

The Hopkins Notes and Records System and its value for contemporary research

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&

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SI Note Card File Systems

- Quaintance
- Koebele
- Pergande
- Morrison
- Ritchie
- Zetek
- Ulrich
- Riley
- Walsh



~2,459 drawers
2,279,493 cards estimated

- Webster
- Chambliss
- Comstock
- Coquillet
- Hubbard
- Hunter
- Lugger
- Mally
- Hopkins

Majority are “bibliography” cards
18 different sets of research cards

Andrew Delmar Hopkins (1857-1948)



- Forest Entomologist
- Specialized in scolytines (bark beetles)
- Prolific collector of both insects and wood boring damage
- Head of USDA Division of Forest Insect Investigations
- Developed a system for tracking specimens collected, reared, and notes on their biology

Hopkins Collections



Hopkins Insect Collection
USNM & OSU (& ?)



Wood Damage Collection
USNM & OSU (& ?)

Hopkins U.S. System Index (HUSSI)

- Used by the U.S. Forest Service from 1899–1987.
- Documents data pertaining to insects associated with woody plants in U.S. forests.
- Links collection, ID & natural history data for insect specimens (e.g., herbivores & their natural enemies) on known host plants.
- Majority of the insect specimens documented in the Hopkins system are located at the NMNH.
- Specimens associated with data on the cards via unique Hopkins numbers on labels.
- Two largest repositories of specimens and cards are USNM and Oregon State University.

Significant % of natural history and biological data remain unpublished!!!

Hopkins U.S. System Index (HUSSI) Formats



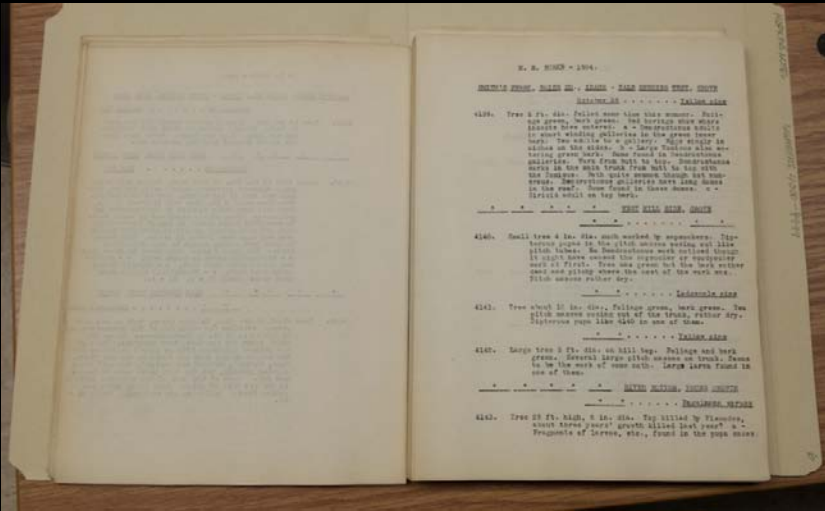
Note cards
USNM

Unknown portion of the cards that were housed at USNM were discarded by non-Entomology staff to take the cabinet when the Entomology collections moved.



