El-Gabbas, A. (2026). **A global, taxon-stratified, high-resolution sampling-effort dataset from GBIF for bias-aware ecological modelling**. Diversity and distributions.

– Appendix 2 –

Global patterns of species and observation distributions per taxonomic group

Taxon-specific spatial patterns of observation count and species richness. For each of the nine major taxonomic groups:

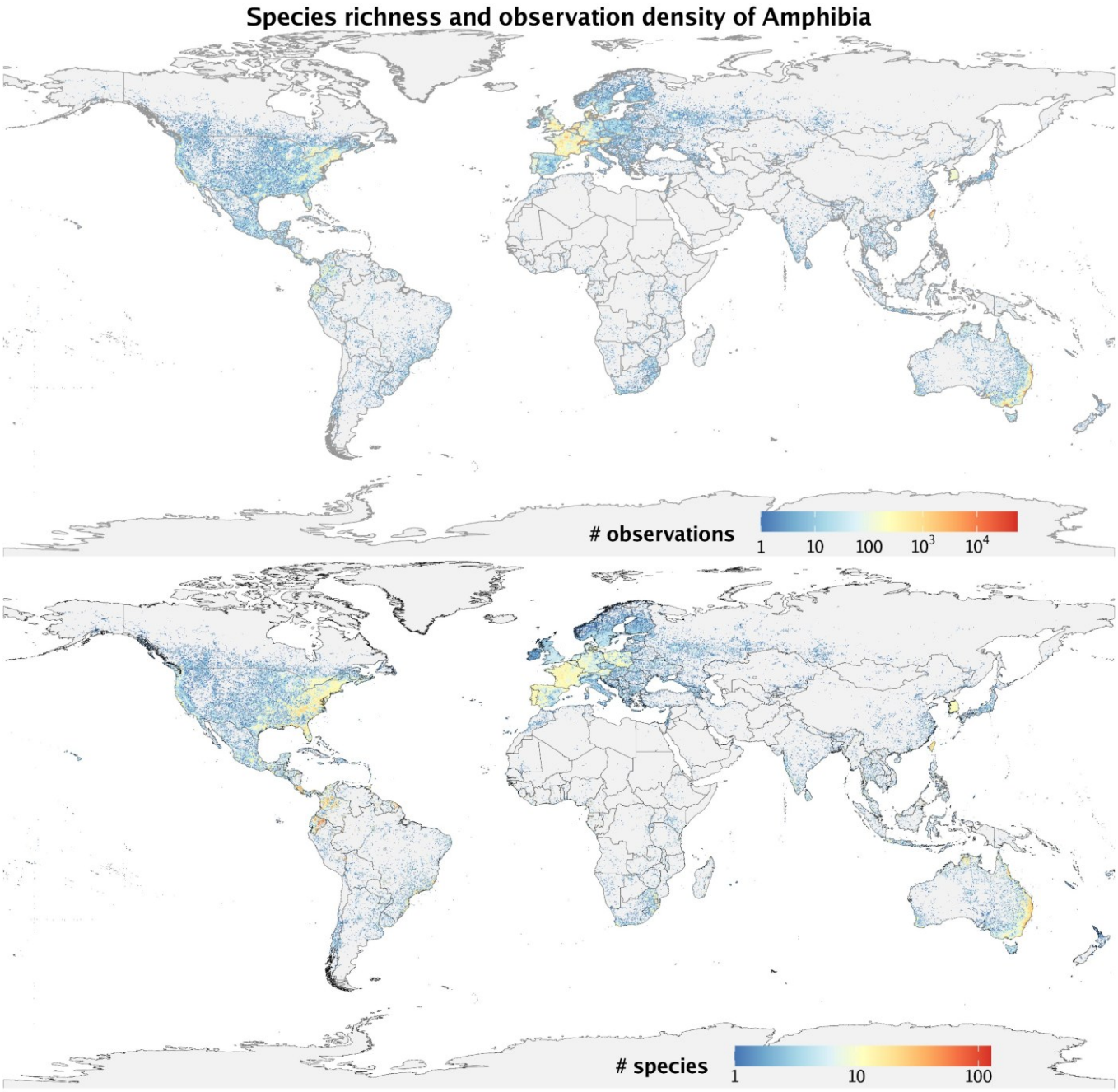
First page: Observation count (top) and species richness (bottom) at ~20 km resolution; both at $\log_{10}$ scale; warmer colours indicate higher values. See Figure 1 for more information.

Second plot: three maps; 20 km resolution

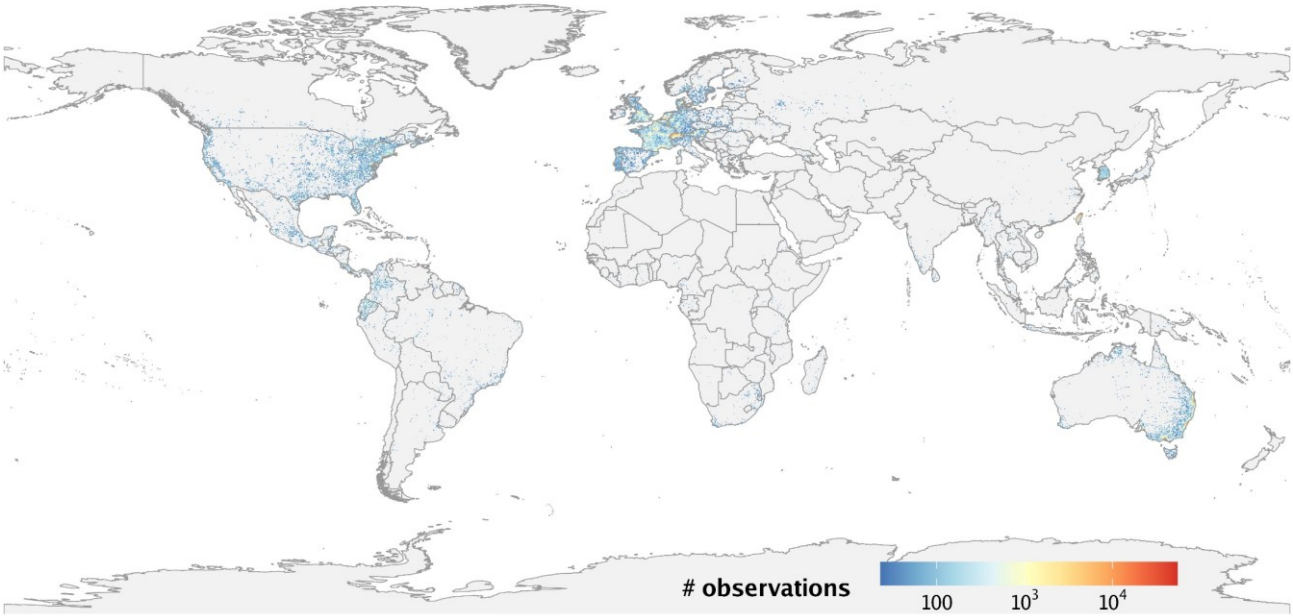
- (Top) Grid cells containing the cumulative most-recorded 95% of observations;
- (Middle) Grid cells containing the cumulative least-recorded 5% of observations;
- (Bottom) Unsampled areas (dark grey) with zero observations.

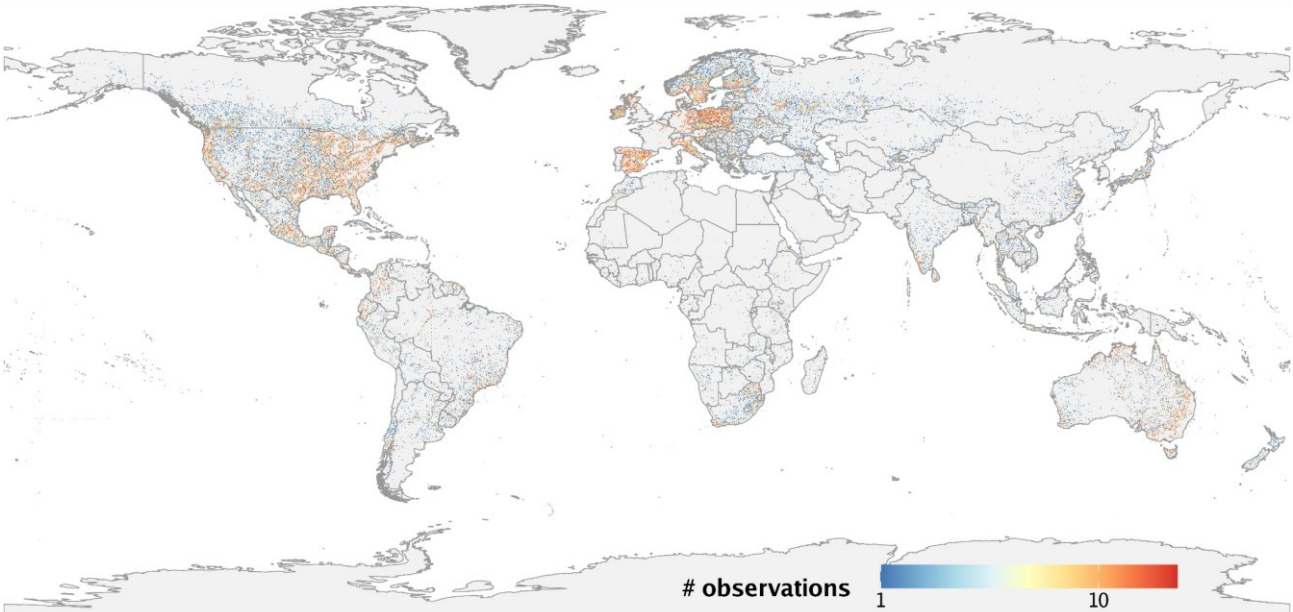
While overall patterns are broadly consistent across taxa, group-specific variations reveal taxonomic heterogeneity in sampling geography. See Figure 3 for more information

