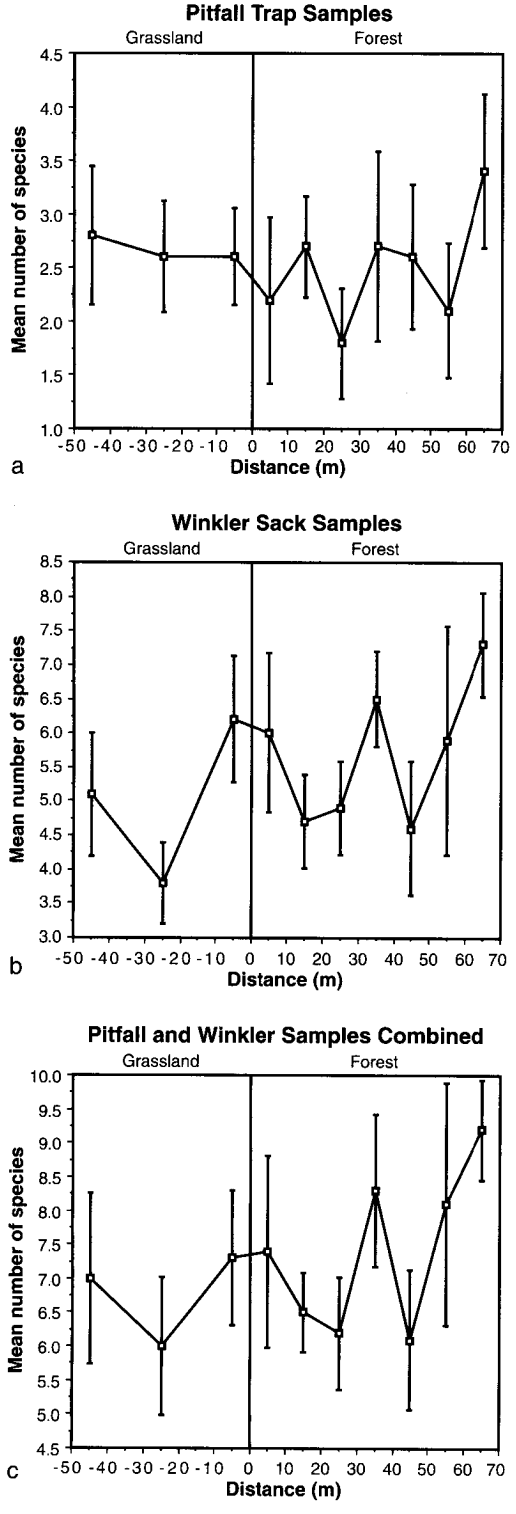

Transects were marked at 10-m interval points and were sited so that seven points extended into the reserve, one occurred in the middle of the planted edge 5 m outside the forest, and two were in an adjacent field. The ALL Protocol was followed, with leaf litter samples collected along the transect and extracted using Winkler sacks (for only 24 hours) and pitfall traps set out along the transect and left out for 48 hours.

Figures 15.5a–c illustrate the variation in the mean number of ant species collected by pitfall traps, by Winkler sacks, and by both methods along the transects. The mean number caught by pitfall traps ranged from 1.8 to 3.4, and there was little apparent trend in numbers along the transects, although the maximum richness was encountered at the point farthest into the forest (Fig. 15.5a). The mean number of species extracted by the Winkler sacks ranged from 3.8 to 7.3. It is noteworthy that the highest density was once again reached at the point farthest into the forest and that the lowest density was encountered at the point 25 m into the field (Fig. 15.5b).

The results of this survey reveal an abrupt differentiation in forest and field ant community composition. Five assemblages of ant species were distinguished along the transect. The largest grouping contained species that were ubiquitous along the transects or that were ubiquitous except at points outside the forest. The second group comprised ants that showed a tendency to occur around the outer forest margin, while the third and fourth groups contained ants that were generally found in deeper forest. The fifth group contained 12 species that were found

Figure 15.5. Mean number of ant species (and standard error) sampled by (a) pitfall traps, (b) Winkler sacks, and (c) both methods combined along ten transects extending from the field into the rainforest in Bahia, Brazil. The vertical line indicates the position of the fence around the forest reserve.