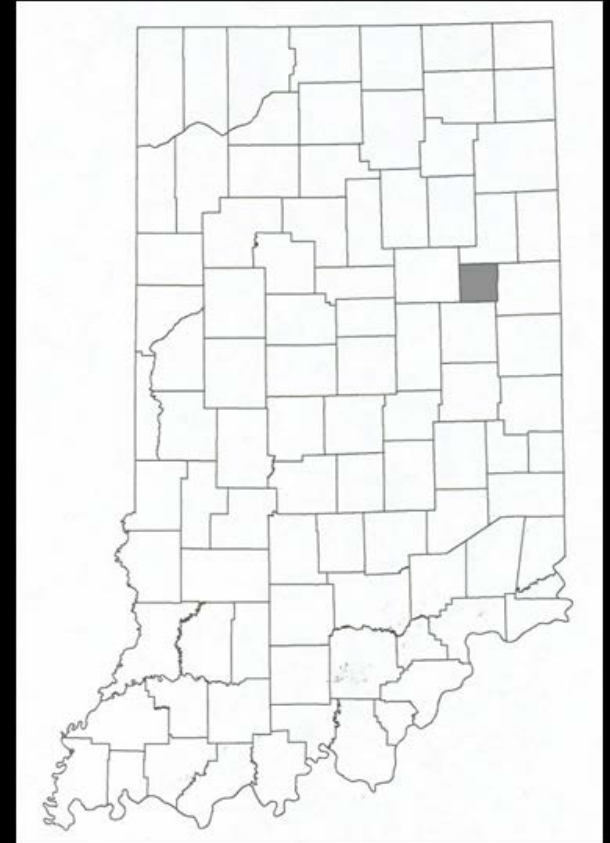


# An Archaeological Survey of Blackford County: Enhancement of a Data Deficient Region



Blackford County Historical Society  
April 17, 2012  
Applied Archaeology Laboratories  
Department of Anthropology, Ball State University

# Historic Preservation Fund Grant FY 2011

Christine Keller, Archaeologist, Applied Archaeology Laboratories  
Department of Anthropology, Ball State University



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& Archaeology**

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# Acknowledgement of State and Federal Assistance

This project has been funded in part by a grant from the U.S. Department of the Interior, National Park Service's Historic Preservation Fund administered by the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology. The project received federal financial assistance for the identification, protection, and/or rehabilitation of historic properties and cultural resources in the State of Indiana.

# Grant Goals – Blackford County

---

- To conduct a Phase I survey of 900 acres to increase archaeological site database
- Construct a cultural chronology of county
- Refine settlement patterns of the precontact era
- Enhance our understanding of the early Euro-American period

# Grant Goals – Why?

- County only had 105 archaeological sites identified – listed by DHPA as data deficient
- Prehistory of Blackford County
  - What were the cultures of the people living here?
  - Where within the county were they living? Why?
  - When were they living here?
- No systematic research of the Godfroy Reserve

# Grant Deliverables

---

- Technical Report submitted to DHPA
- Indiana Archaeology Journal article
- Presentation
- Sites entered in SHAARD
- Updated topo maps

# Grant Team – BSU Department of Anthropology & DHPA

- Dr. Mark Hill, AAL Director
- Christine Keller, AAL Archaeologist and grant writer
- Joe Miller, Graduate Assistant
- Tori Kiefer and Kristin Kjeldsen, Core Team
- Over 20 other students who surveyed, washed artifacts, cataloged, etc.
- DHPA Amy Johnson and Malia Vanaman

# Grant Team - Landowners

- Contacted landowners in 3 waves
  - Different landforms
  - Visibility
  - A few specific target areas
- Most important part of team!
- Blackford County Historical Society



# Grant Timeline

- Oct 2010 – Application submitted
- July 2011 – Grant awarded
- Sept 2011 - Landowner contacts begins
- Fall 2011 - Report research begins
- Oct 2011 to Feb 2012 – Pedestrian surveys
- Oct 2011 to Apr 2012 - Artifact analysis
- Apr 30, 2012 – Draft report due to DHPA

# Grant Effort

- Grant amount = \$49,519, with additional \$26,317 in matching time from BSU Dept. of Anthropology
- Approx. 3,000 staff and student hours
- 2 BSU archaeologists + 1 graduate assistant + over 20 graduate and undergraduate students
- 19 landowners
- Over 15 trips to Blackford County

