

also an indication of the relative biological uniformity of the Irish species. The communities are characterised by the varying proportions in which the colonies of the different species occur rather than by a series of stenotypic species.

(a) *The low soil humidity fauna.*

The L.S.H. fauna is characterised by the preponderance of *Formica fusca* L., *Lasius niger* L., *Myrmica scabrinodis* Nyl., or *M. sabuleti* Meinert. An example of the preponderance of *F. fusca* was clearly indicated in an *Erica-Calluna* association on the southern slope of Carri-
gollohan, County Dublin, where of the 43 colonies examined no less than 41 were of this species. Two of these colonies were in plesbiosis with other species (*L. flavus* and *M. laevinodis* Nyl. The remaining two colonies were of *M. scabrinodis* and *M. sabuleti*, respectively. This very clear preponderance of a single species is almost certainly a case of true dominance in the ecological sense, as the ants are in fact moulding the environment. Such a clear cut case is rather unusual and may be contrasted with a more typical distribution found in a similar habitat at Castlekelly, Glenasmole, County Dublin, where of the 25 nests examined 13 were of *F. fusca*, five of *M. scabrinodis*, four *M. sabuleti* and three of *M. rubra* L. The importance of differences in microhabitat was shown in a count made at another situation in Castlekelly. The site was a well-drained bank facing south with little plant cover other than few plants of *Erica*, *Calluna*, and *Vaccinium myrtillus*. Here there were 91 colonies of *F. fusca* and eight of *M. rubra*. These figures show clearly how *F. fusca* can dominate the fauna of such microhabitats. The colonies of *M. rubra* were found in the moist patches in the area as a general rule. I have seen occasionally striking examples of this where there are two separate ecoclimates under the same stone; the moist end inhabited by a colony of *M. rubra* and the dry end by a colony of *M. scabrinodis*. This illustration also demonstrates the difficulty one encounters in endeavouring to consider the ant fauna of an area as a whole.

The L.S.H. fauna in Ireland is occasionally dominated by *Tetramorium caespitum* L. as at Ballyteige Burrows, County Wexford. *Lasius niger*, however, is frequently found dominating this type of habitat, especially when the soil is very sandy, as at the North Dunes, Arklow, County Wicklow, where of the 37 colonies examined 29 were of this species, five of *F. fusca*, two of *L. flavus*, and one of *M. laevinodis*.

(b) *The medium soil humidity fauna.*

The second type of community, the M.S.H. fauna, is characterised by the occurrence of *L. flavus*, *M. laevinodis*, or *M. scabrinodis*, as dominants. This was well illustrated in the Rye Water Valley, County Kildare, where of 37 colonies counted 14 were of *M. scabrinodis*, 12 of *L. flavus*, 10 of *M. laevinodis*, and the remaining one of *F. fusca*.

Occasionally a community is found that combines both L.S.H. and