

Table 13.1 Example Data Set from Berlese Samples

Ant Species	Sample Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Species 1	0	9	0	0	0	0	1	0	0	0	1	5	1	0	0	0
Species 2	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
Species 3	0	0	0	2	3	0	0	3	0	0	0	0	0	0	0	0
Species 4	1	0	0	0	0	0	0	0	0	0	0	7	0	0	0	1
Species 5	0	0	0	0	2	0	0	1	0	0	0	1	0	0	1	1
Species 6	0	0	2	12	0	0	0	0	0	0	0	0	0	2	2	0
Species 7	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0
Species 8	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0
Species 9	0	0	0	0	0	0	0	0	8	3	3	0	0	1	0	0
Species 10	4	0	0	0	0	27	0	0	0	3	0	1	2	0	0	8
:																
Species 107	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0

curve can be produced by repeatedly randomizing sample order, calculating a species-accumulation curve for each randomization, and averaging the resultant curves (Fig. 13.1). (This and many other analyses illustrated here were carried out with the program EstimateS [Colwell 1997].) The curve for a highly undersampled fauna will appear nearly linear, with each new

sample adding many new species to the inventory. The curve for a thoroughly sampled fauna will reach a plateau, with few or no species being added with additional sampling. In addition to observing the current rate of species accumulation, one may wish to predict the results of additional sampling. Projecting a species-accumulation curve allows one to esti-

Table 13.2 Calculating a Species-Accumulation Curve^a

Ant Species	Sample Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Species 1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Species 2	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
Species 3	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Species 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Species 5	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
:																
Species 106	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Species 107	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
Sum	19	36	47	56	62	68	75	79	92	93	100	101	104	106	106	106

^aAbundances are summed across rows and then each nonzero value is replaced with 1. The column sums are the observed species-accumulation curve for a particular sample order.