

THE REBUILDING OF MOUNDS OF THE ANT,
POGONOMYRMEX OCCIDENTALIS, CRESS.

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The mound of *Pogonomyrmex occidentalis* passes through three stages of development. The first is represented by a small crescentic pile of earth arranged by the queen at the origin of the formicary; the second, the crater type of mound, usually present during the second year; and the third, the dome- or cone-shaped mound of the fully developed formicary. The time required for the complete development of the mound apparently varies with the number of workers comprising the colony and also, to a great extent, with the environmental conditions present throughout the period of mound construction. In the majority of colonies three years are required for the natural development of the mounds, while for others shorter periods are evident. The writer is inclined to believe that mounds of *occidentalis* are fully developed only when they possess rather sharp mound apexes. If this is true some never reach their possible limits.

Strong northwesterly winds, prevalent over the arid sections of Idaho, contribute their share to incomplete mound development, and, in some cases, to complete mound destruction. This is especially true in unprotected areas where the soil is fine and loose. Generally, only a short time is required for the workers to rebuild mounds partially levelled by the wind. A comparison was made of the time required for the rebuilding of wind-leveled mounds with that for the rebuilding of those mounds which were artificially-leveled by hand, the results of which appear in Tables I and II. These data were taken in the vicinity of Twin Falls, Idaho, during the summer of 1931. The number and position of the nest entrances remained fairly constant, and in only one case, of the mounds under observation, was an additional entrance produced during the rebuilding process. The tables illustrate the fact that, in most cases, the mounds were rebuilt with slightly greater dimensions than the

original structures possessed. The rate of rebuilding is apparently proportional to the numerical strength of the colony, as is also the case during the normal building process. Therefore, mounds leveled or partially leveled in the above fashions are built with greater rapidity than are the original structures.

TABLE I.
The Rebuilding of Artificially-leveled Mounds of
Pogonomyrmex occidentalis Cr.

Mound Number	Height in Inches Before Leveling	Height in Inches After Rebuilding	Time Required, in Days, for Rebuilding
1.....	15.2	16.1	20
2.....	15.6	15.8	17
3.....	14.2	14.7	23
4.....	16.1	16.3	21
5.....	15.8	15.7	17
6.....	14.3	14.7	20
7.....	15.4	16.0	28
8.....	16.0	16.1	21
9.....	22.4	21.8	34
10.....	15.4	15.9	23

TABLE II.
The Rebuilding of Wind-swept Mounds of *Pogonomyrmex occidentalis* Cr.

Mound Number	Height, in Inches, of Wind-swept Mounds	Height, in Inches, After Rebuilding	Time Required, in Days, for Rebuilding
1.....	14.1	15.0	12
2.....	13.6	14.4	12
3.....	13.8	14.9	14
4.....	13.2	14.2	18
5.....	14.2	14.8	17
6.....	18.5	19.1	12
7.....	13.9	22.4	15
8.....	13.4	15.8	17
9.....	13.7	15.1	19
10.....	14.3	16.3	21