

At this stage, at my request, Herr E. Wagner, of Hamburg, kindly supplied me with a series of each of the four species, for comparison with British material. These series were also variable and were in such poor condition that comprehensive measurement of all potentially useful characters could be made on only a few specimens. This was true also of material from the British Museum and from the Hope Department of Entomology, Oxford. As a result I was forced to work largely with specimens collected by myself or by Dr. Masee. My method was to select from the named continental material examples of each species which agreed most closely with the published information. These I then used as standards for subjective comparison with British material, rejecting, for the moment, all specimens not in very close agreement with these standards. In this way I was able to build up series of British origin, in measurable condition, provisionally allocated to species. Comparison was then made between these series by using every character capable of accurate measurement and from the mass of data so obtained two ratios were discovered which appeared to be of use for separating the species as I had identified them. These were the ratio of the width of the pronotal base to the width of the head including eyes and the ratio of the length of the third antennal segment to the width of the vertex. There were no differences between the sexes in respect of these ratios. Unfortunately neither of these ratios gave a clear separation on its own (which probably explains the lack of subjective differences) but when plotted against each other as a scatter diagram (fig. 13), the species formed adjacent but not non-overlapping groups. The unidentifiable remainder of the material was then measured to provide these ratios and added to the diagram, as were ratios from the few measurable continental specimens. Not only did the groups remain largely distinct but they conformed to locality series. Thus, all measurable material from Braunton Burrows (Coll. G.E.W.), Sandscales, Lancs. (Coll. T. R. E. Southwood), a few examples from South Wales and one series (dated 13.vi.63) from Dungeness, Kent (Coll. A. M. Masee) formed the group identified as *sabulicola* (solid circles in the scatter diagram); material collected in a sand-pit at Virginia Water, Surrey (see Woodroffe, 1962) conformed to the group identified as *bohemani* (triangles in the diagram); and several series from Dungeness (Coll. A. M. Masee & G.E.W.) corresponded with the group identified as *maritima* (open circles in the diagram).

The results described above fail to distinguish *maritima* from *nigritula*. In continental keys (e.g. Wagner & Weber, 1964) *nigritula* is separated from the other three on the basis of its entirely black cuneus, though this is present in *bohemani* var. *scotti* and in a black form of *maritima*. In the scatter diagram black specimens from Dungeness and one or two continental *nigritula* (open circles with crosses) do not segregate from bi-coloured *maritima* (open circles) from the same locality. It is