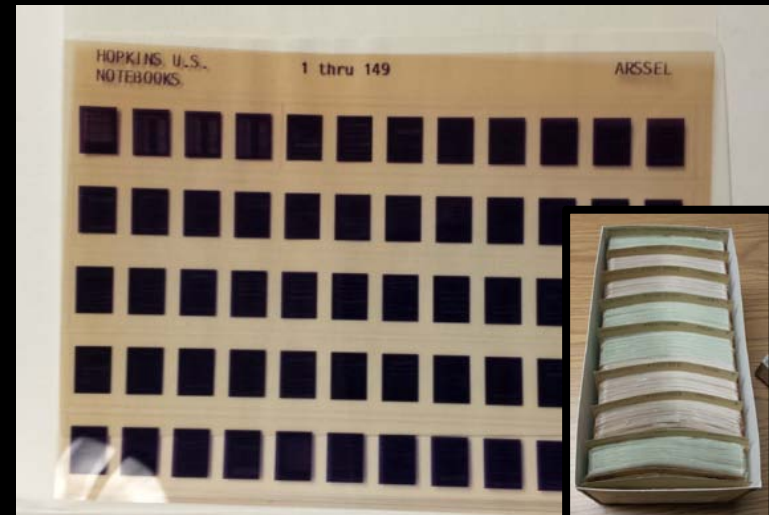
Note cards
Oregon State University

Hopkins U.S. System Index (HUSSI) Formats



Notebooks

Unclear how many sets were created
May be unique to each institution



Microfilm

Multiple sets created of "all cards"
Sets to USFS labs and USDA SEL



Hopkins U.S. System Index (HUSSI)

HOPKINS U.S. SYSTEM INDEXING PROJECT

Status 5/26/87

Location of repository	Repository code	File type	Estimated no.	Records No.	Indices completed
Washington, DC	ARSSEL	cards	96,253	0	
Washington, DC	ARSSEL	pages	3,174	0	
LaGrande, OR	PNWLAOR	cards	11,714	0	
Fairbanks, AK	PNWFAAK	cards	572	483	5/19
Berkeley, CA	PSWBECA	cards	16,521	0	
Berkeley, CA	PSWBECA	pages	6,639	0	
Ogden, UT	INTOGUT	cards	465	469	5/19
Ft. Collins, CO	RMFCCO	cards	10,074	0	
Lincoln, NE	RMLINE	cards	2,526	3,790	3/12
East Lansing, MI	NCSPMN	cards	731	0	
Delaware, OH	NEDEOH	cards	567	0	
Athens, GA	SEATGA	cards	1,412	1,213	3/24
Res.Tri.Pk., NC	SERTPNC	cards	1,221	1,161	3/24
Olustee, FL	SEOLFL	cards	350	344	3/24
Stoneville, MS	SOSTMS	cards	486	515	5/21
Gulfport, MS	SOGUMS	cards	1,047	1,020	5/21
Missoula, MT	RONMIMT	cards	2,522	2,618	5/19
Lakewood, CO	RTWLACO	cards	153	153	3/27
Albuquerque, NM	RTHALNM	cards	1,352	723	5/19
Ogden, UT	RFOOGUT	cards	1,339	1,307	5/19
Boise, ID	RFOBOID	cards	192	218	5/19
Alexandria, LA	REIALLA	cards	396	0	
Anchorage, AK	RTEANAK	cards	500	0	
Juneau, AK	RTEJUAK	cards	2,158	0	
Durham, NH	NADUNH	cards	219	103	5/19
		cards	152,770		
		pages	9,813		
		Totals	162,583	14,117	

Hopk. U.S. 33500Abies amabilis
Enumclaw, Wash. July 28, 1959 P. W. Orr, Col'r.

While checking for black-headed budworm damage on Huckleberry Ridge on Snoqualmie N. F., sawfly feeding on old and new needles of silver fir was noted near Jim Creek (T.18 N, R.9 E; Sec.16 WM; elev., 3,500 ft.). The feeding was about equally severe on old and new needles. Disease appeared to have killed some larvae. Some larvae sent to Dr. A. E. Steinhaus for diagnosis. Diagnosis negative. 25 larvae placed in rearing July 30.

General note card (NF)

Rearing Notes Hopk. U.S. 33465Pinus ponderosa
Goldendale, Wash. Aug. 6, 1957 W. H. Klein, Col'r.

Date emerged	Adult Emergence from Bark Samples				
	"A" Sawfly	"B" Ichn.	"C" Ichn.	"D" Chalcid	"E" Fly
4- 7-58	5	2	1	0	0
4-17-58	7	2	0	2	0
4-18-58	1	0	0	1	1
4-20-58	2	0	0	0	2
4-25-58	1	0	0	0	1
6- 1-58	0	0	0	0	0
Totals	16	4	1	3	4

Rearing summary card (NF)

Hopk. U.S. 33,395-APseudotsuga menziesii
Baker, Ore. July 10, 1957 V. M. Carolin, Col'r.

