Reviewer’s report

Title: Genomic data of Avian Phylogenomics Project

Version: 1 Date: 28 April 2014

Reviewer: Scott Edwards

Reviewer’s report:

This report of genomic data associated with the Avian Phylogenomics Project is very exciting and will be a useful resource for the community. The review of data quality and sequencing strategies is very clear. Overall this will be a report that will be welcomed by the community.

The writing is generally clear but there are confusing phrases throughout the paper that I have suggested edits for. In several places the authors self-evaluate the impact of their work, which I discourage (see below). Also, I don’t recommend mentioning in the text the journal in which the primary papers were published— if you are looking for maximal impact, you will get it by leaving mention of Science to the citations, otherwise you will seem over-eager for impact. Finally, I recommend mentioning that an effort was made to use DNA from vouchered museum specimens. It is unfortunate that this initial effort did not include 100% vouchered specimens, so as to set a standard for the community going forward. But at least the authors seem aware that this is an important issue.

Minor essential revisions:

p. 1
Title: Change to “Genomic data of the Avian Phylogenomics Project”
Abstract: Change “relationship” to “relationships”
Change “of other 10 birds” to “of 10 other birds”
Change “reported in Science simultaneously” to “reported”

p. 2:
Change “in long N50 scaffold sizes >1Mb” to “in N50 scaffold sizes greater than 1Mb”
Change “Using the homology-based” to “Using homology-based”
Change “gene syntenic strategy” “a strategy based on gene synteny”
Change “consisted of” to “comprised”
Change “unprecedented genomic data” to “genomic data”. It is best not to evaluate the impact of one’s own data in the paper in which the data are presented.
Add a sentence to the section on Genome Sequencing: “An effort was made to obtain DNA samples from tissues with associated museum voucher specimens with high quality metadata”. I assume this statement is true.

p.3:

Change “with a series insert sizes of up to 9 insert sizes” to “with a series up to 9 insert sizes”

Change “their specific sequencing strategy” to “the sequencing strategy applied to those species” (the sequencing strategy does not belong to the species).

Change “while the sequencing depths” to “whereas the sequencing depths”. “While” is better used to denote temporal relationships.

Change “optical mapping date” to “optical mapping data”

Change “exceptionally larger” to “an unusually large”

p. 4:

Change “large portion of the genomic regions have” to “large portion of the genome has”

Change “Finally, we obtained” to “In the end, we obtained”

Supplementary material:

In the supplementary material, the Avian Phylogenomics Project should be capitalized in each species description.

The supplementary material should mention whose taxonomy is used in the species descriptions. Some authorities will not recognize some of the taxa (such as the subspecies of flamingo), so the specific taxonomy used should be indicated.

The supplementary material should begin with the title of the paper with authors at the top, so that readers can be sure to link the supplement with the Avian Phylogenomics Project.

**Level of interest:** An exceptional article

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

No competing interests.