Updates on Information Management at Hubbard Brook

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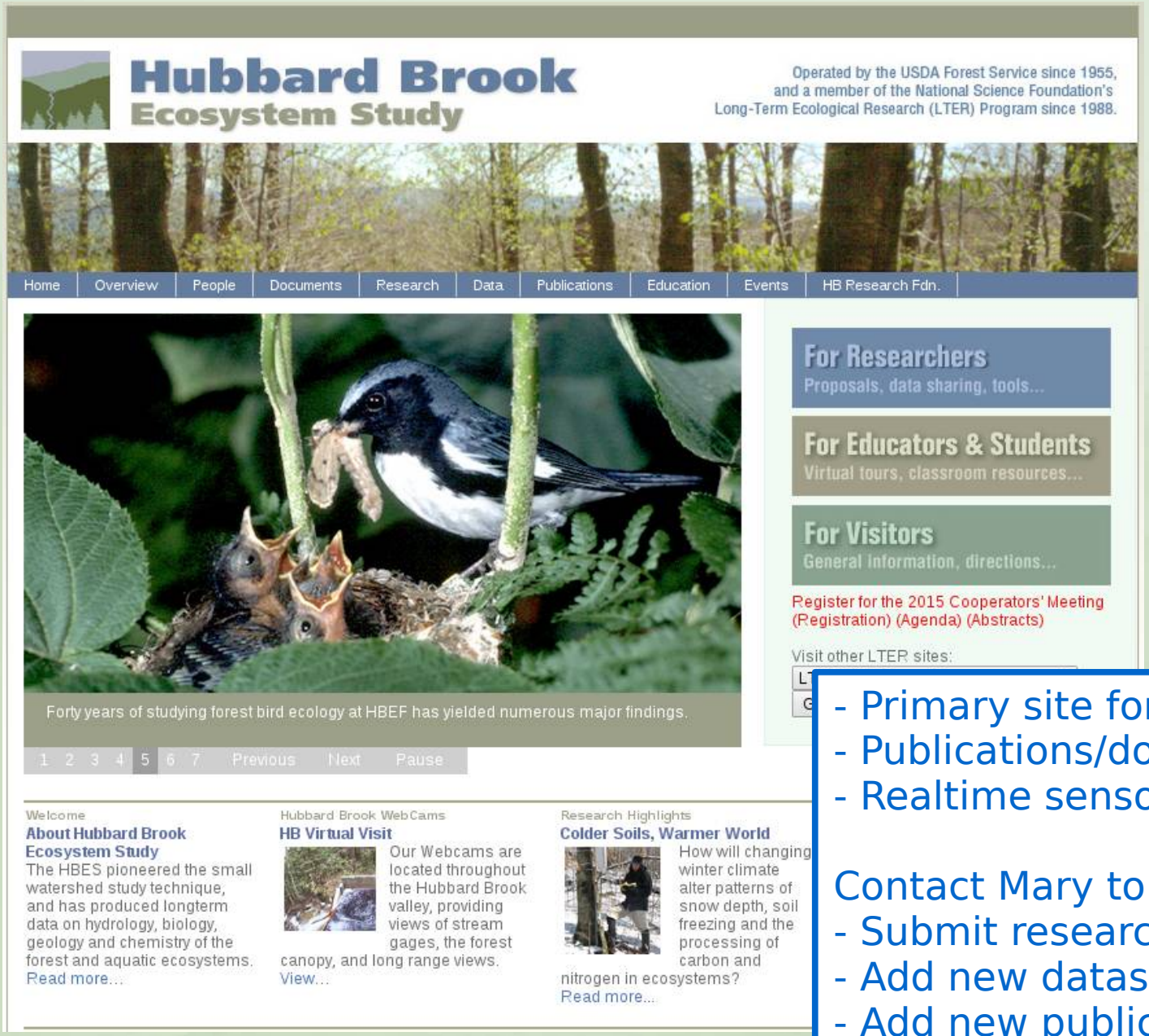
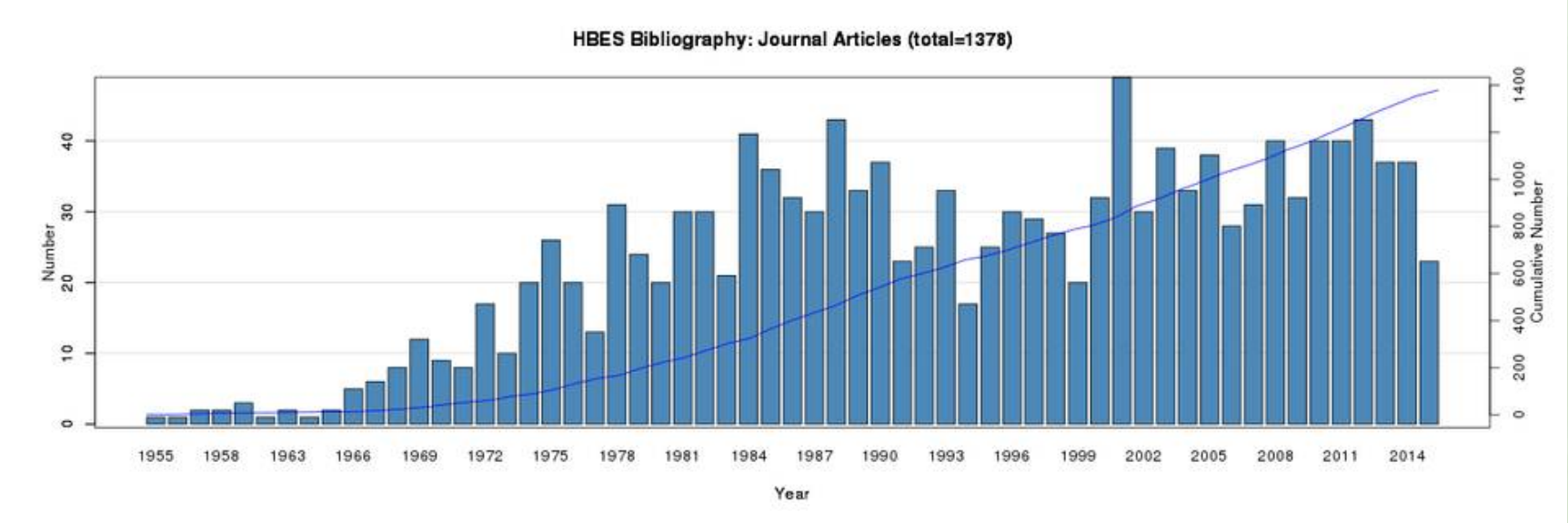
Hubbard Brook website



