Bi-Monthly Progress Reports To iDigBio Submitted By Active Thematic Collections Networks (TCNs)

July 2017

Reports included:

☒ InvertNet	☒ SCAN	☒ InvertEBase
☒ LBCC	☒ VACS	☒ SERNEC
☒ PALEONICHES	☒ FIC	☒ MiCC
☒ MaCC	☒ MHC	☒ EPICC
☒ NEVP	☒ GLI	

iDigBio is funded by a grant from the National Science Foundation's Advancing Digitization of Biodiversity Collections Program (Cooperative Agreement EF-1115210). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Submission #781

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by chdietri
Wednesday, July 13, 2016 - 16:52
130.126.115.31

TCN Name:
InvertNet: An Integrative Platform for Research on Environmental Change, Species Discovery and Identification

Person completing the report:
chdietri@illinois.edu

Progress in Digitization Efforts:
A major upgrade to the invertnet.org cyberinfrastructure is currently underway so no new whole-drawer images have been posted to the website since the previous report. Invertnet collaborators continue to capture whole drawer image sets and submit them, on removable hard drives sent via courier to INHS, and these continue to be uploaded to our storage system and backed up.

Share and Identify Best Practices and Standards (including Lessons Learned):
Nothing new to report.

Identify Gaps in Digitization Areas and Technology:
Nothing new to report.

Share and Identify Opportunities to Enhance Training Efforts:
Nothing new to report.

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:

Share and Identify Opportunities and Strategies for Sustainability:

Share and Identify Education and Outreach (E&O) Activities:

Other Progress (that doesn't fit into the above categories):

Attachment

Submission #779

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by cgries
Wednesday, July 13, 2016 - 15:56
144.92.62.242

TCN Name:
North American Lichens and Bryophytes: Sensitive Indicators of Environmental Quality and Change

Person completing the report:
cgries@wisc.edu

Progress in Digitization Efforts:
please see annual report summary attached

Share and Identify Best Practices and Standards (including Lessons Learned):
Please see annual report summary attached

Identify Gaps in Digitization Areas and Technology:
nothing to report

Share and Identify Opportunities to Enhance Training Efforts:
please see annual report summary attached

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:

Share and Identify Opportunities and Strategies for Sustainability:

Share and Identify Education and Outreach (E&O) Activities:

Other Progress (that doesn't fit into the above categories):

Attachment
LBCCsummaryReport.pdf

Annual Report – LBCC TCN – Lichens, Bryophytes and Climate Change

1 July, 2015 to 30 June, 2016

As of this writing the LBCC website (http://lbcc1.acis.ufl.edu/) shows over 4.2 million records, representing a combination of mobilizing existing digital records, added through the original LBCC, plus subsequent PEN's and inspiring and supporting 35 other institutions to join either the lichen or bryophyte portals or both. Hereafter we will break the numbers down, with an emphasis on results over the past year.

The Original LBCC TCN

The original TCN has WIS as the lead institution, and the following additional imaging institutions with their own budget: ALA, BRY, DUKE, F, FH, ILLS, LSU, MICH, MO, MSC, NY, OS, PH, UC, and WTU. The imaging institutions were responsible for their own collections and were to image specimen labels for 38 additional, smaller herbaria. We projected adding 2.3 million records to the lichen and bryophyte portals.

As of mid-June, 2016 over 1.95 million records were in the lichen portal and 2.27 million records in the bryophyte portal. Combined the total of over 4 million records reflects the original projection, but only 87% are currently transcribed (see below). Nearly 50% of all portal records are georeferenced.

Most (but not all) of our institutions implemented the following three procedures:

1) Image the specimen labels while recording the most up-to-date species name, unique bar code information, country and state (or province).

2) After OCR and NLP were run, fully transcribe each imaged label in Symbiota

3) Geo-reference specimens with sufficient information to do so (recent labels often have coordinates but many very old labels are impossible to geo-reference).

As of mid-June, 2016, over 700,000 label images were in the lichen portal and ~ 1.2 million label images were in the bryophyte portal. Total records transcribed exceed these numbers, as some institutions are keystroking and/or providing data from their "in house" database systems.

During the 2015-2016 reporting period 89,000 new records were added to the lichen portal, 160,000 transcribed and 140,000 geo-referenced. 182,000 records were added to the bryophyte portal, 334,000 transcribed and 137,000 geo-referenced.

The most active imaging institutions over the past year include: BRY, adding over 7000 transcribed lichen records; DUKE, adding over 8000 transcribed lichen records, F, adding almost 3000 transcribed lichen records and over 21,000 transcribed bryophyte records; FH adding over 42,000 transcribed bryophyte records; WTU, adding almost 3000 transcribed lichen records; PH, adding almost 10,000 transcribed lichen records and over 10,000 transcribed bryophyte records; ILLS, adding almost 8000 transcribed lichen records; MICH, adding over 85,000 transcribed bryophyte records, WIS, adding over 5000 transcribed lichen records and over 26,000 bryophyte records. Were DUKE (bryophytes), MO

(bryophytes), NY (both), and UC (bryophytes) to transcribe a substantial fraction of their imaged records, then we would probably have well over 90% of the imaged records transcribed for the whole TCN.

As of June, 2016, 50% of the records in the lichen portal were georeferenced while 28% of the bryophyte records are georeferenced.

Of the "smaller" LBCC institutions, the following have their respective Symbiota databases complete as far as we can go: AUA (lichens), BALT (both), BRIT (both), CUP (lichens), IDS (lichens), KSP (bryophytes), MAINE (both), MCTC (both), MONT (lichens), MOR (lichens), NCU (both), NDA (both). NEBK (both), NHA (both), OSC (both), RM (both), SBBG (lichens), TENN (lichens), "TLE" (lichens), UCONN (both), UMFK (lichens), UNM (bryophytes), URV (bryophytes), UWEC (bryophytes), UWSP (both), and VT (both). Over the second year of a no cost extension we will be working to complete as many as possible of the other LBCC smaller institutions. We have hired independent contractors at several institutions over the 2016 summer to make further progress.

PENs associated with LBCC

Four PENs are associated with the LBCC, involving the following institutions: CINC, COLO, FLAS, FTG, FTU, MIN, MU, USF, UWFP, and YPM. Altogether 301,740 records have been added to the two portals (28% lichens; 72% bryophytes). Almost all (299,214) have imaged their labels. Over 60% (181,218) are transcribed (94.8% lichens; 46.5% bryophytes) and over 26% are geo-referenced. Of the PEN institutions, the following are essentially complete: COLO (lichens), FLAS (both), FTG (both), FTU (both), MU (lichens), USF (both), UWFP (bryophytes), and YPM (both).

Other collections contributing to the portals

The lichen and bryophyte portals continue to attract collections that are already databased by other institutions not associated with the LBCC directly: 25 institutions with the lichen portal and 17 with the bryophyte portal. During the past year, CHSC, GRCH, OBI and UCSB were added to the lichen portal; and ACAD, CHSC, GRCH, LCDI, NMCR, OBI, SNM, SUCO, UCSB and UNCA were added to the bryophyte portal.

All 35 other institutions (this year's additions and previous years' additions) combined add over 900,000 records to the numbers showing on the LBCC web site. It would be over a million additional records if UBC had not withdrawn a year ago.

Participants and volunteers

Overall more than 500 people have registered with the two portals and actively transcribed or edited records. This number includes herbarium staff, paid student workers, and volunteers. Several collections participated in a WeDigBio event in October 2015 with the Field museum being particularly successful with ~180 participant on- and off-site, followed by 'behind scene' tours, news coverage of the event, and ~5000 records transcribed. The LBCC volunteer coordinator, Mari Roberts, was based at NY and her volunteers completed 16,959 bryophyte records across 8 institutions.

