

## Project proposal

**Title:** 'Global conservation of country-endemic species'

**Aim:** Analyse biogeographic and political patterns of country-endemic bird species in order to inform conservation priorities at a global level.

**Rationale:** Traditionally, endemism is a spatially bound dimension of species distribution considered at multiple scales, which can be conceptualised as biogeographic endemism. This biological trait has been usually considered to confer vulnerability to species when distribution is narrow, either because it is associated with high specialization implying lower tolerance to environmental change or due to intrinsic small populations subject to stochastic events.



*Kagu - found only in New Caledonia*

This parameter can also be considered in a governance context regardless of arbitrary range size thresholds. Hence, a spatial bound dimension of species distribution can also be considered in relation to the political jurisdictions where they occur. Country-endemic species is a case in point, whereby the distribution of a species is completely restricted to a single country. Countries are important governance units for conservation, because they hold internal sovereignty, generally translating into nested and hierarchical political structures that create a broadly homogeneous set of rules within which the survival of species is embedded. The conditions created by the governance structures of countries can influence the threats species face, as well as policy for their conservation. Consequently, when species occur across more than one country, their survival relies on the governance structures of more than one country. If a species extinction, or extirpation, is considered as a governance failure, then the extinction of a species that occurs across more than one country would require governance failures across all countries of occurrence. By contrast, for country-endemic species, extinction can happen when there is governance failure in a single country. Importantly, governance failure across more than one country is perhaps less likely than governance failure in a single country.

**The project:** In sum, as much as biogeographic endemism confers vulnerability to species, so does political endemism. The rationale for this proposed project stems from the idea that country-endemic species are subject to potentially less resilient overarching governance systems, simply because they are under the 'rule' of only one political authority, if something goes wrong, there is no back-up anywhere else. In the case of birds, there are many country-endemic species, however, no study has analysed patterns of country endemism that could inform conservation policy and practice. Therefore, this study will aim to answer the following questions: (i) are there any emerging patterns of country-endemic species richness given by biogeography, geopolitics, or other socio-economic/political variables? and, (ii) are there any emerging patterns and conservation priorities in relation to taxonomic groups and conservation status?

**Methods:** Desktop-based data collection with spatial analysis from a biogeographic and political perspective.

**Duration:** 8 months to 1 year.

**Candidates:** potential honours or master's research project.

**Supervisors:** Professor Richard A. Fuller, Eduardo Gallo-Cajiao

To apply or for more information, please email [r.fuller@uq.edu.au](mailto:r.fuller@uq.edu.au) or [e.gallocajiao@uq.edu.au](mailto:e.gallocajiao@uq.edu.au)