

Restoring Natural History Collections of Native Amphibians and Reptiles in South Dakota

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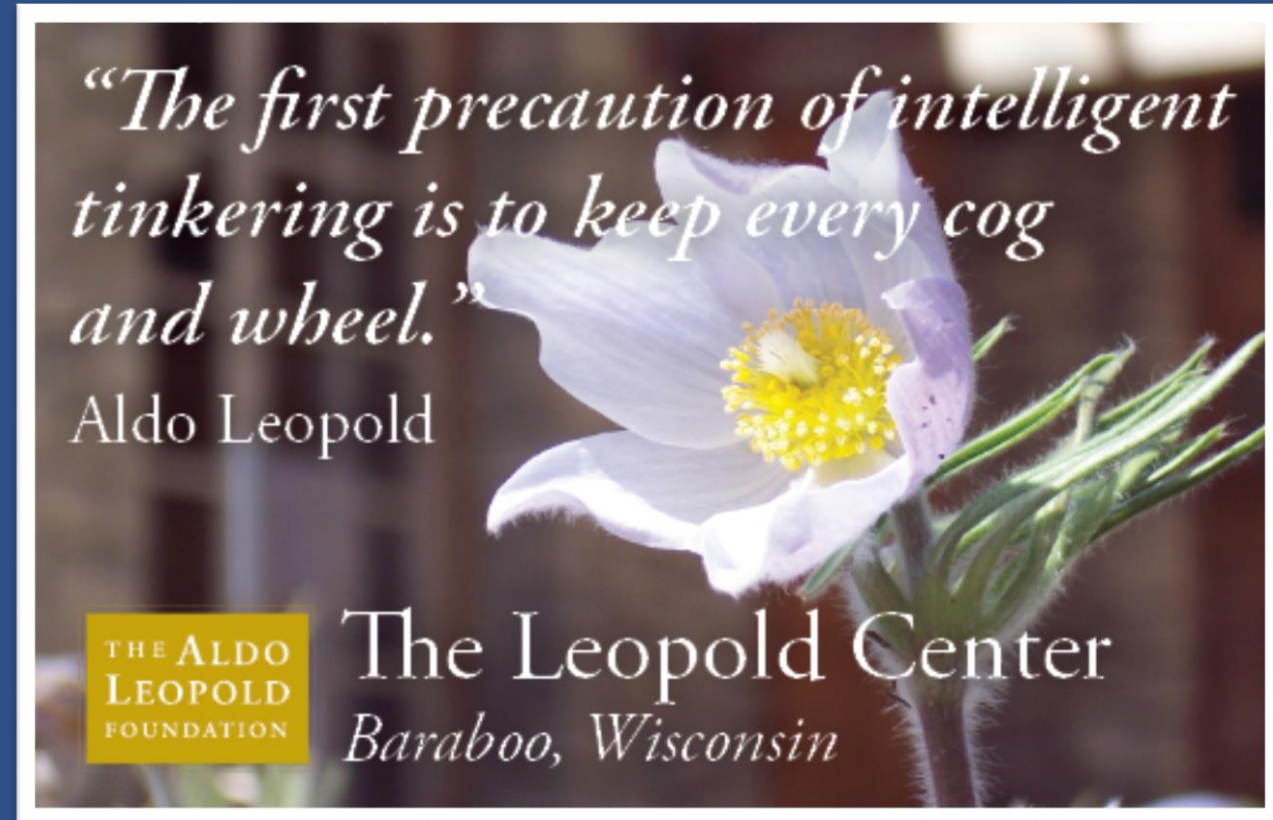


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Why a Natural History Collection?

- Importance of Collections
- No Complete Collection in SD
- Addition of “Survey Of Reptiles and Amphibians” Course
- Personal Interest/Herpetology Experience
 - Started Brainstorming
 - “The Big Picture”

