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## Insects: An Invertebrate Inspiration for Artists

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### Abstract

Throughout history and across many cultures, insects have been said to inspire painters and crafters. Silk, wax, colours, and other creative media have been given by moth larvae, bees, and beetles. Humans were fascinated by their strange biology and unfamiliar lifestyles while repulsed or frightened by their stingers, toxins, and the diseases they may (or may not) carry; however, some insects leave traces on their environment that artists capture, while others in effect become collaborators as their natural behaviours are incorporated into art.

### Introduction

Insects first appeared on Earth around 480 million years ago in the Ordovician period, coinciding with the appearance of terrestrial plants, and coevolution has allowed them to split into diverse lineages such as Hymenoptera, Lepidoptera, Diptera, and Coleoptera. These orders' insects are regarded as major damaging hexapods, and their cultural values have been ignored. Insects have captivated our attention since time immemorial, from their ability to cause various types of damage to their role in aesthetics. Throughout history and across many civilizations, insects have inspired artists and craftspeople. Insects are well-known pests that wreak havoc on artefacts, museums, monuments, artworks, and other cultural assets. Silk, wax, and lac-like insect products, on the other hand, have a broader use in art as well as other aspects of culture, and insects such as butterflies, honeybees, flies, and stag beetles are important symbols that are frequently represented and focused in paintings, sculptures, monuments, books, or heraldry around the world. Artists have long used insects as a creative force. Some insects leave traces on their surroundings that artists capture, while others collaborate by incorporating their natural behaviours into the art. Insects were first mentioned in an epigram discovered in Ancient Greece around 600 BC, about a young girl and her dying pet bug. After that, there was a lot more documentation of insects in aesthetics (Klein, 2021). The details of insects, their products use in cultural entomology and aesthetics is mentioned below.

### 1. Insects and Their Products

An engraving of a cricket was cut into a fragment of bison bone around 14,000 years ago and it was considered as one of the oldest instances of insect art. In Egyptian religious art, Scarab beetle images with rolling balls of dung across the ground reflected the habit of god Khepri to roll the sun across the sky each day. Furthermore, according to, Navajo creation myth, cicadas bring mankind out of the earth, thus mimicking the periodic life cycle from underground. Shellac,

a resinous secretions of the female lac bug, has wider use in ornate Tibetan armour; Carmine, a scarlet dye derived from cochineal bugs feeding on cactus are utilised by the Aztecs and Mayas painters and textile manufacturers; singing shawls by the Karen people of South-eastern Asia were prepared from insects. While, silk, lustrous thread prepared by silk worm (*Bombyx mori*) has also wider economic value. Apart from, the mulberry silk, (*Bombyx mori*) found on Mulberry leaves, other non mulberry type silk liketasar silk (*Antheraea paphia*), erisilk (*Philosamia ricini*), mugasilk (*Antheraea assamensis*) have also significant role in aesthetics. Fire flies (glow worms) belong to Lampyridae combine oxygen with a substance called luciferin to produce bioilluminescence was widely used in entomotourism. Other than these, ancient Egyptians worship Scarab beetles as powerful symbols of resurrection and eternal life, Jewell Beetle as symbol of rebirth, while honey Bees were thought to have association with sun God Ra-Ra and tear Flies were believed to protect against misfortune and diseases. Fireflies have been used to impart "live jewels" to garments in India, Sri Lanka, and Mexico.

## 2. Ornamental Insects

Several beetles and butterflies, are usually large and colourful, and can be easily prepared and kept as collectibles for lengthy periods of time. Generally, butterflies are known to be the most beautiful insects in the world. Artists, designers, poets and songwriters have been using butterflies as subjects and inspirations in their work. In some cultures, butterflies are often portrayed as symbols of love and peace. Blue Morpho Butterfly, *Morpho fabricius*, Zebra Long tail Butterfly, *Heliconius charitonius*, Peacock Butterfly, *Inachis* sp. can be used to attract tourist attention. To enhance this, in India different states have constructed butterfly parks, out of which butterfly Park of Bangalore is India's first of a kind. Moreover, the government of Papua New Guinea, which is home to the interesting genus Ornithoptera, or bird wings, has promoted butterfly ranching as an income generating source for local farmers, while, active beetle farming communities (Lucanidae, Cetoniidae, and Dynastidae) in Japan and Taiwan have important industrial applications.

## 3. Singing Crickets

Keeping crickets and bush crickets as pets has been practised for ages in Asian cultures and, to a lesser extent, in several Western countries. Around 22,000 years ago, singing insects became domestic pets in China.

## 4. Cricket Fighting

Furthermore, cricket fighting was a popular sport in China during the Song Dynasty, which was later stopped during Qing Dynasty. Cricket fighting has resurfaced again in major cities of China in cricket fighting clubs and societies and thus, due to overharvesting, crickets are becoming increasingly scarce in China's urban areas.

## 5. Crime Investigation

Blow flies (*Chrysomya megacephala*) are the first ones to reach the dead bodies. Due to their predictable life cycle, crime scene investigators can use their colonies to help determine a time of death.

## 6. Medicinal Uses

Blister Beetles - beetles secreted a substance known as Cantharidin which act as a pain reliever. Current studies indicated that the blister beetle secretions attack hostile cells - including cancer, thus can be used to battle tumors and in chemotherapy treatments. Furthermore, maggots are used as crime detectors and skin healers in maggot therapy as they eat dead flesh larva This potential was well studied after World War I, but due to development of penicillin and other antibiotics there was limited adaptability. But now-a-days these treatments have wider usage and acceptance.

## 7. As Bioindicators

Bioindicators are species that can be used for real time monitoring of the health of an environment or ecosystem. Dragonflies and Damselflies (Odonata), Mayflies (Ephemeroptera) and Midges Species of Chironomidae (Diptera) are recognized worldwide for their extreme sensitivity to oxygen depletion in water bodies, while honey bees (Hymenoptera) were observed to act as bio indicator of arial environment either directly through high mortality rates or indirectly via residues in larva, pollen and honey (Kritsky and Smith, 2018).

## Conclusion

Insects, apart from attacking the crops, can be a profitable source for artists and they have tremendous role in cultural entomology. Apart from this, they can act as an income generating sources for both the rural and urban household. There is a need to understand the hidden potential of insects in aesthetics for artists and utilise them effectively. Although, though establishment of butterfly garden, some of the aesthetical values of insects have been well exploited, yet there are much scope among insects in cultural entomology and aesthetics. There is a need to explore the underutilised fauna so that, these can be helpful in income generation either directly/ indirectly.

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