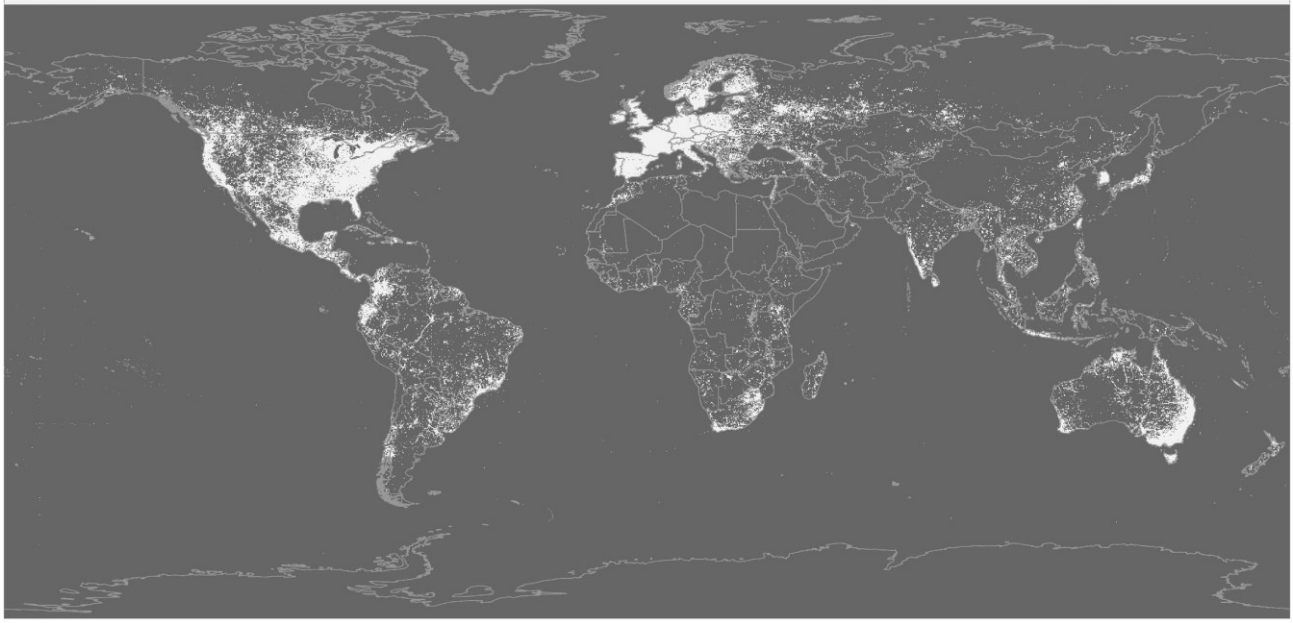
Amphibia


Species richness and observation density of Amphibia
observations
1
10
100
10^3
10^4
species
1
10
100

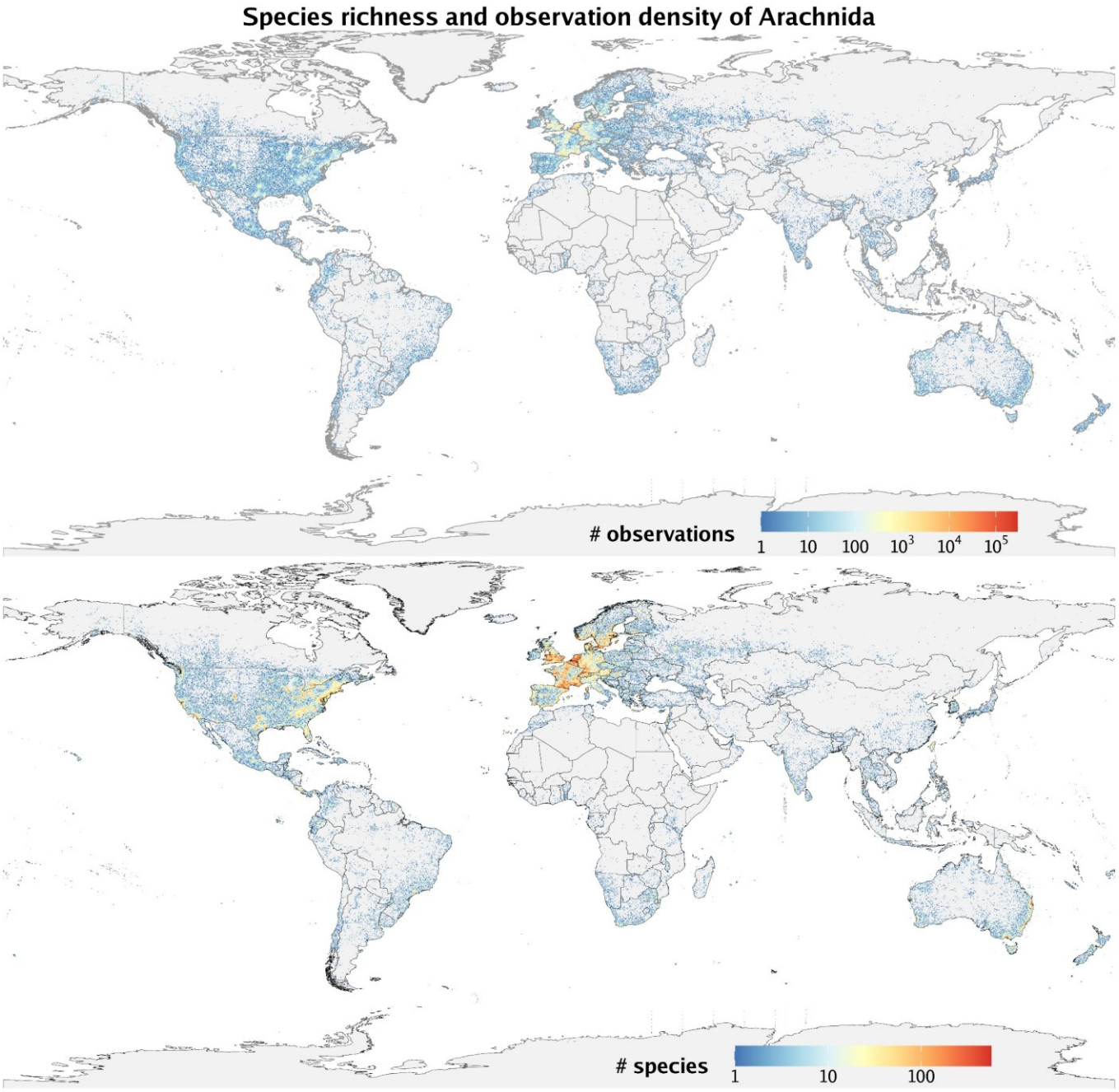
Grid cells contributing to top 95% and lowest 5% of total observations for Amphibia



