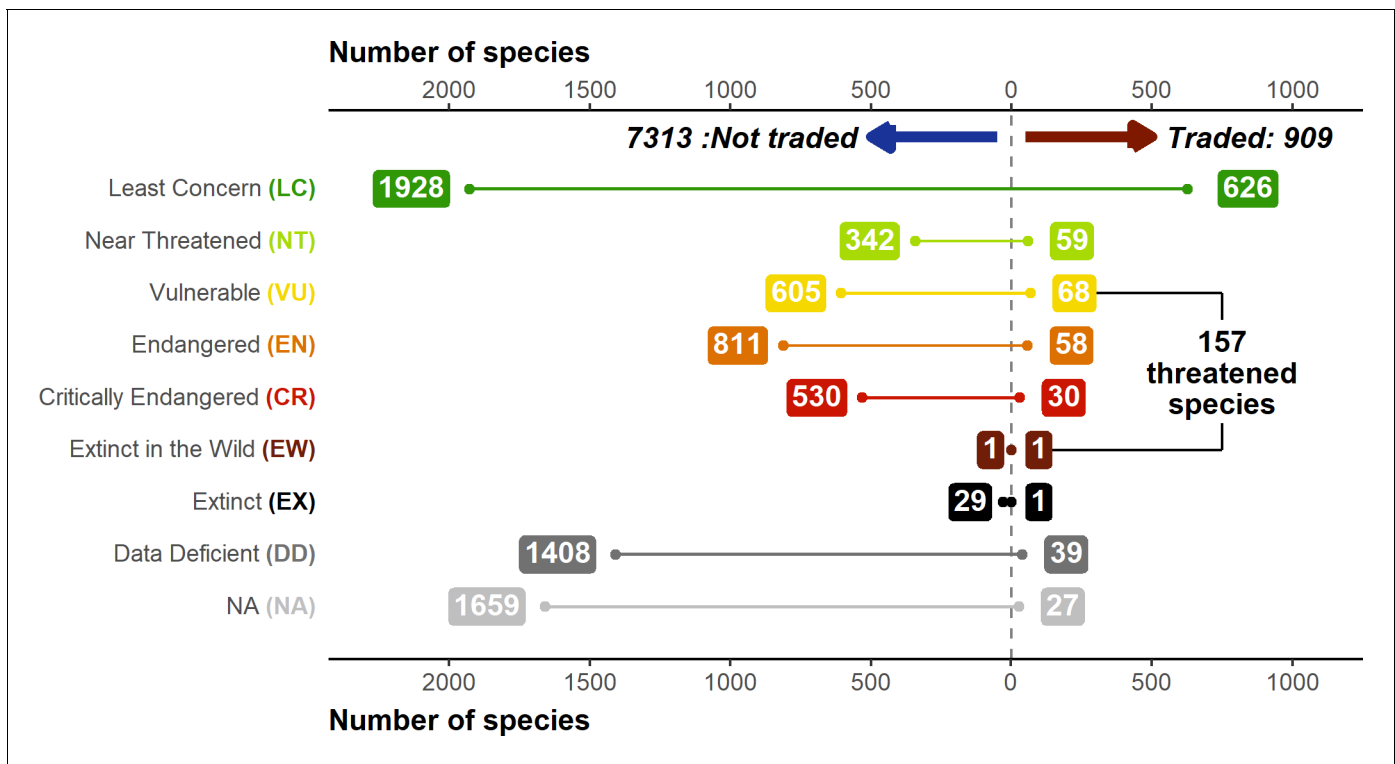


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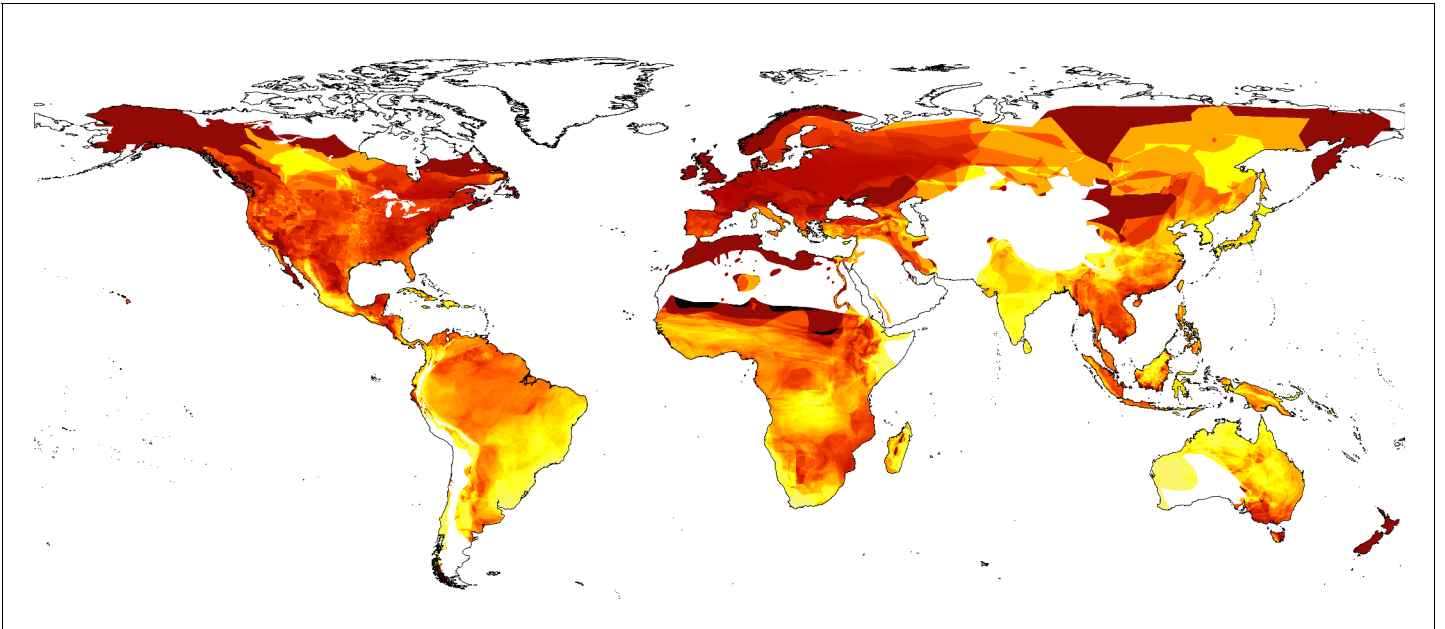
## Figures and figure supplements