- Primary site for HB data
- Publications/documents
- Realtime sensor data

Contact Mary to:
- Submit research highlights
- Add new datasets
- Add new publications

Publication History



2015 Publications

Ali, G., Tetzlaff, D., McDonnell, J.J., Soulsby, C., Carey, S., Laudon, H., McGuire, K., Buttle, J., Seibert, J., Shanley, J., 2015. Comparison of threshold hydrologic response across northern catchments. Hydrol. Process. n/a–n/a. doi:10.1002/hyp.10527

Bae, K., Fahey, T.J., Yanai, R.D., Fisk, M., 2015. Soil Nitrogen Availability Affects Belowground Carbon Allocation and Soil Respiration in Northern Hardwood Forests of New Hampshire. Ecosystems. doi:10.1007/s10021-015-9892-7

Beier, C., Caputo, J., Groffman, P.M., 2015. Measuring ecosystem capacity to provide regulating services: forest removal and recovery at Hubbard Brook (USA). Ecological Applications. doi:10.1890/14-1376.1

Bourgault, R.R., Ross, D.S., Bailey, S.W., 2015. Chemical and Morphological Distinctions between Vertical and Lateral Podzolization at Hubbard Brook. Soil Science Society of America Journal 79, 428. doi:10.2136/sssaj2014.05.0190

Burakowski, E.A., Ollinger, S.V., Lepine, L., Schaaf, C.B., Wang, Z., Dibb, J.E., Hollinger, D.Y., Kim, J., Erb, A., Martin, M., 2015. Spatial scaling of reflectance and surface albedo over a mixed-use, temperate forest landscape during snow-covered periods. Remote Sensing of Environment 158, 465–477. doi:10.1016/j.rse.2014.11.023

Fahey, T.J., Templer, P.H., Anderson, B.T., Battles, J.J., Campbell, J.L., Driscoll, C.T., Fusco, A.R., Green, M.B., Kassam, K.-A.S., Rodenhouse, N.L., Rustad, L., Schaberg, P.G., Vadeboncoeur, M.A., 2015. The promise and peril of intensive-site-based ecological research: insights from the Hubbard Brook ecosystem study. Ecology 96, 885–901. doi:10.1890/14-1043.1

Fakhraei, H., Driscoll, C.T., 2015. Proton and Aluminum Binding Properties of Organic Acids in Surface Waters of the Northeastern U.S. Environ. Sci. Technol. 49, 2939–2947. doi:10.1021/es504024u

Falster, D.S., Duursma, R.A., Ishihara, M.I., Barneche, D.R., FitzJohn, et al., 2015. BAAD: a Biomass And Allometry Database for woody plants: *Ecological Archives* E096-128. Ecology 96, 1445–1445. doi:10.1890/14-1889.1

