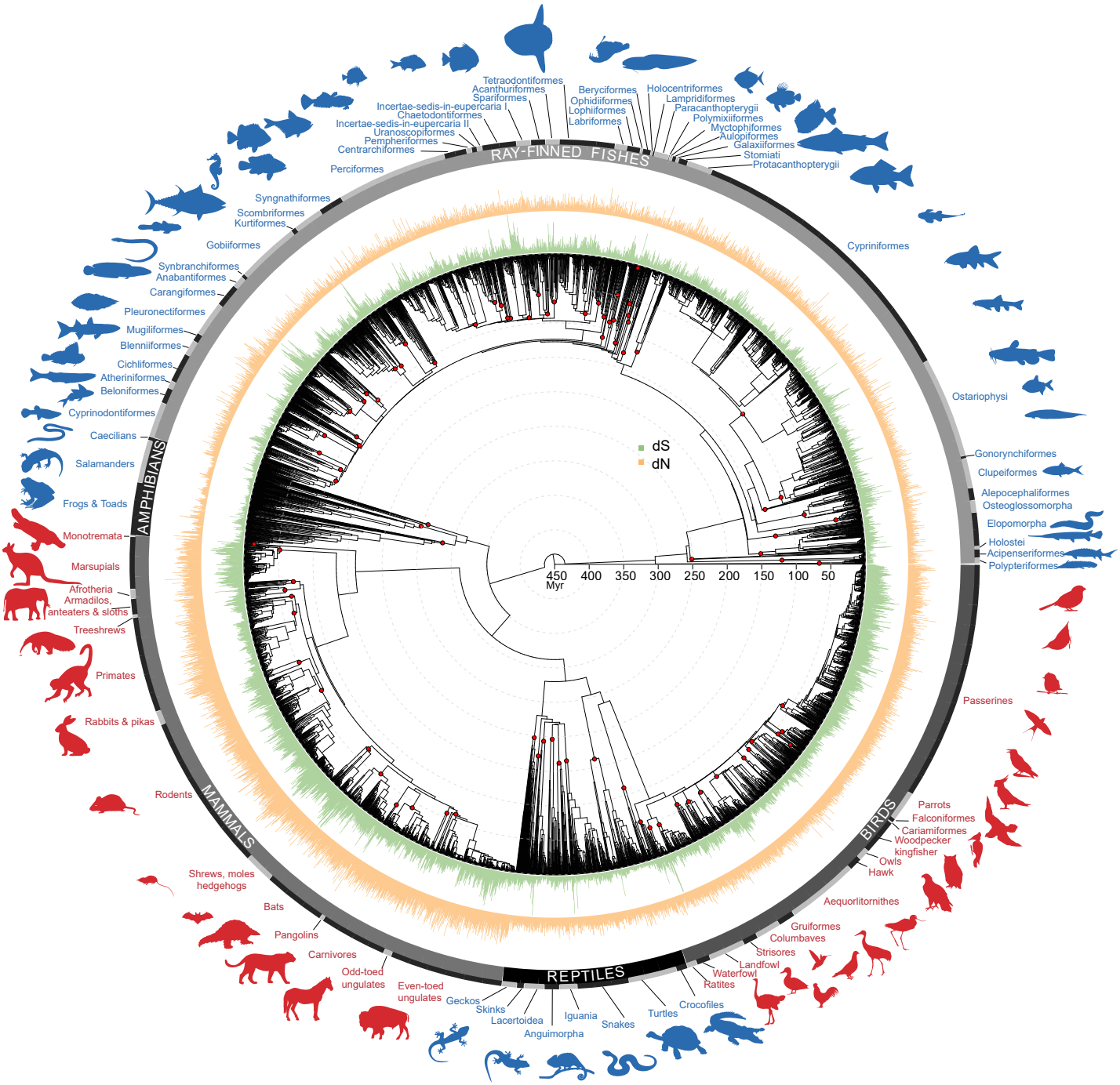
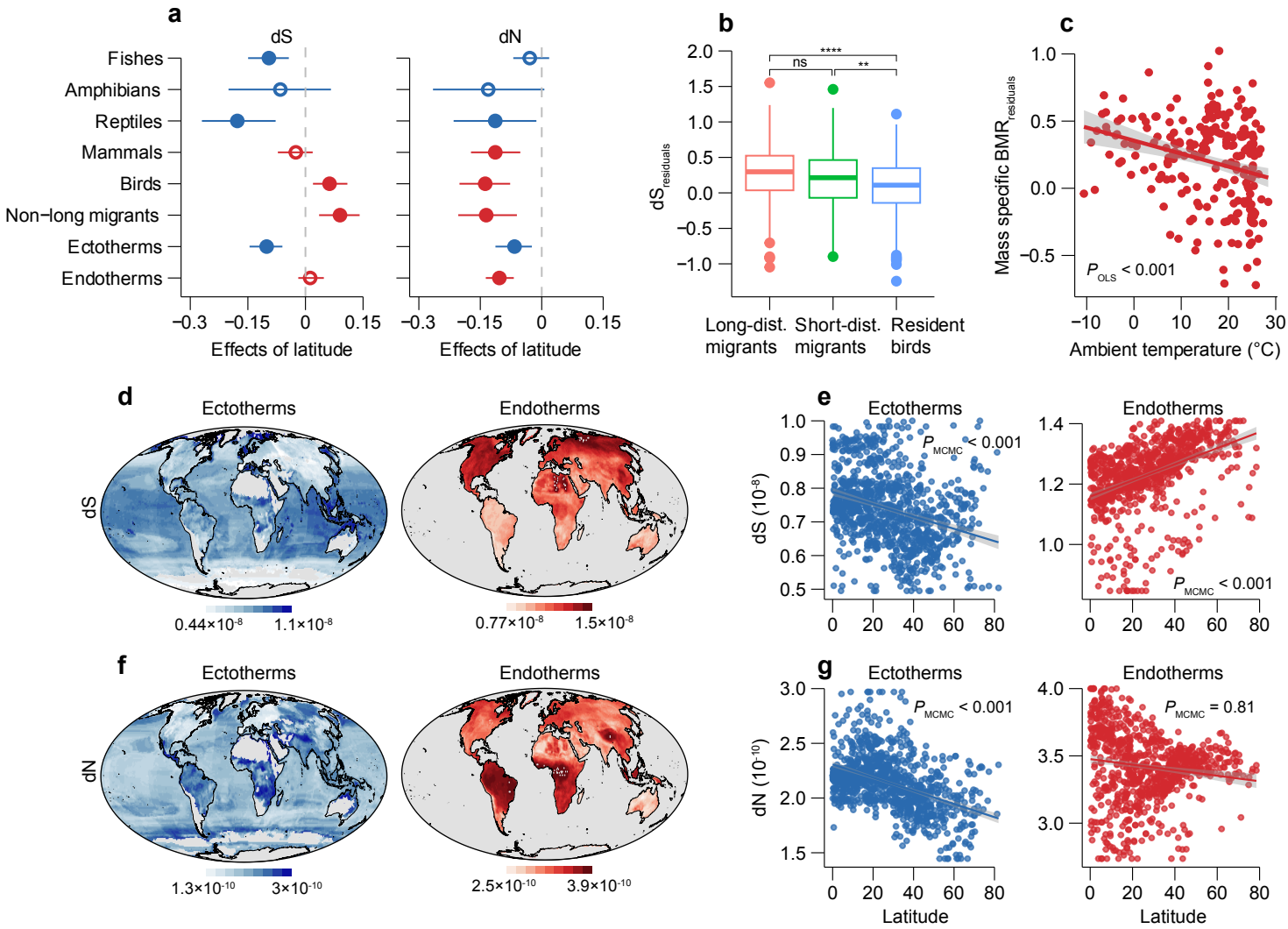
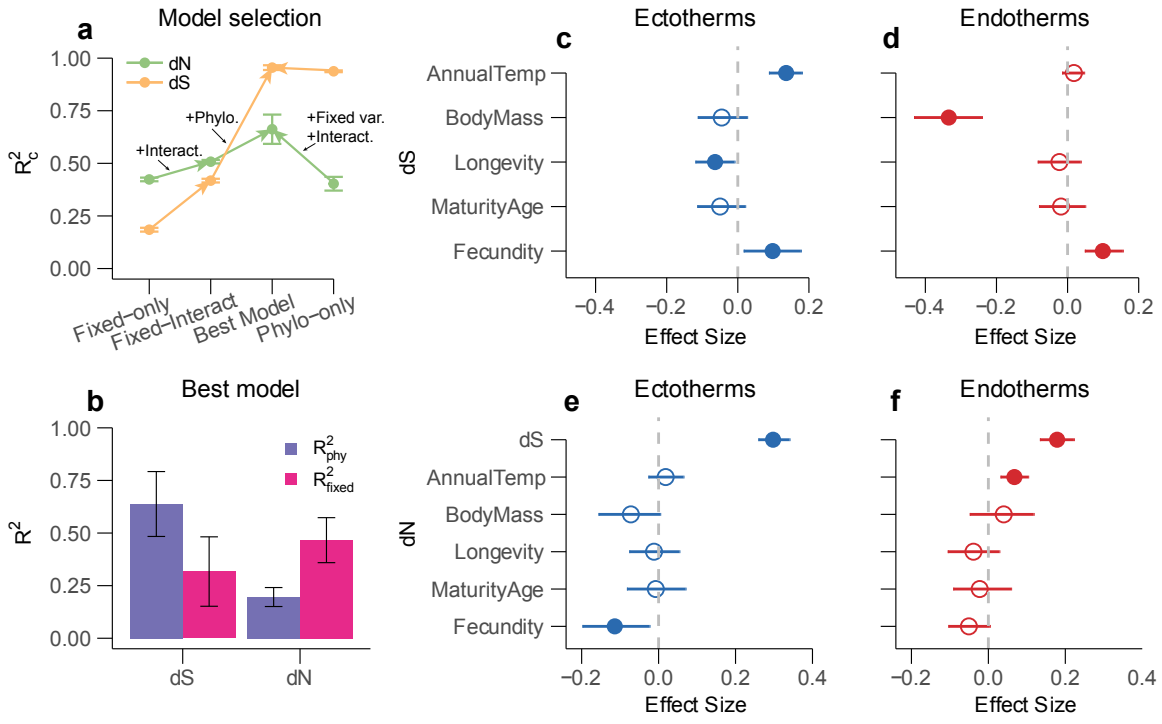
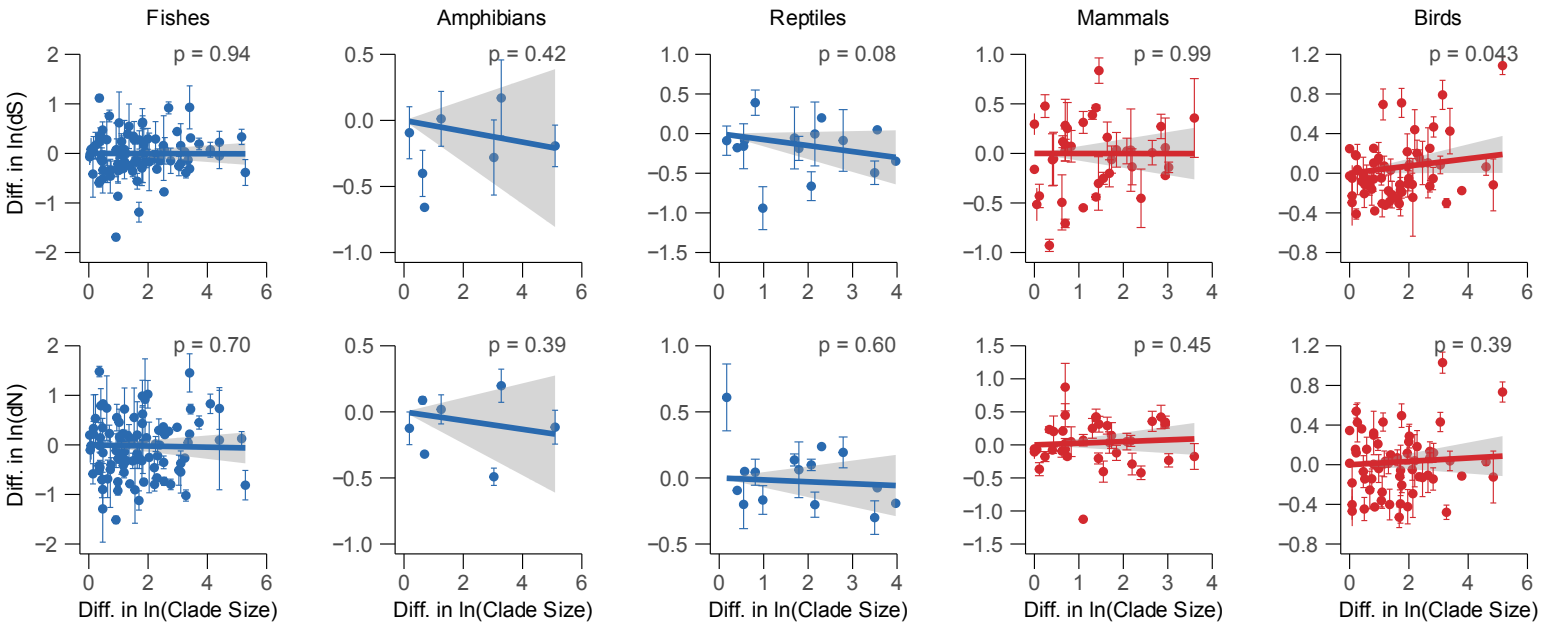

RAY-FINNED FISHES
Tetraodontiformes
Acanthuriformes
Spariformes
Incertae-sedis-in-eupercaria I
Chaetodontiformes
Incertae-sedis-in-eupercaria II
Uranoscopiformes
Pempheriformes
Centrarchiformes
Perciformes
Syngnathiformes
Scombriformes
Kurtiformes
Gobiiformes
Synbranchiformes
Anabantiformes
Carangiformes
Pleuronectiformes
Mugiliformes
Blenniiformes
Cichliformes
Atheriniformes
Beloniformes
Cyprinodontiformes
Beryciformes
Ophidiiformes
Lophiiformes