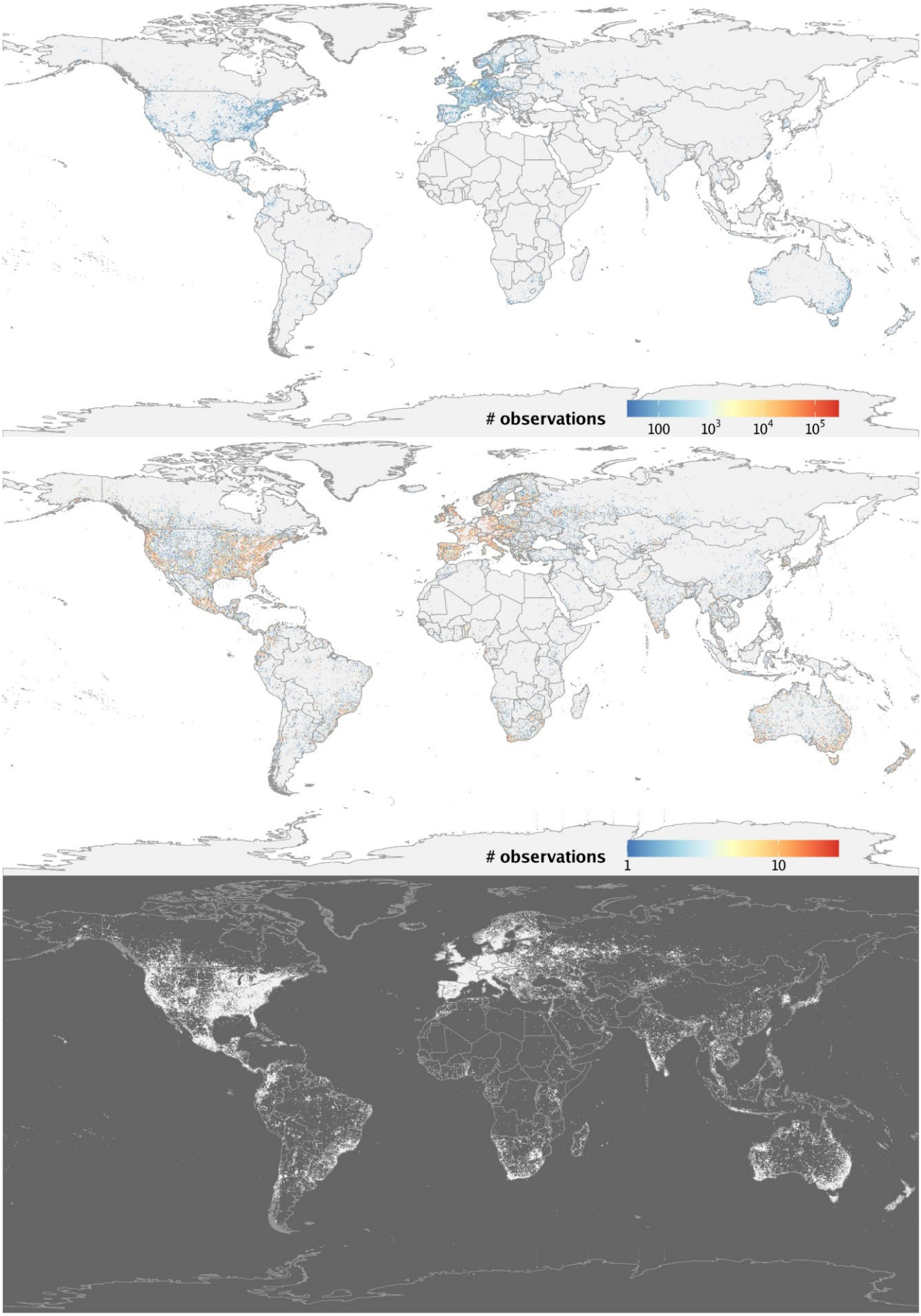




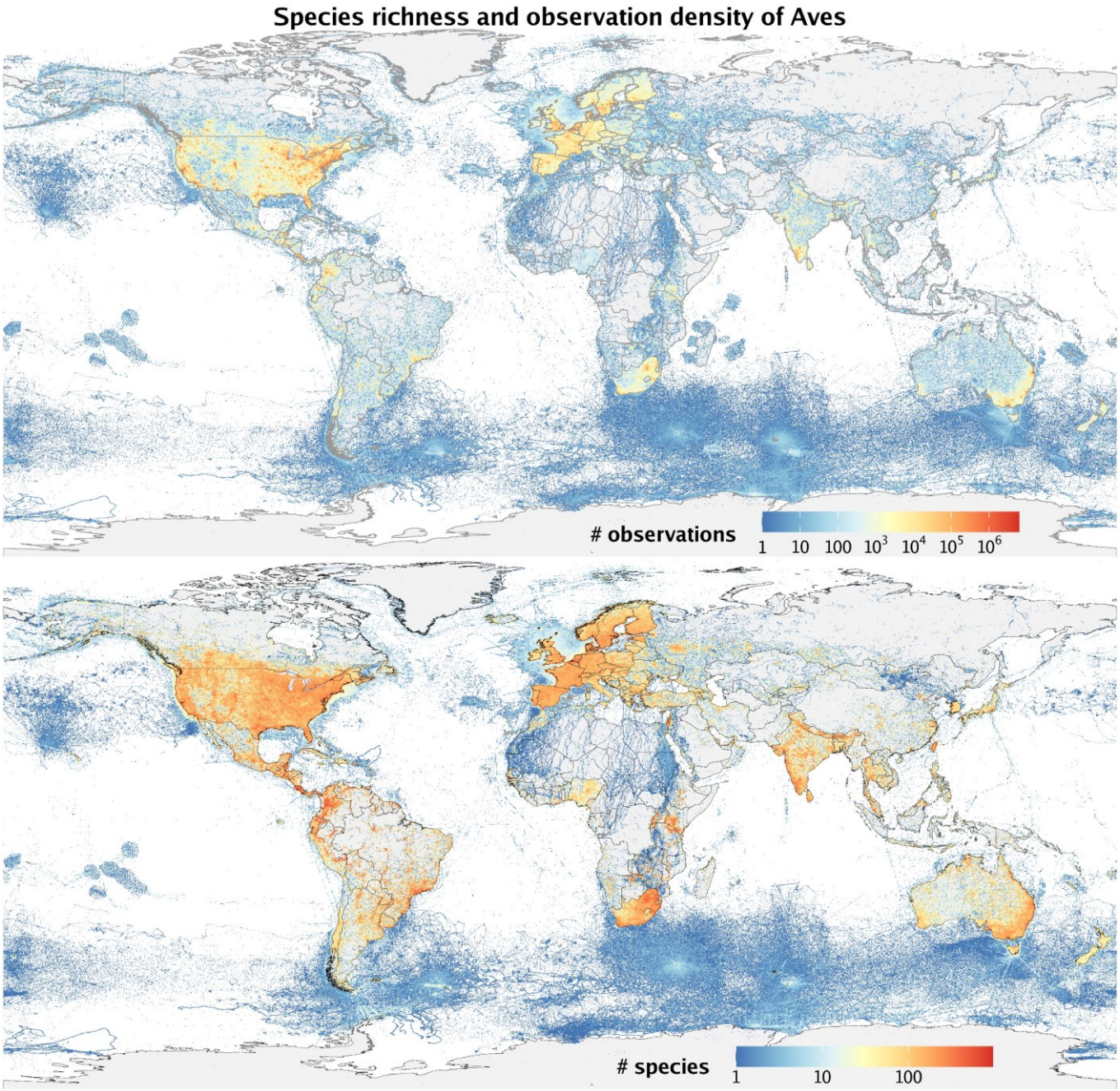
Arachnida


Species richness and observation density of Arachnida
observations
1
10
100
10^3
10^4
10^5
species
1
10
100

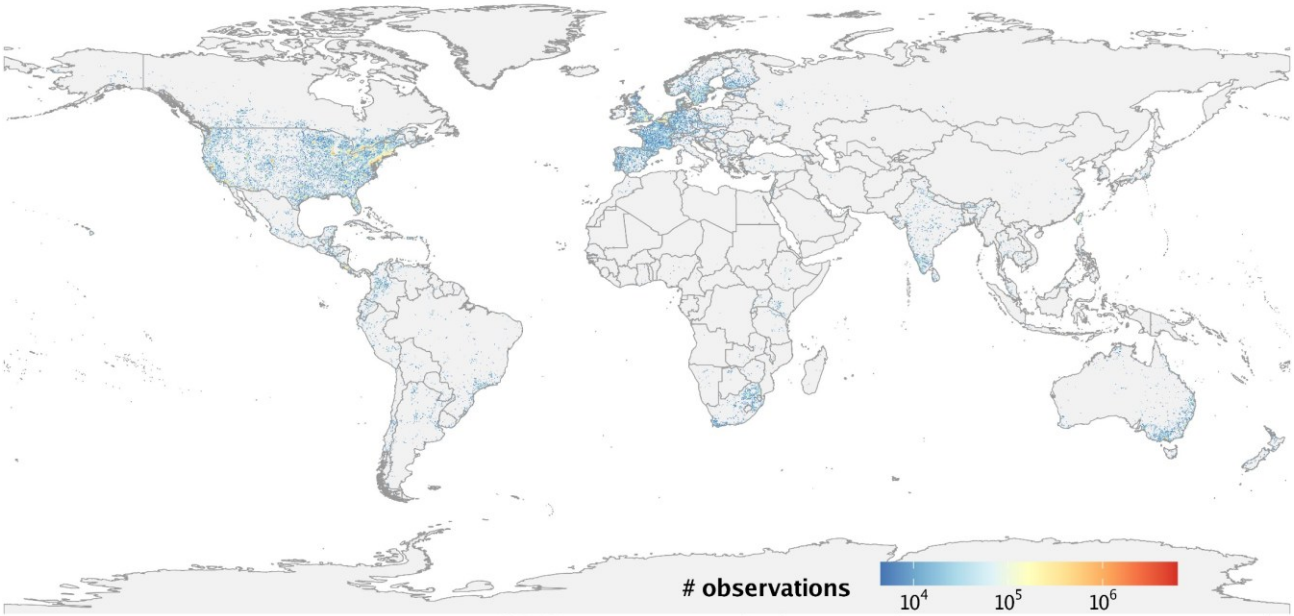
Grid cells contributing to top 95% and lowest 5% of total observations for Arachnida

