

Work Flow and **Error Detection in a** Paleontology (IMLS Silurian Reef) **Digitization Project By Paul Mayer** Liza Connolly, Nicole Karpus, & Alex Layng

















Silurian Reefs

Flank beds dipping from 100 meter tall Silurian Reef at Thornton Quarry, Illinois, USA



CSGEO8771 Copyright The Field Museum



The Virtual Silurian Reef

INTRODUCTION

During the Silurian Period in earth history, 425 million years ago, when much of North America was covered by a shallow, tropical sea, reefs flourished in the area now occupied by Wisconsin and Illinois. This site uses these reefs as a vehicle for students to learn general principles, local details, and environmental significance of the study of the ancient past.



The Silurian reef diorama at the Milwaukee Public Museum, which serves as the focus for the pages that follow.

CONTENTS

- Basic concepts
- Distribution of Silurian
 reefs
- Reef organisms
- Biodiversity
- Silurian reefs in the field
- Environmental relations
- Environmental relation
 Inside the Museum
- The history and future of
- reefs
- References



Why Digitize the Silurian Reef Fossil Collection?

- Protection of Data
- Staff Efficiency and Knowledge Increases
- Research: Saves Time and Money
- Accessibility
- Update Collection



Why Digitize the Silurian Reef Fossil Collection?

- Educational tool
 - Local Geology of Illinois and Wisconsin
 - Biodiversity
 - Climate and Environmental Change
 - Plate Tectonics
 - Extinction and Evolution
 - **Document the recovery and diversification of reef and level** bottom-communities following the end-Ordovician extinction

event.

Modern vs. Paleozoic Reefs



Workflow and Design

Goal to digitize 15,000 Silurian specimens in three summers, with three interns per summer and share data with MPM thru online database.

Interns selected fossil group, pull 6 drawers from collection, photograph labels, enter label data in KE EMu catalog module, then photograph fossils. Interns record their times for each task

Edit images, batch upload images to KE EMu Multimedia module, then batch connect each Multimedia record to correct KE EMu catalog record.

Connecting multimedia records to catalog records is perfect time to check for errors. EMu generates error report for unconnected records, and I visual inspect catalog records in a tabular format, and multimedia records one at a time



IMLS Silurian Reef Digitization Project

Each intern has a set of fossils that they cycle through the three work stations. Goal: to digitize 31,000 Silurian reef fossil invertebrates from the FMNH and MPM collections.

3. KE EMu Data Entry Station 2. Fossil Photography Station

1. Label Photography Station



Average # of minutes per specimen in each cart



Average # of minutes per specimen in each cart



Fastest

Average

My Work Flow: Inserting images into the database

206

- 18r/58.

50

9

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2

125

50

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-20

-188

30

Edit images then batch upload images as .csv file.