			Bryophytes					Lichens				
Acronym	Institution	LBCC Participant	pre LBCC number of records	LBCC estimates	total records	total transcribed	LBCC added	pre LBCC number of records	LBCC estimates	total records	total transcribed	LBCC added
ALA	University of Alaska Museum	yes	14175	39955	44937	44937	30762	7812	23000	29980	29980	22168
ARIZ	University of Arizona	yes	0	5000	3738	1782	3738	0	0	0	0	0
AUA	Auburn University	yes	0	0	1417	58	1417	0	0	1959	1844	1959
BALT	Towson University	yes	0	1000	2788	2079	2788	0	6000	6617	6515	6617
BING	University of New York Binghamton	yes	0	8000	19808	2930	19808	0	0	0	0	0
BRIT	Botanical Research Inststitute of Texas	yes	0	11468	14858	14649	14858	0	1925	984	958	984
BRY	Brigham Young University	yes	0	2000	3705	3572	3705	3604	78000	41008	40584	37404
CAS	California Academy of Science	yes	0	90000	48050	507	48050	0	17500	4065	180	4065
CHRB	Rutgers University	yes	0	5000	6838	6121	6838	0	1800	2670	2653	2670
CONN	University of Connecticut	yes	0	7421	7397	4439	7397	0	2356	2678	2460	2678
CUP	Cornell University	yes	0	0	0	0	0	130	6500	8133	4717	8003
DUKE	Duke University	yes	171725	60396	219335	197179	47610	12639	55632	65506	65275	52867
F	Field Museum of Natural History	yes	53022	34000	123382	68425	70360	35020	34000	62628	35156	27608
FH	Harvard University	yes	5144	130359	88644	87865	83500	3361	93745	61467	60879	58106
ID	University of Idaho	yes	0	5000	0	0	0	0	9800	8579	0	8579
IDS	Idaho State University	yes	0	126	0	0	0	0	1750	1641	1611	1641
ILL	University of Illinois, Urbana	yes	0	27000	25273	11912	25273	0		6714	450	6714
ILLS	Illinois Natural History Survey	yes	0		2743	2738	2743	0	11526	18628	18247	18628
IND	Indiana University	yes	0		1575	875	1575	0		128	56	128
KSP	Pittsburg State University (Kansas)	yes	0		5689	151	5689	0	0	0	0	0
LSU	Louisiana State University	yes	0	4500	4700	4688	4700	740	32000	31032	31029	30292
MAINE	University of Maine	yes	0	2000	2687	2675	2687	0	6500	9454	9136	9454
MCTC	Michigan Technological University	yes	0	14000	10964	10682	10964	0	2000	2961	2529	2961
MDKY	Morehead State University	yes	0	11944	0	0	0	0	0	0	0	0
MICH	University of Michigan	yes	2131	78000	127818	115452	125687	1625	36700	44715	43826	43090
MO	Missouri Botanical Garden	yes	228835	242062	328556	218331	99721	0	0	0	0	0
MONT	Montana State University	yes	0	0	0	0	0	0	8000	8496	8450	8496
MOR	Morton Arboretum	yes	0	1000	489	489	489	455	19000	16661	16579	16206
MSC	Michigan State University	yes	0	16000	22243	3737	22243	0		105476	105470	105476
NCU	University of North Carolina Chapel Hill	yes	445	4500	3476	3390	3031	4866	936	5435	5356	569
NDA	North Dakota State University	yes	0	0	3258	3096	3258	0	5000	5158	4975	5158
NEB	University of Nebraska	yes	0	11900	10702	7832	10702	0	16000	16838	11053	16838

NEBK	University of Nebraska at Kearny	yes	0	0	3827	3708	3827	0	178	198	183	198
NHA	University of New Hampshire	yes	0	500	1167	1093	1167	0	40	633	595	633
NO	Tulane University	yes	0	2500	0	0	0	0	0	0	0	0
NY	New York Botanical Garden	yes	344047	50000	389196	319690	45149	51943	135000	121422	70360	69479
OS	Ohio State University	yes	0	11300	0	0	0	0	13180	14361	3082	14361
OSC	Oregon State University	yes	0	3000	16663	16663	16663		3000	21110	20865	21110
PH	Philadelphia Academy of Science	yes	12473	48401	47724	44560	35251	587	24763	18026	16143	17439
RM	University of Wyoming	yes			5613	5544	5613			562	475	562
SBBG	Santa Barbara Botanic Garden	yes	0	0	0	0	0	5000	5000	33009	32768	28009
SFSU	San Francisco State University	yes	0	5264	2971	0	2971	0	13018	4416	3441	4416
SIU	Southern Illinois University	yes	0	26000	19105	8435	19105	0				0
SRP	Boise State University	yes	0	0	817	1	817	11395	5000	23107	10899	11712
TENN	University of Tennessee	yes	0	115000	71332	50430	71332	0	8000	7935	7041	7935
UC	University of California, Berkeley	yes	860	114088	99959	23233	99099	1505	28000	47249	45640	45744
UMFK	University of Maine at Ft. Kent	yes	0	0	0	0	0	387	387	46970	46970	46583
UNAF	University of Northern Alabama	yes	32	3000	1567	1561	1535	0	0	0	0	0
UNLV	University of Nevada Las Vegas	yes	0	3500	3154	1022	3154	0	280	169	1	169
UNM	University of New Mexico	yes	0	1000	1920	1917	1920	0	0	0	0	0
URV	University of Richmond	yes	0	450	441	440	441	0	1450	1895	238	1895
UVSC	Utah Valley University	yes	0				0	0	89			0
UWEC	University of Wisconsin Eau Claire	yes	0	0	500	486	500	0	10000	1180	797	1180
UWSP	University of Wisconsin Stevens Point	yes	0	2187	4067	3852	4067	0	1500	1749	1522	1749
VT	University of Vermont	yes	0	17637	17682	13477	17682	0	73	5081	2862	5081
WIS	University of Wisconsin	yes	0	44150	35210	33354	35210	6475	112780	116143	105064	109668
WTU	University of Washington	yes	51482	30000	74141	51424	22659	27517	0	30370	30337	2853
WVA	West Virginia University	yes	0	20000	3974	481	3974	0	15000	8220	7052	8220
WWB	Western Washington University	yes	0	2638	5213	2629	5213	0	0	5336	962	5336
	LBCC Participants	yes Total	884371	1313246	1941313	1404591	1056942	175061	846408	1078752	917265	903691

CINC	**University of Cincinnati**	**PEN**			**20618**	**11941**	**20618**			**6938**	**4827**	**6938**
COLO	University of Colorado	PEN			63164	16308	63164			50150	49659	50150
FLAS	University of Florida	PEN			23452	23224	23452			11601	11418	11601
FSU	Florida State University	PEN					0					0
FTG	Fairchild Tropical Botanic Garden, Florida	PEN			425	425	425			138	138	138
FTU	University of Central Florida	PEN			791	791	791			750	750	750
MIN	University of Minnesota	PEN			60142	12963	60142			148084	144851	148084
MU	Willard Sherman Turrell Herbarium, Miami University	PEN			11932	6573	11932			8424	6844	8424
SPMS	University of South Florida	PEN					0					0
UARK	University of Arkansas	PEN			2790	0	2790					0
USF	University of South Florida	PEN			2879	2758	2879			1450	1442	1450
UWFP	University of West Florida	PEN			304	304	304					0
YPM	YU Yale University, Peabody Museum of Natural History	PEN			37057	31979	37057			5041	4972	5041
	PEN	Total	0	0	223554	107266	223554	0	0	232576	224901	232576
ACAD	Acadia University	non-US			3571	3474	3571					0
BG	University Museum of Bergen	non-US					0			68260	66868	68260
C	Natural History Museum of Denmark: The Herbarium of Lichens	non-US					0			8088	8035	8088
CANL	Canadian Museum of Nature	non-US					0			31102	30412	31102
CMN	Canadian Museum of Nature	non-US			11227	11129	11227					0
NBM	New Brunswick Museum	non-US					0			10123	10026	10123
O	Botanical Museum, Oslo, Norway	non-US					0			168316	166254	168316
QFA	Université Laval, Canada. Québec. QUÉBEC.	non-US			17170	17170	17170			20457	20457	20457
SQB	Société québécoise de bryologie	non-US			3253	3226	3253					0
UPS	Uppsala University Exsiccati	non-US					0			26266	24142	26266
	International Collections	**Total**	**0**	**0**	**35221**	**34999**	**35221**	**0**	**0**	**332612**	**326194**	**332612**
ASU	Arizona State University	no					0			118606	117533	118606
BISH	Bishop Museum Hawaii	no					0					0
CHSC	California State University, Chico	no			4355	4297	4355			1582	1576	1582
EVE	Evergreen State College	no			304	304	304			390	388	390
HAW	University of Hawaii	no					0			6652	1701	6652
ISC	Iowa State University	no					0			5081	4344	5081
KANU	University of Kansas	no					0			20385	20385	20385
KE	Kent State University	no			14020	14020	14020					
LCDI	Luther College, Iowa DECORAH	no			93	93	93					0
LEDLIE	Patricia Ledlie Herbarium (private collection)	no			1402	1402	1402					0

MIL	Milwaukee Public Museum	no					0			3240	2892	3240
NEBC	New England Botanical Club	no					0					0
NMCR	New Mexico State University	no			2557	2554	2557					0
NYS	New York State Museum	no			32452	31756	32452			8935	8927	8935
OBI	California Polytechnic State University	no					0			198	194	198
OMA	University of Nebraska at Omaha	no					0			19034	18976	19034
SNM	Western New Mexico University	no			1474	1466	1474					0
TLE	Ted Esslinger private collection	no								26389	25879	26389
UCR	University of California, Riverside	no					0			16041	16036	16041
UCSB	University of California, Santa Barbara	no					0			259	209	259
UNCA	University of North Carolina at Asheville	no			158	158	158					0
US	Smithsonian Institution	no			14145	12753	14145			72828	65593	72828
USU	Utah State University	no			2201	2194	2201			486	484	486
UTC	Utah State University	no					0					0
VPI	Virginia Polytechnic Institute and State University	no					0			759	758	759
VSC	Valdosta State University	no			4069	3771	4069					0
	Non-LBCC collections	**Total**	**0**	**0**	**77230**	**74768**	**77230**	**0**	**18935**	**300865**	**285875**	**300865**
		Grand Total	**884371**	**1313246**	**2277318**	**1621624**	**1392947**	**175061**	**865343**	**1944805**	**1754235**	**1769744**

Published on *iDigBio* (https://www.idigbio.org)

Submission #772

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by BruceL
Sunday, July 10, 2016 - 12:00
24.124.69.244

TCN Name:
Digitizing Fossils to Enable New Syntheses in Biogeography- Creating a PALEONICHES

Person completing the report:
blieber@ku.edu

Progress in Digitization Efforts:
At the University of Kansas we continue to focus on databasing our Pennsylvanian Cnidaria collections. We are getting close to completing these and when we are done we will move on to Bryozoa.

