

	#	Clade	"Primary Tree"	NJ <sub>st</sub>				ML concatenation			
				CDS	CNEE	Intergenic	Intron	CDS	CNEE	Intergenic	Intron
Easy (+++)	1	PALAEognathae									
	2	<b>Notopalaeognathae</b>									
	4	NEOGNATHAE									
	5	Galloanserae									
	6	Neoaves									
	7	<b>Mirandornithes</b> (VII)									
	16	Daedalornithes									
	33	Passeriformes									
	34	Eupasserres									
			0	1	0	1	1	1	1	2	0
Medium (++)	3	<b>Novaeratitae</b>									
	12	Strisores (V)									
	19	<b>Aequornithes</b> (II)									
	20	<b>Feraequornithes</b>									
	21	<b>Procellariimorphae</b>									
	24	<b>Telluraves</b> (I)									
	26	<b>Cavitaves</b>									
	27	<b>Eucavitaves</b>									
	28	<b>Picocoraciae</b>									
	30	<b>Australaves</b>									
	31	<b>Eufalconimorphae</b>									
	32	<b>Psittacopasserae</b>									
			0	5	0	2	0	3	0	5	0
Hard (+)	8	Columbimorphae (VI)									
	9	Pteroclimbesites									
	11	<b>Musophagotides</b>									
	17	<b>Phaethoquornithes</b>									
	18	<b>Phaethontimorphae</b> (III)									
	22	Pelecanimorphae									
	23	<b>Pelecanes</b>									
	25	Coraciimorphae									
	29	<b>Picodynastornithes</b>									
			0	5	1	9	2	4	1	8	1
Uncertain (-)	10	Otidimorphae (IV)									
	13	Vanescaves									
	14	Sedentaves									
	15	Letornithes									
	-	Afroaves									
	-	Accipitriformes+Strigiformes									
	-	Coraciimorphae+Australaves									

**Figure S1. Recovery of reliable clades in Wu et al. (2024).**

Grids show the presence (green) or absence (white) of clades in the Wu et al. (2024) trees generated by each method and dataset. Reliable clades were divided into three groups (easy, medium, and hard); the fourth group is clades that were not placed in any category based on our criteria. Novaeratitae (clade 3) is red because its presence or absence could not be assessed using the Wu et al. (2024) taxon sample.