0	0	27	LC_IMLS_Aug26_trilobite2.csv	
•	A	B	C D E F G H I J K L M	N
2 P	596	Multimedia Ndavinci\Geology\maver\IMLS_LC\LC_IMLS_Aug26_trilobite=small\PS96_fossil.JPG	Mulbescription Admirubishi Votikishi Admirubishi Votikishi Admirubishi Votikishi DetDateU DetDubed (DetSubed (De	(2)
3 P	596	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P596_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 596 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
4 P	1458	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P1458_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 1458 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
5 P	6358	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P6358_tossil.JPG	IMLS silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 6358 Yes (Pried Muse 26-Augr 13 Silurian IMLS) Authropod Thiobite Liza Connolly S. Mayer IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 6358 Yes (Pried Muse 26-Augr 13 Silurian IMLS) Authropod Thiobite Liza Connolly S. Mayer	
7 P	6881	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P6881_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 6881 Yes 🥹 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
8 P	6881	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P6881_label.JPG	[MLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 6881 Yes Yes @ Field Muse 24-Aug-13 Silurian [MLS Arthropod Trilobite Liza Connolly,P. S. Mayer	
10 P	7546	\\davinc\\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P7546_fossil.prg	jinius siurian keer ulgitization projekt, image of silurian thiobite, specimen P 7546 Yes Yes @ Field Muse 26-Augr-13 Silurian IIMLS Authropod Thiobite Liza Connolly S. Mayer	
11 P	8172	\\davinc\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8172_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 8172 Yes Yes 🐵 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
12 P	8172	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-rmall(P8172_label.JPG	IMLS Silvrian Reef Digitization Project, Image of Silvrian trilobite, specimen P 8172 Yes Yes @ Field Muse 26-Aug-13 Silvrian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
14 P	8173	\\davinc\\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8173_fossil_2.JPG	IMLS silurian Reef Digitization project, Image of silurian thiobite, specimen P 8173 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolly S. Mayer IMLS Silurian Reef Digitization project, Image of Silurian thiobite, specimen P 8173 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS	
15 P	8173	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8173_label_2.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 8173 Yes Yes 💿 Field Muse 26-Aug-13 Silurian IMLS Arthropod Thilobite Liza Connolly P. S. Mayer	
16 P	8173	\\davinc\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8173_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 8173 Yes Yes © Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
18 P	8174	\\davinc\\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8174_tossil.JPG	IMLS silurian Keef Digitization Project, image of siluran thiobite, specimen P 8274 Yes Ves © Field Muse 2e-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolisy. S. Mayer IMLS Silurian Reaf Digitization Project, Image of Siluran thiobite, specimen P 8174 Yes Ves © Field Muse 2e-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolisy. S. Mayer	
19 P	8175	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8175_fessil_2.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 8175 Yes Yes 💿 Field Muse 26-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolly P. S. Mayer	
20 P	8175	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8175_fossil.JPG	[MLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 8175 Yes Yes © Field Muse 26-Aug-13 Silurian [MLS] Arthropod Trilobite Liza Connoliça. S. Mayer	
22 P	8175	\\davinc\Geology\mayerIMLS_LC\LC_IMLS_Aug26_trilobite-small\P8175_label_2.JPG	umus silutian Reef Digitization Project, Image of Silutian thiobite, specimen P 8175 Yes Yes @ Field Muse 26-Augr 3 Silutian ImUs Arthropod Thiobite Liza Connolly, S. Mayer	
23 P	8200	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8200_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 8200 Yes 🛛 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
24 P	8200	\\davinc\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite+small\P8200_label.JPG	[MLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 9200 Yes Yes @ Field Musé 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly.P. S. Mayer	
26 P	8631	\\davinci\Geology\mayer.IMLS_LC\LC_IMLS_Aug26_trilobite-small/P6631_fossil.PG	janus siudian keer ulgitisation projekt, image of siudian thiobite, specimen P 6631 Yes Yes @ Field Muse 26-Augri3 Siudian Janus Anthropod Thiobite Liza Connolisy, s. mayer JMLS Silurian Reef Digitization Projekt, image of Siudian thiobite, specimen P 8631 Yes Yes @ Field Muse 26-Augri3 Siudian JMLS Anthropod Thiobite Liza Connolisy, S. Mayer	
27 P	8917	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8917_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 8917 Yes 🛛 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
28 P	8917	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P8917_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 9917 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolly P. S. Mayer	
38 P	9191	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small(P9191_fossil.)PG	JMLS silurian Reef Digitization Project, Image of silurian thiobite, specimen P 9191 Yes Yes @ Field Muss 2e-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolly, S. Mayer IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 9191 Yes Yes @ Field Muss 2e-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolly, S. Mayer	
31 P	11520	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11520_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 11520 Yes Yes 💿 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
32 P	11520	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11520_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 11520 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
33 P 34 D	11526	\\davinc\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11526_tossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 11356 Yes Yes © Field Muse 26-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolly S. Mayer IMLS Silurian Reef Digitization Project Image of Silurian P 11556 Yes Yes Ø Field Muse 26-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolly S. Mayer	