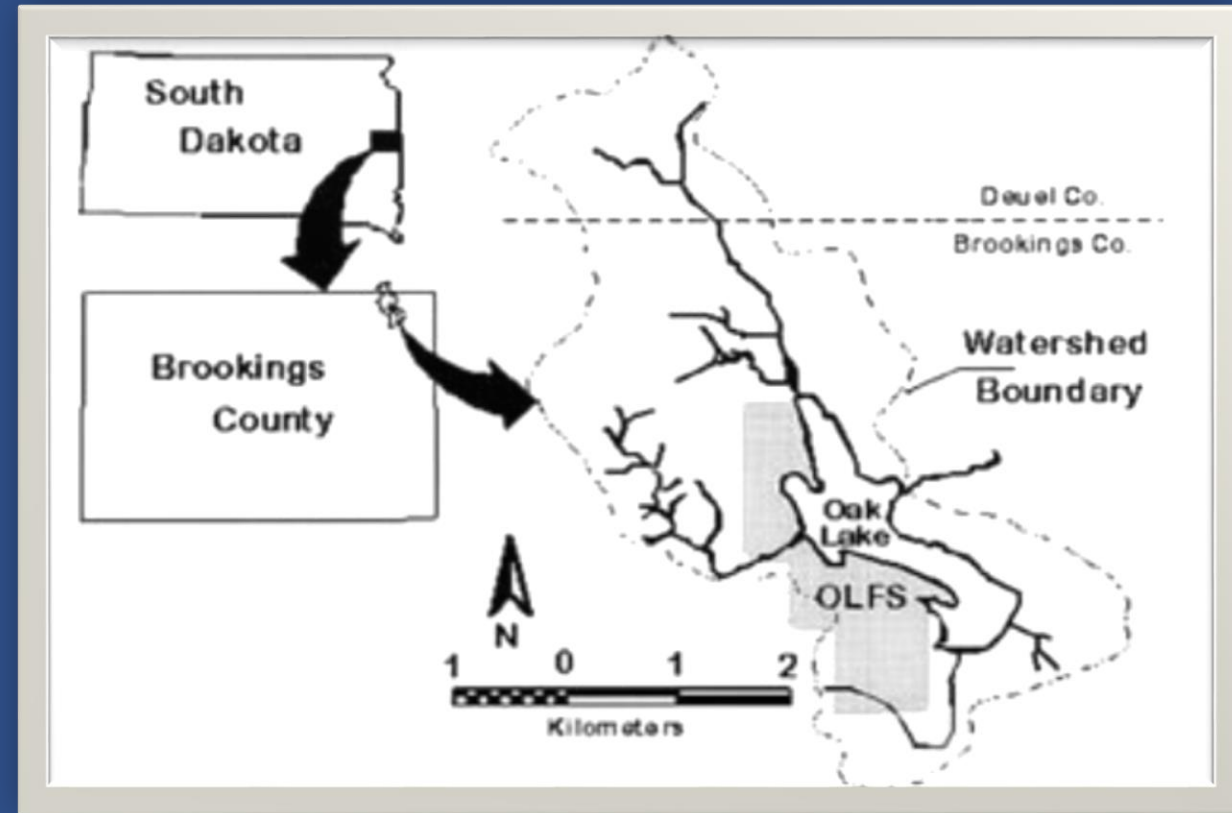


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Goals and Objectives

- Increase Exposure/ Generate Interest
- How it Started
- OLFS Natural History Collection
- Create a Teaching Collection
 - Lab section
- Exciting things...

