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Biological Importance Of Honey

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Introduction

The ancient fascination exerted by insect societies, due to their perfect organisation (especially the division of labour), has been a source of analogies with human society. These are represented in "The Wasps" of Aristophanes, and Mandeville used them for his philosophic "Fables of Bees". More recently, modern biologists identified the obvious adaptive advantage of the organisation of insect societies into a "super organism". For example in terms of biomass, the social insects of the Amazonian forest represent 75% of the total weight of all insects globally and their mass is certainly 4 to 8 fold higher than the terrestrial vertebrates. By contrast, the number of species is very low: of the 750,000 insect species, 1300 (about 2%) are social insects of the two groups Isoptera and Hymenoptera.

The study of the social insects recently gave rise to a new discipline: sociobiology, which introduced the notion of "eusociality" for species showing the following characteristics:

- (i) superposition of many adult generations in the same social group;
- (ii) cohesion between the members of the same group;
- (iii) division of labour with a specialisation of a restricted number of reproductive individuals, all the other individuals being sterile and devoted to "altruist" tasks; and
- (iv) rearing of young in cooperation. These characters are a product of biological evolution which is demonstrated by the ecological success of species organised in a social "super organism".

Beyond the fundamental interest in social insects, ancient peoples exploited honeybees for hive products, mainly for food. For successful