

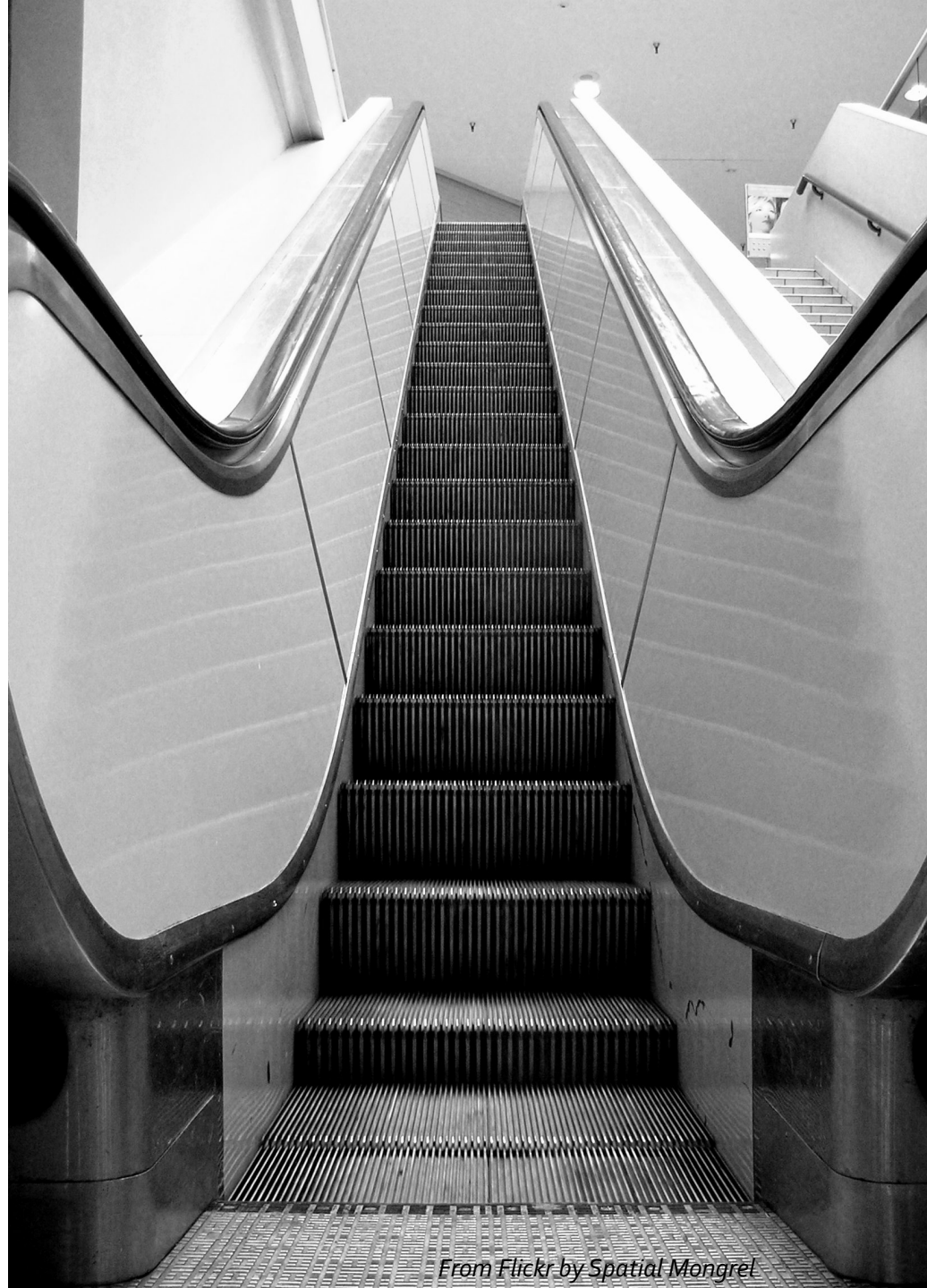
DataUp: Helping manage & archive data

Helmholtz Open Access Webinars
on Research Data | Webinar 11

Carly Strasser
California Digital Library
@carlystrasser



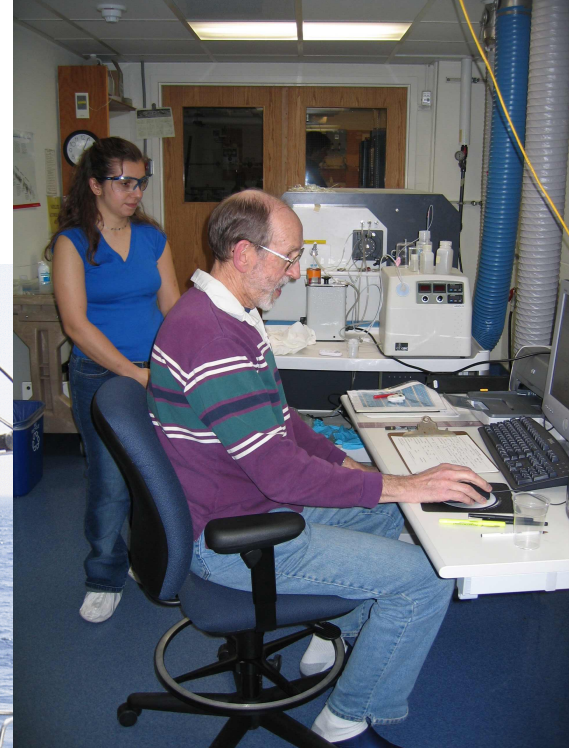
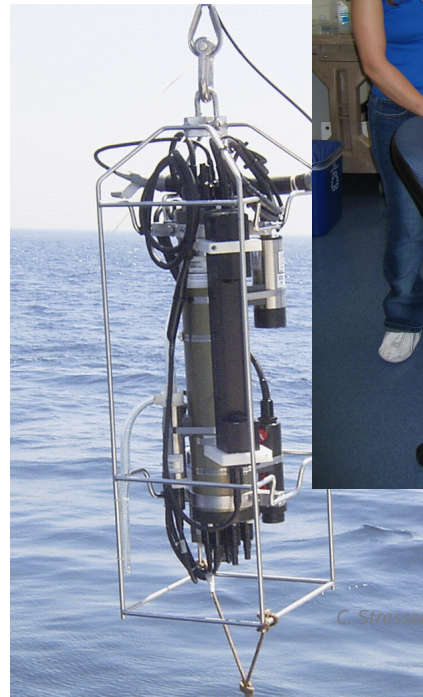
14/22 May 2013



From Flickr by Spatial Mongrel

Digital data

From Flickr by Flickrmor



Courtesy of WHOI

From Flickr by DWo825



From Flickr by deltaMike

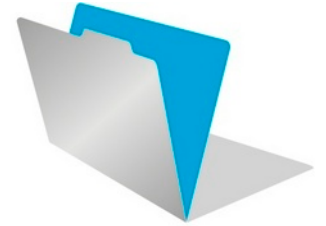


From Flickr by US Army Environmental Command

Digital data

+

Complex workflows



FileMaker®

zotero



MATLAB®
The Language of Technical Computing



L^AT_EX



SPSS®
Real Stats. Real Easy.™



C:\Documents and Settings\hampton\My Documents\NCEAS Distributed Graduate Seminars\Wash Cres Lake Dec 15 Dont_Use.xls]Sheet1

Stable Isotope Data Sheet

Sampling Site / Identifier: Wash Cresc Lake
 Sample Type: Algal
 Date: Dec. 16
 Tray ID and Sequence: Tray 004

