

Uta Stansburiana Captures- Round Two (4/24/08)
Zyanti

Uta Stansburiana				
Color	Sex	Back		
BY	M	spots/bars		
BY	F	chevron		
BY	F	barred		
BO	F	striped		
BO	F	bar/chevron		
BO	M	striped		
BO	F	striped		
BO	F	chevron		
BY	F	striped		
BB	F	chevron		
BO	F	partial chevron		
BY	M	dash /striped		
BY	M	chevron		
BO	M	chevron		
BY	F	chevron		
BY	M	spot/dash		
BO	M	striped		
BY	F	chevron		
OO	M	spotted		
BY	M	chevron/stripes		
BY	M	chevron		
BY	M	spotted		
BY	F	chevron		
YY	F	striped		
BO	M	chevron		
BY	F	striped		
BY	M	striped		
BO	F	chevron		
BO	F	striped		
BY	M	spotted		
OO	F	striped		
BY	M	chevron		
BY	M	spots/chevron		
BB	M	spotted		
BO	M	spotted		
BY	F	striped		

Totals	
S. Occidentalis	Uta
8	35

Uta assignment #1

This assignment, although already turned in, can be redone if you'd like to have this graded as opposed to the one originally handed in (I advise this option).

Step 1: Find allele frequencies

- Find allele frequencies for the entire population and,
- Find allele frequencies for different sexes.

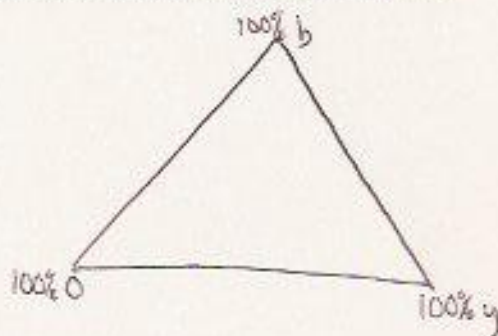
$$f(o) = \frac{n_{oo} + \frac{1}{2}n_{bo} + \frac{1}{2}n_{yo}}{n_{\text{total}}}$$

$$f(b) = \frac{n_{bb} + \dots}{n_{\text{total}}}$$

$$f(y) = \dots$$

$$f(\text{♀}), f(\text{♂}), f(\text{Total})$$

Step 2: Plot frequencies onto the PDF plot online



Step 3: Determine the chi-square for *Uta* and *Sceloporus*

	OBSERVED				EXPECTED		
	Quarry	Field	Total				
Uta	31	2	33	→	$\frac{(O-E)^2}{E}$	→	
Sceloporus	6	11	17				
	37	13	50				

	$\frac{37 \cdot 33}{50}$	$\frac{33 \cdot 13}{50}$	

$$\sum \frac{(O-E)^2}{E}$$

Uta assignment #2

This assignment has not yet been turned in and is due on Tuesday, May 13th. The first Uta assignment, if you have chosen to redo it, will be due on the above date as well.

Step 1: From the Nacimiento data, find the allele frequencies for the total population only. Pool the sexes.

Step 2: Pool the sexes and do a chi-square for Nacimiento **genotypes**.

	oo	bo	yo	bb	by	yy
O						
Σ	p^2	$2pr$	$2pr$	q^2	$2qr$	r^2

Step 3: Using the **second Uta** data from 4-23-08, as you did in the first assignment, find the frequencies for the entire population and for both sexes. Compare allele frequencies between the sexes.

	o	b	y
♂			
♀			

Step 4: Compare Nacimiento vs. Zayante individuals (not allele frequencies).

	oo	bo	yo	bb	by	yy
Zayante						
Nacimiento						

Step 5: Run a chi-square of Nacimiento allele frequencies.

	o	b	y
O			
Σ			

There is a rattle snake here
 \Rightarrow

Step 6: Plot both Zayante and Nacimiento frequencies onto the triangular genotype graph.