Jon Hendricks is in the process of moving from his position at San Jose State University to a new position at the Paleontological Research Institution and will be starting at the PRI soon. He continues to upload information on fossils to the Digital Atlas of Ancient Life. He has currently been focusing on Neogene material.

Share and Identify Best Practices and Standards (including Lessons Learned):
N/A

Identify Gaps in Digitization Areas and Technology:
N/A

Share and Identify Opportunities to Enhance Training Efforts:
Regarding the KU portion of the project another graduate student has recently begun work (May 2016) and has received training in how to database our collections using Specify and is beginning to undergo training in georeferencing. One of our student databasers Brittney Oleniacz received her degree and will begin a PhD in Geology at KU and will continue databasing part time for us. We also have a new collections manager, Julien Kimmig, who started in June 2016. He has thus far received training in how to use Specify and is becoming proficient in the use of this program. He is beginning his training in georeferencing and to further this applied to and was accepted into a georeferencing workshop to be held at NCEAS in October.

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
Nothing new to report at this time.

Share and Identify Opportunities and Strategies for Sustainability:

Nothing new to report at this time.

Share and Identify Education and Outreach (E&O) Activities:
Nothing new to report at this time.

Other Progress (that doesn't fit into the above categories):
At the University of Kansas graduate student Kayla Kolis, supported by the grant, has been focusing on analyzing the paleobiogeography of Late Paleozoic fossil cephalopods using a GIS framework. This work is currently in progress.

Attachment

Submission #773

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by bthiers
Monday, July 11, 2016 - 09:42
69.74.186.251

TCN Name:
The Macrofungi Collection Consortium: Unlocking a Biodiversity Resource for Understanding Biotec Interactions, Nutrient Cycling and Human Affairs

Person completing the report:
barbara.thiers@gmail.com

Progress in Digitization Efforts:
As of 1 Jul 2016, approximately 1,203,849 items have been imaged for this project, including 730,600 specimen labels and 419,600 supplemental images (e.g., specimen photographs, drawings, field notes). Approximately 1,150.200 items have been imaged for this project, including 730,600 specimen labels and 419,600 supplemental images (e.g., specimen photographs, drawings, field notes).

The major product of the project is the MycoPortal. To date 2,388,254 specimen records have been added to the Mycoportal during the Macrofungi grant (excluding those records for Microfungi added by the Microfungi Collection Consortium beginning in July 2015). This total includes the approximately 1 million records that existed before the project but were added after the establishment of the MycoPortal, and records from non-participating institutions who added their records voluntarily, and from PEN grant recipients. 207,893 new records were added in year 4. The Portal contains about 70,000 skeletal records (i.e. locality data yet to be added); and 299,000 records have geocoordinates. The MycoPortal also has been populated with images. Approximately 730,000 of these are specimen labels, 130,700 are images of specimens, 88,600 are specimens as living fungi, and 198,000 are field notes and spore prints). The Mycoportal also contains 42 checklists, including a checklist for North American fungi with more than 15,000 entries, and approximately 8000 images of living fungi contributed by non-funded participants.

Share and Identify Best Practices and Standards (including Lessons Learned):
Nothing to report.

Identify Gaps in Digitization Areas and Technology:
Nothing to report.

Share and Identify Opportunities to Enhance Training Efforts:
Nothing to report.

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
Nothing to report.

Share and Identify Opportunities and Strategies for Sustainability:
In May 2016 PIs Thiers and Halling met with Dr. Tom May, a member of the International Mycological Association nomenclature committee to discuss the internationalization of the MycoPortal. We agreed to proposed a workshop/discussion session at the next IMA meeting (Puerto Rico, 1918) to discuss.

Share and Identify Education and Outreach (E&O) Activities:
Dr. Betsy Arnold (ARIZ) hosted 105 high school students for 5-hour workshops on fungal biodiversity. They represent an urban, Hispanic-serving high school. The students engaged in laboratory and Herbarium activities to acquaint them with fungal diversity. They then collected samples of plant-associated fungi and over the course of one month, worked with their teachers and my team to extract DNA, run PCR, and identify their fungi. The results of sequencing and training on phylogenetic trees were conveyed in the classroom. Assessment results indicated significant improvement in students' ability to explain 'what is a fungus?' and 'why are fungi important?', as well as the scale of fungal biodiversity and the ways in which Herbaria are used.

Other Progress (that doesn't fit into the above categories):
During the past year, 11 presentations have been given to a scientific audience about the project and nine publications by project participants used data derived from the project.

There were 42 Presentations, demonstrations, publications (including blogs), tours and workshops based on the project have been presented or published for a general audience during the past year

Attachment

Published on *iDigBio* (https://www.idigbio.org)

Submission #783

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by psweney
Thursday, July 14, 2016 - 10:19
130.132.173.131

TCN Name:
Mobilizing New England Vascular Plant Specimen Data to Track Environmental Change

Person completing the report:
p_sweeney@att.net

Progress in Digitization Efforts:
Progress in Digitization Efforts: Capture of collection level-information (i.e., “pre-capture”) is complete. Approximately 800,000 specimens have been pre-captured -- with at least current identification captured. As part of the primary digitization phase, approximately 709,361 records and 730,369 images have been captured. We have begun to capture phenology data using new functionality in Symbiota.

Share and Identify Best Practices and Standards (including Lessons Learned):
nothing to report

Identify Gaps in Digitization Areas and Technology:
nothing to report

Share and Identify Opportunities to Enhance Training Efforts:
nothing to report

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
We continue to collaborate with, iPlant, the FilteredPush project, the Symbiota team, and iDigBio. In collaboration with Ed Gilbert, we recently implemented trait attribute scoring functionality within Symbiota and are incorporating new functionality to track specimen usage.

Share and Identify Opportunities and Strategies for Sustainability:
nothing to report

Share and Identify Education and Outreach (E&O) Activities:
nothing to report

Other Progress (that doesn’t fit into the above categories):
nothing to report

Attachment

Source URL: https://www.idigbio.org/node/564/submission/783

Published on *iDigBio* (https://www.idigbio.org)

Submission #777

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by neilscobb
Tuesday, July 12, 2016 - 13:03
24.121.65.222

TCN Name:
Southwest Collections of Arthropods Network (SCAN): A Model for Collections Digitization to Promote Taxonomic and Ecological Research

Person completing the report:
neilscobb@gmail.com

Progress in Digitization Efforts:
see attached

Share and Identify Best Practices and Standards (including Lessons Learned):
see attached

Identify Gaps in Digitization Areas and Technology:
see attached

Share and Identify Opportunities to Enhance Training Efforts:
see attached

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
see attached

Share and Identify Opportunities and Strategies for Sustainability:
see attached

Share and Identify Education and Outreach (E&O) Activities:
see attached

Other Progress (that doesn't fit into the above categories):
see attached

Attachment
SCAN_July_2016.docx

Source URL: https://www.idigbio.org/node/564/submission/777

Southwest Collections of Arthropods Network Update

July 12, 2016

Neil Cobb

Progress in Digitization Efforts:

We have exceeded our quota for digitizing labels from pinned specimens, the original goal was to obtain 736,736 records from the original 10 institutions and 958,736 total records when we included the three PEN projects. T**able 1** presents four sets of statistics derived from our data portal as of May 9, 2016. These contain the following data: 1) the original institutions that are funded by the NSF-ADBC program, 2) the three additional PEN grants; 3) institutions that have entered data into the SCAN portal but not funded by the NSF-ADBC program; 4) the total of these first three categories; 5) arthropod records produced by InvertEBase, and 6) the total records in the SCAN portal including museums that provide SCAN with an IPT or API to harvest their data and also provide data to aggregators GBIF and/or iDigBio. The purpose of serving this last category of data is to provide as complete as information as possible to persons that are considering research projects. We do not serve all arthropod data available on aggregator portals, we focus on providers that have North American occurrence data that we have established an IPT link and the provider gives us explicit permission to serve their data. The only exception is North American spider data from GBIF.

Table 1. Number of specimen records digitized and associated summary statistics. From http://symbiota4.acis.ufl.edu/scan/portal/index.php . SCAN-funded numbers refers to the 10 original museums receiving ADBC funding. SCAN PEN includes the three additional museums. SCAN non-funded numbers include 37 museums contributing cataloged specimen data and non-cataloged moth specimen data from 33 collections (5 private collections and 28 public museums). InvertEBase numbers refer to arthropod records contributed by the InvertEBase TCN. Total Served includes all SCAN data and other datasets with North American arthropod records (e.g., GBIF, Tri-Trophic TCN, iNaturalist).

