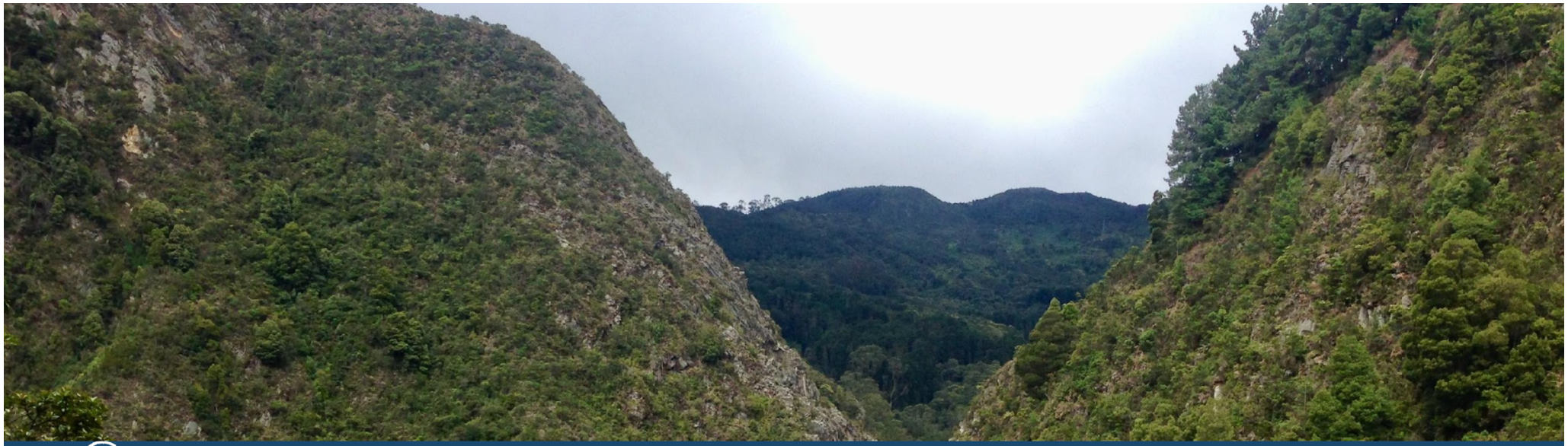


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Expanding Wallace species distribution modeling software as a tool for assessment and reporting by Biodiversity Observation Networks (BONs)

Mary E. Blair, P.J. Galante, N. Horning, P. Ersts (AMNH), M.E. Aiello-Lammens, S. Chang (Pace U.), B.E. Gerstner (Michigan State), V. Grisales-Betancur (U. Eafít), J.M. Kass (OIST), C. Merow (UCONN), D. López-Lozano, E. Suarez-Valencia, E.A. Noguera-Urbano (I. A. V. Humboldt), J. Velásquez-Tibatá (Audubon), B. Johnson, G.E. Pinilla-Buitrago, A. Paz, R.P. Anderson (CCNY-CUNY)

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Wallace: A flexible platform for reproducible modeling of species niches and distributions

Jamie M. Kass, Andrea Paz, Valentina Grisales-Betancur, Bethany A. Johnson, Sarah I. Meenan, Dean Attali, Mary E. Blair, Olivier Broennimann, Peter J. Galante, Brian S. Maitner, Hannah L. Owens, Sara Varela, Matthew E. Aiello-Lammens, Cory Merow, Robert P. Anderson

