Ecography

ECOG-04874
Oliveira, E. A., Perez, M. F., Bertollo, L. A. C., Gestich, C. C., Ráb, P., Ezaz, T., Souza, F. H. S., Viana, P., Feldberg, E., Oliveira, E. H. C. and Cioffi, M. B. 2020. Historical demography and climate driven distributional changes in a widespread Neotropical freshwater species with high economic importance. – Ecography doi: 10.1111/ecog.04874

Supplementary material

Appendix 1

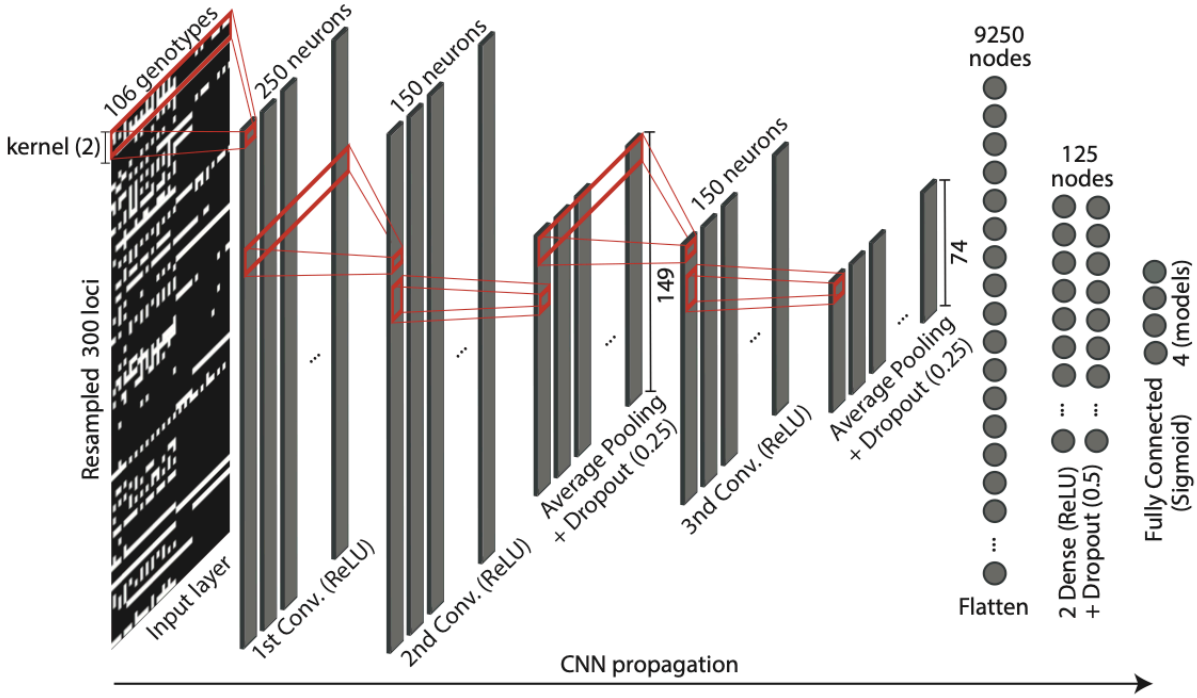

Figure A1. Architecture of the convolutional neural network used to compare demographic models in the present study. The input is an alignment represented as an image, which is passed through a first convolutional layer in order to create a set of feature maps. These feature maps are then downsized with an average pooling step, which replaces the values within the input feature map by the mean value. These downsized feature maps are then passed through a second convolutional filter and pooling step, and the resulting output is flattened into a one-dimensional vector and passed as input into a fully connected feedforward layer. Finally, the last fully connected neural network layer yields the predicted output values.