	SCAN Funded	SCAN PEN	SCAN non-funded	TOTAL SCAN	InvertEBase	Total Served
Specimens	1,118,546	980,294	1,640,293	3,739,133	287,746	8,488,506
Georeferenced	950,314	618,624	1,177,666	2,746,604	78,460	6,424,938
Imaged	116,023	537	130,687	247,247	0	374,546
Species ID	608,916	348,665	800,563	1,758,144	79,643	4,362,314
Families	2,801	2,213	2,279	2,661	767	3,264
Genera	12,747	8,493	17,399	14,088	6,277	18,496
Species	29,753	25,333	46,684	56,646	19,172	95,021
Total Taxa	30,876	25,894	47,247	57,885	19,193	98,070

Although we have technically reached our goal for the 13 SCAN museums, we have not thoroughly reviewed all records produced by SCAN-funded museums to determine how many of those strictly ground-dwelling arthropods, but we have 1,118,546 records to date for target ground-dwelling arthropod taxa and thus we expect to exceed our project goal. Ten museums are in a one-year no-cost extension and the one PEN museum (BYU) is in their second year. We estimate that we will digitize at least 200,000 more ground-dwelling arthropod specimens by the end of the project and over 1.7 million total specimens for the original 10 museums. The three additional PEN grants (Harvard, BYU, and Ohio State University) are on track to meet their quotas. For the purpose of the bi-monthly reports I lumped all data provided by PEN institutions. For example, Ohio State University provided data prior to becoming a PEN collaborator and they have produced 415,076 records to date, of which only ~48,000 records represent the two focal taxa (Carabidae and Tenbrionidae) that they have targeted in their PEN project. We have just added a fourth PEN project, OrthopNet (ANSP), which will focus on Acrididae (grasshoppers).

A subset of SCAN museums are creating high-resolution images and three museums are creating low resolution images that include the specimen and labels in the same image. Table 2 lists the number of images posted on SCAN by participating museums. Our goal was to produce 15,125 high-resolution images suites. An image suite consists of 1-3 images representing different aspects of a specimen. This will translate into approximately 40,000 images. Three museums are producing low-resolution images (University of Hawaii, University of Arizona, and Texas Tech University). We have started to host iNaturalist records and 77% of those records have at least one image (145,484 total images).

Share and Identify Best Practices and Standards (including Lessons Learned):
We are identifying best practices on a weekly basis and sharing those with respective people within SCAN http://scan1.acis.ufl.edu/ .
Identify Gaps in Digitization Areas and Technology:
We need to harvest additional data (i.e. beyond SCAN) to better understand the biogeography of arthropod taxa. We are meeting this need by incorporating additional collections into the SCAN database, including observational records from iNaturalist.
Share and Identify Opportunities to Enhance Training Efforts: Nothing new to report, we are working on activities already described in previous reports.
Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
We are primarily working with other Symbiota TCNs.
Share and Identify Opportunities and Strategies for Sustainability:
We have a sustainability plan for Colorado State University, they are finished using their NSF funding http://scan1.acis.ufl.edu/content/sustainability .

Table 2. Number of images posted on SCAN portal from SCAN museums that are focused on producing high-resolution images of specimens and non-ADBC funded museums. Data are recorded from http://symbiota1.acis.ufl.edu/scan/portal/imagelib/photographers.php

Institution	# Images
Arizona State University Hasbrouck Insect Collection (ASU-ASUHIC	1
C.P. Gillette Museum of Arthropod Diversity (CSU-CSUC	88
Colorado Plateau Museum of Arthropod Biodiversity (NAUF-CPMAB	2,300
Denver Museum of Nature & Science (DMNS-DMNS	193
Entomology Collection at the Natural History Museum of Utah (UMNH-ENT	1,500
Essig Museum of Entomology (EMEC-EMEC	2,655
Florida Museum of Natural History, McGuire Center for Lepidoptera and Biodiversity	148
Hymenoptera Institute Collection (UKY-HIC-HIC	27,067
Museum of Southwestern Biology, Division of Arthropods (UNM-MSBA	804
New Mexico State Collection of Arthropods (NMSU-NMSU	5,791
Ohio State C.A. Triplehorn Insect Collection (OSU-OSU	91
SDSU Terrestrial Arthropods Collection (SDSU-TAC	33
Texas Tech University - Invertebrate Zoology (TTU-TTU-Z	2,035
The Albert J. Cook Arthropod Research Collection (MSU-MSUC	109,266
UAM Insect Collection (UAM-UAM_ENT	4,445
United States National Museum, Entomology Collections (USNM-USNMENT	230
University of Arizona Insect Collection (UA-UAIC	81,690
University of Colorado Museum of Natural History Entomology Collection (UCB-	287
University of Hawaii Insect Museum (UHIM-UHIM	10,078
University of Kansas Natural History Museum Entomology Division (KU-SEMC	1
University of Tennessee at Chattanooga (UTC-UTCI	88
University of Vermont Zadock Thompson Zoological Collection-Invertebrates	2,300
Virginia Polytechnic Institute and State University Insect Collection (VPI-VTEC	193
Yale Peabody Museum, Entomology Division (YPM-ENT	1,500
iNaturalist	145,484

Other Progress (that doesn't fit into the above categories): We continue to provide North American data we have obtained from other sources to increase the quantity of data available to SCAN users. We have grown from serving 10 collection datasets to serving 83 data sets through SCAN (**Table 3**). There are five categories of data sets listed; 1) SCAN ADBC funded collections, including PEN projects; 2) SCAN collaborator collections that do not received ADBC funding, 3) Moth data collected from non-cataloged specimens, 4) Aggregator collections

(Data served directly to iDigBio/GBIF but also on SCAN) and 5) Arthropod records produced through InvertEBase. These latter two categories will greatly increase the usability of the existing SCAN data, especially understanding species distributions and more complete species lists. We are re-building our data harvested from North American data from GBIF and are in the process of hosting data from other non-TCN arthropod data sets that have been harvested by iDigBio.

Table 3 List of records by SCAN and SCAN PEN collection being served on SCAN data portal.

Collection	**Specimens**
Arizona State University Hasbrouck Insect Collection	74,891
C.P. Gillette Museum of Arthropod Diversity	85,143
Colorado Plateau Museum of Arthropod Biodiversity	58,207
Denver Museum of Nature & Science	127,364
Museum of Southwestern Biology, Division of Arthropods	36,740
New Mexico State Collection of Arthropods	80,362
Texas A&M University Insect Collection	307,674
Texas Tech University - Invertebrate Zoology	171,552
University of Arizona Insect Collection	95,777
University of Colorado Museum of Natural History Entomology Collection	80,836
Academy of Natural Sciences, Entomology Collection	1,983
Brigham Young University Arthropod Museum	69,584
Museum of Comparative Zoology, Harvard University	487,397
Ohio State C.A. Triplehorn Insect Collection	421,330

	Table 3 (Continued)	
	SCAN collaborator collections (not funded through ADBC SCAN Project)	**Specimens**
1	Yale Peabody Museum, Entomology Division	195,408
2	University of Hawaii Insect Museum	109,918
3	Santa Barbara Museum of Natural History Entomology Collection	107,223
4	The Albert J. Cook Arthropod Research Collection	80,726
5	Scarab Central: World Scarabaeoidea	37,999
6	Entomology Collection at the Natural History Museum of Utah	33,948
7	Hymenoptera Institute Collection	16,547
8	University of Tennessee at Chattanooga	11,761
9	R. M.Bohart Museum of Entomology	11,653
10	SDSU Terrestrial Arthropods Collection	4,240
11	University of Georgia Collection of Arthropods	3,343
12	University of Vermont Zadock Thompson Zoological Collection-	3,030
13	Virginia Polytechnic Institute and State University Insect Collection	3,006
14	The Purdue Entomological Research Collection	2,917
15	United States National Museum, Entomology Collections	2,498
16	Academy of Natural Sciences, Entomology Collection	1,983
17	National Museums of Kenya, Invertebrate Section	1,055
18	Dugway Proving Ground Natural History Collection	879
19	M. Andrew Johnston Collection	799
20	Western Washington University Insect Collection	656
21	Gregory P. Setliff Collection - Kutztown University	577
22	University of Delaware Insect Research Collection	563
23	Utah Department of Agriculture and Food Entomology Collection	425
24	Oregon State Arthropod Collection	420
25	Denver Botanic Gardens Collection of Arthropods	300
26	Milwaukee Public Museum, Invertebrate Zoology-Insect Collection	79
27	BLM Mother Lode Field Office: The Bees of Pine Hill Preserve	64
28	Florida Museum of Natural History, McGuire Center for Lepidoptera and	44
29	Ed V Gage Collection	1
30	Wichita State University Collection	1
	Collections set up in SCAN but no records to date	**Specimens**
1	BLM Mother Lode Field Office: The Bees of Pine Hill Preserve	0
2	Clemson University Arthropod Collection	0
3	ColecciÃ³n ZoolÃ³gica de la Universidad AutÃ³noma de QuerÃ©taro	0
4	Enns Entomology Museum	0
5	Florida Museum of Natural History, McGuire Center for Lepidoptera and Biodiversity	0
	Table 3 (Continued)	

6	LTER Central Arizona Phoenix Arthropod Collection	0
7	M. Andrew Johnston Collection	0
8	The Mississippi Entomological Museum	0
9	University of Minnesota Insect Collection	0
10	University of Nevada, Reno, Museum of Natural History	0
11	Wichita State University Collection	0
12	William F. Barr Entomological Museum	0
13	Wisconsin Insect Research Collection	0
	Collections from Moth specimen survey (Chris Grinter - Coordinator)	
1	Moth Observations Database: UC Berkeley	10,580
2	Moth Observations Database: UC Davis	5,145
3	Moth Observations Database: Denver Museum of Nature & Science	4,118
4	Moth Observations Database: LA County Museum of Natural History	4,097
5	Moth Observations Database: California Academy of Sciences	2,847
6	Moth Observation Database: Field Museum of Natural History	2,319
7	Moth Observations Database: California Department of Food and Agriculture	1,646
8	Moth Observations Database: Canadian National Collection	751
9	Moth Observations Database: Tom Dimock Personal Collection	689
10	Moth Observations Database: National Museum of Natural History	567
11	Moth Observations Database: UC Riverside	335
12	Moth Observations Database: Paul and Sandy Russel Personal Collection	315
13	Moth Observations Database: University of Connecticut	235
14	Moth Observation Database: Santa Barbara Museum of Natural History	211
15	Moth Observations Database: American Museum of Natural History	182
16	Moth Observations Database: San Diego Natural History Museum	155
17	Moth Observations Database: Peter Jump Personal Collection	63
18	Moth Observation Database: Kansas State University	61
19	Moth Observation Database: David L. Wikle Personal Collection	49
20	Moth Observations Database: Colorado State University, Fort Collins	25
21	Moth Observations Database: Chuck Harp Personal Collection	1
22	Moth Observations Database: Illinois Natural History Survey	1

