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
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
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 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
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

KANSAN ICE

ILLINOIAN ICE

WISCONSIN ICE
Glacial History

- Indiana glaciation
  - Kansan Age (350,000-400,000 years ago)
  - Illinoian Age (125,000 years ago)
  - Wisconsinan (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
<table>
<thead>
<tr>
<th>Date</th>
<th>Flora</th>
<th>Vegetation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD 2000</td>
<td>Historic</td>
<td></td>
</tr>
<tr>
<td>AD 1000</td>
<td>Late Woodland</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Middle Woodland</td>
<td></td>
</tr>
<tr>
<td>1000 BC</td>
<td>Early Woodland</td>
<td>Deciduous</td>
</tr>
<tr>
<td>2000 BC</td>
<td>Late Archaic</td>
<td></td>
</tr>
<tr>
<td>3000 BC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4000 BC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000 BC</td>
<td>Middle Archaic</td>
<td>Deciduous, Prairies and Open Vegetation</td>
</tr>
<tr>
<td>6000 BC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7000 BC</td>
<td>Early Archaic / Late Paleo Indian</td>
<td>Deciduous</td>
</tr>
<tr>
<td>8000 BC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9000 BC</td>
<td></td>
<td>Pine Maximum</td>
</tr>
<tr>
<td>10000 BC</td>
<td></td>
<td>Conifer-Deciduous</td>
</tr>
<tr>
<td>11000 BC</td>
<td></td>
<td>Boreal</td>
</tr>
<tr>
<td>12000 BC</td>
<td>Early Paleo Indian</td>
<td>Park Tundra</td>
</tr>
<tr>
<td>13000 BC</td>
<td></td>
<td>Tundra or Open Areas</td>
</tr>
<tr>
<td>14000 BC</td>
<td></td>
<td>Periglacial Zone</td>
</tr>
<tr>
<td>15000 BC</td>
<td></td>
<td>Ice</td>
</tr>
</tbody>
</table>
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)

<table>
<thead>
<tr>
<th>Cultural Period</th>
<th>No.</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unidentified Prehistoric</td>
<td>78</td>
<td>15 multicomponent</td>
</tr>
<tr>
<td>Paleoindian (ca. 10,000 – 7500 B.C.)</td>
<td>3</td>
<td>1 multicomponent</td>
</tr>
<tr>
<td>Archaic</td>
<td>1</td>
<td>1 multicomponent</td>
</tr>
<tr>
<td>Early Archaic (ca. 8000 – 6000 B.C.)</td>
<td>6</td>
<td>2 multicomponent</td>
</tr>
<tr>
<td>Middle Archaic (ca. 6000 – 3500 B.C.)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Late Archaic (ca. 4000 – 700 B.C.)</td>
<td>5</td>
<td>2 multicomponent</td>
</tr>
<tr>
<td>Woodland</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Early Woodland (ca. 1000 – 200 B.C.)</td>
<td>2</td>
<td>2 multicomponent</td>
</tr>
<tr>
<td>Middle Woodland (ca. 200 B.C. – A.D. 600)</td>
<td>1</td>
<td>1 multicomponent</td>
</tr>
<tr>
<td>Late Woodland (ca. A.D. 500 – 1200)</td>
<td>3</td>
<td>1 multicomponent</td>
</tr>
<tr>
<td>Late Prehistoric/Mississippian (A.D. 1000-1650)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Historic (post A.D. 1400)</td>
<td>22</td>
<td>18 multicomponent</td>
</tr>
</tbody>
</table>
## Prehistoric Diagnostics (prior to our survey)

<table>
<thead>
<tr>
<th>Cultural Period</th>
<th>Projectile Point Types</th>
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</thead>
<tbody>
<tr>
<td>Paleoindian</td>
<td>Hi Lo, Clovis, Palmer-like</td>
</tr>
<tr>
<td>Early Archaic</td>
<td>Kanawha, Thebes, Decatur, Kirk, Kirk Corner Notched, Charleston</td>
</tr>
<tr>
<td>Middle Archaic</td>
<td></td>
</tr>
<tr>
<td>Late Archaic</td>
<td>Matanzas, Trimble</td>
</tr>
<tr>
<td>Terminal Late Archaic</td>
<td>Riverton</td>
</tr>
<tr>
<td>Woodland</td>
<td>Jack’s Reef, Adena</td>
</tr>
<tr>
<td>Late Woodland</td>
<td>Madison, Hamilton</td>
</tr>
</tbody>
</table>
Methodology & Results

