

with the extreme posterior part of the alitrunk red; these last examples are very similar to many Canadian and Alaskan samples in color as well as in other respects.

Apparently, the *sachalinensis* of Forel and some later authors is this melanic *herculeanus* form. Other melanic *herculeanus* populations are known from Italy and the western United States (see below). The black *herculeanus* samples can be distinguished from *japonicus* by sculpture, much less well developed pubescence, and by the short clypeal lobe. No intergradation to *japonicus* is known, despite intensive collecting in the mountains of Japan. It seems clear to us now that our category of the 1951 paper (p. 36): "*japonicus*...(b) Black intergrades to *herculeanus*" wrongly includes the present Classes I and II without distinction. Actually, these two classes seem to be examples of color convergence, not intergradation. Without seeing types, it is impossible to be sure whether varieties *jakutica*, *sachalinensis* and *manczshurica* belong to Class II, to mixtures of Classes I and II, or to something completely different from anything we have seen.

### *Class III.*

This is equivalent to our 1951 *japonicus* category "(c) Intergrades to *herculeanus* with red alitrunk" (pp. 37-38). The prior name, which we shall apply here, is *atrox* Emery. The few specimens actually available to us are samples of a single nest series from Mt. Kongo in central Korea, from a single depauperate nest taken in Shansi Province by Yasumatsu, and a single major worker from "Eastern Tomb," presumably near Peking, in the MCZ Collection. These specimens have the sculpture and pilosity of *japonicus*, but the alitrunk is red, not black. The clypeus, for what this character is worth, seems to be intermediate between those of "typical" *japonicus* and *herculeanus*.

Yasumatsu found only the single small nest in Shansi, although he found a great many nests of *japonicus* during his collecting in this province. In neighboring Shensi Province, despite extensive collecting, Brown found only *japonicus* at Hanchung, Pao Cheng, Miao Tai Tze in the Tsinling Range, and on the Wei River Plain, and never saw *atrox*, either in this province or elsewhere in western and north-western China. Other published records referring to this form are from northern Korea and from Jehol. It seems reasonably clear that such a large ant, conspicuous by virtue of its color, must be rather uncommon and sporadic in China, Korea and Manchuria, at least, to have yielded so few and scattered records. That *atrox* is not known from the Japanese highlands, despite intensive collecting, is significant, especially when one considers that such experienced ant collectors as Yano, Teranishi, Yoshioka, Morishita, Silvestri, Okamoto and others have worked this area over a long period.