	Table 3 (Continued)	
	Aggregator Collections (Data served directly to iDigBio/GBIF but also on SCAN)	**Specimens**
1	University of Kansas Natural History Museum Entomology Division	1,250,770
2	Tri-Trophic TCN	759,378
3	AntWeb	562,638
4	UAM Insect Collection	250,054
5	North American Bee Collections	351,520
6	University of Alberta Museums Entomology Collection (UASM)	303,837
8	Tri-Trophic Interactions - Texas A&M	139,170
9	GBIF NA spiders Extract without Location Information	65,362
10	GBIF NA spiders Extract with Location Data	56,263
	InverteBase TCN Records	**Specimens**
1	Field Museum of Natural History Collection of Insects, Arachnids, and	268,672
2	Cleveland Museum of Natural History Invertebrate Zoology Collection	12,686

Published on *iDigBio* (https://www.idigbio.org)

Submission #784

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by mikewebster
Tuesday, July 19, 2016 - 09:15
128.84.6.98

TCN Name:
Developing a Centralized Digital Archive of Vouchered Animal Communication Signals

Person completing the report:
msw244@cornell.edu

Progress in Digitization Efforts:
Thus far in 2016, our TCN has digitized 2,144 audio recordings associated with specimens at various institutions. Over half of these have been anuran recordings, including over 200 recordings of frogs digitized since the last report and associated with physical specimens at the Texas Natural History Collections. During the past two months we have also digitized over 200 recordings of birds associated with specimens at the Museu Paraense Emilio Goeldi.

Share and Identify Best Practices and Standards (including Lessons Learned):
The Macaulay Library uses an audio archival standard of 96kHz 24-bit, the audio standard recommended by Sound Directions: Best Practices for Audio Preservation <http://www.dlib.indiana.edu/projects/sounddirections/papersPresent/index.shtml> and a standard adopted by leading audio archival institutions such as the Library of Congress and The British Library.

Identify Gaps in Digitization Areas and Technology:
Nothing to report

Share and Identify Opportunities to Enhance Training Efforts:
Nothing to report

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
Nothing to report

Share and Identify Opportunities and Strategies for Sustainability:
Nothing to report

Share and Identify Education and Outreach (E&O) Activities:
Nothing to report

Other Progress (that doesn't fit into the above categories):

Nothing to report

Attachment

Source URL: https://www.idigbio.org/node/564/submission/784

Published on *iDigBio* (https://www.idigbio.org)

Submission #782

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by tkarim
Wednesday, July 13, 2016 - 17:25
128.138.65.130

TCN Name:
Fossil Insect Collaborative: A Deep-Time Approach to Studying Diversification and Response to Environmental Change

Person completing the report:
talia.karim@colorado.edu

Progress in Digitization Efforts:
VMNH is providing a full data set (specimen records and image metadata) for all invertebrate fossil specimens from Solite Quarry. Specimen records that do not yet have images associated with them are being shared as well. VMNH is publishing this data via VertNet's IPT, who make the data available to aggregators. VMNH also sends a notice to iDigPaleo and iDidBio when updated versions are available.

The INHS data is in the process of being migrated into Symbiota and Karim will be checking in with them over the summer on this task. We hope to have their data in iDigPaleo and iDigBio this fall.

Yale, VMNH, CU-Boulder, and MCZ are continuing to database and image on a regular basis.

We have purchased as server to host iDigPaleo at CU-Boulder. It has been setup and we plan to migrate and launch iDigPaleo this summer.

Share and Identify Best Practices and Standards (including Lessons Learned):
Members at Yale have recognized that imaging has gone much more slowly than anticipated.

Identify Gaps in Digitization Areas and Technology:
Nothing to report

Share and Identify Opportunities to Enhance Training Efforts:
Nothing to report

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
Addition of WIS-TCN to iDigPaleo starting July 1, 2016 - includes data and educational materials. University of Colorado and Yale will both be digitizing as part of this TCN as well.

Talia Karim and Erica Clites (EPIC TCN) had a meeting to discuss TCN logistics. The Fossil Insect

TCN is now using jot forms to collect data for the bi-monthly reports as they seem to work well for EPIC. Karim and Clites are planning to have more regular (maybe semi-annual) meetings to share ideas and progress. They would like to include members of the new Cretaceous World TCN as well if they are interested.

Share and Identify Opportunities and Strategies for Sustainability:

Share and Identify Education and Outreach (E&O) Activities:
We continue to connect with the public and researchers via social media. We recently did a series of posts focusing on graduating students who have worked on the TCN project.

Other Progress (that doesn't fit into the above categories):
Our group is continuing to share images with researchers all over the world. The MZC has shared images of Mirotelenomus angulatus (Hymenoptera: Scelionidae) with Dr. Virgilio Caleca, from the University of Palermo and shared image of the holotype of Eclytus lutatus (Hymenoptera: Ichneumonidae) with Ms. Tamara Spasojevic, from the University of Bern.

Presentation focusing on our iDIgPaleo portal and the ePANDDA project at the Society for the Preservation of Natural History Collections Annual Meeting (June 22, 2016). Talk by C. Norris, coauthors Susan Butts, Talia Karim, and Dena Smith.

Attachment

Source URL: https://www.idigbio.org/node/564/submission/782

Published on *iDigBio* (https://www.idigbio.org)

Submission #785

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by chrisneefus
Tuesday, July 19, 2016 - 16:04
108.49.58.55

TCN Name:
The Macroalgal Herbarium Consortium: Accessing 150 Years of Specimen Data to Understand Changes in the Marine/Aquatic Environment

Person completing the report:
Chris.neefus@unh.edu

Progress in Digitization Efforts:
During the this 2 month reporting period, the MHC created 13,019 new record, imaged 56,259 herbarium sheets, transcribed 26,920 labels and geo-referenced 31,528 specimens.

Share and Identify Best Practices and Standards (including Lessons Learned):
nothing to report

Identify Gaps in Digitization Areas and Technology:
A number of our digitizing centers report that using the new image ingestion appliance is far more cumbersome than the previous ftp method for uploading images. It also seems to be prone to crashing part way through when uploading large batches of images and there isn't an easy way to determine which if any images were actually uploaded.

Share and Identify Opportunities to Enhance Training Efforts:
Several of the digitizing institutions have hired and trained new digitizers for the summer.

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
nothing to report

Share and Identify Opportunities and Strategies for Sustainability:
nothing to report

Share and Identify Education and Outreach (E&O) Activities:
nothing to report

Other Progress (that doesn't fit into the above categories):
We created a subaward to Northern Arizona University, where Ben Brandt is making modifications that will allow the spacial analysis module that was developed for the Atlas of Living Austrailia to be incorporated into Symbiota portals.

Attachment
Macroalgae TCN Digitization Summary 07-19-2016.pdf

Source URL: https://www.idigbio.org/node/564/submission/785

				Percent Complete				
Digitizing Institution	**Start**	**Collections**	**Specimens**	**Records Created**	**On Portal**	**Imaged**	**Transcribed**	**Geo-referenced**
University of New Hampshire	Year 1	10	131,837					
New York Botanical Garden	Year 1	5	170,076					
University of North Carolina	Year 1	7	56,995					
University of Michigan	Year 1	5	95,339					
University of Washington	Year 1	3	36,098					
Duke University	Year 1	1	22,014					
University of Alaska SE	Year 1	1	9,889					
Bishop Museum	Year 1	1	65,000					
Field Museum	Year 1	1	48,184					
Oregon State University	Year 1	1	12,120					
University of Guam	Year 1	1	13,600					
University of California - Berkeley	Year 2	9	228,862					
University of Hawaii	Year 2	1	4,730	1	1	0	1	0
Harvard University	Year 2	1	150,000	0	0	0	0	0
Academy of Natural Sciences	Year 3	1	36,303					
University of Vermont	Year 3	1	3,500					
	Totals	49	1,084,547	757,473	729,824	613,305	509,319	396,047
				1	1	1	0	0

Submission #778

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by kmcameron
Tuesday, July 12, 2016 - 13:39
128.104.98.139

TCN Name:
Great Lakes Invasives: Documenting the Occurrence through Space and Time of Aquatic Non-indigenous Fish, Mollusks, Algae, and Plants Threatening North America's Great Lakes

Person completing the report:
kmcameron@wisc.edu

Progress in Digitization Efforts:
See attached pdf for total as of July 11, 2016

Share and Identify Best Practices and Standards (including Lessons Learned):
Nothing to report

Identify Gaps in Digitization Areas and Technology:
Nothing to report

Share and Identify Opportunities to Enhance Training Efforts:
Nothing to report

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:

Share and Identify Opportunities and Strategies for Sustainability:

Share and Identify Education and Outreach (E&O) Activities:

Other Progress (that doesn't fit into the above categories):

Attachment
GLICollStats_07082016.pdf

Great Lakes Invasives Portal Collection Statistics (as of 07/11/2016)

Plants (US institutions)

Collection Plants	Specimens	Imaged	Target	Percent records complete	Percent with records and images
Central Michigan University	3742	3711	3000	124.73	123.70
Eastern Michigan University Herbarium	1625	1502	SMI		
Field Museum of Natural History	62462	53497	63000	99.14	84.92
Friesner Herbarium, Butler University	2321	2183	11000	21.10	19.85
Grand Valley State University	4336	4277	SMI		
Illinois Natural History Survey	48010	20124	102000	56.26	28.85
University of Illinois Herbarium	9379	9306			
J. F. Bell Museum of Natural History Herbarium	84191	39299	65000	129.52	60.46
Michigan State University	18172	18063	41000	44.32	44.06
Morton Aboretum	15905	13704	18000	88.36	76.13
New York Botanical Garden	147009	141829	103000	142.73	137.70
Ohio State University Herbarium - Plants	394*	394*	10000	3.94*	3.94*
University of Michigan Herbarium	75829	67808	48000	157.98	141.27
University of Wisconsin-LaCrosse	4449	3412	7000	63.56	48.74
University of Wisconsin-Milwaukee	7326	7297	5000	146.52	145.94
Willard Sherman Turrell Herbarium, Miami University	17721	17685	18000	98.45	98.25
Wisconsin State Herbarium at UW-Madison	93662	91175	60000	156.10	151.96
Total	458538	352900			

*Database to portal transfer in progress
SMI = Small Michigan Institution

Plants (Canada institutions)

Canadensys	122816	14278

Fish

Collection Fish	Specimens	Imaged	Target	Percent records complete	Percent with records and images
Field Museum of Natural History - Fish	4855	1497	7500	64.73	19.96
Illinois Natural History Survey - Fish	29371	3663	30000	97.90	12.21
J. F. Bell Museum of Natural History - Fish	10685	3298	11000	97.14	29.98
Ohio State University Museum of Biological Diversity - Fish Division	9120	9084	10000	91.20	90.84
University of Michigan Museum of Zoology - Fish	34434	48	31660	108.76	0.15
University of Wisconsin-Madison Zoological Museum - Fish	4431	2658	2600	170.42	102.23
Total	92896	20248			

Mollusks

Collection Mollusks	Specimens	Imaged	Target	Percent records complete	Percent with records and images
Field Museum of Natural History - Mollusks	6438	0	NA	NA	NA
Illinois Natural History Survey - Mollusks	5716	0	7800	73.28	0
J. F. Bell Museum of Natural History - Mollusks	0	0	1100	0	0
Ohio State University Museum of Biological Diversity - Mollusc Division	2376	2350	9000	26.40	26.11
University of Michigan Museum of Zoology - Mollusks	22351	414	25000	89.40	1.66
University of Wisconsin-Madison Zoological Museum - Mollusks	531	137	500	106.20	27.40
Total	37412	2901			

Submission #781

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by chdietri
Wednesday, July 13, 2016 - 16:52
130.126.115.31

TCN Name:
InvertNet: An Integrative Platform for Research on Environmental Change, Species Discovery and Identification

Person completing the report:
chdietri@illinois.edu

Progress in Digitization Efforts:
A major upgrade to the invertnet.org cyberinfrastructure is currently underway so no new whole-drawer images have been posted to the website since the previous report. Invertnet collaborators continue to capture whole drawer image sets and submit them, on removable hard drives sent via courier to INHS, and these continue to be uploaded to our storage system and backed up.

Share and Identify Best Practices and Standards (including Lessons Learned):
Nothing new to report.

Identify Gaps in Digitization Areas and Technology:
Nothing new to report.

Share and Identify Opportunities to Enhance Training Efforts:
Nothing new to report.

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:

Share and Identify Opportunities and Strategies for Sustainability:

Share and Identify Education and Outreach (E&O) Activities:

Other Progress (that doesn't fit into the above categories):

Attachment

Published on *iDigBio* (https://www.idigbio.org)

Submission #776

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by mwdenslow
Tuesday, July 12, 2016 - 10:07
98.245.161.74

TCN Name:
SERNEC: The Key to the Cabinets: Building and Sustaining a Research Database for a Global Biodiversity Hotspot

Person completing the report:
michael.denslow@gmail.com

Progress in Digitization Efforts:
There are 74 collections serving data through the SERNEC portal. There are currently 1,888,586 specimens records and 118,934 (6%) of those records are georeferenced. There are currently 1,144,448 imaged specimen images available.

Share and Identify Best Practices and Standards (including Lessons Learned):
The SERNEC – TCN protocols continue to be updated as needed and are posted on the SERNEC resources site (http://sernec.appstate.edu/resources).

Identify Gaps in Digitization Areas and Technology:
Nothing to report.

Share and Identify Opportunities to Enhance Training Efforts:
SERNEC members participated in a workshop titled “Herbarium Specimen Curation and Best Practices.” It was hosted by the GA herbarium at the University of Georgia on May 19-21. Twenty-six participants from 17 institutions participated. More information can be found at: http://www.plantbio.uga.edu/news/may-2016-nsf-funded-workshop-herbarium-techniques-held-pbio-department-may

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
SERNEC members remain active in the Symbiota and Education and Outreach iDigBio working groups.
Six SERNEC – TCN PIs attend the SPNHC meeting in Berlin June 20 – 25. Five SERNEC – TCN related papers were presented.
During the reporting period, SERNEC has begun its collaboration with BioSpex in order to ramp up Citizen Science activities and participation in Notes From Nature. Five SERNEC expeditions have been launched during this time.

Share and Identify Opportunities and Strategies for Sustainability:

Nothing to report.

Share and Identify Education and Outreach (E&O) Activities:
A new version of Notes From Nature launched in May. The SERNEC images and workflow played an integral role by informing what features to develop for the new platform.
We continue to regularly post SERNEC related content through blogs, and social media accounts.

Other Progress (that doesn't fit into the above categories):
Nothing to report.

Attachment

Source URL: https://www.idigbio.org/node/564/submission/776

Submission #771

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by akuhn
Friday, July 8, 2016 - 14:50
192.17.34.135

TCN Name:
The Microfungi Collections Consortium: A Networked Approach to Digitizing Small Fungi with Large Impacts on the Function and Health of Ecosystems

Person completing the report:
akuhn@illinois.edu

Progress in Digitization Efforts:
• University of Arkansas (UARK) and Clemson University (CLEMS) collections were created on the MyCoPortal (7 June 2016)
• Rhianna Baldree (previously at GAM) was hired as a MiCC data curator at the University of Illinois (1 June 2016)
• Progress for June and July includes 46,076 new records, 56,849 new images, and 74,853 records georeferenced

Share and Identify Best Practices and Standards (including Lessons Learned):
• Improved GeoReferencing workflow and updated reference on project website (www.microfungi.org)

Identify Gaps in Digitization Areas and Technology:
• Working out issues with GeoLocate tool and georeferencing records with blank ‘Locality’ field

Share and Identify Opportunities to Enhance Training Efforts:
• Trained new team members from University of Arkansas (UARK), Michigan State University (MSC), and University of Minnesota (MIN) on 7 June 2016
• Hosted MiCC Webinar for Year 1 project updates, improved methods for digitization and georeferencing, and data publication to iDigBio and GBIF on 23 June 2016

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
• PI serves as Co-Chair of the Symbiota Working Group and hosted a SWG meeting on 17 June 2016

Share and Identify Opportunities and Strategies for Sustainability:
Nothing to report.

Share and Identify Education and Outreach (E&O) Activities:

• Addition of mycologist biographies to MiCC website written by Carol Ann McCormick of the University of North Carolina Chapel Hill Herbarium (http://www.microfungi.org/index.php/education/) (June 2016)

• MiCC project FaceBook page now has 493 members from 45 countries

Other Progress (that doesn't fit into the above categories):

• Began linking voucher specimen records to/from genetic sequence data in GenBank using the LinkOut feature (1963 records linked); a How-to guide was developed for use by all Symbiota portals: (http://www.microfungi.org/files/4214/6799/3353/Linking_genetic_resources_to_from_GenBank.pdf)

• Specimens on the MyCoPortal were referenced in a recent publication:
Bates ST, Chapman RM, Islam MB, Schwabe A, Wardenaar ECP, Evenson VS. 2016. The phylogenetic placement of the secotioid fungus Araneosa columellata within Agaricus. Mycotaxon 131: 103-110.

