

1. Stebbins (1950 Table 9) reported data from Reid and Reid (1915) on extinction rates in woody and herbaceous species of the early Pliocene in Northwestern Europe.

		Woody Nspecies	Herbaceous Nspecies
Modern species	N_s	25	31
Modern genera	N_g	56	70
Unidentified	N_{unid}	13	22
	Total	94	123

Calculate

a. Proportion of all Woody plants that belong to modern genera. $p_W =$ _____ [1]

Proportion of all Herbaceous plants that belong to modern genera. $p_H =$ _____ [1]

Odds of extinction of modern species

where $Odds_W = p_W / (1 - p_W)$

$Odds_W =$ _____ [1]

$Odds_H =$ _____ [1]

Odds ratio: $OR = (Odds_W) / (Odds_H)$

$OR =$ _____ [1]

b. Mean extinction rate of modern genera N_g .

$mean(N_g) =$ _____ [1]

$CV = \text{st.deviation} / \text{mean}$ $CV(N_g) = 0.157$

$\text{st.deviation}(N_g) =$ _____ [1]

$t = (\text{mean} - \mu) / \text{st.deviation}$

If $\mu = 0$, calculate t _____ [1]

2. 1 acre = 1 rod X 1 furlong 1 rod = 22 yards 1 furlong = 220 yards

m = 1.098 yards

0.742 acres = _____ yards² [1]

show your work [2]

0.742 acres = _____ m² [1]

show your work [2]