At the age of 15-16-hours the lateral borders of the germ band become slightly infolded so as to form a fold with the overlying serosa. Similar folds appear on the cephalic and caudal extremities (Plate 1, Fig. 9, cmf) all of which eventually become continuous. Meanwhile the germ band considerably increases in length and decreases in width. During the process of elongation its posterior extremity grows faster and comes to lie on the dorsal surface of the egg. While curving round the posterior pole it does not exactly follow the contour of the egg but invaginates slightly into the yolk. From the very beginning these folds are two-layered and as development progresses the head and tail folds grow towards each other until they unite underneath the germ band to form two continuous layers. The outer forms the serosa and the inner the amnion. The serosa covers the entire egg under the vitelline membrane (Plate 7, Fig. 45). Nuclei continue to multiply and spread out to form a delicate membrane. When fully differentiated the membranous portion measures 1.33-microns in thickness. Scattered throughout its extent are distinct swellings which mark the position of the nuclei. They are widely-spaced and oval in form measuring 0.04-microns in length and 0.03-microns in breadth. Serosa nuclei till hatching takes place.

As the umbilicus progressively differentiates a cavity, the amniotic cavity makes its appearance between the somites and the embryonic rudiment (Fig. 9). It has been observed that this
embryonic membranes, the amnion and the serosa, are closely applied to each other at certain points and yolk may be seen rarely between the two. This condition should not, however, be taken as an evidence in support of the view that the amnion is formed by progressive delamination from the outer serosa as has been claimed in some insects. The present writer feels that such a contact is of little significance, as such changes in the free parts of the embryo are most likely to occur during fixation and subsequent manipulations.

The cells of the amnion spread out and at 18-hours, a delicate membrane is formed which extends from the lateral margins to cover the ventral side of the embryo (Plate 1, Figs. 3 and 7). Like the serosa, its nuclei are widely-spaced and are 7-microns long and 3.2-microns broad. During the next one or two hours the amnion breaks into small fragments and which for some time can be observed both in transverse and sagittal sections (Plate 2, Fig. 11). Its remnants attached to the lateral borders and the extremities of the embryo soon grow along the sides of the yolk and eventually meet over the dorsum. Thus the yolk for the first time, at 24-hours, becomes enclosed by a delicate nucleated membrane forming what Roonwal (1937) calls the provisional dorsal closure (Plate 3, Fig. 22 and Plate 7 Fig. 49 pdc). This membrane lies in close contact with the yolk and its nuclei resemble closely those of the amnion. It persists till the splanic layer and the companion cells of the mesenteron rudiment enclose the yolk completely beneath it. Following the definitive dorsal closure of the embryo this membrane, in all probability, disintegrates thereafter. Roonwal (1937)
describes two provisional dorsal closures in the embryo of Locusta. The first, appears before blastokinesis and grows between the yolk and the embryonic inner surface. During blastokinesis this membrane is said to tear away at the edges which soon grow round the yolk to form a layer that serves as a temporary mid-gut epithelium. According to Roomual (1937), this membrane is peculiar to Acrididae and is not found in any other family of insects. It may be of interest to note that a similar membrane has recently been recorded in the stone fly Pteronarcys proteus (Hiller, 1940) and P. sertilla (Sander, 1956) which has been termed as 'ontal membrane'. A corresponding structure in A. proxima does not develop. The provisional dorsal closure of this insect corresponds with the second provisional dorsal closure of Locusta which originates from the amnion. Similar membranes have been reported in the bush fly Hylotoma barberides (Graber, 1880) and in the yellow brown moth Discorsia virginiaca (Johnson, 1870).

In a large number of insects, the eggs are surrounded by two embryonic envelopes, the amnion and the serosa. In A. proxima only one embryonic envelope has been recorded which Nelson (1915) calls the amnion. Likewise in Chalicodoma (Carrière and Bürger, 1897) and in the ant Camponotus (Tanquary, 1913) but one membrane is formed. In the sawflies (Hylotoma, Pteronideras) thus far studied and in A. proxima both the embryonic membranes develop. Whilst Shefiq (1954) in Pteronideras reports that the amnion is a transitory structure, Graber (1850) in Hylotoma holds that both the embryonic envelopes develop and persist till the hatching of the embryo takes place.