Gillin, C., Bailey, S., McGuire, Kevin, Gannon, J.P., 2015. Mapping of Hydropedologic Spatial Patterns in a Steep Headwater Catchment. Soil Science Soc. Am. J. 79, 40–453. doi:10.2136/sssaj2014.05.0189

Gillin, C.P., Bailey, S.W., McGuire, K.J., Prisley, S.P., 2015. Evaluation of Lidar-derived DEMs through Terrain Analysis and Field Comparison. Photogrammetric Engineering & Remote Sensing 81, 387–396. doi:10.14358/PERS.81.5.387

Hallworth, M.T., Marra, P.P., 2015. Miniaturized GPS Tags Identify Non-breeding Territories of a Small Breeding Migratory Songbird. Sci. Rep. 5. doi:10.1038/srep11069

Hallworth, M.T., Sillet, T.S., Van Wilgenburg, S.L., Hobson, K.A., Mara, P.P., 2015. Migratory connectivity of a Neotropical migratory songbird revealed by archival light-level geolocators. Ecological Aplications 25, 336–347. doi:10.1890/14-0195.1

Hansen, C., 2015. Lidar Remote Sensing Of Forest Canopy Structure: An Assessment Of The Accuracy Of Lidar And Its Relationship To Higher Trophic Levels (MS Thesis). University of Vermont, Burlington, VT.

Kaiser, S.A., Sillett, T.S., Risk, B.B., Webster, M.S., 2015. Experimental food supplementation reveals habitat-dependent male reproductive investment in a migratory bird. Proceedings of the Royal Society of London B: Biological Sciences 282, 20142523. doi:10.1098/rspb.2014.2523

Keenan, T.F., Richardson, A.D., 2015. The timing of autumn senescence is affected by the timing of spring phenology: implications for predictive models. Global Change Biology 21, 2634–2641. doi:10.1111/gcb.12890

Migliavacca, M., Reichstein, M., Richardson, A.D., Mahecha, M.D., Cremonese, E., Delpierre, N., Galvagno, M., Law, B.E., Wohlfahrt, G., Andrew Black, T., Carvalhais, N., Ceccherini, G., Chen, J., Gobron, N., Koffi, E., William Munger, J., Perez-Priego, O., Robustelli, M., Tomelleri, E., Cescatti, A., 2015. Influence of physiological phenology on the seasonal pattern of ecosystem respiration in deciduous forests. Glob Change Biol 21, 363–376. doi:10.1111/gcb.12671

Milanovich, J.R., Maerz, J.C., Rosemond, A.D., 2015. Stoichiometry and estimates of nutrient standing stocks of larval salamanders in Appalachian headwater streams. Freshw Biol 60, 1340–1353. doi:10.1111/fwb.12572

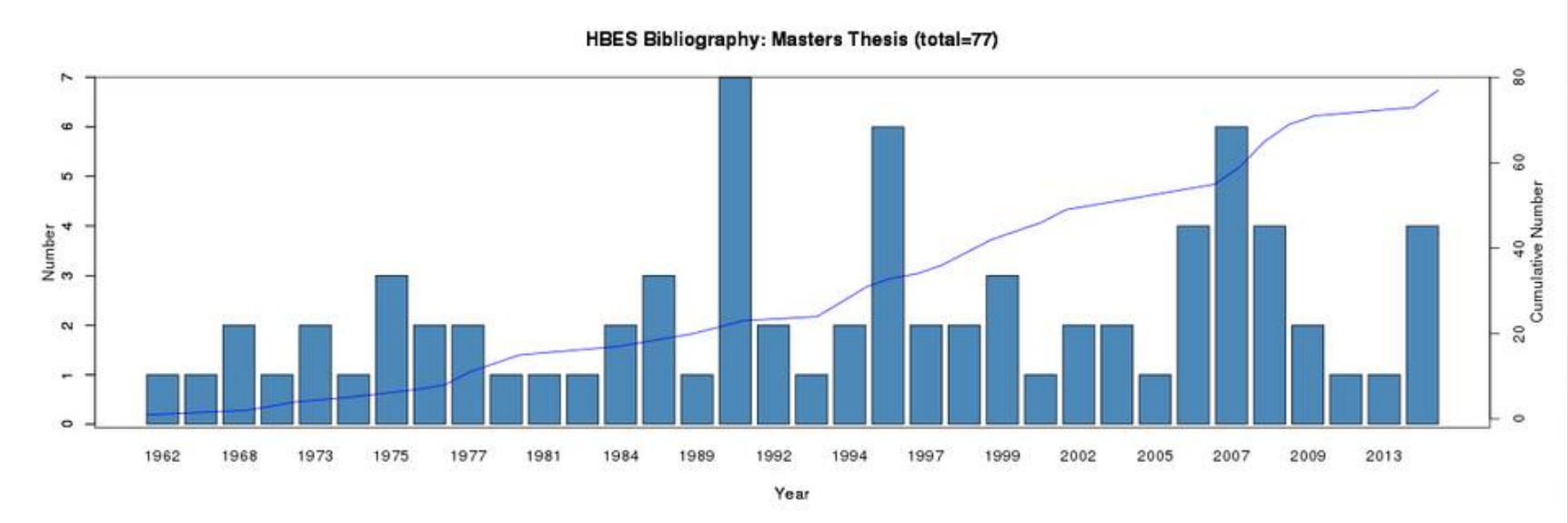
Morse, J.L., Durán, J., Groffman, P.M., 2015. Soil Denitrification Fluxes in a Northern Hardwood Forest: The Importance of Snowmelt and Implications for Ecosystem N Budgets. Ecosystems 18, 520–532. doi:10.1007/s10021-015-9844-2