Peter's lab
 Washed Rocks
 Don't use - old data

Reference statistics: SD for delta ¹³C = 0.07 SD for delta ¹⁵N = 0.15

Position	SampleID	Weight (mg)	%C	delta 13C	delta 13C_ca	%N	delta 15N	delta 15N_ca	Spec. No.
A1	ref	0.98	38.27	-25.05	-24.59	1.96	4.12	3.47	25354
A2	ref	0.98	39.78	-25.00	-24.54	2.03	4.01	3.36	25356
A3	ref	0.98	40.37	-24.99	-24.53	2.04	4.09	3.44	25358
A4	ref	1.01	42.23	-25.06	-24.60	2.17	4.20	3.55	25360
A5	ALG01	3.05	1.88	-24.34	-23.88	0.17	-1.65	-2.30	25362 c
A6	Lk Outlet Alg	3.06	31.55	-30.17	-29.71	0.92	0.87	0.22	25364
A7	ALG03	2.91	6.85	-21.11	-20.65	0.48	-0.97	-1.62	25366 c
A8	ALG05	2.91	35.56	-28.05	-27.59	2.30	0.59	-0.06	25368
A9	ALG07	3.04	33.49	-29.56	-29.10	1.68	0.79	0.14	25370
A10	ALG06	2.95	41.17	-27.32	-26.86	1.97	2.71	2.06	25372
B1	ALG04	3.01	43.74	-27.50	-27.04	1.36	0.99	0.34	25374 c
B2	ALG02	3	4.51	-22.68	-22.22	0.34	4.31	3.66	25376
B3	ALG01	2.99	1.59	-24.58	-24.12	0.15	-1.69	-2.34	25378 c
B4	ALG03	2.92	4.37	-21.06	-20.60	0.34	-1.52	-2.17	25380 c
B5	ALG07	2.9	33.58	-29.44	-28.98	1.74	0.62	-0.03	25382
B6	ref	1.01	44.94	-25.00	-24.54	2.59	3.96	3.31	25384
B7	ref	0.99	42.28	-24.87	-24.41	2.37	4.33	3.68	25386
B8	Lk Outlet Alg	3.04	31.43	-29.69	-29.23	1.07	0.95	0.30	25388
B9	ALG06	3.09	35.57	-27.26	-26.80	1.96	2.79	2.14	25390
B10	ALG02	3.05	5.52	-22.31	-21.85	0.45	4.72	4.07	25392
C1	ALG04	2.98	37.90	-27.42	-26.96	1.36	1.21	0.56	25394 c
C2	ALG05	3.04	31.74	-27.93	-27.47	2.40	0.73	0.08	25396
C3	ref	0.99	38.46	-25.09	-24.63	2.40	4.37	3.72	25398
			23.78			1.17			

Shore
 -1.26
 1.26
 Avg Con
 -27.22
 0.32

2 tables

Random notes

C:\Documents and Settings\hampton\My Documents\NCEES Distributed Graduate Seminars\Wash Cres Lake Dec 15 Dont_Use.xls, Sheet1

Stable Isotope Data Sheet

Sampling Site / Identifier: Wash Cres Lake

Sample Type: Algal

Date: Dec. 16

Tray ID and Sequence: Tray 004

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SD for delta ¹⁵N = 0.15

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A3	ref	0.98	40.37	-24.99	-24.53	2.04	4.09	3.44	25358
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C3	ref	0.99	38.46	-25.09	-24.63	2.40	4.37	3.72	25398
			23.78			1.17			

Peter's lab
Washed Rocks

Don't use - old data

Shore

Avg Con

-1.26
1.26

-27.22
0.32

Wash Cres Lake Dec 15 Dont_Use.xls

C:\Documents and Settings\hampton\My Documents\NCEAS Distributed Graduate Seminars\Wash Cres Lake Dec 15 Dont_Use.xls\Sheet1

Stable Isotope Data Sheet

Sampling Site / Identifier: Wash Cresc Lake
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Date: Dec. 16
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Washed Rocks
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Reference statistics: SD for delta ¹³C = 0.07 SD for delta ¹⁵N = 0.15

Position	SampleID	Weight (mg)	%C	delta 13C	delta 13C ca	%N	delta 15N	delta 15N ca	Spec. No.
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A5	ALG01	3.05	1.88	-24.34	-23.88	0.17	-1.65	-2.30	25362 c
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C3	ref	0.99	38.46	-25.09	-24.63	2.40	4.37	3.72	25398
			23.78			1.17			

Shore
-1.26
1.26
Avg Con
-27.22
0.32

Random stats output

C:\Documents and Settings\hampton\My Documents\NCEAS Distributed Graduate Seminars\Wash Cres Lake Dec 15 Dont_Use.xls]Sheet1