# Environmental Setting & Archaeological Background

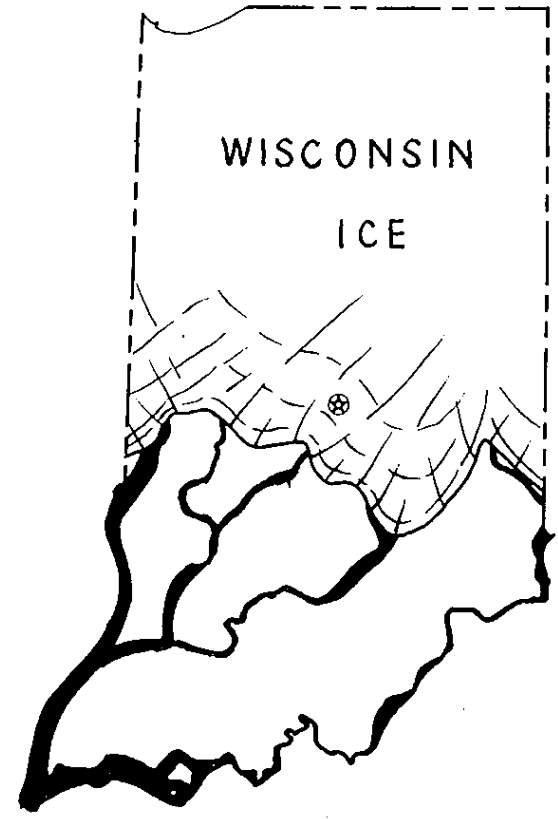
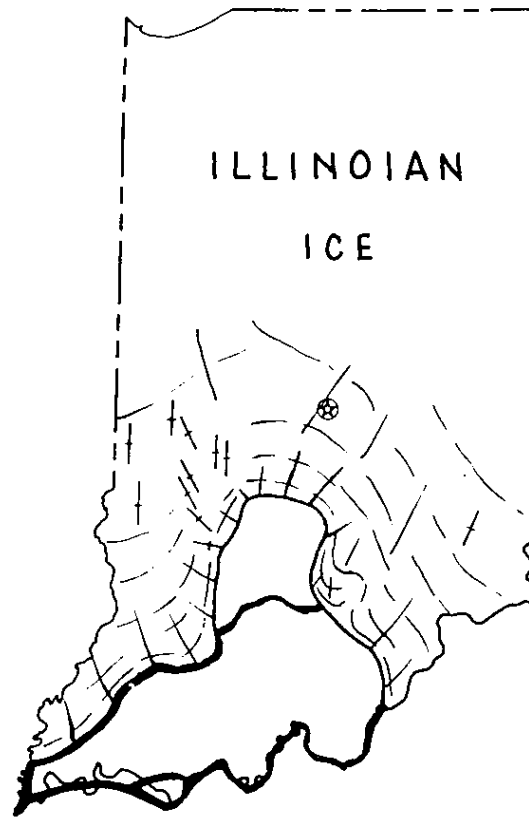
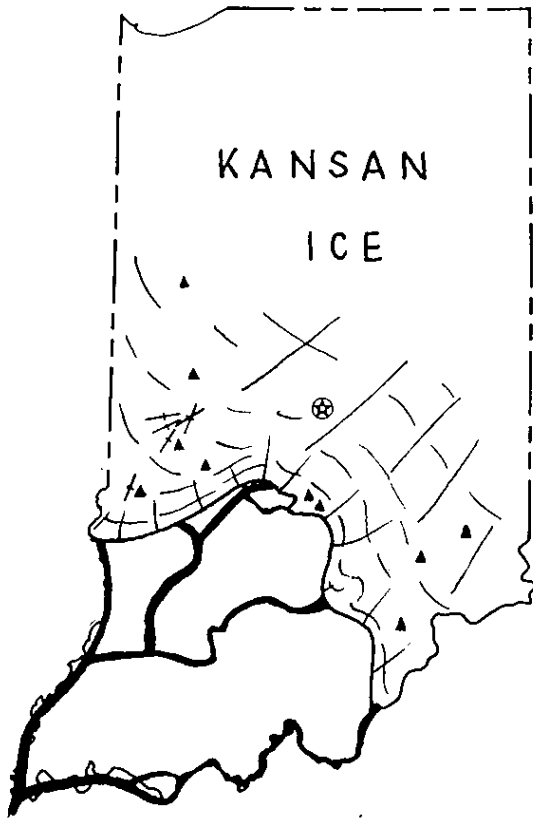
Kristin Kjeldsen, Undergraduate Student, Applied Archaeology Laboratories  
Department of Anthropology , Ball State University



# Geology

- Blackford County = 106,022 acres
- Bedrock physiographic units
  - Northern flank of Cincinnati Arch
- No chert sources in county, but Liston Creek chert can be found in nearby Huntington, Miami, and Wabash counties