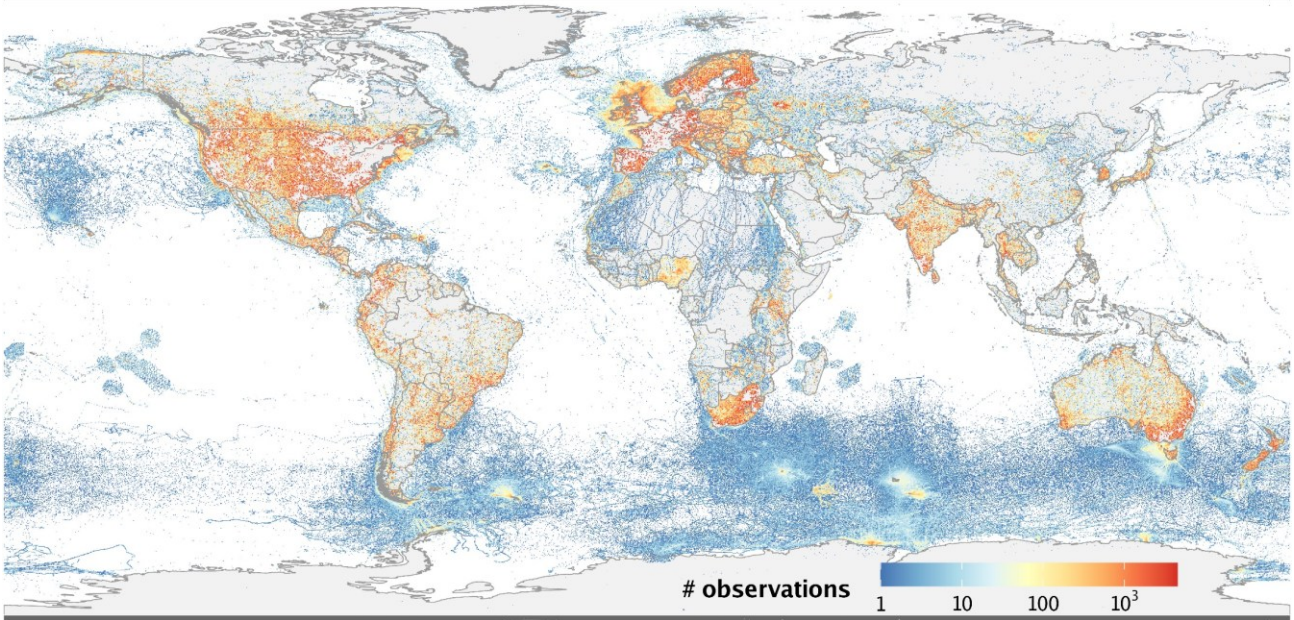


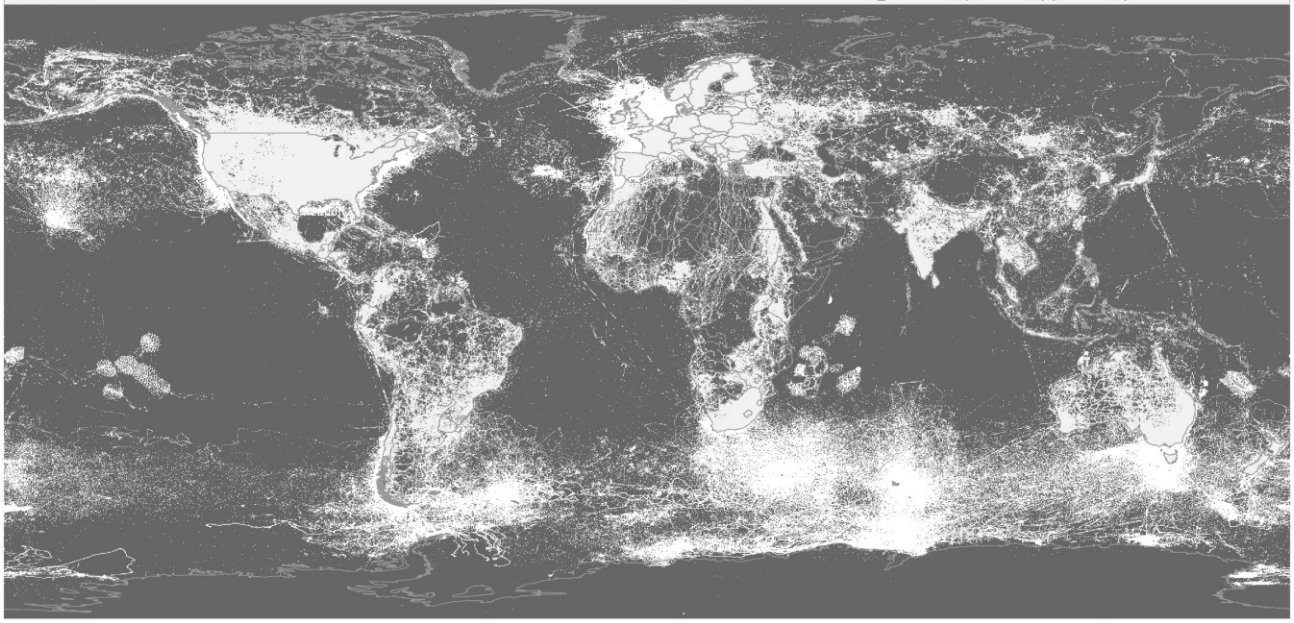
Aves


Species richness and observation density of Aves
observations
1 10 100 10^3 10^4 10^5 10^6
species
1 10 100

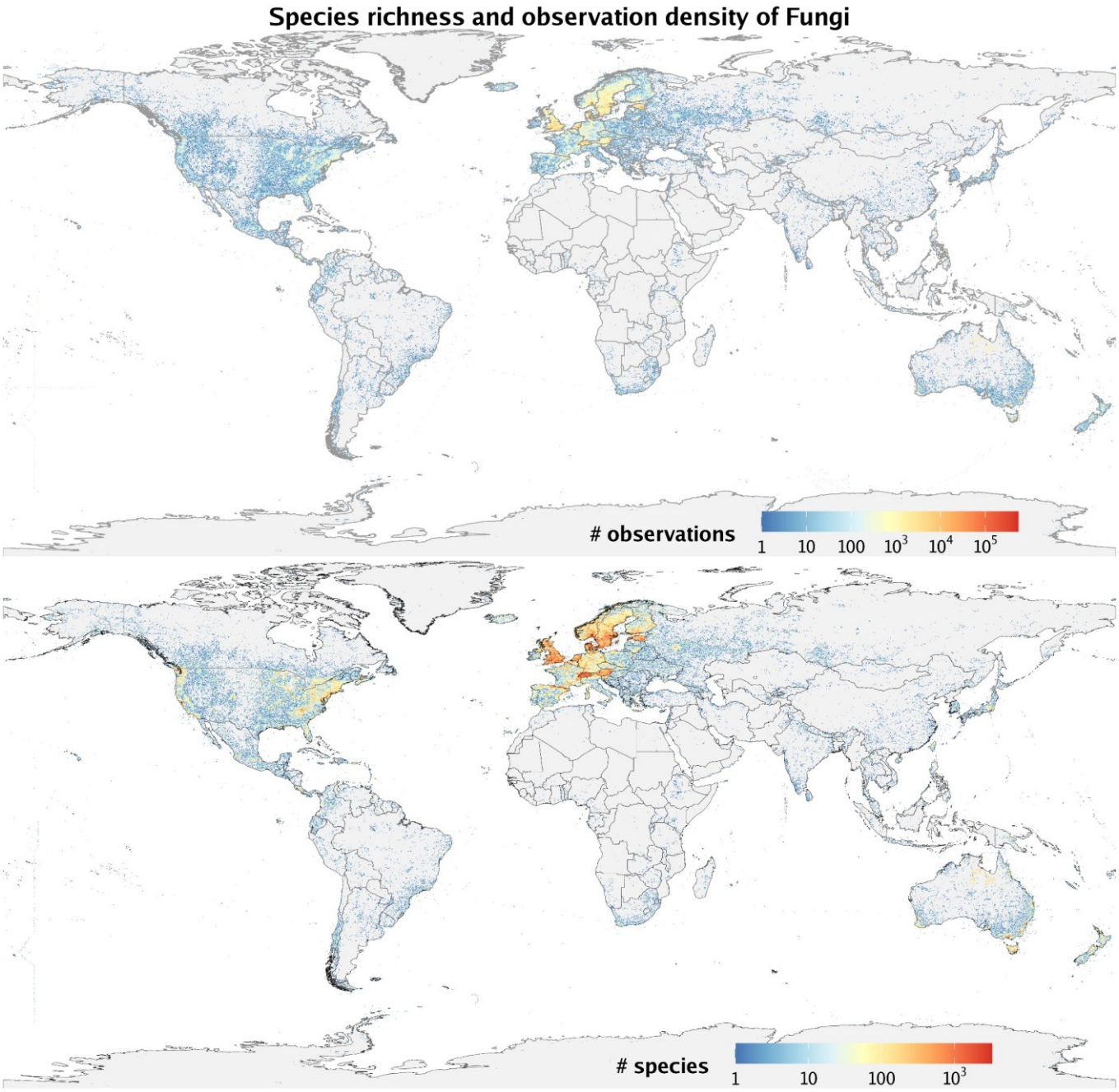
Grid cells contributing to top 95% and lowest 5% of total observations for Aves



