

Termites - Social Insect

Ent-307



Termites



Commonly called as white ants

Important families

Kalotermitidae

Rhinotermitidae

Termitidae



Classification

On the basis of habits

1. Soil inhabiting termites

- Form their colony in ground, soil
- Further subdivided into
 - Subterranean termites
 - Desert termites
 - Mound building termites
 - Carton-nest-building termites

2. Wood inhabiting termites

- Colony in wood

Castes

REPRODUCTIVE

- King
- Queen
- Colonizing individual
(winged form)
- Complementary caste
(short-wing or wingless)

STERILE

- Workers
- Soldier

Reproductive caste

King

- Develop from unfertilized egg
- Consume superior diet
- Father of colony
- Lives with queen in Royal Chamber
- Life is shorter than queen
- When dead, replaced by new one

Queen

- This is only perfectly developed female
- Develops either from colonizing individuals or from complementary caste
- 1 queen in a colony
- Lives 5-10 years
- According to some reports, may live up to 20 years

Fungus garden: Fungus grows near the royal chamber to feed the royal pair

Colonizing individuals

- Winged form
- Comprising both sexes
- Produced in large numbers only once in year
- Capable of establishing new colony

Complementary caste

- Short winged or wingless
- In the event of untimely death, they replace the king and queen

Sterile caste

Workers

- Developed from fertilized eggs
- But remain stunted as they feed on ordinary food
- Most abundant in colony
- Smaller than soldier
- Well-developed mandibles

Function

- Take care of eggs and young ones
- Feeding queen
- Collection of food
- Construction of house known as termitarium

Soldier

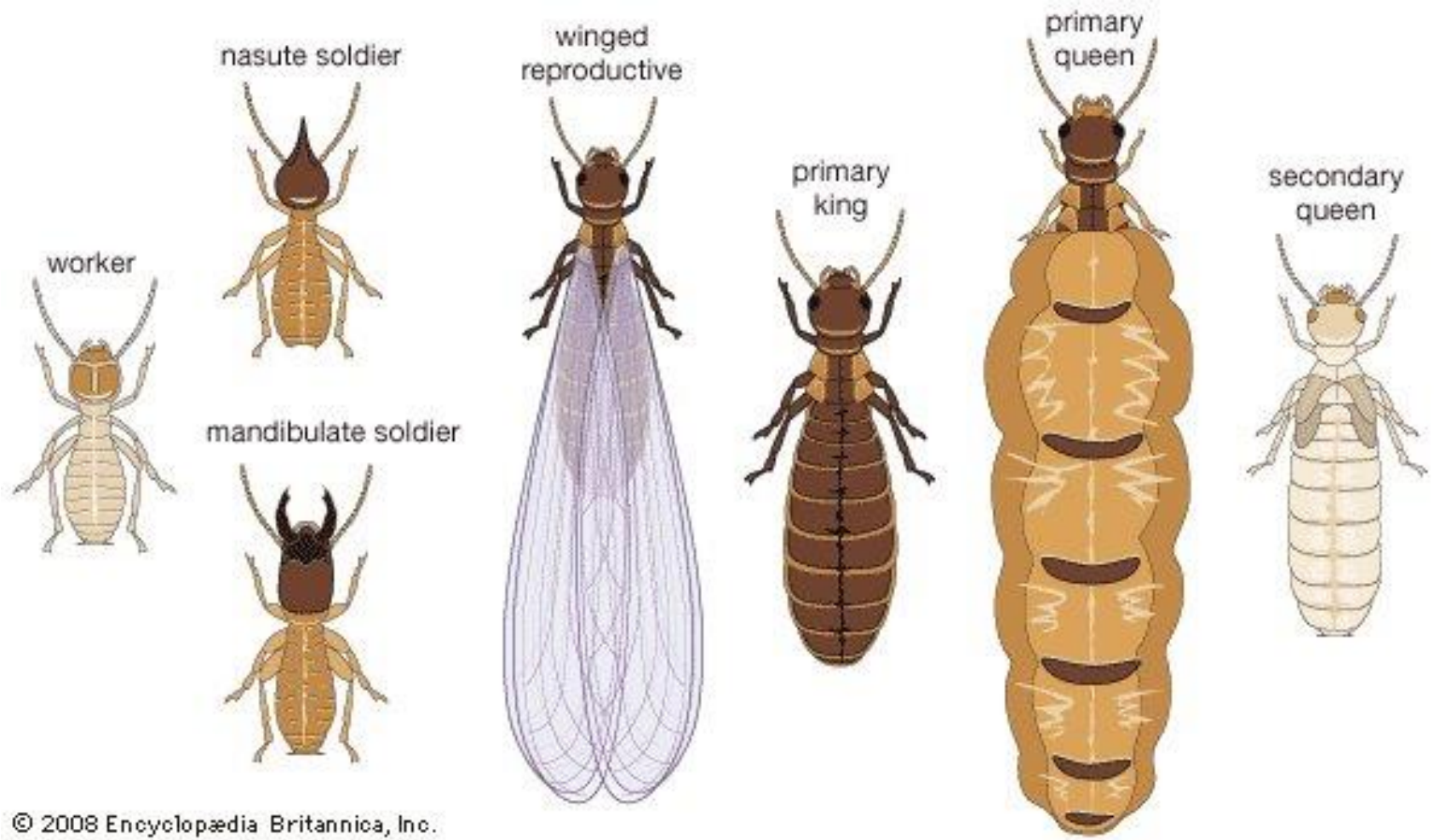
- Develop from unfertilized eggs
- Two types of soldier

