# *Paratrechina longicornis* (Longhorn Crazy Ant)

Order: Hymenoptera (Ants, Wasps and Bees)
Class: Insecta (Insects)
Phylum: Arthropoda (Arthropods)


**Fig. 1.** Longhorn crazy ant, *Paratrechina longicornis.*

[http://imgarcade.com/1/crazy-ant-identification/, downloaded 16 February 2015]

**TRAITS.** The longhorn crazy ant is difficult to misidentify due to its unique distinctions and crazy-like movements. Worker ants usually measure 2.3-3mm. The body has long hair-like projections called setae that are coarse and grey-white in colour (Fig. 1). The body and head are brown-black (Creighton, 1950). The eyes are located more to the posterior rim of the head and are powerfully convex and elliptical. The head is long and has narrow mandibles. Antennae are extremely long with 12 segments and without a club (an enlarged segment at the end of the antenna). The longhorn crazy ant lacks a stinger but they are capable of biting. The abdomen is curved forward and venom is injected via the acidopore during defence and predation. *Paratrechina longicornis* is commonly known as the longhorn crazy ant or just crazy ant but also in known internationally as hairy ant, black crazy ant and slender crazy ant among others.

**DISTRIBUTION.** *Paratrechina longicornis* is arguably the most dispersed of ant species (Wetterer, 2008). The longhorn crazy ant is found predominantly in warmer regions of the tropics and subtropics (Fig. 2). Although, sometimes found in temperate areas like Sweden and New Zealand, they are indoor pests there. The earliest record of *Paratrechina longicornis* in Trinidad and Tobago is 1895 (Wetterer, 2008), which is not the earliest arrival date of the insect but the earliest collection date of distribution data. Longhorn crazy ants were introduced to Trinidad and Tobago most likely from Africa or Asia since they can thrive easily on ships at sea.

**HABITAT AND ACTIVITY.** The longhorn crazy ant is known as a pest both agriculturally and in homes. They adapt very quickly to their surroundings, wet or dry, and can be found anywhere from ships at sea, plant cavities, rotting wood (Fig. 3), debris piles and beaches. The nest of *Paratrechina longicornis* can easily be found by following workers who collect food.

**FOOD AND FEEDING.** *Paratrechina longicornis* tend to be attracted to sweeter forage like crumbs, sugar and honey. They are omnivores and consume anything from insects (live or dead), seeds, fruits and many foods found in human homes. Throughout the year, the feeding preference changes. During summer they feed on high protein foods and during spring/fall they consume honeydew. Most workers are observed carrying their food back to the nest since foraging areas are far from nesting sites (Fig. 4). Longhorn crazy ants share a symbiotic relationship with hemipterans (plant suckers), insects which provide honeydew and in turn the ants provide protection from predators and parasites (Koch et al., 2011). Group work is common since large prey like lizards are carried by groups of workers to the nests. In colder climates, survival is ensured since they nest in homes and business where household food items like meat, grease and sugar are readily available.

**POPULATION ECOLOGY.** Longhorn crazy ants live in related groups as a colony. These colonies are usually small or moderately sized for ants, comprising about 2,000 workers (Urbanentomology.tamu.edu, 2015). These ants are considered pests and they are able to adapt to varying environments from dry to moist. Nests can be found in rotten wood, under stones and even in fallen trees. Inside, they can be found under floors or close to heat sources like hot water pipes. Longhorn crazy ants' nest are transportable and they can move to other environments if conditions are critical. Nests can survive in water as in beaches since air bubbles trapped within the nest keep the ant alive. The nests are built in the soil, or whichever environment they are found, with deep tunnels connected by a series of perpendicular channels containing a single entrance on the surface.

**REPRODUCTION.** The queen ant is the only one that is allowed to mate and she does this during a short period of time (Fig. 5). When she obtains the sperm, it is with her for the rest of her life span since they never re-mate. Generally, in the animal kingdom, inbreeding results in loss of genetic variation and might make an organism less fit but the longhorn crazy ant is not affected by this. Usually, mating occurs year-round but in places like Florida, it is reserved for the months between May and September. Queens live for up to 5-30 years and are the longest living insects. Workers live from 1-3 years and reproductive males live for a few months since their only purpose it to mate. The eggs which contain daughter queens are produced annually. The longhorn crazy ant goes through complete metamorphosis since the eggs develop into larvae which develop into pupae which then develops into adults. The larva is fed a highly nutritious substance secreted by workers. The eggs laid by the queen is cared for by herself. She feeds her young with saliva and she fasts

during this time. Since her wings are no longer attached, the unwanted wing muscle is used for food.

