Code Definitions of IBP-MAPS-Data-Exploration-Results.csv

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IBP-MAPS-Data-Exploration-Download.csv contains the data that is used in MAPS Data Explorer maps. This document includes the codes and definitions for the downloaded table. For questions, please contact Jim Saracco at jsaracco@birdpop.org. Should Jim's contact info be here? More or less text?

BCR: Bird Conservation Region number (https://nabci-us.org/resources/bird-conservation-regions-map/)

BCR_name: Bird Conservation Region name (https://nabci-us.org/resources/bird-conservation-regions-map/)

CommonName: English common name (https://checklist.americanornithology.org/)

ScientificName: Scientific name (https://checklist.americanornithology.org/)

SPEC: 4-letter species code (https://birdpop.org/pages/birdSpeciesCodes.php)

No_individuals: Number of adults included in transient Cormack-Jolly-Seber (CJS) models used to estimate apparent survival and residency probabilities. Only individuals captured at stations operated for ≥ 4 years are included.

Nsta_CJS: Number of stations included in transient Cormack-Jolly-Seber (CJS) models used to estimate apparent survival and residency probabilities. Only stations operated for ≥ 4 years are included.

No_yrunique_adults: Number of year-unique adults (after-hatching year birds) included in capture models for estimating indices of adult abundance, and productivity.

No_yrunique_young: Number of year-unique young (hatching-year birds) included in capture models for estimating indices of young abundance, and productivity.

Nsta_ce: Number of stations included in constant-effort capture models for estimating adult abundance, young abundance, and productivity indices.

phi.med: Median of the posterior distribution for adult apparent survival probability from a Bayesian hierarchical transient Cormack-Jolly-Seber model. BCR-specific estimates are derived from back-transformed random intercepts of a logit-linear model. BCR × year estimates are derived from random trend and year effects added to the intercepts.

phi.sd: Standard deviation of the posterior distribution for adult apparent survival probability from a Bayesian hierarchical transient Cormack-Jolly-Seber model. BCR-specific estimates are derived from back-transformed random intercepts of a logit-linear model. BCR × year estimates are derived from random trend and year effects added to the intercepts.

phi.05: Lower bound of 90% credible interval from the posterior distribution for adult apparent survival probability from a Bayesian hierarchical transient Cormack-Jolly-Seber model. BCR-specific estimates are derived from back-transformed random intercepts of a logit-linear model. BCR × year estimates are derived from random trend and year effects added to the intercepts.

phi.95: Upper bound of 90% credible interval from the posterior distribution for adult apparent survival probability from a Bayesian hierarchical transient Cormack-Jolly-Seber model. BCR-specific estimates are derived from back-transformed random intercepts of a logit-linear model. BCR × year estimates are derived from random trend and year effects added to the intercepts.

phi.trend.med: Median of the posterior distribution of the logit-linear trend effect on adult apparent survival probability from a Bayesian hierarchical transient Cormack-Jolly-Seber model.

phi.trend.sd: Standard deviation of the posterior distribution of the logit-linear trend effect on adult apparent survival probability from a Bayesian hierarchical transient Cormack-Jolly-Seber model.

phi.trend.05: Lower bound of 90% credible interval from the posterior distribution of the logit-linear trend effect on adult apparent survival probability from a Bayesian hierarchical transient Cormack-Jolly-Seber model.

phi.trend.95: Upper bound of 90% credible interval from the posterior distribution of the logit-linear trend effect on adult apparent survival probability from a Bayesian hierarchical transient Cormack-Jolly-Seber model.

sigma.phi.med: Median of the posterior distribution of the standard deviation hyperparameter for adult apparent survival from the Bayesian hierarchical transient Cormack-Jolly-Seber model. This is a measure of annual variation in survival in the BCR.

sigma.phi.sd: Standard deviation of the posterior distribution of the standard deviation hyperparameter for adult apparent survival from the Bayesian hierarchical transient Cormack-Jolly-Seber model. This is a measure of uncertainty in annual variation in survival in the BCR.

sigma.phi.05: Lower bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for adult apparent survival from the Bayesian hierarchical transient Cormack-Jolly-Seber model.

sigma.phi.95: Lower bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for adult apparent survival from the transient Bayesian hierarchical Cormack-Jolly-Seber model.

pi.med: Median of the posterior distribution for residency probability (probability of a newly marked bird being a resident) from a Bayesian hierarchical transient Cormack-Jolly-Seber model. BCR-specific estimates are derived from back-transformed random intercepts of a logit-linear model. BCR × year estimates are derived from random trend and year effects added to the intercepts.

pi.sd: Standard deviation of the posterior distribution for residency probability (probability of a newly marked bird being a resident) from a Bayesian hierarchical transient Cormack-Jolly-Seber model. BCR-specific estimates are derived from back-transformed random intercepts of a logit-linear model. BCR × year estimates are derived from random trend and year effects added to the intercepts.

