southern counterparts. The south-slope depression is due to *W. auropunctata* (see below).

EFFECTS OF *Wasmannia* ON ANT DISTRIBUTION.—Table 2 shows the results of a series of transects perpendicular to the north-slope highway. The depressing effect of *W. auropunctata* on ant diversity is obvious. At only one site did *Wasmannia* and other species co-occur. At this location we observed seven fights between *Wasmannia* and other species in a 45-minute period.

As the data in table 2 imply, boundaries of *Wasmannia* distribution were often extremely narrow and well demarcated. Composition of the ant fauna changed from 100 percent to 0 percent *Wasmannia* in the course of 100 or even 50 m. Table 3 shows the results of baiting experiments run perpendicular to sharp boundaries. Seven of the eight experiments were run in areas of what appeared to be uniform habitat, so we discount the possibility that these boundaries are due to vegetation, soil, climate, or a similar factor. Interspecific fighting on the baits was often observed.

In addition to sharp boundaries, we also observed areas where *Wasmannia* and other species co-occurred. We suspect that co-occurrence has at least two explanations. One is that in certain areas (e.g., the arid zone around Puerto Ayora) *Wasmannia* becomes dominant only during the hot, wet season. Other species may survive by being active during the rest of the year. A second explanation is historical. The northwest area of the island is undergoing rapid expansion of *Wasmannia* (according to residents), and co-occurrence may be a fairly ephemeral phenomenon. In all areas where the density of *Wasmannia* was high, other ants were either totally absent or extremely rare. Spencer (1941) encountered a similar situation in agricultural situations in Florida, where he reported that ". . . within the network of heavy (*Wasmannia*) infestation other ant species are conspicuous by their absence."

FORAGING PATTERNS.—Patterns of foraging in *Wasmannia* and other species were investigated at a series of sugar-water bait stations. We examined the following variables: size of foraging groups, ability to encounter baits, ability to persist at baits, ability to monopolize baits, and success at interspecific replacement.

Eleven of the 17 species that we collected on Santa Cruz appeared at the bait stations (table 3). Of the

TABLE 2. *Distribution of ants on the north slope of Santa Cruz. Data come from a two person-hour search of a 200 m transect at each location.* (Abbreviations correspond to genus and species of ants in table 1.)

Distance (km) from Los Gemelos	Altitude (m)	Vegetation	Ants										
			Wa	H	P	Pw	Pv	Pl	Tg	Cp	Ca	Sg	Co
0	619	S[a]		X	X		X						
0.5	600	S		X	X		X	X	X	X			
1.0	—	S		X	X		X		X	X			
1.5	510	T	X										
2.0	480	T	X										
3.0	418	T	X										
4.0	408	T	X	X		X				X	X	X	
5.0	344	T				X	X			X		X	
6.0	311	T				X	X			X	X	X	X
7.0	290	A			X					X		X	
9.0	134	A				X				X		X	
10	104	A					X			X		X	
11	91	A					X			X		X	
12	—	A				X	X					X	X
13	45	A				X	X			X			
14	37	A				X	X			X			
15	24	A					X			X		X	
16	18	A					X			X		X	
17	6	A								X		X	X

[a]S = *Scalesia* zone, T = Transition zone, A = Arid zone (after Wiggins and Porter 1971).