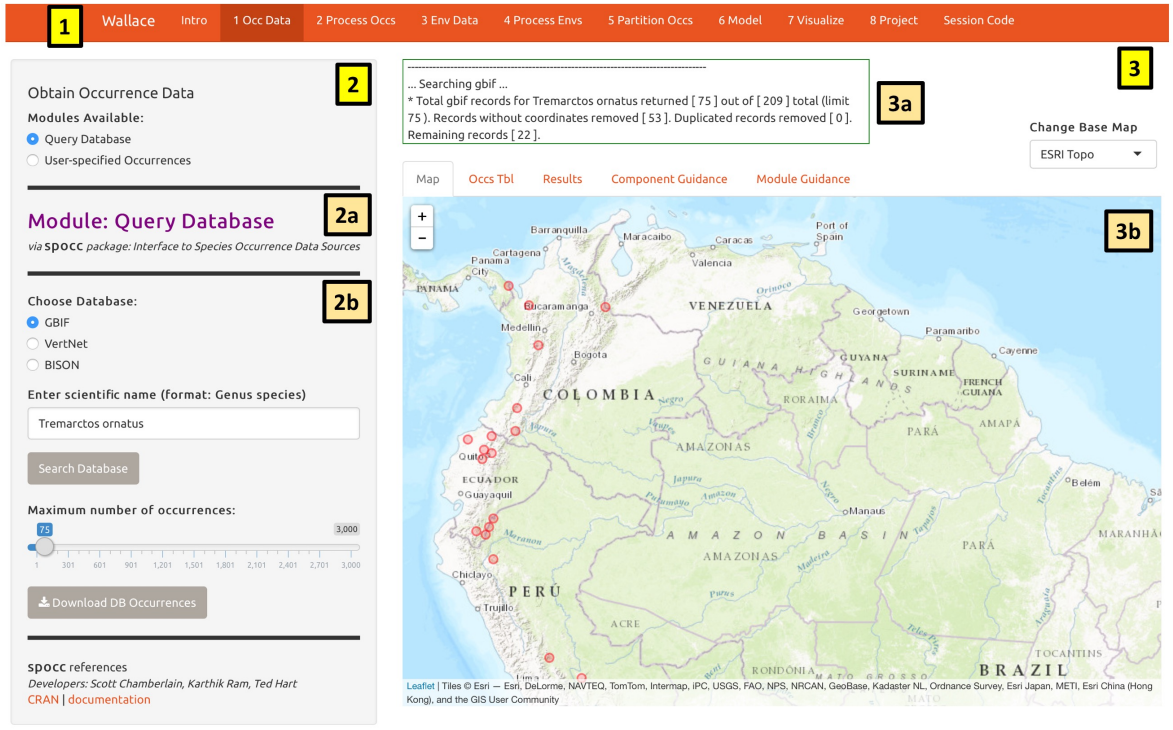


The City College of New York | CUNY The City University of New York | PACE UNIVERSITY | University of Connecticut 1881 | Humboldt

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Wallace software



Open-source, flexible, reproducible

https://wallaceecomod.github.io/

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Expanding `Wallace`

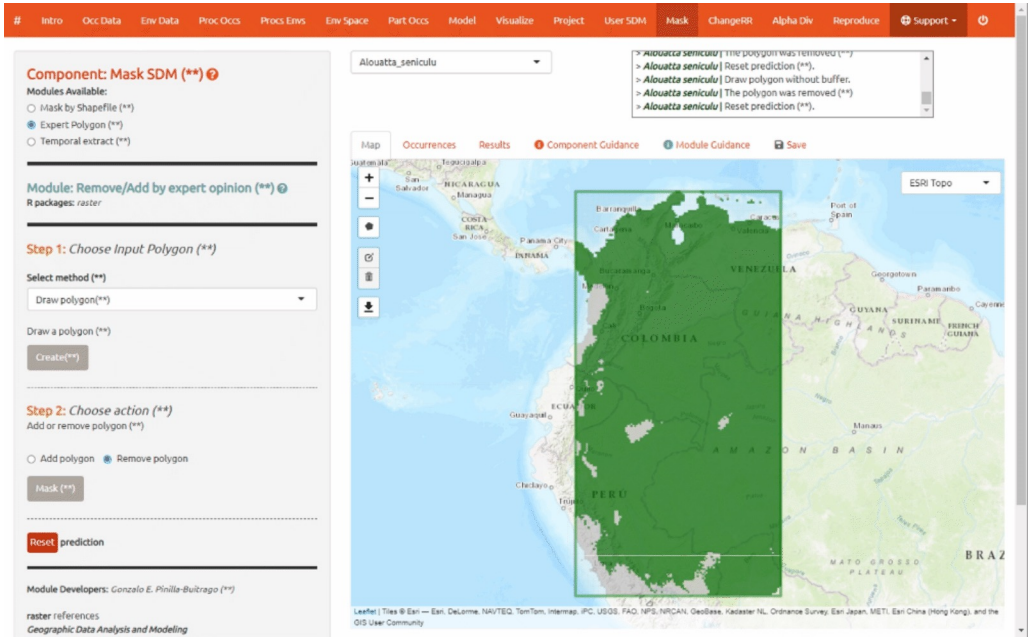
1. Develop two new R packages to calculate biodiversity change indicators using GEO Remote Sensing data & add them to *Wallace* as modules
2. Integrate *Wallace* with *BioModelos*
3. Create interactive web-based training and workshop materials