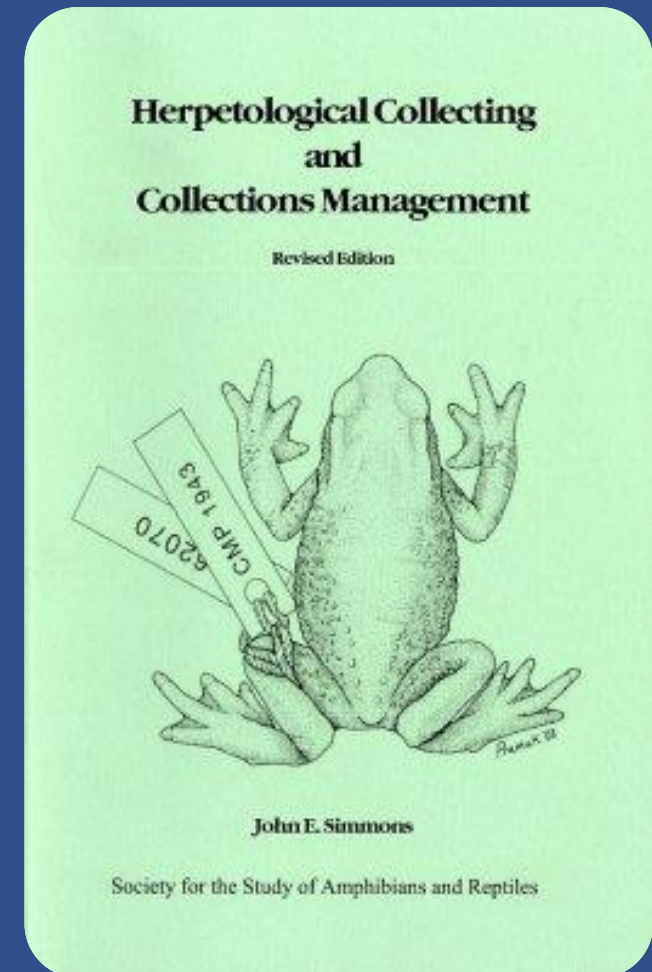


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Beginning a Natural History Collection

- No Prior Experience
- Prior to Beginning
 - Background Research (Simmons 2002)
 - Staff Support
 - Funding
 - Permits
- Gathering Vouchers
 - Wild Collection
 - Restoring an old Collection
 - MANY Collaborations



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Collection Methods

- Began Wild Collection Summer 2013
- Permitted 38/45
- 10/13 Species
- Forming a Complete Collection
- Collaborating Universities
 - University of South Dakota, Ft. Hays State University, University of Minnesota & Black Hills State University
- Haertel Collection



Restoring An Old Collection

- Notified of an old collection
 - Established by Dr. John Haertel
 - State of Collection
 - Data from the late 1800s
 - Making it Useful Again
- Restoration Methods
 - New Jars, Ethanol, Labels
 - Cataloged
 - Data Sharing

1	Catalog #	Species	Common Name	*= No Data	Date Collected	Location	Collector	Notes	Sp
1057	1056	<i>Pituophis melanoleucus saji</i>	Bullsnake		13-May-1976	Harding Co., SD	Steve Thompson	T20N,R9E, Sec. 4	
1058	1057	<i>Crotalus v. viridis</i>	Prairie Rattlesnake		1-Oct-1976	Corson Co., SD	Steve Thompson	Rattlesnake butte r120N,R29E	
1059	1058	<i>Pituophis melanoleucus saji</i>	Bullsnake		1-Oct-1976	Corson Co., SD	Steve Thompson	Rattlesnake butte r120N,R29E	
1060	1059	<i>Coluber constrictor</i>	Racer		1-Oct-1976	Corson Co., SD	Steve Thompson	Rattlesnake butte r120N,R29E (dry specimen)	
1061	1060	<i>Thamnophis radix</i>	Prairie Garter Snake		1-Oct-1976	Corson Co., SD	Steve Thompson	Rattlesnake butte r120N,R29E (dry specimen)	
1062	1061	<i>Crotalus v. viridis</i>	Prairie Rattlesnake		15-Sep-1976	Harding Co., SD	Steve Thompson	Eagle Nest Butte T23N, R5E, Sec 27	
1063	1062	<i>Crotalus v. viridis</i>	Prairie Rattlesnake		15-Sep-1976	Harding Co., SD	Steve Thompson	Eagle Nest Butte T23N, R5E, Sec 27, juvenile specimen	
1064	1063	<i>Pituophis melanoleucus saji</i>	Bullsnake		10-Aug-1976	Gregory Co., SD	Steve Thompson	T39N,R71W, Sec. 21NE 1/4	
1065	1064	<i>Pituophis melanoleucus saji</i>	Bullsnake		15-Sep-1976	Dewey Co., SD	Steve Thompson	T15N,R29E, Sec 21	
1066	1065	<i>Pituophis melanoleucus saji</i>	Bullsnake		29-Sep-1976	Lyman Co., SD	Steve Thompson	T101N, R72W, Sec 8, sv 1/4	
1067	1066	<i>Chrysemys picta bellii</i>	Painted Turtle		19-Jul-1976	Haakon Co., SD	Steve Thompson	11 mi N of Philip on HWY 73 T3N, R20E	
1068	1067	<i>Chrysemys picta bellii</i>	Painted Turtle		7-Jun-1976	Butte Co., SD	Steve Thompson	12 mi N of Junction 85/168, T14N, R5E, Sec. 8 (on road)	
1069	1068	<i>Coluber constrictor</i>	Racer		13-May-1976	Lyman Co., SD	Steve Thompson	T106N, R74W, Sec 12	
1070	1069	<i>Coluber constrictor</i>	Racer		13-May-1976	Lyman Co., SD	Steve Thompson	T106N, R74W, Sec 12, sex = male	
1071	1070	<i>Coluber constrictor</i>	Racer		1-Apr-1976	Perkins Co., SD	Pat Dinkins	T17N,R10E,Sec 12 SE 1/4	
1072	1071	<i>Thamnophis radix</i>	Prairie Garter Snake		13-May-1976	Harding Co., SD	Steve Thompson	T20N,R9E, Sec. 4	
1073	1072	<i>Thamnophis radix</i>	Prairie Garter Snake		13-May-1976	Harding Co., SD	Steve Thompson	T20N,R9E, Sec. 4	
1074	1073	<i>Coluber constrictor</i>	Racer		13-May-1976	Harding Co., SD	Steve Thompson	T20N,R9E, Sec. 4	
1075	1074	<i>Thamnophis radix</i>	Prairie Garter Snake		27-Apr-1976	Dewey Co., SD	Steve Thompson	T14N, R30E, Sec. 31 sv 1/4	
1076	1075	<i>Coluber constrictor</i>	Racer		7-Oct-1976	Perkins Co., SD	Steve Thompson	T17N, R10E, Sec. 34	
1077	1076	<i>Coluber constrictor</i>	Racer		7-Oct-1976	Perkins Co., SD	Steve Thompson	T17N, R10E, Sec. 34	
1078	1077	<i>Pantherophis ramspotti</i>	Western Foxsnake		27-Sep-1975	Clay Co., SD	John Haertel	Burbank Lake under log near shore line held captive til May 1978	
1079	1078	<i>Pantherophis ramspotti</i>	Western Foxsnake		27-Sep-1975	Clay Co., SD	John Haertel	Burbank Lake under log near shore line held captive til May 1978	
1080	1079	<i>Eumeces septentrionalis</i>	Northern Prairie Skink		3-May-1978	Brookings Co., SD	R. J. Walstrom	2 mi S. Bruce, potato cellar	