35 P	11573	\\davinc\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11573_fossil.JPG	Intes sindhan keef bightasten Projekt Image of sindhan motors, specifieren P 11573 Yes Yes 🖉 Field Muss de August Sindhan Intes Anthropod Thiobite Liza Connolly, S. Mayer	
36 P	11573	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11573_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 11573 Yes Ves © Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
37 P	11574	\\davinc\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11574_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 11574 Yes Yes © Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
39 P	11374	\\davinc\Geology\mayerIMLS_LC\LC_IMLS_Aug26_trilobite-small\P11574_tabel.JPG	IMLS Silutian Reef Digitization Project, Image of Silutian Milobite, specimen P 11372 Yes Yes Ø Freid Musie 20-Augr 13 Silutian IMLS Anthropod Thilobite Liza Connolity, S. Mayer	
40 P	11872	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11872_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 11872 Yes Yes 💿 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
41 P	11915	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11915_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 11915 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
42 P	11960	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P11960_tossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 13960 Yes Yes ⊘ Field Muse 26/Augr13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
44 P	16766	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P16766_fossil_2.JPG	ImLS Silvian Reef Digitization Project, Image of Silvian tribule, spectrem P 16766 Yes Yes 🛇 Field Muse 26-Aug-13 Silvian ImLS Anthropod Thiobite Liza Connolly, S. Mayer	
45 P	16766	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P16766_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 16766 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
46 P	16766	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P16766_label_2.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 16766 Yes Yes @ Field Muse 26-Augr-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	_
48 P	17594	\\davinc\\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P16766_tabel.JPG	jints silunian Reef Digitization Project, image of silunian thiobite, specimen P 15/56 Tes Tes © Field Muse 26-Aug-13 silunian 1 MLS Authropod Thiobite Liza Connolly, s. Mayer 11 MLS Authropod Thiobite Liza Connolly, S. Mayer	
49 P	17594	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P17594_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 17594 Yes 🛞 Field Muse 26-Aug-13 Silurian IMLS Arthropod Thilobite Liza ConnollyP. S. Mayer	
50 P	19915	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P19915_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 19915 Yes Yes @ Field Muse 24-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
51 P	20658	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20658_tossil.JPG \\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20658_label_106	IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 2058 Yes Yes © Field Muse 26-Aug-13 Silurian IMLS Arthropod Thiobite Liza Connolity S. Mayer IMI Silurian Reef Digitization Project Image of Silurian thiobite, specimen P 2058 Yes Ves © Field Muse 26-Aug-13 Silurian IMIS Arthropod Thiobite Liza Connolity S. Mayer	
53 P	20863	\\davinc\\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20863_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20863 Yes Yes 💿 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
54 P	20863	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20863_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20863 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
55 P	20864	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20864_tossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P. 20664 Yes Yes © Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
57 P	20865	\\davinc\Geology\mayerIMLS_LC\LC_IMLS_Aug26_trilobite-small\P20865_fossil.JPG	International and an and a state of the stat	
58 P	20865	\\davinc\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20865_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20865 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
59 P	20866	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20866_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20866 Yes Yes © Field Muse 26-Augr13 Silurian IMLS Arthropod Trilobite Liza ConnoliçA S. Mayer	
61 P	20867	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P200667_fossil.JPG	IMLS Silvrian Reef Digitization Project, Image of Silvrian thiobite, specifier P 20867 Yes @ Field Muse 26 Aug to Subrain IMLS Arthropod Thilobite Liza Connolly P. S. Mayer	
62 P	20867	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20867_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20867 Yes 🛛 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
63 P	20869	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20869_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20069 Yes Yes ⊗ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza ConnoliçA. S. Mayer	
65 P	20869	\\davinc\Geology\mayer.IMLS_ECILC_IMLS_Aug26_trilobite-small\P20872_fossil.JPG	janus siudnan keer bightisation projekt, image of siudnan thiobite, specimen P 2087 2 Yes Yes @ Field Muse 26:Augri3 Siudnan 1 MLS Anthropod Thiobite Liza Connolisy, s. mayer IMLS Siudnan Reef Dightisation Projekt, Image of Siudnan thiobite, specimen P 2087 2 Yes Yes @ Field Muse 26:Augri3 Siudnan 1 MLS Anthropod Thiobite Liza Connolisy, s. Mayer	
66 P	20872	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20872_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20872 Yes Yes 🛛 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
67 P	20886	/\/davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P20886_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20886 Ves ⊗ Field Muse 26-Aug 13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
69 D	21208	\\davinci\Geology\mayerimLs_LC\LC_IMLS_Aug26_trilobite-small\P20886_label.JPG \\davinci\Geology\mayeriIMLS_LC\LC_IMLS_Aug26_trilobite-small\P21208_foccil_2_IPG	panus anuman new ungusawan neges, image of silunan trilobite, specimen P. 2026 Yes tes Sheld Muse 26-Aug-13 Silurian IMLS Arthropod Thilobite Liza Connolly, S. Mayer IMLS Silurian Reef Digitization Protect. Image of Silurian trilobite, specimen P. 2020 Yes Yes Sheld Muse 26-Aug-13 Silurian IMLS Arthropod Thilobite Liza Connolly, S. Mayer	
70 P	21208	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P21208_fossil_3.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 21208 Yes Yes 🖉 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connol(LP, S. Mayer	
