



Annual report 2023-24

For our fiscal year - July 1, 2023 to June 30, 2024

Reflections

From the Chair of the Board of Directors

As 2024 marks my final year serving as Chair of Dryad's Board of Directors, I want to express what an honor it has been to help lead this incredible organization. Working alongside such talented and passionate colleagues on the Executive Committee, the Board, and especially our CEO, Jennifer Gibson, has been one of the most rewarding experiences of my professional life. I am deeply grateful for their dedication, expertise, and shared commitment to Dryad's mission.

During my tenure, I have had the privilege of supporting the continued professionalization of our Board procedures, a process that has further strengthened our ability to govern effectively and steward Dryad's values. This work, alongside the tireless efforts of our leadership and staff, has reinforced my full confidence in Jen's exceptional leadership. Her vision and steadfast commitment to open data will continue to guide Dryad into a future of growth and innovation.

This past year has underscored the growing importance of Dryad's mission. As global scientific communities navigate the complexities of data sharing and analysis in an increasingly interconnected world, Dryad's commitment to high-quality curation and open access remains foundational. By embedding our core values—responsibility, openness, inclusion, and trustworthiness—into every aspect of our work, we have strengthened our partnerships with members and broadened our impact across disciplines.

Looking ahead, our focus is on scaling these efforts while promoting Dryad's fiscal sustainability. Ensuring that Dryad remains a vital resource for researchers and institutions alike. This report reflects both our accomplishments and the challenges that drive us to innovate further.

Dryad's mission is more important than ever. As an independent, non-profit, community-led organization, we remain firmly rooted in our values. We are committed to our vision of ensuring the open availability of scientific data—a cornerstone of equitable and impactful scientific progress. I hope it inspires you to continue supporting Dryad's essential contributions to the global research ecosystem.

I leave this position with pride in what we have accomplished together and excitement for Dryad's bright future. Thank you for your continued support of this vital work.



With gratitude,



Jason Williams
Cold Spring Harbor Laboratory DNA Learning Center
Chair, Board of Directors (October 2022-2024)

January 28, 2025

From the Executive Director

I feel I speak for the team as well as the Board in saying that we're really proud of what we're building together at Dryad. In the period covered by this report, the wide range of stakeholders supporting Dryad took new steps to help us model the type of organization we aspire to be – one that is community-supported, financially resilient, and impressive in what we do.

This is due in no small part to Jason William's influence as Chair of the Board from October 2022 to November 2024. Jason has been a personal support to me and to every member of the executive team as well as the visionary for institutionalizing community participation through committees of the Board. For Dryad, our committees are not only a powerful channel for expert insight and guidance from across our different stakeholders. They are also a form of scaffolding for the organization that helps perpetuate transparency, accountability and integrity in all our dealings. Yes, we are proud of what we've built with the benefit of so many voices and so much support. Now, to the report.

Together this year, we: [Created new committees](#) for fee development, large data file support, strategic advice, and more; organized the conclusion of a [successful, five-year partnership with the California Digital Library](#); [shared input on how to make fees work better](#) for members - and Dryad; welcomed 14 new members, added lots of richness to our support for authors; and contributed to strengthening the global open infrastructure for open science.

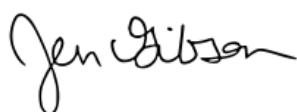
We've also been challenged to keep up by the pioneering communities that founded Dryad and have now [boosted their standards for data sharing](#).

Advancing broad-spectrum practices for data-sharing and reuse is work at the frontier of open science and at the nexus where research results meet the latest technology to build upon them.

We're excited about the opportunities for research data and, in FY24, contemplated [what it means to make data AI-ready](#) and how to [empower reuse of cognitive neuroscience](#) data with more contextual metadata.

We have a lot to share from our work this year and hope readers will find the report of interest, as well as valuable for the transparency we offer.

It's all made possible with your support. Thank you for standing with us.

A handwritten signature in black ink that reads "Jen Gibson".

