

Table S1. Biome classification used in this study and its relationship to Reichenbacher et al.'s (1998) classification.

Biomes used in this study	Reichenbacher et al.'s (1998) biomes
Arctic/Taiga	Polar (High Arctic) Tundra
Arctic/Taiga	Alaskan Tundra
Arctic/Taiga	Canadian (Low Arctic) Tundra
Arctic/Taiga	Alaskan-Alpine Tundra
Arctic/Taiga	Alaska-Yukon Subarctic Conifer Conifer Forest
Arctic/Taiga	Canadian Taiga
Arctic/Taiga	Sitka Coastal Conifer Forest
Arctic/Taiga	Alaskan Swamp Scrub
Desertscrub	Southwestern (Arizona) Interior Chaparral
Desertscrub	Chihuahuan Interior Chaparral
Desertscrub	Semidesert Grassland
Desertscrub	Mohave Desertscrub
Desertscrub	Chihuahuan Desertscrub
Desertscrub	Tamaulipan Semi-deciduous Forest
Desertscrub	Tamaulipan Thornscrub
Desertscrub	Sonoran Desertscrub
Great Basin	Great Basin Shrub-Grassland
Great Basin	Great Basin Desertscrub
Plains Grassland	Plains Grassland
Plains Grassland	Gulf Coastal Grassland
California Grassland	California Valley Grassland
California Scrub and Woodland	California Evergreen Forest and Woodland
California Scrub and Woodland	California Chaparral
California Scrub and Woodland	California Coastalscrub
Mountain West	Rocky Mountain and Great Basin Alpine Tundra
Mountain West	Cascade-Sierran Alpine Tundra
Mountain West	Rocky Mountain Subalpine Conifer Forest
Mountain West	Cascade-Sierran Subalpine Conifer Forest
Mountain West	Oregonian Coastal Conifer Forest
Mountain West	Oregonian Deciduous and Evergreen Forests
Mountain West	Cascade-Sierran Montane Conifer Forest
Mountain West	Rocky Mountain Montane Conifer Forest
Mountain West	Great Basin Conifer Woodland
Mountain West	Madrean Montane Conifer Forest
Mountain West	Madrean Evergreen Forest and Woodland
Mountain West	Great Basin Montane Scrub
Southeastern Forest	Southeastern Deciduous and Evergreen Forests
Southeastern Forest	Southeastern Swamp and Riparian Forest
Southeastern Forest	Floridian Evergreen Forest
Southeastern Forest	Undifferentiated Neotropical Wetlands
Northeastern Forest	Adirondack-Appalachian Alpine Tundra
Northeastern Forest	Adirondack-Appalachian Subalpine Conifer Forest
Northeastern Forest	Northeastern Deciduous Forest
Undifferentiated Nearctic Wetlands	Undifferentiated Nearctic Wetlands

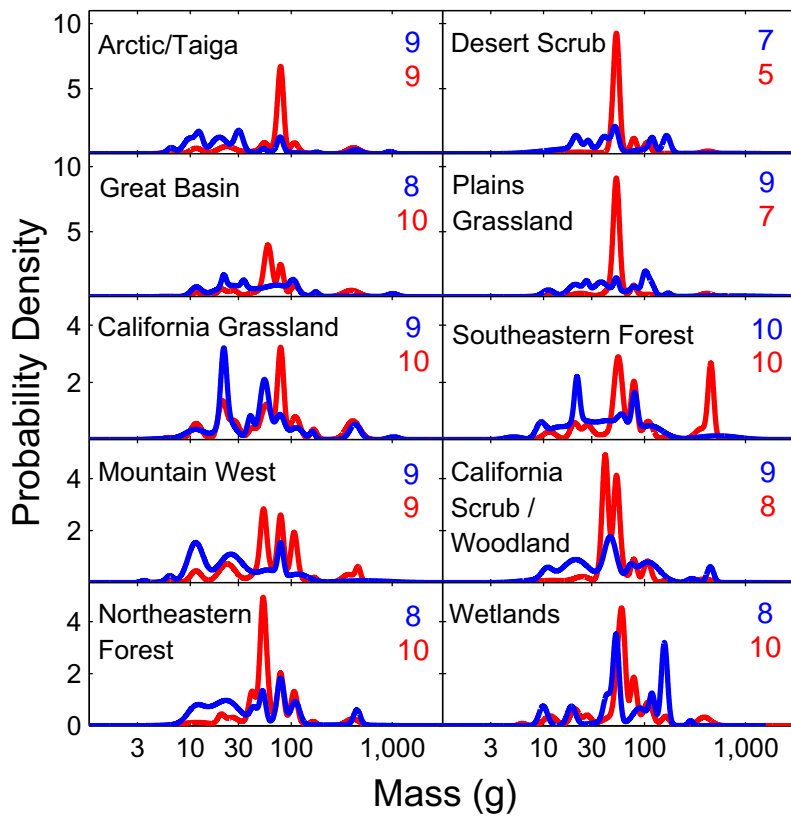


Figure S1. Probability density estimates of individual size distributions based on Gaussian mixture modeling from all biomes spanning both datasets (Breeding Bird Survey in blue, Christmas Bird Count in red). The number of modes identified in the distributions is also indicated.