Species note - Description

Full-grown larva - length 1-1/4 to 1-1/2 inches; head jet black, shield colorless and divided; body a mottled green, marked with 3 longitudinal white lines on dorsum and with a pale yellow spiracular stripe; conjunctivae yellow to pink; setal bases black and prominent - those on meso- and meta-thorax larger and raised.

Species note card (NF)

Hopk. U.S. 30344Pseudotsuga taxifolia
Enumclaw, Wash. July 28, 1959 P. W. Orr, Col'r.

A - Scolytidae, Dendroctonus sp. 10 pinned, 20 alc.
B - Cerambycidae, Monochamus sp. 5 pinned
C - Braconidae, Coeloides sp. 13 pinned

Species summary card (NF)

Hopk. U.S. 30344-APseudotsuga taxifolia
Enumclaw, Wash. July 28, 1959 P. W. Orr, Col'r.

30344-A Dendroctonus sp. (No.) pinned specimens sent to Washington for identification (Date); returned (Date).

Det.: (Scientific name)
Det.by: (Name of specialist) (Date of memo)

Species determination card (NF)

PICEA SITCHENSIS

18166 - Astoria, Ore.	2/27/30	WJB
18176 - Oregon City, Ore.	5/ 2/30	FPK
33244 - Seaside, Ore.	5/25/53	KHW

Number summary card (HI)

PINUS CONTORTA COLEOPTERA

Locality Col'r. Det.by

Scolytidae			
<u>Dendroctonus brevicomis</u>	Ore.	FPK	WPA
<u>Hylurgops lecontei</u>	Ore.	WJB	REA
<u>Ips concinnus</u>	Ore.	FPK	NUT

Index summary card (HI)

CHORISTONEURA FUMIFERANA (CLEM.)

LEPIDOPTERA
TortricidaePseudotsuga taxifolia Col'r. Det.by

12517-B	Ashland, Ore.	5/15/14	JPM	CH
18158-F	Northport, Wn.	7/18/29	FPK	FPK
31865-A	Heppner, Ore.	9/ 3/44	WJB, RLF	RLF
33313-A	Cottage Grove, Ore.	5/25/49	KHW	RLF

Phytophagous insect card (ISF)

