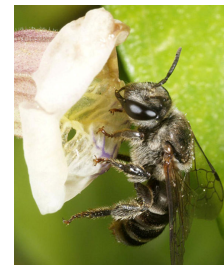


Lipotriches bees are insects just like honey bees but they do not make honey. *Lipotriches* bees are solid looking medium sized bees (7-12 mm in length) usually with a striped abdomen and metallic appearance. They look like *Nomia* bees but *Lipotriches* bees do not have pale hairless bands on abdomen. They live independently of others (i.e. are solitary) and build their nests in the ground. This factsheet intends to provide information about these bees to aid farmers in understanding them, protecting them and ensuring their crops get the best pollinator at times of flowering period. Please enjoy reading and enlighten other people of these different bees.

Scientific Classification

Kingdom: Animal
Phylum: Arthropoda
Class: Insecta
Order: Hymenoptera
Family: Halictidae
Subfamily: Nomiinae
Genus: *Lipotriches* Gerstaecker, 1858



Species in the Genus

Bee species in the genus *Lipotriches* are found throughout the Eastern Hemisphere though they are not present in Europe. It is a large genus with close to 300 described species.

Representative Species in East Africa

About fifty species have been recorded in different habitats in Kenya, Tanzania and Uganda (Eardley & Urban 2010) though a comprehensive list of *Lipotriches* species for the Region has not yet been produced.

Description

Lipotriches bees are not well known by local people (including farmers) and scientists in East Africa. They are solid looking medium-sized bees (7-12 mm in length). Most species are banded (dark coloured with narrow lighter bands on the abdomen or yellow with narrow black bands on the abdomen). Many species have short furry hair on the thorax and have a metallic sheen which makes them stand out.

Economic / Ecological importance

These bees are important pollinators of crops and plants where they effect pollination while collecting their food resources. In so doing, they enhance productivity of crops, which in turns provides farmers with more income from commodity sales. In addition, farmers have enough to eat, both quantity and quality wise. At ecological level, 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

Some insect species look like large *Lipotriches* bees: These are other Halictidae (*Nomia*, *Halictus*) and *Melitta* bees. They look like *Nomia* bees but *Lipotriches* bees do not have pale hairless bands on abdomen that are found on *Nomia* bees. These are easy to confuse with other *Lipotriches* species frequently encountered on flowering plants during peak blooming periods.

Documented Distribution in Kenya, Tanzania, Uganda

Lipotriches bees are found in most Districts/Regions of Uganda, Kenya and Tanzania (Eardley et al. 2009).

Habitats

Lipotriches 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

Lipotriches bees are solitary ground nesting bees (Michener 2007) .In Uganda, *Lipotriches* bees are commonly found nesting in termite mounds in shaded and dry places in different semi-natural habitats.

Crops Visited

Lipotriches bee species in East Africa collect nectar and pollen from various flowering crop species belonging to different plant families (are polylectic). These bees are efficient pollinators of crops such as cucurbits, coffee, water melon, cowpeas, simsim (jasmine) and apple.

Other Plants Visited

In East Africa, *Lipotriches* bees visit various plant species, notably those in the Fabaceae, Malvaceae, Rubiaceae and Asteraceae families. *Lipotriches* are wild bees that visit various wild plant species (trees, shrubs, herbs, weeds, lianas) found in different habitats. These bees have short tongues and feed on a variety of shallow flowers. They preferably visit plant species of small to medium flowers of yellow, white, green, milk-cream and purple colours. Certain species are characterized by high constancy of visit to certain plant species belonging to certain families.

Threats

ipotriches bees and other bees are threatened by factors such as habitat degradation and agricultural intensification (e.g., misuse of pesticides, tillage practices, hedgerow management). Information about the effects of their pests and diseases is lacking though these play important ecological role in regulation of population dynamics of species. Trampling by people and livestock can affect these ground-nesting 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 has been gathered and there have been no scientific or farmer efforts to conserve them. However, information is now being sought and best practices for conservation and management of these bees will be developed and utilised for improving crop productivity. 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. Trampling by people and livestock and tilling should be managed to conserve the nesting sites of soil-nesting 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 standards 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

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