# Glacial History – Ice Ages

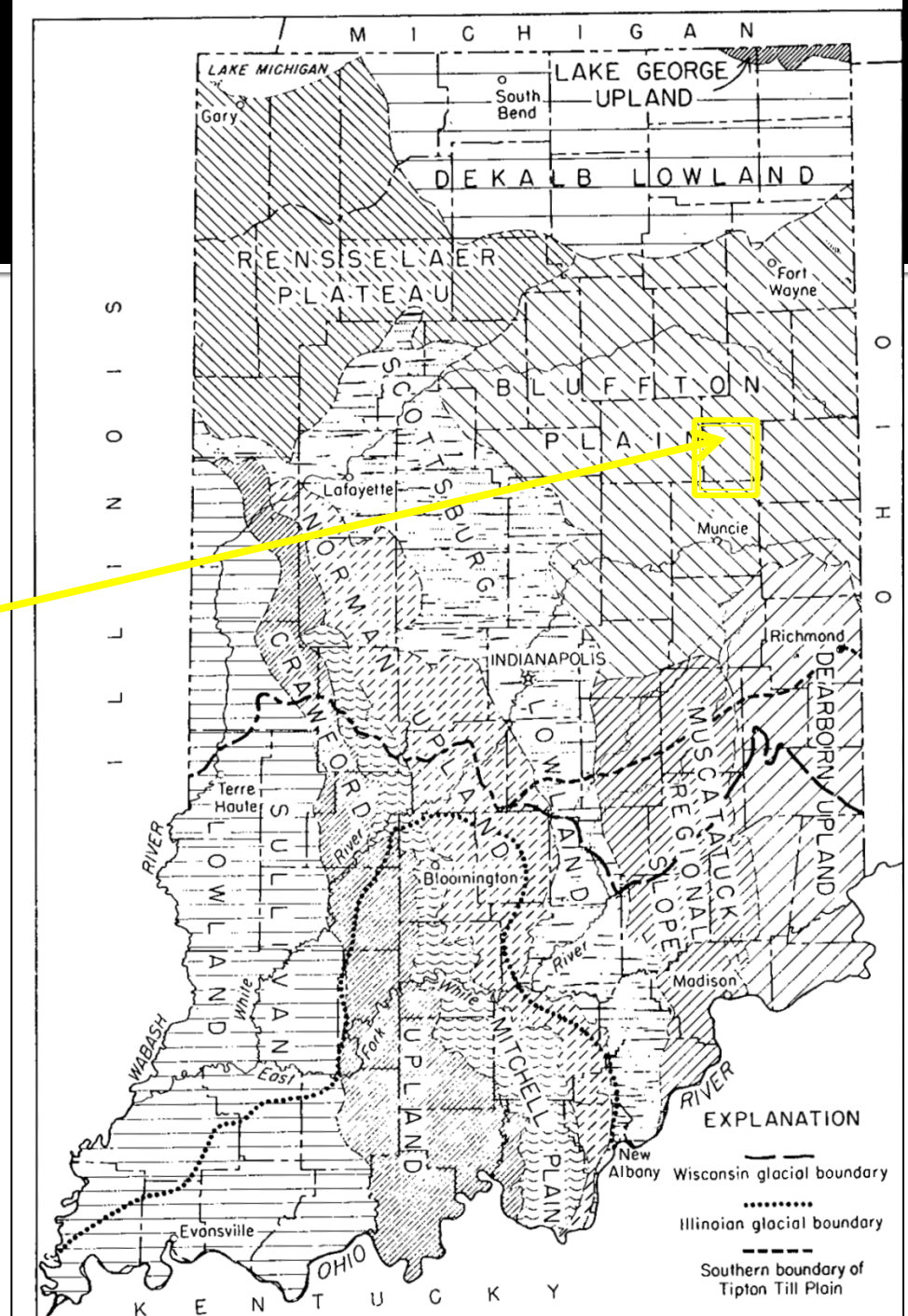


# Glacial History

- Indiana glaciation
  - Kansan Age (350,000-400,000 years ago)
  - Illinoian Age (125,000 years ago)
  - Wisconsinian (70,000 years ago)
- Silurian Aged Bedrock
  - Salamonie Dolomite
  - Limberlost Dolomite Formation
  - Wabash Formation (Liston Creek chert comes from this)

# Physiographic Units

Blackford  
County



# Physiography and Soils

- Tipton Till Plain/ Bluffton Plain subset
  - Ice-disintegration features (Wisconsin)
  - Flat to gently rolling topography
- Soils
  - Product of either glacial or fluvial parent materials
  - Numerous soil associations to support various flora and fauna to sustain human occupation



