repellent to the ants. I have observed in both the Old World and New World tropics that some kinds of live or freshly killed termites are shunned by odontomachites and other predaceous Ponerinae, presumably because of protective allomones, even when termites in general were known to be principal foods of the predators concerned.

Population biology. Colombel (1970a, b, 1972) has given us a detailed and extensive study, based on many samples examined in Cameroon, of the population biology of *O. troglodytes* (called by him «*O. haematodes*»). This investigation is the most complete of its kind available for any ponerine ant.

In Cameroon, *O. troglodytes* nests most often in second-growth forest at the bases of dead or diseased trees, under or against logs, or simply in the soil. In some especially favorable districts, Colombel thinks the density of colonies may reach as high as 20 per hectare over wide areas, but he places the mean density at less than 12 per hectare. A secondary habitat is in the heads of palms, especially oil palms *(Elaeis)* where the ants nest in beetle burrows and the axillary spaces at the leaf bases, where soil and humus accumulate. Additionally, some ants live in the soil in treeless areas at the base of hill slopes, etc., in which case the nest rarely extends through a space more than 60 x 60 x 15 = 54,000 cm, or about half a cubic meter. Beyond this, tunnels extend outward up to 3 m, and large colonies may have as many as 20 entrances hidden under leaves, under stones, or in depressions in the soil surface. In such situations, the ants attack earthworms as well as insects.

Of 770 colonies found and sampled, Colombel records only 0.65% as dealate nest-founding queens, though of course these are much harder to discover than are larger colonies. Colonies in the growth stage, with up to about 250 workers, mostly have only a single dealate queen, but colonies with 300 workers are capable of producing their own queens and adding some of them to the nest force, or adopting outside queens, so that nests with populations above 300 eventually arrive at an equilibrium ratio of about 1 queen to every 85 workers.

The great majority of nests found contained more than 300 workers, and in good forest locations, some nests were counted at more than 1,000 (up to nearly 1,300) workers. Colonies are slightly more populous, on the average, during the rainy season than in the dry season, and they are also larger in good forest