

more or less decomposed, showing that they had been wafted to this altitude the previous summer and had perished, probably from cold, while endeavoring to found colonies. These observations strengthen Forel's and my contention that in mountainous regions queen ants are often borne up by air-currents to elevations at which the physical conditions will not permit them to establish the species. It is very probable that this process continues year after year and that it may constitute an appreciable drain on certain ant-populations at lower altitudes.

2. *Pogonomyrmex barbatus* F. Sm. subsp. *rugosus* Emery.

July 29 we visited the ancient ruins of Casa Grande, nine miles south of Florence, Ariz. In the rooms on the ground-floor of the three-storied portion of the structure still standing we found vast numbers of males and females of *Pogonomyrmex barbatus rugosus*, only a small portion of which were still living. The marriage flight of these large ants must have occurred a day or two previously, and the swarms, for some reason, had entered the low, narrow doorways of the ruin and accumulated on the floor in such masses that several bushels could have been collected.

3. *Pogonomyrmex barbatus* F. Smith subsp. *molefaciens* Buckley.

At Tempe, Ariz., the marriage flight of this ant took place at 5 p. m., July 31, nearly a month later than the flights I observed many years ago in Central Texas. Thousands of males and females issued from the large, flat nests in the irrigated fields about the town and soon disappeared in the cloudless sky. On the following day, August 1, the fecundated females were seen in great numbers digging their craters in the soil. They preferred the damp margins of the puddles left by recent rains and the banks of the irrigating ditches. So numerous were the little craters that their peripheries were often in contact. The females were busily bringing up the moist earth in their psammophores as pellets one-eighth of an inch in diameter and depositing them near the orifice of the eccentric burrow.

4. *Pogonomyrmex (Ephebomyrmex) imberbiculus* Wheeler.

Near Deming, N. M., I witnessed the marriage flight of this ant at 10 a. m., July 12. The black males were flying rapidly to