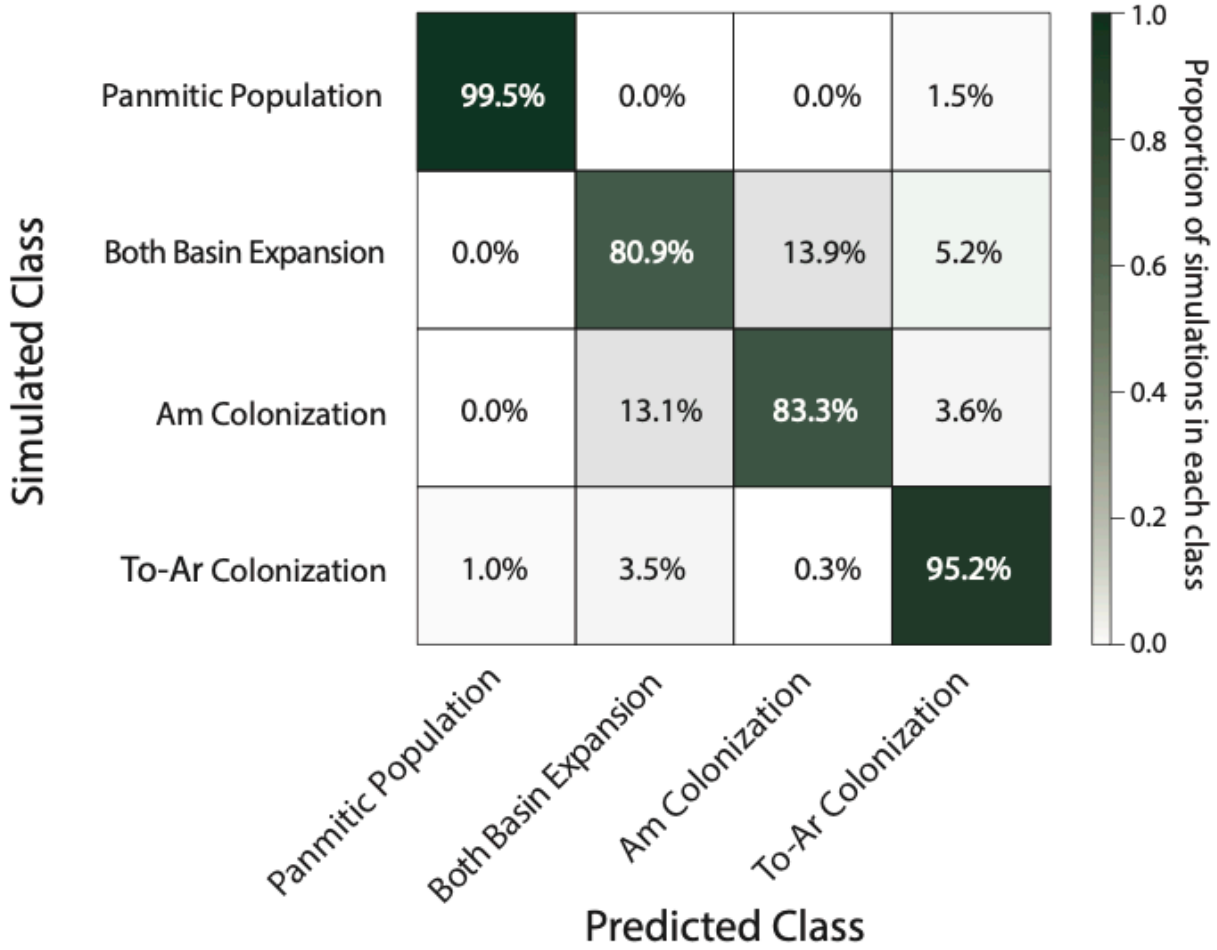

Figure A2. Confusion matrix showing the proportion of simulations predicted in each simulated class. The main diagonal represents simulations that were correctly predicted.