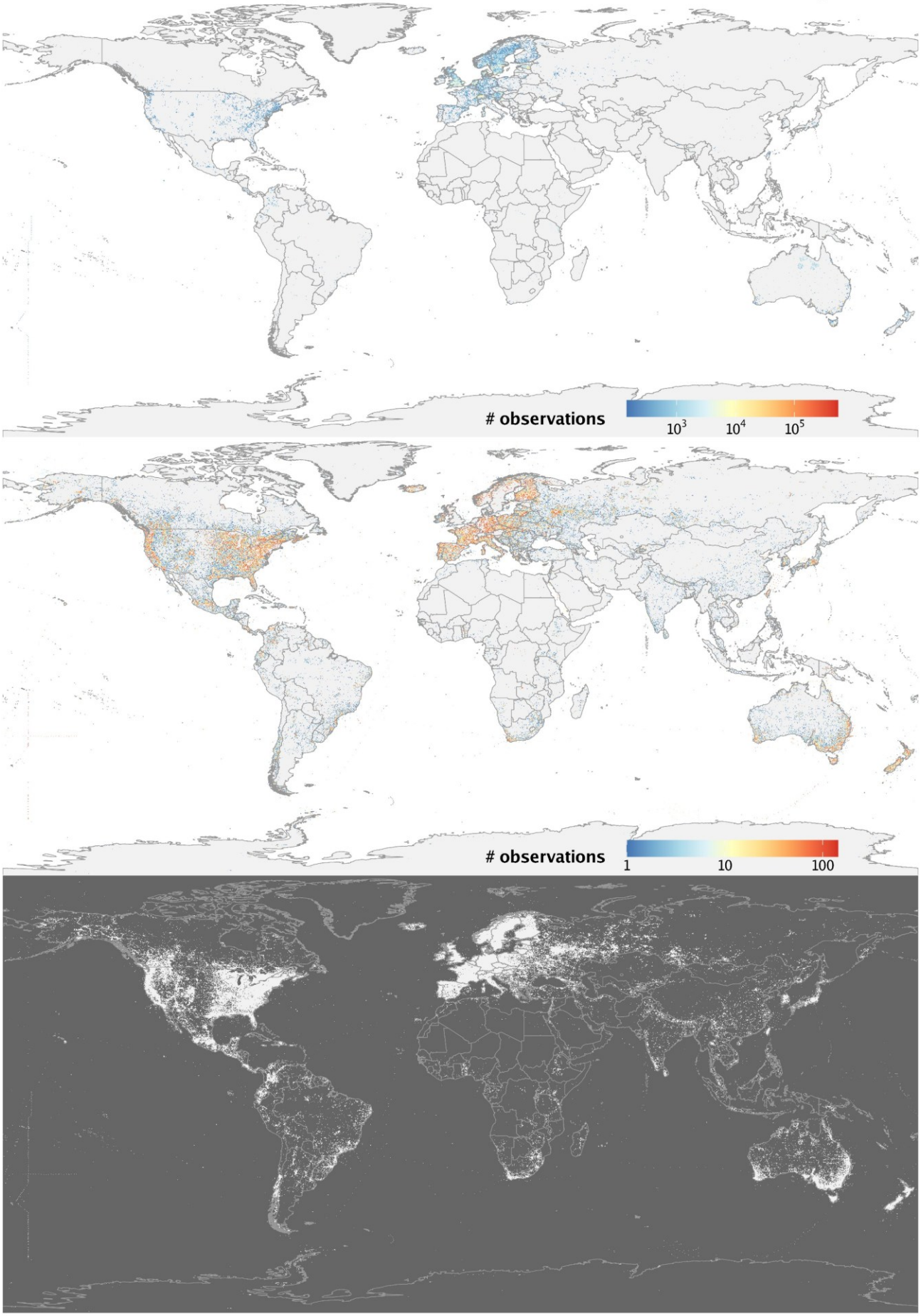




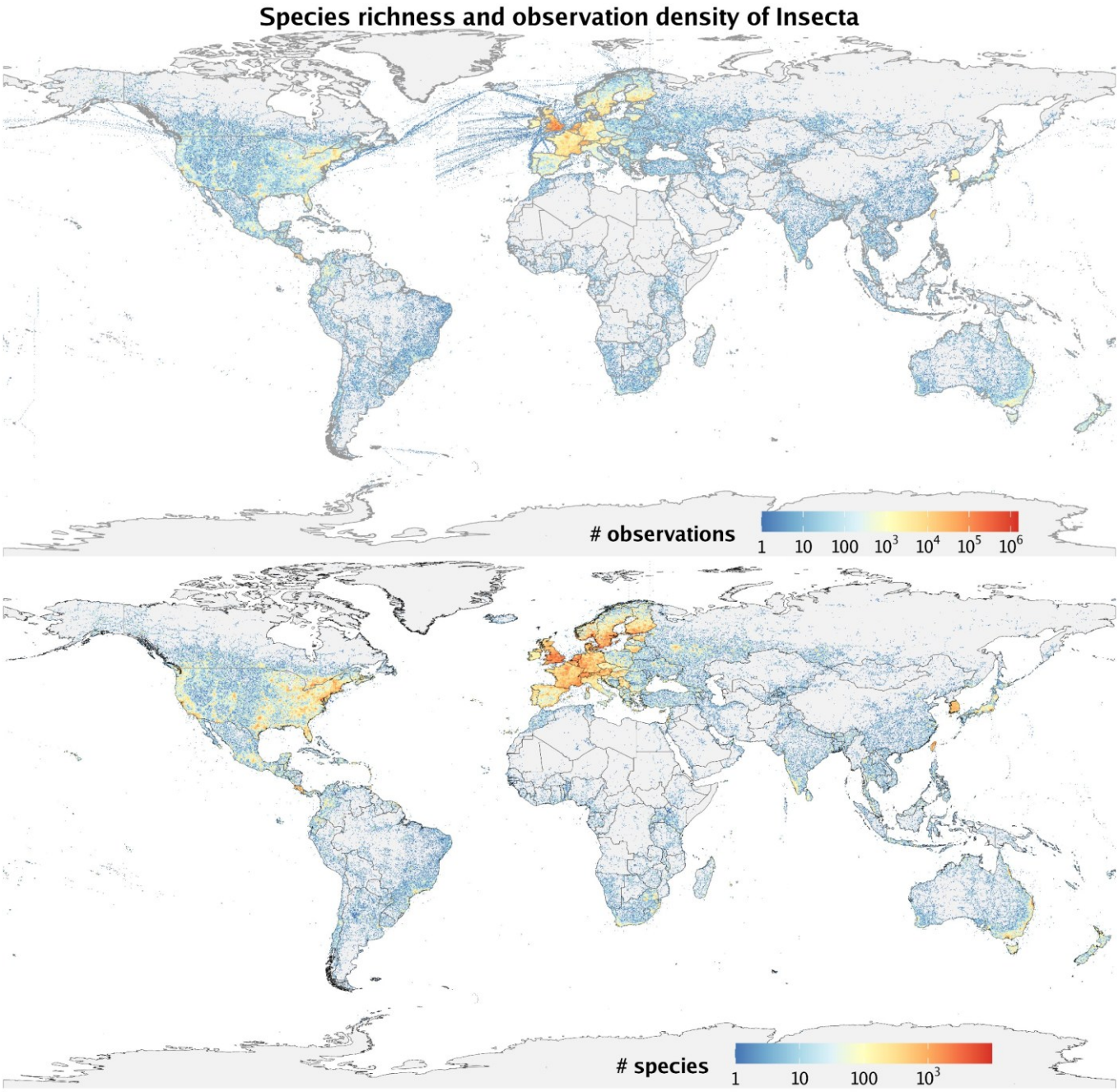
Fungi


Species richness and observation density of Fungi
observations
1
10
100
10^3
10^4
10^5
species
1
10
100
10^3

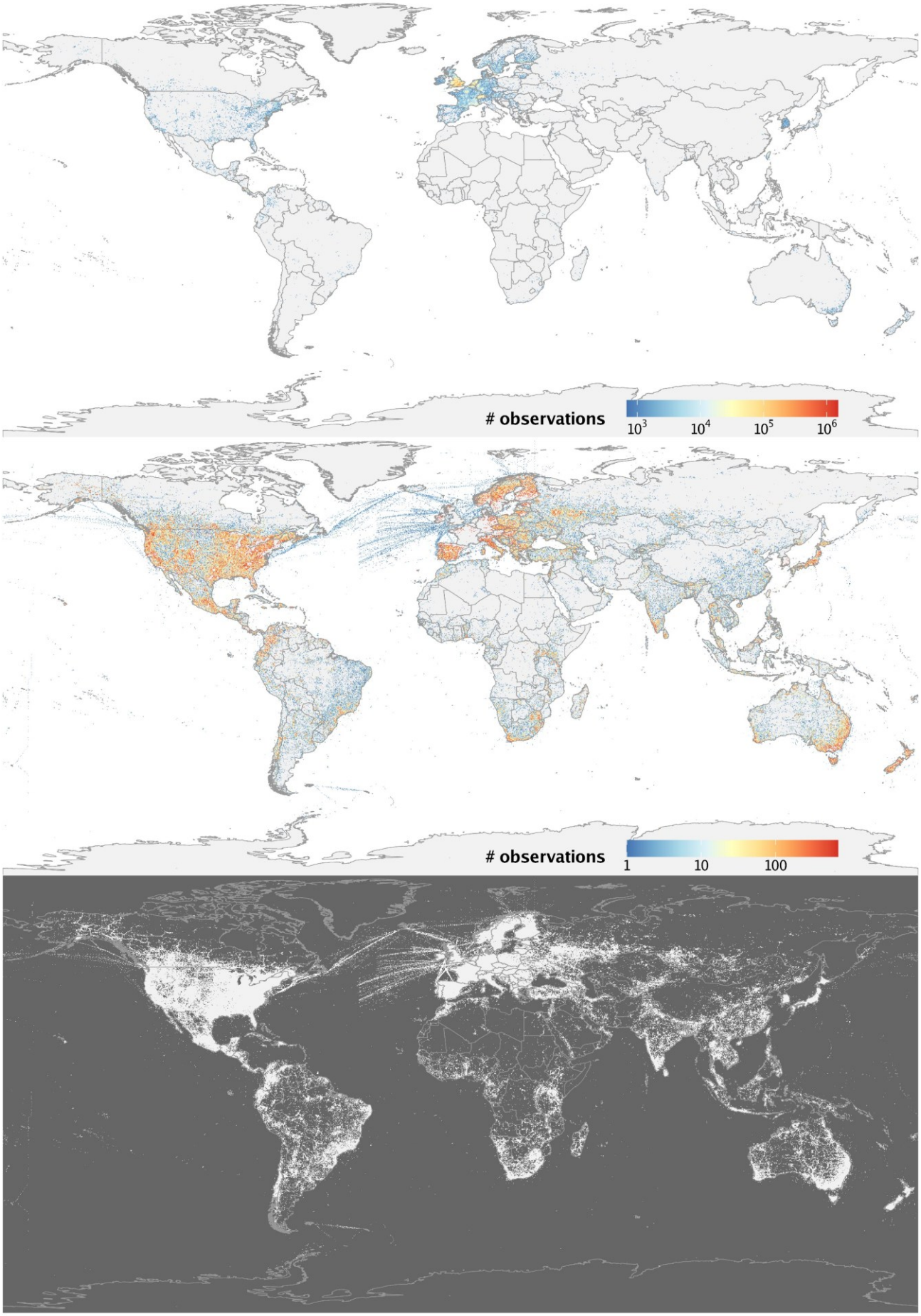
Grid cells contributing to top 95% and lowest 5% of total observations for Fungi