Gaps in global wildlife trade monitoring leave amphibians vulnerable

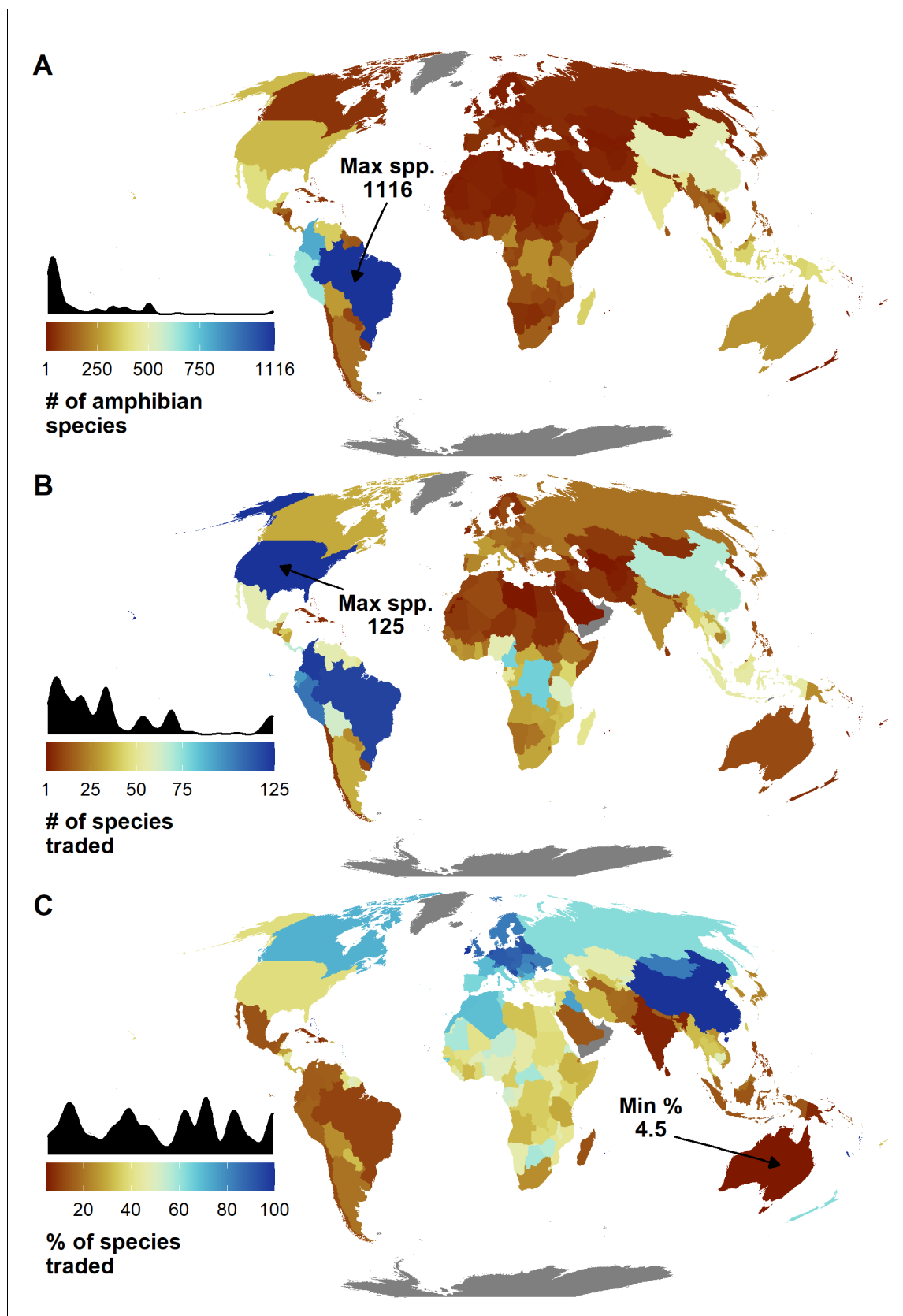
**Alice C Hughes et al**



**Figure 1.** Breakdown of IUCN Redlist status of traded and not-traded amphibian species. IUCN assessments based on data from AmphibiaWeb. Inclusion as a traded species based on appearance in online searches (2004–2019 and 2020 online contemporary sample), Law Enforcement Management Information System (LEMIS) (2000–2014), and Convention on International Trade in Endangered Species (CITES) data sources (1975–2019). Generated using **Source code 8** and **Source data 10**.



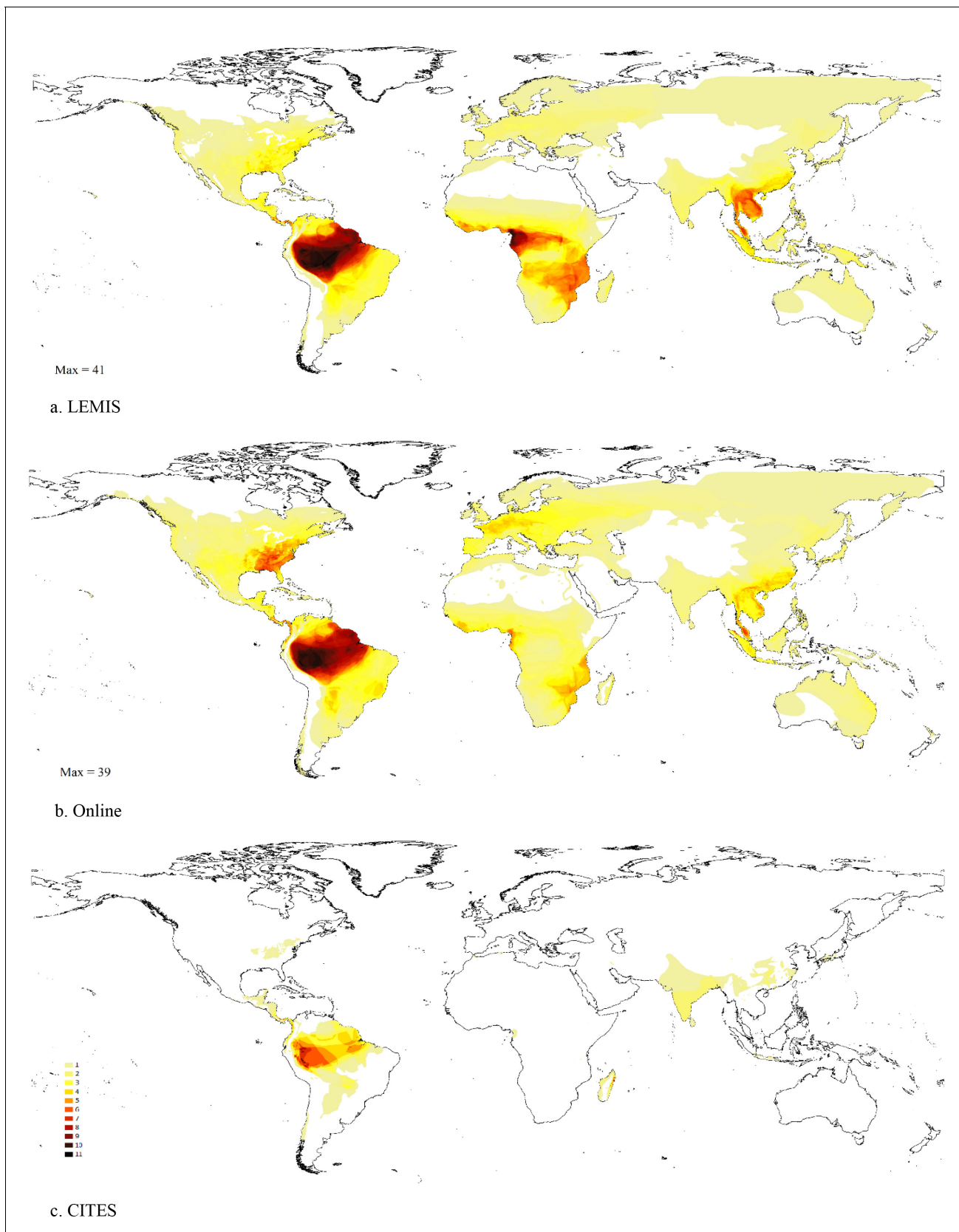
**Figure 2.** Percentage of species in trade based on three combined contemporary datasets (Law Enforcement Management Information System [LEMIS], Convention on International Trade in Endangered Species [CITES], Online [yellow (0%)-red-black (100%)]). Also see **Figure 2—figure supplements 1, 2, 3, and 4** for patterns of individual countries and inventories.



