

Handout: Using rOpenSci packages to access open data for ecology

Steffi LaZerte on behalf of rOpenSci

ESA 2021

INS 6: Open Data Resources During a Global Pandemic

Live Discussion: Tuesday August 3 2021, 11am - 12pm Pacific

Presentation Slides: <https://steffilazerte.ca/presentations>

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Connect with rOpenSci

- Twitter: [@rOpenSci](#)
- Web: <https://ropensci.org>

Links

- [NOAA](#)
- [NASA POWER](#)
- [Global Biodiversity Information Facility](#)
- [iNaturalist](#)
- [eBird](#)

Paper Citations

Michael B. Schrimpf, Paulson Des Brisay, Alison Johnston, Adam C. Smith, Jessica Sánchez-Jasso, Barry G. Robinson, Miyako H. Warrington, Nancy A. Mahony, Andrew G. Horn, Matthew Strimas-Mackey, Lenore Fahrig, Nicola Koper. (accepted pending revisions). Reduced human activity during COVID-19 alters avian land use across North America. *Science Advances*.

As presentations are prepared before the the conference, this paper may be In Press by the time you see this presentation

For more information:

- [C19-Wild Research Group](#)
- Contact [Michael Schrimpf](#)

rOpenSci Resources

Use cases

- [All use cases](#)
- [Mapping asian elephant observations with rgbif](#) - by Tuija Sonkkila

Blog posts

- [POWER to the People](#) - by Adam Sparks
- [When Field or Lab Work is not an Option - Leveraging Open Data Resources for Remote Research](#) - by The rOpenSci Team, Brooke Anderson, Robin Lovelace, Ben Marwick, Ben Raymond, Anton Van de Putte, Louise Slater, Sam Zipper, Ilaria Prosdocimi, Sam Albers, Claudia Vitolo
- [Using Open-Access Tools \(rentrez, taxize\) to Find Coronaviruses, Their Genetic Sequences, and Their Hosts](#) - by Liam Brierley

Packages mentioned

- **rnoaa**
 - Documentation: <https://docs.ropensci.org/rnoaa>
 - Citation: Scott Chamberlain (2021). rnoaa: ‘NOAA’ Weather Data from R. R package version 1.3.4. <https://CRAN.R-project.org/package=rnoaa>
- **nasapower**
 - Documentation: <https://docs.ropensci.org/nasapower>
 - Citation: Adam Sparks (2018). nasapower: A NASA POWER Global Meteorology, Surface Solar Energy and Climatology Data Client for R. Journal of Open Source Software, 3(30), 1035
- **riem**
 - Documentation: <https://docs.ropensci.org/riem>
 - Blog Post: Where to Live <https://masalmon.eu/2017/11/16/wheretoliveus/>
 - Citation: Maëlle Salmon (2016). riem: Accesses Weather Data from the Iowa Environment Mesonet
- **rgbif**
 - Documentation: <https://docs.ropensci.org/rgbif>
 - Citation: Scott Chamberlain and Damiano Oldoni (2021). rgbif: Interface to the Global Biodiversity Information Facility API. <https://CRAN.R-project.org/package=rgbif>
- **rinat**
 - Documentation: <https://docs.ropensci.org/rinat>
 - Citation: Vijay Barve and Edmund Hart (2021). rinat: Access ‘iNaturalist’ Data Through APIs. <https://CRAN.R-project.org/package=rinat>
- **auk**
 - Documentation: <https://docs.ropensci.org/auk>
 - Citation: Matthew Strimas-Mackey, Eliot Miller, and Wesley Hochachka (2018). auk: eBird Data Extraction and Processing with AWK. R package version 0.3.0. <https://cornelllabofornithology.github.io/auk/>

- **rentrez**

- Documentation: <https://cornelllabofornithology.github.io/auk/>
- Citation: David J. Winter. (2017) rentrez: an R package for the NCBI eUtils API The R Journal 9(2):520-526

- **taxize**

- Documentation: <https://docs.ropensci.org/taxize>
- Citation: Scott Chamberlain and Eduard Szocs (2013). taxize - taxonomic search and retrieval in R. F1000Research, 2:191. URL: <https://f1000research.com/articles/2-191/v2>