

The rhythmical assaults of the *Myrmicas* on the *Leptothorax* retreat in the afternoon, on several of the days during which the ants were observed, is, I believe, to be explained as the result of rising temperature. In the Litchfield Hills the nights and mornings of late August and early September are rather cool, while the noon hours may be very warm. The Lubbock nest happened to be placed at a window in a room with southwestern exposure, so that the diurnal variation in temperature must have been keenly perceived by the ants. In the warm afternoons the activities of the *Myrmicas* increased; they ran about more rapidly, became more enterprising, and indulged their excavating instincts to a greater extent. Then in the course of this employment they often broke into the *Leptothorax* retreat.

The fact that the *Leptothorax* changed their entrances from time to time, and, as shown by the figures, kept perfecting the form of their cell, thereby making it easier to guard and rebuild and more difficult for the *Myrmicas* to demolish, is evidence of the remarkable psychic plasticity of these ants. Similar behavior on the part of ants that have been repeatedly disturbed by other species are recorded by different observers. Forel ('94, p. 8) brought a large formicary of *Myrmicocystus altisquamis* from Algiers and gave it an opportunity to establish itself in a garden near Zürich. The African ants were much annoyed by the incursions of *Lasius niger* and *Tetramorium cæspitum*, and although they at first adhered to their Algerian custom of maintaining a large open entrance to their nest, they learned during the course of the summer to narrow the opening gradually. Finally they plugged it up completely with grains of earth and made only a small temporary orifice whenever they strolled out on sunny days. Wasmann ('97, pp. 69, 70) mentions a nest of *Formica sanguinea* that resorted to a similar method of protecting itself from the repeated attacks of a neighboring colony of *F. pratensis*. All these observations go to show that Bethe's conception ('98; '00) of ants as mere "reflex machines" cannot be entertained.

From the persistent and strenuous efforts of the *Leptothorax* to intrench themselves, and from the shape and character of