`naturecounts`

Intro ~ 20s

Thank you for being here, I'm looking forward to sharing with you the new R package that I've developed with Denis Lepage from Bird Studies Canada.

NatureCounts ~ 1min 20s

- NatureCounts is an online repository of plant and animal population data managed by Bird Studies Canada.
- Data are stored in a standardized format based on DarwinCore
- It has over 128 million records from over 400 different sources generated by volunteer surveys and research projects across Canada.
- Thousands of researchers have made requests resulting billions of total record requests so far

Now the goals of this repository

1) safely archiving data
2) facilitating data entry from various sources (including data entry tools)
3) facilitating access of raw data by everyone in support of research, conservation, and education;
4) developing tools to facilitate data exploration, analysis, interpretation, provide support for decision-making

`naturecounts` - 2min 30s

To address these last two goals, we've developed a new API and an R package called 'naturecounts'. For those of you that are unfamiliar, R is a free and open source statistical programming language used by many researchers in the natural sciences (among other fields).

This R package accesses the API and allows users to download data either as a data frame (in R) or to a local SQLite database.

Users can access metadata and we also provide some tools for formating dates, and zero-filling the data and hope to add future tools to facilitate data analysis.

The best thing about this package is that it provides quick and, more importantly, reproducible access to the data.

You'll see in this small example here, that a username is required (here we have the 'sample' username). Users can sign up for access on naturecounts.ca. Initially they'll have access to a basic set of data, but they can also request access to other datasets. As this access is reviewed and approved, they'll be given request Ids that can then be used in the R package to directly download newly accessible data.

The package can be found on GitHub through the Bird Studies Canada page and we also have a support site with Tutorials, Vignettes, and examples to help users get started.

As for development stage, with respet to downloading data, I'd say we're at the Alpha phase, and with data tools to facilitate analysis we're still mostly in development.

We'd love to hear from anyone giving the package a try, or with comments or suggestions for features or feedback on usability!

So that is my quick introduction to naturecounts! Please find me if you have any questions or comments, I have cards with quick information on how to get started with the naturecounts package.

Extra

- educate the public on the dynamics of bird populations
- provide interactive decision-making tools for land managers
- make available a data resource for scientific research
- advance new exploratory analysis techniques to study bird populations.