

Order: Phasmidae

Order: Dermaptera

Order: Embioptera

**Dictyoptera (Cockroaches and Mantids)**



### Characteristics :-

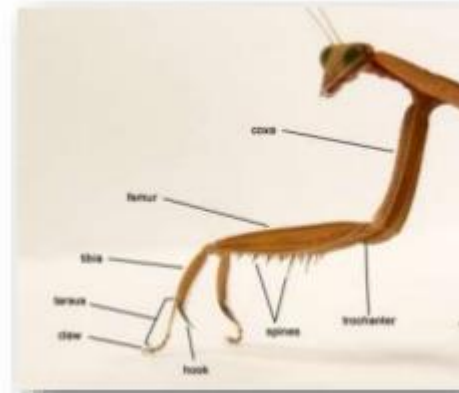
- Medium to large sized insects
- Filiform antennae
- Biting mouthparts
- Legs similar to each other or in Mantids fore legs raptorial
- Fore wings are thickened to form tegmina, and the tarsi are 5-segmented
- Eggs present in an ootheca. Female with reduced ovipositor and male with asymmetrical genitalia which bears a pair of styles.
- Cerci many-segmented
- Specialized stridulatory and auditory organs absent.

## General Characters

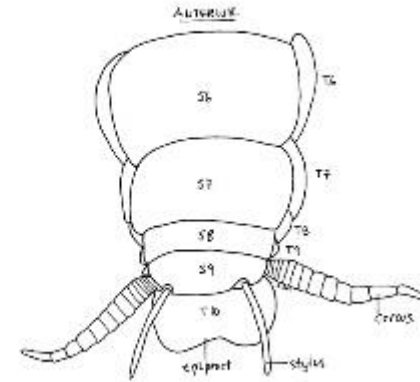
- 🦗 Body : Medium to large sized insects
- 🦗 Head : Usually hypognathous
- 🦗 Antennae : Filiform or setaceous
- 🦗 Mouth Parts: Chewing type



- Thorax : Prothorax usually larger than meso and metathorax
- Wings : Forewing leathery – tegmina ; hindwings – membranous and folded, fanlike
- Legs : Forelegs are Raptorial in Mantids and Cursorial in Blattidae



- Male genitalia is asymmetrical.
- On 9<sup>th</sup> segment pair of styli.
- Cerci many segmented.
- Cerci > Styli



## SUB-ORDERS

**BLATTARIA**

- Polyphagidae
- Blaberidae
- Blattidae
- Epilampridae

**MANTODEA**

- Amorphoscelidae
- Eremiaphilidae
- Hymenopodidae
- Mantidae
- Empusidae

## BLATTARIA

- Head is not mobile in all directions.
- Pronotum is shield like and covers the head.
- Body is flattened and dark coloured .
- Antennae long and setaceous.
- Legs are cursorial type.
- Ootheca is chitinous.
- They are omnivorous.
- Common family : Blattidae :  
eg. American cockroach

## MANTODEA

- Head is mobile in all directions.
- Pronotum is elongated and do not cover the head.
- Body is elongated sometimes cylindrical.
- Antennae long, setaceous and may be filiform in some species.
- Legs are raptorial type.
- Ootheca is not chitinous.
- They are carnivorous.
- Common family : Mantidae :  
eg. Preying mantids

## Family : Blattidae

- Antennae long and setaceous
- Forewings prominently tegmina
- Legs similar to one another
- Tarsi 5-segmented
- Ovipositor reduced and concealed under the 7<sup>th</sup> abdominal sternum
- A pair of many segmented cerci.
- They are mainly household pests.

ex. American cockroach, *Periplaneta americana*

German cockroach, *Blattella germanica*





## الانواع المعروفة في العراق

هناك ثلاثة انواع معروفة في العراق وهي

1- الصرصر الامريكي

*Periplaneta americana*

2- الصرصر الالماني

*Blatta germanica*

3- الصرصر الشرقي

*Blattella orientalis*



## Family : Mantidae

- Usually large insects having elongated and cylindrical body.
- Forelegs modified as raptorial with spines on inner-ventral side of fore-femurs.
- Antennae comparatively shorter and filiform.
- Pronotum is elongated and do not cover the head.
- Nymphs are cannibalistic.
- Mimic leaves and flowers.
- Predators on crop pests.

ex. Praying mantis, *Mantis religiosa*.