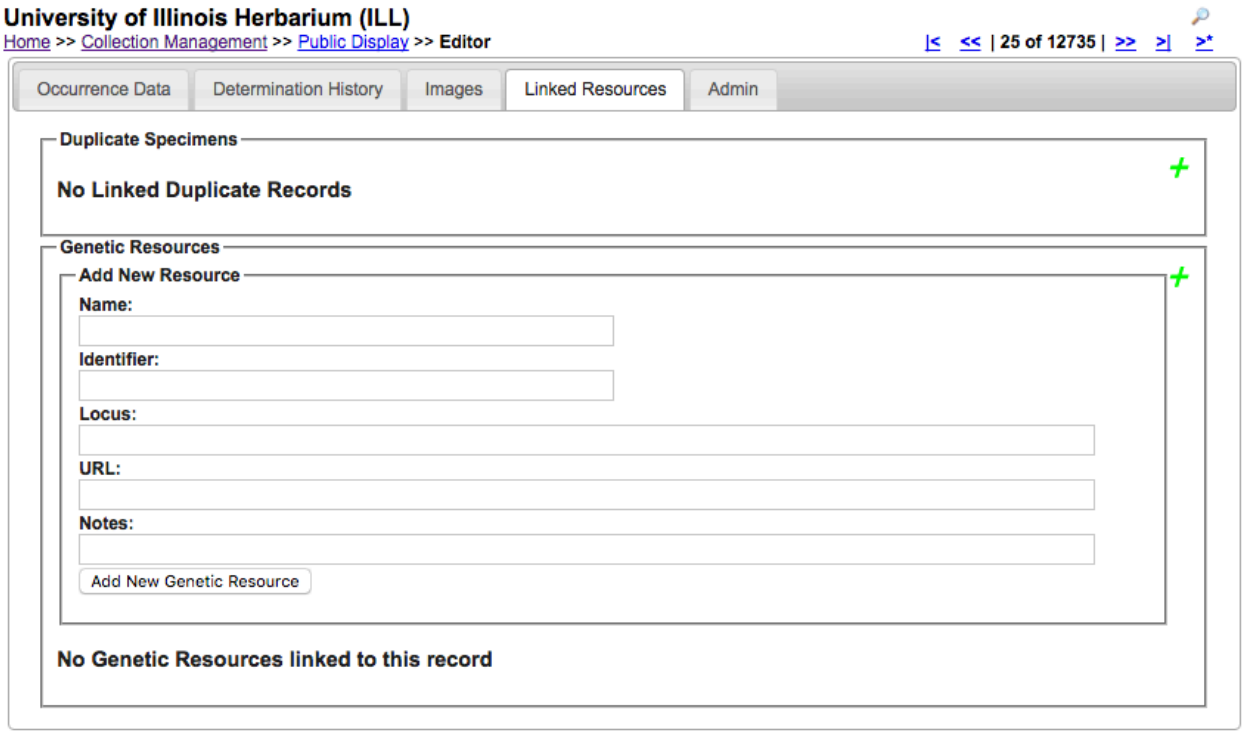
Attachment

Linking_genetic_resources_to_from_GenBank.pdf

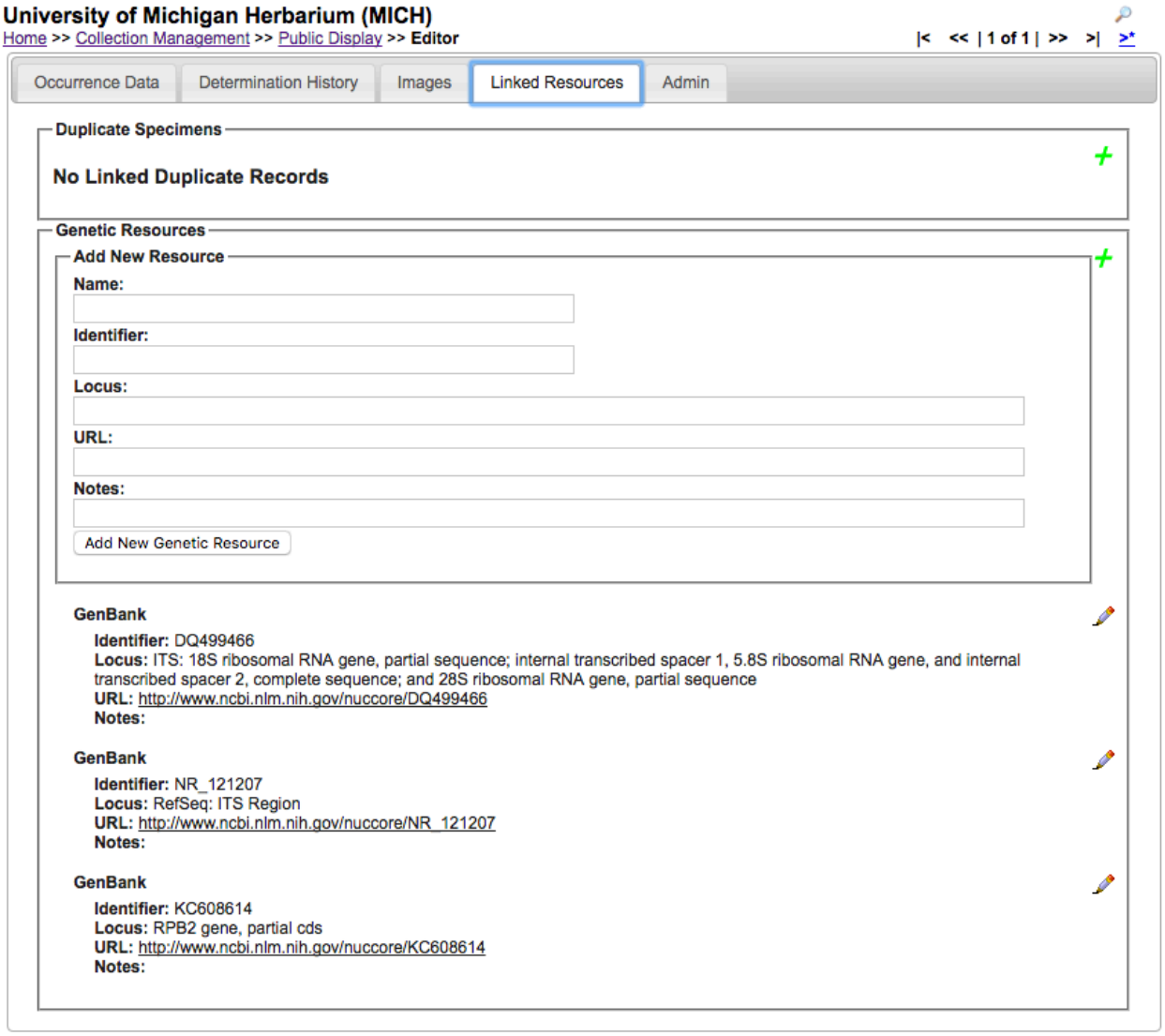
Source URL: https://www.idigbio.org/node/564/submission/771

Linking specimen records with genetic data from Symbiota portals to GenBank

Step 1: Pull up the occurrence record you would like to add genetic data to and click on the Linked Resources tab. Then, click on the green cross to reveal the table for adding Genetic Resources.



Step 2: Complete the necessary fields as shown below. Name and Notes can remain empty, but Identifier (= GenBank accession number), Locus (= name of gene), and URL (= link to the GenBank record) should be filled out. Add additional gene sequences by clicking on the pencil icons.


University of Michigan Herbarium (MICH)
Home >> Collection Management >> Public Display >> Editor
|< << | 1 of 1 | >> >| >*
Occurrence Data
Determination History
Images
Linked Resources
Admin
Duplicate Specimens
No Linked Duplicate Records
Genetic Resources
Add New Resource
Name:
Identifier:
Locus:
URL:
Notes:
Add New Genetic Resource
GenBank
Identifier: DQ499466
Locus: ITS: 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S ribosomal RNA gene, and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence
URL: http://www.ncbi.nlm.nih.gov/nuccore/DQ499466
Notes:
GenBank
Identifier: NR_121207
Locus: RefSeq: ITS Region
URL: http://www.ncbi.nlm.nih.gov/nuccore/NR_121207
Notes:
GenBank
Identifier: KC608614
Locus: RPB2 gene, partial cds
URL: http://www.ncbi.nlm.nih.gov/nuccore/KC608614
Notes:

Linking specimen records with genetic data from GenBank to Symbiota portals

To create links to your portal, NCBI needs two XML files, an identity file and a resource file.

Step 1. Create your Identity File using the example below from the MyCoPortal and email to: **linkout@ncbi.nlm.nih.gov**

[Note to MyCoPortal users: Please email help@mycoportal.org and we will provide you with the mycoportal Providerid number]

The identity file contains the information needed to list a provider in LinkOut. This file must be named **providerinfo.xml**; the file name is case sensitive. This file should be composed in a text editor, such as NotePad, not in a word processing program.

The NCBI LinkOut staff will then assign you a unique ProviderId and provide you with instructions for uploading your Resource File via ftp.