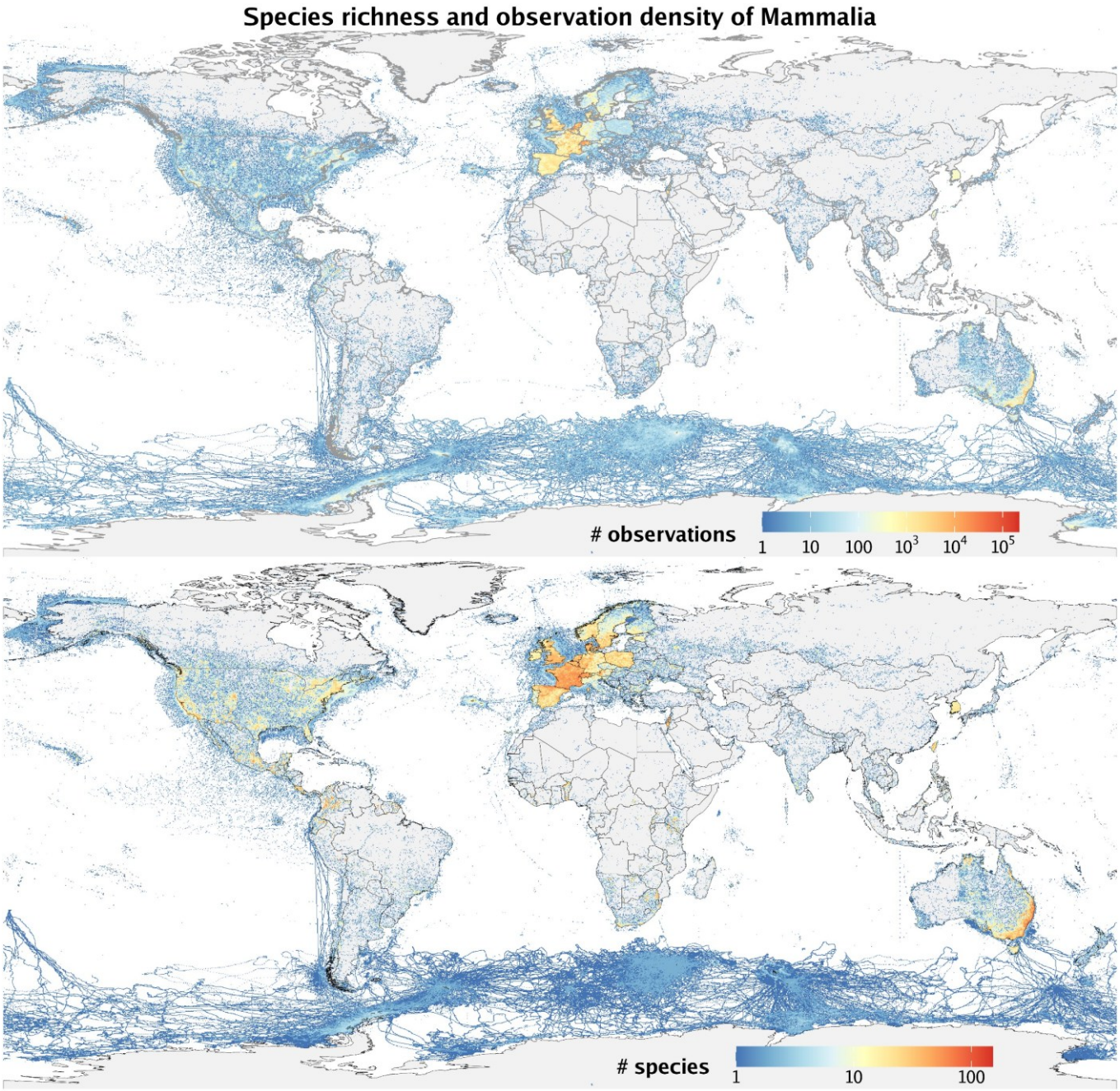
Insecta


Species richness and observation density of Insecta
observations
1
10
100
10^3
10^4
10^5
10^6
species
1
10
100
10^3

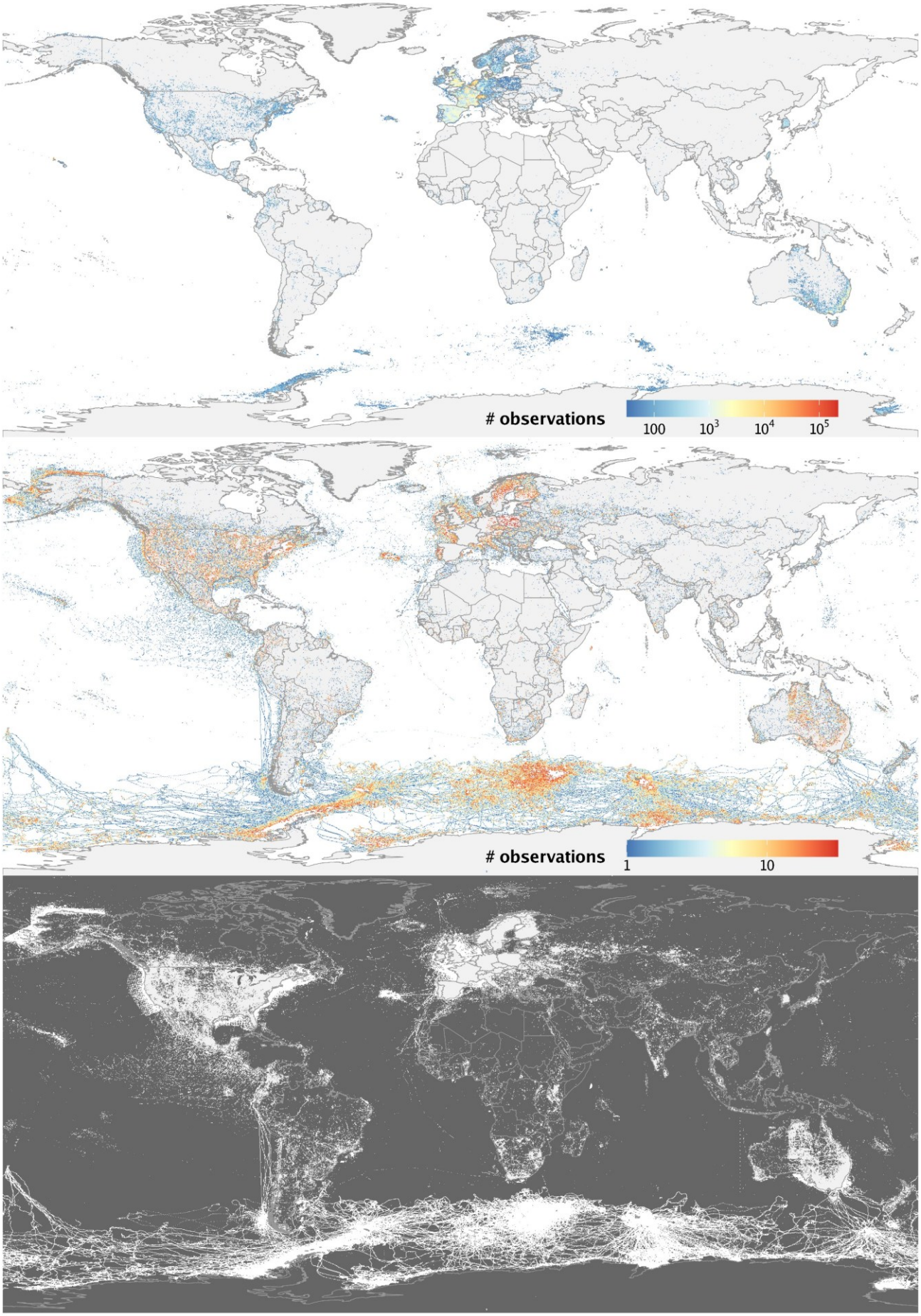
Grid cells contributing to top 95% and lowest 5% of total observations for Insecta



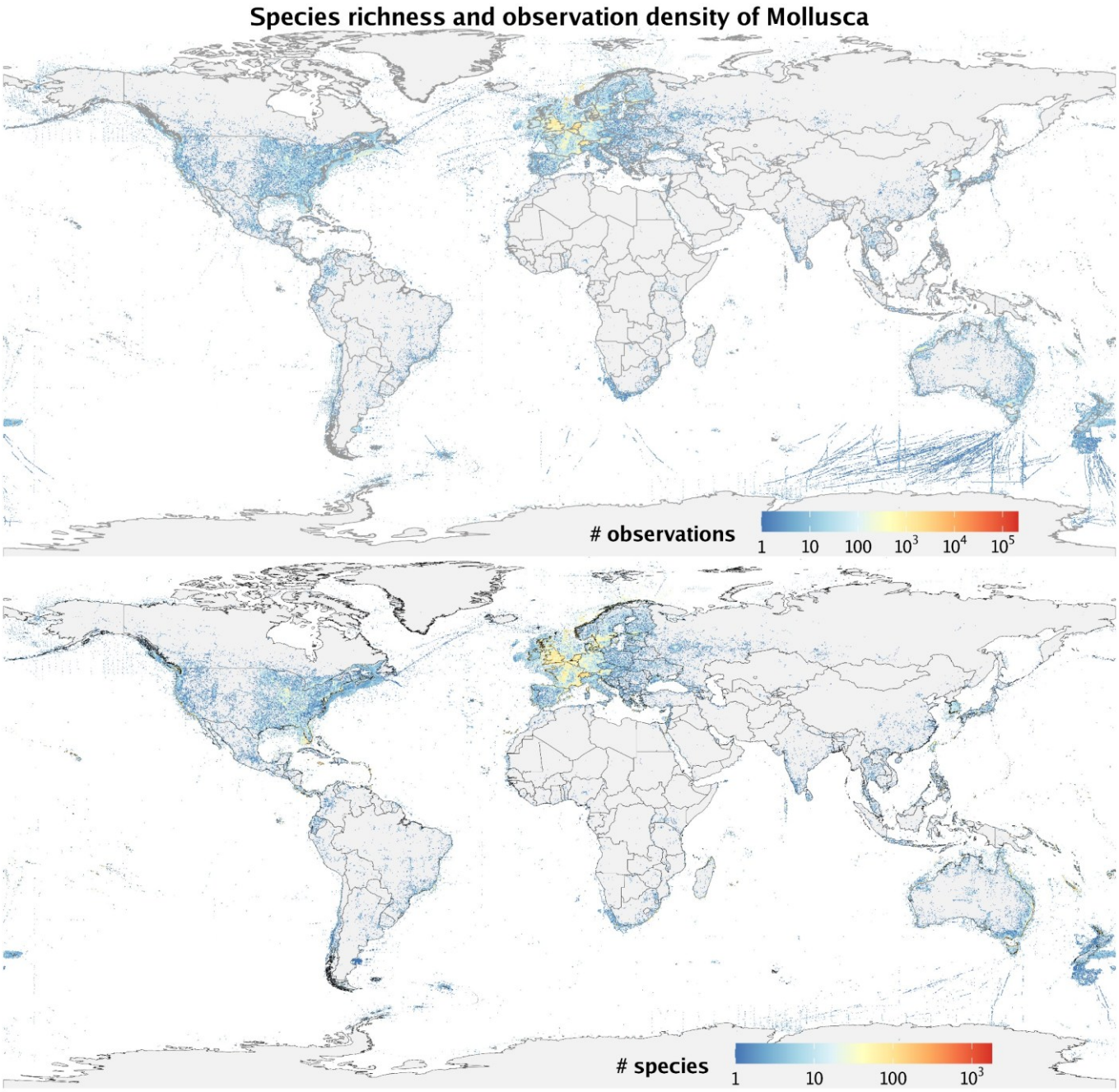
Mammalia


Species richness and observation density of Mammalia
observations
1
10
100
10^3
10^4
10^5
species
1
10
100