# Water and Climate

## ■ Water Resources

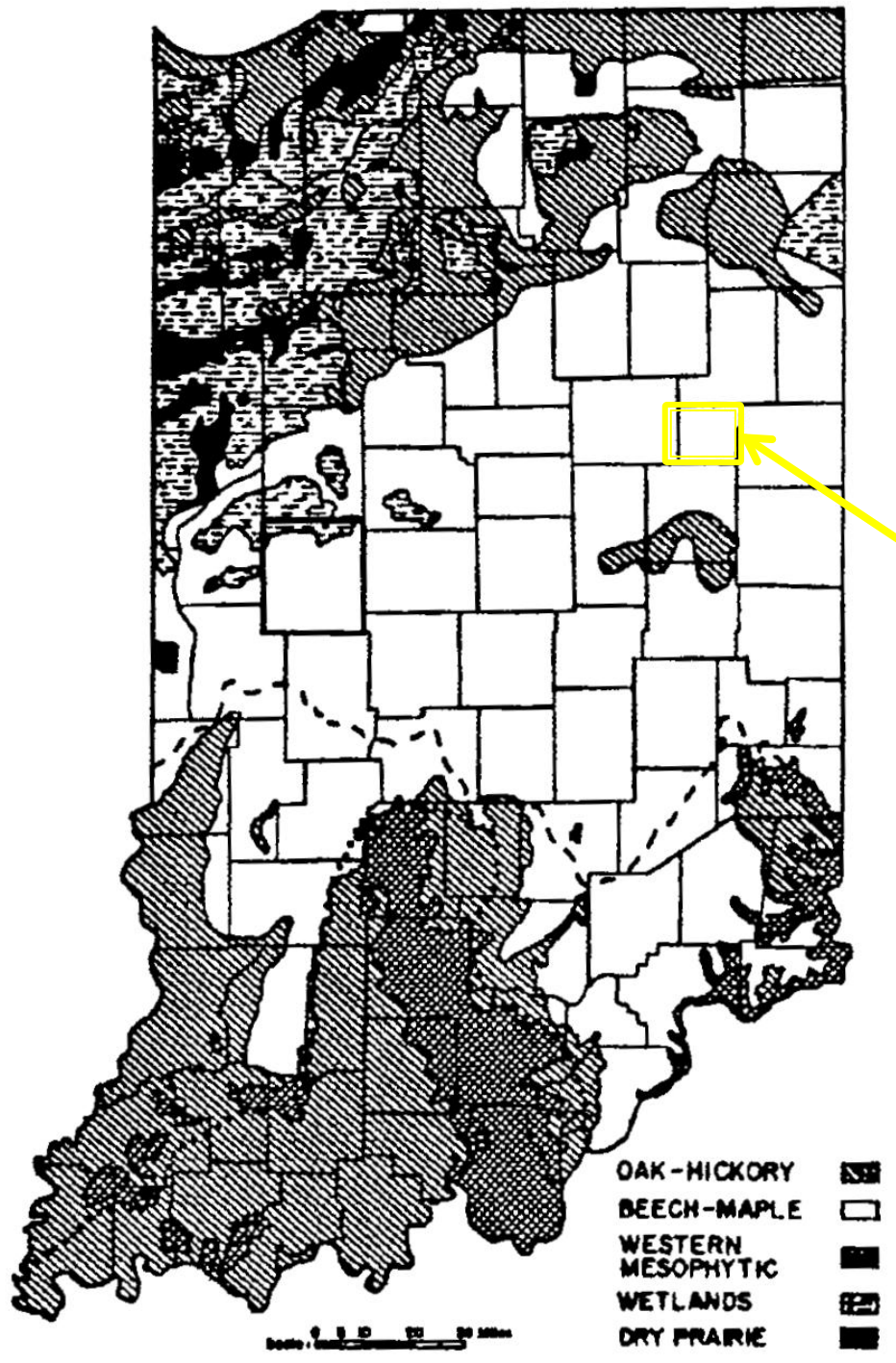
- Precipitation – rain 38-40 in/yr; snow 20-25 in/yr
- Salamonie River
- Big and Little Lick Creeks

## ■ Climate

- Humid, mesothermal-microthermal (cold & hot)
- Modern climate unlike climate of last 12,000 years

Flora	Vegetation Sequence of Central Indiana (Cochran and Buehrig 1985: 9)		
	AD 2000	Historic	Deciduous
	AD 1000	Late Woodland	
	0	Middle Woodland	
	1000 BC	Early Woodland	
	2000 BC	Late Archaic	Prairies and Open Vegetation
	3000 BC		
	4000 BC		
	5000 BC	Middle Archaic	Deciduous
	6000 BC		
	7000 BC	Early Archaic / Late Paleo Indian	Pine Maximum
	8000 BC		
	9000 BC	Early Paleo Indian	Conifer-Deciduous
	10000 BC		Boreal
	11000 BC		Park Tundra
	12000 BC		Tundra or Open Areas
	13000 BC		Periglacial Zone
	14000 BC		Ice
	15000 BC		

# Presettlement Vegetation



Blackford  
County

# Fauna – Pleistocene Age

- Bison, giant beaver, caribou, Virginia deer, dire wolf, wapiti, horse, mammoth, mastodon, musk-ox, peccary, sloth, moose, black bear, giant short-faced bear, giant tortoise, white-tailed deer, Canadian goose, armadillo, jaguar, sabertooth tiger, camel
- Extinction 10,000 – 11,000 years ago

# Fauna - Today

- Number of species – early historic and today
  - Mammals - 66
  - Birds – 366
  - Fish – 177
  - Mollusk – 200
  - Crustaceans – 400
  - Amphibians & reptiles - 82

# Archaeological Background – Surface Surveys

- Predominant survey methodology
- Survey of Hartford City (Jeske and Stillwell 1994a)
- Survey of a proposed ethanol plant (Jackson and Vosnick 2006)
- Survey of Montpelier Industrial Park (Stillwell 2003)

