Table 1: Model Comparison across Multiple Datasets

AICc Model Selection Results

| species | Modnames | K | AICc | Delta\_AICc | ModelLik | AICcWt | LL | Cum.Wt |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Colpidium striatum** | **y ~ rich** | **7** | **-1,084.48** | **0.00** | **1.000** | **0.63** | **549.41** | **0.63** |
| Colpidium striatum | y ~ rich + rich^2 | 8 | -1,083.40 | 1.09 | 0.581 | 0.37 | 549.91 | 1.00 |
| Dexiostoma campylum | y ~ rich + rich^2 | 8 | -812.42 | 0.00 | 1.000 | 0.72 | 414.42 | 0.72 |
| **Dexiostoma campylum** | **y ~ rich** | **7** | **-810.55** | **1.87** | **0.392** | **0.28** | **412.44** | **1.00** |
| **Loxocephalus sp.** | **y ~ rich** | **7** | **-1,206.64** | **0.00** | **1.000** | **0.68** | **610.48** | **0.68** |
| Loxocephalus sp. | y ~ rich + rich^2 | 8 | -1,205.11 | 1.52 | 0.467 | 0.32 | 610.77 | 1.00 |
| **Paramecium caudatum** | **y ~ rich** | **7** | **-846.29** | **0.00** | **1.000** | **0.60** | **430.31** | **0.60** |
| Paramecium caudatum | y ~ rich + rich^2 | 8 | -845.49 | 0.80 | 0.670 | 0.40 | 430.96 | 1.00 |
| Spirostomum teres | y ~ rich + rich^2 | 8 | -873.30 | 0.00 | 1.000 | 0.70 | 444.86 | 0.70 |
| **Spirostomum teres** | **y ~ rich** | **7** | **-871.60** | **1.70** | **0.428** | **0.30** | **442.97** | **1.00** |
| **Tetrahymena thermophila** | **y ~ rich** | **7** | **-1,116.38** | **0.00** | **1.000** | **0.74** | **565.36** | **0.74** |
| Tetrahymena thermophila | y ~ rich + rich^2 | 8 | -1,114.33 | 2.05 | 0.358 | 0.26 | 565.38 | 1.00 |