71 P	21208	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P21208_fossil_4.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 21208 Yes Yes @Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly D. S. Mayer	
73 P	21208	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-smail\P21208_fossil.JPG \\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-smail\P21208_label_2_IDG	jenus anuman neer urgrozation Project, image of silurian trilobite, specimen P 21208 Yes Tes por heid Muse 26-Aug-13 silurian imits Anthropod Trilobite Liza Connolity S. Mayer IMLS Silurian Reef Digitzation Project, Image of Silurian trilobite, specimen P 21208 Yes Yes & Reial Muse 26-Aug-13 Silurian IMLS Anthropod Trilobite Liza Connolity S. Mayer	
74 P	21208	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P21208_label_3.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 21208 Yes Yes 💿 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly, S. Mayer	
75 P	21208	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P21208_label_4.JPG	IMLS Silurian Raef Digitization Project, Image of Silurian trilobite, specimen P 21208 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
76 P	21208	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite=small\P21208_label.JPG	IMLS Silurian Reef Digitzation Project, Image of Silurian trilobite, specimen P.21208 Tef Yes © Field Muse 26-Aug-13/Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer IMLS Silurian Raef Digitzation Project Image of Silurian trilobite, specimen P.21594 Var	
78 P	21586	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P21586_label.JPG	IMLS Silviran Reef Digitization Project, Image of Silviran trilobite, specimen P 21586 Yes Yes @ Field Muse 26-Aug-13 Silviran IMLS Anthropod Trilobite Liza Connolly, S. Mayer	
79 P	22556	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P22556_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 22556 Yes Yes © Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
88 P	22556	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P22556_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 22555 Yes Yes © Field Muse 26-Augr-13 Silurian IMLS Arthorpod Thiobite Liza Connolly S. Mayer IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen P 22732 Yes Ø Field Muse 26-Augr-13 Silurian IMLS Arthorpod Thiobite Liza Connolly S. Mayer	
82 P	22733	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P22733_label.JPG	IMLS silurian Reef Digitzation Project, Image of silurian thiobite, specimen P 22733 Yes Yes @ Field Muse 26 Aug 13 Silurian I Mus Arthroppot Thilobite Liza Connolive S, Maver	
83 P	30882	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P30882_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 30882 Yes Yes 🛛 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
84 P	30882	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P30882_label.JPG \\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\P30882_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen P 20882 Ves @Field Muse 26-Aug-13/Silurian IMLS Arthropod Trilobite Lize Connolly,P. S. Mayer	
86 P	E 962	/\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small/PE962_fossil.JPG	IMLS Silvian Reef Digitization Project, Image of Silvian thiobite, speciment P5 42 Ves Ves Pielo Muse 26-Aug(12) Silvian ImLS Arthropod Thiobite Liza Connoll(P, S. Mayer	
87 P	E 962	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE962_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen PE 962 Yes Yes 🐵 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Lizs Connolly P. S. Mayer	
88 P	E 1458	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE1458_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen PE 1458 Yes Ves @Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly S. Mayer	
98 P	E 3004 E 3004	\\davinci\ueeology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE3004_fossil.JPG \\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE3004_lshal_JPG	janus siuunan keer Lugitaston Project, image of siuunan trilobite, specimen PE 3004 Yes Yes (© Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly, R.S. Mayer IMLS Silurian Reef Diditization Project, Image of Silurian trilobite, specimen PE 3004 Yes Yes (© Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly, R.S. Mayer	
91 P	E 5312	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE5312_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen PE 5512 Yes Yes © Field Muse 26-Aug-13 Silurian IMLS Arthropot Trilobite Liza Connolly. S. Mayer	
92 P	E 5312	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE5312_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen PE 5312 Yes 🛛 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly P. S. Mayer	
93 P	£ 6335 £ 6335	It daving (geology)mayer/IMLS_LC\LC_IMLS_Aug26_trilobite-small/PE6335_fossil.JPG \\daving\Geology\mayer/IMLS_LC\LC_IMLS_Aug26_trilobite-small/PE6335_fossil.JPG	jmis siuman Reef Digitization Project, Image of Silurian trilobite, specimen PE 6335 Yos Yos ⊘Field Muse 26-Aug-13/Silurian IMLS Arthropod Trilobite Liza Connolls,P. S. Mayer	
95 P	E 6335	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE6335_label_JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen PE 6335 Yes Yes Silurian IMLS Silurian IMLS Arthropot Trilobite Liza Connolly, S. Mayer	
96 P	E 17223	\\davinc\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE17223_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian tollobite, specimen PE 17223 Yes Yes Selid Muse 26-Aug-13 Silurian IMLS Arthropod Thilobite Liza Connolly P. S. Mayer	
97 P	E 17223	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE17223_label.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian thiobite, specimen PE 17233 Yes Ves ⊘Field Muse 26-Aug-13 Silurian IMLS Arthropod Tribibite Liza Connolly.P. S. Mayer	
99 P	E 24340	Indeviner/Geology/mayer/IMLS_LC/LC_IMLS_Aug26_thiobite-smail/PE24340_hossil.JPG //daviner/Geology/mayer/IMLS_LC/LC_IMLS_Aug26_thiobite-smail/PE24340_label_IPG	jamus anuman neer ungrocation Project, image of alumant Uniobite, speciment PC 24340 [18] [18] [24340 [Yes] [26] [26] [26] [26] [26] [26] [26] [26	
100 P	E 24928	\\davinci\Geology\mayer\IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE24928_fossil.JPG	IMLS Silurian Reef Digitization Project, Image of Silurian trilobite, specimen PE 24928 Yes Yes @ Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connolly, S. Mayer	
101 P	E 28645	I) daving) Geology maveri IMLS_LC\LC_IMLS_Aug26_trilobite-small\PE28645_fossil.JPG LC_IMIS_aug26_trilobite2ccv	IMLS Silurian Roef Dioitization Project. Image of Silurian Inlobite. specimen PE 28645. Yes 🖉 Field Muse 26-Aug-13 Silurian IMLS Arthropod Trilobite Liza Connollé P. S. Maver	
E	allel Frid	and a second a second s		/

