**Zoogeography Assignment 2 Due Mon, Jan 27th**

**NAME:**

**STUDENT NUMBER:**

Claramunt, S., Derryberry, E. P., Remsen Jr, J.V., Brumfield, R. T. (2012) High dispersal ability inhibits speciation in a continental radiation of passerine birds. *Proc. Roy. Soc. B* 279: 1567-1574.

**Instructions:**

* Use your own words and provide complete but concise answers to the following questions.
* Cite literature appropriately if referenced. **Do not copy-paste definitions**.
* Answers should fit onto this page. The back may be used for expanding your answers if needed.
* Hard copy to be handed in by 12:00pm, Monday, Jan 27th at Biodiversity Research Centre Rm 325. No exceptions unless previously arranged with the TA.

1) What defines a biological species?

2) How does dispersal ability affect gene flow and what are the consequences for speciation?

3a) What is the relationship between hand-wing index and flying ability?

3b) How has this been tested with birds? (see also Supplemental Materials)

4) How is the hand-wing index related to the diversity of species within clades across the phylogeny?

Do their results support the intermediate dispersal hypothesis? Use Figure 5 in your answer.

5) Woodcreepers (Furnariidae) were chosen for this study because of their diversity of dispersal abilities. Use the Global Biodiversity Information Facility to locate the most isolated pacific occurrence record for this family. What is the name of the island and which Furnariddae species occurs there (scientific and common name)? (Hint: search "Furnariidae" at gbif.org, scroll past "datasets" down to "species", select "Furnariidae" and view the occurrence map.