Labriformes
Holocentriformes
Lampridiformes
Paracanthopterygii
Polymixiiformes
Myctophiformes
Aulopiformes
Galaxiiformes
Stomiati
Protacanthopterygii
Cypriniformes
Ostariophysi
Gonorynchiformes
Clupeiformes
Alepocephaliformes
Osteoglossomorpha
Elopomorpha
Holostei
Acipenseriformes
Polypteriformes
AMPHIBIANS
Caecilians
Salamanders
Frogs & Toads
MAMMALS
Monotremata
Marsupials
Afrotheria
Armadilos, anteaters & sloths
Treeshrews
Primates
Rabbits & pikas
Rodents
Shrews, moles hedgehogs
Bats
Pangolins
Carnivores
Odd-toed ungulates
Even-toed ungulates
REPTILES
Geckos
Skinks
Lacertoidea
Anguimorpha
Iguania
Snakes
Turtles
Crocofiles
Ratites
Waterfowl
Landfowl
Strisores
Columbaves
Gruiformes
Aequorlitornithes
BIRDS
Hawk
Owls
Woodpecker kingfisher
Cariamiformes
Falconiformes
Parrots
Passerines
dS
dN
450
400
350
300
250
200
150
100
50
Myr


a
dS
dN
Fishes
Amphibians
Reptiles
Mammals
Birds
Non−long migrants
Ectotherms
Endotherms
−0.3 −0.15 0 0.15
Effects of latitude
b
****
ns
**
dS residuals
Long-dist. migrants
Short-dist. migrants
Resident birds
c
Mass specific BMR residuals
P OLS < 0.001
Ambient temperature (°C)
d
Ectotherms
Endotherms
dS
0.44×10-8 1.1×10-8
0.77×10-8 1.5×10-8
e
Ectotherms
Endotherms
dS (10-8)
P MCMC < 0.001
f
dN
1.3×10-10 3×10-10
2.5×10-10 3.9×10-10
g
dN (10-10)
P MCMC = 0.81
Latitude


a
Model selection
dN
dS
+Phylo.
+Fixed var.
+Interact.
+Interact.
R^2_c
1.00
0.75
0.50
0.25
0.00
Fixed−only
Fixed−Interact
Best Model
Phylo−only
b
Best model
R^2_{phy}
R^2_{fixed}
R^2
dS
dN
c
Ectotherms
AnnualTemp
BodyMass
Longevity
MaturityAge
Fecundity
dS
−0.4
−0.2
0.0
0.2
Effect Size
d
Endotherms
e
Ectotherms
dS
dN
f
Endotherms
0.4


Fishes
Amphibians
Reptiles
Mammals
Birds
p = 0.94
p = 0.42
p = 0.08
p = 0.99
p = 0.043
p = 0.70
p = 0.39
p = 0.60
p = 0.45
p = 0.39
Diff. in ln(dS)
Diff. in ln(dN)
Diff. in ln(Clade Size)