

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

# **July 2016**

## Reports included:

| ⊠ InvertNet   | ⊠ SCAN | ⊠ InvertEBase |
|---------------|--------|---------------|
| ⊠ LBCC        | ⊠ VACS | ⊠ SERNEC      |
| □ PALEONICHES | ⊠ FIC  | ⊠ MiCC        |
| ⊠ MaCC        | ⊠ MHC  | ⊠ EPICC       |
| ⊠ NEVP        | ⊠ GLI  |               |









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## 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**



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## Submission #779

Submission information

Form: <u>TCN Bi-Monthly Progress Report to iDigBio</u> Submitted by <u>cgries</u>

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.

|         |   |                     | Bryo                                | ohytes            |                  |                      |               | Liche                               | ns                |                  |                      |               |
|---------|---|---------------------|-------------------------------------|-------------------|------------------|----------------------|---------------|-------------------------------------|-------------------|------------------|----------------------|---------------|
| Acronym | Institution                                 | LBCC<br>Participant | pre LBCC<br>number<br>of<br>records | LBCC<br>estimates | total<br>records | total<br>transcribed | LBCC<br>added | pre LBCC<br>number<br>of<br>records | LBCC<br>estimates | total<br>records | total<br>transcribed | LBCC<br>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<br>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<br>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<br>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          |
| МСТС    | Michigan Technological<br>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         |
| МО      | 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<br>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                | yes       | 0      | 0       | 3827    | 3708    | 3827    | 0      | 178    | 198     | 183    | 198    |
|------|--|-----------|--------|---------|---------|---------|---------|--------|--------|---------|--------|--------|
| NHA  | Kearny 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  |
| РН   | 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<br>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,<br>Berkeley    | yes       | 860    | 114088  | 99959   | 23233   | 99099   | 1505   | 28000  | 47249   | 45640  | 45744  |
| UMFK | University of Maine at Ft.<br>Kent       | yes       | 0      | 0       | 0       | 0       | 0       | 387    | 387    | 46970   | 46970  | 46583  |
| UNAF | University of Northern<br>Alabama        | yes       | 32     | 3000    | 1567    | 1561    | 1535    | 0      | 0      | 0       | 0      | 0      |
| UNLV | University of Nevada Las<br>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<br>Claire    | yes       | 0      | 0       | 500     | 486     | 500     | 0      | 10000  | 1180    | 797    | 1180   |
| UWSP | University of Wisconsin<br>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<br>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<br>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<br>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<br>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  |
| С      | Natural History Museum of<br>Denmark: The Herbarium of<br>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  |
| 0      | Botanical Museum, Oslo,<br>Norway                                 | non-US |   |   |        |        | 0      |   | 168316   | 166254 | 168316 |
| QFA    | Université Laval, Canada.<br>Québec. QUÉBEC.                      | non-US |   |   | 17170  | 17170  | 17170  |   | 20457    | 20457  | 20457  |
| SQB    | Société québécoise de<br>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,<br>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<br>DECORAH                                   | no     |   |   | 93     | 93     | 93     |   |          |        | 0      |
| LEDLIE | Patricia Ledlie Herbarium<br>(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    |
| ОВІ  | California Polytechnic State<br>University          | no                 |        |         |         |         | 0       |        |        | 198     | 194     | 198     |
| OMA  | University of Nebraska at<br>Omaha                  | no                 |        |         |         |         | 0       |        |        | 19034   | 18976   | 19034   |
| SNM  | Western New Mexico<br>University                    | no                 |        |         | 1474    | 1466    | 1474    |        |        |         |         | 0       |
| TLE  | Ted Esslinger private collection                    | no                 |        |         |         |         |         |        |        | 26389   | 25879   | 26389   |
| UCR  | University of California,<br>Riverside              | no                 |        |         |         |         | 0       |        |        | 16041   | 16036   | 16041   |
| UCSB | University of California, Santa<br>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  |
|      |   | <b>Grand Total</b> | 884371 | 1313246 | 2277318 | 1621624 | 1392947 | 175061 | 865343 | 1944805 | 1754235 | 1769744 |



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

Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #772

## 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



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

Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #773

## 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**



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Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #783

## 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**



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

Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #777

## 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

## 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. Table 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

Table 1. Number of specimen records digitized and associated summary statistics. From <a href="http://symbiota4.acis.ufl.edu/scan/portal/index.php">http://symbiota4.acis.ufl.edu/scan/portal/index.php</a>. SCAN-funded numbers refers to the 10 original museums receiving ADBC funding. SCAN PEN includes the three additional museums. SCAN nonfunded 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      | SCAN PEN | SCAN      | TOTAL     | InvertEBase | Total     |
|---------------|-----------|----------|-----------|-----------|-------------|-----------|
|               | Funded    |          | non-      | SCAN      |             | Served    |
|               |           |          | funded    |           |             |           |
| 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    |

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.



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 <a href="http://scan1.acis.ufl.edu/">http://scan1.acis.ufl.edu/</a>.

