

adherence of the material to a viscid substance, and a gradual entanglement and sinking of the food into the body, but through an active extension or flowing of the ectosare over it, with or without the aid of the pseudopods. In the naked forms, the inception may occur in any position of the exterior surface of the body, but, according to the researches of Prof. Duncan,* would appear ordinarily to take place at the posterior extremity, where the endosare is nearest to or actually reaches the surface. Some of my latest observations apparently confirm this view.

Whatever may be the position of ingestion in the naked Lobosa, excreta are ordinarily discharged at the posterior extremity of the body adjacent to the position of the contractile vesicle. Although there is no true vent, like the positions of the contractile vesicle and nucleus, the position of discharge of excrement maintains a certain degree of constancy.

In the shell-covered Lobosa, the food and water are ingested at the mouth of the shell, usually through the agency of the pseudopods, and the egesta are discharged in the same position at the base of the pseudopods, if these happen to be protruded.

Many of the Lobosa exhibit, among the constituents of the endosare, variable proportions of clear, colorless or yellowish oil-globules, and also starch-granules. The latter are no doubt often swallowed as part of the food; but in many cases they appear as if they were an intrinsic element of the endosare.

Most of the naked Lobosa frequently contain in the endosare more or less angular particles of quartz sand; sometimes a few grains, sometimes in large and truly astonishing quantities. The shell-covered Lobosa usually do not contain this material, at least in any obvious quantity.

Another frequent constituent of the endosare, especially in some of the Amœbæ, consists of minute crystals, often quite distinct, though it is not easy to make out their exact form and constitution. They sometimes appear as octahedrons, rhombohedrons, and hexagonal tables. Auerbach† supposes them to be of a fatty nature; Carter‡ describes them as octahedrons, or modifications of the same, and as probably consisting of oxalate of lime; and Wallich§ speaks of them as rhombohedrons, probably of ear-

* Popular Science Review, 1877, 217.

† Zeitschrift f. wis. Zoologie, 1856, 309.

‡ Annals and Magazine of Natural History, 1863, xii, 331.

§ Ibidem, 1863, xi, 434; xii, 135.