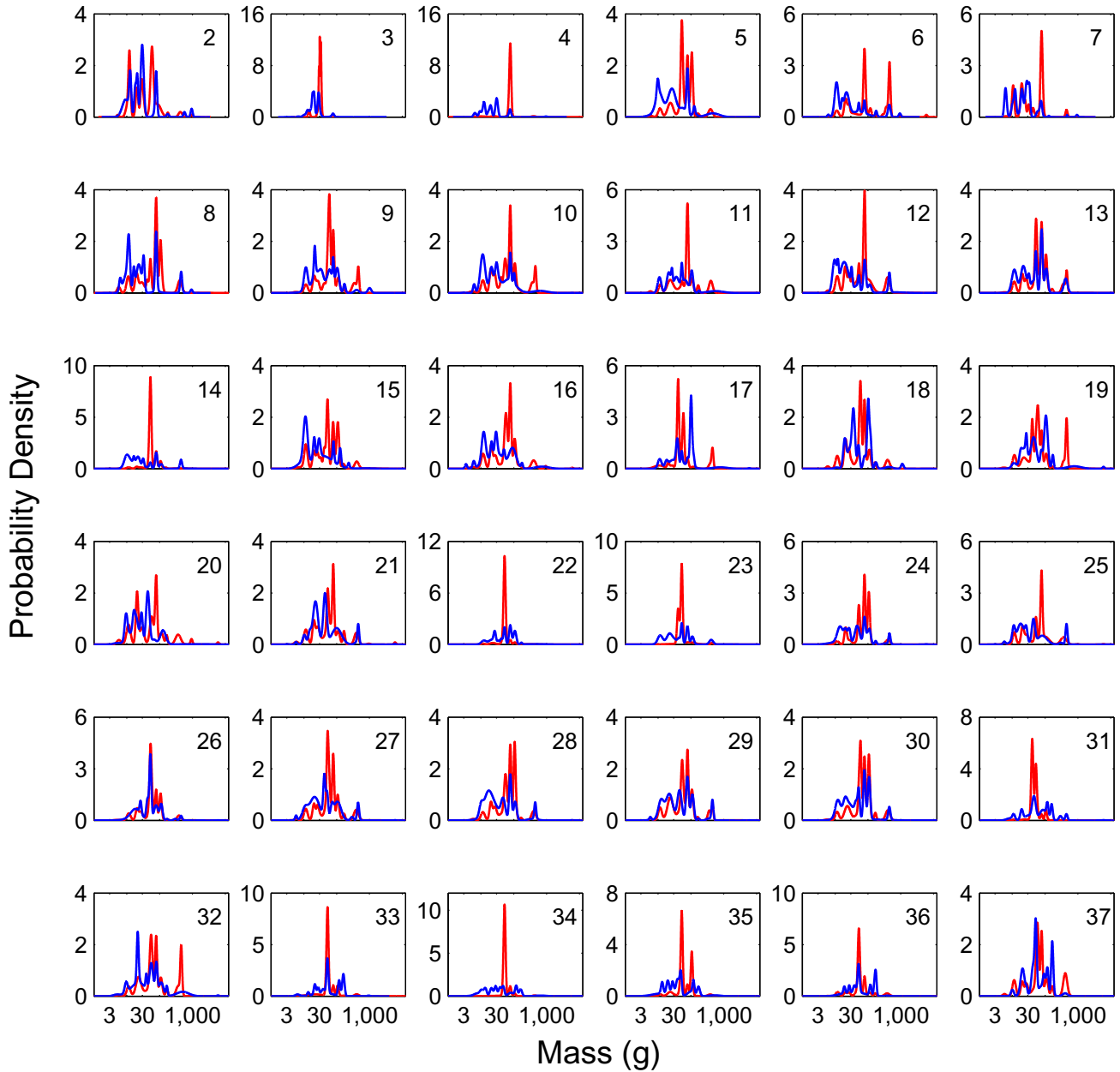


Figure S2. Probability density estimates of individual size distributions based on Gaussian mixture modeling from all Bird Conservation Regions spanning both datasets (Breeding Bird Survey in blue, Christmas Bird Count in red). 2 - Western Alaska, 3 - Arctic Plains and Mountains, 4 - Northwestern Interior Forest, 5 - Northern Pacific Rainforest, 6 - Boreal Taiga Plains, 7 - Taiga Shield And Hudson Plains, 8 - Boreal Softwood Shield, 9 - Great Basin, 10 - Northern Rockies, 11 - Prairie Potholes, 12 - Boreal Hardwood Transition, 13 - Lower Great Lakes/ St. Lawrence Plain, 14 - Atlantic Northern Forest, 15 - Sierra Nevada, 16 - Southern Rockies/Colorado Plateau, 17 - Badlands and Prairies, 18 - Shortgrass Prairie, 19 - Central Mixed Grass