# **ISOPTERA**

(Termites)

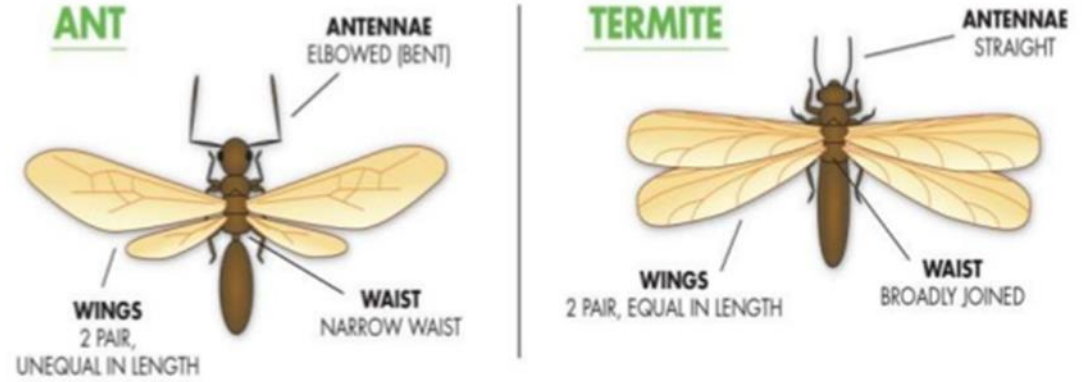


# الفرق بين النمل الحقيقي والنمل الابيض

الاختلافات هي

- 1- اللامس
- 2- الاجنحه
- 3- ارتباط الصدر بالبطن
- 4- اللون

## WHAT'S THE DIFFERENCE BETWEEN A FLYING ANT & AND TERMITE?



## Caste system in Termites

هناك خمس مستويات ضمن مملكة النمل الابيض وهي

1- الملكة والتي هي الالهة

2- الملك

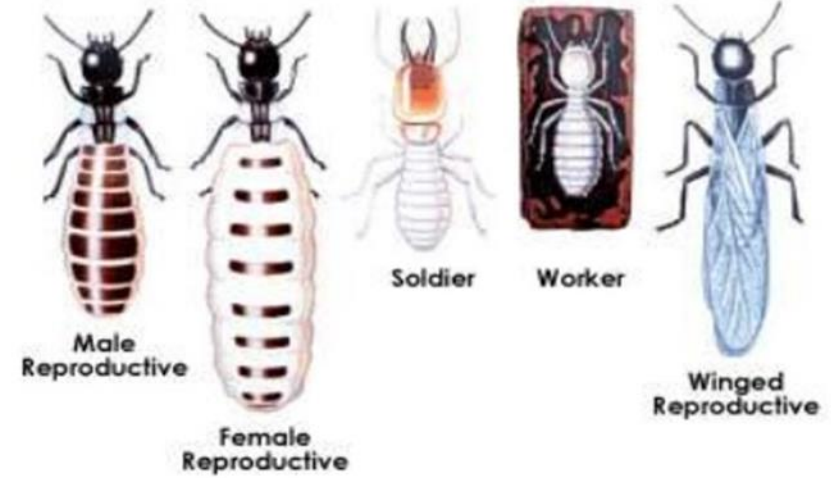
3- الجندي وهو المسؤول الدفاع عن المملكه

4- العاملات وهي داينمو الخليه وعلى كاهلها يقع العمل

5- الذكور

6- التكاثرية المجنحة

Termite Caste



Termite nests



تعيش الارضه اما في داخل التربة او خارج  
التربة على شكل تلال او انها تعيش على  
الاشجار

Termite Damage

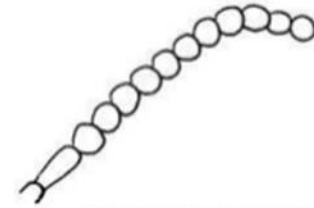


ومن اضرارها انها تصيب الابخشاب داخل  
المنازل مما تسبب الضرر الجسيم للاثاث  
والابواب وغيرها من مكونات المنزل  
الخشبيه

# Damp wood termites

## Termitidae

- ✦ Antennae: Moniliform
- ✦ Wing have colour
- ✦ Forewing have scale
- ✦ Scale of forewing < pronotum
- ✦ Pronotum is saddle shaped



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# dry wood termites

## Kalotermitidae

- 🐜 Ocelli absent
- 🐜 Radius vein have 1 or 2 anterior branches

