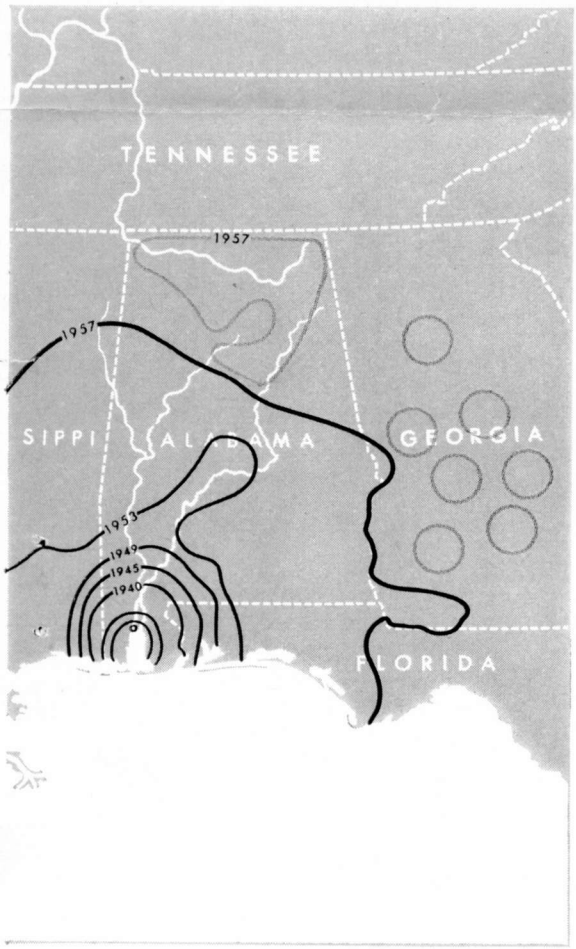
appeared at just about the time that the population as a whole began its rapid growth in all directions out of Mobile.

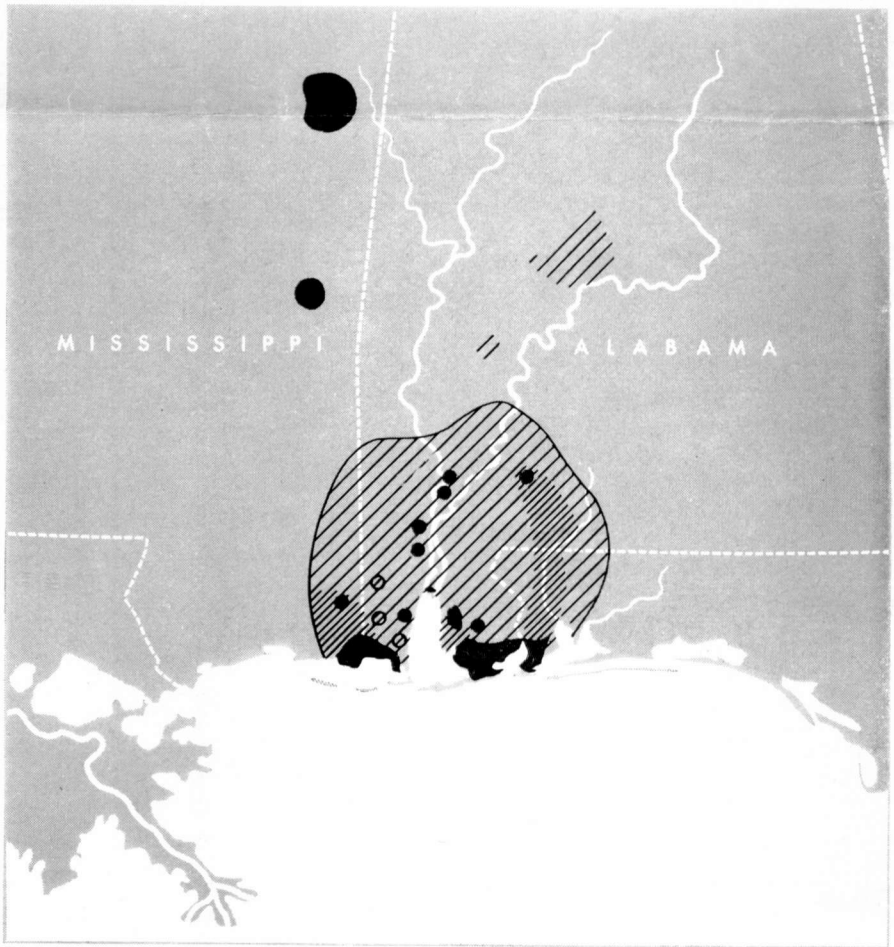
When I first began to study the imported fire ant in 1949, I noticed that the two color forms were distributed around Mobile in a curious and significant pattern. The dark form was very rare within the city itself, despite the fact that it had been the predominant or exclusive form when Creighton studied it there 20 years earlier. Now it was limited to a few isolated localities concentrated mostly along the southern periphery of the range [*see map at right below*]. Everywhere else in the Mobile area the teeming colonies were composed of the light form. To the north, in the Mississippi towns of Meridian and Artesia, there were small secondary populations consisting entirely of the dark form. Investigation showed that these localities had been colonized by ants from the Mobile area during the 1930s, probably while the dark form still predominated in the primary population. Other isolated populations were found at Thomasville and Selma in Alabama. These consisted entirely of the light form. As one might have predicted, it was subsequently disclosed that these light-form populations were quite recent in origin, being no more than five years old in 1949. Compared to the dark-form populations of Mississippi, they were remarkably successful and fast-growing. The Selma population, in fact, already exceeded in size both Mississippi populations taken together.

All this information clearly indicated that the imported fire ant was in the midst of a rapid evolutionary change. The conclusion seemed inescapable that the light form, which had originated in the Mobile area sometime after the introduction of the dark form, was adaptively superior to the dark form and was replacing it over most of its range. Additional field studies conducted by William L. Brown and myself in 1956 and 1957 have corroborated this interpretation. We found that in the interval between 1949 and 1957 the dark form had continued to decline in the center of the main population, while the growing edge of the population had come to consist almost entirely of the light form. In some areas where the dark form had been abundant in 1949 it was now absent; only the light form persisted. By 1957 the dark-form population at Meridian had been engulfed by the northward-expanding main population, and the light form was quickly rising to predominance there. The Artesia population, 70 miles to the north of Meridian and still isolated, remained uniformly dark in composition, but its rate of spread had been far less than that of nearby light-form populations.

These most recent studies indicate that replacement of the dark-form genes is proceeding not only by genetic "swamping" but also by direct conflict between colonies. The dark form appears to be losing out in the struggle because its nest-founding queens and young colonies are destroyed by the fiercely aggressive mature colonies of the light form. Young dark-form colonies are



population by years. The gray lines indicate the limits of secondary populations in 1957.



DARK FORM OF SPECIES comprises more than 20 per cent of population in dark areas; 20 to 5 per cent in heavily hatched areas; less than 5 in light hatched. Dots are small colonies.