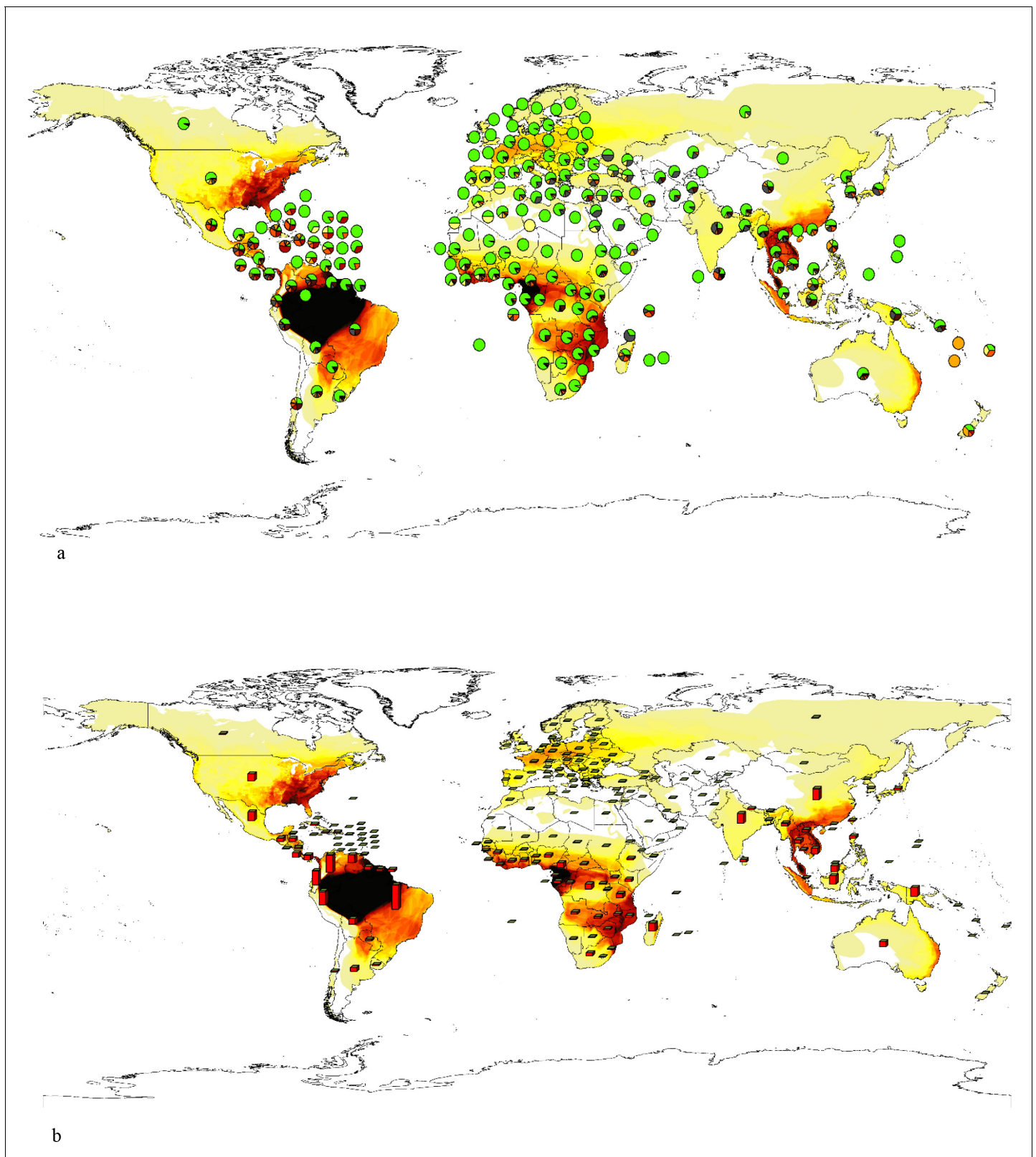
**Figure 2—figure supplement 1.** Map of trade by country derived from Online, Law Enforcement Management Information System (LEMIS), and Convention on International Trade in Endangered Species (CITES) trade data, and mapped using AmphibiaWeb distribution data. (A) The number of  
*Figure 2—figure supplement 1 continued on next page*

Figure 2—figure supplement 1 continued

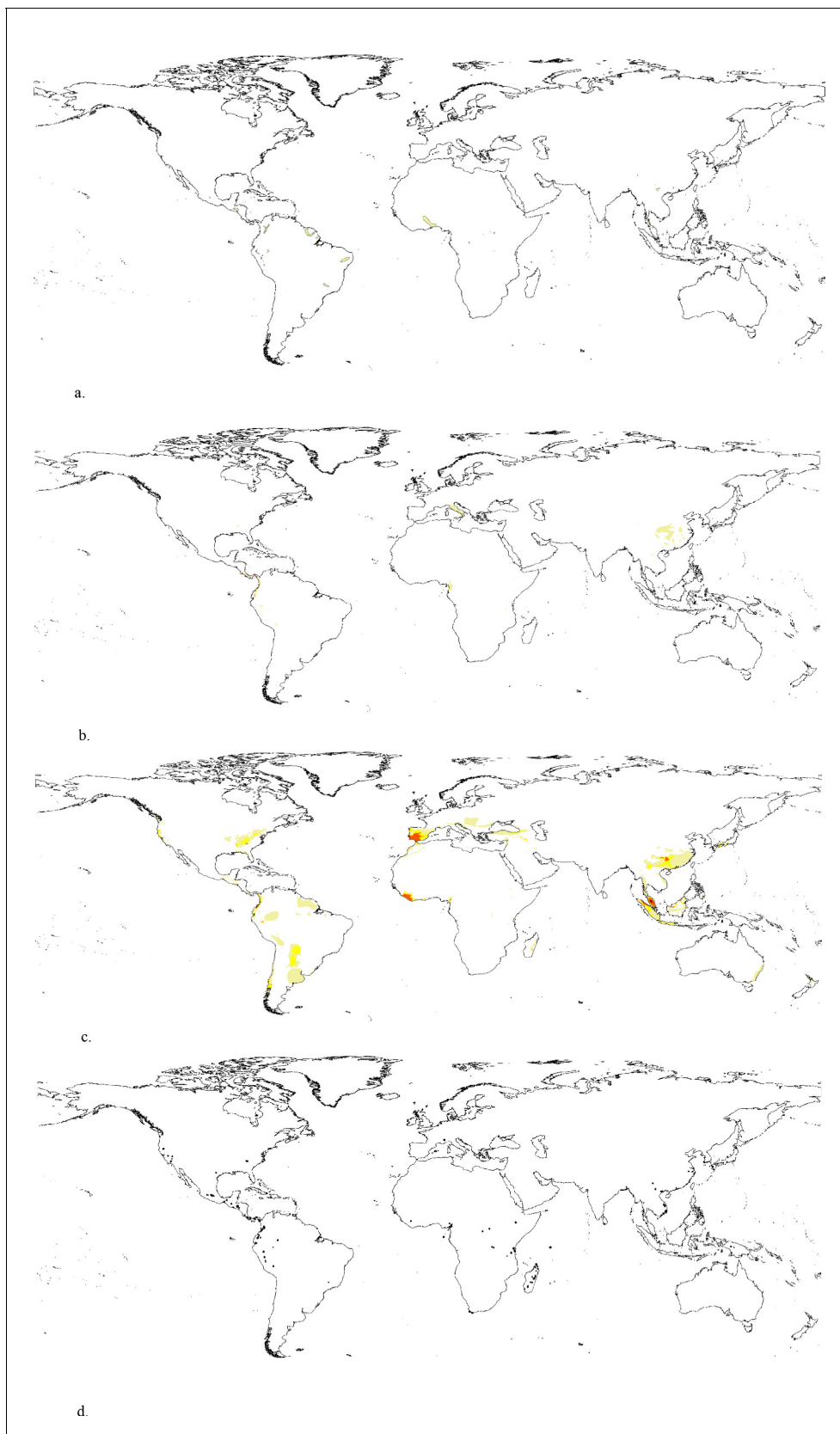
amphibian species present in a country. (B) The number of species present in that country and also present in the trade. (C) The % of species found in a country that are traded.