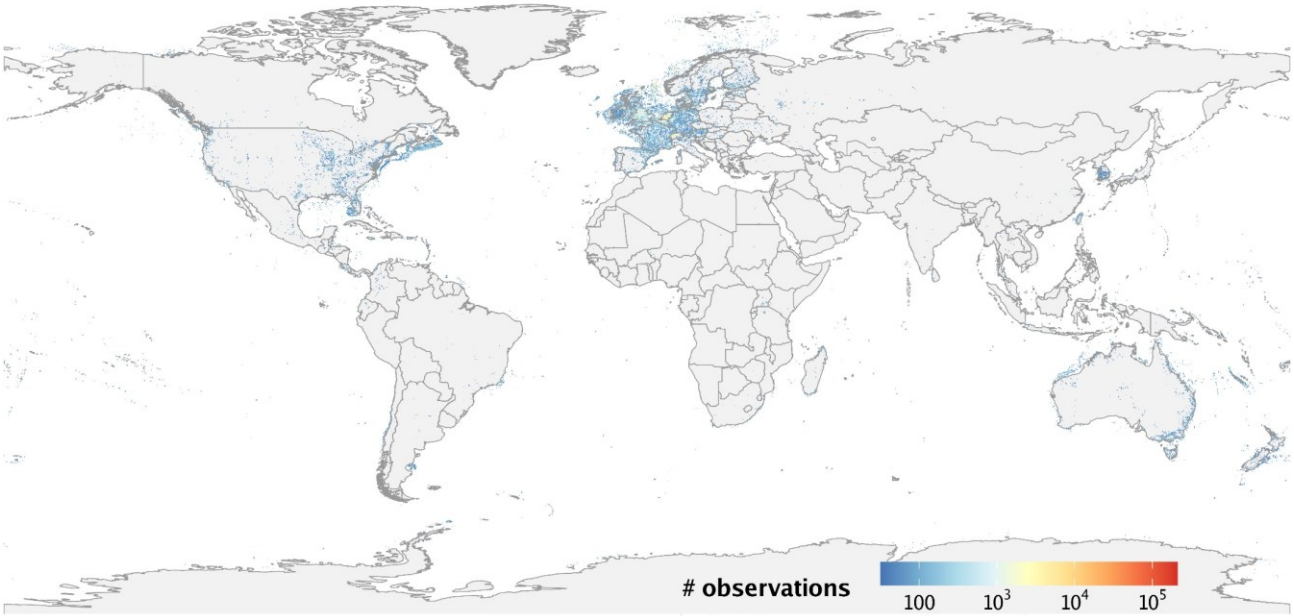
Grid cells contributing to top 95% and lowest 5% of total observations for Mammalia

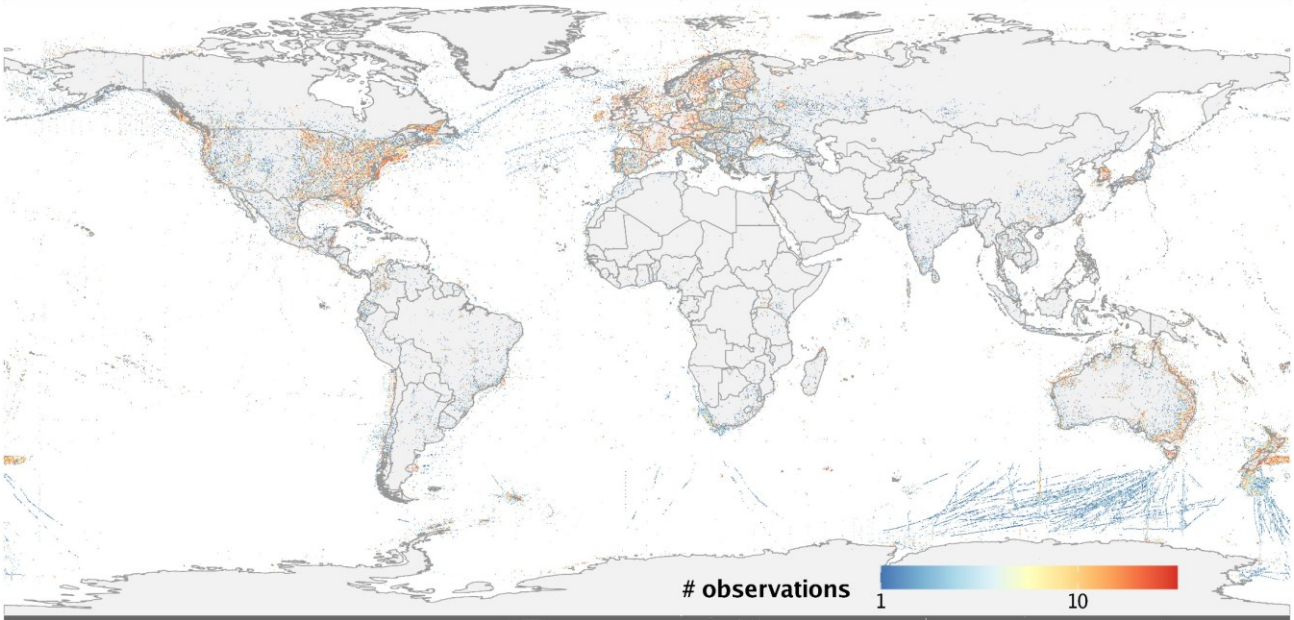


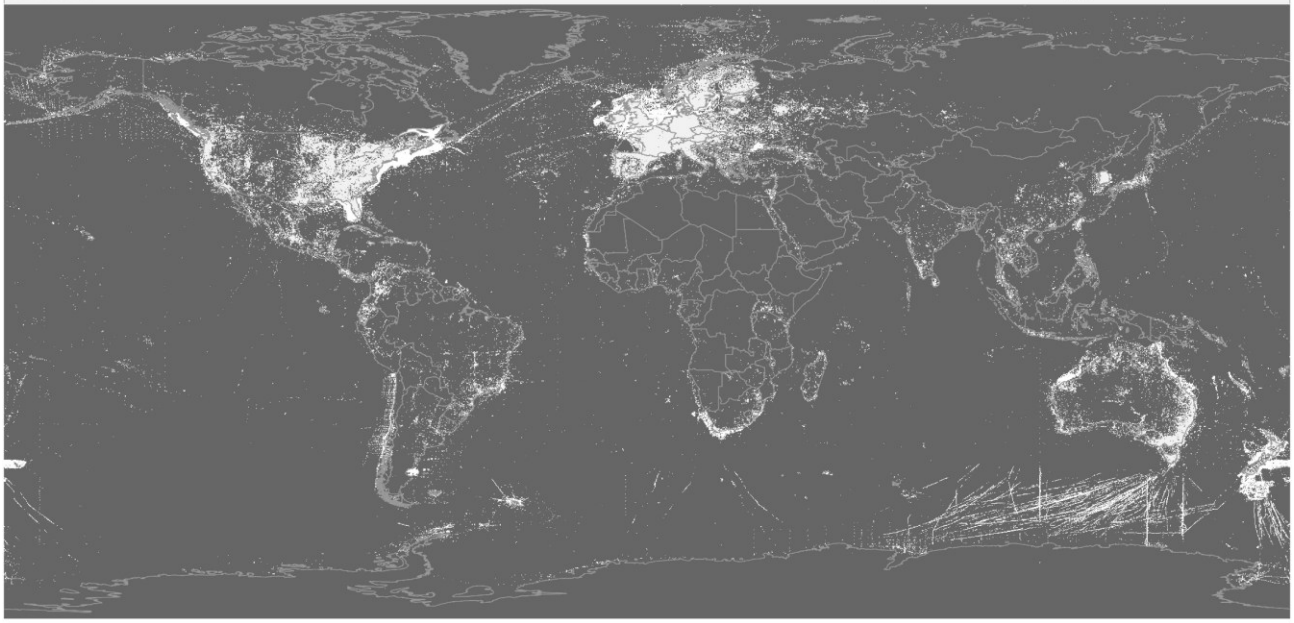
Mollusca


Species richness and observation density of Mollusca
observations
1
10
100
10^3
10^4
10^5
species
1
10
100
10^3

