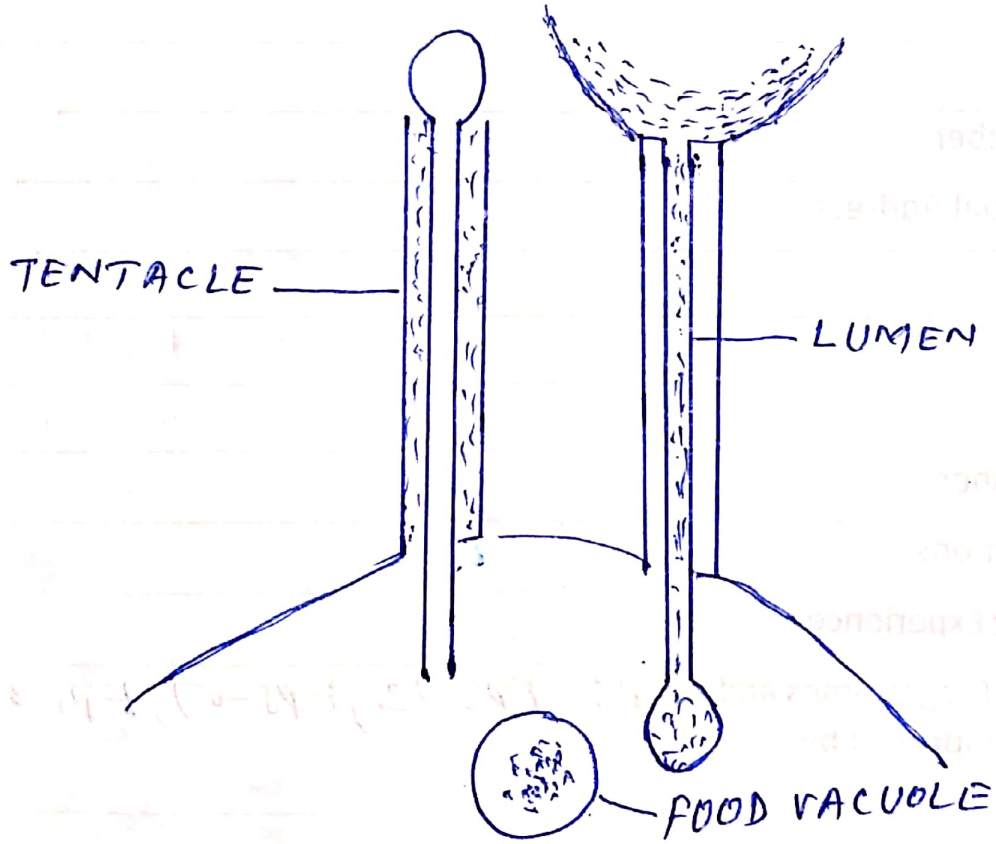
DIGESION: It is intracellular and usually takes place in the food vacuole. The ingested food particles enter into the endoplasm and are surrounded by a film of water forming food vacuole. Before ingestion in a number of species, the prey is paralysed or killed upon contact with Pseudopodia, tentacles or trichites. In other cases, prey is taken into food particles alive, where activity stops probably due to some substances secreted into food vacuole by the protoplasm. Numerous chemical changes take place in the food vacuole and it passes through two places.

Usually the reaction is at first acidic and becomes alkaline later. Proteolytic enzymes (Proteinase, Peptidases, etc), carbohydrate splitting enzymes (amylase, cellulases etc) and lipolytic enzymes are found in different Protozoa. These enzymes are enclosed in lysosomes, which invade the food vacuole and digestion takes place. During digestion, the food vacuoles are often seen moving in the endoplasm in a definite path (e.g: Paramecium, Euplotes carchesum, etc), which is called cyclosis. This probably helps in quick digestion and distribution of the digested food.

Assimilation: The digested products pass into the adjacent cytoplasm from the food vacuole by diffusion and form small cytoplasmic nutrient vacuoles. These

then migrate to the site where they will be used for structural and energy metabolism.

Egestion: The undigested food is expelled from the body at any point on the surface in many Sarcodina by a reverse process of ingestion. In pellicle bearing protozoa, egestion takes place through a definite spot called cytopyge, either located at the posterior end (e.g. Paramecium) or open into the cytopharynx (e.g. Vorticella).



SUCTORIAN FEEDING ON PREY