**Figure 2—figure supplement 2.** Species traded from different trade inventories.

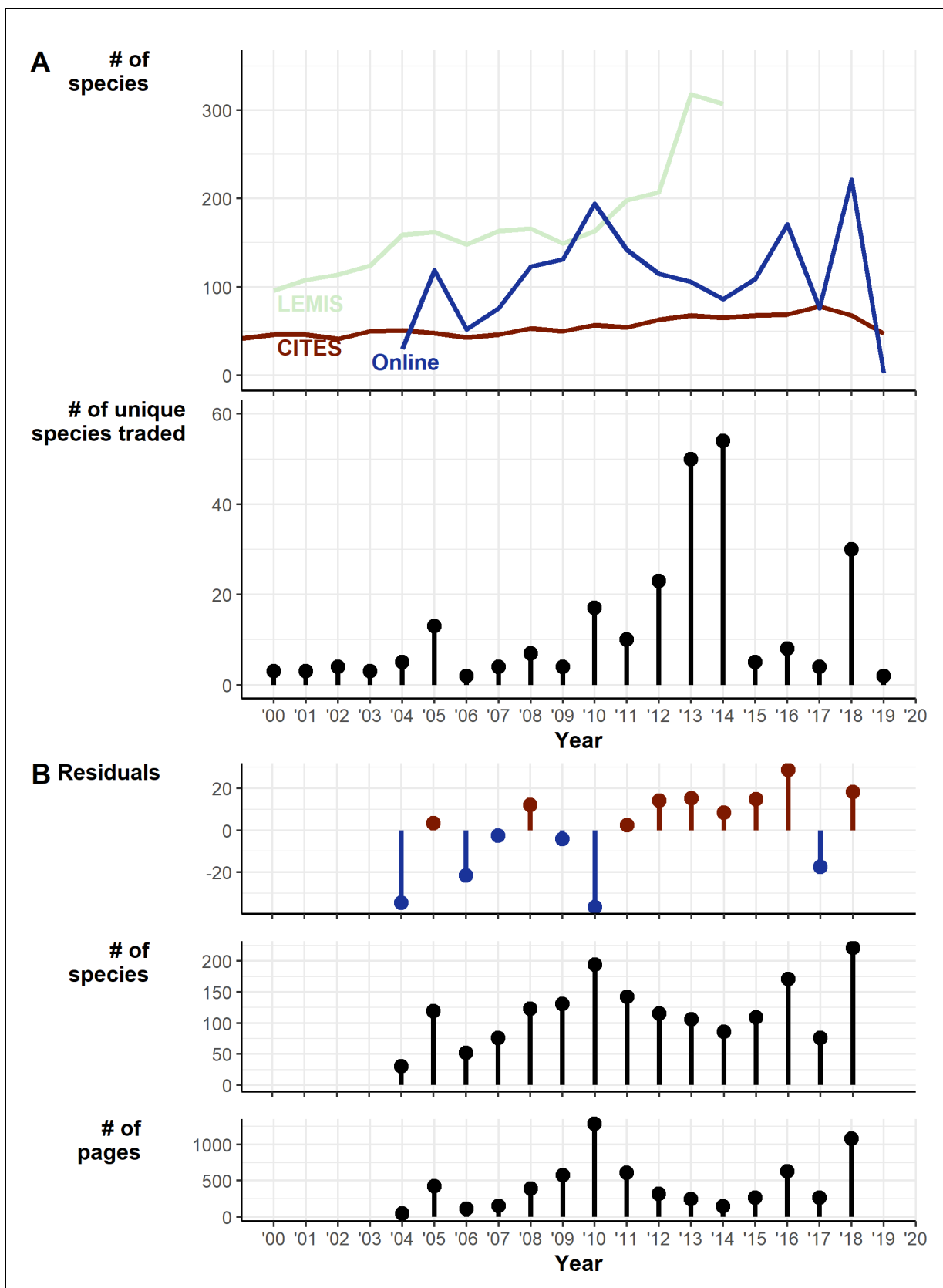


**Figure 2—figure supplement 3.** Maps of national statistics of species with different IUCN Redlist status and Convention on International Trade in Endangered Species (CITES) listing in trade.