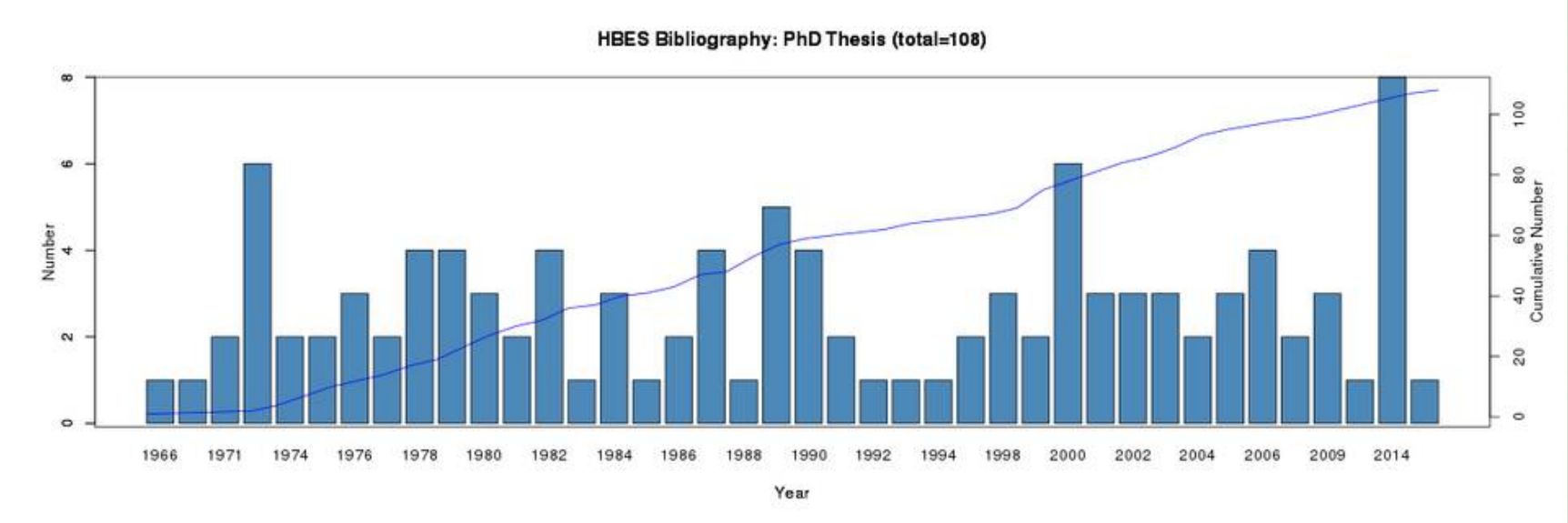
Sherry, T.W., Wilson, S., Hunter, S., Holmes, R.T., 2015. Impacts of nest predators and weather on reproductive success and population limitation in a long-distance migratory songbird. J Avian Biol n/a–n/a. doi:10.1111/jav.00536

Tree-Ring Research, 2015. Thomas G. Siccama 1936–2014. Tree-Ring Research 71, 51–52. doi:10.3959/1536-1098-71.1.51

Wagner, S., Allred, S.R.B., Dittmar, T., Jaffé, R., 2015. Molecular characterization of dissolved black nitrogen via electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry. Organic Geochemistry 79, 21–30. doi:10.1016/j.orggeochem.2014.12.002