222

Chelydra serpentina

Common Snapping Turtle

29 Jul 1892

Elk Creek + Cheyenne River Meade Co. Smithville, SD

Range 14-E Town 3N



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A Decision to Reallocate Voucher Specimens

- Valuable Data
- Ensure Preservation
 - Continuity
 - Staffing
 - Space
 - Budget
- 1000+ vouchers to USD
- Peace Offering Between Rivals
- What We Kept



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Current Collection Status

- Diverse Teaching Collection
- 1000+ specimens
 - 44/45 SD Species Represented
- Almost all Orders
 - Non-natives
 - Live Animals
 - Skins, Skulls, etc.
- Sustainable Size



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Uses of the SDSU Herpetological Collection

- Primary Focus of this Collection
- Academic
 - Enhance Herp Course
 - Oak Lake Field Station
 - Aiding Research
- Outreach
 - Generating Interest
 - Great Plains Zoo & Delbridge Museum of Natural History
 - Hillcrest Elementary
 - Boys and Girls Club



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Survey of Reptiles and Amphibians Course

- First Year Lab Spring 2015
 - Survey Course vs. Herpetology
 - 2-1 Structure
 - Registration
- Design and Objectives
 - Introduction to Natural History & Identification
 - Citizen Science
 - Frog Watch & HerpMapper



Academic Uses

The “Height” of Collection Success

- Improving Collections Management
 - Revisions J.E. Simmons 2002 SSAR Publication
 - “Herpetological Collecting and Collections Management”
 - July 2015

Research

- Mudpuppy (*Necturus maculosus*)
- Smooth Green Snake (*Opheodrys vernalis*)



Photograph Provided by Drew R. Davis 2015



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Furthering Undergraduate Involvement

- Collections becoming an Underappreciated “Lost Art”
 - Created Employment Opportunities
- Assistant Savannah Allard
 - Work Study
- USD Student Fellowship
 - SDSU Donations to USD
 - Updated SD Distribution Records



