



# Managing Digitization Personnel & Workflows



Larry Gall

Computer Systems Office  
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# Motivating ~~Managing~~ Digitization Personnel & Workflows

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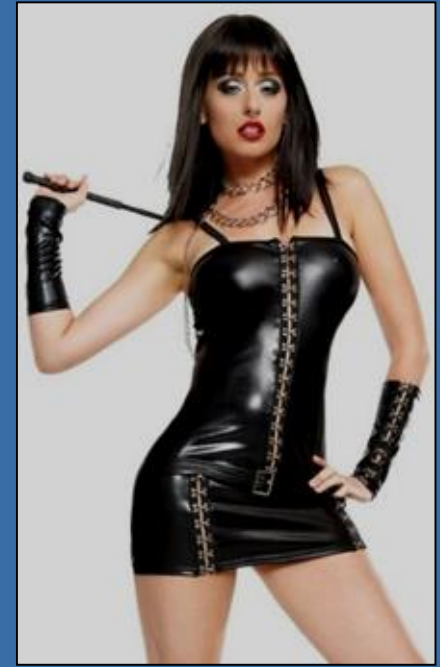
# Motivating ~~Managing~~ Digitization Personnel & Workflows

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# Motivating ~~Managing~~ Digitization Personnel & Workflows

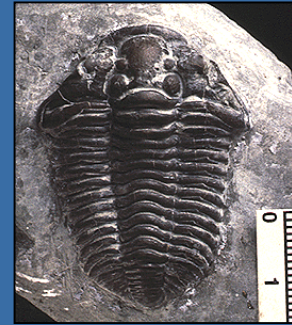
^



Different situations call for different solutions



Old God, Late Classic Maya



**Anthropology**  
**Botany**  
**Entomology**  
**Invertebrate Paleontology**  
**Invertebrate Zoology**  
**Meteorites & Planetary Science**  
**Mineralogy**  
**Paleobotany**  
**Scientific Instruments**  
**Vertebrate Paleontology**  
**Vertebrate Zoology**



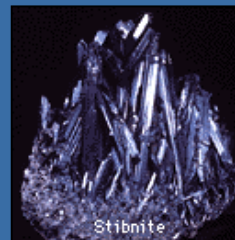
*Fagopsis longifolia*



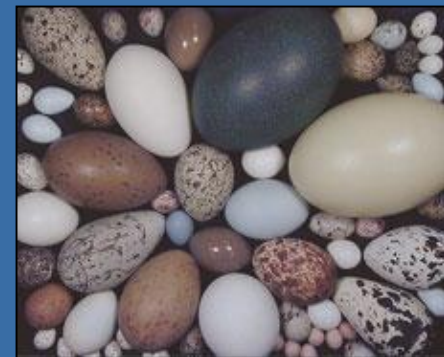
YPM 9297 *Olenellus getzi* Dunbar



Archelon



Stibnite



**~12 million specimens**

# Managing Digitization Personnel & Workflows



## Managing Digitization Personnel & Workflows

1. Reflect, know thyself, context matters





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## Managing Digitization Personnel & Workflows

1. Reflect, know thyself, context matters
- 2a. Create solutions that can be reused & recycled
- 2b. ... copying/pinching is quicker than creating



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3. Provide a tasty buffet of discrete/iterative tasks



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## Managing Digitization Personnel & Workflows

1. Reflect, know thyself, context matters
- 2a. Create solutions that can be reused & recycled
- 2b. ... copying/pinching is quicker than creating
3. Provide a tasty buffet of discrete/iterative tasks
4. Always remain flexible as matters arise
- 5a. Listen closely, users will find what's amiss
- 5b. ... prepare to alter workflow, perhaps wildly



# Vignette One

Invertebrate Paleontology -- imaging 75,000 brachiopods



**Jess Utrup**  
EMu Power User



# Vignette One

Invertebrate Paleontology -- imaging 75,000 brachiopods



IMPORT2

Home Insert Page Layout Formulas Data Review

Paste Clipboard Font Alignment

	A	B	C	D	E	F	G
1	CatFullNum	CatDepar	MultiTurMe	MultiTurMe	MultiTurMe	MultiTurMe	MultiTurMe
2	IP 009863	Invertebra IP 009863v	IP 009863	IP 009863	IP 009863	IP 009863	IP 009863
3	IP 007014	Invertebra IP 007014v	IP 007014	IP 007014	IP 007014	IP 007014	IP 007014
4	IP 007010	Invertebra IP 007010v	IP 007010	IP 007010	IP 007010	IP 007010	IP 007010
5	IP 067458	Invertebra IP 067458v	IP 067458	IP 067458	IP 067458	IP 067458	IP 067458
6	IP 067457	Invertebra IP 067457v	IP 067457	IP 067457	ventral - generated 10 Jul 2012		
7	IP 067454	Invertebra IP 067454v	IP 067454	IP 067454	ventral - generated 10 Jul 2012		
8	IP 067449	Invertebra IP 067449v	IP 067449	IP 067449	IP 067449	IP 067449	IP 067449
9	IP 067441	Invertebra IP 067441v	IP 067441	IP 067441	ventral - generated 10 Jul 2012		
10	IP 067440	Invertebra IP 067440v	IP 067440	IP 067440	dorsal - generated 10 Jul 2012		
11	IP 067433	Invertebra IP 067433v	IP 067433	IP 067433	IP 067433	IP 067433	IP 067433
12	IP 067428	Invertebra IP 067428v	IP 067428	IP 067428	ventral - generated 10 Jul 2012		
13	IP 067427	Invertebra IP 067427v	IP 067427	IP 067427	IP 067427	IP 067427	IP 067427
14	IP 067422	Invertebra IP 067422v	IP 067422	IP 067422	ventral - generated 10 Jul 2012		
15	IP 067415	Invertebra IP 067415v	IP 067415	IP 067415	ventral - generated 10 Jul 2012		
16	IP 067414	Invertebra IP 067414v	IP 067414	IP 067414	IP 067414	IP 067414	IP 067414
17	IP 067411	Invertebra IP 067411v	IP 067411	IP 067411	IP 067411	IP 067411	IP 067411
18	IP 067408	Invertebra IP 067408v	IP 067408	IP 067408	interior dorsal - generated 10 Jul 2012		
19	IP 067401	Invertebra IP 067401v	IP 067401	IP 067401	ventral - generated 10 Jul 2012		
20	IP 067396	Invertebra IP 067396v	IP 067396	IP 067396	IP 067396	IP 067396	IP 067396
21	IP 067178	Invertebra IP 067178v	IP 067178	IP 067178	ventral - generated 10 Jul 2012		
22	IP 067175	Invertebra IP 067175v	IP 067175	IP 067175	dorsal - generated 10 Jul 2012		
23	IP 067174	Invertebra IP 067174v	IP 067174	IP 067174	ventral - generated 10 Jul 2012		
24	IP 067173	Invertebra IP 067173v	IP 067173	IP 067173	IP 067173	IP 067173	IP 067173
25	IP 067172	Invertebra IP 067172v	IP 067172	IP 067172	IP 067172	IP 067172	IP 067172
26	IP 067169	Invertebra IP 067169v	IP 067169	IP 067169	ventral - generated 10 Jul 2012		
27	IP 067168	Invertebra IP 067168v	IP 067168	IP 067168	ventral - generated 10 Jul 2012		
28	IP 067165	Invertebra IP 067165v	IP 067165	IP 067165	IP 067165	IP 067165	IP 067165
29	IP 067164	Invertebra IP 067164v	IP 067164	IP 067164	IP 067164	IP 067164	IP 067164
30	IP 067163	Invertebra IP 067163v	IP 067163	IP 067163	ventral - generated 10 Jul 2012		
31	IP 067162	Invertebra IP 067162v	IP 067162	IP 067162	ventral - generated 10 Jul 2012		
32	IP 067160	Invertebra IP 067160v	IP 067160	IP 067160	IP 067160	IP 067160	IP 067160
33	IP 067159	Invertebra IP 067159v	IP 067159	IP 067159	ventral - generated 10 Jul 2012		
34	IP 067158	Invertebra IP 067158v	IP 067158	IP 067158	ventral - generated 10 Jul 2012		
35	IP 067157	Invertebra IP 067157v	IP 067157	IP 067157	IP 067157	IP 067157	IP 067157
36	IP 067156	Invertebra IP 067156v	IP 067156	IP 067156	ventral - generated 10 Jul 2012		
37	IP 067155	Invertebra IP 067155v	IP 067155	IP 067155	IP 067155	IP 067155	IP 067155
38	IP 067154	Invertebra IP 067154v	IP 067154	IP 067154	dorsal - generated 10 Jul 2012		
39	IP 067154	Invertebra IP 067154v	IP 067154	IP 067154	dorsal - generated 10 Jul 2012		

Ready

# Vignette One

Invertebrate Paleontology -- imaging 75,000 brachiopods



The image shows two overlapping screenshots of an Excel spreadsheet. The top screenshot shows the first few rows of the spreadsheet, and the bottom screenshot shows a larger portion of the spreadsheet, including a header row and many data rows.

