Table S1. Variance inflation factors for the effect of habitat, diet, foraging substrate, sociality, timing of activity, migration, latitude, foraging, body mass, and life history on eye volume in birds (n = 660 species).

Factor	Level	VIF
Habitat	Semi-open v. closed	2.70
	Open v. closed	2.13
Diet	Fruits/nectar v. invertebrates	1.18
	Omnivore v. invertebrates	1.25
	Plants/seeds v. invertebrates	1.43
	Vertebrates/carrion v. invertebrates	1.93
Substrate	Aerial v. terrestrial-ground	1.25
	Aquatic v. terrestrial-ground	3.17
	Terrestrial-canopy v. terrestrial-ground	1.15
	Terrestrial-mid-story v. terrestrial-ground	1.60
	Terrestrial-under-story v. terrestrial-ground	1.58
Flocking	Occasional v. solitary	1.94
	Flocking v. solitary	1.68
Timing of activity	Nocturnal-diurnal v. diurnal	4.49
	Nocturnal v. diurnal	4.91
Migration	Absent v. present	1.59
Foraging	Myopic v. hyperopic	1.77
Absolute latitude	-	1.78
Pace-of-life axis (PC1)	-	2.43
Body-mass axis (PC2)	-	2.55

Table S2. Table of 136 families and 660 species with available data on eye size, life history, and flocking. Taxonomy is based on the Cornell Lab of Ornithology Birds of the World. Families are sorted by species sampled.

Family	Species worldwide	Species sampled	Proportion sampled
Accipitridae	249	25	0.1
Thamnophilidae	237	24	0.1
Scolopacidae	97	23	0.24
Tyrannidae	441	23	0.05
Procellariidae	97	20	0.21
Corvidae	128	19	0.15
Fringillidae	229	19	0.08
Parulidae	115	19	0.17
Laridae	99	16	0.16
Estrildidae	138	13	0.09
Muscicapidae	345	13	0.04
Thraupidae	382	13	0.03
Alcidae	25	12	0.48
Picidae	233	12	0.05
Anatidae	174	11	0.06
Furnariidae	307	11	0.04
Strigidae	228	11	0.05
Troglodytidae	86	11	0.13
Alcedinidae	93	10	0.11
Passerellidae	132	10	0.08
Nectariniidae	143	9	0.06
Phasianidae	186	9	0.05
Turdidae	175	9	0.05
Cardinalidae	49	8	0.16
Hirundinidae	86	8	0.09
Paridae	63	8	0.13
Pipridae	55	8	0.15
Charadriidae	68	7	0.1
Diomedeidae	15	7	0.47
Meliphagidae	189	7	0.04
Rallidae	159	7	0.04
Spheniscidae	18	7	0.39
Trochilidae	363	7	0.02
Icteridae	106	6	0.06
Laniidae	34	6	0.18
Ploceidae	123	6	0.05
Pycnonotidae	151	6	0.04
Threskiornithidae	36	6	0.17
Vireonidae	61	6	0.1
Ardeidae	68	5	0.07

Climacteridae	7	5	0.71
Columbidae	353	5	0.01
Sittidae	28	5	0.18
Timaliidae	58	5	0.09
Apodidae	103	4	0.04
Cisticolidae	162	4	0.02
Maluridae	32	4	0.13
Mimidae	34	4	0.12
Motacillidae	69	4	0.06
Passeridae	43	4	0.09
Petroicidae	49	4	0.08
Phalacrocoracidae	40	4	0.1
Psittacidae	175	4	0.02
Rhipiduridae	54	4	0.07
Stercorariidae	7	4	0.57
Sulidae	10	4	0.4
Acrocephalidae	59	3	0.05
Alaudidae	91	3	0.03
Caprimulgidae	96	3	0.03
Cathartidae	7	3	0.43
Ciconiidae	20	3	0.15
Cinclidae	5	3	0.6
Coliidae	6	3	0.5
Hydrobatidae	18	3	0.17
Malaconotidae	50	3	0.06
Monarchidae	100	3	0.03
Pachycephalidae	63	3	0.05
Pelecanidae	8	3	0.38
Phaethontidae	3	3	1
Phylloscopidae	80	3	0.04
Ptilonorhynchidae	27	3	0.11
Remizidae	11	3	0.27
Sylviidae	69	3	0.04
Zosteropidae	143	3	0.02
Acanthizidae	65	2	0.03
Apterygidae	4	2	0.5
Artamidae	11	2	0.18
Conopophagidae	12	2	0.17
Corcoracidae	2	2	1
Cuculidae	147	2	0.01
Dicruridae	29	2	0.07
Formicariidae	12	2	0.17
Gaviidae	5	2	0.4
Gruidae	15	2	0.13
Haematopodidae	12	2	0.17
Macrosphenidae	21	2	0.1
Odontophoridae	33	2	0.06