Stable Isotope Data Sheet

Sampling Site / Identifier: Wash Cres Lake

Sample Type: Algal

Date: Dec. 16

Tray ID and Sequence: Tray 004

Reference statistics: SD for delta ¹³C = 0.07

SD for delta ¹⁵N = 0.15

Position	SampleID	Weight (mg)	%C	delta 13C	delta 13C ca	%N	delta 15N	delta 15N ca	Spec. No.
A1	ref	0.98	38.27	-25.05	-24.59	1.96	4.12	3.47	25354
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			23.78			1.17			

Peter's lab
Washed Rocks

Don't use old data

Shore
-1.26
1.26

Avg Con
-27.22
0.32

SUMMARY OUTPUT

Regression Statistics

Multiple R 0.283158
R Square 0.080178
Adjusted R -0.022024
Standard E 1.906378
Observations 11

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2.851116	2.851116	0.784507	0.398813
Residual	9	32.7085	3.634278		
Total	10	35.55962			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-4.297428	4.671099	-0.920003	0.381568	-14.8642	6.269341	-14.8642	6.269341
X Variable	-0.158022	0.17841	-0.885724	0.398813	-0.561612	0.245569	-0.561612	0.245569

Who cares?

Who cares?



From Flickr by AJC1

Who cares?



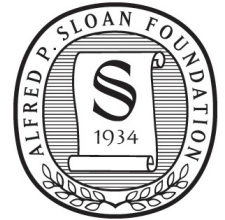
From Flickr by AJC1



Who cares?



From Flickr by AJC1



Who cares?



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From Flickr by iowa_spirit_walker



- Cost
- Confusion about standards
- Lack of training
- Fear of lost rights or benefits
- No incentives