Jennifer Gibson
Executive Director

March 17, 2025

Governing board

The following Directors were in office at the start of the Board term in October 2023.

Andrew Beckerman, University
of Sheffield (UK)

Barbara Ebert, German Federation
for Biological Data e.V. (Germany)

Jake Carlson, University at Buffalo (USA)

Bekah Darksmith, Public Library of
Science (USA)

Scott Edmunds, GigaScience (CHN)

Brooks Hanson, American Geophysical
Union (USA)

Kristi Holmes, Northwestern
University (USA)

Devika Madalli, Indian Statistical
Institute (IN)

Jenny Muilenburg, University of
Washington (USA)

Ian Mulvany, British Medical Journal (UK)

Daniel Potter, University of California, Davis
(USA)

Mona Ramonetti, Stony Brook University
(USA)

Jason Williams, Cold Spring Harbor
Laboratory (USA) (Chair)

Günter Waibel, California Digital Library
(USA)(Ex-officio)

Dryad Board Members past and present are recognised on our [website](#).

The potential for open data

The vision of our community is for the open availability and routine reuse of research data from across disciplines to help accelerate the translation of research into solutions and benefits for society. Whether the application is health care or climate science, the importance of open access to a wide corpus of well-described data that is prepared for reuse by humans and machines is increasingly clear.

Publishing data openly since 2008, the Dryad platform is now home to 65,000+ data publications – which are the result of work by over 200,000 researchers, associated with over 70,000 international institutions and over 1,300 academic journals.

Dryad published 5,567 datasets between July 2023 and June 2024. While we also publish data submitted directly by researchers, independently of research articles, this year our data was released in connection with publications in 510 different journals.

The 10 journals from which we received the most datasets were:

- | | |
|--------------------------------------|------------------------------|
| → Ecology and Evolution | → Functional Ecology |
| → Proceedings of the Royal Society B | → Science Advances (AAAS) |
| → PLOS ONE | → Science (AAAS) |
| → Royal Society Open Science | → Journal of Applied Ecology |
| → Molecular Ecology | |
| → Global Change Biology | |

The 10 institutions from which we received the most data (according to the submitting author's affiliation) were:

- | | |
|--------------------------------------|---|
| → Colorado State University | → University of California, Santa Barbara |
| → University of California, Davis | → University of California, San Diego |
| → University of California, Berkeley | → Yale University |
| → University of Washington | → Stanford University |
| → University of Wisconsin-Madison | → North Carolina State University |

The most downloaded datasets published with Dryad in FY24 represent the breadth of research we support as well as the important role of journals in facilitating data sharing and curation. Some of the most trusted (broad-spectrum and specialist) journals count on Dryad to ensure the data underpinning published research is not only available, but accessible and well-described – from neuroscience to environmental studies to cell biology.

Data for: A high-performance **speech neuroprosthesis**

(799 downloads, 2260 views, *Nature*)

Single-synapse analyses of **Alzheimer's disease** implicate pathologic tau, DJ1, CD47, and ApoE

(748 downloads, 251 views, *Science Advances*)

Wolbachia endosymbionts manipulate the self-renewal and differentiation of germline stem cells to reinforce fertility of their fruit fly host

(461 downloads, *PLOS Biology*)

Quantitative precipitation estimate (QPE) and forecast (QPF) exceedance comparison with **flash flood reports**

(298 downloads, *Journal of Hydrometeorology*)

One-locus-several-primers: A strategy to improve the taxonomic and haplotypic coverage in **diet metabarcoding studies**

(243 downloads, *Ecology & Evolution*)

Data in support of: Distance decay and directional diffusion of ecoclimate teleconnections driven by **regional-scale tree die-off**

(234 downloads, *Environmental Research Letters*)

Dopamine activity in the tail of the striatum, **DeepLabCut and MoSeq** during novel object exploration

(188 downloads, *Neuron*)

Release of cognitive and multimodal MRI data including **real-world tasks and hippocampal subfield segmentations**

(162 downloads, *Scientific Data*)

Data for: Quantifying direct yield benefits of **soil carbon increases** from cover cropping

(140 downloads, *Nature Sustainability*)

Highlights from the year

Author service and support in focus

This year, our curation and community engagement teams identified the need to share guidance for authors in a wide-ranging set of important areas, including.