Example of a KE EMu multimedia record

📴 Multimedia (1) - Edit								
<u>File Edit Select View Tools Tabs Multimedia Window H</u> elp								
□ 🖬 🔘 🖻 🎦 👌 🖓 ザ 📄 📖								
P 11369 (image/jpeg) 616916								
	Image Image </th							
Multimedia Details Characteristics EXIF	IPTC XMP Resolutions Supple							
Edit Item 3 of 5	pmayer FossilInvertsMgr emufmnh							

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Next step

Upload a second .CSV file with the Multimedia IRN and the specimen's catalog number to the catalog module.

This links the image to the catalog entry.

Example of a KE EMu catalog record with an attached multimedia record

🔜 Catalogue (1) - Display	
<u>File Edit Select View Tools Tabs Parts Multimedia Window H</u> elp	
	⊡ ⊡ № ?
2365747 UC 28805 [HS, M] Callonema elevatum Wing, 1925 Niagaran, United States of America, Illinois, Cook	
Collection Details	
Catalog subset: Main Catalogue Object Kind: Hand Specimen No. of pieces:	Lot Count:
Identification	
Taxon: Callonema elevatum Wing, 1925 🗗 Type Stat	IS:
Locality	
Locality: North America, USA, Illinois, Cook, Chicago: Bridgeport Quarry	\$ •
Stratigraphic Interpretations	
Stratigraphy Kind	 The second second
1 Silurian, Niagaran, NAS Chronostrati	raphy
2 Lithostratigra	phy 🔫
Accession Details	On Loan: P/C: MM: rotes:
Notes	
Collection Notes.	
Catalog Specimen Stratigraphy Identification Associations Preservation Loan History Condition	Deaccession References
Display Object 7 of 2877	pmayer FossilInvertsMgr emufmnh