# Cultural Chronology of Blackford Co. (prior to our survey)

Sites Recorded Within Blackford County		
Cultural Period	No.	Comments
<b>Unidentified Prehistoric</b>	<b>78</b>	<b>15 multicomponent</b>
<b>Paleoindian (ca. 10,000 – 7500 B.C.)</b>	<b>3</b>	<b>1 multicomponent</b>
<b>Archaic</b>	<b>1</b>	<b>1 multicomponent</b>
Early Archaic (ca. 8000 – 6000 B.C.)	6	2 multicomponent
Middle Archaic (ca. 6000 – 3500 B.C.)	0	
Late Archaic (ca. 4000 – 700 B.C.)	5	2 multicomponent
<b>Woodland</b>	<b>2</b>	
Early Woodland (ca. 1000 – 200 B.C.)	2	2 multicomponent
Middle Woodland (ca. 200 B.C. – A.D. 600)	1	1 multicomponent
Late Woodland (ca. A.D. 500 – 1200)	3	1 multicomponent
<b>Late Prehistoric/Mississippian (A.D. 1000-1650)</b>	<b>0</b>	
<b>Historic (post A.D. 1400)</b>	<b>22</b>	<b>18 multicomponent</b>

# Prehistoric Diagnostics (prior to our survey)

Previously Documented Points Within Blackford County (in SHAARD)	
Cultural Period	Projectile Point Types
Paleoindian	Hi Lo, Clovis, Palmer-like
Early Archaic	Kanawha, Thebes, Decatur, Kirk, Kirk Corner Notched, Charleston
Middle Archaic	
Late Archaic	Matanzas, Trimble
Terminal Late Archaic	Riverton
Woodland	Jack's Reef, Adena
Late Woodland	Madison, Hamilton

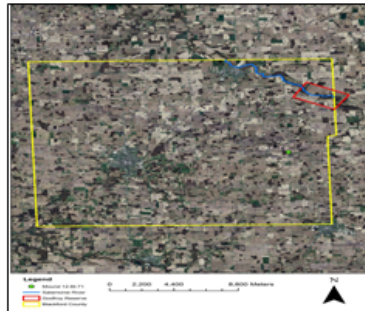


# Methodology & Results

Joe Miller, Graduate Assistant, Applied Archaeology Laboratories  
Department of Anthropology , Ball State University

## A Survey of Blackford County: A Data Enhancement Project

Grant # 31921-4



By: Joseph R. Miller, Victoria Kiefer, and Kristin Kjeldsen

Edited by Christine Keller

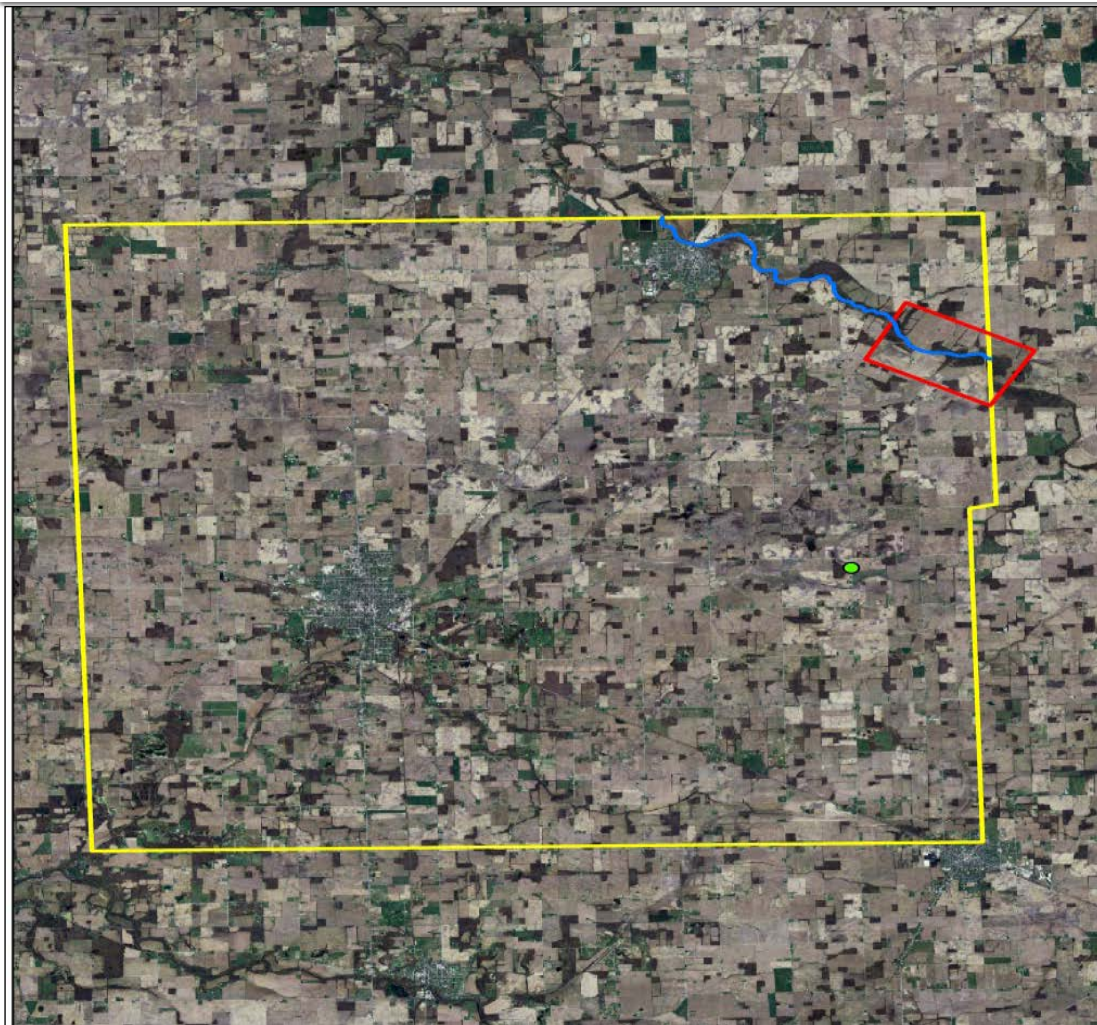
Principal Investigators: Mark A. Hill and Christine Keller

