

Fig. 3. Alate female of a South African *Acropyga* carrying a *Eumyrmococcus* mealybug (redrawn from Prins [1982] by Williams [1993]).

phology is much more generalized than the morphology of mealybugs that are obligate trophobionts. For example, the body shape is oval, not elongate-pyriform, and the antennae are relatively short. Furthermore, the small to fairly large cloud of milky substance around

the center of the dorsal surface of each mealybug, including various instars, suggests that the mealybugs in this amber piece have exuded wax, possibly from between abdominal segments 3 and 4. Thus, it has been hypothesized that these mealybugs were not as intimately symbiotic with *Azteca* as are the mealybugs with *Acropyga* (J. Koteja, personal commun.).

It is, however, almost certain that these coccoids were tended by the ants, even though none of the workers is actually carrying a mealybug. *Azteca* species, like most dolichoderines, are renowned for tending homopteran insects. And while *Azteca alpha* is probably the most common insect species in Dominican amber, comprising at least 30%, and perhaps as much as 50%, of all ant inclusions, coccoids, particularly nymphs, are extremely rare. The chance of finding a cluster of coccoids in a piece of Dominican amber is infinitesimally small, as is the chance of finding a fortuitous cluster of coccoids and *Azteca alpha* ants. The presence of males and females coccoids at several developmental stages indicates that the amber captured them virtually in situ. Although the transport of mealybugs by *Acropyga* gynes implies a symbiotic relationship, this amber piece with *Azteca* ants and mealybugs is probably the

