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Supplementary Materials for

Networks of global bird invasion altered by regional trade ban

Luís Reino, Rui Figueira, Pedro Beja, Miguel B. Araújo, César Capinha, Diederik Strubbe

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The PDF file includes:

Other Supplementary Material for this manuscript includes the following:
(available at advances.sciencemag.org/cgi/content/full/3/11/e1700783/DC1)

- table S5 (Microsoft Excel format). Birds annually exported from different biogeographical realms.
- table S6 (Microsoft Excel format). Invasion events of CITES-listed species before and after the 2005 EU ban.

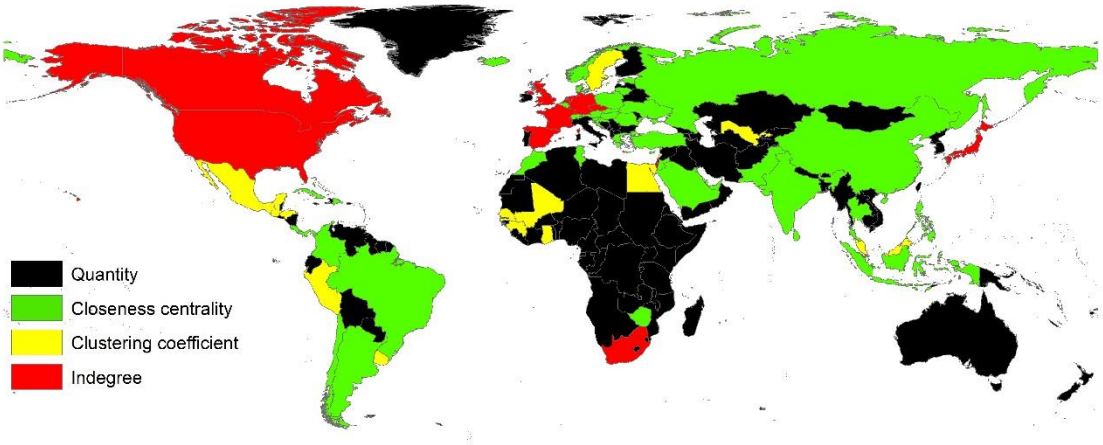

fig. S1. Highest-ranking trade volume/network structure parameters in the period 1995–2005. Country-level (standardized) network parameter values were first summed in order to identify the highest ranking parameter for each country. Before the ban, trade volume was the dominant invasion risk parameter for 59% of countries globally, followed by closeness centrality (27%), clustering coefficient (8%) and indegree (5%).

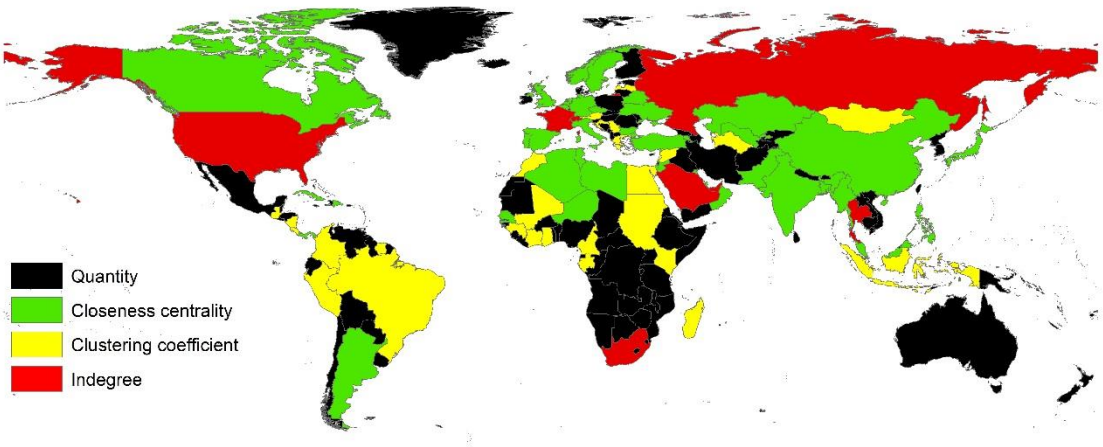

fig. S2. Highest-ranking trade volume/network structure parameters in the period 1995–2005. Country-level (standardized) network parameter values were first summed in order to identify the highest ranking parameter for each country. The EU bird trade ban reduced the importance of trade volume globally (to 47% of countries globally), and increased the contribution of network parameters for explaining invasion success (closeness centrality: 27%, clustering coefficient: 19%, indegree: 6%).

