

Annual report '22

For the fiscal year July 1, 2021 to June 30, 2022

In this year's update

With our FY2021 [Annual report](#), I could only say as an observer, like you, what Dryad had managed to accomplish in an especially difficult time. COVID-19 put a damper on most of our ambitions – aside from publishing data, of course, which researchers working under lock down supplied in abundance.

This time, [having joined](#) just over three months into the period covered by this report, I'm able to share work I supported directly for almost a year. (Thanks again to Patricia Cruse for serving as our Interim Executive Director before I started).

The first notable event for me, two weeks into my term as Executive Director, was the [AGM-turned-community meeting](#). Tasked with organizing this for the first time, my natural inclination was to set up a big tent, and invite all of our members, partners, collaborators, allies and potential such to join us for a conversation. I failed to observe all the requirements of an AGM, but we did recommend new members of the Board (who were [approved](#) by the membership), and it was a real pleasure to meet everyone and begin to talk together about where Dryad is headed.

There are plenty of other notable events in 2021-2022, as you'll see below; it's been a fantastic induction to the Dryad world for a new Executive Director. In retrospect though, looking back on the last year, a handful of things stand out in my mind.

The first is the **show of support from our publisher partners**. Not 45 days into my term, I had the duty to approach our partners (some of them involved with Dryad for 10 or more years) and ask to increase fees quite a bit. While I was prepared with a careful and recent cost analysis by our advisor Jon Treadway, of [Great North Wood Consulting](#), I was surprised and taken aback at the immediacy of response. In recognition of our reported costs, our partners increased their contributions quite a bit – and we're very grateful. (Our exploration of fixed and marginal costs and fees continues. We look forward to sharing outcomes in the coming months).

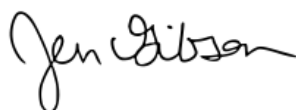
The second is Dryad's **reputation and the extent of trust we hold** with the research community. I've gradually pieced together 15 years of history for myself, talking to some of the researchers who actually attended meetings that shaped Dryad in 2007, editors of the first journals to join in, and members of the founding team: Jane Greenberg and Todd Vision. Todd I'm especially grateful to, for a series of conversations traveling backward and forward across those 15 years. (I'm not the only one grateful to Todd for his investment in Dryad, as the folks behind [American Naturalist reminded us](#) not that long ago.)

Before I was up to speed on the depth of our connections, I was also taken aback by the call for Dryad to **participate in so many community discussions** around the world, on such a wide range of topics. It was a pleasant surprise! I'm definitely having to add capacity to the team to continue to contribute effectively to these discussions, but have been honored to talk at Open Research London, NISO, CNI, ARIO, Phoenix Bioinformatics, and others. We've shared many of these discussions on [our blog](#).

The last thing that really characterizes my entrée to Dryad is the sense that we need a lot more people. The **breadth of service needed, the volume of submissions, the demands of day-to-day operations, and the rapidly changing environment** clearly called for some more hands on deck. We've just made a [formal announcement](#), but I'll go ahead and thank Jess Herzog for assuming the role of Interim Publishing Manager in November 2021 (for her success, Jess was made Head of Publishing Services in September 2022), Mark Kurtz (who joined as Head of Business Operations in March 2022), Ryan Scherle (Dryad's original repository architect and spiritual guide since 2007), Sarah Lippincott (who has led policy connections and European outreach since February 2022, joining as Head of Community Engagement from October), Donna Okubo (membership consultant for North American outreach since February 2022), Jon Treadway (of Great North Wood Consulting, above), Daniella Lowenberg (Senior Product Manager at California Digital Library and my Dryad mentor until summer 2022), and the entire team at the California Digital Library for keeping things excellent. We have a little more to do, at the time of writing, but are approaching a place where I feel we have the right mix of talent and hands on deck to help Dryad enter our next phase.

I haven't said very much about Dryad's **connection to institutions**, and the ongoing expansion of our [Institutional Membership program](#). That's because it's a familiar and comfortable space for me. Having been on the team with SPARC from 2005 - 2011, I feel the interests of the academic and research institutional community in open research are baked into a lot of my thinking. Had I the time, I would repeat our conversations at the [CNI Winter meeting in DC](#) and Spring meeting in San Diego several times a year. I'm certainly keen for Dryad's connection with academic and research institutions to grow, as you'll see it is below, and will do with the leadership of our new team members.

Finally, in closing, thank you. Thanks to all our supporters and investors and general cheer-ers-on. It's a pleasure to work for you.