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**HELP
WANTED**

GORDON AND BETTY
MOORE
FOUNDATION

Microsoft®
Research



University of California

CDL

California Digital Library

Intercept researchers
where **they already work**





DATAUP

Facilitate

Archiving

Sharing

Publishing



DATAUP

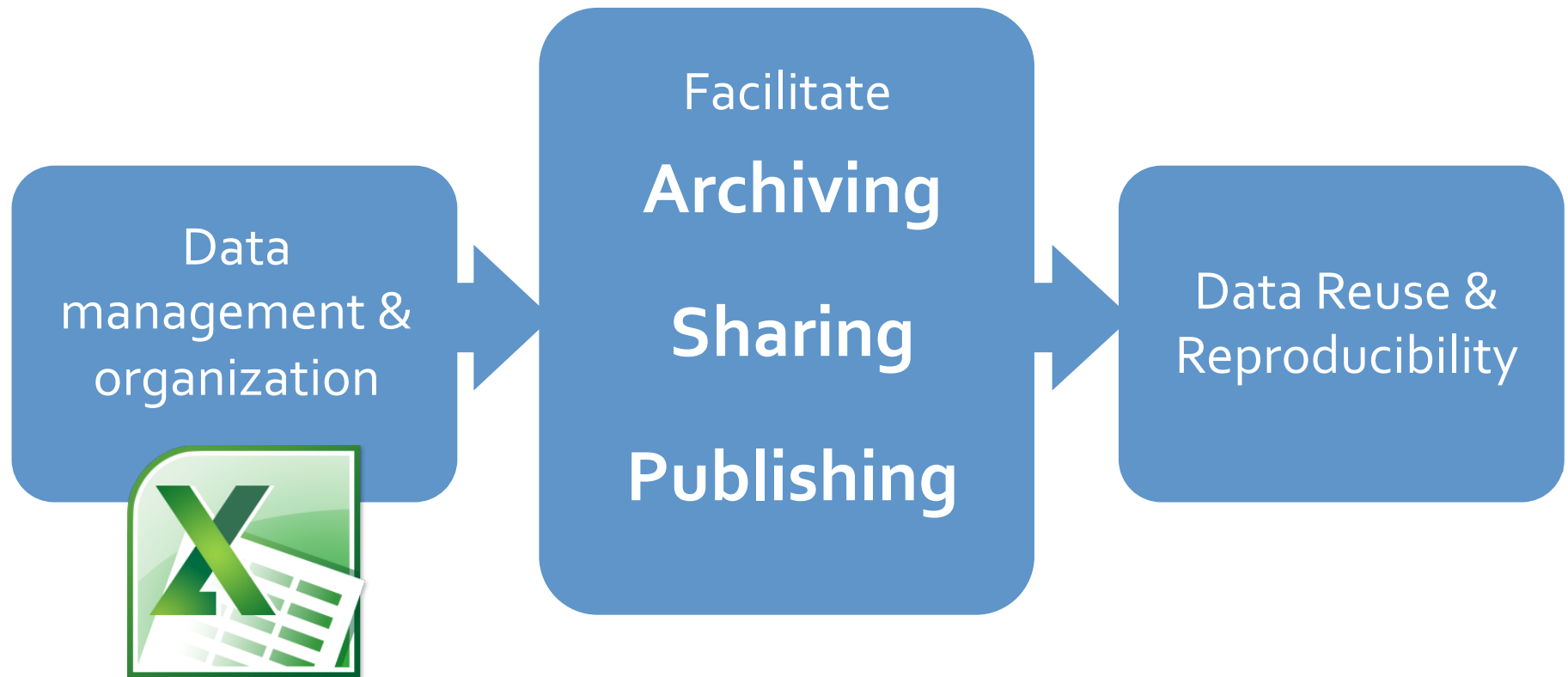
Data
management &
organization



Facilitate
Archiving
Sharing
Publishing



DATAUP





**What do scientists need
help with?**

Asked ~**200** scientists

What does your data look like?

How do you capture metadata?

Plans for saving & sharing data?

Repositories?



What the tool should do:

- Best practices check
- Generate metadata (EML)
- Get identifier + citation
- Post data to repository



dataup.cdlib.org

Free

Open source

.csv and .xlsx

Add-in and web application

Add-in

- Software you download & install
- Appears as “ribbon” in Excel
- Works for Windows Excel 2007+

VS
A2

Web-based application

- Upload file to website
- Works for any platform
- But... new user interface

DataUp

Features

Best practices check
Generate metadata
Get identifier & citation
Post data to repository





Best Practices Check

- Embedded charts, tables, pictures
- Embedded comments
- Commas
- Special characters
- Color-coded text & cell shading
- Columns with mixed data types
- Non-contiguous data
- Merged cells
- Blank cells
- No header row
- Multiple sheets

DataUp

Features

Best practices check
Generate metadata
Get identifier & citation
Post data to repository



File-level Metadata

~**45** elements included

7 required

Creator details

Title

Date

Keywords

Abstract

DataUp

Features

Best practices check
Generate metadata
Get identifier & citation
Post data to repository



HELLO
my name is

Identifier + Citation

From Flickr by maybeemily

Example:

Sidlauskas, B. 2007. Data from: Testing for unequal rates of morphological diversification in the absence of a detailed phylogeny: a case study from characiform fishes. Dryad Digital Repository. [doi:10.5061/dryad.20](https://doi.org/10.5061/dryad.20)

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Persistent Unique
Identifier



HELLO
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From Flickr by maybeemily

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Allows readers to find data products

Get credit for data **and** publications

Promotes reproducibility

Better measure of research impact

DataUp

Features

Best practices check
Generate metadata
Get identifier & citation
Post data to repository



 UC3Merritt

DataONE

ONE *Share*

Data Repository for
Anyone | Anywhere



 HELMHOLTZ
| GEMEINSCHAFT
Open Access

DataUp Web App

Web App



Sign in ▾

Documenting, archiving, and sharing your data has never been easier.

Use DataUp to create metadata, perform a best practices check, and post your tabular data to a repository for others to use.



[Sign in to get started](#)

Use DataUp for these tasks

 Demo

1 upload ➔

Upload tabular data to DataUp

2 best practices ➔

Perform a check for data best practices

3 describe data ➔

Describe your data with standardized metadata

4 generate citation ➔

Generate a citation with a persistent identifier for your data

5 post to repository

Post your file to a data repository

Web App

[Your Information](#)

Upload your tabular data to the DataUp site. Don't worry- we won't share your data with anyone



Drag and drop your tabular data file(s) here
or **Select file** to upload documents from your computer

Uploaded Data Files

Download	File Name	Size	Date Uploaded	Status	Identifier	Actions
	 PracticeData.xlsx	117796 Byte	11/19/2012 8:29:50 PM	Uploaded		 Post 
	 DCXL Beta Test ...	39136 Byte	10/26/2012 8:24:06 PM	Uploaded		 Post 

Web App: Best Practices Check



DataUp has checked your data file for potential issues that might make your data less understandable to others. Some of the issues are related to .csv compatibility, and others are simply best practices for data management and organization.