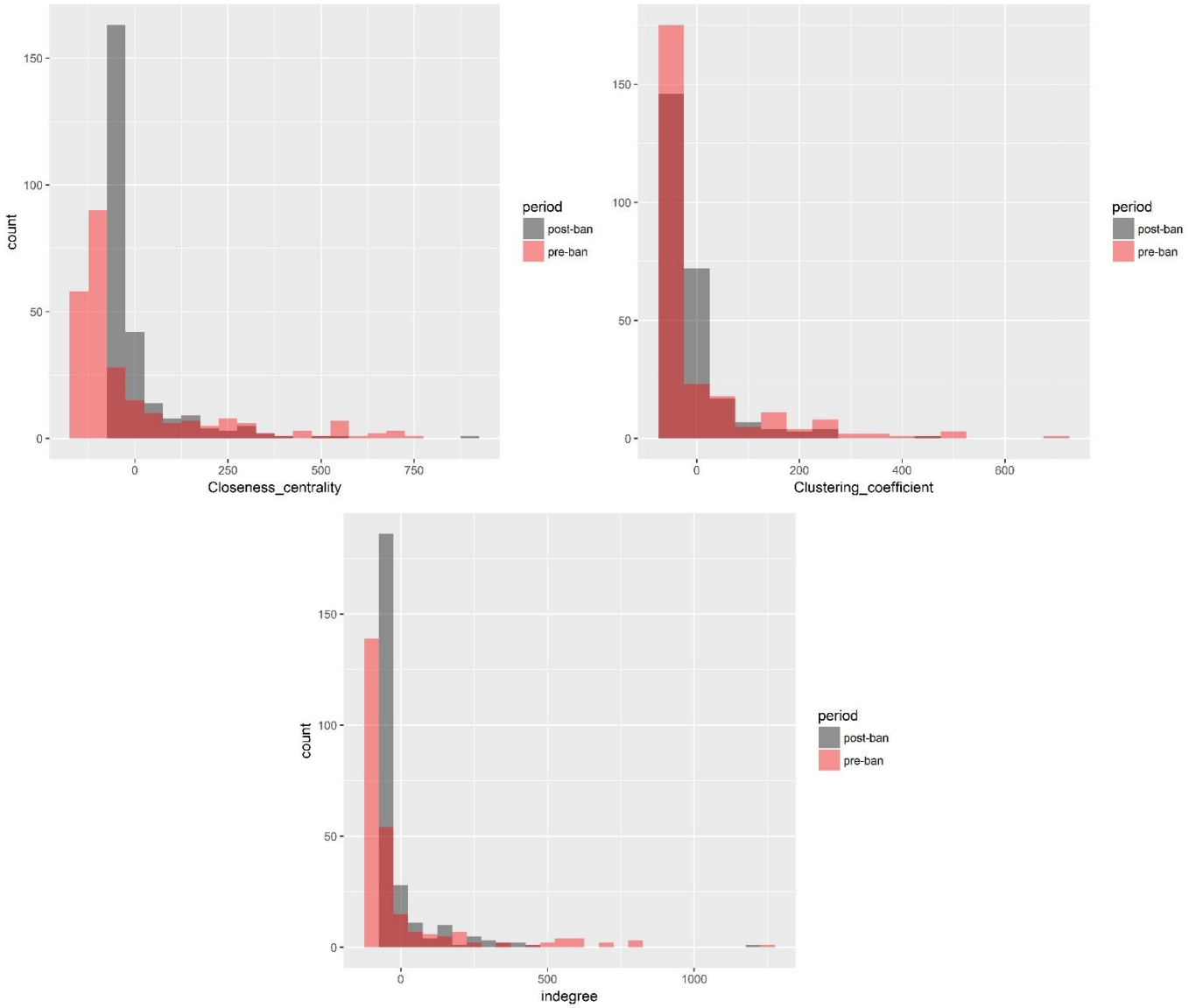

fig. S3. Histograms of network centrality measures in the period 1995–2005 versus 2006–2011. Closeness centrality values on average reduced to 21% of its pre-ban levels, the clustering coefficient to 19% and indegree to 18%.

