

Carefully read the description of the experiment below. Be prepared to answer the questions that follow the design description as a class quiz.

An researcher studying the ecology of bees in interested in the spread of the Africanized Honeybee (*Apis mellifera scutellata*) and its effect on traditional Mayan beekeeping in Mexico?

Historically, an important bee in Mayan areas was the stingless bee group Meliponinae, and in particular the species *Melipona beecheii*. The current species composition and distribution of bees was determined for three areas with different levels of human intervention. The three areas studied included two traditional agricultural areas, Kampocolche and Santa Maria, and a reserve the Sian Ka'an. The study classified the bees into three categories, (1) the Africanized Honeybee, (2) the stingless bee group and (3) other bees. Nine transects were sampled in each of the areas of interest the number of colonies on each transect summed to obtain a total number of bee colonies for each bee category and area. How would the researcher determine if the number of colonies observed in each area occurred in approximately the same proportion as other areas?

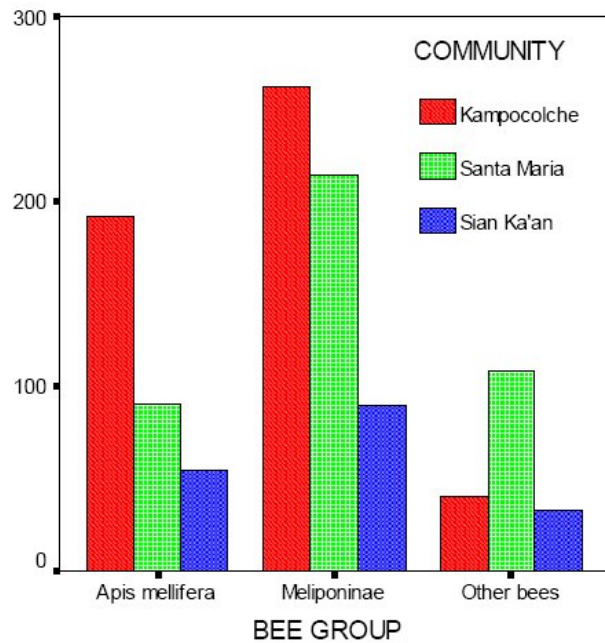


Figure 13: Bee Group by Community

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TABLE 1. Proportion of bees of three groups in three communities of Quintana Roo, Mexico.

		Community			Total	
		Kampocolche	Santa María	Sian Ka'an		
Bee Group	<i>Apis mellifera</i>	Count	192	90	55	337
		% within community	38.79	21.79	31.07	31.06
	Meliponinae	Count	262	215	89	566
		% within community	52.93	52.06	50.28	52.17
	Other bees	Count	41	108	33	182
		% within community	8.28	26.15	18.64	16.77
Total		Count	495	413	177	1085
		% within community	100.00	100.00	100.00	100.00