

the piligerous punctures to some extent and often make the punctures difficult to see. The basal striae on the mandibles of such majors are feeble or absent and the upper surface of the mandible bears small, piligerous punctures (Plate VI, Fig. 2). These differences, plus those of dentition, are usually shown by the larger medias as well. They are less clearly shown by the smaller medias (those in which the antennal scapes reach the occipital angles) and not shown at all by the minors. Even so, these distinctions are more serviceable than those based on proportions which change with the size of the worker. It is unfortunate that Wheeler employed two such characters in the key which accompanied his revision. The shape of the head and that of the postpetiole both fall into this category. It is true that Wheeler restricted his key to the major worker but he did not give any measurements by which this caste could be certainly recognized. If distinctions of this sort are to be useful they should be accompanied by a reliable measurement of the size of the worker which shows them.

Wheeler preferred to treat these two populations (*hirtula* and *subdentata*) as subspecies and on this basis he gave the *vasliti* complex the following constitution:

- Ph. vasliti* Pergande
- var. *hirtula* Forel
- var. *acolhua* Wheeler
- subsp. *subdentata* Pergande
- = *obtusospinosa* Pergande
- var. *arizonica* Santschi

It is clear from this arrangement that Wheeler had recognized Forel's error in treating *obtusospinosa* as the major of *vasliti*, but it is equally clear that he did not question Forel's view that *vasliti* and *hirtula* are essentially the same; nor did Emery (1921), who used Wheeler's arrangement in the Genera Insectorum. The only alteration to the above plan which has been suggested is that of the writer, (1950), who treated *arizonica* as a subspecies. I now know that this treatment is incorrect, for *arizonica* cannot be separated from *subdentata*.

The material which the writer collected in Mexico and southern Arizona falls readily into one or the other of the above groups. The definitive structural features which separate these groups