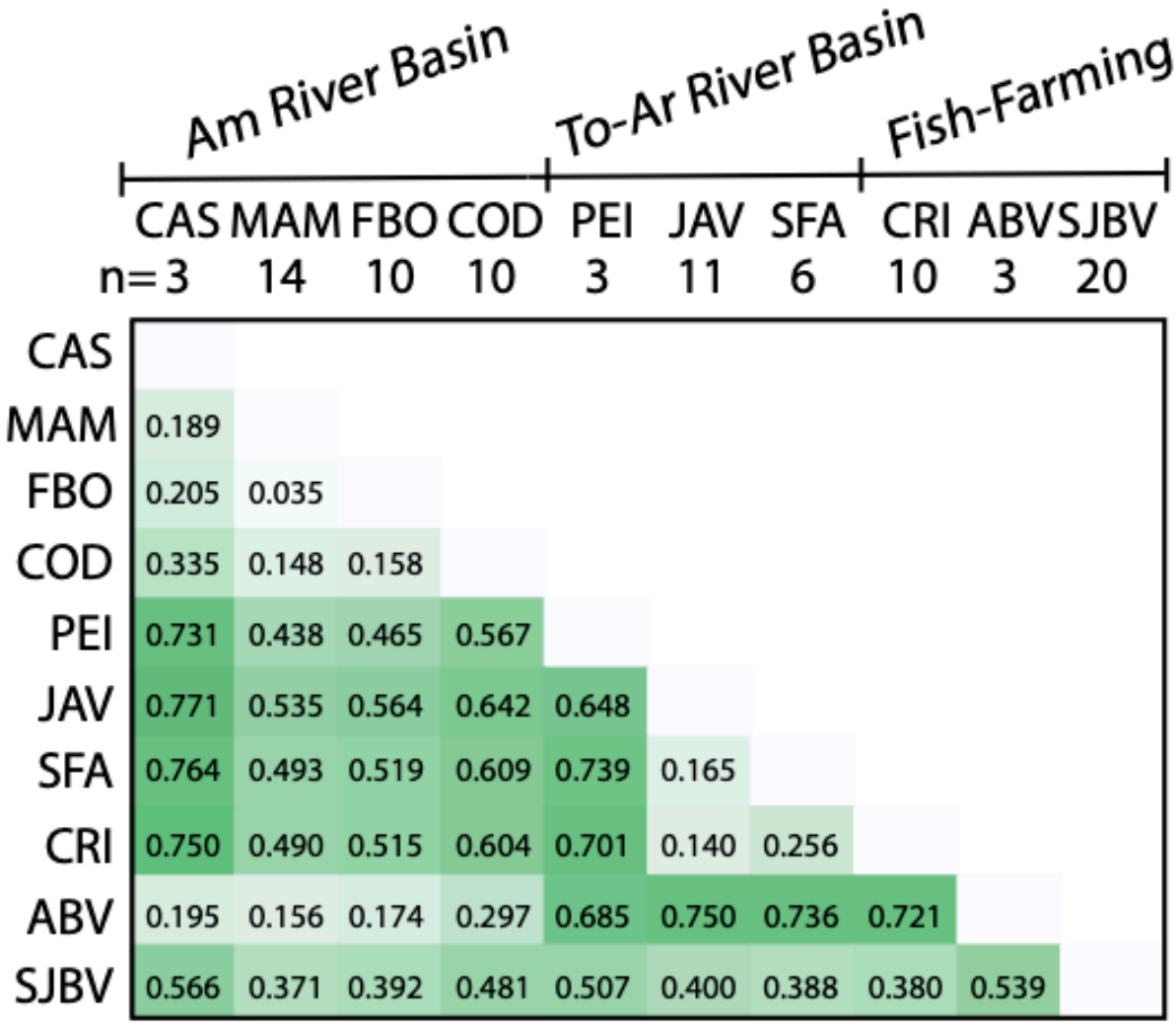

Figure A3. Heatmap of pairwise F_{ST} values between populations of *Arapaima.* All values were significant after Bonferroni correction ($\alpha = 0.01$).