RADY, GEORGE STEWARDSON. On Fucitrogus rhodymeniae, a gall-producing opepod. Jour. Roy. Micros. Soc., 1894, pp. 168--170; pl. 5, fig. 3.

In 1891 Miss Ethel S. Barton described certain galls on marine al-ae, Rhodymenia palmata, and sent me some of the Copepods from the cavi-s of the galls. Some were well known free-swimming species, whose presence in the galls must have been accidental, but there were others of an unknown type and quite abnormal in structure, which I believe to be active agents in producing the galls. I have not yet seen the living copepod and the few specimens sent have not rendered the struc-ture altogether clear. An examination of the living animals would do much to elucidate many points now obscure. Yet from what has been made out I see little reason to doubt that the creature is a permanent inhabitant of the gall cavity, and that the gall is probably produced by it. I have come to this conclusion for the following reasons....

First the shape and general degenerate conditions, which are those characteristic of many parasitic crustacea; secondly the apparent suctorial character of the mouth; thirdly the structure of the mouth organs, which approach more nearly those of some of the Ascidicolous species than to any free living forms; lastly the absence of any appen-dages adapted for creeping or swimming. As this species cannot be placed under any of the three sections (Gnathostoma, Poecilostoma, Siphon-ostoma), which following Thorell I have previously adopted, I propose to institute provisionally for its reception a new section, CHONEOSTOMATA, (CHONE, a funnel and STOMA, mouth). Genus FUCITROGUS, n. gen. (Trogo, gnaw). Fucitrogus rhodymeniae, sp. n. Length 0.50 mm.

Body broadly ovate, widest in the middle, produced at the posterior extremity, showing little or no trace of segmentation. There is a well-marked pharynx and digestive cavity anteriorly, the boundaries of which are defined by distinct chitinous bands, and are cor-rugated behind so as to form something like a gastric mill. The median portion of the digestive canal has not been traced, but there is a dis-tinct anus in the midline at the posterior end of the animal. The oral opening is situated in the middle of what appears to be a protrusible proboscis, and is probably suctorial. Its margins are covered with mi-nute cilia; immediately within the orifice at each side is the mandible composed of 3 strong and rather blunt teeth. There are two pairs of antennae, each consisting of a single segt terminated by 3 or 4 setae, and a little behind these is a pair of similar appendages with stouter setae, which may perhaps be looked upon as mandibular palps.

Considerably behind these, and about on a level with the hinder portion of the gastric cavity, are the two most conspicuous ap-pendages, each consisting of a large triangular chitinous base, to the distal end of which is attached a group of 5 stout fusiform processes (somewhat like miniature fir cones), which are beset on all sides with slender lateral setae. Four of these processes are of about equal length, but the distal process is twice as long as the rest, and is se-tose only on its outer margin.

Nearer the base of the chitinous support are 2 fascicles each composed of 3 long, simple setae. These two sets of appendages, together with the setiferous bodies, may perhaps represent the maxillae and maxillary palps. In some cases these organs are thrown forward,

projecting in front of the mouth like a couple of horns. Considerably further behind and more removed from the median line is a pair of appendages (mxpds ?),bearing two strong tooth-like processes and 5 or 6 long setae,while near the base of the appendage is an elevated circular disc bearing a crown of tentacular cirri. Still nearer the median line is a simple seta,elevated on a papilliform base,beneath which is a circular aperture (genital ?). Near the posterior end of the body are tufts of ciliated setae.

My impression on first examining this creature was that it might perhaps be a naupliform stage of some higher crustacean,but this view can scarcely,I think,be entertained,the general condition of the appendages being much more in accordance with the idea of retrogression arising from parasitic habits. The views here expressed and the names applied to the various appendages must be taken as purely tentative and provisional. The animal is to a large extent anomalous,and some of the parts(maxillae,tentacular cirri) are so unlike anything known in other entomostraca that their true nature must be left to future investigation.