runs roughly dorsoventrad with respect to the main axis of the cranium, so that the mandible is restricted in action to swinging out hinge-like away from the midline and back. The condylar head has prominences and hollows along its perimeter, and these correspond to hollows and processes on the anterior margin of the cranium. Fitting together in the jaws-open position, these hollows and projections on the condyle and cranium lock the jaws into this position when the shafts are opened widely enough, and considerable adductive force must be applied to loose the condyle from the locked position, hollows then overriding projections with a snap, so that the opposite mandibles swing inward until they collide on the midline.

The adductive force is supplied not only by powerful adductor muscles deployed longitudinally in the massive cranium, but also by a sclerotized, spoon-shaped or J-shaped part of the adductor tendon inserted on the mandibular condyle. As the mandibles are opened by the abductor muscles, each spoon-shaped piece is deformed as a powerful spring, and the energy stored in its elastic bending is released in instantaneous adductive action once the locking mechanism for the jaws-open position is overcome.

Some details of the locking and release of the mandible from the jaws-open position are still not absolutely clear to me from Barth's account, but the main essentials of the lock-and-spring mechanism are plausibly presented. Such spring-snap arrangements are common in insects in many instances where very rapid movement is required — often at rates beyond the capability of muscles acting directly. The action of the wings in many insects, for example, involves more complex cases of this kind of mechanism. I am indebted to Thomas Eisner for help in understanding the Barth explanation and a discussion of snap mechanisms in general.

The use of the mandibles in prey-getting and defense by odontomachite workers and queens in life has been observed many times (e. g., Wheeler, 1900), but one aspect of their attacks on prey arthropods has perhaps not been sufficiently emphasized. My own observations on cultured and wild workers of *Odontomachus brunneus* from Florida, *O. simillimus* in southern India, and *Anochetus inermis* in Ecuador, all show that these species are usually cautious and hesitant in their attacks on potential prey. Many approaches to insects supplied are tentative, and are not carried through in snap attacks, though the ants' mandibles