are used in various other industries like cosmetics, Fuel, water treatment etc. Being a plant of unique structure and biochemical composition seaweed could be used highly for its multifunctional properties in the form of food, energy medicine and cosmetics. This review work attempt to highlights all the relevant resources, types, culture and relevant application of seaweed are discussed in detail in this manuscript.

## INTRODUCTION

Seaweeds are marine, photosynthetic algae which are abundant in every ocean. There are three phyla or main classes of seaweeds: Phaeophyceae (brown algae), Rhodophyta (Red algae), and Chlorophyta (green algae). Thousands of species comprises each phylum (Guiry and Guiry 2019); Rindi et al. 2012). Seaweeds have been traditionally as a food, folk, remedies, dyes, fertilizers. Within the development of mass food manufacturing in the early 1900s, seaweeds components were harnessed industrially. Hydrocolloids, such as alginate, carrageenan and agar are still the most commonly used components because of their gelling properties of food, pharmaceutical and biological application (Rhein-Knudsen et al. 2015; Zollman 2019).



# TITLE: SELF- ORGANIZATION TRAFFIC RULES OF ANTS; NATURE'S TRAFFIC ENGINEERS

## ABSTRACT:

Many animals take part in flow-like collective movements. Ants, termites and humans often form well organized and highly efficient trails between different locations. From humans driving on the highway, to ants running on a trail, the main challenge faced by all collective systems is how to prevent traffic jams in crowded environments. In most species, however, the flow is unidirectional. Ants are one of the rare group of organisms in which flow-like movements are predominantly bidirectional. This adds to the difficulty of the task of maintaining a smooth, efficient movement. Yet, ants seem to fare well at this task. Do they really? And if so, how do such simple organisms succeed in maintaining a smooth traffic flow, when even humans experience trouble with this task? How does traffic in ants compare with that in human pedestrians or vehicles? The study of ant traffic can not only uncover basic principles of behavioral ecology and evolution in social insects but also provide new insights into the study of traffic systems in general.

## INTRODUCTION:

Animal collective movement is a widespread phenomenon that occurs at various spatial and temporal scales in a variety of living organisms from cells to pedestrians. Often there are no identifiable leaders or coordination relies on a completely decentralized process. In many situations the motion within the collective is unidirectional because it is related to migratory phenomena and involved in individuals moving in the same direction. Ants are central-place forager and must return to their nest with the food collection after each foraging event which often lead to the formation of trails with a steady stream of traffic between the nest and the food source. In some species, the traffic flow on these trails can be extremely high, reaching more than a hundred ants per minute, e.g. red wood ants, leaf cutting ants and army ants.

Traffic in ants can be organized either on a spatial or on a temporal scale. To date, the emergence of both the spatial and temporal organizations observed in traffic system of ants.

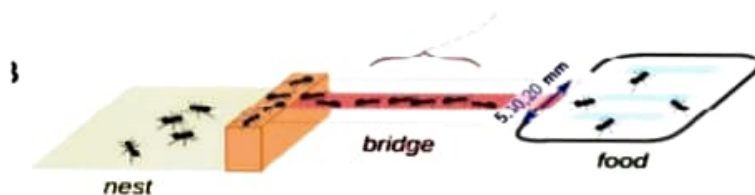


Figure 1: Ant's trail

## Abstract: ⇒

This review work develops a framework for the study of climate on fish populations based on first principles of physiology, ecology & available observations. Environmental variables and oceanographic features that are relevant to fish & that are likely to be affected by climate change are reviewed. Working hypothesis are derived from the differences in the expected response of different species groups. A review on Northeast Atlantic fish species representing different biogeographic affinities, habitats, and body size lends support to the hypothesis that global warming results in a shift in abundance and distribution (in patterns of occurrence with latitude and depth) of fish species. Pelagic species exhibit clear changes in seasonal migration patterns related to climate induced changes in zooplankton productivity. Lusitanian species have increased in recent decades (sprat & anchovy) especially at the northern limit

## PREFACE

The word review means to go thoroughly into detail of a subject or topic which may be an important part of course curricula at Post Graduate level.

A review is an appraisal of a particular topic , in which data is gathered through different sources and is presented under the literature review .

Mostly it comprises the secondary data or the opinion of subject expert collected from the research work or related matter . With the above objective ,and attempt has been done to focus on A brief account of

Eurypterida - an extinct arthropod.



## Abstract :-

Health of an intact organism depend on a proper functioning of endocrine system. These system regulate the release of certain hormones that are essential for growth, metabolism, development etc. Substances disrupting or interfering with normal hormonal balance and exerting adverse effect of health. These chemicals or substances are known as Endocrine disrupting chemicals (EDCs) Principal toxic effects of EDCs were reported to be related to infertility, Thyroid function disruption and teratogenicity, but other important toxic effects of EDCS such as carcinogenicity and mutagenicity have also been demonstrated. Large amount of EDCs are found in aquatic environments from wastewater, industrial contamination and hospital. The exposure to EDCs to commercial and ecologically important marine & fresh water fish has seriously affected their production.

## ABSTRACT:

Pesticides are widely used to control the growth of weeds and insects infestation in agricultural fields. As the modes of action for pesticides are not species specific, concerns have been raised about environmental risks associated with their exposure through various routes (e.g.residues in food and drinking water).

Pesticides residues are a public health concern and have been linked to a range of diseases and disorders. To avoid the contamination of food with pesticides, faemers should use alternative methods like Intregated Pest Management(IPM),crop rotation or organic farming.Consumers should also consume organic food products to escape from the harmful effects of pesticides.



