

ibed from only 3 rather dubious specimens by Kutter (1977). It was essential for us to be able to separate workers of the species from those of *M. scabrinodis* from the site at Yenne with a high degree of confidence, because we did not wish to disturb the nests too much when we assessed the populations of ants that were available for parasitisation by *Maculinea* butterflies. Consequently, only workers were available for most identifications.

We compared a sample of 40 workers of *M. vandeli* from 8 nests at Yenne with similar samples of *M. scabrinodis* and *M. sabuleti* that were obtained within a few hundred metres of each other at that site. Where possible, only those colonies which had either queens or males available for confirmation were used to obtain the worker samples. A good discrimination was obtained between *M. vandeli* and the other 2 species, although, interestingly, a much poorer discrimination was obtained between *M. scabrinodis* and *M. sabuleti* at Yenne than is normal for other sites (Fig. 7).

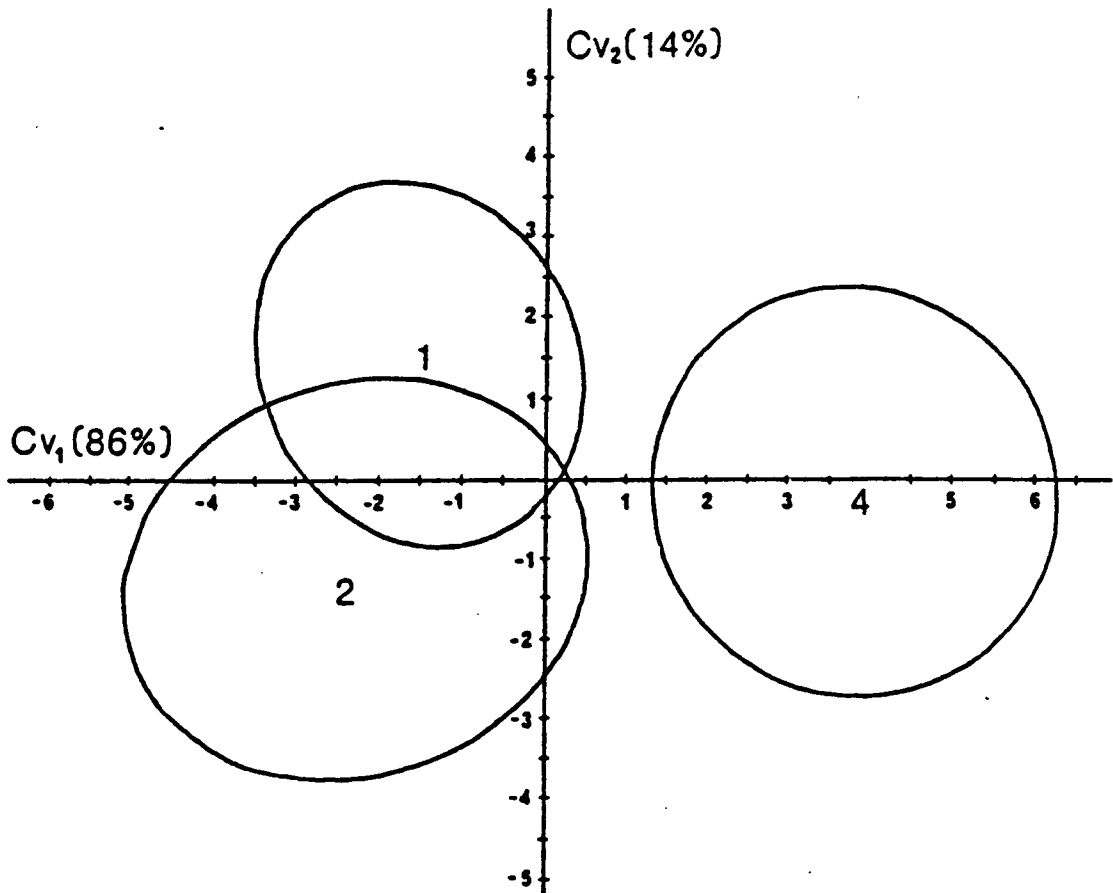


Figure 7: The distribution of Cv scores for 3 species of workers: 40 *M. scabrinodis* (1), 40 *M. sabuleti* (2) and 40 *M. vandeli* (4). The ellipses represent the 95% confidence limits.

When *M. scabrinodis* and *M. vandeli* workers are considered as a pair, we find that only 3 measurements are needed to obtain a satisfactory discrimination. It should be remembered that