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New modules: Mask SDM

- New R package *maskRangeR*
  - Now on CRAN
- Estimates a species' current range
- Post-processing of SDMs:
  - RS products (e.g. forest cover)
  - User-defined polygons (e.g. protected area, land cover)
  - Expert-defined areas



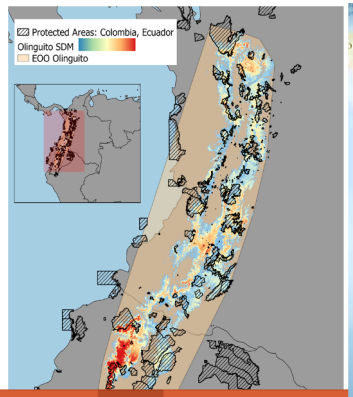


Merow et al. *in rev.*

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New modules: Calculate indicators

- New R package *changeRangeR*
- Biodiversity indicators
  - IUCN's AOO, EOO
  - Range size
  - % suitable land cover
  - PA representativeness
- Changes over time and space
- Multispecies diversity
  - Richness and endemism











Galante et al. *in prep.*

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Wallace and BioModelos

GEO BON

BON IN A BOX REGIÓN LATINOAMÉRICA



Component: Obtain Occurrence Data

Modules Available:

- Query Database (Present)
- Query Database (Paleo)
- User-specified
- Query BioModelos

Module: Query BioModelos

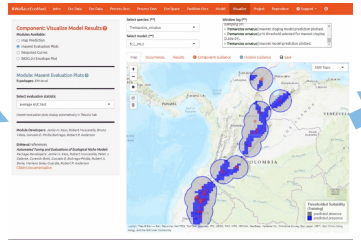
R packages:

Enter species scientific name

format: Genus species

Enter API Key

Query BioModelos



Component: Reproduce

Modules Available:

- Session Code
- Metadata
- Reference Packages (**)
- BioModelos payload

Module: BioModelos payload

R packages:

Enter API Key

User BioModelos e-mail

CC License

Select License

Atlas agreement

Push Payload (**)

Module: *BioModelos payload*

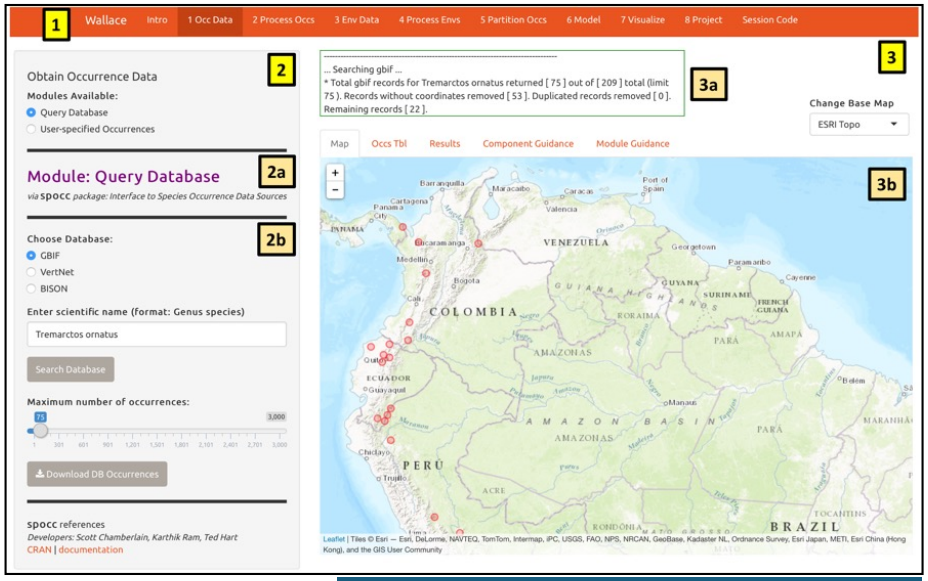
1. Elija las especies que desea enviar a BioModelos
2. Vuelva a ingresar la clave API que utilizó para descargar los datos de ocurrencia.
3. Ingrese su correo electrónico (si aún no está registrado como usuario de BioModelos, ¡puede registrarse en su sitio web! Http://biomodelos.humboldt.org.co/);
4. Para la licencia CC, elija la licencia de derechos de autor bajo la cual acepta compartir su modelo con los usuarios de BioModelos. Puede leer más sobre las diferentes licencias aquí: https://creativecommons.org/licenses/;
5. Marque la casilla junto a "Acuerdo Atlas" si acepta que BioModelos puede publicar su modelo como parte del próximo Atlas de Biodiversidad de Colombia.
6. "Push Payload" enviará sus datos de ocurrencia, rásteres del modelo, metadatos del modelo y archivo Rmd a BioModelos.