**Figure 2—figure supplement 4.** Maps of threatened species in trade based on the three trade inventories.

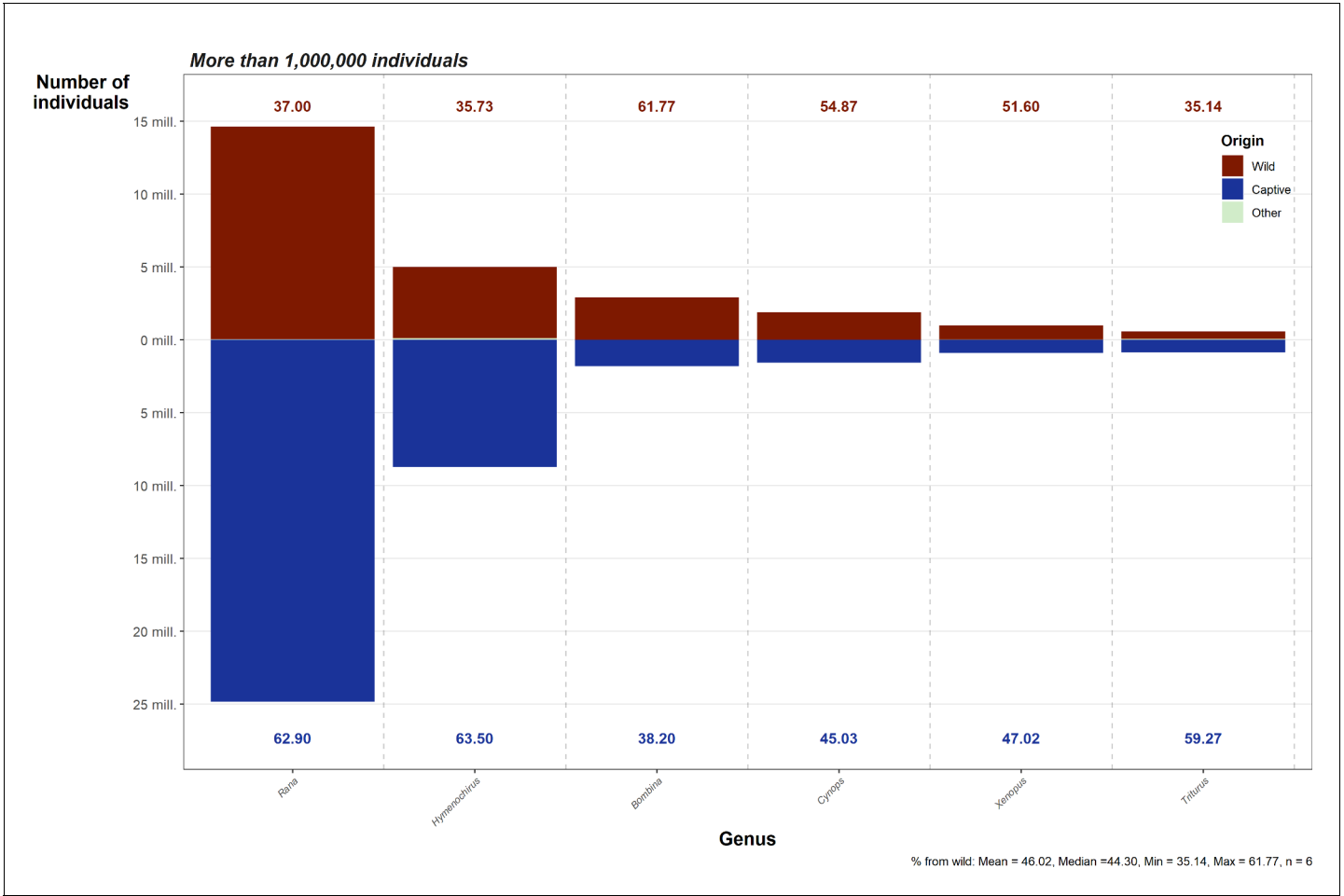




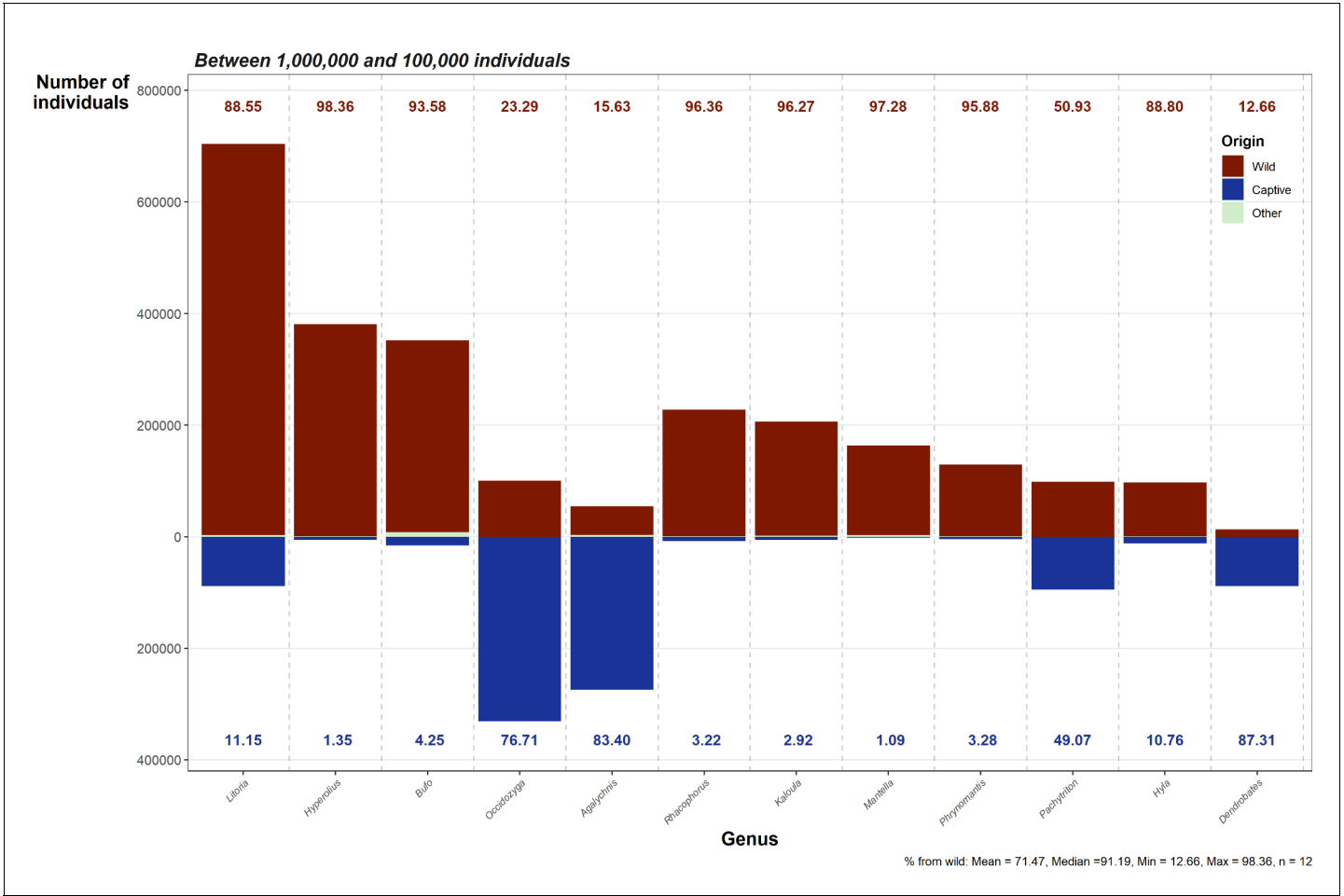
**Figure 3.** Temporal trends in traded species 2000–2019. (A) Trends over time of Online, LEMIS, and CITES datasets: (1) Raw counts of numbers of species detected in each year. (2) The number of species traded only in a particular year. (B) Exploration of trends in online trade: (1) Residuals from the Figure 3 continued on next page

*Figure 3 continued*

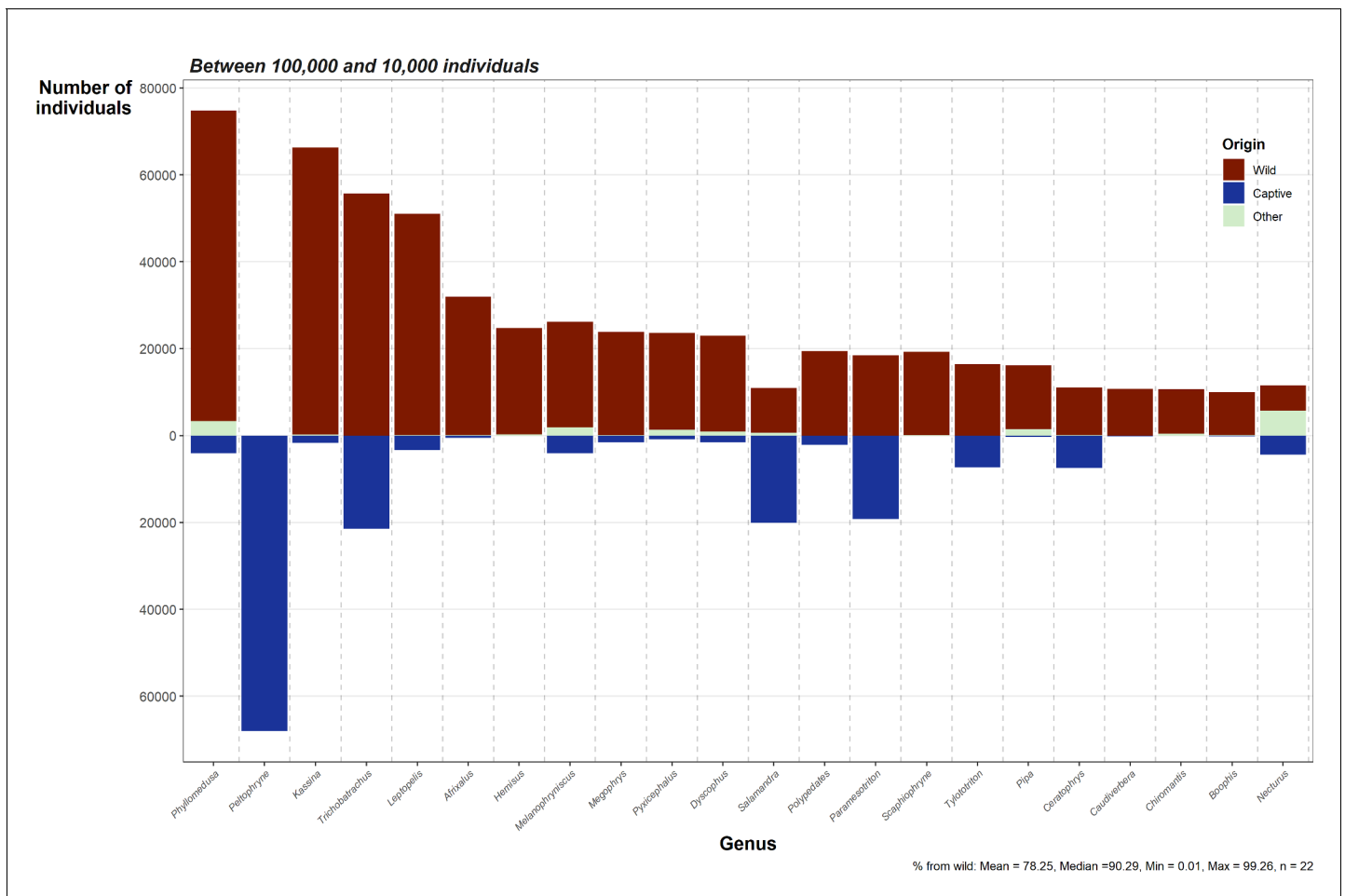
linear regression of number of species detected against number of pages (df = 13, intercept = 58.73, number of pages coef. = 0.13). (2) Number of species per year. (3) Number of archived pages retrieved and searched. Generated using **Source code 9** and **Source data 7, 9, and 10**. Also see **Figure 3—figure supplements 1–6** for a breakdown of how many individuals are coming from the wild for taxa traded at different volumes.



