

Allodapula bees are insects like honey bees. They do not make honey and for long people have perceived them as just insects and not bees. This factsheet intends to provide information about these bees so that the public familiarize themselves with these. The public should also be aware that honey bees are some of bees and there are other kind of bees, like these described here, that do not make honey but are important for other aspects of human wellbeing. Please enjoy reading and enlighten other people of these different bees.

Scientific Classification

Kingdom: Animal
Phylum: Arthropoda
Class: Insecta
Order: Hymenoptera
Family: Apidae
Subfamily: Xylocopinae
Tribe: Allodapini
Genus: *Allodapula* Cockerell, 1934



Species in the Genus

Bee species belonging to the genus *Allodapula* are known to occur only in Africa. *Allodapula* is not a large bee genus with only 16 species described (Eardley, Kuhlmann and Pauly 2010).

Representative Species in East Africa

Only *Allodapula variegata* has been recorded in East Africa (Eardley and Urban 2010). However, a comprehensive list of *Allodapula* species occurring in East Africa is yet to be produced and it is highly likely that more *Allodapula* species may be recorded.

Description

Allodapula bees are small dark and shiny. They mostly have dark head and thorax. *Allodapula* bees are solitary or have small colonies. The frequency of cooperative nesting is low compared with other species in the Allodapini tribe. Overall these bees are hardly known by both farmers in East Africa.

Economic / Ecological importance

These bees are important pollinators of crops and plants. In so doing, they enhance productivity of crops, which in turn provides farmers with more income from commodity sales. In addition, farmers have enough to eat, both quantity and quality wise. Ecologically, they pollinate shrubs and plants and ensure their reproductive success. Some of the shrubs are important in erosion control and are source of food to animals and wildlife. Their presence is a good indicator of ecosystem

Similar Taxa/Possible Causes of Confusion

Allodapula bees are commonly mistaken for *Ceratina* bees. The body of *Ceratina* bees is well sclerotized ("armoured") and robust, whereas *Allodapula* bees are weakly sclerotized and fragile looking.

Documented Distribution in Kenya, Tanzania, Uganda

Allodapula bees are known from a few Districts/Regions of Uganda, Kenya and Tanzania.

Habitats

Allodapula bees can be found in various habitats (land-uses) in East Africa such as grasslands, natural forests, wetlands, marshlands, open habitats, protected areas, farmlands, rangelands, woodlands, woodlots (forest plantations) and riparian areas.

Nesting Sites

Allodapula bees nest in dead wood. Some species are seen nesting in dead dry wood located inside termite mounds found in dry and cool undisturbed sites.

Crops Visited

Most *Allodapula* bee species in East Africa collect nectar and pollen from a wide range of flowering crop species belonging to different plant families. These bees are efficient pollinators of crops such as beans, cowpeas, simsim (sesame), passion fruits and apples.

Other Plants Visited

In East Africa, *Allodapula* bees visit various wild plant species (trees, shrubs, herbs, weeds, lianas) found in different habitats, notably those in the Fabaceae, Malvaceae, Rubiaceae and Asteraceae families. These bees prefer to visit plant species with small to large sized flowers of yellow, white, green, milk-cream and purple colours.

Threats

In East Africa, *Allodapula* bees and most other bee taxa are threatened by factors such as habitat degradation, agricultural intensification and misuse of pesticides. Information about the effects of their pests and diseases is lacking though these play important ecological role in regulation of population dynamics of species. Wood collection can affect nesting sites for these species. The lack of knowledge about these bees and their economic importance by the farmers is far the most serious threat to their existence. This is because conservation and management practices implemented at farm level depend to a large extent upon the value that farmers attach to the bees.

Conservation and Management Practices

Little information exists on the usefulness of these bees to the lives of the people in East Africa. However, there is concerted effort to improve on information collection, collation and use particularly to support crop production. Theoretically, bee conservation and management is inexpensive and adopted activities can also improve the aesthetic value of the landscape. Such practices involve setting land aside (e.g. a 1-metre strip) in the farmland to host all year round food resources for the bees, as well as safer sites for nesting, mating, resting and hiding from natural enemies. During flowering, farmers should manage pesticide usage carefully to avoid poisoning flower-visiting bees. Farmers should also minimise pesticide drift from the field to adjacent areas. Wood collection should be managed to conserve nesting sites of these species. KARI (the Kenya Agricultural Research Institute) is developing protocols for mass rearing of different species of solitary bees. Any successful results from this research will be freely communicated to the public. In addition, KARI is collaborating with other stakeholders to ensure in situ conservation and management of bees for pollination purposes. Much of the work of conserving native bees will be underpinned by raising public awareness of the importance of these species.

Legislation (National and International)

There is not yet any legislation in East Africa that explicitly addresses pollinators. However, there is scattered legislation for the protection of biodiversity particularly that covering environmental protection, protection of wildlife and heritage sites, protection of forests and natural resources such as water catchments. In addition, laws governing registration and use of plant protection products also indirectly play a major role in the protection of pollinators. Such legislation, together with market based regulations such as the Good Agricultural Practices (GAPs) codes, standards and regulations may help to protect bees albeit incidentally. Farmers should lobby their governments to develop Integrated Pest Management policies that would protect bees and other useful insects of importance in agriculture.

Sources of Further Information and Links

1. Eardley CD, Gikungu MW and Schwarz MP (2009) Bee conservation in Sub-Saharan Africa and Madagascar: diversity, status and threats. *Apidologie*, 40: 355–366.
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