Yale Center for Biodiversity and Global Change

Fall 2023 Newsletter

Main News

Map of Life launches new ‘Regions’ tool delivering lists of species, anywhere in the world

The Map of Life and the BGC Center along with our partners at the Field Museum are incredibly excited to launch our brand new Regions tool. For any region, anywhere in the world — a country, a province, a protected area, even your hometown — Map of Life Regions can now deliver a comprehensive biodiversity report in just seconds. This includes a list of species that have been recorded or are expected to occur within a selected region along with full sources for data and expectations. With this launch, we seek to support conservation managers, scientists, and community members around the world with a rapid, accessible, and methodologically transparent tool.
Explore the Regions tool at [mol.org/regions](http://mol.org/regions) and [read our latest story about the release here](http://mol.org/regions). We’d love to hear how you, your team, or your organization is making use of MOL Regions. If you’d like to share your story and send us feedback, please email [ybgc@yale.edu](mailto:ybgc@yale.edu).

Stay tuned as we add new features and updates!

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**Sub-national SPI scores now available on the Half Earth Map**
We’re excited to announce that users can now explore Species Protection Index (SPI) scores at the state and province level on the Half-Earth Project Map! The SPI, a biodiversity indicator developed here at the BGC Center, evaluates how well the protected area network of a given area actually contributes to various species conservation goals. Previously, this metric was only available at the country level, but now we’ve broadened this analysis to the sub-national scale to explore how well states or provinces within a country are meeting species protection goals.

Head to the Half-Earth Project Map Analyze Areas tool to select your province of interest and start exploring!
This summer, the Map of Life Rapid Assessments (MOLRA) team competed in the XPRIZE Rainforest Semifinals competition in Singapore where we deployed semi-autonomous drones through the jungle to inventory species. We are excited to announce that MOLRA has made it through to the Finals competition to be held in Amazonas, Brazil, next summer! Until then, the team is working to refine our MOLRA solution, which involves collecting visual, audio, eDNA, and remote sensing data and which can be deployed in locations around the world to support local biodiversity conservation efforts. We’re grateful to the XPRIZE Foundation for the support to develop our solution and look forward to meeting the other finalists in Brazil.

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**New BGC Center Website Launched**

If you’ve visited our website in the past couple months, you might have noticed some big changes — we completely revamped the BGC Center website! The new site aims to showcase the many projects and initiatives at the BGC Center in an accessible and engaging way. This was a huge undertaking and we’re excited to have a site that better represents our team, our work, and our mission.
BGC in the News

Meet the tech projects competing for a $10m prize to save rainforests
By Abhishyant Kidangoor

Featuring the MOL Rapid Assessments Team and our XPRIZE Rainforest Semifinals solution.

Small, Migratory Birds may be Vulnerable to Climate Change
By Dana Kobilinsky

Featuring Jeremy Cohen’s work on evaluating the niche-tracking abilities of hundreds of North American bird species.

Gauging the key role animals can play in monitoring climate change
By Bill Hathaway

Featuring Diego Ellis-Soto’s work on the potential role of animal sensors in weather and climate monitoring.

Read in Mongabay
Read in TWS
Read in YaleNews

Other News

BGC Center Partnership Developments

BGC Center Engages in Partnerships for National Biodiversity Monitoring

Biodiversity Modeling Expert Evaluation with ASEAN
The BGC Center has engaged with national environmental ministries and agencies in countries across Africa, including Guinea, Liberia, and the Democratic Republic of the Congo, to co-develop national biodiversity dashboards. These dashboards leverage the wealth of data, computational infrastructure, and capabilities of Map of Life with national and local data to more effectively support conservation monitoring, planning, and reporting.

The BGC Center has partnered with the Association of Southeast Asian Nations (ASEAN) Centre for Biodiversity to develop high-resolution species distribution models to inform conservation decision-making. Continuing our North America 30x30 modeling efforts, the BGC Center modeling team has been developing distribution models for thousands of species across Southeast Asia and collaborating with the ASEAN network of taxonomic experts and scientists to rigorously and efficiently validate these models.

Conferences and Events

**GEO BON 2023 Global Conference: Monitoring Biodiversity for Action**

Nine members of the BGC Center participated in the 2023 GEO BON conference, presenting a range of talks, posters, and workshops along with a dedicated Map of Life booth. Several members presented their research and the Map of Life team presented the new Regions tool, our country partnerships, and the full Map of Life platform. Learn more about our experience at the conference here.