Charts,Picture and Table (2)				Embedded Comments (3)	Commas (1)	Special Characters (1)	Color Coded Text (1)	Mixed	
Potential problem	Why this may be a problem	Suggested remedy					Location(s)		
Embedded charts	These embedded items will not be visible when data are exported as a .csv file. Also, these elements are visible only if the file is opened with Microsoft Excel.	Move embedded charts, tables, or pictures to other tabs in your file or a completely separate file.					F16,		
Embedded pictures	These embedded items will not be visible when data are exported as a .csv file. Also, these elements are visible only if the file is opened with Microsoft Excel.	Move embedded charts, tables, or pictures to other tabs in your file or a completely separate file.					F33,		

Color coded text, embedded formulas or objects, merged cells, and any other non-csv compatible components will not be retained in the file upon posting. Some of the potential issues listed here must be manually altered to comply with best practices. [Download](#) modified files to fix errors. You can Ignore these errors and continue posting

[Save](#) [Cancel](#) [Next →](#)

Web App: Metadata



Describe your data set in the boxes provided. Get help by clicking on the (?) next to each empty field. Some fields are required to proceed.

Data Description

Column Description

clear all

* required fields

Title of dataset *



Creator: First name *



Creator: Last name *



Creator: Organization



Creator: Address



Creator: City



← Back

 Save

✕ Cancel

Next →

Web App: Citation



Steps :

1. Retrieve an identifier from the repository for your dataset
(Read this important information about your unique identifier *here*)
2. Check the rest of the information below for accuracy
3. Make any necessary changes or edits to the information
4. Click 'Generate Citation' to create your data citation

Identifier

ark:/99999/fk4qv4891

Retrieve an identifier

Publication Year

2009

Title

Copepod Collections in Halifax NS

Version

Version 1.0

Publisher

Strasser, Carly

Citation

Strasser, Carly(2009): Copepod Collections in Halifax NS.
Version 1.0. Strasser, Carly. ark:/99999/fk4qv4891

