

Chi-Squared Distribution Table

Chi-square Distribution Table

d.f.	.995	.99	.975	.95	.9	.1	.05	.025	.01
1	0.00	0.00	0.00	0.00	0.02	2.71	3.84	5.02	6.63
2	0.01	0.02	0.05	0.10	0.21	4.61	5.99	7.38	9.21
3	0.07	0.11	0.22	0.35	0.58	6.25	7.81	9.35	11.34
4	0.21	0.30	0.48	0.71	1.06	7.78	9.49	11.14	13.28
5	0.41	0.55	0.83	1.15	1.61	9.24	11.07	12.83	15.09
6	0.68	0.87	1.24	1.64	2.20	10.64	12.59	14.45	16.81
7	0.99	1.24	1.69	2.17	2.83	12.02	14.07	16.01	18.48
8	1.34	1.65	2.18	2.73	3.49	13.36	15.51	17.53	20.09
9	1.73	2.09	2.70	3.33	4.17	14.68	16.92	19.02	21.67
10	2.16	2.56	3.25	3.94	4.87	15.99	18.31	20.48	23.21

Degrees of freedom = number of parameters that are free to vary. $p + q = 1$, so $df=1$.

Chi-Squared Distribution

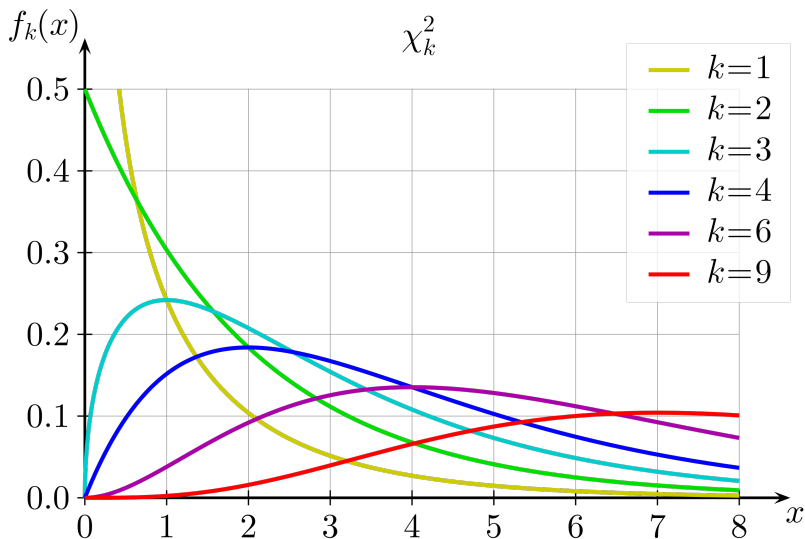
Probability Density Function:

$$f(k) = \frac{1}{2^{k/2}\Gamma(k/2)} x^{k/2-1} e^{-x/2}$$

where k = degrees of freedom and x is the test statistic (i.e., what you use to determine the p-value)

Chi-Squared Distribution

Probability Density Function:



Ferruginous Hawks

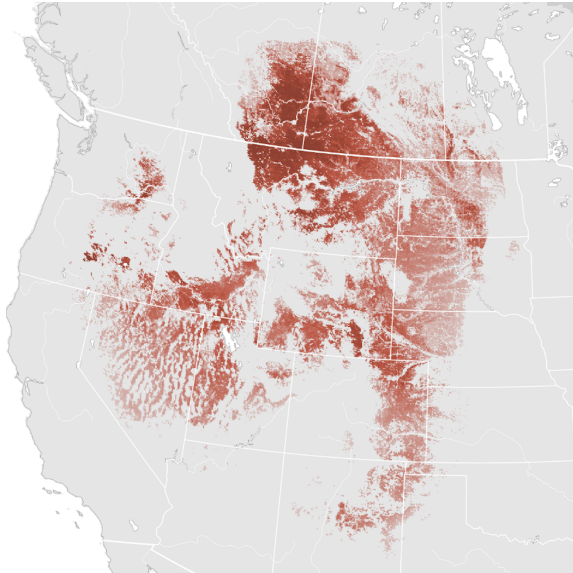


light morph



dark morph

Ferruginous Hawks



Ferruginous Hawks



genotype aa



genotypes Aa, AA

Discussion Questions (Optional Reading)

- 1) Schmutz & Schmutz 1981: Why might there have been a single dark nestling observed in the light x light mating events in 1977?
- 2) Schmutz & Schmutz 1981: What does Table 2 tell us?