#### **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://scanl.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 <a href="http://symbiotal.acis.ufl.edu/scan/portal/imagelib/photographers.php">http://symbiotal.acis.ufl.edu/scan/portal/imagelib/photographers.php</a>

| 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    |
| <u>Virginia Polytechnic Institute and State University Insect Collection (VPI-VTEC</u> | 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  | Colección Zoológica de la Universidad Autónoma de Querétaro                        | 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  |
|    | Moth Observations Database: California Department of Food and         | ·      |
| 7  | 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)

Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #784

## 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 <a href="http://www.dlib.indiana.edu/projects/sounddirections/papersPresent/index.shtml">http://www.dlib.indiana.edu/projects/sounddirections/papersPresent/index.shtml</a> 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**



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

Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #782

## 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



Published on iDigBio (https://www.idiabio.org)

Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #785

## 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

|                                     |        |             |           | 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                |           | 0       | 1           | 0              |
| Harvard University                  | Year 2 | 1           | 150,000   | 0                | 0         | 0       | 0           | 0              |
| Academy of Natural Sciences         | Year 3 | 1           | 36,303    |                  |           | П       | П           |                |
| 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              |



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

Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #778

## 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 Nonindigenous 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    |                          | 2-411-2                         |
| 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 |        |                          |                                 |

<sup>\*</sup>Database to portal transfer in progress SMI = Small Michigan Institution

## Plants (Canada institutions)

| Canadensys | 122816 | 14278 |
|------------|--------|-------|
|------------|--------|-------|

# Fish

|   |           |        |        | Percent records | Percent with records and |
|---|-----------|--------|--------|-----------------|--------------------------|
| Collection Fish   | Specimens | Imaged | Target | complete        | 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

|  |           |        |        | Percent records | Percent with records and |
|--|-----------|--------|--------|-----------------|--------------------------|
| Collection Mollusks                                    | Specimens | Imaged | Target | complete        | 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   |        |                 |                          |



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Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #781

## 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**



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Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #776

## 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-pbiodepartment-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**



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Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #771

## 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)

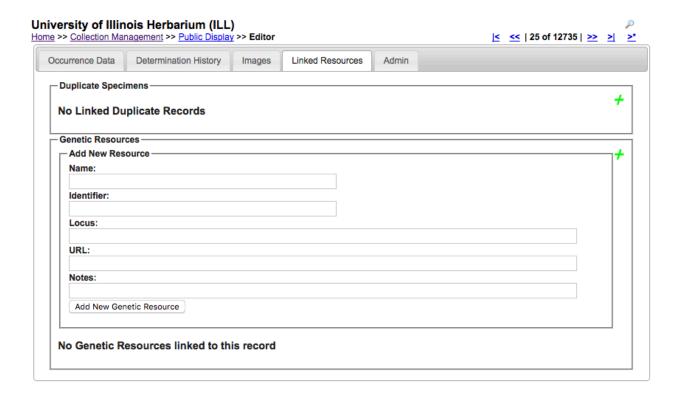
• Specimens on the MyCoPortal were referenced in a recent publication: Bates ST, Chapman RM, Islam MB, Schwabe A, Wardenaar ECP, Evenson VS. 2016. The phylogenetic placement of the secotioid fungus Araneosa columellata within Agaricus. Mycotaxon 131: 103-110.

#### Attachment

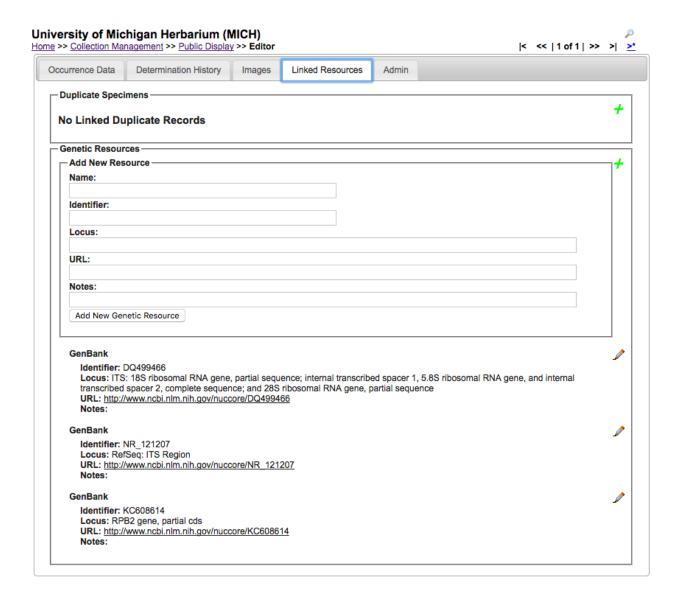
Linking genetic resources to from GenBank.pdf

# 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.



# 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          | В          | С               | 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

| ı | 1      |                |
|---|--------|----------------|
|   | 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)

Home > TCN Bi-Monthly Progress Report to iDigBio > Webform results > Submission #775

## 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@berkelev.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