**BEHAVIOUR.** Young queens usually leave the colony to make a new one elsewhere. This is achieved by the queen after she has mated outside her birth colony. Her wings are shed and she searches for a place to lay her eggs. This will be the starting of a new colony. When the scent of an enemy is picked up, the longhorn crazy ant attacks and kills it. The longhorn crazy ant lacks a stinger but they are capable of biting. The abdomen is curved forward and venom is injected via the acidopore during defence and predation. Olfactory communication (scent marking): the scent is different from other ant species or predators. Once the ants have picked up on a foreign scent, they attack and kill the organism. The longhorn crazy ant used its 12-segmented antennae as a sense organ to 'hear' vibrations as they lack ears. Also the antennae is used for the other senses such as smell, touch and taste. Ants see each other's movements with their compound eyes. Movement is more noticeable to the ant than shape.

**APPLIED ECOLOGY.** *P. longicornis* is not listed by IUCN and there is no conservation threats or actions against this species. They are not utilized by harvesting, hunting, or as pets. *P. longicornis* is a pest to most of the human population in subtropics and tropical areas in outside environments. To people living in temperate conditions, *P. longicornis* is an indoor pest. Removal of food sources from reach of the ant is one method to eliminate them since they are attracted to sugars and proteins. Homes should be properly sealed to prevent nesting in crevices. The longhorn crazy ant could be dealt with chemically but this solution is only temporary. Treatments that are applied to worker ants happen when they are foraging for food. They forage far from the nest so the queen is not affected thus the colony will still thrive. Aquino et al. (2013) found that *P. longicornis* was the most abundant ant species present in 6 out of 12 hospital sectors studied. The longhorn crazy ant was also shown to be contaminated with different fungal taxa hence confirming it as a major carrier on bacteria within hospitals.

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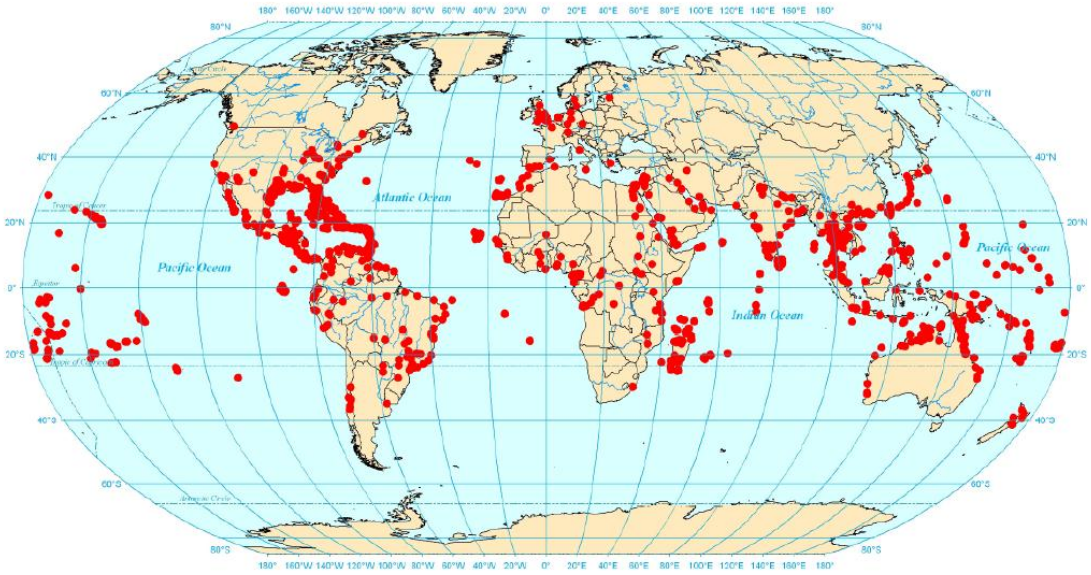


**Fig. 2.** Longhorn crazy ant worldwide distribution.

[http://www.tsusinvasives.org/dotAsset/d3fce2f4-cc55-4966-b157-fcdc7ae60866.pdf, downloaded 10 March 2015]

**Fig. 3.** Longhorn crazy ant nesting in rotting wood.

[http://ak.picdn.net/shutterstock/videos/805897/preview/stock-footage-nest-of-small-black-ants-on-the-side-of-a-tree-trunk.jpg, downloaded 28 March 2015]

**Fig. 4.** Teamwork of the workers to carry a termite back to the nest.

[http://www.alexanderwild.com/Ants/Taxonomic-List-of-Ant-Genera/Paratrechina-longicornis/i-B7Dbqt2/1/S/longicornis3-S.jpg, downloaded 6 April 2015]


**Fig. 5.** The longhorn crazy ant queen

[http://antsofafrica.org/ant_species_2012/paratrechina/paratrechina_longicornis/paratrechina_longicornis_queen_forel_casent0101797.jpg, downloaded 3 April 2015]