- [How to prepare data-management and sharing plans for the U.S. National Institutes of Health](#)
- [How to comply with emerging U.S. policies for data-sharing](#)
- [How to publish your data quickly and easily](#)
- [Creating a README for rapid data publication](#)

- [What are PIDs and how do they amplify your data's impact?](#)
- [Keep your data current with Dryad's data versioning feature](#)

Building the global infrastructure for open research

Dryad is an essential component of the global open infrastructure supporting open research. There are four initiatives we'd like to highlight from this fiscal year.

1. **Cooperation for generalist repositories** – Dryad is one of seven repositories contributing to the normalization of standards for sharing data from across disciplines through the Generalist Repository Ecosystem Initiative (GREI). Funded by the U.S. National Institutes of Health Office of Data Science Strategy, the program is a pioneering model for collaboration across repositories and is set to define norms for data sharing and reuse for years to come. [Learn more about GREI.](#)
 2. **The state of open infrastructure** – The story of the successful conclusion of the Dryad-CDL partnership was featured in the "graceful transitions" section of a high-profile publication from Invest in Open Infrastructure. [Read the profile.](#)
 3. **Collective investment** – Dryad was identified as essential open infrastructure by SCOSS in 2022 and this year is grateful for contributions from:
 - Auckland University; University of New South Wales; University of Melbourne, via the Council of Australian University Libraries (CAUL)
 - Mount Royal University; Toronto Metropolitan University; University of Alberta; University of the Fraser Valley; University of Saskatchewan; University of Waterloo, via the Canadian Research Knowledge Network (CRKN)
 - ETH Zürich; Lib4RI; Université de Lausanne, via SwissUniversities
 - Iowa State University
 4. **Consistent funding metadata** – Dryad champions the Research Organization Registry (ROR) to support research integrity and help funders gauge their impact through consistent, transparent, and machine-readable funding metadata. ([Learn more](#))
-

News from the Dryad community

Welcome, new members

Researchers around the world entrust their research data to Dryad's reliable curation and publishing process. Over 80 institutions and publishing organizations currently sponsor data publication on behalf of their affiliated researchers through partnership with Dryad. Our fourteen newest members reflect the diversity of organizations working with Dryad to realize their open research strategy.

Our dynamic, multi-stakeholder community continues to grow. In addition to supporting data publication in connection with the 510 journals referred to above, we were delighted to welcome these institutions and publishing organizations as partners to Dryad.

New institutional partners:

1. University of Maryland, College Park
2. Northeast Ohio Medical University
3. University of Oregon
4. Charles R. Drew University of Medicine and Science
5. University of Oklahoma (through the Greater Western Library Alliance consortium)
6. University of Arkansas (through the Greater Western Library Alliance consortium)
7. Temple University
8. New York Institute of Technology

New publisher and scholarly society partners:

9. European Respiratory Society
10. The Palaeontological Association
11. Federation of American Societies for Experimental Biology
12. Canadian Science Publishing
13. American Chemical Society
14. Royal Entomological Society

Committee updates

Committees, task forces, advisory and working groups were expanded in December 2023 to more fully leverage the power of community engagement in building Dryad success and longevity. [Learn more](#). Each of their objectives, progress updates and membership are listed here.

