

Appendix 7 to:

Measures of Genetic Diversity

Calculating Nei's genetic distance

First, with the data obtained in the example (see slide 48), we make the distance matrix as follows:

	P ₁	P ₂	P ₃
P ₁	0		
P ₂	0.0852	0	
P ₃	0.0107	0.0440	0

In the first cycle, we choose the shortest distance: $d_{1,3} = 0.0107$

Then, in the second cycle, a new matrix is formed by grouping Individual₁ with Individual₃ and calculating the combined distances:

$$d_{2(1,3)} = (d_{1,2} + d_{2,3})/2 = (0.0852 + 0.044)/2 = 0.0646$$

	P _{1,3}	P ₂
P _{1,3}	0	
P ₂	0.0646	0

We can now draw the dendrogram:

