

Schnierla has discussed the influence of larvae upon the behavior of the colony:

"The *Eciton* colony makes its nest by gathering into a cluster, and the site of this 'bivouac' changes from time to time. In *E. hamatum* and *E. burchelli* one may ascertain two conditions of general activity, which alternate according to the conditions of the brood. [Schnierla's footnote, p. 321: "W. Müller (Kosmos, 1886), from his study of an *Eciton burchelli* colony, was first to suggest the possibility of a relationship between the food-consuming ability of the *Eciton* colony, as affected by the presence of active larvae, and the general activity of the group."] The colony remains bivouacked in a given place, in the 'statory condition,' first when the eggs are present and during the period that precedes the development of the eggs into food-consuming larvae, and secondly during the period of about three weeks when the young are enclosed in cocoons. In contrast, the colony moves to a new bivouacked site each evening (is in the 'nomad condition') during the time the larvae are naked and consuming food, and again, after the brood has been hatched. Colonies in the statory condition are less active, and raid much less vigorously than when in the nomad condition." (1934, p. 319.)

"The nomadic phase is maintained as a result of the activity of developing larvae. . . . The movements of these larvae, particularly the active twisting movements of their anterior ends, shortly become an important source of stimulation to adult workers. For this it is important that the larvae as they grow larger and become more active are not massed together in the very center of the bivouac as before, but are held by individual workers or are piled up in small numbers in the spaces between ant-strands throughout the interior of the bivouac." (1938, p. 68.)

"To summarize, the foregoing theory is built upon the fact that a brood of larvae which contains many thousands of individuals all at the same stage in development, incidentally stimulates the adults through its activity and thereby greatly increases the general level of colony excitement. This accounts for the marked vigor of each day's raiding, and for the developments of raiding systems by great numbers of workers to an extent which makes a colony migration inevitable at the end of the day. When the maintaining cause ceases to function, colony excitement is markedly reduced and the value of raiding activity falls considerably below the threshold necessary for a general migration. Consequently the colony then enters a very different activity phase in which true migration does not occur." (1938, p. 75.)

In a recent paper (1938) I have described the vestigial legs (p. 140 and figs. 1, 2, and 3) and the vestigial gonopods (p. 141 and fig. 1) of this species. The absence of wing rudiments was also noted (p. 141).

The larval stage of *E. hamatum* lasts 20 days (Schnierla, 1938, pp. 58-61).

**E. (E.) burchelli** (Westwood). Fig. 37. The mature larva of this species is very similar to that of *E. hamatum*. The distal and lateral borders of the labrum are slightly concave; the maxillary palp has 6-9 sensilla; the galea is a trifle longer and more slender. (Material studied: numerous specimens from Trinidad collected by Dr. N. A. Weber.)

The young larva (i.e., 4-5 mm.) of *E. burchelli* resembles the mature