

Queen Control

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In a termite colony, the queen termite is the central figure which performs the vital task of procreation by laying thousands of eggs per day to give rise to the enormous number of termites within the colony. She does not work and rarely moves, but grows to very large size in the queen's chamber.

There is usually one queen per colony although in some species, such as *Prohamitermes mirabilis* Haviland, there may be as many as three queens in the same chamber. The queen is not physically equipped with defensive tactics or protective devices, but it is known to be one of nature's longest living insects (up to 10 years). The secrets of longevity of the queen hinge heavily on the special foods fed to her by worker termites via trophallaxis, the benefits of which include organic acids (lactic acids, propionic acids, butyric acids etc.) that are natural disinfectants to pathogenic microbes, antioxidants such as ascorbic acid that clean the aging-causing free radicals, and detoxification enzymes and molecules such as cytochrome P450 and glutathione S-transferases that degrade environmentally hazardous substances. The queen also commands a team of loyal workers who help upkeep her hygiene and cleanliness, and repair any damage to the chamber. In addition, the queen produces pheromones that allows her to deploy a faithful army of soldiers to defend her from predatory attack. If the queen were injured with open wounds, the soldiers will move in instantly to 'staple' the wound with their powerful mandibles until the wound heals. This grand dowager is undoubtedly the wonder queen of nature.



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