	A	B	C	D	E	F	G
1	CatFullTur	CatDe	MultiTurMe	MultiTurMe	MultiTurMe	MultiTurMe	MultiTurMe
2	IP 009863	Invertebra	IP 009863V	IP 009863V	IP 009863V	IP 009863V	IP 009863V
3	IP 007014	Invertebra	IP 007014V	IP 007014V	IP 007014V	IP 007014V	IP 007014V
4	IP 007010	Invertebra	IP 007010V	IP 007010V	IP 007010V	IP 007010V	IP 007010V
5	IP 007458	Inverteb					
6	IP 007457	Inverteb					
7	IP 007454	Inverteb					
8	IP 007449	Inverteb					
9	IP 007441	Inverteb					
10	IP 007440	Inverteb					
11	IP 007433	Inverteb					
12	IP 007428	Inverteb					
13	IP 007427	Inverteb					
14	IP 007422	Inverteb					
15	IP 007415	Inverteb					
16	IP 007414	Inverteb					
17	IP 007411	Inverteb					
18	IP 007408	Inverteb					
19	IP 007401	Inverteb					
20	IP 007396	Inverteb					
21	IP 007178	Inverteb					
22	IP 007175	Inverteb					
23	IP 007172	Inverteb					
24	IP 007171	Inverteb					
25	IP 007173	Inverteb					
26	IP 007172	Inverteb					
27	IP 007169	Inverteb					
28	IP 007168	Inverteb					
29	IP 007165	Inverteb					
30	IP 007164	Inverteb					
31	IP 007163	Inverteb					
32	IP 007162	Inverteb					
33	IP 007160	Inverteb					
34	IP 007159	Inverteb					
35	IP 007158	Inverteb					
36	IP 007157	Inverteb					
37	IP 007156	Inverteb					
38	IP 007155	Inverteb					
39	IP 007154	Inverteb					

The bottom screenshot shows a header row with the following columns: #, MuTitle, MuDescription, Sec:Department\_tab, Multimedia. The data rows contain specimen IDs, descriptions (e.g., dorsal, ventral, hinge), and file paths (e.g., C:\IMAGES\OUT\009863V.jpg).

# Vignette One

Invertebrate Paleontology -- imaging 75,000 brachiopods



The image shows two overlapping windows from a computer application. The top window is a Microsoft Excel spreadsheet with the following data:

	A	B	C	D	E	F	G
1	CatFullNum	CatDepar	MultTitle	MultTitle	MultTitle	MultTitle	MultTitle
2	IP 009863	Invertebra	IP 009863V	IP 009863H	IP 009863D	IP 009863I	IP 009863J
3	IP 007014	Invertebra	IP 007014V	IP 007014H	IP 007014D	IP 007014I	IP 007014J
4	IP 007010	Invertebra	IP 007010V	IP 007010H	IP 007010D	IP 007010I	IP 007010J
5	IP 057458	Inverteb					
6	IP 057457	Inverteb					
7	IP 057454	Inverteb					
8	IP 057449	Inverteb					
9	IP 057441	Inverteb					
10	IP 057440	Inverteb					
11	IP 057433	Inverteb					
12	IP 057428	Inverteb					
13	IP 057427	Inverteb					
14	IP 057422	Inverteb					
15	IP 057415	Inverteb					
16	IP 057414	Inverteb					
17	IP 057411	Inverteb					
18	IP 057408	Inverteb					
19	IP 057401	Inverteb					
20	IP 057396	Inverteb					
21	IP 057178	Inverteb					
22	IP 057175	Inverteb					
23	IP 057172	Inverteb					
24	IP 057171	Inverteb					
25	IP 057173	Inverteb					
26	IP 057172	Inverteb					
27	IP 057169	Inverteb					
28	IP 057168	Inverteb					
29	IP 057165	Inverteb					
30	IP 057164	Inverteb					
31	IP 057163	Inverteb					
32	IP 057162	Inverteb					
33	IP 057160	Inverteb					
34	IP 057159	Inverteb					
35	IP 057158	Inverteb					
36	IP 057157	Inverteb					
37	IP 057156	Inverteb					
38	IP 057155	Inverteb					
39	IP 057154	Inverteb					

The bottom window is a catalog display titled "Catalog (1) - Display". It shows four images of brachiopod specimens with their corresponding IDs and page numbers:

- IP.012281.A 1 of 2
- IP.170546 1 of 1
- IP.057401V 1 of 1
- IP.057178V 1 of 1

Microsoft Excel - batch15.xls

Type a question for help

A536

	A	B	C	D	E	F	G	H	I	J	K	L	M
499	527	501279	hinge										
500	528	501277	ventral										
501	529	501276	ventral										
502	530	501276	interior ventral										
503	531	501274	ventral										
504	532	501271	ventral										
505	533	501266	ventral										
506	534	501266	dorsal										
507	535	501265	ventral										
508	536	501257	ventral										
509	537	501257	dorsal										
510	538	501233	ventral										
511	539	501357	ventral										
512	540	501357	interior ventral										
513	541	501252	ventral										
514	542	501252	dorsal										
515	543	501252	hinge										
516	544	501251	hinge										
517	545	501251	ventral										
518	546	501251	dorsal										
519	547	501249	ventral										
520	548	501246	ventral										
521	549	501238	ventral										
522	550	501238	interior ventral										
523	551	501219	ventral										
524	552	501221	ventral										
525	553	501224	ventral										
526	554	501226	ventral										
527	555	501226	hinge										
528	556	501227	ventral										
529	557	501232	ventral										
530	558	501206	ventral										
531	559	501206	dorsal										
532	560	501206	hinge										
533	561	501210	dorsal										
534	562	501213	ventral										
535	563	501216	dorsal										
536													
537													
538													
539													
540													
541													
542													
543													
544													
545													
546													
547													

Ready

NUM

catalog number

view of specimen  
(dorsal, ventral, etc.)

digital camera's image number,  
minus the prefix (e.g., IMG\_)



```

IP Image Processor
Processing C:\IMAGES\OUT\DS C00502.JPG
Processing C:\IMAGES\OUT\DS C00504.JPG
Processing C:\IMAGES\OUT\DS C00503.JPG
Processing C:\IMAGES\OUT\DS C00059.JPG
Processing C:\IMAGES\OUT\DS C00023.JPG
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Processing C:\IMAGES\OUT\DS C00329.JPG
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Processing C:\IMAGES\OUT\DS C00344.JPG
Processing C:\IMAGES\OUT\DS C00338.JPG
Processing C:\IMAGES\OUT\DS C00339.JPG
Processing C:\IMAGES\OUT\DS C00357.JPG
Processing C:\IMAGES\OUT\DS C00340.JPG
Processing C:\IMAGES\OUT\DS C00315.JPG

```

~ 1.5x

Microsoft Excel - batch15.xls

	A	B	C	D	E	F	G	H	I	J	K	L	M
499	527	501279	hinge										
500	528	501277	ventral										
501	529	501276	ventral										
502	530	501276	interior										
503	531	501274	ventral										
504	532	501271	ventral										
505	533	501266	ventral										
506	534	501266	dorsal										
507	535	501265	ventral										
508	536	501257	ventral										
509	537	501257	dorsal										
510	538	501233	ventral										
511	539	501357	ventral										
512	540	501357	interior										
513	541	501252	ventral										
514	542	501252	dorsal										
515	543	501252	hinge										
516	544	501251	hinge										
517	545	501251	ventral										
518	546	501251	dorsal										
519	547	501249	ventral										
520	548	501246	ventral										
521	549	501238	ventral										
522	550	501238	interior										
523	551	501219	ventral										
524	552	501221	ventral										
527	555	501226	hinge										
528	556	501227	ventral										
529	557	501232	ventral										
530	558	501206	ventral										
531	559	501206	dorsal										
532	560	501206	hinge										
533	561	501210	dorsal										
534	562	501213	ventral										
535	563	501216	dorsal										
536													
537													
538													
539													
540													
541													
542													
543													
544													
545													
546													
547													

Imported CSV data table:

	A	B	C	D
1	MultiMedia	MultDescription	SecDepartment_tab	Multimedia
2	IP.009853V	IP.009853V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\009853V.jpg
3	IP.009853H	IP.009853H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\009853H.jpg
4	IP.009853D	IP.009853D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\009853D.jpg
5	IP.007014V	IP.007014V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\007014V.jpg
6	IP.007014H	IP.007014H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\007014H.jpg
7	IP.007014D	IP.007014D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\007014D.jpg
8	IP.007010V	IP.007010V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\007010V.jpg
9	IP.007010H	IP.007010H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\007010H.jpg
10	IP.007010D	IP.007010D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\007010D.jpg
11	IP.057458V	IP.057458V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057458V.jpg
12	IP.057458H	IP.057458H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057458H.jpg
13	IP.057458D	IP.057458D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\057458D.jpg
14	IP.057457V	IP.057457V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057457V.jpg
15	IP.057457H	IP.057457H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057457H.jpg
16	IP.057457D	IP.057457D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\057457D.jpg
17	IP.057449V	IP.057449V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057449V.jpg
18	IP.057449H	IP.057449H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057449H.jpg
19	IP.057449D	IP.057449D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\057449D.jpg
20	IP.057440V	IP.057440V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057440V.jpg
21	IP.057433V	IP.057433V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057433V.jpg
22	IP.057433H	IP.057433H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057433H.jpg
23	IP.057429V	IP.057429V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057429V.jpg
24	IP.057427V	IP.057427V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057427V.jpg
25	IP.057427H	IP.057427H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057427H.jpg
26	IP.057427D	IP.057427D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\057427D.jpg
27	IP.057422V	IP.057422V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057422V.jpg
28	IP.057415V	IP.057415V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057415V.jpg
29	IP.057414V	IP.057414V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057414V.jpg
30	IP.057414H	IP.057414H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057414H.jpg
31	IP.057414D	IP.057414D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\057414D.jpg
32	IP.057411V	IP.057411V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057411V.jpg
33	IP.057411H	IP.057411H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057411H.jpg
34	IP.057411D	IP.057411D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\057411D.jpg
35	IP.057408D	IP.057408D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\057408D.jpg
36	IP.057401V	IP.057401V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057401V.jpg
37	IP.057395V	IP.057395V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057395V.jpg
38	IP.057396H	IP.057396H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057396H.jpg
39	IP.057178V	IP.057178V	ventral	Invertebrate Paleontol C:\IMAGES\OUT\057178V.jpg
40	IP.057178H	IP.057178H	hinge	Invertebrate Paleontol C:\IMAGES\OUT\057178H.jpg
41	IP.057178D	IP.057178D	dorsal	Invertebrate Paleontol C:\IMAGES\OUT\057178D.jpg

Catalog (1) - Display

IP.012281.A 1 of 2	IP.170546 1 of 1



Can you spot the differences between these two pictures ?



“Hands free” voice-activated data capture



Can you spot the differences between these two pictures ?

# “Hands free” voice-activated data capture



```
IP Image Processor
Processing C:\IMAGES\OUT\DS C00502.JPG
Processing C:\IMAGES\OUT\DS C00504.JPG
Processing C:\IMAGES\OUT\DS C00503.JPG
Processing C:\IMAGES\OUT\DS C00059.JPG
Processing C:\IMAGES\OUT\DS C00023.JPG
Processing C:\IMAGES\OUT\DS C00018.JPG
Processing C:\IMAGES\OUT\DS C00024.JPG
Processing C:\IMAGES\OUT\DS C00057.JPG
Processing C:\IMAGES\OUT\DS C00086.JPG
Processing C:\IMAGES\OUT\DS C00100.JPG
Processing C:\IMAGES\OUT\DS C00101.JPG
Processing C:\IMAGES\OUT\DS C00131.JPG
Processing C:\IMAGES\OUT\DS C00138.JPG
Processing C:\IMAGES\OUT\DS C00139.JPG
Processing C:\IMAGES\OUT\DS C00134.JPG
Processing C:\IMAGES\OUT\DS C00129.JPG
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Processing C:\IMAGES\OUT\DS C00328.JPG
Processing C:\IMAGES\OUT\DS C00344.JPG
Processing C:\IMAGES\OUT\DS C00338.JPG
Processing C:\IMAGES\OUT\DS C00339.JPG
Processing C:\IMAGES\OUT\DS C00357.JPG
Processing C:\IMAGES\OUT\DS C00340.JPG
Processing C:\IMAGES\OUT\DS C00315.JPG
```

	A	B	C	D	E	F	G	H
499	527	501279	hinge					
500	528	501277	ventral					
501	529	501276	ventral					
502	530	501276	interior					
503	531	501274	ventral					
504	532	501271	ventral					
505	533	501266	ventral					
506	534	501266	dorsal					
507	535	501265	ventral					
508	536	501257	ventral					
509	537	501257	dorsal					
510	538	501233	ventral					
511	539	501357	ventral					
512	540	501357	interior					
513	541	501252	ventral					
514	542	501252	dorsal					
515	543	501252	hinge					
516	544	501251	hinge					
517	545	501251	ventral					
518	546	501251	dorsal					
519	547	501249	ventral					
520	548	501246	ventral					
521	549	501238	ventral					
522	550	501238	interior					
523	551	501219	ventral					
524	552	501221	ventral					

	A	B	C	D
527	555	501226	hinge	
528	556	501227	ventral	
529	557	501232	ventral	
530	558	501206	ventral	
531	559	501206	dorsal	
532	560	501206	hinge	
533	561	501210	dorsal	
534	562	501213	ventral	
535	563	501216	dorsal	
536				

~ 3x

# “Hands free” voice-activated data capture



```
IP Image Processor
Processing C:\IMAGES\OUT\DS C00502.JPG
Processing C:\IMAGES\OUT\DS C00504.JPG
Processing C:\IMAGES\OUT\DS C00503.JPG
Processing C:\IMAGES\OUT\DS C00059.JPG
Processing C:\IMAGES\OUT\DS C00023.JPG
Processing C:\IMAGES\OUT\DS C00018.JPG
Processing C:\IMAGES\OUT\DS C00024.JPG
Processing C:\IMAGES\OUT\DS C00057.JPG
Processing C:\IMAGES\OUT\DS C00086.JPG
Processing C:\IMAGES\OUT\DS C00100.JPG
Processing C:\IMAGES\OUT\DS C00101.JPG
Processing C:\IMAGES\OUT\DS C00131.JPG
Processing C:\IMAGES\OUT\DS C00138.JPG
Processing C:\IMAGES\OUT\DS C00139.JPG
Processing C:\IMAGES\OUT\DS C00134.JPG
Processing C:\IMAGES\OUT\DS C00129.JPG
Processing C:\IMAGES\OUT\DS C00133.JPG
Processing C:\IMAGES\OUT\DS C00140.JPG
Processing C:\IMAGES\OUT\DS C00329.JPG
Processing C:\IMAGES\OUT\DS C00328.JPG
Processing C:\IMAGES\OUT\DS C00344.JPG
Processing C:\IMAGES\OUT\DS C00338.JPG
Processing C:\IMAGES\OUT\DS C00339.JPG
Processing C:\IMAGES\OUT\DS C00357.JPG
Processing C:\IMAGES\OUT\DS C00340.JPG
Processing C:\IMAGES\OUT\DS C00315.JPG
```

~ 3x

The main screenshot shows a Microsoft Excel spreadsheet with a table of data. A person is shown in the top right corner wearing a head-mounted display and a microphone, using a voice-activated device. The spreadsheet data is as follows:

	A	B	C	D	E	F	G	H
499	527	501279	hinge					
500	528	501277	ventral					
501	529	501276	ventral					
502	530	501276	interior					
503	531	501274	ventral					
504	532	501271	ventral					
505	533	501266	ventral					
506	534	501266	dorsal					
507	535	501265	ventral					
508	536	501257	ventral					
509	537	501257	dorsal					
510	538	501233	ventral					
511	539	501357	ventral					
512	540	501357	interior					
513	541	501252	ventral					
514	542	501252	dorsal					
515	543	501252	hinge					
516	544	501251	hinge					
517	545	501251	ventral					
518	546	501251	dorsal					
519	547	501249	ventral					
520	548	501246	ventral					
521	549	501238	ventral					
522	550	501238	interior					
523	551	501219	ventral					
524	552	501221	ventral					
527	555	501226	hinge					
528	556	501227	ventral					
529	557	501232	ventral					
530	558	501206	ventral					
531	559	501206	dorsal					
532	560	501206	hinge					
533	561	501210	dorsal					
534	562	501213	ventral					
535	563	501216	dorsal					
536								
537								
538								
539								
540								
541								
542								
543								
544								
545								
546								
547								

The spreadsheet also shows a 'Catalog (1) - Display' window with four images of insect specimens, each with a ruler for scale. The images are labeled with IDs: IP.012281.A (1 of 2), IP.170546 (1 of 1), and two others with IDs ending in 119 and 110.