pi.05: Lower bound of 90% credible interval from the posterior distribution for residency probability (probability of a newly marked bird being a resident) from a Bayesian hierarchical transient Cormack-Jolly-Seber model. BCR-specific estimates are derived from back-transformed random intercepts of a logit-linear model. BCR × year estimates are derived from random trend and year effects added to the intercepts.

pi.95: Upper bound of 90% credible interval from the posterior distribution for residency probability (probability of a newly marked bird being a resident) from a Bayesian hierarchical transient Cormack-Jolly-Seber model. BCR-specific estimates are derived from back-transformed random intercepts of a logit-linear model. BCR × year estimates are derived from random trend and year effects added to the intercepts.

pi.trend.med: Median of the posterior distribution of the logit-linear trend effect on residency probability (probability of a newly marked bird being a resident) from a Bayesian hierarchical transient Cormack-Jolly-Seber model.

pi.trend.sd: Standard deviation of the posterior distribution of the logit-linear trend effect on residency probability (probability of a newly marked bird being a resident) from a Bayesian hierarchical transient Cormack-Jolly-Seber model.

pi.trend.05: Lower bound of 90% credible interval from the posterior distribution of the logit-linear trend effect on residency probability (probability of a newly marked bird being a resident) from a Bayesian hierarchical transient Cormack-Jolly-Seber model.

pi.trend.95: Upper bound of 90% credible interval from the posterior distribution of the logit-linear trend effect on residency probability (probability of a newly marked bird being a resident) from a Bayesian hierarchical transient Cormack-Jolly-Seber model.

sigma.pi.med: Median of the posterior distribution of the standard deviation hyperparameter for residency probability (probability of a newly marked bird being a resident) from the Bayesian hierarchical transient Cormack-Jolly-Seber model. This is a measure of annual variation in residency in the BCR.

sigma.pi.sd: Standard deviation of the posterior distribution of the standard deviation hyperparameter for residency probability (probability of a newly marked bird being a resident) from the Bayesian hierarchical transient Cormack-Jolly-Seber model. This is a measure of uncertainty in annual variation in residency in the BCR.

sigma.pi.05: Lower bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for residency probability (probability of a newly marked bird being a resident) from the Bayesian hierarchical transient Cormack-Jolly-Seber model.

sigma.pi.95: Lower bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for residency probability (probability of a newly marked bird being a resident) from the transient Bayesian hierarchical Cormack-Jolly-Seber model.

ri.med: Median of the posterior distribution for productivity (reproductive index) from a Bayesian hierarchical binomial model. BCR-specific estimates are derived from exponentiated random intercepts of a logit-linear model of the probability of a captured bird being a hatching year (juvenile) bird. BCR × year estimates are derived from random trend and year effects added to the intercepts.

ri.sd: Standard deviation of the posterior distribution for productivity (reproductive index) from a Bayesian hierarchical binomial model. BCR-specific estimates are derived from exponentiated random intercepts of a logit-linear model of the probability of a captured bird being a hatching year (juvenile) bird. BCR × year estimates are derived from random trend and year effects added to the intercepts.

ri.05: Lower bound of 90% credible interval from the posterior distribution for productivity (reproductive index) from a Bayesian hierarchical binomial model. BCR-specific estimates are derived from exponentiated random intercepts of a logit-linear model of the probability of a captured bird being a hatching year (juvenile) bird. BCR × year estimates are derived from random trend and year effects added to the intercepts.

ri.95: Upper bound of 90% credible interval from the posterior distribution for productivity (reproductive index) from a Bayesian hierarchical binomial model. BCR-specific estimates are derived from exponentiated random intercepts of a logit-linear model of the probability of a captured bird being a hatching year (juvenile) bird. BCR × year estimates are derived from random trend and year effects added to the intercepts.

ri.trend.med: Median of the posterior distribution of the logit-linear trend effect on the probability of a captured bird being a hatching year (juvenile) bird from a Bayesian hierarchical binomial model. On the scale of productivity (juvenile/adult), can be interpreted as % change/year.

ri.trend.sd: Standard deviation of the posterior distribution of the logit-linear trend effect on the probability of a captured bird being a hatching year (juvenile) bird from a Bayesian hierarchical binomial model. On the scale of productivity (juvenile/adult), can be interpreted as % change/year.

ri.trend.05: Lower bound of 90% credible interval from the posterior distribution for the logit-linear trend effect on the probability of a captured bird being a hatching year (juvenile) bird from a Bayesian hierarchical binomial model. On the scale of productivity (juvenile/adult), can be interpreted as % change/year.

ri.trend.95: Upper bound of 90% credible interval from the posterior distribution for the logit-linear trend effect on the probability of a captured bird being a hatching year (juvenile) bird from a Bayesian hierarchical binomial model. On the scale of productivity (juvenile/adult), can be interpreted as % change/year.

sigma.ri.med: Median of the posterior distribution of the standard deviation hyperparameter for productivity (reproductive index) from a Bayesian hierarchical binomial model. This is a measure of annual variation in productivity in the BCR.

sigma.ri.sd: Standard deviation of the posterior distribution of the standard deviation hyperparameter for productivity (reproductive index) from a Bayesian hierarchical binomial model. This is a measure of annual variation in productivity in the BCR.