Prairie, 20 - Edwards Plateau, 21 - Oaks and Prairies, 22 - Eastern Tallgrass Prairie, 23 - Prairie Hardwood Transition, 24 - Central Hardwoods, 25 - West Gulf Coastal Plain/Ouachitas, 26 - Mississippi Alluvial Valley, 27 - Southeastern Coastal Plain, 28 - Appalachian Mountains, 29 - Piedmont, 30 - New England/Mid-Atlantic Coast, 31 - Peninsular Florida, 32 - Coastal California, 33 - Sonoran and Mojave Deserts, 34 - Sierra Madre Occidental, 35 - Chihuahuan Desert, 36 - Tamaulipan Brushlands, 37 - Gulf Coastal Prairie.

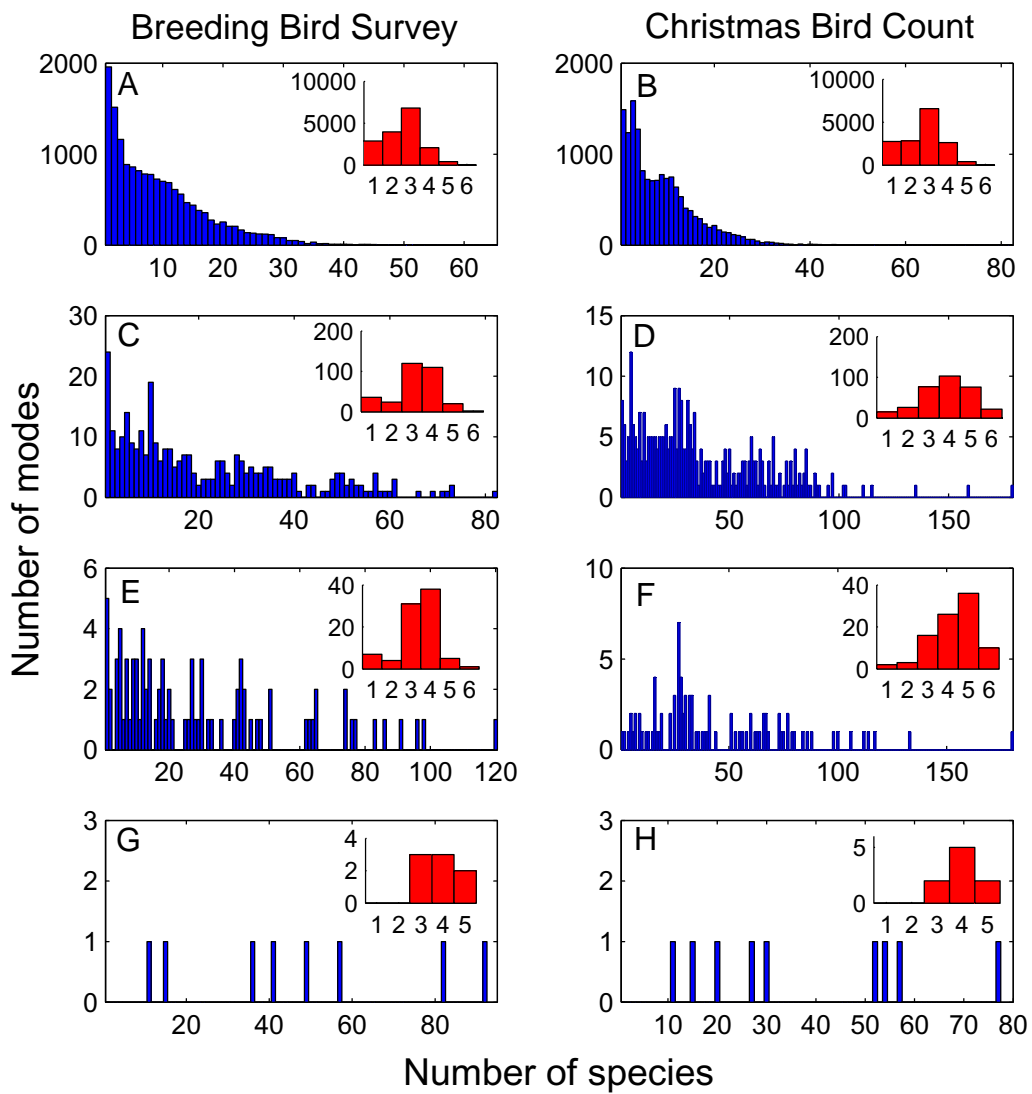


Figure S3. Frequency distributions of the number of species (blue) and guilds (red; inset) that comprise each mode across all sites (A,B), Bird Conservation Regions (C,D), biomes (E,F), and the continent (G,H) in each dataset.