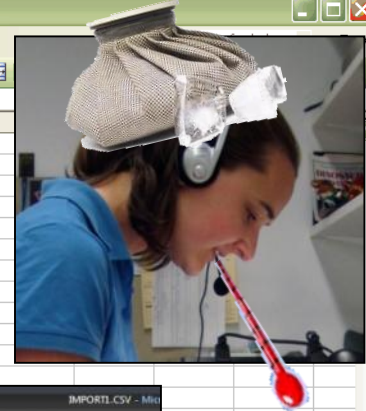
# “Hands free” voice-activated data capture



```
IP Image Processor
Processing C:\IMAGES\OUT\DS000502.JPG
Processing C:\IMAGES\OUT\DS000504.JPG
Processing C:\IMAGES\OUT\DS000503.JPG
Processing C:\IMAGES\OUT\DS000509.JPG
Processing C:\IMAGES\OUT\DS000523.JPG
Processing C:\IMAGES\OUT\DS000524.JPG
Processing C:\IMAGES\OUT\DS000518.JPG
Processing C:\IMAGES\OUT\DS000524.JPG
Processing C:\IMAGES\OUT\DS000577.JPG
Processing C:\IMAGES\OUT\DS000866.JPG
Processing C:\IMAGES\OUT\DS000100.JPG
Processing C:\IMAGES\OUT\DS000101.JPG
Processing C:\IMAGES\OUT\DS000131.JPG
Processing C:\IMAGES\OUT\DS000138.JPG
Processing C:\IMAGES\OUT\DS000139.JPG
Processing C:\IMAGES\OUT\DS000129.JPG
Processing C:\IMAGES\OUT\DS000133.JPG
Processing C:\IMAGES\OUT\DS000140.JPG
Processing C:\IMAGES\OUT\DS000329.JPG
Processing C:\IMAGES\OUT\DS000328.JPG
Processing C:\IMAGES\OUT\DS000344.JPG
Processing C:\IMAGES\OUT\DS000338.JPG
Processing C:\IMAGES\OUT\DS000339.JPG
Processing C:\IMAGES\OUT\DS000357.JPG
Processing C:\IMAGES\OUT\DS000340.JPG
Processing C:\IMAGES\OUT\DS000315.JPG
```

The main screenshot shows a Microsoft Excel spreadsheet with columns A through H. The data includes specimen IDs, counts, and anatomical directions. A red arrow points to a specific row (536) in the spreadsheet. An inset window titled 'IMPORT1.CSV - M...' shows a table with columns: MultiTitle, MultiDescription, SecDepartment, tab, Multimedia. Below the spreadsheet, a 'Catalog (1) - Display' window shows four thumbnail images of specimens with labels: IP.012281.A (1 of 2), IP.170546 (1 of 1), and two other specimens with ruler scales.

A	B	C	D	E	F	G	H
499	527	501279	hinge				
500	528	501277	ventral				
501	529	501276	ventral				
502	530	501276	interior				
503	531	501274	ventral				
504	532	501271	ventral				
505	533	501266	ventral				
506	534	501266	dorsal				
507	535	501265	ventral				
508	536	501257	ventral				
509	537	501257	dorsal				
510	538	501233	ventral				
511	539	501357	ventral				
512	540	501357	interior				
513	541	501252	ventral				
514	542	501252	dorsal				
515	543	501252	hinge				
516	544	501251	hinge				
517	545	501251	ventral				
518	546	501251	dorsal				
519	547	501249	ventral				
520	548	501246	ventral				
521	549	501238	ventral				
522	550	501238	interior				
523	551	501219	ventral				
524	552	501221	ventral				
527	555	501226	hinge				
528	556	501227	ventral				
529	557	501232	ventral				
530	558	501206	ventral				
531	559	501206	dorsal				
532	560	501206	hinge				
533	561	501210	dorsal				
534	562	501213	ventral				
535	563	501216	dorsal				
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537							
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547							







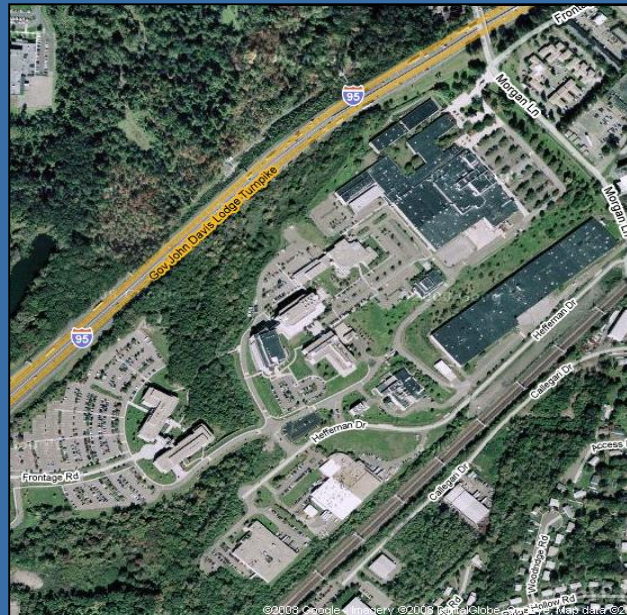
# Vignette Two

Moving collections to Yale's West Campus (2007-2009)  
Anthropology, Vertebrate Zoology, et al.



# Vignette Two

Moving collections to Yale's West Campus (2007-2009)  
Anthropology, Vertebrate Zoology, et al.



former Bayer complex  
130+ acres  
1.5+ million sq. ft.



# Vignette Two

Moving collections to Yale's West Campus (2007-2009)  
Anthropology, Vertebrate Zoology, et al.



# Vignette Two

Moving collections to Yale's West Campus (2007-2009)  
Anthropology, Vertebrate Zoology, et al.



# Yale Art Gallery



Laptop, barcode printer, tethered scan gun – barcoding for tracking & inventory

Yale Art Gallery

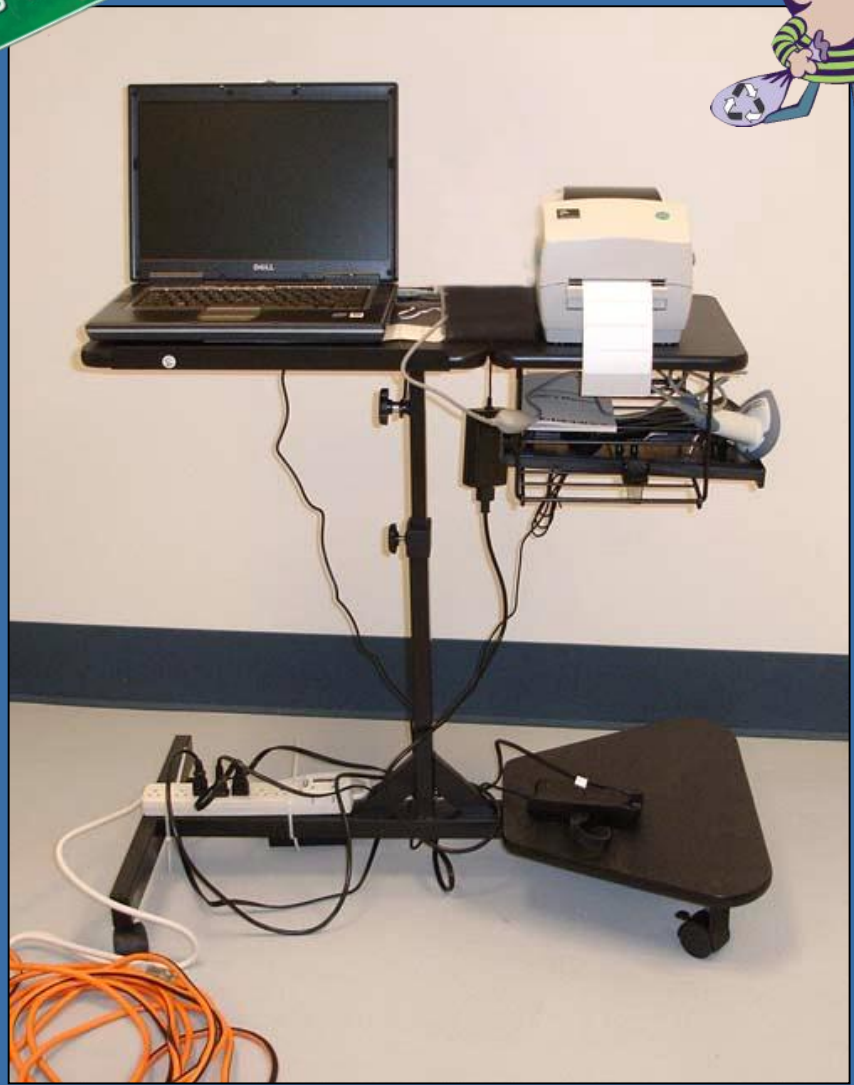
Peabody



Laptop, barcode printer, tethered scan gun – barcoding for tracking & inventory

Yale Art Gallery

Peabody



Laptop, barcode printer, tethered scan gun – barcoding for tracking & inventory



Specimen barcode

# Container barcode



# Specimen barcode

Container barcode

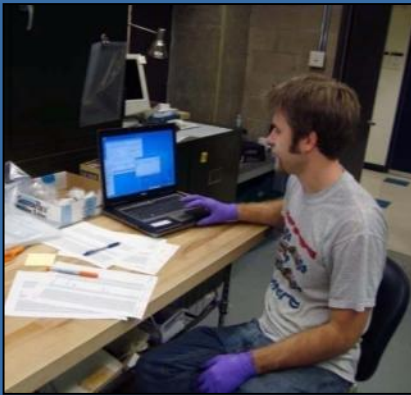


Physical location barcode



Specimen barcode





Vertebrate Zoology -- existing staff, one room, little time pressure, cataloging was rate limiting