Otididae	26	2	0.08
Pellorneidae	62	2	0.03
Platysteiridae	32	2	0.06
Prunellidae	12	2	0.17
Vangidae	40	2	0.05
Viduidae	20	2	0.1
Acanthisittidae	2	1	0.5
Aegithalidae	10	1	0.1
Bucconidae	35	1	0.03
Burhinidae	10	1	0.1
Cacatuidae	21	1	0.05
Callaeidae	5	1	0.2
Casuariidae	4	1	0.25
Certhiidae	11	1	0.09
Chionidae	2	1	0.5
Coraciidae	13	1	0.08
Cotingidae	65	1	0.02
Diodemeidae	15	1	0.07
Dromadidae	1	1	1
Emberizidae	45	1	0.02
Eurylaimidae	9	1	0.11
Fregatidae	5	1	0.2
Galbulidae	18	1	0.06
Icteriidae	1	1	1
Meropidae	31	1	0.03
Oceanitidae	10	1	0.1
Opisthocomidae	1	1	1
Oxyruncidae	7	1	0.14
Pandionidae	1	1	1
Panuridae	1	1	1
Phoenicopteridae	6	1	0.17
Phoeniculidae	8	1	0.13
Podicipedidae	22	1	0.05
Polioptilidae	21	1	0.05
Pomatostomidae	5	1	0.2
Psophiidae	3	1	0.33
Psophodidae	5	1	0.2
Recurvirostridae	9	1	0.11
Regulidae	6	1	0.17
Rhinocryptidae	65	1	0.02
Rostratulidae	3	1	0.33
Scotocercidae	35	1	0.03
Strigopidae	4	1	0.25
Sturnidae	125	1	0.01
Tityridae	33	1	0.03
Todidae	5	1	0.2
Trogonidae	43	1	0.02

Tytonidae	18	1	0.06
Upupidae	1	1	1

The top five families accounted for 17% of the data. The median proportion of species sampled per family was 0.1.

Table S3. Results from a phylogenetic linear model for the effect of habitat, diet, foraging substrate, sociality, timing of activity, migration, latitude, foraging, body mass, and life history on axial length in birds (n = 660 species).

Factor	Level	Estimate (SEM)	p-value
Intercept	-	1.12 (0.072)	<0.0001
Habitat	Semi-open v. closed	-0.011 (0.0053)	0.044
	Open v. closed	-0.026 (0.0068)	<0.0001
Diet	Fruits/nectar v. invertebrates	-0.012 (0.011)	0.24
	Omnivore v. invertebrates	-0.0015 (0.0061)	0.81
	Plants/seeds v. invertebrates	-0.0000051 (0.0099)	0.99
	Vertebrates/carrion v. invertebrates	-0.0091 (0.0086)	0.29
Substrate	Aerial v. terrestrial-ground	0.089 (0.026)	0.0006
	Aquatic v. terrestrial-ground	-0.035 (0.011)	0.0009
	Terrestrial-canopy v. terrestrial-ground	-0.019 (0.0095)	0.049
	Terrestrial-mid-story v. terrestrial-ground	-0.012 (0.0067)	0.073
	Terrestrial-under-story v. terrestrial-ground	-0.0041 (0.0061)	0.50
Flocking	Occasional v. solitary	-0.0064 (0.0056)	0.25
	Flocking v. solitary	-0.018 (0.0058)	0.002
Timing of activity	Nocturnal-diurnal v. diurnal	-0.0031 (0.009)	0.73
	Nocturnal v. diurnal	-0.0038 (0.014)	0.78
Migration	Absent v. present	0.0042 (0.0051)	0.41
Foraging	Myopic v. hyperopic	-0.027 (0.008)	0.0007
Absolute latitude	-	-0.00025 (0.00014)	0.08
Pace-of-life axis (PC1)	-	-0.38 (0.023)	<0.0001
Body-mass axis (PC2)	-	0.78 (0.025)	<0.0001