Member Model Advisory Group (MMAG)

Members: Karl Benedict, University of New Mexico; Jeanine Finn, The Claremont Colleges; Cynthia Hudson Vitale, Association of Research Libraries; Vicky Johnson, Wiley; Johan Nilsson, Nordic Society Oikos; Rob O'Donnell, Rockefeller University Press; Shawn Ross, Macquarie University Library; Matt Wascavage, The Alliance of Crop, Soil and Environmental Science Societies; Jennifer Gibson, Dryad; Maria Guerreiro, Dryad; Mark Kurtz, Dryad; Sarah Lippincott, Dryad

Objective: To recommend a fee structure to the Finance Committee that covers Dryad costs and works for Dryad members

Progress

- Goal to attract ~\$ 2m in annual revenue to support Dryad organizational health and growth
- Agreed on fee structure that combines fixed annual and volume-based data-publication fees
- Annual fees are tiered according to member size/budget and cover Dryad fixed costs; DPCs cover the cost of data publication
- DPCs are billed once a year rather than quarterly, for simplicity of budgeting and administration
- Proposal to bill institutions before publishers

Current priorities

- Estimate new fees for current members, if data publications are billed to institutions rather than publishers first
- Add fees for large data files to revenue projections
- Review proposals for onboarding new members and transitioning current members
- Solicit additional feedback before finalizing proposal to Finance Committee this year

Large Data Working Group (LDWG)

Members: Moira Downey, North Carolina State University; Shannon Farrell, University of Minnesota; Julien Brun, University of California Santa Barbara; Nathan Gerth, University of Nevada Reno; Matthew Goerg, Amazon; Ann James, George Washington University; Zhiwu Xie, University of California Riverside; Sarah Lippincott, Dryad

Objectives

The LDWG was founded to understand and articulate specific needs, opportunities, and costs for publishing and preserving large datasets and develop an action plan for supporting large datasets and has the specific objectives to:

- define "large data",
- determine feasibility and desirability of supporting large datasets, and
- draft a proposal and pilot plan for supporting large datasets

The working group is considering key questions such as:

- What are the requirements for large datasets? Do they differ from other datasets?
- How do we pay for curation and preservation of large datasets?
- How will large datasets realistically be reused?
- How do we educate researchers on considerations for large datasets?

Progress and priorities

- Convened two meetings last spring
- Discussed a definition of large datasets to determine what an increase in Dryad's size cap might look like
- Discussed questions of cost and payment
- Developed user stories relevant to support for large datasets (e.g., As a Researcher, I want to archive a several TBs dataset currently stored on our research team analytical server so that it complies with the data repository policies of a journal")
- Next up: Conduct a survey to gauge the needs of the Dryad member community

Strategy Advisory Task Force (SATF)

Members: Andrew Beckerman, University of Sheffield; Andrea Chiarelli, Research Consulting; Scott Edmunds, GigaScience; Monica Granados, Creative Commons; Ted Habermann, Metadata Game Changers; Hilmar Lapp, Duke University; Adam Leary, Oxford University Press; Helena Ledmyr, International Neuroinformatics Coordinating Facility (INCF); Rory Macneil, Research Space; Katherine McNeill, Independent Contractor; Jennifer Muilenburg, University of Washington; Ian Mulvany, The BMJ; John Wilbanks, Broad Institute; Jennifer Gibson, Dryad; Ryan Scherle, Dryad

Objectives

This Task Force is dedicated to advancing Dryad strategy, so that the organization continues to be a trusted resource and partner in the research data landscape.

- Enhance current plans — Provide feedback on current activities to enable Dryad to meet its strategic goals
- Inform future plans — Assist in fleshing out details for near-term strategic goals
- Suggest future directions — Recommend long-term strategic goals
- Define the need for Dryad to have a standing strategic advisory committee

Progress

- Reviewed technical roadmap for 2024
- Provided detailed feedback on some critical initiatives, including how to represent broad scientific domains in our subject classification metadata
- Volunteered support for upcoming feedback and prioritization activities
- Agreed optional participation beyond formal March 2025 timeframe

Current priorities

- Participate in sub-groups for selected feedback and prioritization activities:
- Detailed feedback on planned platform features
- Priorities regarding incorporating AI
- Product Market Fit project
- Continue to provide feedback on short-term plans
- Detailed review of the current strategic plan. Goal: detailed early input for FY26 by early 2025

