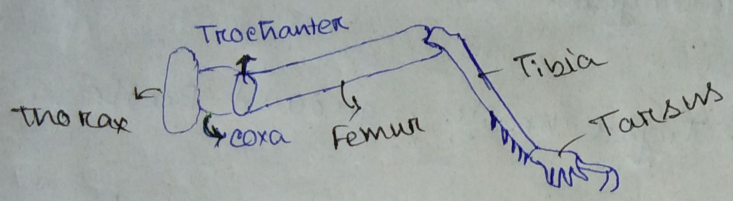
Insect's Leg

All Insect have 3 Pair of legs. It help in movement and several other function. In 3 pair of legs, the 1st Pair is located on Prothorax, called Proleg. The 2nd Pair of is located on mesothorax, called meso leg. The 3rd Pair is located on metathorax, called hind leg or meta leg.

• Parts of Insect Leg :→

Each Leg have 5 major segments- coxa, trochanter, Femur, Tibia, Tarsus.



coxa → coxa is the basal part of insect leg and linking the thorax and trochanter together.

Trochanter → It is the 2nd segment, it is a small segment and links coxa and trochanter.

Femur → It is the largest Leg segment and most variable in shape and is 3rd from the base

Tibia → It is the 4th segment from the base. It is long and slender. It articulates proximally with femus and distally with basitarsus

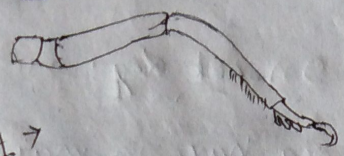
Tarsus → It is the 5th segment from the base. It is the terminal part of the leg. It basically consist of 2-5 tarsomere. on the lower side of ~~to tre~~ tarsomere have pairs of adhesive pads called the pulvilli. Basal side of tarsus called basitarsus and terminal side is called pretarsus. Pretarsus bears 1 pair of movable claws and one unpaired median pad called arolium

Types of leg :=>

① Ambulatory leg :=> (Most common form)

- Most simpliest form of leg.
- It is walking type leg.
- It is thin and elongated in str.

Found in → Boxelder bug, cottonwood leaf Beetle, walking stick. (3 pair of leg)



① cursorial (running) leg →

- it is similar to ~~abu~~ ambulatory leg in shape
- It is thin and elongate but it is modified for running.

e.g → cockroach, Tiger beetle, ground Beetle.

~~Fig~~ →

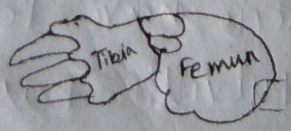
Fig →

② saltatorial (jumping) leg →

- It has very long femur and tibia.
- Femur is provided with very strong muscle which provide force for jumping.

e.g → Metaleg of Grasshopper and cricket, Flea

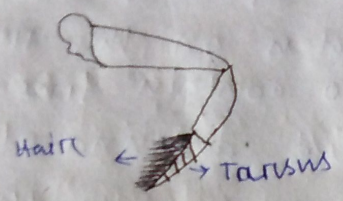
③ Fossorial (digging) leg :=>



i) segments are reduced and flattened to become strong for digging.

ii) The tibia has finger like processes on the apex.
iii) The tarsus also have finger like process of below the tibia
e.g → Fore leg of Mole cricket and cicada nymph ~~(Fore leg)~~

④ Natatorial (swimming) Leg :⇒



i) It has flattened segments and elongated setae or hair like str on tarsus which help insect in swimming.
e.g → Meso and meta leg of both Giant water bug and whirligig beetle.

⑤ Raptorial (Grasping) Leg :⇒

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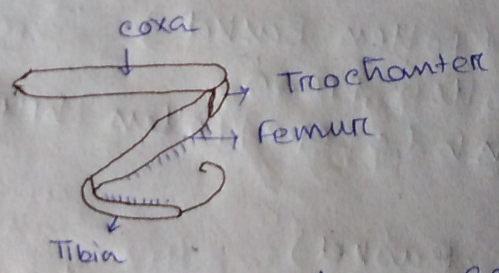
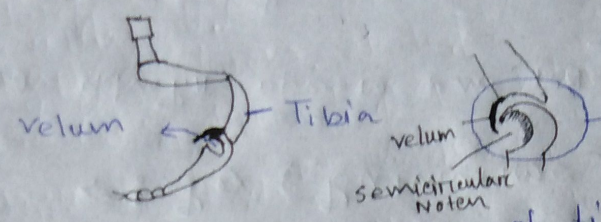


i) In this type, it has large coxa and trochanter.
ii) Femur is broad and double ~~row of~~ line of spines
iii) Tibia also have double row of spines and
iv) This type of leg help the insect in grasping it's prey
e.g → Fore leg of Giant water bug and water scorpion and praying mantid.

⑥ Antenna cleaner leg →



i) There is velum on the apex of tibia which fits into a semicircular noten on the proximal of basi tarsus. This Noten also contain fine hair. This whole str. is called antenna cleaner.

The antennae is drawn through this str. so that pollen or other particle can be removed.

e.g. → In honey bee and bumble bee the fore legs are antennae cleaner.

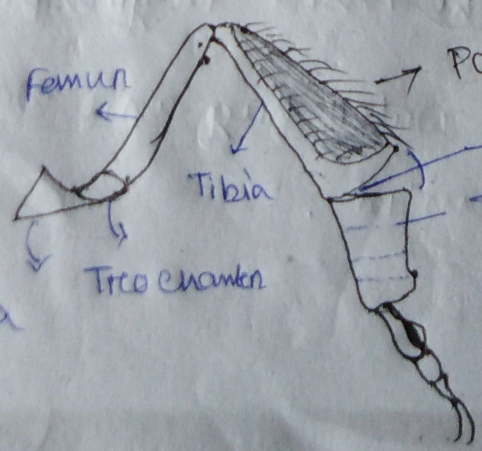
⑦ Pollen collecting leg :→

Pollen collecting leg have 3 main part—

i) corbicula (Pollen Basket)
ii) Auricle (pollen press)
iii) pollen comb (scopa / Pollen brush)

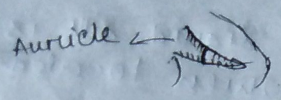
i) corbicula (Pollen Basket)

A smooth area on the outer surface of tibia is bordered on each side of long hair, which serve as pollen basket.



2. Auricle (Pollen press)

Proximal end of Basitarsus have a small ear like lobe called Auricle that bears a row of small hair. By flexing the leg pollen is packed into the pollen basket with the help of this auricle.



3. Pollen combs

The basitarsus of pollen collecting leg is greatly enlarged. It bears on it's inner surface several transverse rows of stiff hair which called scopa. also called pollen combs

~~e.g → meta~~

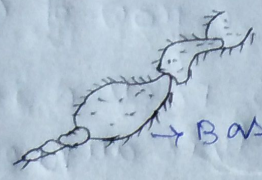
e.g → Meta leg of worker honey bee is pollen collecting leg.

(8) Scansorial (clinging) leg :=>

In scansorial leg a single claw folds in front of thumb like spinose process of elongated tibia help in clinging ~~to~~ the hair of host.

e.g → In human louse all ~~of~~ the 3 pair of legs are ~~and~~ clinging type.

9) Silk secreting leg :→



In this type of leg Basitarsus is greatly enlarged for the presence of silk gland. The liquid silk is ejected by by silk ejectors which located on the ventral side of basitarsus.

e.g → In web spinner fore leg is silk secreting type.

⟹ These are the types of legs that are adapted to diverse habitat.