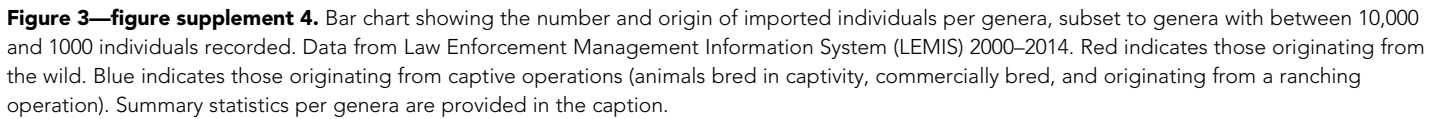
**Figure 3—figure supplement 1.** Bar chart showing the number and origin of imported individuals per genera, subset to genera with over 1,000,000 individuals recorded. Data from Law Enforcement Management Information System (LEMIS) 2000–2014. Red indicates those originating from the wild. Blue indicates those originating from captive operations (animals bred in captivity, commercially bred, and originating from a ranching operation). Labels top and bottom show the percentage of that genera from the wild or captive sources. Summary statistics per genera are provided in the caption.

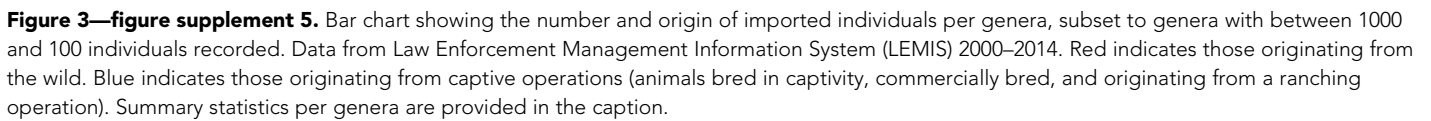


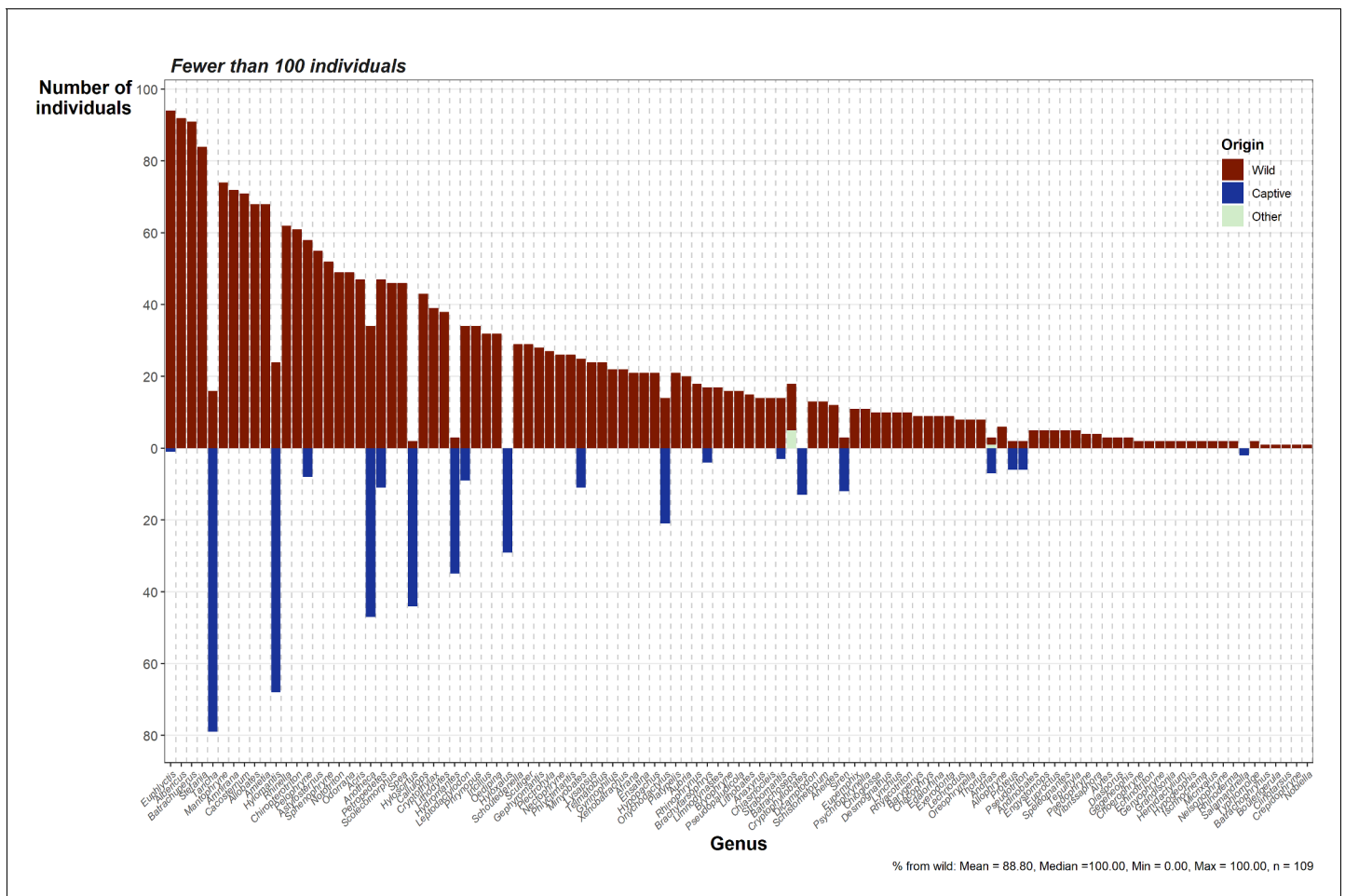
**Figure 3—figure supplement 2.** Bar chart showing the number and origin of imported individuals per genera, subset to genera with between 1,000,000 and 100,000 individuals recorded. Data from Law Enforcement Management Information System (LEMIS) 2000–2014. Red indicates those originating from the wild. Blue indicates those originating from captive operations (animals bred in captivity, commercially bred, and originating from a ranching operation). Labels top and bottom show the percentage of that genera from the wild or captive sources. Summary statistics per genera are provided in the caption.



**Figure 3—figure supplement 3.** Bar chart showing the number and origin of imported individuals per genera, subset to genera with between 100,000 and 10,000 individuals recorded. Data from Law Enforcement Management Information System (LEMIS) 2000–2014. Red indicates those originating from the wild. Blue indicates those originating from captive operations (animals bred in captivity, commercially bred, and originating from a ranching operation). Summary statistics per genera are provided in the caption.