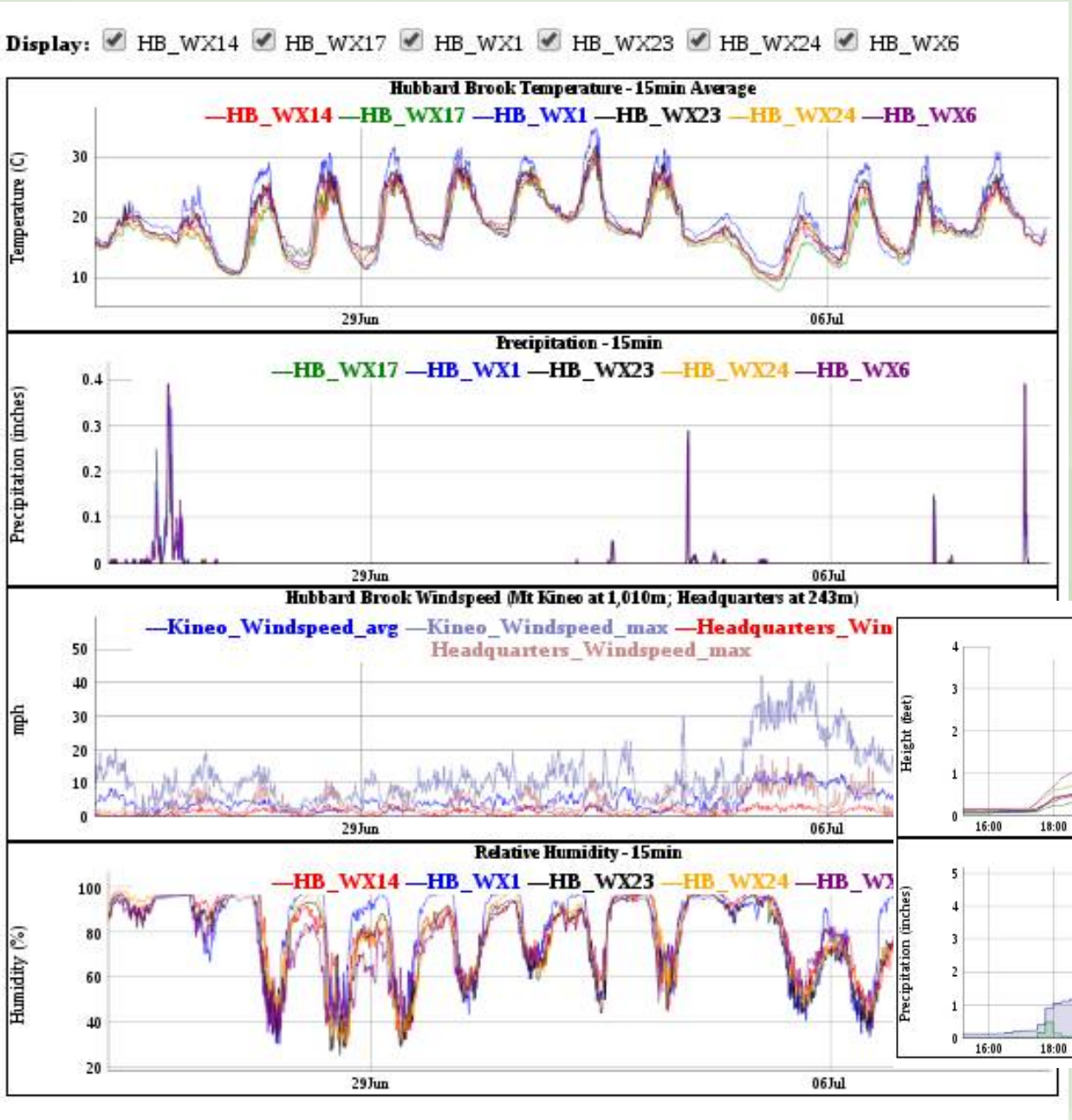
MS and PhD Graduates

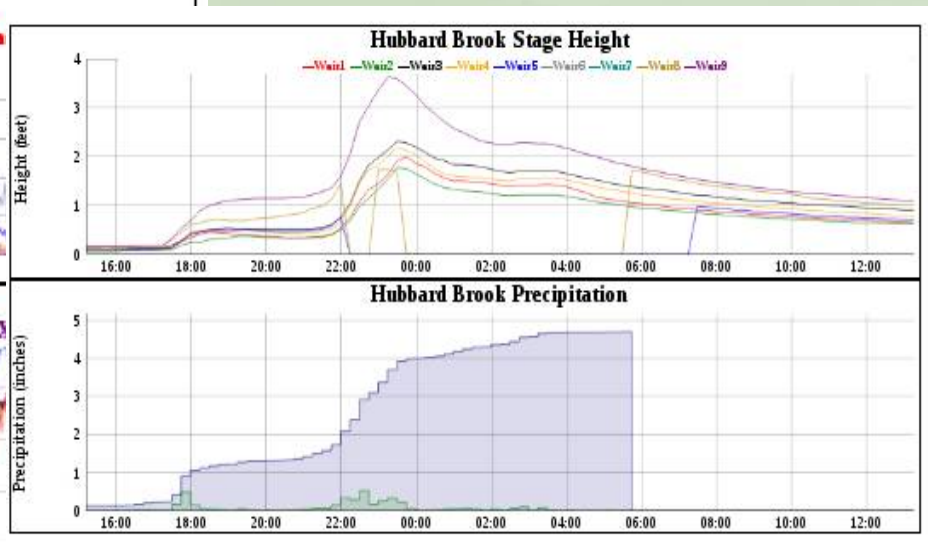




2015 PhDs: Bourgault, UVM; Fuss, Syr; Gannon, VA Tech; Whitehurst, UMD; Hallworth, George Mason; Lany, Dartmouth; Reinman, BU; vanDoorn, Berkeley

