indeed occur. Because the proventriculus is reduced and membranous in *Anomma* as well as in other army ants, it too is of little value to the study of army ant systematics. Because the damming of this type of proventriculus requires continuous muscular contraction, crop storage in army ants may be of relatively short duration (Eisner, 1957).

The number of Malpighian tubules is positively correlated with body size, so that overlap in tubule numbers can be expected, particularly when comparing polymorphic species. The number of tubules in *D. (A.) molesta* overlaps considerably at the lower end of the range with the numbers of tubules in 7 species of New World army ants for which these numbers have been determined (Gotwald, 1971). However, *molesta* soldiers possess 5 more tubules than the largest of these 7 species, *Eciton mexicanum* Roger, reflecting *molesta's* even greater size. The number of rectal papillae, on the other hand, may be relatively constant for any one species. Whelden (1963) reported a range of 3 to 6 papillae in two species of *Eciton* and Mukerji (1933) observed 2 papillae in *D. (Alaopone) orientalis.* Two papillae are also present in *Anomma* and in *Cheliomyrmex* (Gotwald, 1971).

The presence or absence of specific exocrine glands may be of significance to evolutionary interpretation, but extensive comprehensive surveys of ant glands are few in number. Still, numerous exocrine glands have been examined and the behavioral consequences of their pheromonal secretions determined (e.g., see Hölldobler, 1978). Among the newest to be discovered are a series of tergal and sternal glands. Conspicuous among the tergal glands are the pygidial and postpygidial glands. The pygidial glands open through the intersegmental membrane connecting abdominal terga 6 and 7 (Kugler, 1978). The postpygidial glands open between the 7th and 8th abdominal terga (Hölldobler and Engel, 1978). Large pygidial glands with distinct reservoirs are present in *Eciton* and *Neivamyrmex.* Postpygidial glands are also present in these genera. Because the 7th tergum is small in these ants, the reservoirs of the pygidial and postpygidial glands "open directly above the anus at the abdominal tip," and preliminary tests with *Eciton* workers suggest that these tergal glands are involved in chemical trail communication (Hölldobler and Engle, 1978). Interestingly, Hölldobler and Engel (1978) found that the pygidial gland in *D. (A.) molesta* is rather different from that of *Eciton* and *Neivamyrmex.* They also found that the reservoirs of the *Anomma* pygidial glands do not open at the abdominal tip and that *Dorylus* possesses an "anus gland," a feature not discovered thus far in other ants examined.

Like *Cheliomyrmex morosus, D. (Anomma) molesta* possesses 3 thoracic ganglia and a single petiolar ganglion. However, the gaster of *Cheliomyrmex* houses 2 distinct ganglionic masses and that of *D. (A.) molesta* 4 such masses. Thus the fusion of ganglia has occurred to a greater extent in *Cheliomyrmex. Eciton* has the same number of ventral ganglionic masses as *Cheliomyrmex,* although their distribution is different, because the waist of *Cheliomyrmex* is uninodal