

Life lessons from social insects

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If you want to learn something then learn from the experts because they know how to do it in the best possible way. Insects especially social insects have inspired and motivated many out there, morally as well as scientifically. You can learn from the insects as an individual, group and even as a class (Insecta). Humans originated only a million years ago compared to the insects that appeared at least 250-500 million years ago and surviving since then, rather thriving. They outnumber all the other organisms in terms of diversity. One-third of your meal comes from the pollination services of the bees. So, they know how to do it. There are many lessons we could learn from the insects, apply and inculcate them in our day-to-day life and behaviour which could benefit our society. Diapause in insects teaches us that we should never lose hope, difficult time will pass. The lessons for life we could learn from ants are spirit of sharing, ignoring diversions, discipline, brave attitude, hardworking, preparing ahead, teamwork and adaptation to surroundings. Ants have co-opetition (competition+cooperation) behaviour which teaches us how we can keep our greed aside and help each other to thrive together. It is the result of these behaviours that fire ants (*Solenopsis* spp.) could survive even a flood like condition for almost three weeks by making a fire-ant-raft. Army ant (*Eciton burchellii*) makes living bridge to cover the obstacles which are difficult to pass by a single ant.

The social insects like bees, termites and ants share “eusociality”, the highest form of social behaviour

with humans. Some ant cities are huge. If ants were human sized, the settlement of ants (*Formica yessensis*) would be much larger than Tokyo. Similarly, if termites were as big as humans, then the height of an African termite mound would be equal to the tallest building on earth, the Burj Khalifa. These social insects show a high degree of sacrifice. The exploding ants (*Colobopsis explodens*) blow themselves up to kill their enemy in order to save their colony. Army abide by a code that no man is left behind when injured inspired by Termite-hunting ants (*Megaponera analis*) after raid on a termite nest. But if ants were severely injured, they themselves refused to cooperate, waving their legs when picked up, forcing the helpers to abandon them. The mortally injured ants choose to die rather than wasting resources and energy on them.

The ants also show leadership qualities guiding others to the food source through trail-marking pheromones. They can lift 5000 times their own weight, motivating us to exploit our true potential within. Trophallaxis is the sharing of food in ants as well as bees because they have social stomach meaning some of them search food out there in the wild and bring it to the colony for those who are taking care of young ones and protecting the colony. Our social stomach is the tax system where we collect money from the public and use it to help the needy ones. “Umuntu-ngumuntu-ngabantu” abbreviated as “Ubuntu”, a saying meaning: “I am because you are, and you are because we are.” Ants works on the principle of



Fig. 1. A fire ant raft (Source: al.com)



Fig. 2. Army ant bridge (Source: mappingignorance.org)



Fig. 3. A termite mound (Source: depositphotos.com)



Fig. 4. Trophallaxis in ants
(Source: wordpress.com)



Fig. 5. Ants lifting weight heavier
than their body
(Source: worldatlas.com)

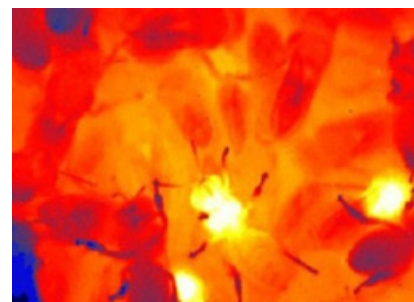


Fig. 6. Temperature regulation in
honey bees
(Source: todayifoundout.com)

Ubuntu and inspire humans to realize the importance of Ubuntu which implies that everyone has different strengths and skills, people are not isolated and with mutual understanding they can help each other to support themselves.

I bet, no matter how much time you may spend on any of the social networking sites. You can't be more social than these social insects. Honey bees show "Altruism" which is the behaviour of worker bees who spend their whole lives working for the welfare of the colony, queen and her off springs. One of the best examples of teamwork could be found in bees. Bees are poikilothermic organisms as an individual, also called cold-blooded or ectothermic organisms. These are those organisms whose body temperature depends on the temperature of the surrounding. But as a colony they act as homeothermic/warm-blooded/ endothermic organism which congregate around each other to maintain a uniform temperature of about 32-35°C, necessary for their survival. So, we need to see the world from their perspectives to find unique and effective solutions to our life problems.

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