Digital Sensor Data – near-realtime displays

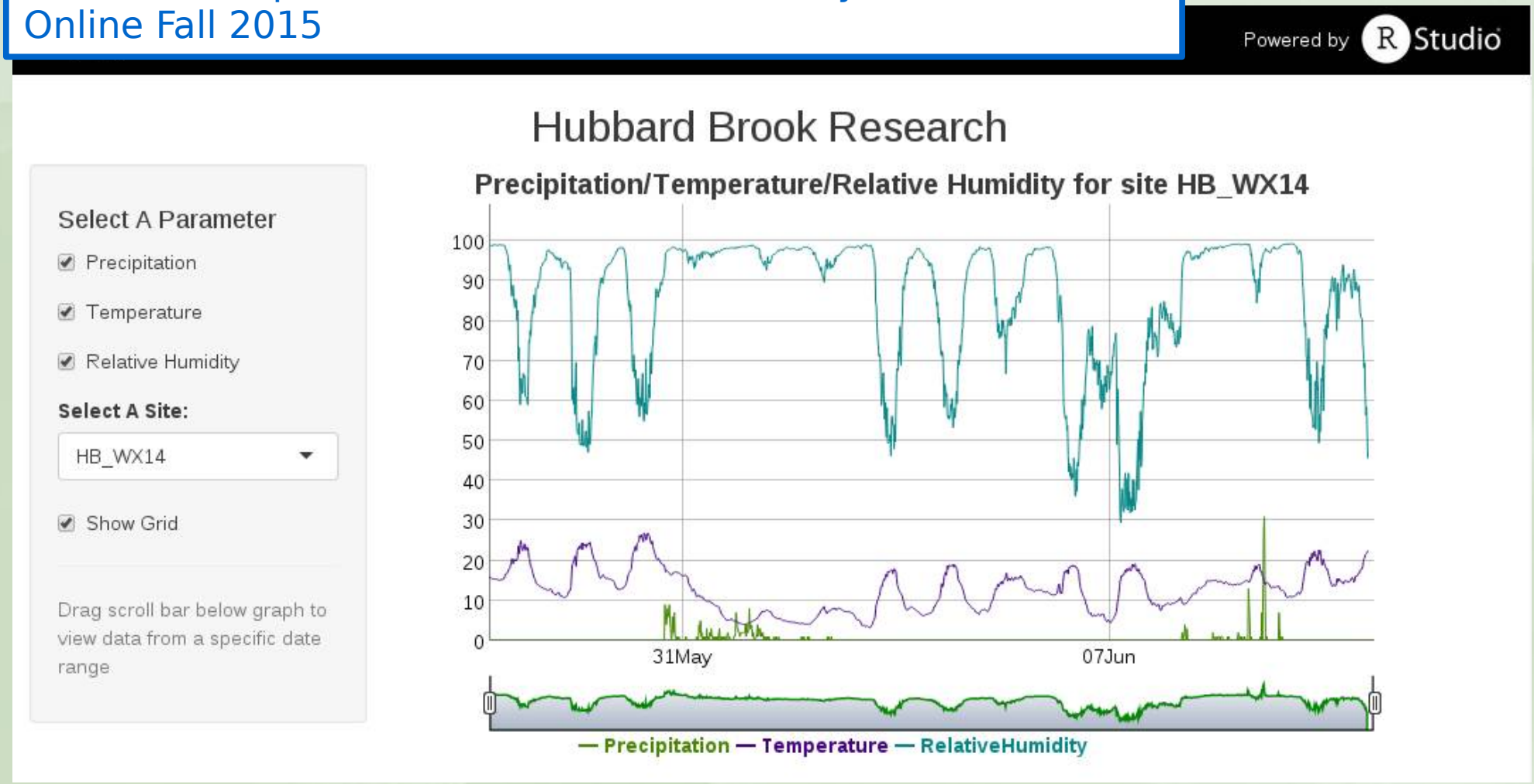




Near-realtime view of HBEF data. First pass of automated QC. Available within ~2hrs.

