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WRL reference M04 D03

Module M04 Ecosystems – Tropical Rainforests

Data set D03 The effect of altitude on dung beetle community structure

Table to show the possible variables that might determine Dung Beetle Distribution and Community structure in Cusuco National Park:

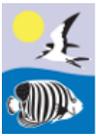
Fill in as much as you can and then use this information for discussion on which variables might be important.

Column	Variable measured	Description	Comment	Importance? ***, **, *, X
AV	Elevation	Height in meters above sea level.		
BP-BS	Monthly precipitation	From WorldClim website -		
BP-CA	Max-min temperatures	<a href="http://www.worldclim.org/bioclim">http://www.worldclim.org/bioclim</a>		
CB	Cut stumps	Number recorded in an area. Human activity?	Cut stumps might indicate an unhealthy habitat where dung-producers are not found	
CC	Saplings	Total number in 20x20m sample square.		
CD	Total trees	Total number in square.		
CE	Broadleaf trees	Total number in square.		
CF	Ferns			
CG	Palms			
CH	Pines			
CI	Tree ferns			
CJ	Vines			
CK	Alive trees	Total number in square.		
CL	Dead trees	Total number in square.	Dead trees might indicate an unhealthy habitat where dung-producers are not found	
CM	Average CBH	The circumference measured at breast height in cms.		
CN	Average Canopy height	The height of a representative tree in the plot - meters		



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These data were gathered from the Opwall Honduras expedition: <http://opwall.com/sixth-form-high-school/locations/honduras-school-expeditions/> Copyright: these resources are the sole property of Operation Wallacea although they may be used freely for educational purposes within the classroom or for internal examinations. Further use will require permission which can be gained by email.



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CO	Average leaf litter depth	Depth in mm. of the leaf litter layer	Leaf litter depth might affect the dung beetles' ability to roll or tunnel dung.	
CQ	Average soil density	Measured using a standard weight dropped from a set height.mm.	Soil density might affect the dung beetles' ability to roll or tunnel dung.	
CP	Average canopy openness	How much blue-sky could be seen - the higher the number, the more sky visible.	Canopy openness might affect the local temperature and increase predation	
CR-CW	Vegetation touches	The number of times each 50cm segment of a 3metre pole is touched by vegetation: gives an indicator of the density of the understory vegetation.		

All the data was collected from 20x20m squares. The Dung beetle 10x10m square was located within this sample area.

Importance key - \*\*\* = high \*\* = medium \* = low or possibly X = no