Reports of Investigation 79 Volume 1

June 2012

Applied Archaeology Laboratories, Department of Anthropology  
Ball State University, Muncie, IN 47306-0435  
Phone: 765-285-5328 Fax: 765-285-2163  
Web Address: <http://www.bsui.edu/aal>

# Grant Activities



- Concentrated pedestrian surveys in Salamonie River valley and northern half of county
- Surveyed 915 acres in 16 parcels
- Investigated all reported mounds
- Surveyed three parcels adjacent to the Godfroy Reserve

# Pedestrian Survey Methodology

- 10 meter (30 feet) intervals
- Follow field rows if at all possible
- Looking for any cultural remains – stone artifacts (points, flakes), historics
- 1 person can cover approx 2 acres/hr – crew of 8 could cover 80 to 100 acres/day – covering 80 meters at a time





# Pedestrian Survey Methodology

- Site – a single lithic (prehistoric artifact) or a few historic artifacts
- When site was found:
  - Record GPS location
  - Look for other artifacts within a 5m radius
  - Bag artifacts and take back to lab
  - Assign a temporary site #

# Lab Analysis Methodology

- All artifacts brought back to lab:
  - Washed
  - Analyzed and identified (chert, tool type, historics)
  - Entered into a catalog sheet
  - Cataloged (labeled each artifact)
  - Bagged by artifact type and site
  - Will be returned to landowner if requested (photos)





# Catalog Sheet – Historic

Site No. 12-BI-320  
Blackford Co. HPF Grant  
Acc. No. 11.36

Dept of Anthropology  
Ball State University  
Catalog Record

Catalog No.	Identification	Material (chert)	No.
12-BI-320-01	Ceramic, Rim	Redware	1
12-BI-320-02	Ceramic, Body	Redware	5
12-BI-320-03	Ceramic, Base	Stoneware, Albany/Tan	1
12-BI-320-04	Ceramic, Body	Stoneware, Albany, Gray Salt	1
12-BI-320-05	Ceramic, Body	Stoneware, Albany/Tan	1
12-BI-320-06	Ceramic, Rim	Whiteware	3
12-BI-320-07	Ceramic, Rim	Whiteware, Shell edge	5
12-BI-320-08	Ceramic, Rim, Molded	Whiteware, Shell edge	1
12-BI-320-09	Ceramic, Rim	Whiteware, Hand painted, Burnt	2
		Whiteware, Blue sponge	
12-BI-320-10	Ceramic, Rim	decoration, Burnt	1
12-BI-320-11	Ceramic, Base	Whiteware	12
12-BI-320-12	Ceramic, Body, Embossed "WAL"	Whiteware	1
12-BI-320-13	Ceramic, Rim	Whiteware, Blue/Pink, Banded	1
12-BI-320-14	Ceramic, Body	Whiteware, Hand painted, Green	7
12-BI-320-15	Ceramic, Body	Whiteware, Hand painted, Blue	2
12-BI-320-16	Ceramic, Body	Whiteware, Blue sponge decoration	1
12-BI-320-17	Ceramic, Body	Whiteware, Blue	4
12-BI-320-18	Ceramic, Body	Whiteware, Transfer print, Red	6
12-BI-320-19	Ceramic, Body	Whiteware, Transfer print, Purple	1



# Catalog Sheet - Prehistoric

Site No. 12-BI-289  
Blackford Co. HPF Grant  
Acc. No. 11.36

Dept of Anthropology  
Ball State University  
Catalog Record

Catalog No.	Identification	Material (chert)	No.
12-BI-289-01	Biface, Hafted, Raddatz	Unidentified	1
12-BI-289-02	Flake, Utilized	Liston Creek	1
12-BI-289-03	Flake, Utilized	Muldraugh	1
12-BI-289-04	Flake, Shatter	Liston Creek	1
12-BI-289-05	Flake, Shatter	Jeffersonville	1
12-BI-289-06	Flake, Shatter	Delaware	1
12-BI-289-07	Flake, Shatter	Unidentified	1

