

Chorionic Structure Of *Graphosoma lineatum* (Linnaeus, 1758) (Heteroptera, Pentatomidae)

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ABSTRACT

Graphosoma lineatum (Linnaeus, 1758) was collected from Ankara, Ayap and reared under laboratory conditions. Each female deposited 14 eggs in tight masses on the plants or on the cotton cover of containers. Most eggs were laid in rows. The barrel shaped eggs are in average 1.10 mm long and 0.98 mm wide. Eggs were light cream color at deposition but changed to dirty white after embryonic development. The first external evidence of embryonic development is the appearance of two red eye spots opposite each other beneath the operculum. Then, a blackish T shaped egg burster appears between eye spots and assists hatching. On the egg surface, variable shaped polygons are clearly seen by a scanning electron microscope. The series of chorionic spines extend from the chorion in an upright position and are connected with each other by somewhat flattened ridges arranged to form an irregular polygonal pattern. The hatching line is cracked in a circular shape around the operculum by the egg burster. There are 25-30 pipe shaped micropylar projections around the hatching line.

Key words: Egg shell, chorion, SEM, *Graphosoma lineatum*

INTRODUCTION

Heteropteran eggs are more diverse in form, color and chorionic structure. Most of them have an operculum and chorionic processes of various lengths and shapes. Egg bursters are present in Pentatomoidea (Heymons, 1906; Puchkova, 1957, 1959). They can be used to indicate embryonic development and embryonic orientation in Pentatomidae eggs (Cobben, 1968; Lockwood and Story, 1986; Javahery, 1994). The egg surface structure of Heteroptera species including Pentatomidae