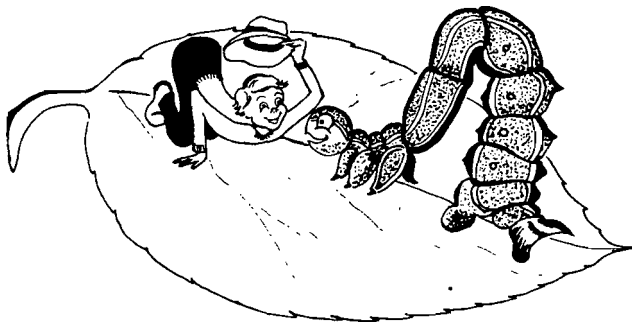


Insects as food and medicine

S Louw

Man benefits from insects in many ways and without them, human society could not exist in its present form. Without the pollinating services of bees and other insects we would have few vegetables, few fruits, few flowers, no coffee — in fact we would be without many things — that are an integral part of our economy and civilization. Insects provide us with honey, beeswax, silk and many other useful products. Many species are parasitic or predaceous and are important in keeping pest species under control; others help to control noxious weeds, while others clean up refuse and make the world a little more pleasant to live in. Besides also having an aesthetic value, many people enjoy studying insects purely for a hobby.



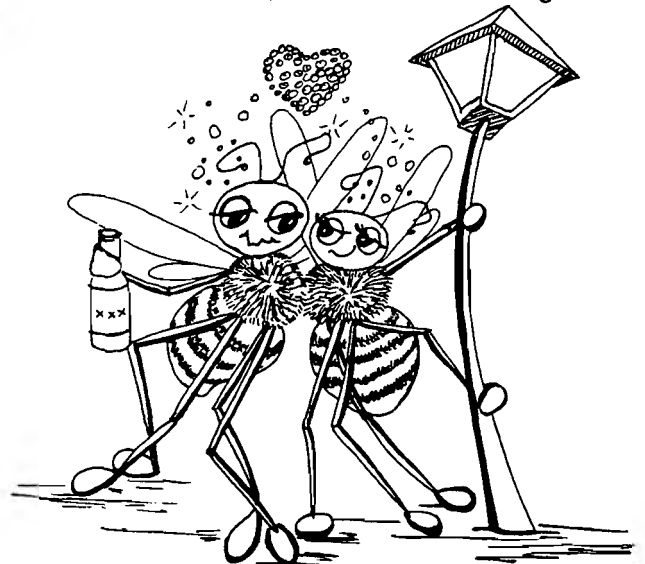
Mole- and field-crickets, warble flies and caterpillars are all eaten in different parts of the world, while in South Africa fried Mopani worms are a much relished dish. The acme of economy is found among the Chinese who eat the silkworms after they have taken out the thread. In some countries insects are even exploited commercially and caterpillars are tinned and exported.

The medicinal and dietic benefits derived from insects in the past are less well-known today and many are now used only by the very primitive peoples. Therefore the original and often bizarre uses of insects, as well as the totally different insight into the insect world, will be discussed further.

Natives of the Amazon are very fond of the local red-headed ant. The gravid females are taken by the head and thorax and neatly bitten off at the abdomen — much like eating a cherry off its stalk. In the Nile Valley, dung beetles have the reputation of being a good fattening food and, because rotundity is a great feminine asset in these parts, these beetles are much sought after.

It is strange that civilized man is squeamish about utilizing insects for food, but does not mind drinking animals' milk and is prepared to eat sewage-feeding marine Arthropods. In many of the overpopulated countries, however, the staple diet is starch and the people, who all have an overwhelming hunger for meat, therefore will endeavour to eat *anything* with a protein content. Certain people in Cental Asia are known to pick and then eat the lice of each other, while swarming termites and locusts in many African countries are not just a mere titbit, but constitute an important source of food. In a manner, man is therefore taking a slight revenge on the locusts that devastate his crops!

The most popular insect of all is most probably the honey bee. Before "sugars"



were known, honey was the chief sweetening ingredient in food and drink. An intoxicant from honey and water is one of the earliest forms of liquor. In certain countries today, honey is a very important export product.

From a medicinal point of view insects were, and still are, well-known in pharmacopoeia. In historic times doctors used to base their prescriptions on two principles. Firstly, the ingredients had to be as repulsive as possible — a sort of witch's cauldron and secondly, the animal used had to be related to the complaint or ailing organ, be it in appearance or name. By such reasoning, it was concluded that earwigs (Dermaptera) must be remedial for deafness ...



Beetles are still used as ingredients of medicine. The blister beetles (Meloidae) contain a substance in their blood known as cantharidin which is used in restoring hair growth and for treating certain ailments of the urogenital system. The larvae of certain leaf beetles, *Diamphidia simplex* (Chrysomelidae) are used by the Bushmen to poison their arrow tips. The poison acts as a haemolytic which causes death through general paralysis.

The larvae of the gallflies (Cynipidae) form galls on the plants in which they develop and

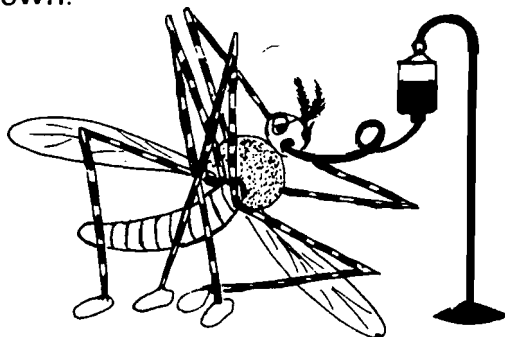
these galls contain large percentages of tannin which is used in manufacturing tannic acid, a modern day pharmaceutical ingredient. In addition tannin is also used for manufacturing ink and for curing hides.

The Indians in Peru used ants with large jaws to 'sew-up' wounds — the edges of a cut were nipped together and the hind portion of the body then snipped off. This custom was also used in Greece until the beginning of this century!

As is the case with food, honey bees also have a reputation in the medical field. Bee stings are widely considered to be useful for curing rheumatism — this is based on the observation that beekeepers appear to be immune from this illness. Today bee-venom is employed with considerable success. Beeswax is a common ingredient in ointments, while honey itself is used as a flavouring agent in several pharmaceutical preparations and is also used as a laxative and an astringent.

In Vienna shortly after the First World War, it was discovered that temporary insanity and general paralysis of the insane could be cured by inducing high temperatures through malaria. Patients were deliberately exposed to the bites of infected mosquitoes — malaria thus being the lesser evil! During World War I, it was found that soldiers' festering wounds which had been neglected contained maggots, but that no infectious complications occurred. Investigation showed that the maggots were feeding on the dead tissues and therefore depriving the bacteria of their food. The majority of these patients recovered completely. This was followed up with great success in America.

From the above it is obvious that insects can be utilized in extraordinary ways and in time we will be compelled to accept that these animals constitute an integral part of the world in which we live and that insects can benefit man much more than hitherto known. ©



Reference: Burr, M. 1939. *The Insect Legion*. James Nisbet & Co. Ltd, London.