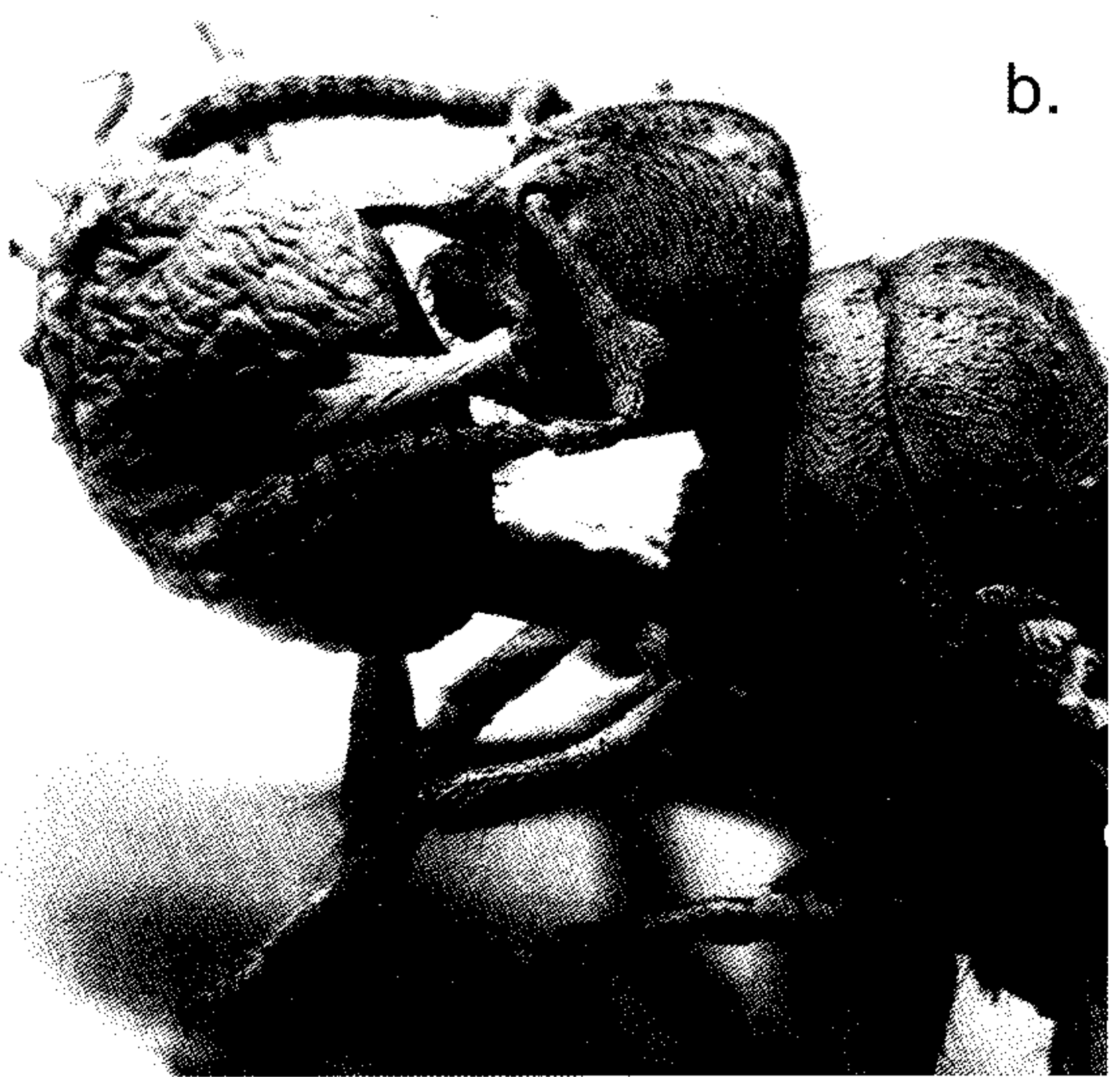
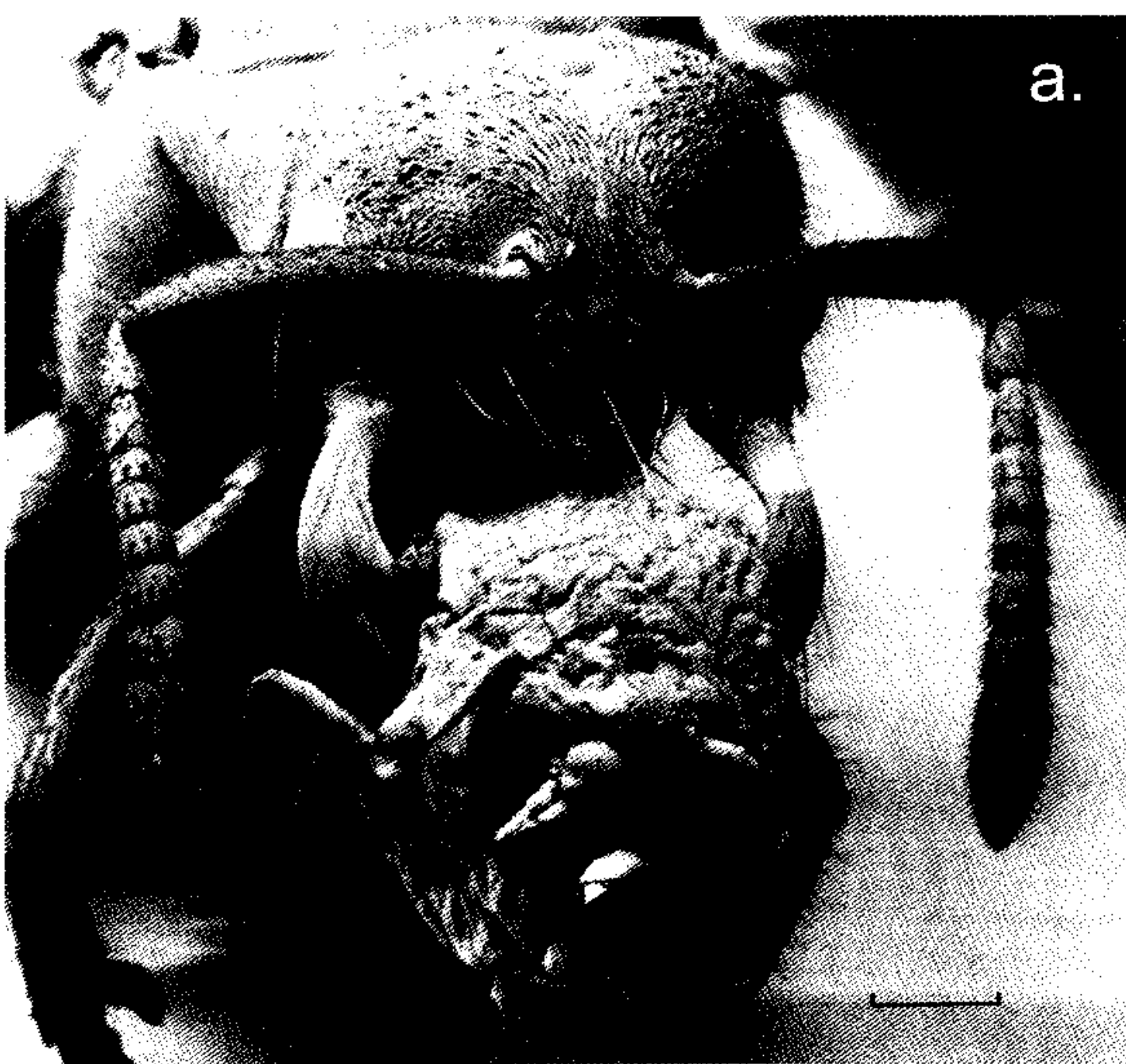


Fig. 4. Scanning electron micrographs (40–50 $\times$ ) of an *Acropyga* gyne from Saül, French Guiana, carrying a mealybug (collected by C. Johnson). a. Frontal view. b. Oblique lateral view.