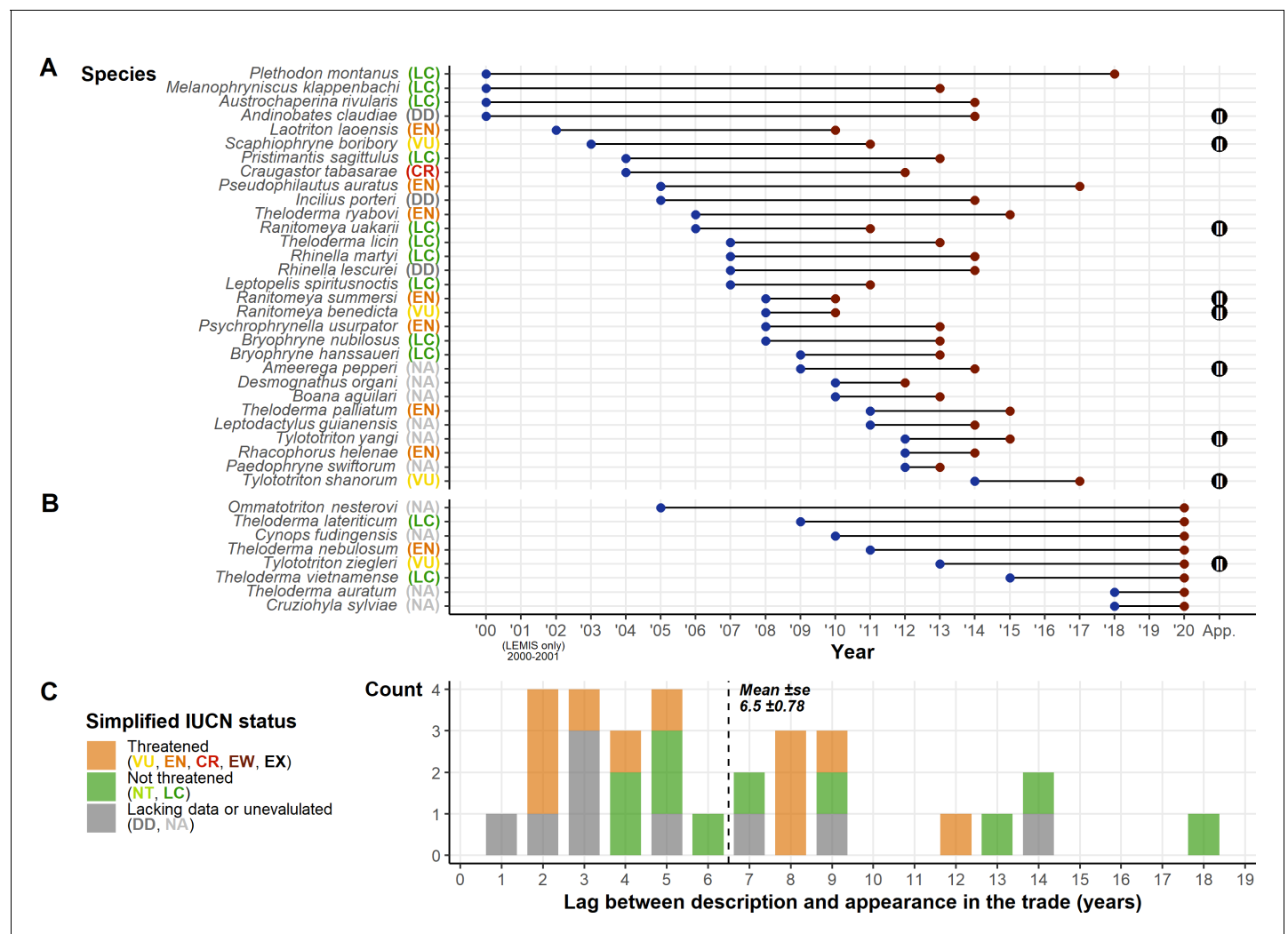




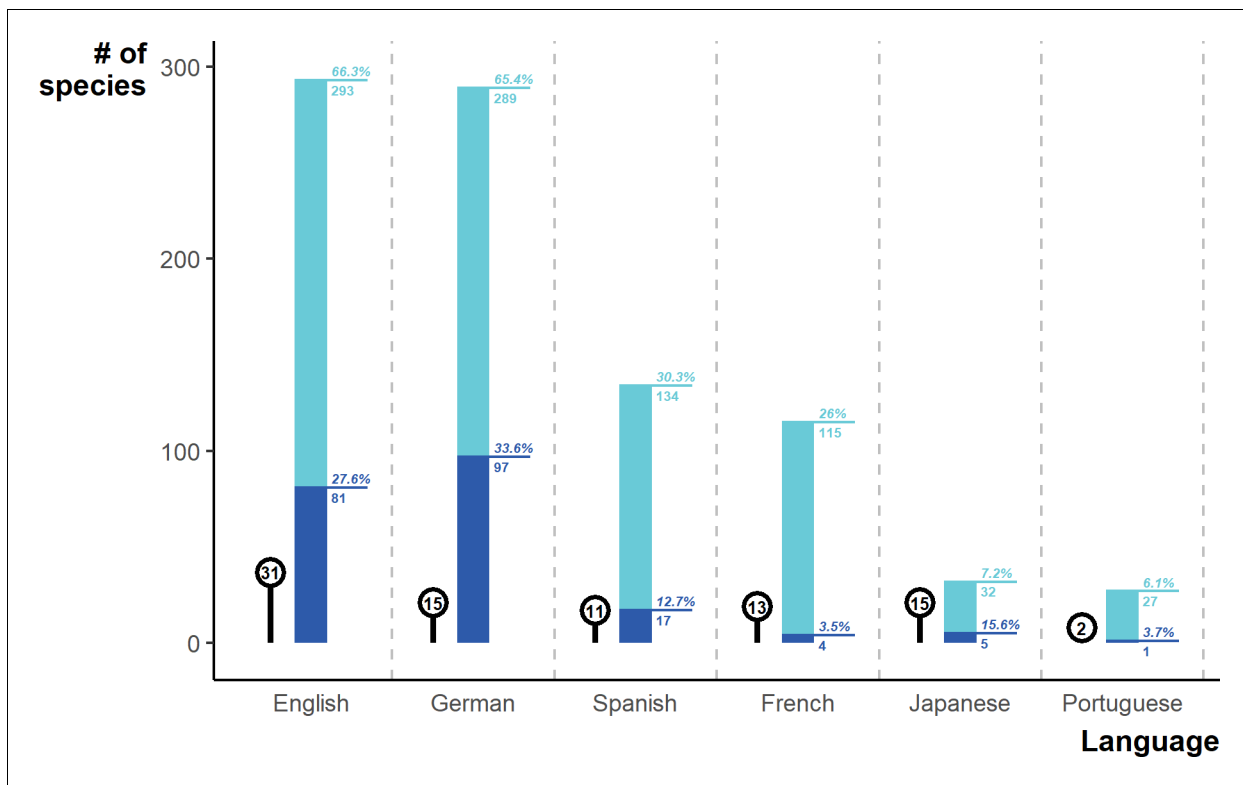


**Figure 3—figure supplement 6.** Bar chart showing the number and origin of imported individuals per genera, subset to genera with fewer than 100 individuals recorded. Data from Law Enforcement Management Information System (LEMIS) 2000–2014. Red indicates those originating from the wild. Blue indicates those originating from captive operations (animals bred in captivity, commercially bred, and originating from a ranching operation). Summary statistics per genera are provided in the caption.

