

Supplementary Material

Supplementary Table S2: The spectrum of APV host diversity. The number of species in which APV has been detected and number of species per order (following Clements et al., 2019) was used to calculate the proportion of APV positive species per order, to test whether proportions significantly varied from the expected level. Significant results are shown in bold.

Avian order	N APV	N Order	Proportion infected with APV	p-value	Lower CI	Higher CI
Accipitriformes ¹	20	259	0.08	9.68E-04	0.05	0.11
Anseriformes	28	178	0.16	3.28E-11	0.11	0.22
Caprimulgiformes	2	597	0.00	2.87E-07	0.00	0.01
Charadriiformes	17	379	0.04	3.29E-01	0.03	0.07
Columbiformes	13	348	0.04	5.57E-01	0.02	0.07
Coraciiformes	0	183	0.00	3.54E-03	0.00	0.02
Cuculiformes	1	147	0.01	6.81E-02	0.00	0.04
Galliformes	30	295	0.10	2.25E-07	0.07	0.14
Gruiformes	4	192	0.02	4.27E-01	0.01	0.05
Passeriformes	161	6386	0.02	1.23E-05	0.02	0.03
Pelecaniformes	4	114	0.03	1.0E+00	0.01	0.09
Piciformes ¹	3	432	0.01	3.25E-04	0.00	0.02
Procellariiformes	12	138	0.08	3.38E-03	0.05	0.15
Psittaciformes	40	387	0.10	1.55E-09	0.07	0.14
Strigiformes	6	234	0.02	5.91E-01	0.01	0.05
Others ²	32	452	0.07	2.52E-04	0.05	0.10
Total	374	10721	0.03			

References

Clements, J.F., Schulenberg, T.S., Iliff, M.J., Billerman, S.M., Fredericks, T.A., Sullivan, B.L., Wood, C.L. 2019. *The eBird/Clements Checklist of Birds of the World: v2019*.

¹ We deviate from Clements' treatment of Order in two cases. We consider New World vultures "Cathartiformes" to form part of the order "Accipitriformes", and Puffbirds and Jacamars "Galbuliformes" to belong to the order "Piciformes".

² The 24 Orders (following Clements et al., 2019) which contain less than 1% of bird species were grouped together as "Other", to avoid introducing size effect bias to data analysis. Collectively they contain 4.5% of bird species. The full list of bird orders grouped into "Other, from most speciose to least, is: **Bucerotiformes**, **Falconiformes**, Suliformes, Tinamiformes, Trogoniformes, **Otidiformes**, Musophagiformes, **Podicipediformes**, **Ciconiiformes**, **Sphenisciformes**, Pteroclidiformes, **Phoenicopteriformes**, Coliiformes, **Apterygiformes**, Gaviiformes, Casuariiformes, Mesitornithiformes, **Phaethontiformes**, **Struthioniformes**, **Rheiformes**, Eurypygiformes, Cariamiformes, Opisthocomiformes, Leptosomiformes. APV has been detected from all **bold** orders.