# Reported Mounds

- 1 recorded mound in Jackson Township, in the state site database
- 1 reported mound on the Godfroy Reserve (Glen 1979, 1980)
- 1 unrecorded mound found in the GLO notes while researching the above mounds (GLO notes 1795-1840)

# Mounds Methodology

- Researched all historical records, previous reports, geological surveys
- Pedestrian survey
- If mound features found: 1-inch soil cores, elevation data, contour map
- Photos

# Grant Goals - Revisited

- 915 acres surveyed across the same landform
- 179 sites added to Blackford Co. database – for new total of over 284 sites
- Filled in gaps of cultural chronology - diagnostics

# Updated Cultural Chronology of Blackford Co.

Number of Sites Recorded Within Blackford County		
Cultural Period	Existing	Added
<b>Unidentified Prehistoric</b>	<b>78</b>	<b>139</b>
<b>Paleoindian (ca. 10,000 – 7500 B.C.)</b>	<b>3</b>	<b>0</b>
<b>Archaic</b>	<b>11</b>	<b>8</b>
Early Archaic (ca. 8000 – 6000 B.C.)	6	3
Middle Archaic (ca. 6000 – 3500 B.C.)	0	1
Late Archaic (ca. 4000 – 700 B.C.)	5	4
<b>Woodland</b>	<b>6</b>	<b>6</b>
Early Woodland (ca. 1000 – 200 B.C.)	2	2
Middle Woodland (ca. 200 B.C. – A.D. 600)	1	2
Late Woodland (ca. A.D. 500 – 1200)	3	2
<b>Late Prehistoric/Mississippian (A.D. 1000-1650)</b>	<b>0</b>	<b>0</b>
<b>Historic (post A.D. 1400)</b>	<b>22</b>	<b>47</b>

# Updated Prehistoric Diagnostics

Documented Points Within Blackford County (points added from survey in red)	
Cultural Period	Projectile Point Types
Paleoindian	Clovis, Hi Lo, Palmer
Early Archaic	Charleston, Kirk Corner Notched, Kirk, Kanawha, Decatur, Thebes
Middle Archaic	Raddatz
Late Archaic	Matanzas, Trimble, Riverton, Merom Cluster, Etley
Early Woodland	Robbins, Meadowood, Adena
Middle Woodland	Steuben Expanded Stemmed, Jack's Reef
Late Woodland	Madison, Hamilton, Triangular Cluster

# Artifact Discoveries

Tori Kiefer, Undergraduate Student, Applied Archaeology Laboratories  
Department of Anthropology, Ball State University



# Site and Artifact Summary

- 179 sites discovered
- 139 prehistoric sites; 47 historic sites
- 17 multi-component
- Sites ranged from isolated find (1 artifact) to a large site of 100 m x 130 m (~ 3.2 acres)
- 1,595 total artifacts



# Prehistoric Artifacts Found

- Non-Diagnostic  
(unidentified prehistoric)
  - Flake Shatter
  - Angular Shatter
  - Proximal Flake
  - Biface
  - Core
  - Fire Cracked Rock
- Diagnostic  
(can tie to a particular time period or culture)
  - Projectile Points
- Chert Types
  - Liston Creek
  - Jeffersonville
  - Ditney
  - Unidentified
  - Plus 15 other chert types

# Historic Artifacts Found (dated using multiple sources)

- Whiteware
  - Embossed, Prints
- Porcelain
- Porcelain Insulators
- Semi-Porcelain
- Milkglass
- Stoneware
  - Glazes
- Container Glass
  - Clear, Aqua, Amethyst, Amber/Brown, Green
- Flat Glass
  - Clear, Aqua
- Brick
- Metal
  - Hardware
  - Mostly unidentified

