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3. Basement membrane: It is a very thin (up to 0.5 μm thick) non-cellular layer lying beneath the epidermis. The epidermal cells stand on it. It appears to be amorphous granular under the electron microscope.

The external surface of cuticle bears a number of fixed processes, such as spines, horns, minute fixed hair, tubercles, etc., and movable appendages, in addition to the segmental appendages, like setae and spurs.

*includes pointed
processes out growth of cuticle*

DIVISION OF BODY

The body consists of a series of joints or segments which are grouped into three regions or tagmata (sing. tagma), viz., head, thorax and abdomen.

HEAD

This is the first region of the body. If you press the head from top, it clearly becomes demarcated from the thorax. The hard outer covering of the head is the head capsule. This type of head having the mouthparts (see their types under INSECT APPENDAGES) on its lower side and projecting downward is called hypognathous. Compare this type of head with that of a beetle and a bug. In a beetle the head is of prognathous type in which the mouthparts are on the front side and project forward. In a bug it is of opisthognathous or opisthorhynchous type with the mouthparts on its lower side in the form of a proboscis projecting backward. The head is made up of 6 segments, fused together to form a box-like structure, the cranium.

First of all examine the front side of head (Fig. 14A). Its upper half is the frons. It has a median longitudinal furrow, the frontal furrow which bears a tiny median ocellus (simple eye) in it. Note an ocellus has a single lens. On upper one-third of the frons, there is a grooved high ridge, the frontal costa. The groove of the frontal costa merges below into that of the frontal furrow. On the sides of the frontal costa are depressions, the antennal sockets. From each socket arises a thread-like antenna (see its parts and types under INSECT APPENDAGES). On the margin of an antennal socket, just inner to the anterior end of a compound eye, lies a lateral ocellus (pl. ocelli). Below the frons is an other somewhat raised sclerite, the clypeus. It is separated from the frons by a transverse frontoclypeal or epistomal sulcus. The clypeus is partially divided by a trans sulcus (only clear from sides) into two parts. The anterior narrow part is the anteclypeus while the posterior broader part is the postclypeus. Below the clypeus is an other sclerite, the labrum. It is separated from the clypeus by a transverse clypeolabral sulcus. On each side of clypeus and labrum the grooved outer surface of the mandible is visible. See the mandible by lifting up the labrum with your dissecting needle. Also note the segmented maxillary and labial palpi (sing. palpus) on the sides of the mouth.