



**Fig. 18.** Workers of different colonies conduct combat by rearing up on their legs and mandibles in a threat display (*above*), dodging around one another, and seizing one another with their mandibles (*lower*). Many such encounters end in injury or death. (Painting by Turid Hölldobler)

ble 8). This disparity probably resulted at least in part from tissue contaminants entering the rectal fluid when the sacs were removed and opened, even though the dissections were conducted very carefully. The presence of such contaminants was indicated by the fact that artificially created spots from nestmates caused a more hostile reaction than natural spots from nestmates. However, uncertainty over the amount of contamination makes it impossible to decide whether the territorial pheromone originates entirely from the rectal sac or is augmented in some way from materials originating elsewhere in the abdomen.

*h) Warfare.* When major workers from two *O. longinoda* colonies were permitted to enter an arena simultaneously, they quickly joined in a territorial battle. As individual pairs of opponents met, they reared up by straightening their legs and proceeded to dodge around each other like prancing, stiff-legged dancers (Fig. 18). This behavior was remarkably like that observed by Hölldobler (1976b) in the territorial wars of the honeypot ant *Myrmecocystus mimicus*. But whereas the *Myrmecocystus* relied principally on shoving and butting, the *Oecophylla* quickly added more deadly movements. Each thrust back and forth was an attempt to bite her opponent. When one succeeded in grasping a mandible, antenna, leg, or other part of the enemy's body thin enough to secure a good