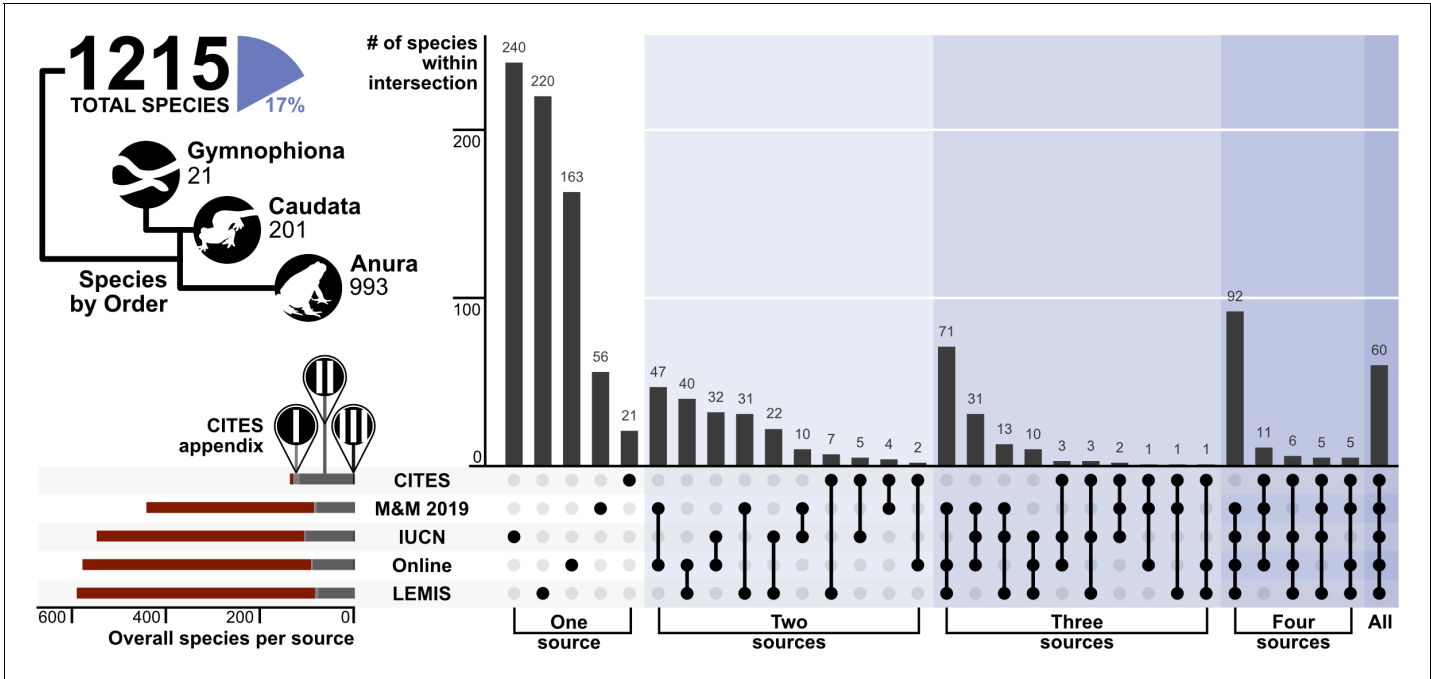




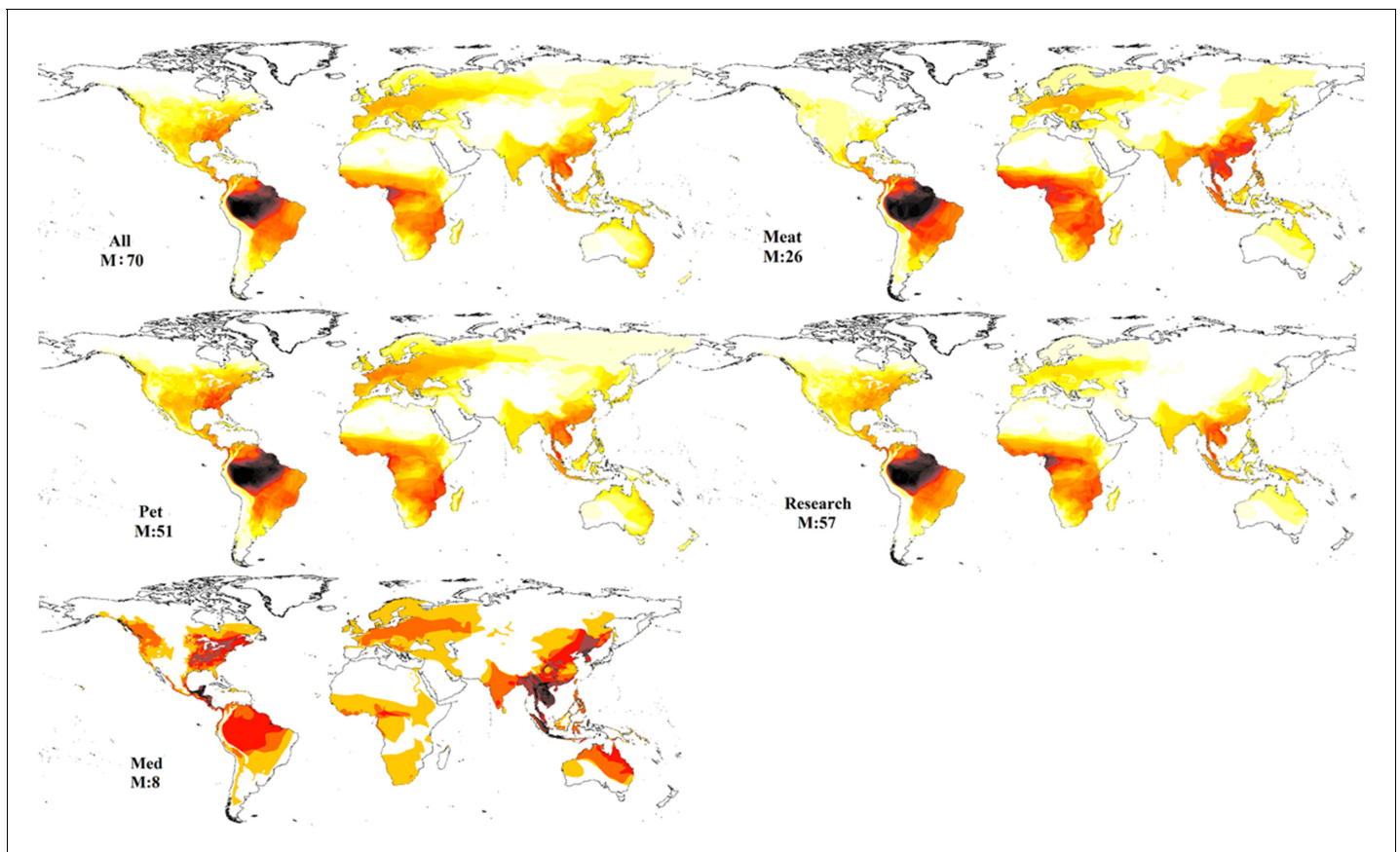
**Figure 4.** Summary of post-1999 described species and their presence in the trade. (A) The species described post-1999 detected in the trade displaying the year of description and the year detected in the trade. (B) Species described post-1999 but were only detected in the 2020 snapshot. Alongside species names in A and B are their IUCN Redlist status; the Convention on International Trade in Endangered Species (CITES) appendix (where listed) is shown on the right of the plot. (C) Frequency plot showing the count of time lags between description and trade, with colours corresponding to broad summaries of IUCN Redlist status. Generated using **Source code 11** and **12**, and **Source data 4, 7, and 10**.



**Figure 5.** Number of species detected via each language in the online search. Light blue shows the total number of species per language, and percentage of the overall online species list. Dark blue shows the number of species unique to a particular language and the percentage of that language's species that are unique. Lollipop alongside bars describe the number of websites sampled. Generated using **Source code 10** and **Source data 1** and **3**.



**Figure 6.** Upset plot showing the coverage and intersection of the five trade data sources. The number of species per order is presented as an illustrative tree, alongside the % of the 8212 amphibian species in trade. The number of species that are covered by each CITES appendix is represented in the bottom left plot (red – not listed, light grey – Appendix I, medium grey - Appendix II, black – Appendix III). N.b., M&M 2019 is referring to *Mohanty and Measey, 2019*. Generated using *Source code 8*, and *Source data 10*.



**Figure 7.** Mapping diversity of species in trade for different uses based on the five data sources. (A) Pet, (B) meat; (C) medicinal, (D) research, and (E) all trade.