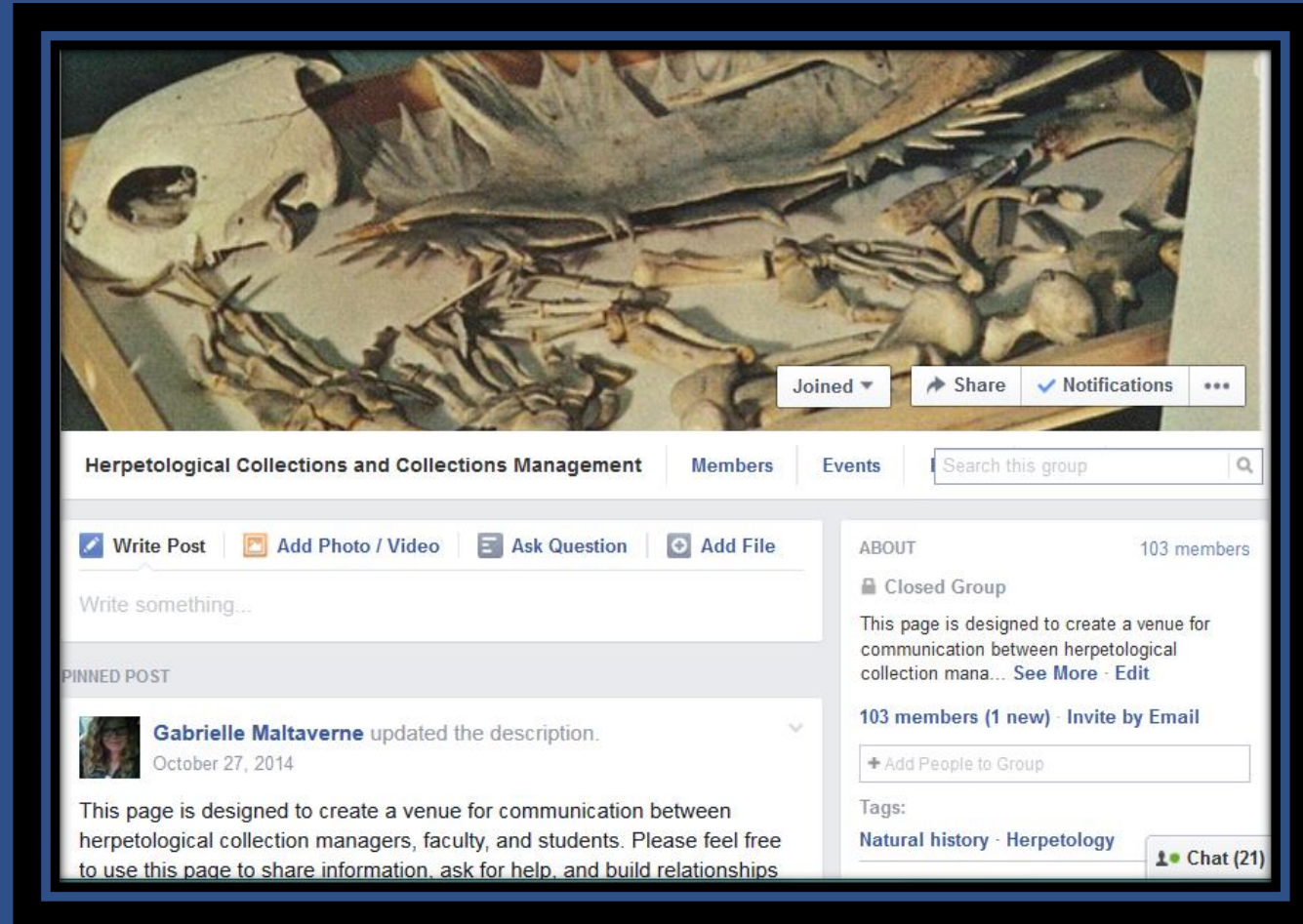
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Incorporating Social Media

- Always Seeking Information
- Conferences
 - Few and Far & Expensive!
- Using Social Media
 - **J. Simmons & C. Schmidt**
 - Building Connections & Exchange Information
- 100+ Active Members
- Members Find it Useful!



The Future of the SDSU Herpetological Collection

- Collection Work Never Finished...
- More Specimen Transfers
- My Biggest Fear
- Being Proactive
 - Creating A Management Plan
 - SDSU Meetings
 - Staff Changes
- Digitizing
 - iDigBio Meeting



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Questions?

- Thank You!
- Here to Learn & Bring Back Information

- Contact Information
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