English Version

1. Choose the species you want to send to BioModelos
2. Re-enter the API key that you used to download occurrence data.
3. Enter your email (if you are not yet registered as a BioModelos user - you can register on their website! http://biomodelos.humboldt.org.co/);
4. For CC license, choose the copyright license under which you agree to share your model with BioModelos users. You can read more about different licenses here: https://creativecommons.org/licenses/;
5. Check the box beside "Atlas agreement" if you agree that BioModelos can publish your model as a part of the next Atlas of Biodiversity of Colombia.
6. "Push Payload" will send your occurrence data, model rasters, model metadata, and Rmd file to BioModelos.

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Training Materials





Network of Conservation Educators and Practitioners

ncep.amnh.org

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Inclusion & co-creation



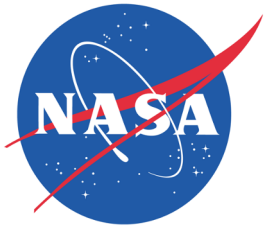




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Acknowledgements











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PARQUES NACIONALES NATURALES DE COLOMBIA













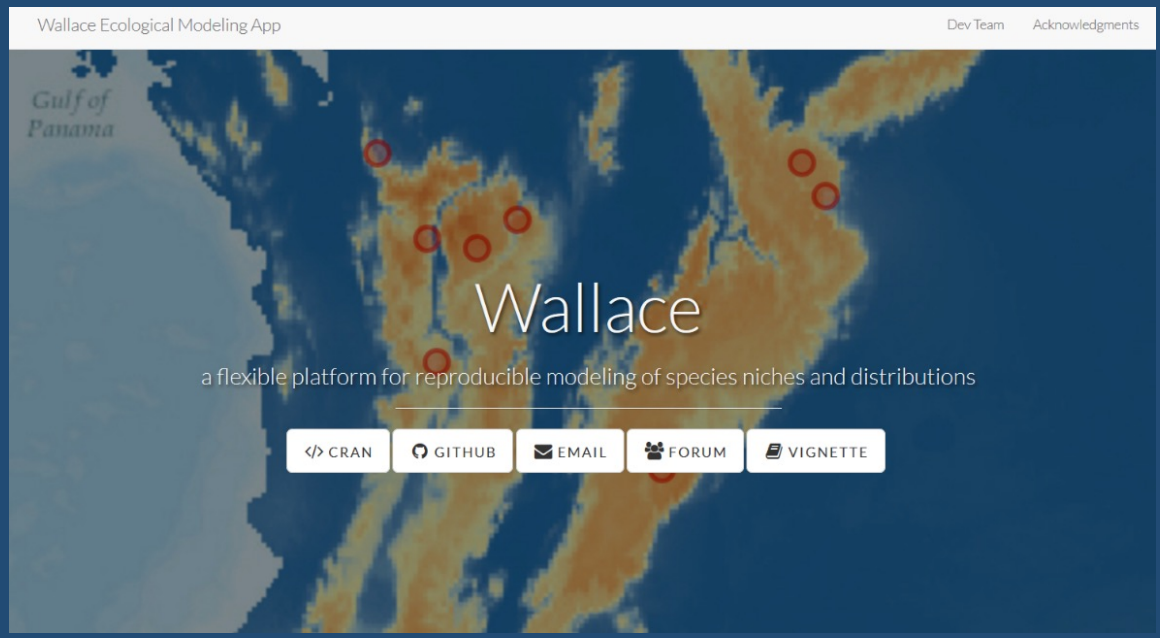





Questions? Want to beta-test?
Please contact me or visit the *Wallace* website.

wallaceecomod.github.io

- Software note
- Tutorial
- Google group
- Wallace e-mail
- Github
- Youtube webinar



mblair1@amnh.org