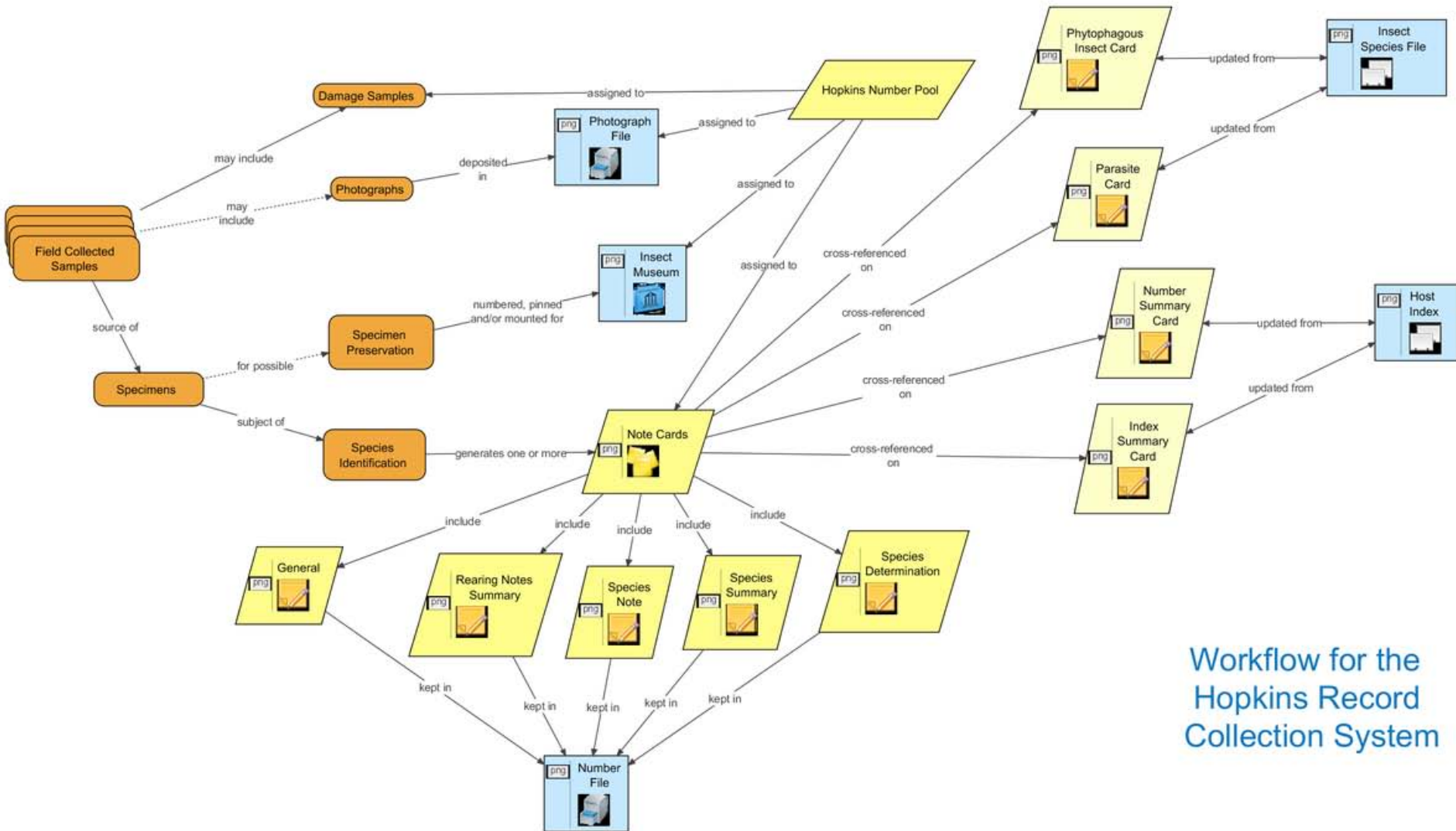
APANTELES FUMIFERANAE VIER.

HYMENOPTERA
BraconidaePseudotsuga taxifolia

Ex.	<u>Choristoneura fumiferana</u>	Col'r.	Det.by
33313-F	Cottage Grove, Ore.	5/25/49	KHW VMC
33331-C	Joseph, Ore.	7/29/55	WKC WKC

Parasite card (ISF)

"HopkinsWorkflow" by Norm Cimon. Licensed under CC BY-SA 3.0 via Commons



Workflow for the
Hopkins Record
Collection System

General Note Card


Burby HOPK. U. S.

H379 b. *Dendroctonus valens* Sugar Pine


Camp 2, Summerdale, Calif. July 3, '06. Stumps of trees felled last fall, foliage of tops reddish green, bark of tops rather dead and tight, bark of stumps rather greenish. Galleries of *D. valens* common in bark of stumps. Form rather large mines, two adults to a mine, large masses of eggs on the sides of the mines, usually on one side. Sometimes a rather long narrow gallery is made for a way and then opens up into a large mine where the eggs are laid. Gallery is usually packed etc. ontd.

Species Determination Cards for same specimens done at different times

22. *Thysanoes n.sp.* 23
H. 1114 New Mexico, Sept. 02 Sage Brush



HOPK. O. S.
1114
micrioid. scolytid = *Thysanoes n.sp.*
a plumed larva Sagebrush.



BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE, FOREST INSECTS


Thysanoes n.sp. HOPK. U. S. 1114

Sage Brush

Along Santa Fe RR in New Mexico

Sept., 1902

A. D. Hopkins, colr.



U. S. GOVERNMENT PRINTING OFFICE 8-1738

Species Summary Card linked to 2 Species Determination Cards

HOPK. U. S.
1112 Williams, Ariz. Pine Sept. 1902

- a *Zomicus onizoni*
- b *Aulonium longum* larvae
- c *Platysoma punctigerum*

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE, FOREST INSECTS

Aulonium longum Lec. HOPK. U. S. 1112 v

Pine
Williams, Ariz.
Sept. 1902

U. S. GOVERNMENT PRINTING OFFICE 8-1738

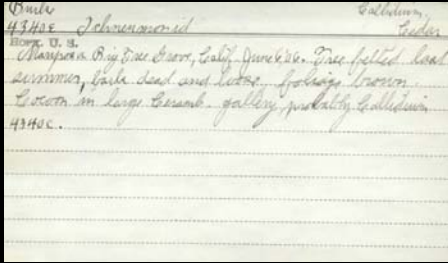
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE, FOREST INSECTS