Generate Citation

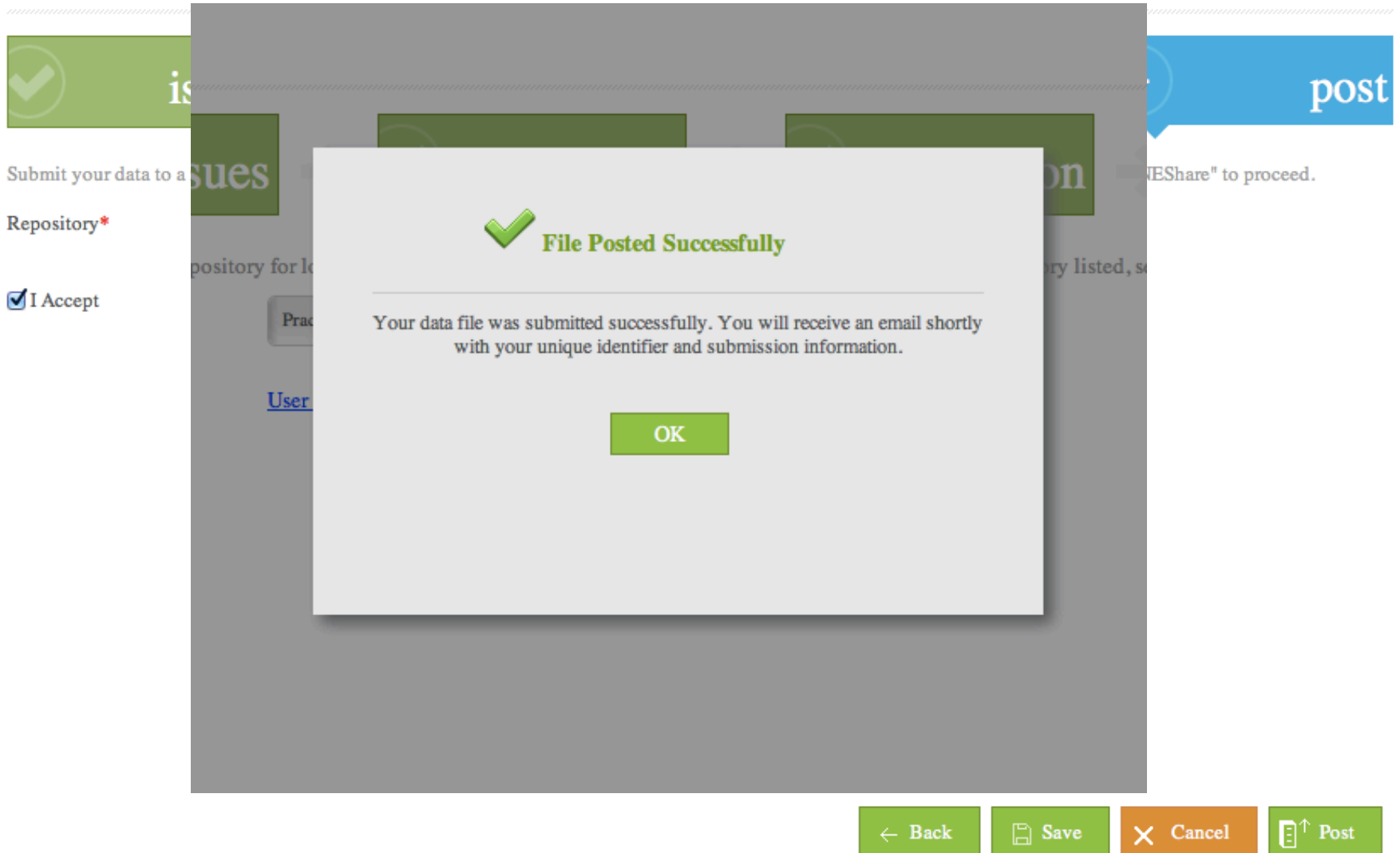
← Back

Save

× Cancel

Next →

Web App: Posting to repository



DataUp Add-In

Add-in: Ribbon

copepod_log_2008-12(1).xlsx - Microsoft Excel

Home Insert Page Layout Formulas Data Review View **DataUp**

Check Data Column Generate Post to Repository Demo
Best Practices Describe Data Citation Post File About

B7 fx 30

	A	B	C	D	E	F	G	H	I
1									
2	Date	amount food	S4T10_R3		S4T10_R4		S8T10R1		S8T10R
3	24-Oct	25					1250		950
4	26-Oct	20	800		1850		1300		1600
5	28-Oct	25	800		1500		600		1850
6	30-Oct	35	1000				1050		1050
7	1-Nov	30	1600		1550		750		1800
8	3-Nov	25	550		900		1100		1500
9	5-Nov	30	1000		1450		1000		1000
10	7-Nov	30	1000		1200		650		350
11	9-Nov	30	300		700		825		550
12	11-Nov	30	450		1150		250		500
13	13-Nov	30	250		500		300		200
14	15-Nov	35	250		1000		219		550
15	17-Nov	30	125		850		313		292
16	19-Nov	30	125		700		179		536
17	21-Nov	25	250		550		313		281
18	23-Nov	25	125		650		313		281
19	25-Nov	25	75		300		344		500

Add-in: Metadata tab

The screenshot displays the Metadata add-in interface. At the top is a toolbar with icons and labels for 'Check', 'Data Description', 'Column Description', 'Generate', 'Post to Repository', and 'Demo'. Below the toolbar is a formula bar showing 'A25' and 'Data Contact Person: Email'. The main area is a table with two columns: 'Name' and 'Value'. The table contains various metadata fields, with the 'Data Contact Person: Email' field highlighted in row 25. A red arrow points to the 'Metadata' tab in the bottom navigation bar.

