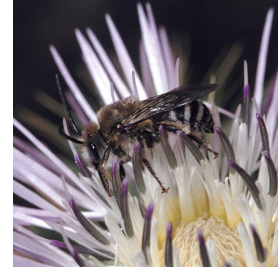


*Tetraloniella* bees are true bees just like honey bees but do not make honey that people can harvest. They do not make honey and for long people have perceived them as just insects and not bees. This factsheet intends to provide information about these bees so that the public can familiarize themselves with the bees. 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:** Anthophorinae  
**Tribe:** Eucerini  
**Genus:** *Tetraloniella* Ashmead



## Species in the Genus

Over 120 species belonging to the genus *Tetraloniella* have been so far been recorded in the world. Most species are known from North America.

## Representative Species in East Africa

Fewer than 30 *Tetraloniella* species are known from East Africa - Rwanda, Burundi, Kenya, Tanzania and Uganda (Eardley & Urban 2010).

## Description

*Tetraloniella* bees are not well known by local people (including farmers) and scientists in East Africa. They are medium-large sized bees that resemble honeybees. They are often have a striped abdomen and the males have long antennae. They are frequently found foraging in shaded environments and live independently (i.e. are solitary).

## 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

These bees can be confused with honey bees because they are similar in size. They can also be confused with some *Megachile* bees (leafcutter bees). They can be easily differentiated from honey bees as they do not have colonies and carry pollen in hairy brushes on the hind leg while honey bees have a pollen basket. *Tetraloniella* bees do not use leaves, as do most *Megachile* species, to construct their nests.

## Documented Distribution in Kenya, Tanzania, Uganda

*Tetraloniella* bees can be found in most districts and agro ecologies, from lowlands and coastal lands to the highlands. They will be found in forest lands, shrub lands, rangelands, farm lands, marshlands, plains and plateaus.

## Habitats

*Tetraloniella* bees are common in farmlands particularly those with some set-aside lands that can provide shelter and nests. They are also abundant in areas surrounding natural habitats. In Uganda, these bees are frequently observed in savannah and woodland and swamp edge habitats.

## Nesting Sites

*Tetraloniella* nest in the soil located in dry places.

## Crops Visited

*Tetraloniella* bee species in East Africa are polylectic; i.e. they collect nectar and pollen from various flowering crop species belonging to different plant families. These bees like visiting plants with blue, yellow, white and purple colours. Some species in the genus *Tetraloniella* have been observed in Uganda performing buzz pollination on tomatoes, egg plants and chillies. This makes them ideal candidates for greenhouse pollination of these crops in East Africa where tomatoes and egg plants are important fruits found in almost all markets. They are efficient pollinators of egg plants, tomato, chillies and coffee in Uganda.

## Other Plants Visited

*Tetraloniella* bees visit various wild plant species from various families, notably those in the Amaranthaceae, Malvaceae, Solanaceae, Asteraceae families.

## Threats

Just similar to other bees, *Tetraloniella* bees 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. Trampling by people and livestock can affect these soil-nesting species. The lack of knowledge of 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. 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. Wood collection should be managed to conserve nesting sites these wood-nesting. 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 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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