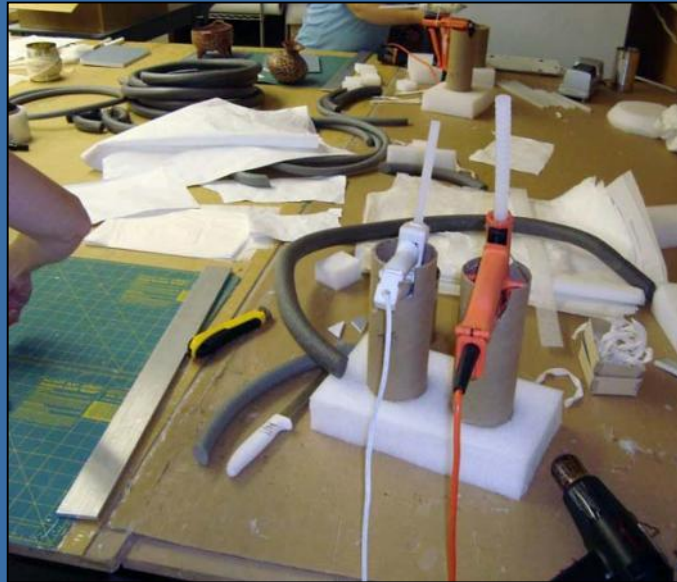


Anthropology— new/many staff, many rooms, big time pressure, packing/barcoding was rate limiting

We hired expert digitizers



Anthropology— new/many staff, many rooms, big time pressure, packing/barcoding was rate limiting

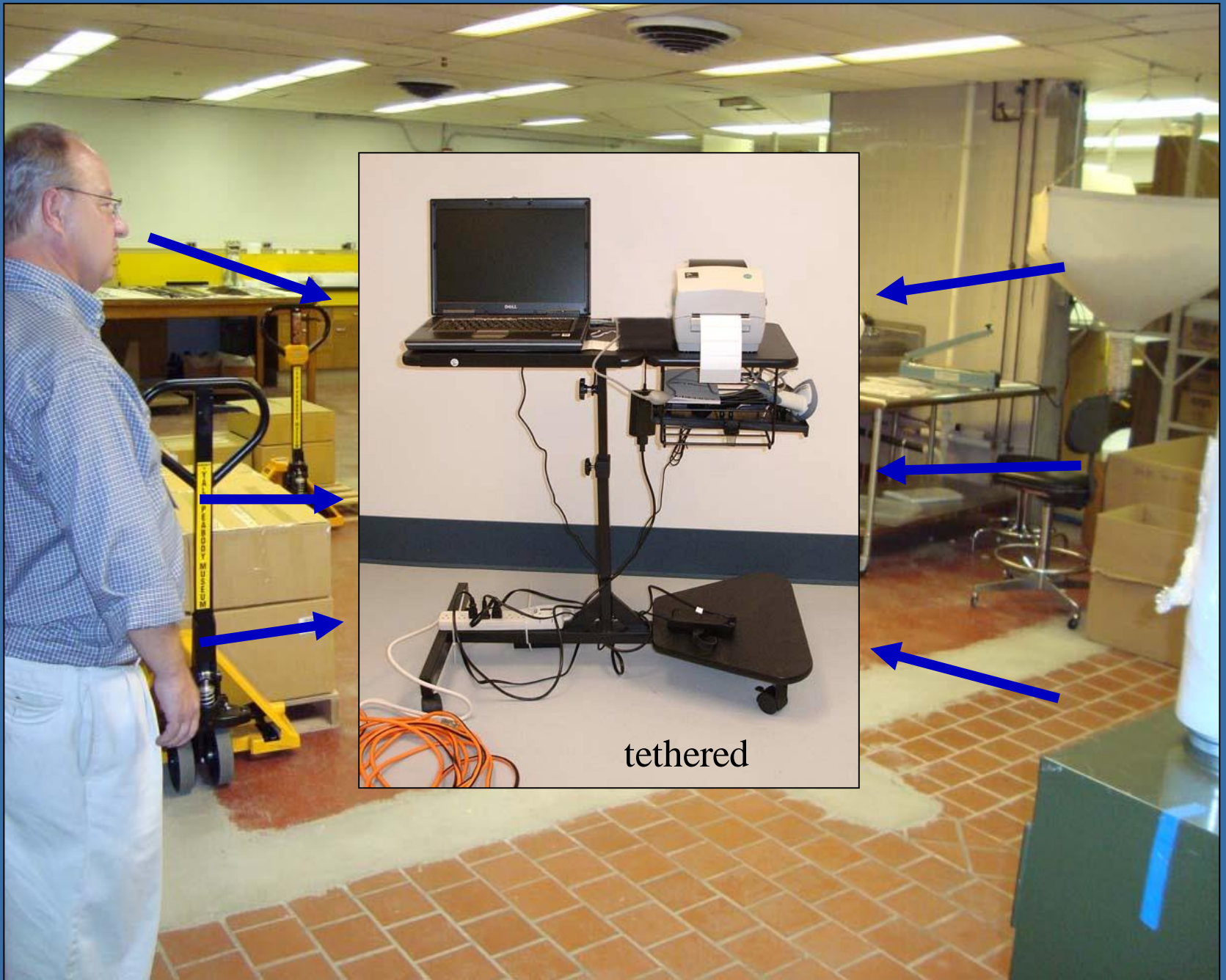


Ethafoam!

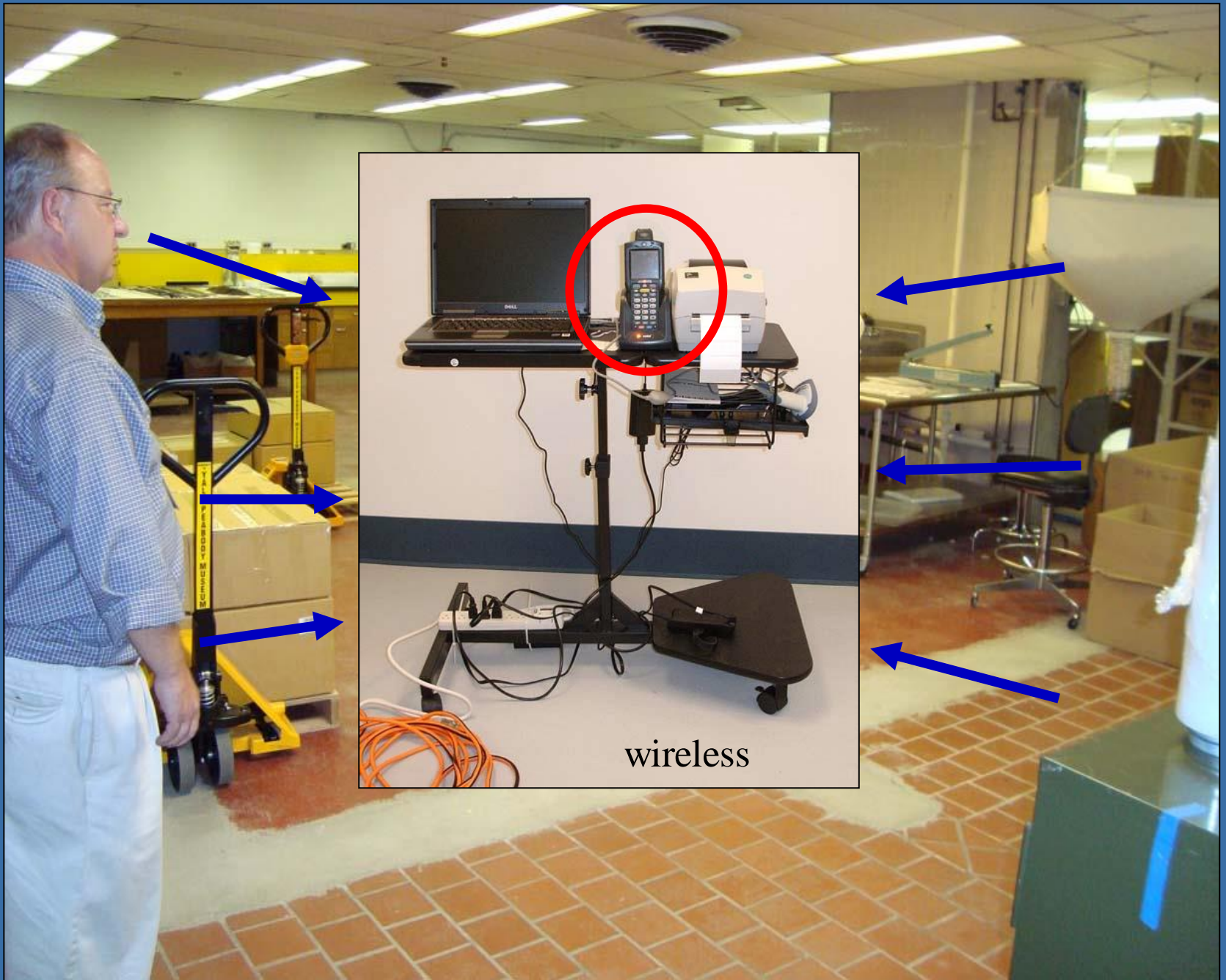


Anthropology— new/many staff, many rooms, big time pressure, packing/barcoding was rate limiting