Jennifer Gibson
Executive Director
November 22, 2022

Governing board

Scott Edmunds, GigaScience (Hong Kong)
Brooks Hanson, American Geophysical Union (USA)
Wolfram Horstmann, Goettingen University (Germany)
Catriona Maccallum, Hindawi (UK)
Ian Mulvany, British Medical Journal (UK)
Fiona Murphy, More Brains (UK)
Johan Nilsson, Oikos Editorial Office (Sweden)
Naomi Penfold, Science Practice (UK)

Iratxe Puebla, ASAPBio (UK)
Judy Ruttenberg, Association of Research Libraries (USA)
Caroline Sutton, Taylor & Francis (to January 2022) and STM (The International Association for Scientific, Technical and Medical Publishers) (Norway)
Jason Williams, Cold Spring Harbor Laboratory (USA)
Günter Waibel, California Digital Library (USA) (Ex-officio)

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

Data publications

Dryad published 6,429 datasets between July 2021 and June 2022. While we also publish data submitted directly by researchers, independently of research articles, this year our data was released in connection with publications in 810 different journals.

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

- Ecology and Evolution (Wiley)
- Proceedings of the Royal Society B (The Royal Society)
- eLife (eLife Sciences Publications Ltd)
- Royal Society Open Science (The Royal Society)
- Molecular Ecology (Wiley)
- PLOS ONE (Public Library of Science)
- Functional Ecology (British Ecological Society)
- Journal of Applied Ecology (British Ecological Society)
- Oikos (Nordic Society Oikos)
- The American Naturalist (University of Chicago Press)

The top 10 institutions from which we received data were:

- University of California, Davis
- Chinese Academy of Sciences

- University of California, Berkeley
- Yale University
- University of California, Santa Barbara
- Michigan State University
- Stanford University
- University of British Columbia
- Australian National University
- Lund University

We'd also like to highlight that Dryad was chosen as the home for [data generated through The Atlantic's COVID-19 tracking project](#), and "provide an accessible, citable, and long-term home for the data that has guided policy and expanded the capacity of the medical and scientific community to respond to COVID-19."

Alignment with emerging policies

At the beginning of 2021, the U.S. National Institutes of Health (NIH) Office of Data Science Strategy announced the Generalist Repository Ecosystem Initiative (GREI). Through the GREI program, Dryad is working with five generalist repositories to "establish consistent metadata, develop use cases for data sharing, train and educate researchers on FAIR data and the importance of data sharing" and help prepare for the roll-out of their new Data Sharing and Management Policy in January 2023.

As Dryad naturally aligns with the NIH policy and other [desirable characteristics of data repositories for federally funded research](#), we've been able to invest the support we receive through GREI (detailed below) in accelerating reuse of research data using data science-informed approaches that we'll report on next year (but which are set out on [our blog](#)).

Support for authors

Product update: Frictionless Data and Dryad join forces to validate research data

Because Dryad accepts all kinds of data, they need to curate that data for quality and ensure that the data does not present risk, and have comprehensive metadata to reuse the data. We quickly realized our shared goals, and formed a Pilot collaboration to add Frictionless validation functionality to the Dryad data upload page. Both teams agreed how

important it is to give researchers immediate feedback about their data as they are submitting it so they can make edits in that moment, and learn about data best practices.

Read more on the [Frictionless Blog](#).

Improving metadata and connecting repositories

Metadata Game Changers, the Center for Expanded Data Annotation and Retrieval (CEDAR) at Stanford University, and Dryad are thrilled to announce their joint National Science Foundation two-year EAGER award focused on increasing the quality of disciplinary metadata and bridging the gap between generalist and disciplinary data repositories. Increasing the quality of metadata for past and future datasets requires interoperable, seamless workflows. This team will be working together to pilot approaches that increase the quality of datasets deposited into the Dryad data repository while streamlining the submission processes. Examples of these pilot projects include displaying the right scientific metadata schema for datasets depending on standard fields in Dryad, as well as using metadata fields to flag datasets that would be best fit at a disciplinary repository (and piloting integrations with those repositories).

Learn [more](#)

Support for publishers and journals

Editorial Manager integrates with Dryad

From October 2021, journals using Editorial Manager (EM) to manage submissions can now help authors to make research data openly available and reusable through our seamless, new API-level integration. The integration is free for journals using EM to turn on and helps ensure that research data at Dryad and related manuscripts are properly timed for curation and publication. Through the secure API workflow, authors may submit data to Dryad from the point of submission at EM, if that's the journal's policy. The author moves seamlessly between the EM and Dryad platforms to submit data and then return to EM and resume work on their manuscript. Data submitted to Dryad may be reserved for peer reviewers, and only curated after article acceptance, using our 'private for peer review' functionality.

Learn [more](#).

eLife integrates with Dryad for seamless data publishing, with eJournalPress

eLife and Dryad have long supported making research publicly accessible and reusable. Over the last years, Dryad has increasingly curated and published datasets supporting eLife

publications. As the open science landscape continues to evolve, with a growing emphasis on best practices and making all research components openly available, both organizations recognize that the workflows need to be simplified. Working with eJournalPress, eLife and Dryad are pleased to announce Dryad's first platform-based integration, allowing authors to deposit datasets to Dryad seamlessly through eLife's submission process.

