

SECTION I. INTRODUCTION

The numbers of Lophocateres pusillus Klug. occurring in badly infested paddy in Trinidad and British Guiana are sufficient to raise the question as to whether the damage they cause is insignificant, and to suggest a more detailed study of the life history than was undertaken by Chittenden in 1916.

Although L. pusillus has been known for over half a century, the literature on it is limited to short notices in connection with its technical description or records of its occurrence in new localities.

According to Chittenden (1905), L. pusillus made its first appearance in the New World in 1893 when it was first observed in rice and other exhibits from Siam, Ceylon and Liberia at the Worlds Columbian Exposition in Chicago. It was not until 1905 that it became established on the North American continent. Chittenden (1916) reports its occurrence firstly in 1903 in corn in Peru, then in 1904, in rice from Java, and in 1906 in rice from Guatemala, where it also occurred on black beans: and is of the opinion that L. pusillus arrived in North America via Charlestown, S.C., where millers had for some years been importing rice from Siam and other points in the Orient.

In 1909, states Chittenden (1916), it was reported on eggplant and gourd seeds, and beans from Siam; in rye and flour in Texas, and in paddy imported into the U.S.A. from India and traced to Demarara.

Reyne (1924) found L. pusillus on Sesamum seed in Surinam. In 1926 Roepke reported that he had observed the insect attacking stored shelled rice in Java, but doing little harm. Zacher (1926) found L. pusillus in macaroni in Germany. In Malaya Corbett and Padgen (1941) noticed that rice in the bush was only <sup>? husk</sup> suitable to the insect if the husks were damaged. Larvae of L. pusillus were discovered feeding on damaged tissues of dried bananas from the Ivory Coast, examined at Marseilles by Clement in

1945. Landani and Swank (1954) used L. pusillus in tests of Pyrethrum in wheat in Georgia. Lastly, Baeta Neves (1954) reports its presence in Portugal in stored products.

L. pusillus is worldwide in its distribution and apart from the original description, no work has been done in the investigation of the life history and habits of this insect. Cliff's description, as given by Whittaker (1916) is as follows.

Genus Lophoceros Cliff.

Head nearly quadrate. Eyes small, lateral, not prominent. Antennae 11-jointed, basal joint large, with inner angle much produced, 2nd joint short, 3rd rather longer, 4th to 7th transverse and very short, last four forming a gradually elongated club, of which the joints increase in breadth as they approach the apex. Mandibles robust, inner margins straight, apex slightly incurved. Maxillae with both lobes narrow and sharply pointed, the inner much shorter. Maxillary palpi three-jointed, the basal very small, the 2nd rather longer, the 3rd longer than the 1st and 2nd together, rounded at apex. Labium with anterior margin rounded. Labial palpi 2-jointed, of which apical is somewhat the longer. Prothorax transversely quadrate, rather strongly narrowed laterally. Elytra about the same width as the thorax, depressed, covering the abdomen, sub-parallel, with fine costae. Legs short and slender; tibiae armed on outer margins with sharp spines, the posterior tibiae with a row of blunt teeth at the base, slightly projecting over the first joint of the tarsus. Anal spurs short, tarsae 5-jointed, the basal very short, the second and third rather longer, the fourth shorter, and the fifth nearly as long as the other four together; claws simple.

The fine but distinct costae on the elytra, the gradate 11-jointed club of the antennae, and the peculiar structure of the posterior tibiae, are characters which will serve to distinguish this genus.