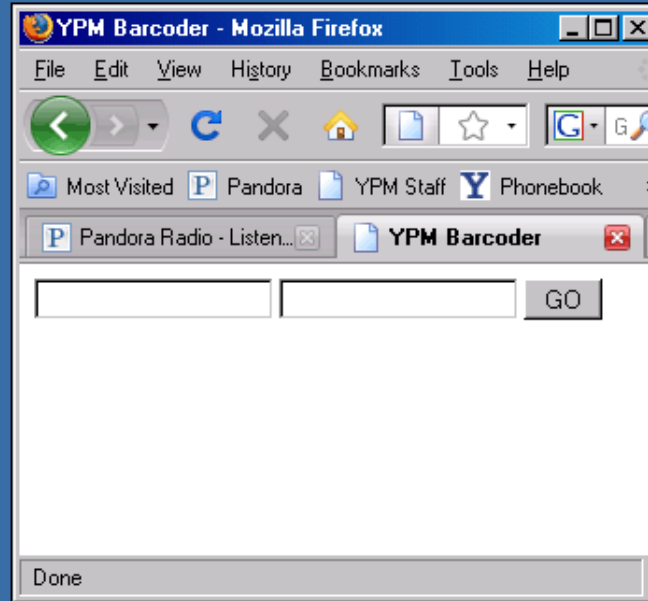




tethered

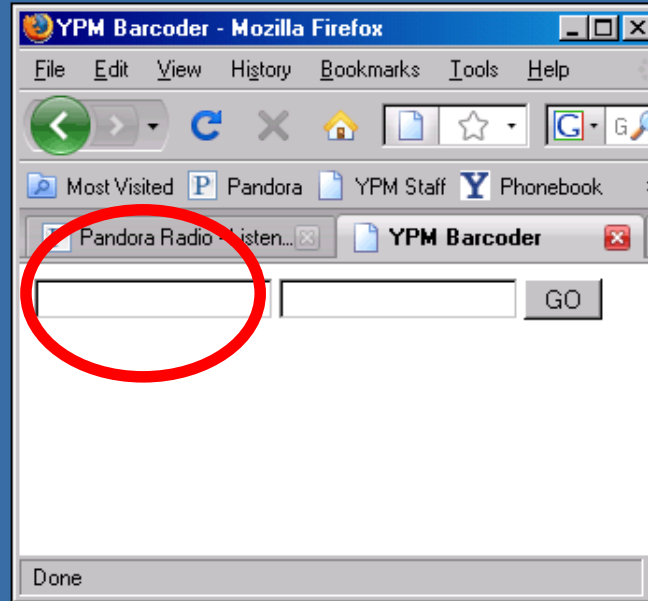


wireless

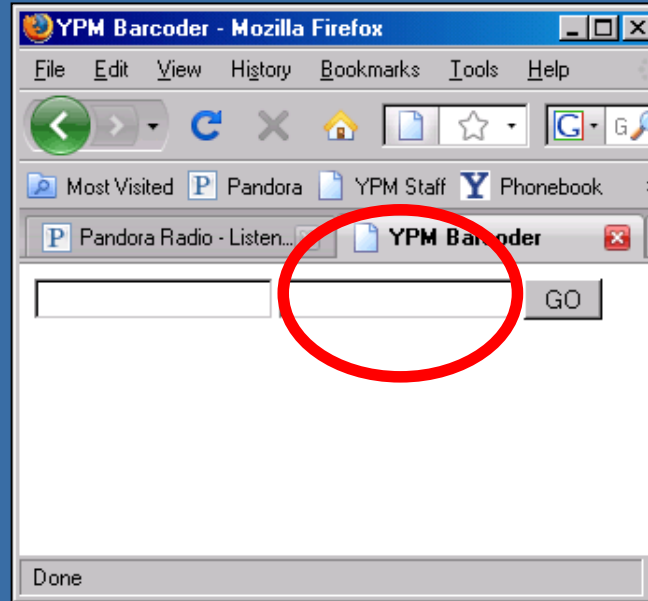


MC3090 scanner, simple CGI script, invokes existing database functionality

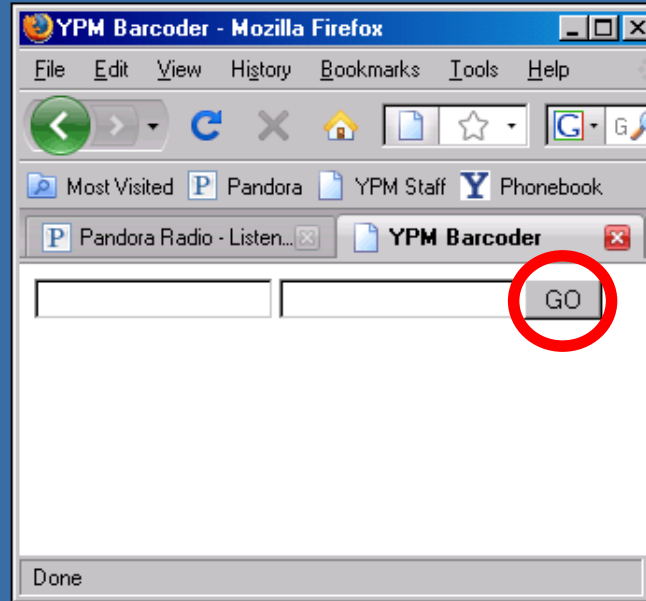




MC3090 scanner, simple CGI script, invokes existing database functionality



MC3090 scanner, simple CGI script, invokes existing database functionality



No need to  
get to cart

No need to  
login to EMu



MC3090 scanner, simple CGI script, invokes existing database functionality



MC3090 scanner, simple CGI script, invokes existing database functionality



Set scanners on stun ! Aye, Captain !



Set scanners on stun ! Aye, Captain !



Ethafoam Madness

# Vignette Three

57 Yale student workers in Entomology (2007-present)





# Student-Powered Paracurating



Sort to Family  
then Subfamily  
(Larry)



Sort to Genus  
then Species  
(Larry, students)



Sort within Species  
by Collecting Event  
(students)



Database  
(students)

# Student-Powered Paracurating



Sort to Family  
then Subfamily  
(Larry)



Sort to Genus  
then Species  
(Larry, students)



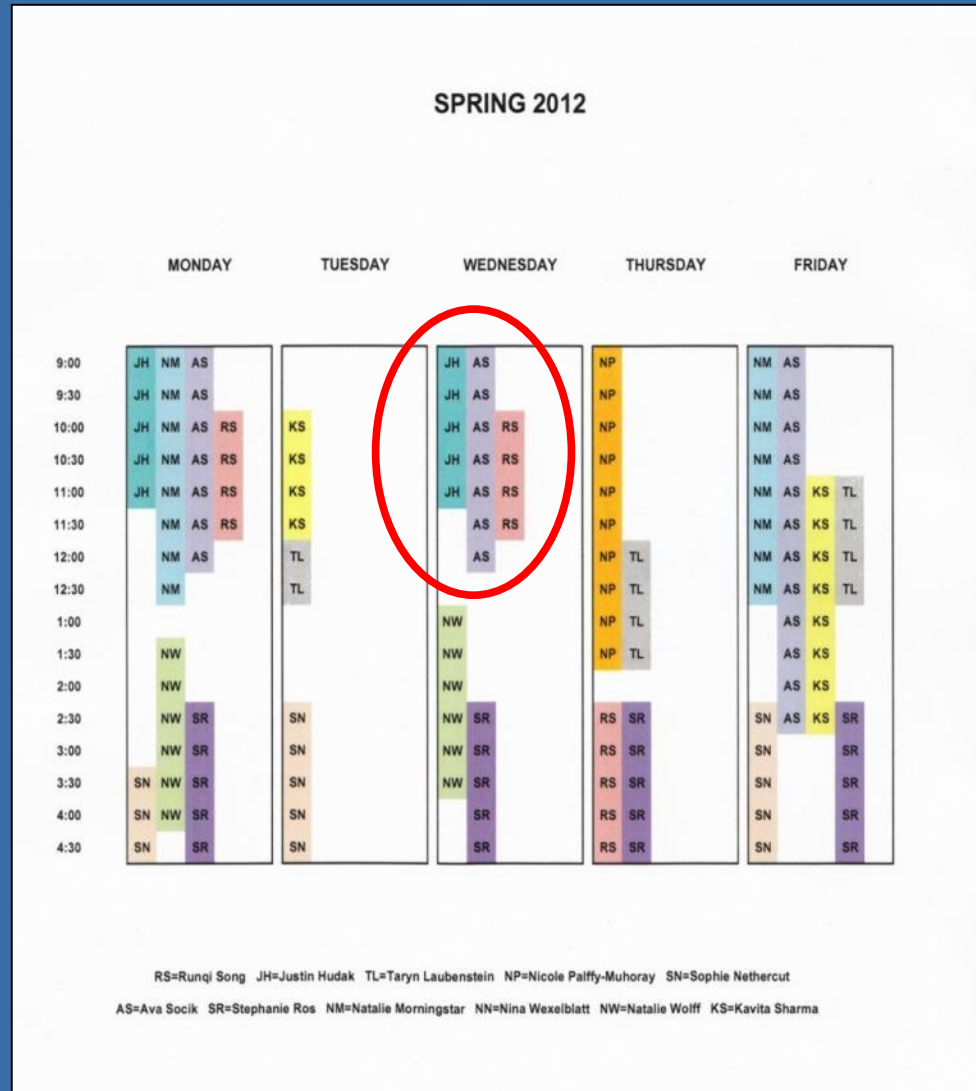
Sort within Species  
by Collecting Event  
(students)



