be either distinct species, or one a synonym of the other. The confusing structural intermixture of supposed *buccalis* with both *vinelandica* and *bicarinata* makes it extremely unlikely that *buccalis* can be an independent species, and to demonstrate that it is such would take many more data than at present exist. I can see no objection to accepting Dr. Cole's suggestion (1956) for relegating *buccalis* to synonymy, but I have placed it under the subspecies *vinelandica* to which it seems somewhat more closely linked and under which it was originally described (vide supra).

Cole also suggested (1956) that *Ph. bicarinata longula* be raised to full specific rank. Though there is apparently no known evidence of intergradation between *longula* and the typical *bicarinata* as yet, the morphological differences between them are very slight, and the range and habits of *longula* are imperfectly understood. I agree with Creighton that the evidence for specific distinctness here is weak and am disinclined to follow Cole's proposal. Until more information is obtained, it seems preferable to regard *longula* as a subspecies of *bicarinata.* Structural characteristics and geographical range of the ant are not, so far, inconsistent with this view.

The discovery of a new member of the *bicarinata* complex in Nevada has been described above as the subspecies *paiute* and is carried in the key. Its status at this time is provisional owing to the small amount of material available for study.

In 1953 Cole, after studying types of both, proposed that *Ph. sitarches campestris* be synonymized with *Ph. sitarches soritis* on the basis of inconsequential differences between them. Later, in 1956, upon reviewing numerous samples from New Mexico and Arizona, he reversed this decision by concluding that *soritis* was a variant population within the widespread, typical subspecies, and therefore suggested that *soritis* be made a synonym of *sitarches sitarches.* It cannot be denied that much variability exists in the representatives of this complex coming from New Mexico and Arizona, but Dr. Cole's contention that this does not indicate intergradation between two subspecies (*soritis* and *sitarches*) is open to reasonable doubt. As Dr. Creighton has pointed out, Wheeler's type series for the typical *sitarches* included specimens from New Braunfels and Austin, Texas, and he showed that Austin is an area of intergradation for *sitarches*