AL_IMLS_connect_Aug05labels.log - Notepad



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<u>File Edit Format View Help</u>

Import of C:\Users\pmayer\Desktop\AL_IMLS_connect_Aug05labels.csv started 25 Mar 2014 17:02:08 error: record 12, line 13: you do not have permission to insert into column "GeoSpecimenNo" error: record 43, line 44: you do not have permission to insert into column "GeoSpecimenNo" error: record 71, line 72: you do not have permission to insert into column "GeoSpecimenNo" error: record 78, line 79: you do not have permission to insert into column "GeoSpecimenNo" error: record 84, line 85: you do not have permission to insert into column "GeoSpecimenNo" error: record 103, line 104: you do not have permission to insert into column "GeoSpecimenNo" error: record 142, line 143: you do not have permission to insert into column "GeoSpecimenNo" error: record 146, line 147: you do not have permission to insert into column "GeoSpecimenNo" Import of C:\Users\pmayer\Desktop\AL_IMLS_connect_Aug05labels.csv finished 25 Mar 2014 17:10:52

Import Summary

Records Processed: 146 Import Identifier: AL_IMLS_Aug05labels System Identifier: pmayer-140325-1702

Module Summary

Catalogue (ecatalogue): 0 created, 138 updated, 0 attached, 8 error(s) Multimedia (emultimedia): 0 created, 0 updated, 146 attached, 0 error(s)





🛃 Catalogue (1) - Display						
<u>F</u> ile	Edit Select View Tools Tabs Parts	s <u>M</u> ultimedia <u>W</u> indow <u>H</u> elp				
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	Internal Record Number	Stratigraphy: (Stratigraphy Details)	Kind: (Stratigraphy Details)			
1	2309208	Lockport Group, Guelph Dolomite	Chronostratigraphy			
2	2309215		Chronostratigraphy			
3	2309226		Chronostratigraphy			
4	2309227		Chronostratigraphy			
5	2309228		Chronostratigraphy			
6	2476967	Silurian, Niagaran. NAS	Chronostratigraphy			
7	2476489	Silurian, Niagaran, NAS	Chronostratigraphy			
8	2476241	Silurian, Niagaran, NAS	Chronostratigraphy			
9	2291484	Silurian, Wenlock - Ludlow. ICS/IUGS	Chronostratigraphy			
10	2477010	Silurian, Niagaran, NAS	Chronostratigraphy			
11	2476276	Silurian, Niagaran, NAS	Chronostratigraphy			
12	2477011	Silurian, Niagaran, NAS	Chronostratigraphy			
13	2476968	Silurian, Niagaran. NAS	Chronostratigraphy			
14	2477012	Silurian, Niagaran, NAS	Chronostratigraphy			
15	2476969	Silurian, Niagaran. NAS	Chronostratigraphy			
16	2476970	Silurian, Niagaran, NAS	Chronostratigraphy			
17	2477013	Silurian, Niagaran. NAS	Chronostratigraphy			
18	2274719	Pennsylvanian, Middle Pennsylvanian, Mosco	Chronostratigraphy			
19	2276069	Silurian, Late Silurian, ICS/IUGS	Chronostratigraphy			
20	2276053	Silurian, Late Silurian, ICS/IUGS	Chronostratigraphy			
21	2276055	Silurian, Late Silurian. ICS/IUGS	Chronostratigraphy			
22	2276057	Silurian, Late Silurian. ICS/IUGS	Chronostratigraphy			
23	2276059	Silurian, Late Silurian, ICS/IUGS	Chronostratigraphy			
24	2276061	Silurian, Late Silurian. ICS/IUGS	Chronostratigraphy			
25	2276063	Silurian, Late Silurian. ICS/IUGS	Chronostratigraphy			
26	2276065	Silurian, Late Silurian. ICS/IUGS	Chronostratigraphy			
27	2276067	Silurian, Late Silurian. ICS/IUGS	Chronostratigraphy			
Displ	ay 154 matching objects		pmayer FossilInvertsMgr emufmnh			

Summary



- 15,000 Silurian specimen to be digitized in 3 summers.
- Workflow and error detection designed around collection organization.
- Digitization rates averaging ~10 minutes per specimen
- Error rates less than 2%



Acknowledgements

IMLS Grants For America

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