[Read more](#)

Support for institutions

An invitation to libraries

At the Winter meeting of the Coalition for Networked Information (CNI) in December, we had the chance to present for the first time (for me) Dryad's invitation to collaborate for academic and research libraries. It was three years ago, at this same meeting, where library colleagues met to discuss Dryad's prospective role and how we might supplement ongoing initiatives for open research and repository systems on campus.

[Read more](#)

UBC launches Dryad2Dataverse

Colleagues at the University of British Columbia (UBC) Library Research Commons have designed and launched an open-source tool connecting Dryad with Dataverse repository software. Quoting the UBC project update, dryad2dataverse can: Translate metadata from Dryad to Dataverse; Transfer Dryad information to Dataverse; and Monitor changes over time.

Read the full update [here](#).

New to Dryad

Our dynamic, multi-stakeholder community continues to grow. In addition to supporting data publication in connection with the 760 journals referred to above, and helping 27 publishing organizations to cover costs for their authors, we were so pleased to welcome new members to Dryad.

Hindawi joined as a publisher member and, through our institutional membership program, the following organizations committed to supporting data curation and publication for their affiliated researchers and are able to reflect as much of the Dryad corpus as they like into their catalog, search or repository systems.

- Australian Wine Research Institute (AUS)
- Northwestern University (USA)
- Rockefeller University (USA)
- University of Rochester (USA)
- U.S. Fish & Wildlife Service (USA)

Finance

Summary position

Income and expense, years ended June 30, 2021 and 2022 [1]

	FY 2021	FY 2022
Income		
Contributions and grants	312,079	390,347
Program service revenue	543,579	732,393
Investment income	0	35
In-kind contribution	467,115	441,015 [2]
Total income	1,322,773	1,563,790
Expense		
Personnel	592,337	487,333
Other expenses	207,248	435,929
Platform maintenance & development	467,115	441,015 [3]
Total expense	1,266,700	1,364,277
Net operating income	56,073	199,513

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

[2] Estimated in-kind support from CDL was not included in Dryad's accounting system in FY 2020 and 2021, but was reported in FY 2021 tax filings. In-kind contributions will be included in Dryad's accounting system beginning in FY 2023.

[3] Estimated in-kind contribution from CDL shown as expense.

Analysis of revenue

Dryad is supported by four types of investor:

1. Publishing organizations (society, non-profit and commercial) that invest in membership as well as data publication fees for their authors
2. Institutions, that invest in Dryad as members
3. Individual researchers who pay to have Dryad curate and publish their data
4. Public and private funders committing grants for operational or project support

We are 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 is made in the context of an ongoing and formal collaboration that was initiated in 2018. ([Learn more](#))

In the 2022 fiscal year:

- Contribution and grant revenue increased, largely in connection with the U.S. National Science Foundation (NSF) Sustaining Award and the U.S. National Institutes of Health Generalist Repository Ecosystem Initiative (GREI), through which Dryad became the recipient of a new Other Transaction. Funding under both programs is detailed below.
- Membership revenues, currently reported as program service revenue, increased in connection with the addition of new institutions, above.
- Data publishing fees paid by individuals and publishers, also in program service revenue, have also grown. This is in part due to additional support from current publisher partners, mentioned above. We can report on that in more detail in future.
- We continued to collaborate in the grants listed below.

Grants and funded initiatives

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 \$179,621 in expense against this subaward for the 2022 fiscal year

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 2023, with potential renewal for three years.

- We reported \$117,636 in expense against this award for the 2022 fiscal year.

National Science Foundation EAGER Award #2134956, to Metadata Game Changers, LLC (\$299,940). "1) Providing technical advice and assistance to Metadata Game Changers on retrieving metadata from the Dryad repository, and 2) implementation of metadata from CEDAR templates into the Dryad repository", 2022-2023

- Dryad receives a \$63,000 subaward from Metadata Game Changers, LLC for this work
- We reported \$27,453 in expense against this subaward for the 2022 fiscal year

Sloan Foundation Award #G-2019-12333 (\$635,915). "Building Connections in Data Publishing to Achieve Community Goals", 2019-2022 (after no-cost extension)

- This is an innovation award to help Dryad build connections and integrations with the larger research and research-supporting communities to make data publishing and re-use more seamless. Examples of integrations include publishing platforms, analytical environments, and community curation groups.
- We completed our reporting against this award with \$110,719 in expense in FY22.

Analysis of expenditure

Minor increases in expense were tied to additions in personnel and external resourcing.

As Dryad is a US-registered tax-exempt organization, our annual Form 990 is posted publicly. A copy is also available [here](#).