**Half-Earth Day 2023**

This year’s Half-Earth Day celebration, which took place at the GEO BON Global Conference, brought together a diverse array of speakers across science, conservation, and business sectors to discuss how we can link information and data to conservation action. Head to the Half-Earth Project website to watch highlights of the event and explore the speaker bios.
Ecological Society of America Conference

Diego Ellis-Soto presented multiple research efforts at this year's ESA conference, including quantifying how socio-economic considerations shape biodiversity data, integrating income data in species modeling, and integrating dynamic human mobility data in animal movement studies, and Richard Li presented his work on identifying taxonomic concept mismatches in biodiversity occurrence data.

Gordon Research Conference

This past summer, BGC Center members Leila Fouda, Diego Ellis-Soto, Scott Yanco, and Fabiola Iannarilli presented at the Movement Ecology of Animals Gordon Research Conference and Shubhi Sharma and Benjamin Kellenberger presented at the Predictive Ecology Gordon Research Conference where Shubhi was also awarded an Early Career Research Award!

WRI Land and Carbon Summit

Walter Jetz and Alex Killion spoke at the Land and Carbon 2023 Summit, which focused on using geospatial data to achieve climate, nature, and sustainability goals. They presented on the Center's efforts to support species conservation monitoring, reporting, and planning at national and sub-national levels. Watch the Summit highlights here.

Bloom 23 Conference

Alex Killion spoke of the importance of essential biodiversity variables and scientifically robust approaches to measure biodiversity at scale for businesses and financial institutions at the Bloom 23 event in San Jose, CA in October. Increasingly, businesses are looking for ways to monitor biodiversity and incorporate it into their decision-making processes.

Selected Publications

Here are some new papers recently published by Center affiliates:
Animal-borne sensors as a biologically informed lens on a changing climate

*Nature Climate Change. 2023.*
Diego Ellis-Soto, Martin Wikelski & Walter Jetz

A globally integrated structure of taxonomy to support biodiversity science and conservation

*Trends in Ecology & Evolution. 2023.*
Emily L. Sandall, Aurore A. Maureaud, et al.

A high-resolution canopy height model of the Earth

Nico Lang, Walter Jetz, Konrad Schindler, & Jan Dirk Wegner

A vision for incorporating human mobility in the study of human–wildlife interactions

Diego Ellis-Soto, Ruth Y. Oliver, et al.
Diverse strategies for tracking seasonal environmental niches at hemispheric scale

Jeremy Cohen & Walter Jetz

Camera trapping expands the view into global biodiversity and its change

Ruth Y. Oliver, Fabiola Iannarilli, et al.

To explore all recent Center publications, visit our [Publications page](#).

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**Looking Ahead**

*Internet of Animals*
Half-Day Virtual Symposium

*Co-hosted by the BCC Center and NASA • February 21, 2024*
The BGC Center and NASA will co-host a half-day virtual symposium on February 21 to bring together scientists and practitioners to address the use of ‘big’ animal movement data for studying biodiversity. The Symposium will feature methods and tools that have emerged from the 5-year Max Planck–Yale Center for Biodiversity Movement effort and the ongoing NASA ‘Internet of Animals’ project. We will send out registration details soon!

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**Member News**

**Benjamin Kellenberger awarded faculty position at UCL**

We are all wishing a huge congratulations to BGC Center postdoc Dr. Benjamin Kellenberger, who has accepted a faculty position in the People and Nature Lab in the University College of London’s Faculty of Life Sciences. Starting next summer, his new lab will connect the fields of artificial intelligence and biodiversity science to study questions in ecology and conservation.

**Congratulations to Dr. Ben Carlson!**

Ben Carlson successfully defended his PhD dissertation "The Individual Environmental Niche: Drivers, Specialization, and Geometric Configuration" in October to officially earn the title of Dr. Carlson! Ben’s dissertation investigates individual niches and nestedness patterns of individual, population, and species niches among white stork populations. We are all wishing the best to Dr. Carlson as he begins his postdoc at the University of Connecticut with BGC Center alumnus Cory Merow.

**Clara Brandon starting PhD at University of Michigan**

Clara Brandon, who joined the Map of Life team at the Center as a Postgraduate Associate, started her PhD in Anthropology at the University of Michigan this semester. Her doctoral studies will focus on primate and lemur ecology and evolution in Madagascar. Clara was an integral part of the Map of Life data team, and we’re all excited for her continuing studies and research!

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Thank You For Reading!
https://bgc.yale.edu