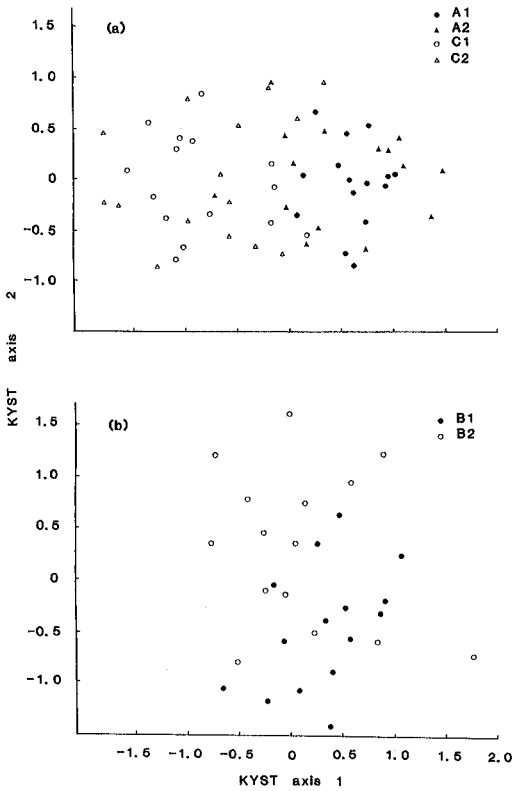

FIGURE 2. Scatter plots of ordination of pitfall traps using hybrid multidimensional scaling (HMDS) across two dimensions (two plots have been used for improved clarity).

species ($r = -0.21$, $P < 0.05$) and generalized myrmicines ($r = -0.22$, $P < 0.05$). This suggests that the former taxa were most abundant in the annually burned plots, with the latter most abundant in unburned plots. This was in fact the case, when considering either absolute (Table 2) or relative (Table 1) abundance of ants in traps. The relative abundance of *Iridomyrmex* spp. (63 and 52% of total ants), hot climate specialists (16, 11%) and opportunists (9, 12%) were all considerably higher in the annually burned plots than in the unburned plots (15, 19%; 4, 1%; and 4, 3%, respectively). Generalized myrmicines and cryptic species, on the other hand, were more abundant in the unburned than annually burned plots (50, 61% and 26, 14% total ants, respectively, compared with 11, 21% and 2, 3%) (Table 1).

The biennially burned plots were intermediate between the annually burned and unburned plots, but B1 was more similar to the former, with B2 resembling the latter (Fig. 2, Table 2). Compared to B2, B1 had a higher relative abundance of dominant *Iridomyrmex* (47 vs 14%), but lower relative abundances of generalized myrmicines (26 vs 46%) and cryptic species (10 vs 23%) (Table 1).

The relationships between plots outlined above were supported by Bray-Curtis similarity coefficients. Greatest similarities were between the replicates of the annually burned plots (coefficient of 0.63), and unburned plots (0.56), with the lowest similarities being between the annually burned and unburned plots (0.23–0.29). Plot B1 had highest similarities with the annually burned plots (0.51, 0.54), whereas B2 was more similar to the unburned plots (0.46, 0.50). The annually burned plots and B1 had more ants and more species recorded in traps than did the unburned plots and B2, but there were no systematic differences in species diversity or evenness indices (Table 1).

Cluster analysis of traps (Table 3) also showed a clear separation between annually burned and unburned plots, with B1 grouping with the former, and B2, the latter. The largest cluster (group 1) comprised 41 traps, and included 15 each from A1 and A2, and nine from B1. The ants best discriminating this group were species of *Iridomyrmex* (dominant species), *Melophorus* (hot climate specialists) and *Rhytidoponera aurata* (opportunist). The next two largest clusters (group 6 with 31 traps, and group 5 with 24 traps), on the other hand, consisted almost entirely of traps from C1, C2 and B2. The ants best discriminating these two groups were mostly generalized myrmicines (species of *Monomorium* and *Pheidole*) and cryptic species (*Solenopsis* sp. 1 and *Paratrechina* (*minutula* gp.) sp. 1). The characterization of annually burned plots by *Iridomyrmex* spp., hot climate specialists and *Rhytidoponera aurata*, and of unburned plots by generalized myrmicines and cryptic species, is also shown by cluster analysis of species (Table 4; in particular, see groups 1 and 4).

Many species that were common under one fire treatment were uncommon or even absent from others. For example, of the 32 most abundant species (Table 4), nine (*Iridomyrmex* spp. 1 and 3, *I. sanguineus*, *Monomorium* ("*Chelaner*") sp. 1, *Meranoplus* (*diversus* gp.) sp. 1, *Paratrechina* (*minutula* gp.) sp. 1, *Monomorium* spp. 8 and 13, and *Rhytidoponera trachypyx*) were not recorded at all in the unburned plots. Similarly, several species that were common in the unburned plots (*e.g.*, *Monomorium* sp. 14, *Crematogaster* sp. 2, *Pheidole* spp. 4, 8 and 14) were rarely recorded in the annually burned plots.

The data presented here only relate to ground-