## Abstract

Cypermethrin is one among the synthetic pyrethroids and a major pollutant present in agriculture and domestic runoff water that enter in aquatic environment and have harmful effect on aquatic organisms on snails. The present study was performed to investigate the toxicity of cypermethrin (10% EC) on fresh water snails *Bellamya bengalensis*. In acute toxicity bioassay LC50 values after 24, 48, 72 and 96 h were determined by direct interpolation method. LC50 values obtained by plotting a graph between % mortality and concentrations of toxicant were 0.00064 ml/l, 0.00050 ml/l, 0.00036 ml/l and 0.00025 ml/l after 24, 48, 72 and 96 h of cypermethrin intoxication. Data obtained from acute toxicity test were evaluated using the probit analysis statistical method. The LC50 values for different exposure periods were 0.00066, 0.00044, 0.00033, and 0.00022. The effect of sublethal exposure to Cypermethrin on the reproductive Physiology and oxidative metabolism of the freshwater Snail. In aquatic ecosystem Cypermethrin 10%EC affects the non target organisms like fish, snails and thus after the metabolism, haematology and population of Crustaceans. The results revealed that a lower concentration of cypermethrin is found to be highly toxic to snails.

**Keywords:** Cypermethrin, *Bellamya bengalensis*, Acute.



# Abstract:

Current evidence demonstrates that a sixth major extinction of biological diversity event is underway. The earth is losing between one and ten percent of biodiversity per decade. Mostly due to habitat loss, pest invasion, pollution, over harvesting & disease. Certain natural ecosystem services are vital for human societies. Many fruit, nut, vegetable, legume & seed both wild free living organisms mainly bees - but also to name a few many butterflies, moths & flies & by commercial managed bee species. Bees are the predominant & most economically important group of pollinators in most geographical regions. The Food & Agriculture organization of UN estimates that out of some 100 crop species which provide 90% of food worldwide, 71 of these are bee pollinated. Research is required to quantify the synergistic effects of potential drivers for current colony loss & to identify the ecotypes & native species of honey bees which are more resistant to pests, pathogens & pesticides.

# INTERACTING EFFECTS OF GLOBAL CHANGE ON FOREST PEST AND PATHOGEN DYNAMICS

## ABSTRACT

Pathogens and insect pests are important drivers of tree mortality and forest dynamics, but global change has rapidly altered or intensified their impacts. predictive understanding of changing disease and outbreak occurrence has been limited by two factors: (a) tree mortality and morbidity are emergent phenomena determined by interaction between host plant and biotic agent (insects or pathogens), and the environment ;and (b) disparate global change driver co-occur ,obscuring net impacts on each of these component .To expand our understanding of changing forest diseases, declines ,and outbreaks ,we adopt a framework that identifies and organizes observed impacts of diverse global change driver on the primary mechanisms underlying agent virulence and host susceptibility . We then discuss insights from ecological theory that may advance prediction of forest epidemics and outbreaks .This approach highlights key drivers of changing pest and pathogen dynamics, which may inform forest management aimed at mitigating accelerating rates of tree mortality globally.



## ABSTRACT

We can hear about large scale forest fires in the media from several areas of India almost every year. A large forest fire causes a serious impact on the environment, determining its future for decades. Prevention of forest fires is one of today's most important tasks as well as appropriate preparedness for effective fighting against them. To do so, it is vital to have detailed knowledge on the characteristics of different forest types and their environment, their ecosystem and food chains, technical information on the properties of forest fire and their effects on different elements of the environment and lessons learned from previous cases. Based on gathered information of past events, authors have provided a complete system of forest fire categories by their size, types, risk and consequences.

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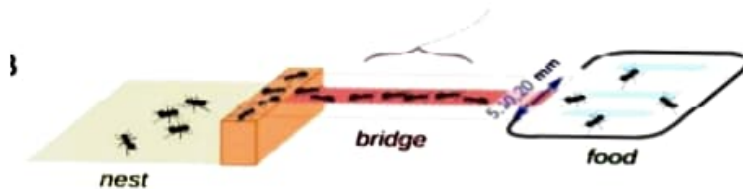


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## **Abstract**

The novel coronavirus has hit the human race hard for over five months now. The ongoing COVID-19 pandemic have included travel bans and social distancing, resulting in sudden changes in human activity and subsequent effects on the global and national economy. This crisis has also had a deep impact on wildlife. Wild animals near urban cityscapes are taking this opportunity to step beyond the comforts of their forested homes, global wildlife trade has been thrown into the spotlight and wildlife tourism too has felt the impact of this pandemic.

# PLANT HERBIVORE INTERACTIONS AND COEVOLUTION IN ECOSYSTEM

## ABSTRACT

Plants-herbivores communities are very enormous in terms of productivity, species diversity and genetic diversity within species. This vegetation impact both the likelihood and strength of interaction between plant and herbivores. Because plant-herbivores interactions will also impact on both patterns fitness, these ecological effects also have evolutionary sequences. In this review were discussed several hypothesized and will document mechanisms where variation in the plants community alters the plant herbivores interactions, discuss potential evolutionary outcomes of each of these ecological effects.

## INTRODUCTION

The feature of most plants and animal communities is that the organisms are unevenly distributed in nature. The plants always try to protect themselves from being eaten by their herbivores. Herbivores are faced with a food supply that is not very nutritious. The tissue of all animals contain one to several orders of magnitude more nitrogen than are plant foods (Mattson 1980). In addition, plants contain many physical and chemical traits that reduce their digestibility that are directly toxic to most herbivores. Plant quality can vary greatly in time and space.



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