Digital Sensor Data – near-realtime displays

New interface to realtime sensor data
Under development - Sanchita Abhinave, Syracuse IM intern
Online Fall 2015

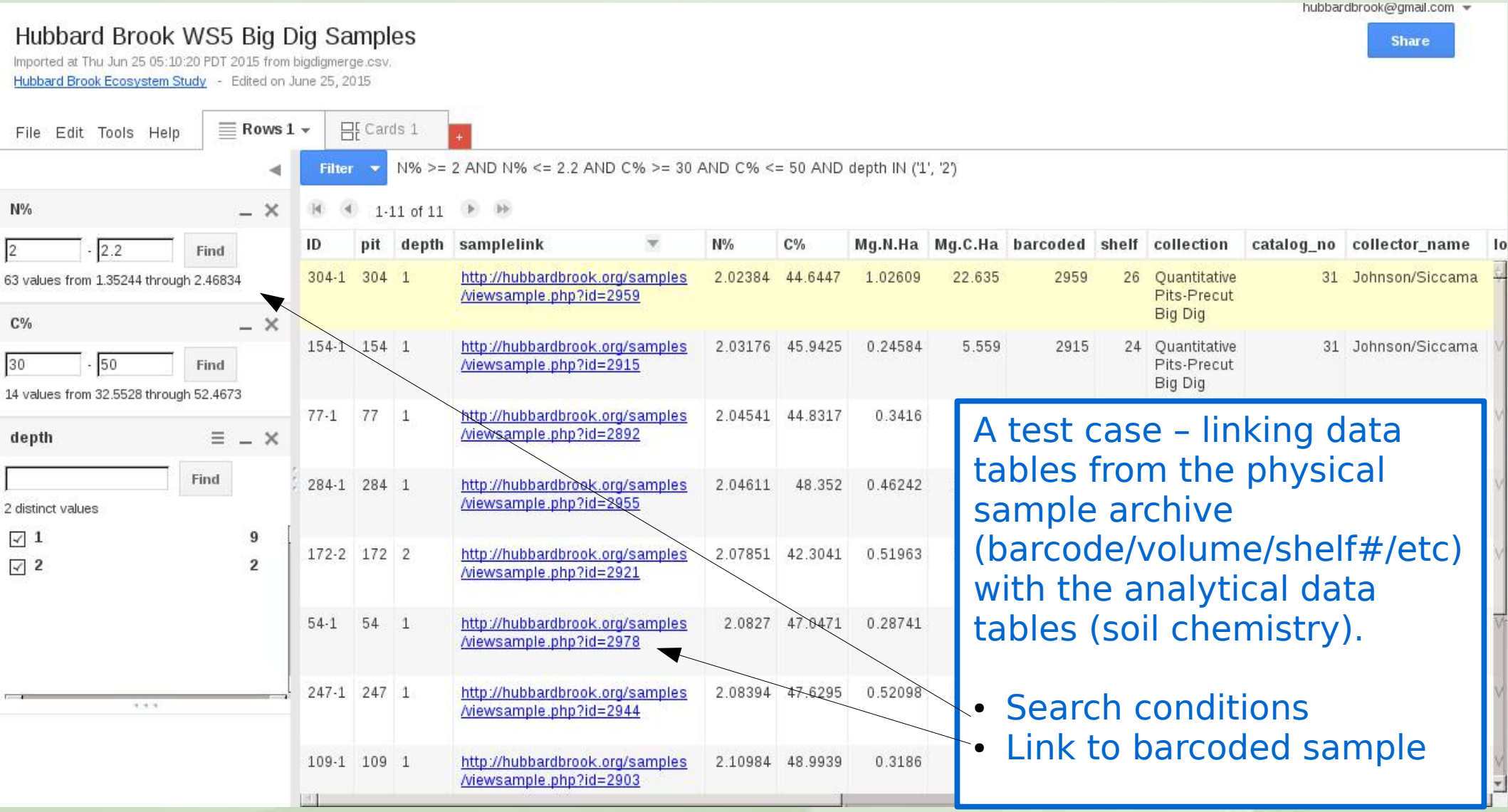


2015 work in the sample archive

Highlights

- LTER supplement for barcodes and supplies
- USFS funding/labor support
- LOTS of volunteers!!
- Database QC, updating weights
- Sample/data prep for new barcoding
- Simplify data entry – barcode scanner, scale
- Link sample and analytical databases

Linking analytical data with sample archive



A test case – linking data tables from the physical sample archive (barcode/volume/shelf#/etc) with the analytical data tables (soil chemistry).