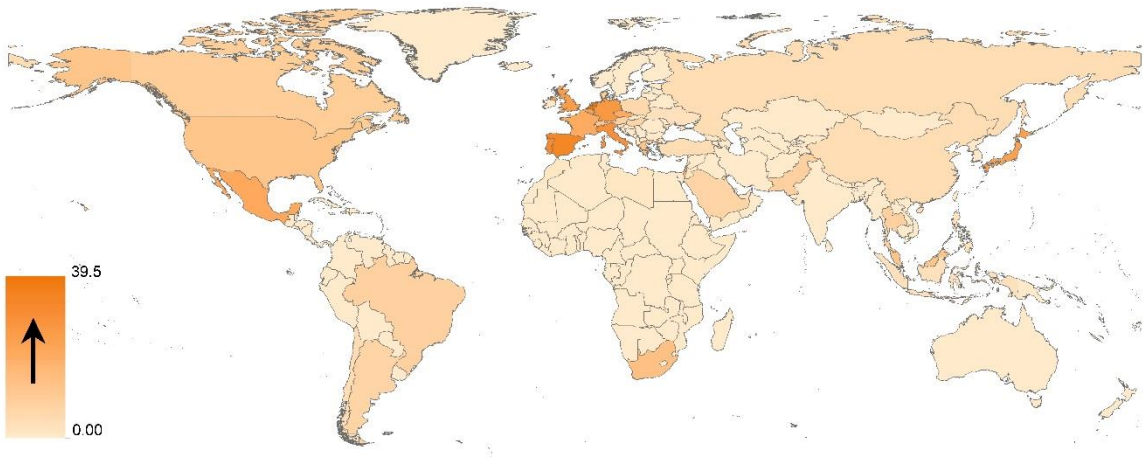

fig. S4. Global wild bird trade–driven invasion risk in the period 1995–2005. Country-level invasion risk estimates were obtained by summing model invasion probabilities for all bird species exported to a given country in the period 1995–2005. Darker hues indicate higher invasion probabilities, maps have been drawn using equally spaced intervals. Invasion risks were highest across (Western) Europe, followed by Japan, Mexico and South-Africa.

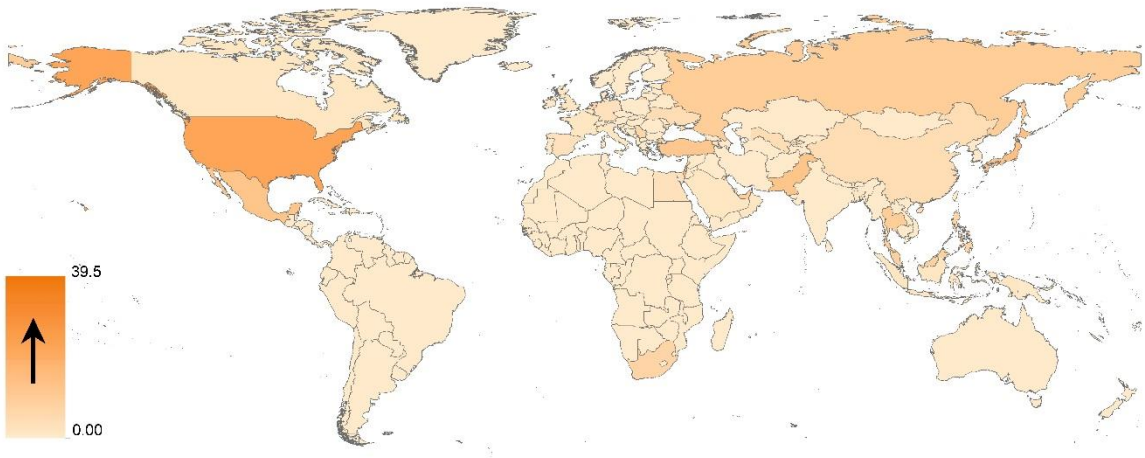

fig. S5. Global wild bird trade–driven invasion risk in the period 2006–2011. Country-level invasion risk estimates were obtained by summing model invasion probabilities for all bird species exported to a given country in the period 2006–2011. Darker hues indicate higher invasion probabilities, maps have been drawn using equally spaced intervals. Invasion risks were highest across the Nearctic, followed by parts of the Afro-Tropical and Indo-Malay region.

