README for cbc_indices_version_2023.0_la_web_download.csv and for cbc_trends_version_2023.0_la_web_download.csv

All use of CBC relative abundance trends should adhere to our <u>Terms of Use for Christmas</u> <u>Bird Count® Data Assets, including Data & Derived Products.</u>

Data Fields Dictionary for Relative Abundance Indices

Field Name	Description
scientific_name	Scientific name using eBird taxonomy.
	Genus and species. In some cases
	multiple species are pooled during analysis
	and multiple species names are given.
region	Name of survey region, which includes the
	entire survey region and individual country.
region_type	The region category.
count_number	The official number of the CBC, where the
	first count started in December of 1900.
year_start	The year corresponding with December
	counts.
year_end	The year corresponding with January
	counts.
annual_index	The relative abundance index for a given
	species, region, and year. This index
	roughly represents the expected count
	given a global mean count effort quantified
	as party hours. This effort-corrected
	relative abundance index cannot be
	converted to true abundance or density.
index_lcl	A lower 95% credible limit for the annual
	index estimate.
index_ucl	An upper 95% credible limit for the annual
	index estimate.
survey_suitability	A subjective ranking of the CBC as a
	sampling protocol for a given species.
	Rankings of high, medium, and low come
	from expert opinion. For species that are

	large, easily seen, attracted to humans,
	and are active and vocal all day, survey
	suitability is high. For species that are
	small, avoid humans, are cryptic, and are
	active only at night, survey suitability is low.
range_proportion	The proportion of a species' winter
	geographic range that falls within the
	borders of all regions included in this
	analysis.

Data Fields Dictionary for Relative Abundance Trends

Field Name	Description
scientific_name	Scientific name using eBird taxonomy.
	Genus and species. In some cases
	multiple species are pooled during analysis
	and multiple species names are given.
region	Name of survey region, which includes the
	entire survey region and individual country.
region_type	The region category.
trend_type	The category describing the duration of the
	trend, defined by start and end years.
year_start	The year corresponding with December
	counts during the first count in the series.
year_end	The year corresponding with January
	counts during the last count in the series.
annual_percent_change	The change in a smoothed version of
	relative abundance indices over the trend
	period, expressed as percent change <i>per</i>
	year between the first and last year of the
	trend period.
annual_change_lcl	A lower 95% credible limit for the annual
	percent change estimate.
annual_change_ucl	An upper 95% credible limit for the annual
	percent change estimate.
total_percent_change	The change in a smoothed version of
	relative abundance indices over the trend
	period, expressed as percent change
	across years between the first and last year
	of the trend period.
total_change_lcl	A lower 95% credible limit for the total
	percent change estimate.

total_change_ucl	An upper 95% credible limit for the total
	percent change estimate.
prob_change_gt0p	The probability that there was a decrease in
	relative abundance over the trend period.
prob_change_gt30p	The probability that there was a \geq 30%
	decrease in relative abundance over the
	trend period.
prob_change_gt50p	The probability that there was a ≥ 50%
	decrease in relative abundance over the
	trend period.
prob_change_gt70p	The probability that there was a ≥ 70%
	decrease in relative abundance over the
	trend period.
survey_suitability	A subjective ranking of the CBC as a
	sampling protocol for a given species.
	Rankings of high, medium, and low come
	from expert opinion. For species that are
	large, easily seen, attracted to humans,
	and are active and vocal all day, survey
	suitability is high. For species that are
	small, avoid humans, are cryptic, and are
	active only at night, survey suitability is low.
range_proportion	The proportion of a species' winter
	geographic range that falls within the
	borders of all regions included in this
	analysis.
	,

Preferred Citation for CBC Analysis Methods

Smith, A.C., D. Binley, A., Daly, L., Edwards, B.P., Ethier, D., Frei, B., Iles, D., Meehan, T.D., Michel, N.L. and Smith, P.A., 2024. Spatially explicit Bayesian hierarchical models improve estimates of avian population status and trends. Ornithological Applications, 126(1), p.duad056.

Preferred Citation for Most Recent Results

Meehan, T.D., Smith, A.C., Farr, C., Wilsey, C.B. 2022. Trends in relative abundance for birds wintering in the continental USA and Canada: Audubon Christmas Bird Counts, 1966-2023, version 2023.0. National Audubon Society, New York, New York, USA.