sigma.ri.05: Lower bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for productivity (reproductive index) from a Bayesian hierarchical binomial model. This is a measure of annual variation in productivity in the BCR.

sigma.ri.95: Upper bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for productivity (reproductive index) from a Bayesian hierarchical binomial model. This is a measure of annual variation in productivity in the BCR.

ahy.med: Median of the posterior distribution for the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. BCR-specific estimates are derived from exponentiated random intercepts of a log-linear model of the year-unique numbers of adults (after-hatching-year birds) captured. BCR × year estimates are derived from random trend and year effects added to the intercepts.

ahy.sd: Standard deviation of the posterior distribution for the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. BCR-specific estimates are derived from exponentiated random intercepts of a log-linear model of the year-unique numbers of adults (after-hatching-year birds) captured. BCR × year estimates are derived from random trend and year effects added to the intercepts.

ahy.05: Lower bound of 90% credible interval from the posterior distribution for the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. BCR-specific estimates are derived from exponentiated random intercepts of a log-linear model of the year-unique numbers of adults (after-hatching-year birds) captured. BCR × year estimates are derived from random trend and year effects added to the intercepts.

ahy.95: Upper bound of 90% credible interval from the posterior distribution for the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. BCR-specific estimates are derived from exponentiated random intercepts of a log-linear model of the year-unique numbers of adults (after-

hatching-year birds) captured. BCR × year estimates are derived from random trend and year effects added to the intercepts.

ahy.trend.med: Median of the posterior distribution of the log-linear trend effect on the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. The trend effect can be interpreted as % change/year.

ahy.trend.sd: Standard deviation of the posterior distribution of the log-linear trend effect on the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. The trend effect can be interpreted as % change/year.

ahy.trend.05: Lower bound of 90% credible interval from the posterior distribution of the log-linear trend effect on the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. The trend effect can be interpreted as % change/year.

ahy.trend.95: Upper bound of 90% credible interval from the posterior distribution of the log-linear trend effect on the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. The trend effect can be interpreted as % change/year.

sigma.ahy.med: Median of the posterior distribution of the standard deviation hyperparameter for the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. This is a measure of annual variation in adult abundance in the BCR.

sigma.ahy.sd: Standard deviation of the posterior distribution of the standard deviation hyperparameter for the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. This is a measure of annual variation in adult abundance in the BCR.

sigma.ahy.05: Lower bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. This is a measure of annual variation in adult abundance in the BCR.

sigma.ahy.95: Upper bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for the adult abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. This is a measure of annual variation in adult abundance in the BCR.

hy.med: Median of the posterior distribution for the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. BCR-specific estimates are derived from exponentiated random intercepts of a log-linear model of the year-unique numbers of juveniles (hatching-year birds) captured. BCR × year estimates are derived from random trend and year effects added to the intercepts.

hy.sd: Standard deviation of the posterior distribution for the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. BCR-specific estimates are derived from exponentiated random intercepts of a log-linear model of the year-unique numbers of juveniles (hatching-year birds) captured. BCR × year estimates are derived from random trend and year effects added to the intercepts.

hy.05: Lower bound of 90% credible interval from the posterior distribution for the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. BCR-specific estimates are derived from exponentiated random intercepts of a log-linear model of the year-unique numbers of juveniles (hatching-year birds) captured. BCR × year estimates are derived from random trend and year effects added to the intercepts.

hy.95: Upper bound of 90% credible interval from the posterior distribution for the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. BCR-specific estimates are derived from exponentiated random intercepts of a log-linear model of the year-unique numbers of juveniles (hatching-year birds) captured. BCR × year estimates are derived from random trend and year effects added to the intercepts.

hy.trend.med: Median of the posterior distribution of the log-linear trend effect on the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. The trend effect can be interpreted as % change/year.

hy.trend.sd: Standard deviation of the posterior distribution of the log-linear trend effect on the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. The trend effect can be interpreted as % change/year.

hy.trend.05: Lower bound of 90% credible interval from the posterior distribution of the log-linear trend effect on the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. The trend effect can be interpreted as % change/year.

hy.trend.95: Upper bound of 90% credible interval from the posterior distribution of the log-linear trend effect on the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. The trend effect can be interpreted as % change/year.

sigma.hy.med: Median of the posterior distribution of the standard deviation hyperparameter for the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. This is a measure of annual variation in juvenile abundance in the BCR.

sigma.hy.sd: Standard deviation of the posterior distribution of the standard deviation hyperparameter for the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. This is a measure of annual variation in juvenile abundance in the BCR.

sigma.hy.05: Lower bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for the juvenile index (birds/station/year) from a Bayesian hierarchical Poisson model. This is a measure of annual variation in juvenile abundance in the BCR.

sigma.hy.95: Upper bound of 90% credible interval from the posterior distribution of the standard deviation hyperparameter for the juvenile abundance index (birds/station/year) from a Bayesian hierarchical Poisson model. This is a measure of annual variation in juvenile abundance in the BCR.