Database  
(students)



# Student-Powered Paracurating



Schedule in overlapping timeslots, so students can work in groups

## Student-Powered Paracurating



“Play Darwin - invent & separate out species of biblidine nymphalids”

## Student-Powered Paracurating



Teachable  
Moments

“Play Darwin - invent & separate out species of biblidine nymphalids”

## Student-Powered Paracurating



Teachable  
Moments

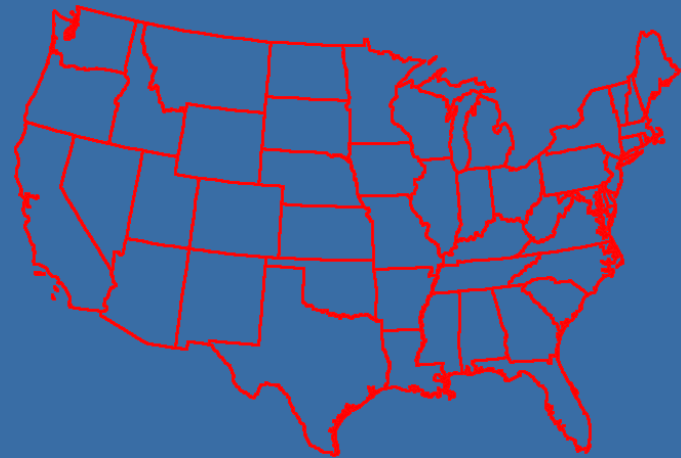
“Play Darwin - invent & separate out species of biblidine nymphalids”

## Student-Powered Paracurating



Sorting within species to State/Province or comparably “digestible” geographic unit

## Student-Powered Paracurating



Geography, and the “Student Enforcers”



## Student-Powered Paracurating



Geography, and the “Student Enforcers”

## Student-Powered Paracurating



Geography, and the “Student Enforcers”

# Student-Powered Paracurating



Geography, and the “Student Enforcers”



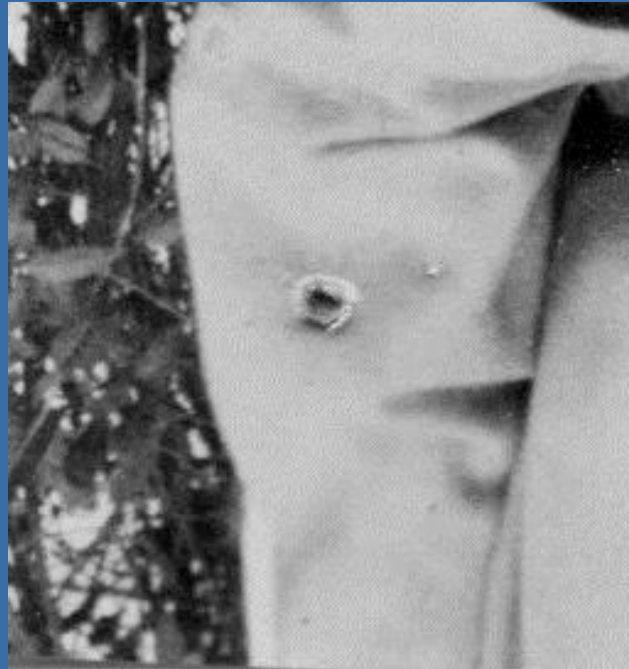
Always check reverse of labels to uncover any hidden information

## Student-Powered Paracurating



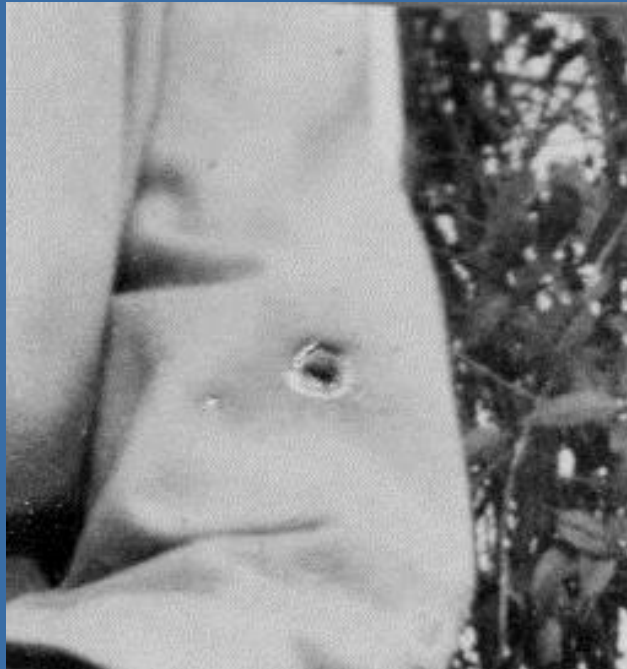
Always check reverse of labels to uncover any hidden information

## Student-Powered Paracurating



“Picture on label” into cataloguing comments field

## Student-Powered Paracurating



“Picture on label” into cataloguing comments field

## Student-Powered Paracurating



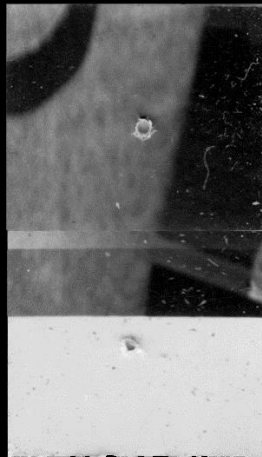
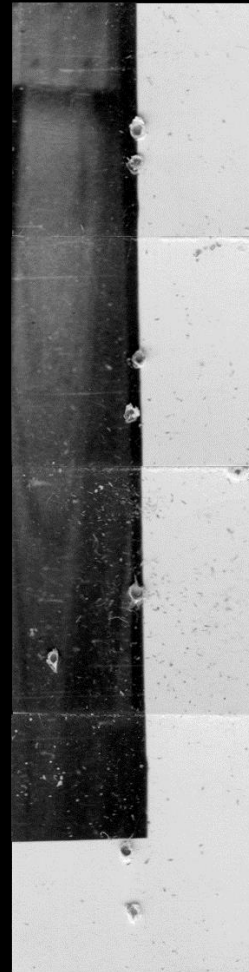
“Picture on label” into cataloguing comments field





“Picture on label” into cataloguing comments field

## Student-Powered Paracurating



“Picture on label” into cataloguing comments field

## Student-Powered Paracurating



Rosa Li



# Yale Precision Marching Band

[Yale Concert Band](#) • [Yale Jazz Ensemble](#) • [Yale Precision Marching Band](#)

[Members](#)

[Leaders](#)

[Music](#)

[Schedule](#)

[Gallery](#)

[FAQ](#)

[Links](#)



## Rosa Li CC'09

Hailing from the far-off land of Texas, Rosa Li brings to the job of drum major an unbeatable combination of rock star magnetism, keen and piercing intellect, and a penchant for singing along, even when she doesn't know the words. The only football game she's ever missed was the one where the band spelled her name on the field; after that, she resolved never to miss another YPMB event again.

Rosa earned her YPMB wings as KBB section leader, banging her way into the hearts of the band. She continued her career as band social chair before assuming the role of whistle-bearer. Other highlights of her career in the band include being the crotch of the pre-game Y, accidentally locking herself and the band president in the band office...and carrying on an extensive conversation with then-governor of New York George Pataki while clad only in white pants and a YPMB sports bra.

Rosa is a psychology major, and when she's not directing the band, she's playing with monkeys in Yale's Capuchin Cognition lab or looking at



“Uberprops”



# Yale Precision Marching Band

Ensemble • Yale Precision Marching Band



- Member
- Leaders
- Music
- Schedule
- Gallery
- FAQ
- Links



Texas, Rosa Li brings to the job of drum major a combination of rock star magnetism, keen and infectious energy, and a love for singing along, even when she's not singing. In the 2017 football game she's ever missed was the game she was named on the field; after that, she was named on the field again.

As a KBB section leader, banging her way into the hearts of the band. She continued her career as band social media manager and whistle-bearer. Other highlights of her career include being the crotch of the pre-game Y, being the band president in the band, having a five conversation with then-governor of Connecticut, and wearing only in white pants and a YPMB t-shirt.



When she's not directing the band, she's working at the Cognitive Lab or looking at



Toruk, Pegasus, Provost Salovey



## Yale Precision Marching Band

From Wikipedia, the free encyclopedia

**The Yale Precision Marching Band** (affectionately known as the **YPMB**, or more simply **The Band**, for short) is the official marching band of Yale University. It is a scatter band (what some peers might call a "scramble band"), as distinct from university marching bands that emphasize precise movements and geometric field formations. Band members refer to themselves as "The Members Of", which is derived from their introduction at Yale events.