Platysoma punctigerum Lec. HOPK. U. S. 1112 c

Pine
Williams, Arizona
Sept. 8, 1902
A. D. Hopkins, colr.

U. S. GOVERNMENT PRINTING OFFICE 8-1738

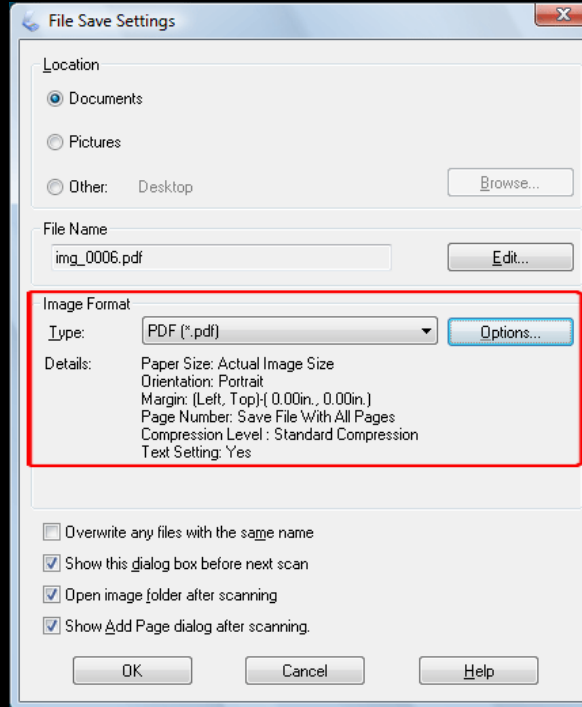
SI Hopkins Card Digitization Project



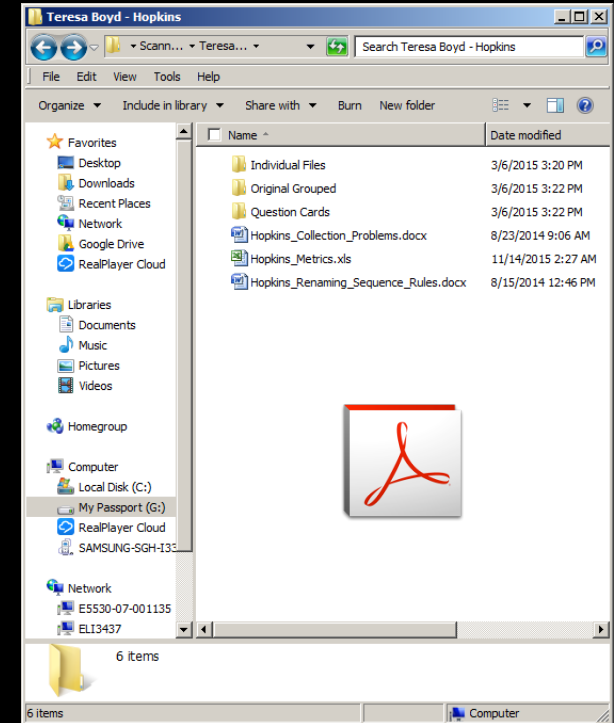
Cards loaded 20-40
at a time



Epson Workforce Pro
GT-S50



Card groups saved as PDFs



Card groups broken up into
individual files and renamed
based on #

Scanning and Renaming
~100 hours for 18,500 cards

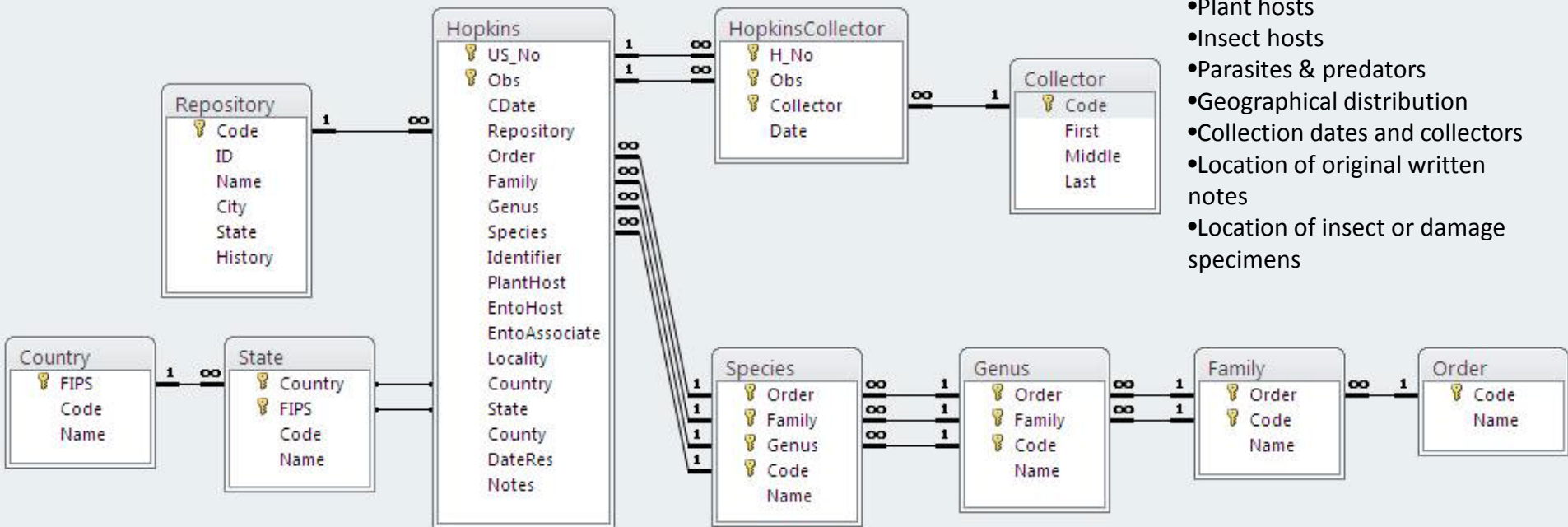
Scanning Problems

- Some handwritten cards difficult to tell if the number is a b or a G.
- There are some cards that are typed which have either an 8 or a g in the name of the card.
- One of the typewriters used to create cards had a fuzzy printer ribbon, making cards with e, c, or o in the naming sequence difficult to read.
- There are sections of the cards that have water damage and or are very light due to the pencil that was used to create the card.
- Some of the original Hopkins cards are too fragile to scan with the Epson. These have to be scanned on the flatbed scanner.
- There are oversized cards and other material folded up into the Hopkins collections. These items had to be scanned separately on the flatbed scanner.
- Some cards were put into the Hopkins collection, which perhaps are part of another collection that had been intermingled with Hopkins.

Renaming Problems

- Handwritten & typed cards intermingled
- Cards of different “vintages” and thicknesses
- Double sided cards (mixed in randomly with single sided cards)
- Cards with the same number
- Cards with the same number but 1 to many subcards indicated by letters
- Inconsistent formatting of numbers
 - 100a vs. 100A
 - 429^a
 - 429a/2
 - 429z²
 - 1468-e-2
 - 2/3510
 - 3510_b
 - 1475a 1475b

Western Digitization Project U.S. Forest Service



- Plant hosts
- Insect hosts
- Parasites & predators
- Geographical distribution
- Collection dates and collectors
- Location of original written notes
- Location of insect or damage specimens

37,000+ records from the Western Collections. Stored in MS Access.
Done under contract through Norm Cimon, U.S. Forest Service.

So...now that you know about the Hopkins system, what can be done with it to fuel research questions?

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