Code of conduct committee

Members: Jennifer Mulenburg, University of Washington; Daniel Potter, American Society of Plant Taxonomists; Malvika Sharan, The Alan Turing Institute; Jason Williams, Cold Spring Harbor Laboratory; Jennifer Gibson, Dryad

Objectives

- Establish, maintain and uphold the [Code of Conduct](#)
- Educate members of the community of policies and behaviors that can help create a more inclusive and welcoming environment
- Protect all members from harm in community spaces

Progress and priorities

- Assembled in August 2024
- Agreed process for managing inquiries
- Committed to review the current code (from 2021) and terms of reference for the group and consider revisions

Fundraising Advisory Board (FAB)

Members: Barbara Ebert, German Federation for Biological Data e.V. (GFBio); Brooks Hanson, Retired, past Executive Vice President for Science for the American Geophysical Union (AGU); Jason Williams, Cold Spring Harbor Laboratory (Committee Chair); Mone Zaidi, Icahn Sinai School of Medicine at Mount Sinai; Maria Guerreiro, Dryad

Objectives

- Raise funds for Dryad
- Develop fundraising strategies
- Facilitate connections with and represent Dryad to private and public funders, grant-makers, corporate and individual donors

Progress

- In-person meeting with philanthropic organization supporting projects in science and technology
- 4 grant applications submitted, 3 full submissions invited and under consideration
- Monthly meetings to discuss new opportunities and most suitable strategies

Priorities

- Being selective on what opportunities to pursue given pending applications, and current resources; exploring partnerships whenever possible to leverage chances of success

Nominations and Elections Committee

Members: Andrew Beckerman, University of Sheffield (Committee Chair); Kristi Holmes, Northwestern University; Devika Madali, Indian Statistical Institute; Nicolas Palopoli, CONICET; Daniel Potter, American Society of Plant Taxonomists; Jennifer Gibson, Dryad

Objectives

- Enable the Board to fulfill its responsibility for appointing new Directors.
- Oversee the development, implementation and review of policy on elections and member representation, and other policies, as relevant and possible, for approval by the Executive Committee and Board.
- Ensure smooth and on-time realization of the annual election and resulting appointment of new directors.

Progress and priorities

- Assembled in June 2024: Reviewed charge and current requests for policies development; agreed meeting schedule
 - Current requests include board member meeting attendance policy, and new BOD on-boarding support
 - The FY25 election is deferred while there are no vacancies to fill
-

Finance update

With the FY24 budget, the Dryad Board of Directors approved a deficit of -\$ 489,504 in order that the organization be positioned to respond to an inflection point for research data – and for Dryad – and invest in growth.

Analysis

At year end, FY24, Dryad had spent 60.67% of our budgeted deficit, concluding the year with a deficit of -\$ 311,670 rather than -\$ 489,504. There was \$739,000 cash on hand at year-end and \$473,402 in equity (after liabilities).

In FY24, year-end revenue was 82.84% of budget, resulting from:

- Stronger than expected response from publishing organizations
- High complexity of quarterly DPC invoicing, prone to errors
- Longer time to conversion for institutions
- Lower than expected uptake of volume-based DPCs among institutions
- Lower than expected response from SCOSS supporters

At FY24 year-end, expenses were 79.01% of budget resulting from avoiding expenses planned with SCOSS support and savings related to continued optimization of outsourced curation.

Summary position

Revenue, expense and net assets years ended June 2022 to 2024

[1]

	FY 2022	FY 2023	FY 2024
Revenue			
Contributions and grants	390,347	648,806	737,380 [2]
Program service revenue	732,393	805,044	1,032,449 [3]
Investment income	35	274	0
Other revenue	0	0	0
Total income	1,122,775	1,454,124	1,769,829
Expense			
Grants and similar amounts paid	0	0	
Benefits paid to or for members	0	0	
Salaries, other compensation, benefits	487,333	529,274	737,679
Professional fundraising fees	0	0	
Other expenses	0	967,362	1,343,820
Total expense	487,333	1,496,636	2,081,499
Revenue less expenses	635,442	(42,512)	(311,670)
Net Assets or Fund Balances			
Total assets	1,117,044	1,110,469	860,164
Total liabilities	305,549	326,087	387,365
Net assets or fund balances	811,495	784,382	472,799

[1] Dryad's accounting is accrual based, thus income values reflect accrued income. Data is from Dryad's accounting system.

