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 ~ temp + temp^2** | **4** | **-49.28** | **0.00** | **1.000** | **0.80** | **30.31** | **0.80** |
| Colpidium striatum | y ~ temp | 3 | -46.54 | 2.75 | 0.253 | 0.20 | 27.19 | 1.00 |
| **Dexiostoma campylum** | **y ~ temp + temp^2** | **4** | **-67.77** | **0.00** | **1.000** | **0.78** | **39.42** | **0.78** |
| Dexiostoma campylum | y ~ temp | 3 | -65.26 | 2.51 | 0.286 | 0.22 | 36.49 | 1.00 |
| Loxocephalus sp. | y ~ temp + temp^2 | 4 | -73.60 | 0.00 | 1.000 | 0.57 | 42.47 | 0.57 |
| **Loxocephalus sp.** | **y ~ temp** | **3** | **-73.00** | **0.60** | **0.740** | **0.43** | **40.42** | **1.00** |
| **Paramecium caudatum** | **y ~ temp** | **3** | **-62.90** | **0.00** | **1.000** | **0.76** | **35.38** | **0.76** |
| Paramecium caudatum | y ~ temp + temp^2 | 4 | -60.57 | 2.33 | 0.311 | 0.24 | 35.95 | 1.00 |
| **Spirostomum teres** | **y ~ temp** | **3** | **-60.33** | **0.00** | **1.000** | **0.80** | **34.26** | **0.80** |
| Spirostomum teres | y ~ temp + temp^2 | 4 | -57.50 | 2.83 | 0.243 | 0.20 | 34.75 | 1.00 |
| **Tetrahymena thermophila** | **y ~ temp** | **3** | **-60.84** | **0.00** | **1.000** | **0.84** | **34.34** | **0.84** |
| Tetrahymena thermophila | y ~ temp + temp^2 | 4 | -57.57 | 3.27 | 0.195 | 0.16 | 34.45 | 1.00 |