- Search conditions
- Link to barcoded sample

LTER/NSF support for data management

DataONE Data Observation Network for Earth

ED41A-0672

William Michener[1], Amber E Budden[1], Rebecca Koskela[1], Dave Vieglais[2], Stacy Rebich Hespanha[3] and the DataONE Team
[1]University of New Mexico, [2]University of Kansas, [3]University of California Santa Barbara
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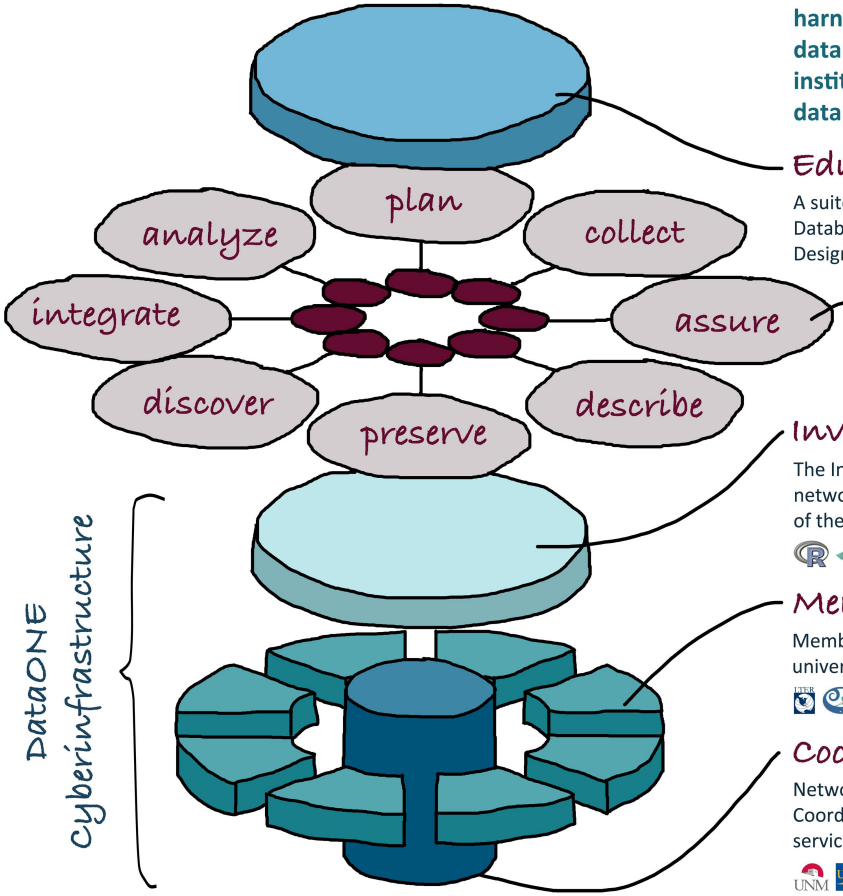
Supporting the Management of Data Throughout its Life Cycle



Addressing the Earth's environmental problems requires that we change the ways that we do science; harness the enormity of existing data; develop new methods to combine, analyze, and visualize diverse data resources; create new, long-lasting cyberinfrastructure; and re-envision many of our longstanding institutions. DataONE is a federated data network that has been built to improve access to, and preserve data about, life on Earth and the environment that sustains it.

Education and Outreach

A suite of resources and training events build out from the DataONE infrastructure. These resources include a Best Practices Database of expert recommendations for data management; a Primer on Data Management; and a Software Tools Database. Designed as a community project, the DataONE Users Group guides the evolution of DataONE.

Data Life Cycle

The eight steps of the Data Life Cycle provide the framework for the development, education and outreach activities of DataONE. Tools are designed to meet user needs in all areas of the DLC and training and outreach activities ensure users have access to the information and resources needed for planning, organizing and sharing their data.

Investigator Toolkit (ITK)

The Investigator Toolkit provides a user friendly interface for seamless search and retrieval of data held within the DataONE network. The ITK also enables access to customized tools that are familiar to scientists and that can support them in all aspects of the Data Life Cycle.

MATLAB DMPTool zotero Kepler UC3DataUp

Member Nodes (MN)

Member Nodes encompass a diverse array of institutions that serve as data centers or repositories including libraries, universities, research networks, and governmental and nongovernmental agencies.

PISCO DRYAD USGS esa Merritt KNB ONEShare

Coordinating Nodes (CN)

Network-wide services enhance interoperability of the Member Nodes and support indexing and replication services. Coordinating Nodes enable scientists to discover networked data wherever they reside and make Member Node data and services more broadly available to the international community.

UNM UCSB UT

www.dataone.org

This poster reflects the work of multiple individuals across numerous institutions that make up the DataONE Team.
Support is provided for DataONE by US National Science Foundation award #0830944 under a Cooperative Agreement.
For more information see www.DataONE.org, www.facebook.com/DataONEorg; follow @DataONEorg or contact info@DataONE.org

Hubbard Brook Listservs

- **HubbardBrook - extended community**
- **HubbardBrookCOS – official business**
- **HubbardBrook GradStudents**
- **HubbardBrookISE/HubbardBrookISEfield (Project)**
- **LTER Personnel Directory (LTER listservs)**

Hubbard Brook Information Management Update

Questions?