	A	B	C
1	Name	Value	
2	Creator: First name	Carly	
3	Creator: Last name	Strasser	
4	Creator: Address	410 20th Street	
5	Creator: City	Oakland	
6	Creator: State/province	CA	
7	Creator: Postal code	94612	
8	Creator: Country	USA	
9	Creator: Email	carly.strasser@ucop.edu	
10	Creator: Phone	510-987-0179	
11	Creator: Organization	California Digital Library	
12	Title of dataset	Nanaimo Estuary Copepod Populations 2008	
13	Today's date	2009-10-02	
14	Abstract	We collected copepods from the Nanaimo Estuary	
15	Repository name and contact information		
16	url for data		
17	Data Contact Person: First name	Carly	
18	Data Contact Person: Last name	Strasser	
19	Data Contact Person: Address		
20	Data Contact Person: City		
21	Data Contact Person: State/province		
22	Data Contact Person: Postal code		
23	Data Contact Person: Country		
24	Data Contact Person: Phone		
25	Data Contact Person: Email	carly.strasser@ucop.edu	
26	Data Contact Person: Organization	CDL	

Ready

Add-In

- Windows PC 2007+
- No log-in required
- Offline & online
- Can view metadata via tab
- See check alongside data
- Select header row

VS

Web app

- Any platform
- Log-in required
- Online only
- Can't view metadata once generated
- Get locations for check
- Manual header row entry

Main site: dataup.cdlib.org



An open source tool helping researchers document, manage, and archive their tabular data, DataUp operates within the scientist's workflow and integrates with Microsoft® Excel.

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- ▶ Create Metadata
- ▶ Get Credit for Data
- ▶ Archive Data



About the Project:

Funders, partners, history and evolution of DataUp



Resources:

CDL resources, data management help
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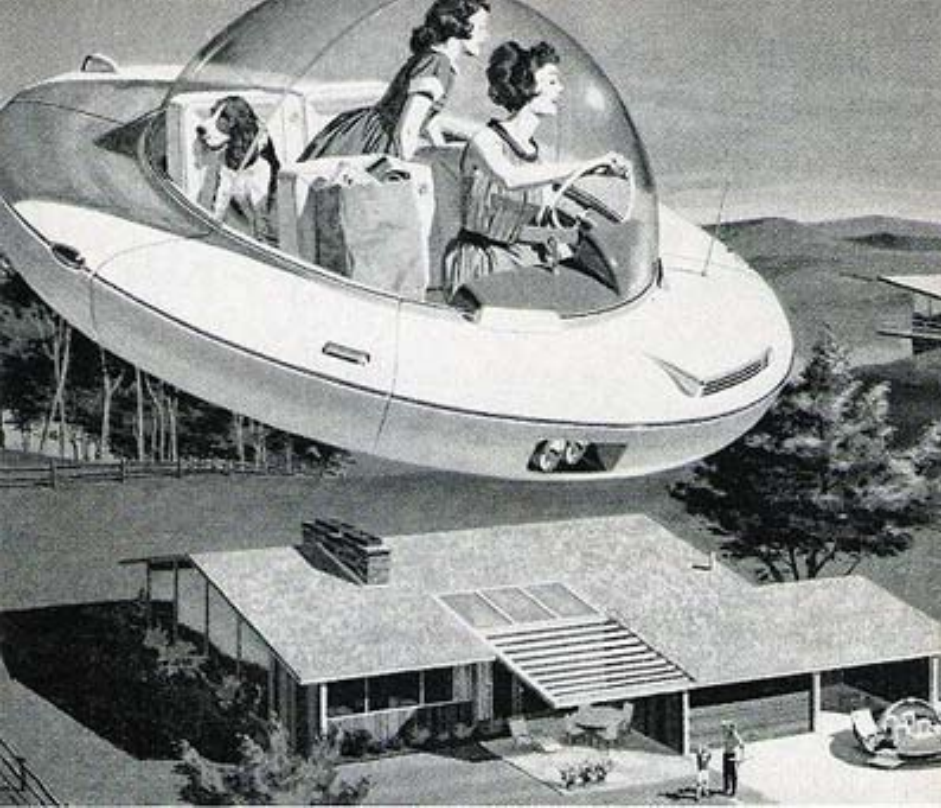
My interview with @OpenAtMicrosoft about #Opensource @DataUpCDL for #Excel (available today)
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Website	dataup.cdlib.org
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