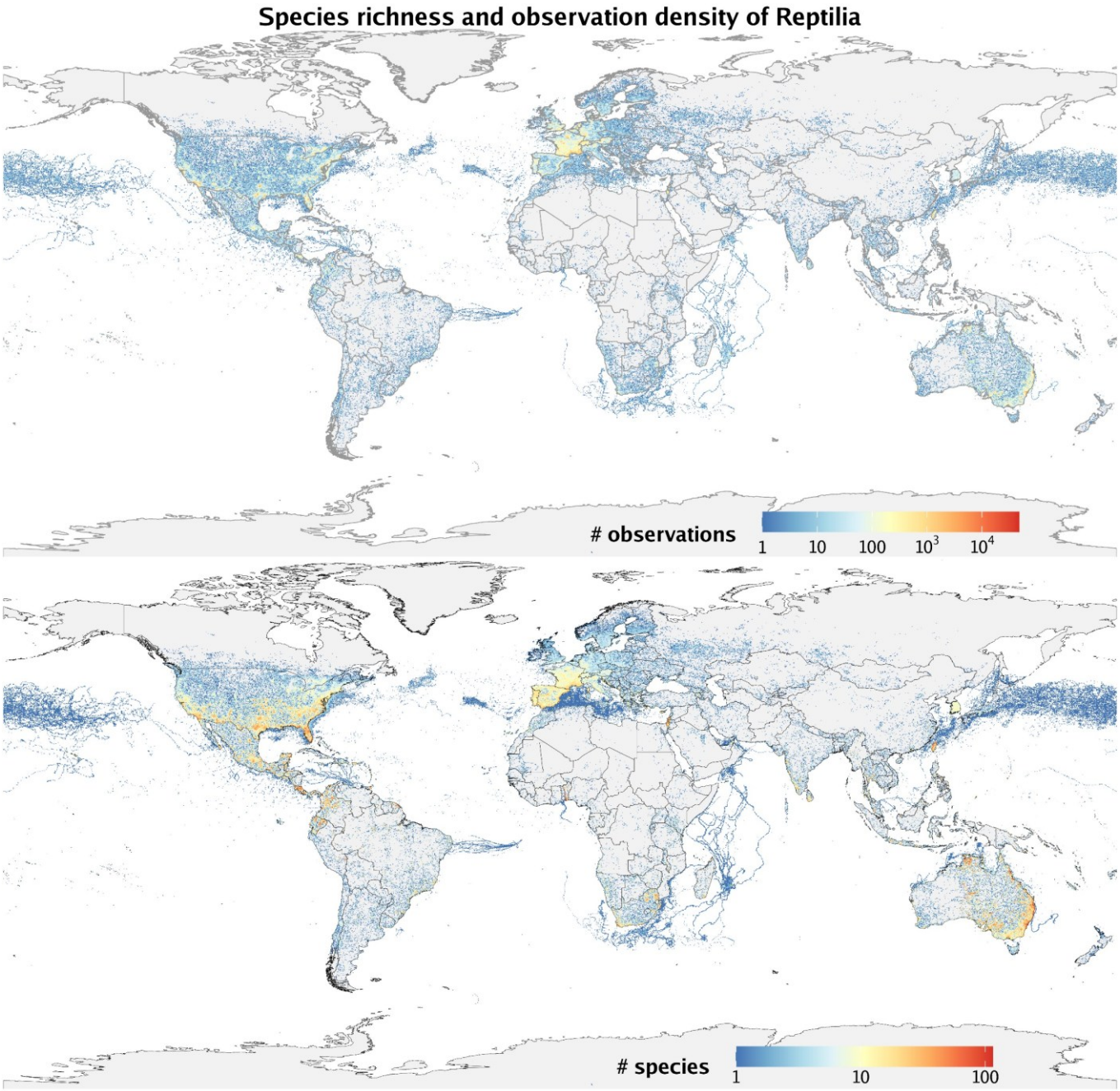
Grid cells contributing to top 95% and lowest 5% of total observations for Mollusca



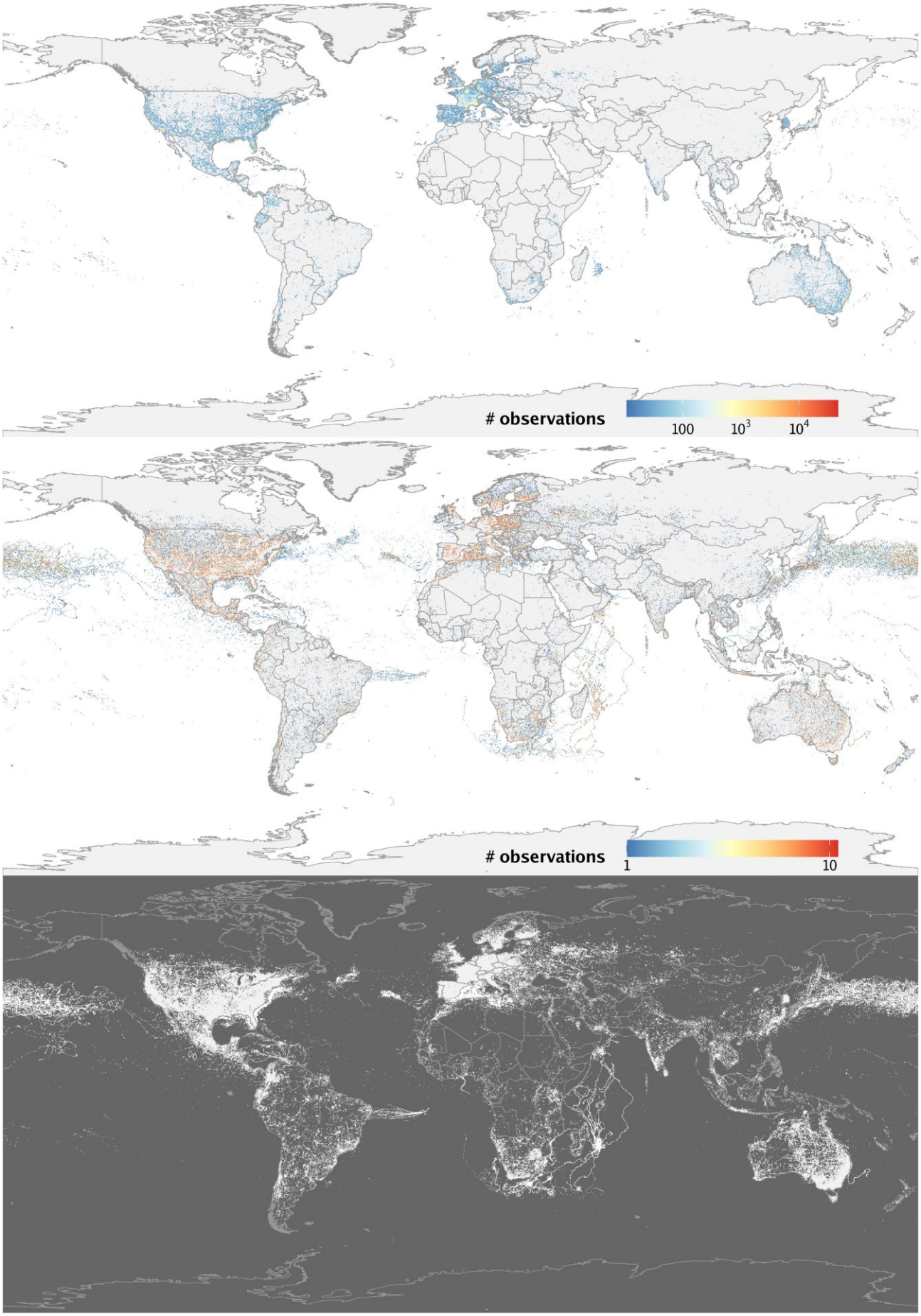




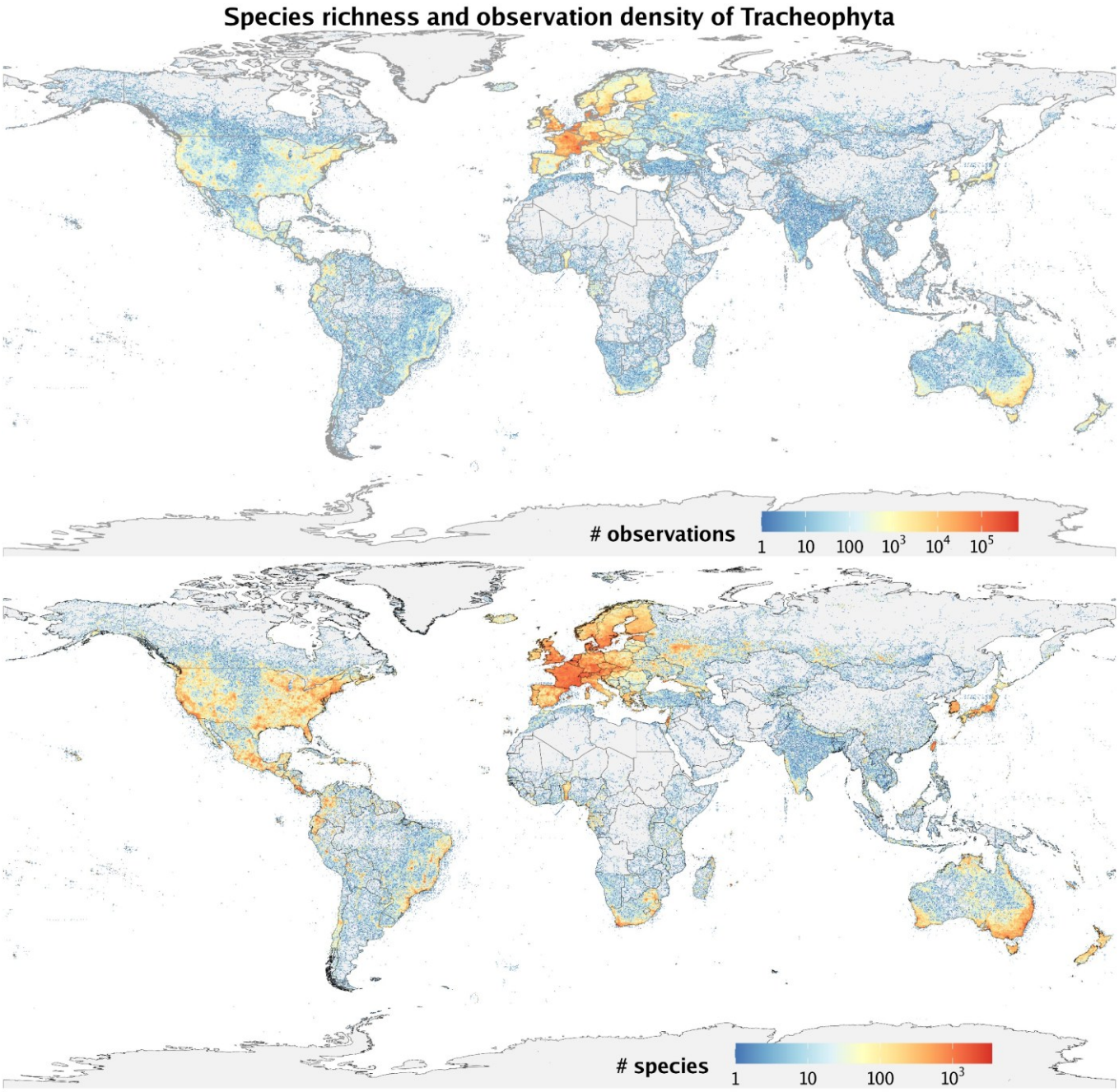
Reptilia


Species richness and observation density of Reptilia
observations
1
10
100
10^3
10^4
species
1
10
100

Grid cells contributing to top 95% and lowest 5% of total observations for Reptilia



Tracheophyta



Grid cells contributing to top 95% and lowest 5% of total observations for Tracheophyta