ProviderId Example File:

```
<?xml version="1.0"?>
<!DOCTYPE Provider PUBLIC "-//NLM//DTD LinkOut 1.0//EN"
"http://www.ncbi.nlm.nih.gov/projects/linkout/doc/LinkOut.dtd">
<Provider>
  <ProviderId>9439</ProviderId>
  <Name>Mycology Collections Portal</Name>
  <NameAbbr>MyCoPortal</NameAbbr>
  <SubjectType>herbarium/museum collections</SubjectType>
  <Url>http://www.mycoportal.org</Url>
  <Brief> On-line database of fungal specimen data</Brief>
</Provider>
```

Step 2. Create your Resource File using the example below. You can create a Resource File as xml, csv, or simple text. Instructions below are given for creating your Resource File as a csv file. For other methods, please refer to: http://www.ncbi.nlm.nih.gov/books/NBK3812/ -ft.File_Preparation_Identity_File

Resource File example as a CSV file:

	A	B	C	D	E	F	G
1	ProviderId	Database	UID/Query	URL	IconURL	UrlName	SubjectType
2	####	nucleotide	AB080793 [accn]	http://mycoportal.org/portal/collections/individual/index.php?occid=2160623			herbarium/museum collections
3	####	nucleotide	AB080794 [accn]	http://mycoportal.org/portal/collections/individual/index.php?occid=2162722			herbarium/museum collections
4	####	nucleotide	AB080795 [accn]	http://mycoportal.org/portal/collections/individual/index.php?occid=2160683			herbarium/museum collections
5	####	nucleotide	AB193390 [accn]	http://mycoportal.org/portal/collections/individual/index.php?occid=1833176			herbarium/museum collections
6	####	nucleotide	AF042620 [accn]	http://mycoportal.org/portal/collections/individual/index.php?occid=1932644			herbarium/museum collections

ProviderId = your ProviderId assigned to you by NCBI LinkOut staff

Database = nucleotide

UID/Query = the GenBank accession number for the gene sequence you want to link your occurrence record with

URL = the url to that specific occurrence record in your portal (Note: each occurrence record has a unique occid)

Icon URL = [required, but leave blank]

UrlName = [required, but leave blank]

SubjectType = herbarium/museum collections

Step 3: Using the instructions provided by the NCBI LinkOut staff, ftp your ProviderId and Resource File to NCBI.

Step 4: Wait 48 hours and confirm GenBank sequences have been linked to your portal's occurrence records through NCBI's LinkOut feature.

Provider Statistics

LinkOut collects statistics on the number of clicks on each providers's links in the LinkOut display.

Statistics can be emailed to the LinkOut contact monthly. If you would like to receive statistics, please notify the LinkOut Team at **linkout@ncbi.nlm.nih.gov**

Statistics send via email include the yearly and monthly totals for clicks on a provider's links (a CSV file with the same information is provided as an attachment as well).

Statistics may change for the first 2 weeks that they are available. After 2 weeks, statistics will be stable.

A sample statistics report is shown below.

The following is the usage statistics for your LinkOut links:
(Hits = number of times users clicked your links)

Please note that statistics for the most recent month may change in the next report.

Database: Gene

Total: 629

Month	Number of Hits
8/2005	126
7/2005	195
6/2005	142
5/2005	155
4/2005	11

Limiting a Search to Records with Links to a Specific Resource

loprovmycoportal[filter] to get all linked records for your portal

or, to search for linked records for a specific collection:
loprovmycoportal[filter] AND MICH

Published on *iDigBio* (https://www.idigbio.org)

Submission #775

Submission information

Form: TCN Bi-Monthly Progress Report to iDigBio
Submitted by EPICC
Monday, July 11, 2016 - 19:55
128.32.154.17

TCN Name:
Documenting Fossil Marine Invertebrate Communities of the Eastern Pacific - Faunal Responses to Environmental Change over the last 66 million years

Person completing the report:
eclites@berkeley.edu

Progress in Digitization Efforts:
As of 7/11/2016, the TCN has digitized 251,024 specimens, including 8854 that are currently searchable via the iDigBio portal. In addition we have photographed 15,366 specimens and georeferenced 7927 localities. Georeferencing: UO (Edward Davis) has figured out how to redact the lat/long data down to 0.1 degree using a script. This has been incorporated into their export workflow. 56 Oregon localities from other TCN member museums have either been georeferenced or their georeferencing has been validated. There are 1792 total localities to validate from the other TCN members. UAM finished georeferencing of all of their specimens. At UCMP transcription of locality descriptions is on-going, as is the transcription of township and range information from locality descriptions to the appropriate fields in order to use bulk georeferencing software program, AllTopo. Georeferencing of all UCMP localities for CA state plane 1 is nearly complete. Then we will begin checking CA state plane 1 localities from member museums. UCMP also completed ArcGIS trials for scanned locality maps.

Formations: Collaboration with Chuck Powell at USGS continues to improve and refine CA concordance of marine formations. Hundreds of paper locality cards were photographed in Menlo Park to aid updates to paragraph descriptions of problematic formations.

Taxonomy: PRI continues to prepare specimens by checking taxonomy and authorities.

Original source material digitized: Ongoing transcription of CAS Catalogs. At LACM, preparation for participation in WeDigBio 2016 has included scanning old catalog ledgers for public transcription using Notes From Nature. This will enable skeleton records to be created for ~50,000 lots. Rehousing of specimens as part of digitization workflow.

Workflows: NMNH has started imaging tests to prepare for a one week mass digitization pilot project in September. They have had several productive meetings with the Smithsonian Digitization Program Office (DPO). The testing includes a look into different lighting setups and capturing

examples of the different types of images they might want to capture. The one week project will help NMNH launch into imaging for the rest of the collection for EPICC with a fully documented and tested workflow. Research use of images has also been discussed with various TCN members. PRI continues to segregate and separate material by locality.

Share and Identify Best Practices and Standards (including Lessons Learned):
Specify allows for batch uploading of images. In doing so, UO was able to determine some of the specimens that were double numbered in our collections. That is, the photo does not match the description given in the database. Unfortunately there is no easy way to correct these records, other than going through each of the photographs and checking that they match the catalog record. UCMP found that if a paper map contains >5 localities of interest, it is worth scanning a part of or the entire map to georectify it. The map can then be matched to the appropriate base map in ArcGIS and the localities georeferenced directly through ArcGIS. UAM suggests keeping lots together. When they tried to split lots and it added far too many photos. LACM continues conducting an inventory of their stratigraphic collections. Pleistocene, Pliocene, Paleocene, and now nearly all Eocene are complete. The data from this inventory greatly improve the efficiency of our digitization workflow in addition to becoming an online searchable dataset in their own right.

Identify Gaps in Digitization Areas and Technology:
UAM found that older specimens do not have good georeferencing data. LACM is awaiting a third workstation, which will allow increased multi-tasking among our pool of student and volunteer labor. Presently photography, georeferencing, and cataloguing tasks compete among two workstations and we don't have the capacity for simultaneous cataloguing. LACM anticipates having a test copy of KE-EMu in the next five weeks, and to begin migration of data from MS Access in about 9-10 weeks. PRI uploaded a test batch of non-EPICC material to both iDigBio and GBIF. At this time, iDigBio only shows one image of our specimen and GBIF has some major issues with displaying our taxonomy. We have made these organizations aware of the problems and they are working with us to find a resolution. Gigapan no longer accepts new uploads, so the VFE Team is researching new sites to host the VFEs.

Share and Identify Opportunities to Enhance Training Efforts:
E. Clites (UCMP) participated in WordPress training to help in maintaining the EPICC website. Through various trials of different georeferencing methods at UCMP, we are learning a lot about efficient georeferencing. Students are cross-trained in different methods and recently learned to georeference localities based only off the locality descriptions.

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:
LACM (A. Hendy) visited CAS and UCMP, received tours of collections and inspected the workflows being used by EPICC, in addition to the Fossil Insect Collaborative at UCMP. A. Hendy also visited the San Diego Museum of Natural History to inspect their collections and discuss strategies for successful PEN participation and opportunities for sharing of data. A. Hendy is involved in design and implementation of Paleobiology Database specimen entry portal, which will allow enhanced communication of data between the PBDB, iDigBio, and institutional collection databases through EPPANDA. This increased functionality and EPPANDA-related tools are likely to be useful to EPICC participants. The Burke Museum sent UO their list of geological ages and formation names which UO has been updating in their database. Additionally, UO has begun georeferencing Oregon localities from the other TCN members. E. Clites (UCMP) spoke with Talia Karim (Fossil Insect Collaborative) about TCN best practices. UCMP retrieved additional USGS Cenozoic fossil specimens from Chuck Powell in Menlo Park. UCMP staff are collaborating with iDigBio staff to plan the third Paleo Digitization meeting, to be held in Berkeley in Spring 2017.

Share and Identify Opportunities and Strategies for Sustainability:
Utilization of credit-awarded interns from underserved community colleges. These students are very effective, appreciative, and LACM believes they are already benefiting through retention in STEM.

Share and Identify Education and Outreach (E&O) Activities:
PRI-UCMP Virtual Fieldwork Experience (VFE) group met by videoconference to plan next quarter's goals. Progress has been made in creating an advisory panel to provide advice and feedback on development of VFEs. Team has researched new server software to host Gigapixel-resolution panoramic images for the VFEs. This is to replace the Gigapan website which no longer hosts new uploads. A summer intern has started who will help process sedimentological samples from Kettleman Hills, California, for the first VFE. Students continue to work in the collections at multiple museums, cataloging specimens, georeferencing localities and helping with other tasks. LACM is involving teachers in preparing, designing, and implementing public participation "citizen curator" program. Fossil kits of unsorted matrix are being prepared to deliver to schools and homeschooled families for sorting, identification, and partial curation. These materials, once fully curated, will contribute to EPICC. CAS has ongoing work with the high school Careers in Science program.

Other Progress (that doesn't fit into the above categories):
Successfully hosted third virtual TCN meeting June 8 with participation from all 9 institutions. Productive discussions about priorities and guidelines for 3-D imaging took place, as well as updates on georeferencing progress of OR localities and VFE fieldwork. Our next in person meeting will be held Sept. 8-9 at the Burke Museum with participants from all institutions expected.

Attachment