<b>Yale Precision Marching Band</b> <i>YPMB, The Band</i>	
<b>School</b>	Yale University
<b>Location</b>	New Haven, CT
<b>Conference</b>	Ivy League
<b>Founded</b>	[Unknown]
<b>Director</b>	Thomas C. Duffy
<b>Members</b>	80+
<b>Fight song</b>	<i>Bulldog, Down the Field</i>
<b>Uniform</b>	Navy blue Yale blazers, white collared button-up shirts, white pants, black shoes, decorative pins and accessories known as "schwee"
<b>Website</b>	Yale Precision Marching Band

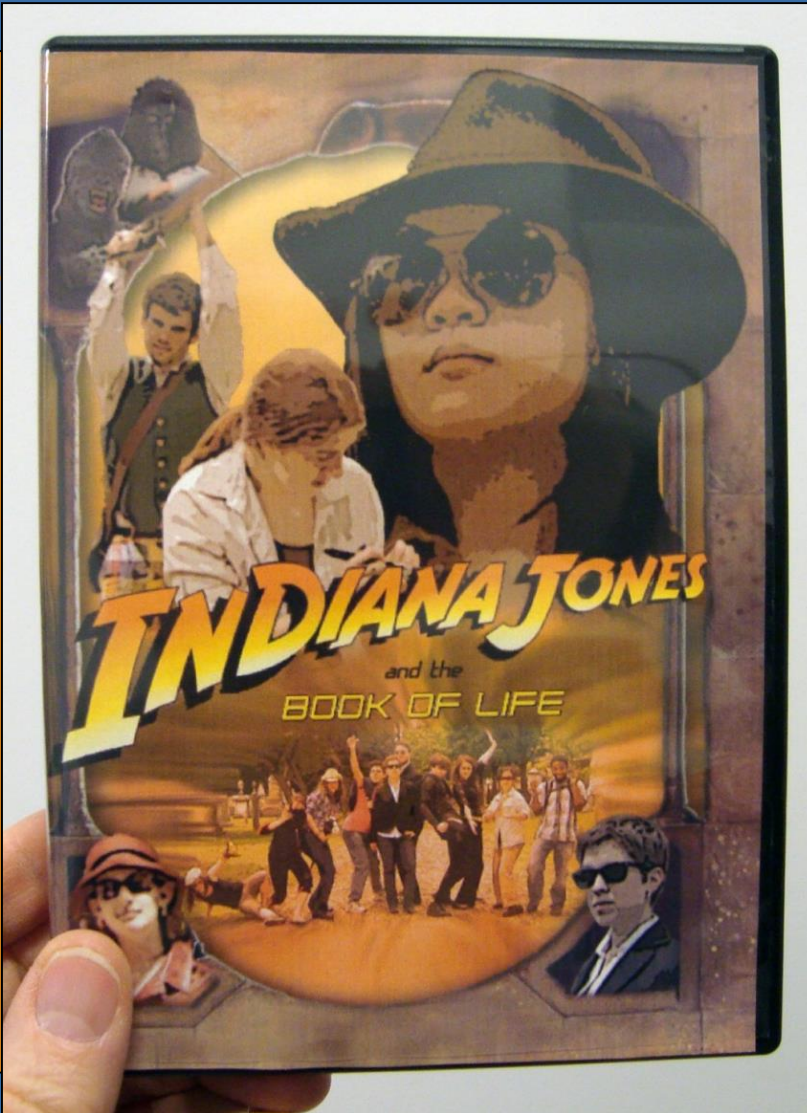
Rosa Li brings to the job of drum star magnetism, keen and ging along, even when she ll game she's ever missed was e on the field; after that, she ent again.

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New York George Pataki while clad only in white pants and a YPMB sports bra.

Rosa is a psychology major, and when she's not directing the band, she's playing with monkeys in Yale's Capuchin Cognition lab or looking at



## Marching Band

Precision Marching Band

the job of drum  
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band  
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ad a YPMB

the band, she's  
r looking at



# Student-Powered Paracurating





# Student-Powered Paracurating



# Student-Powered Paracurating



# Student-Powered Paracurating



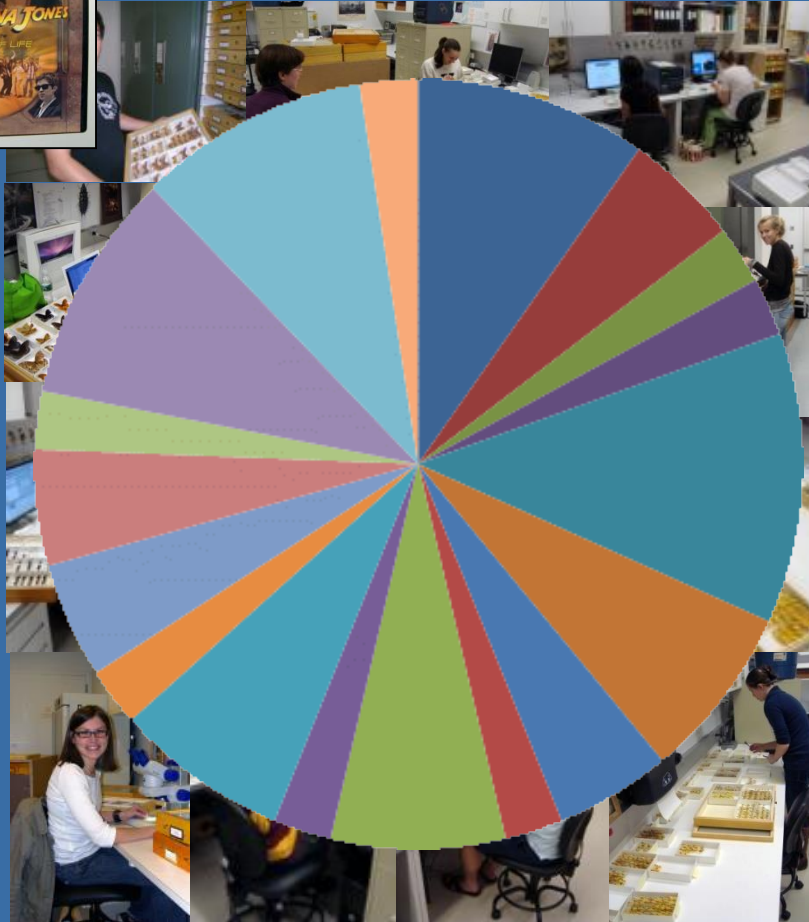
## The Village



57 students

# Student-Powered Paracurating

## The Village



57 students

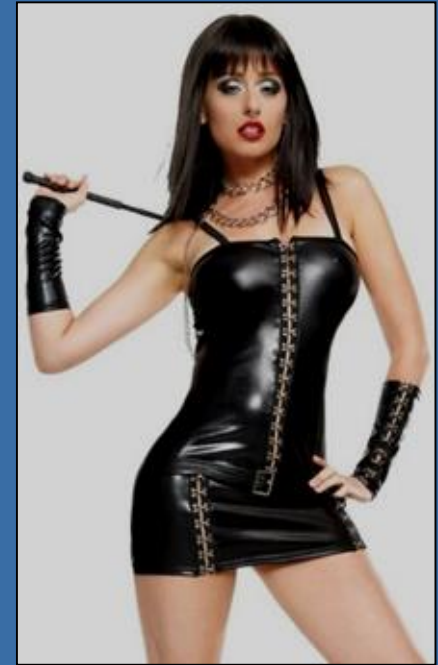
- Art
- Biological Anthropology
- Biomedical Engineering
- Classics
- Ecology & Evolutionary Biology
- English
- Environmental Studies
- Geology
- History
- Italian
- Linguistics
- Literature
- Mechanical Engineering
- Music
- Physics
- Political Science
- Psychology
- Sculpture



18 subject majors

# Motivating ~~Managing~~ Digitization Personnel & Workflows

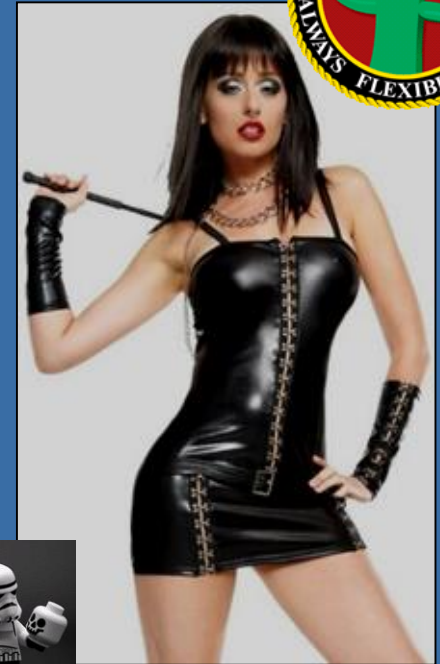
^



Options shown are not available in all stores & locations ...

# Motivating ~~Managing~~ Digitization Personnel & Workflows

^



Options shown are not available in all stores & locations ...