# Groundstone Tool

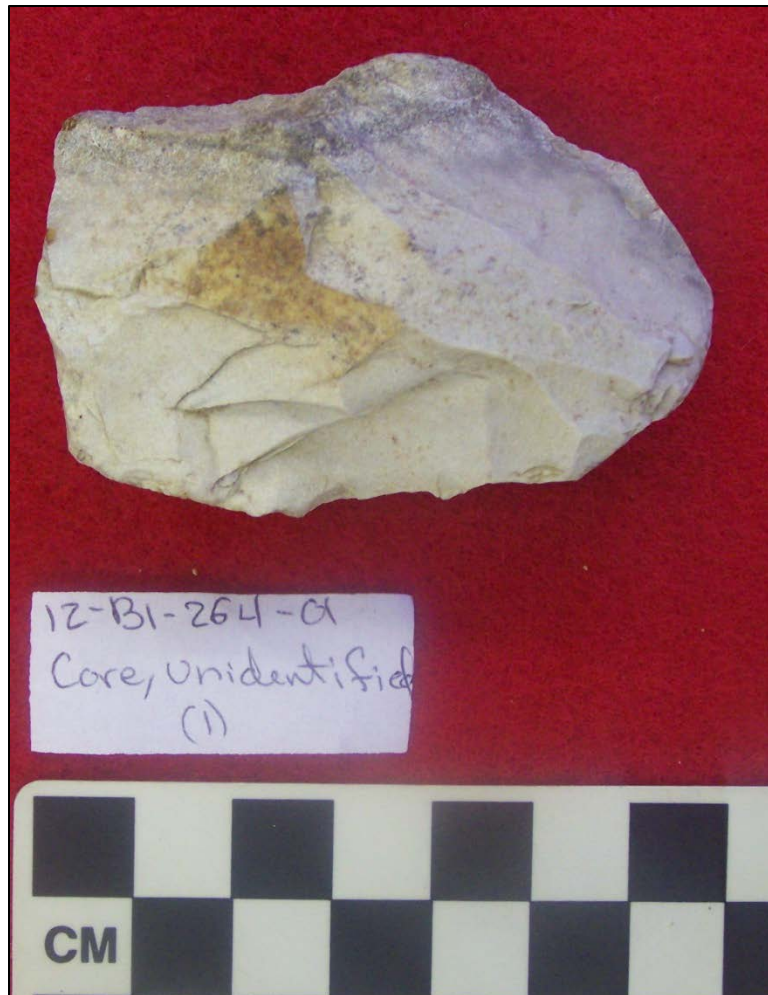


# Biface, Hafted, Kirk Corner Notched, Ditney Chert





# Core Tool, Unidentified Chert



# Whiteware, Rim w/Black Transfer Print



12-BL-177-03  
ceramic, whiteware,  
rim, transfer print,  
black (1)

CM

# Glass Rims, Aqua





# Glass Bottle, Clear, Embossed "6 box O 6"





# Wrap Up and Thanks

Christine Keller, Archaeologist, Applied Archaeology Laboratories  
Department of Anthropology, Ball State University

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## Archaeology Mandates & Laws

The DHPA's Archaeology Team administers programs for protecting and preserving Indiana's prehistoric and historic archaeological sites and the valuable information that they contain. The DHPA is the central repository of archaeological records and reports for the state and also houses the state's official computerized database of archaeological site information.

The Archaeology Team's primary responsibility is to review, evaluate, and comment upon projects that may affect archaeological resources. Other duties include: implementing the state law providing protection for [archaeological sites and human remains](#), maintaining standards and guidelines for the archaeology community, reviewing grant-funded archaeological projects, reviewing National Register nominations for archaeological sites, [reviewing plans for development near cemeteries](#), providing technical assistance and advice to the public and professionals, and undertaking public education initiatives.

# Indiana Archaeology Laws

- What is an artifact?
- What is a site?
- Is it legal to surface collect?
- Is it legal to disturb the ground for the purpose of obtaining artifacts or human remains?
- What if I discover an archaeological site?

# Thanks – Landowners of surveyed property

---

- Jon Creek
- James and Judy Clarkson
- Brian Kitterman Family
- Ron Enochs
- Eric and Jenny Garrett
- Craig Miller
- Greg and Rita Miller

# Thanks – Landowners who gave permission

- John and Amy Payne
- Vernon Cravens
- Leo Banter
- Penny Watterson Cooper
- Charles Bole
- Jonne Koger, Judy Cline,  
and Jill Carter
- Larry Pluimer
- Dick and Dawn Burchard
- David Oswalt
- Melanie McCammon and  
Risa Kinney
- Emojean Brown
- James Hedges

# Thanks to entire team

---

- DHPA Funding
- DHPA Amy Johnson and Malia Vanaman
- Applied Archaeology Laboratories, Dept. of Anthropology – staff & students
- BSU Support Staff – Contracts & Grants
- Blackford County Historical Society

# Questions?

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# Contact Info

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- Christine Keller, Archaeologist
- Applied Archaeology Laboratories,  
Department of Anthropology,  
Ball State University
- [ckkeller2@bsu.edu](mailto:ckkeller2@bsu.edu) or (765) 285-5328

# Resources

Black, Glenn A.

1933 Report of Work Done in the Gravel Pit on the Secrest-Reasoner Farm 4/15-4/21/33, Blackford County, Indiana. Glenn A. Black Laboratory: Indianapolis.

1935 Excavation of a Blackford County Site. Proceedings of the Sixteenth Annual Indiana History Conference, Indiana Historical Society, Indianapolis.

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2006 A Phase Ia Archaeological Literature Review and Reconnaissance Survey of a Proposed Ethanol Plant near Hartford City, Licking Township, Blackford County, Indiana. Archaeological Consultants of the Midwest, Indianapolis.

Jeske, Robert J. and Larry N. Stillwell

1994a Blackford County Industrial Park: An Archaeological Reconnaissance Survey in Hartford City, Blackford County, Indiana. Cultural Resource Management Report No. 65. Northeast Indiana Archaeological Survey, Indiana-Purdue University, Fort Wayne.

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Stillwell, Larry N.

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