(1) Madibulate

- Well-developed jaws
- Defend the colony by fighting

(2) Nasute type

- Smaller jaws
- Repels the enemy by spraying obnoxious smelling liquid through their rostrum





Description of stages

Eggs

- Males live for a long time and mate repeatedly with the queen
- 1 egg/ second or 70,000 to 80,000 eggs in a day
- Egg Laying machine
- Hatching in 1 week

Nymphs

- Nymphs are similar in appearance to workers
- Soon begin to show minor differences and develop into different castes at the final molt
- Within 6 months they develop to form soldiers and workers

Adult

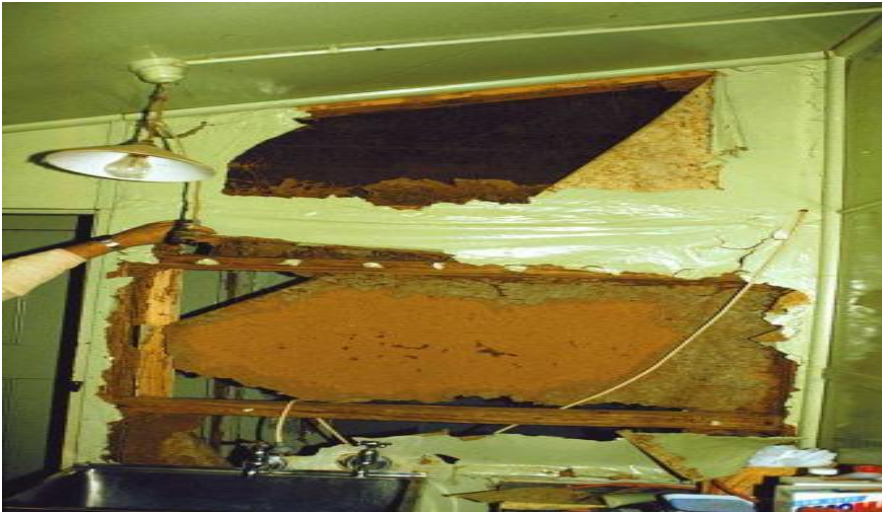
- King and queen have two pair of long, narrow and whitish wings
- Wings are almost same is size and appearance thus the name of order is ISOPTERA

Life History

- Colonizing individuals comprising both sexes leave the colony in monsoon when temperature is favorable
- Since they are weak fliers, cant travel long unless aided by wind
- Attracted to light
- Wings are meant by nuptial flight
- Wings drop off after mating
- Most of them are eating by predator while a pair that survive start a new colony at suitable place
- In beginning, few eggs are laid
- Newly hatched nymph fed by parents
- Nymph develop into workers and take over all the brooding

Damage

- Termites live on cellulose which they obtain from dead and living vegetables matter
- To obtain their food, they destroy wood work, articles of household, wooden material that comes into contact with the soil





Control

- When a colony is established, it becomes difficult to control until termitaria is located and queen is killed
- Wooden structure of buildings should be constructed on the cement layer and should not directly touch the ground
- 0.5% chlorpyrifos @ 5 liter/m² to the soil beneath the building and around the foundation
- Pre and Post-construction treatment