

In North Europe as a whole, *L. mixtus* and *L. umbratus* occupy the same geographic range although in the British Isles *L. umbratus* becomes relatively scarce in the north (Table III). Populations of *L. mixtus* from the mountains of north Spain, Pyrenees, Alps and Scandinavia, as well as a single queen I have seen from east Siberia, are morphologically consistent throughout this range and show no clinal trends, but a single isolated queen, taken by Dr I. H. H. Yarrow in Huesca province, North Spain, may represent the category *L. distinguenda* Emery (1916). This includes series of large individuals taken in south Europe with numerous body hairs but no appendage hairs. The Spanish specimen has a flat scape, a high angularly emarginate scale and hairless scapes and tibiae as in *L. affinis*, but profuse genal and body hairs in number and length within the *L. umbratus* range. *L. distinguenda* may well be a good species but I have seen no other material from south Europe to justify an opinion. Only Staercke (1937) of recent authors appears to have studied this form, but neither he nor Emery described or distinguished the male. Series of workers that I collected in south France in 1955 have hairy tibiae and scapes and appear to be mostly *L. rabaudi*, a much more abundant species in Europe than was realised before Wilson (1955). In England there are now authenticated records for this species from Kent, Surrey, Berkshire, Hampshire, Glamorgan, Pembroke, Suffolk and Norfolk.

TABLE III.

Distribution of members of the *Lasius umbratus* complex in Britain from all available records.

| | <i>umbratus</i> | <i>mixtus</i> | <i>rabaudi</i> | Number of Vice- counties | Records per Vice-county |
|------------|-----------------|----------------|----------------|--------------------------------|----------------------------|
| Scotland | 5 (31%) | 9 (64%) | 0 | 41 | 0.34 |
| Ireland | 3 (14%) | 18 (86%) | 0 | 40 | 0.53 |
| N. Wales, | | | | | |
| N. England | 15 (58%) | 11 (42%) | 0 | 25 | 1.04 |
| S. Wales, | | | | | |
| S. England | 148 (63%) | 48 (24%) | 26 (13%) | 46 | 4.39 |
| | <hr/> 142 (57%) | <hr/> 83 (33%) | <hr/> 25 (10%) | <hr/> | <hr/> |

I have recorded habitats for my own captures of the three species and the percentage of nests in each of three types of site are given in Table IV. In my experience *L. mixtus* is rather a species of subalpine pasture in Europe whereas *L. umbratus* is associated more definitely with woodland or hedgerow trees. *L. rabaudi* is a characteristic inhabitant of heath and sandy pasture in South England and Scandinavia but seems to occur as frequently in scrub and woodland in France and Spain. The three species obviously overlap in habitat distribution but the table does suggest a trend difference which supports the morphological differences.