[2] Includes membership dues and grants.

[3] Includes revenue earned by providing curation, publication and preservation services.

About revenue and expense

Dryad categorizes multiple streams of revenue into two classes in our chart of financial accounts:

1. Contributions and grants – includes membership dues, grants, and other types of contribution. Grants may be for operational or project support. Contributions may include donations or in-kind and encompasses investments from SCOSS. In FY 24, we were also supported by a partnership with California Digital Library (CDL), whose in-kind investment in product management, platform development, the preservation repository behind Dryad (Merritt), and grants management was made in the context of an ongoing and formal collaboration that was concluded in 2023. ([Learn more](#))
2. Program service revenue – includes data publication fees from members covering the cost of data-sharing for their affiliated researchers, or individual researchers, and funding for projects with a specific scope or set of deliverables, including the Generalist Repository Ecosystem Initiative of the U.S. NIH. Detailed grant and contribution information is below.

"Other expenses" include contractor services, management and general expenses, platform fees, marketing and travel, fundraising costs, program service and other administrative expenses.

Grants, contributions and program service revenue

[GRANT] National Science Foundation Sustaining Award #1933812, to the California Digital Library (\$870,922), "Enabling the Access, Publishing, and Preservation of Curated Research Data at Dryad", 2019-2023 (after no-cost extension)

- Dryad has received a subaward from the California Digital Library to sustain our curation program and ongoing operations.
- We reported \$18,473 in revenue for the 2024 fiscal year.

[GRANT] EAGER: Dryad BRIDGE: Building Repository Interconnections with Dryad Guidance and Extensions, grant to Metadata Game Changers (NSF #2134956). This two-year EAGER award focused on increasing the quality of disciplinary metadata and bridging the gap between generalist and disciplinary data repositories. Subawards to Dryad and the Center for Expanded Data Annotation and Retrieval (CEDAR) at Stanford University. [Learn more.](#)

- We reported \$6,000 in revenue for the 2024 fiscal year

[CONTRIBUTIONS] The Global Sustainability Coalition for Open Science Services (SCOSS) selected Dryad for its fourth funding cycle in 2022. "Through SCOSS, institutions can commit funding to Dryad that will allow us to grow our outreach and promotion efforts and bring

new members into our community; increase community engagement with current members and users; and stay at the forefront of best practice for data-sharing and building best practice for data reuse." Dryad's funding target for SCOSS is €889,061 – January 1, 2023 to December 31, 2025.

- We reported \$33,970 in revenue from SCOSS contributions in the 2024 fiscal year.

[PROGRAM SERVICE REVENUE] NIH Generalist Repository Ecosystem Initiative (GREI)

Other Transaction #1 OT2 DB000005-01, "to support a seamless repository ecosystem to ensure that data and other digital objects resulting from NIH research can be stored and shared with the research community", November 2021 - February 2024, with the potential to renew for two additional years. DataCite is a sub-awardee for Dryad.

- We reported \$572,587 in revenue for the 2024 fiscal year.

Dryad is a U.S.-registered tax-exempt, non-organization 501(c)3 and our annual Form 990 is posted publicly by the Internal Revenue Service. A copy is also available [here](#), along with our audited financial accounts.

IMAGE CREDITS - REPORT COVER PAGE, from left to right: [Drug-resistant, Mycobacterium tuberculosis bacteria, the pathogen responsible for causing the disease tuberculosis \(TB\)](#). A 3D computer-generated image - Photo by [CDC](#) on Unsplash; [An aquatic snail shedding larvae of the blood fluke Schistosoma mansoni](#), image credit: Clint Sergi (CC BY 4.0); [HD photo of texture, pattern, earth, and sand in Tan'am, Oman](#) - by NASA on Unsplash.