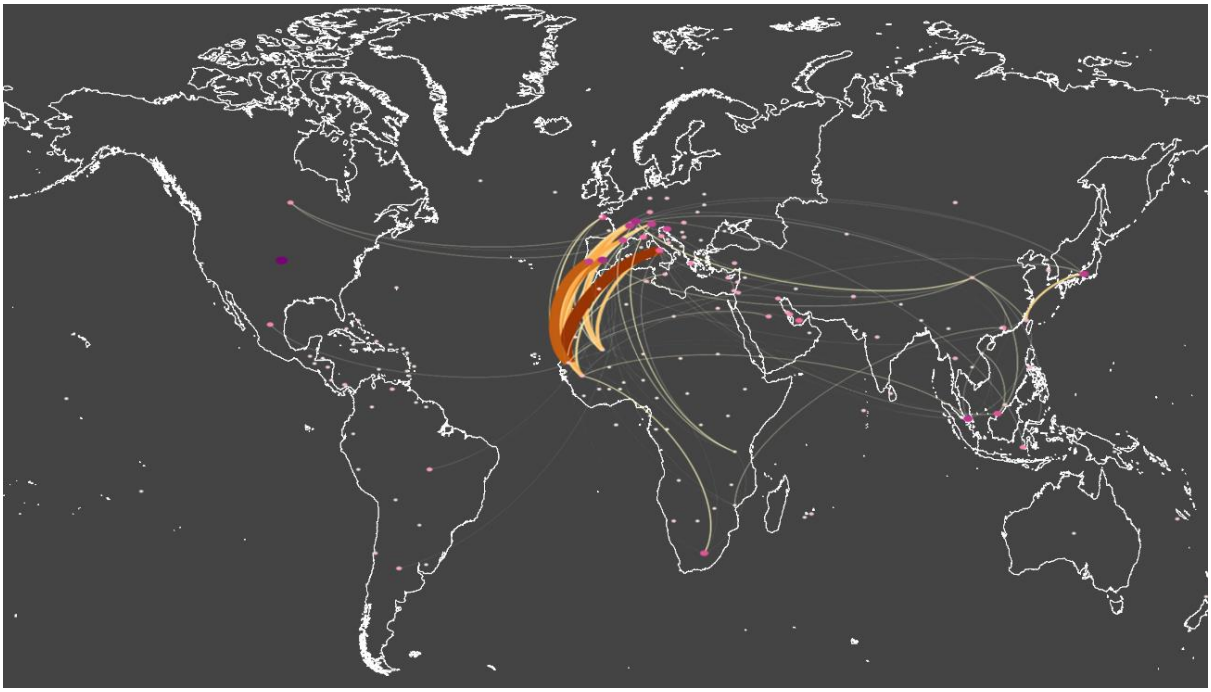

fig. S6. Trade fluxes of CITES-listed passerine birds in the period 1995–2005. Darker colours and broader lines indicate higher trade volumes.

fig. S7. Trade fluxes of CITES-listed Psittaciformes birds in the period 1995–2005. Darker colours and broader lines indicate higher trade volumes.

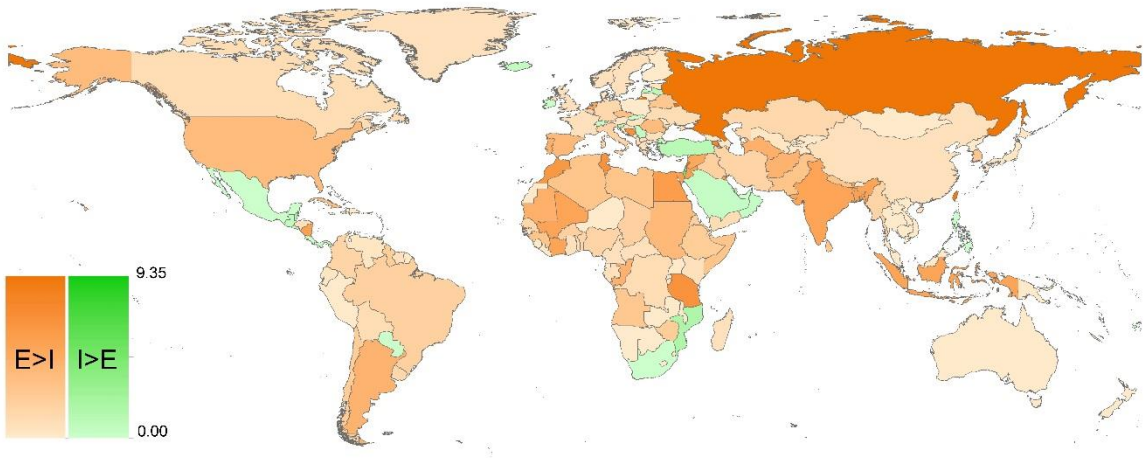

fig. S8. Discrepancies between exporter- and importer-listed quantities of traded wild birds. Orange hues indicate countries where listed exports to were higher than reported imports, green hues represent countries where listed imports where higher. Darker hues indicate higher invasion probabilities, maps have been drawn using equally spaced intervals. Orange hues thus represent countries where post-ban invasion risks may be overestimated, green hues indicate possible underestimates.