

Diversity of Spiders and the free Economic Services by Them

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Spiders are polyphagous and feed on a variety of available prey. They not only prey on adult insect pests but also feed on their eggs and larvae. They help in maintaining the ecosystem balance. Spiders are good friends of farmers as they control all types of pests on the crop. Some spiders like *Geolycosa* and tarantulas, make burrow in soil and thus help in water percolation. Most of the spiders in nature feed on mosquitoes and protect us from Malaria and similar other mosquito borne diseases. Some Pisaurid and tetragnathid spiders feed on mosquito larvae. The mud wasps and some birds feed their young ones with spiders as spiders are rich in simple proteins.

The secretions of spiders are boon for human beings. For example Silk. Spider silk has high tensile strength, four to five times more than that of iron. Hence, the recombinant silk produced on large scale is used to manufacture cloth from which bulletproof jackets are manufactured. If spider silk rods of 5mm diameter are used in building construction instead of iron rods, earthquake proof houses can be constructed as silk is elastic. This is the nature's gift which is of great use for the army of any country. Parachute ropes can also be manufactured from spider silk. German scientists

have manufactured guitar strings from spider silk. Spider silk is antibiotic and hence surgical threads and bandages are prepared from the spider silk. This silk is biocompatible with human beings. Most of the birds internally line their nests with spider silk because the spider silk is smooth and antibiotic. If young ones are injured with grass-blades or their pointed tips, they do not get bacterial infection as they are in contact with antibacterial silk. Spider silk covering the egg sacs of spider reflects UV rays and thus protects the tiny delicate eggs. With this property, the spider silk is now a days used to manufacture UV reflecting cloths. Spider venom is used to manufacture medicines against cancer and now a days pesticides are also manufactured from spider venom. Astonishingly, the spider venom is not venomous for humans, only slight allergic responses are seen after envenomation.

According to the World Spider Catalog, Version 14.0 by Platnick (2013), the updated list documented 44,032 species of spider worldwide belonging to 3,905 genera and 112 families. However from India only about 1,600 spider species are known from 60 families.

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