Joe Miller, Graduate Assistant, Applied Archaeology Laboratories
Department of Anthropology, Ball State University
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), historic
- 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 #
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)
<table>
<thead>
<tr>
<th>Catalog No.</th>
<th>Identification</th>
<th>Material (chert)</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-BL-320-01</td>
<td>Ceramic, Rim</td>
<td>Redware</td>
<td>1</td>
</tr>
<tr>
<td>12-BL-320-02</td>
<td>Ceramic, Body</td>
<td>Redware</td>
<td>5</td>
</tr>
<tr>
<td>12-BL-320-03</td>
<td>Ceramic, Base</td>
<td>Stoneware, Albany/Tan</td>
<td>1</td>
</tr>
<tr>
<td>12-BL-320-04</td>
<td>Ceramic, Body</td>
<td>Stoneware, Albany, Gray Salt</td>
<td>1</td>
</tr>
<tr>
<td>12-BL-320-05</td>
<td>Ceramic, Body</td>
<td>Stoneware, Albany/Tan</td>
<td>1</td>
</tr>
<tr>
<td>12-BL-320-06</td>
<td>Ceramic, Rim</td>
<td>Whiteware</td>
<td>3</td>
</tr>
<tr>
<td>12-BL-320-07</td>
<td>Ceramic, Rim</td>
<td>Whiteware, Shell edge</td>
<td>5</td>
</tr>
<tr>
<td>12-BL-320-08</td>
<td>Ceramic, Rim, Molded</td>
<td>Whiteware, Shell edge</td>
<td>1</td>
</tr>
<tr>
<td>12-BL-320-09</td>
<td>Ceramic, Rim</td>
<td>Whiteware, Hand painted, Burnt</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Whiteware, Blue sponge decoration, Burnt</td>
<td>1</td>
</tr>
<tr>
<td>12-BL-320-10</td>
<td>Ceramic, Rim</td>
<td>Whiteware</td>
<td>12</td>
</tr>
<tr>
<td>12-BL-320-11</td>
<td>Ceramic, Base</td>
<td>Whiteware</td>
<td>1</td>
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<tr>
<td>12-BL-320-12</td>
<td>Ceramic, Body, Embossed &quot;WAL&quot;</td>
<td>Whiteware</td>
<td>1</td>
</tr>
<tr>
<td>12-BL-320-13</td>
<td>Ceramic, Rim</td>
<td>Whiteware, Blue/Pink, Banded</td>
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</tr>
<tr>
<td>12-BL-320-14</td>
<td>Ceramic, Body</td>
<td>Whiteware, Hand painted, Green</td>
<td>7</td>
</tr>
<tr>
<td>12-BL-320-15</td>
<td>Ceramic, Body</td>
<td>Whiteware, Hand painted, Blue</td>
<td>2</td>
</tr>
<tr>
<td>12-BL-320-16</td>
<td>Ceramic, Body</td>
<td>Whiteware, Blue sponge decoration</td>
<td>1</td>
</tr>
<tr>
<td>12-BL-320-17</td>
<td>Ceramic, Body</td>
<td>Whiteware, Blue</td>
<td>4</td>
</tr>
<tr>
<td>12-BL-320-18</td>
<td>Ceramic, Body</td>
<td>Whiteware, Transfer print, Red</td>
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</tr>
<tr>
<td>12-BL-320-19</td>
<td>Ceramic, Body</td>
<td>Whiteware, Transfer print, Purple</td>
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</tr>
<tr>
<td>Catalog No.</td>
<td>Identification</td>
<td>Material (chert)</td>
<td>No.</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>-----</td>
</tr>
<tr>
<td>12-BI-289-01</td>
<td>Biface, Hafted, Raddatz</td>
<td>Unidentified</td>
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<tr>
<td>12-BI-289-02</td>
<td>Flake, Utilized</td>
<td>Liston Creek</td>
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</tr>
<tr>
<td>12-BI-289-03</td>
<td>Flake, Utilized</td>
<td>Muldraugh</td>
<td>1</td>
</tr>
<tr>
<td>12-BI-289-04</td>
<td>Flake, Shatter</td>
<td>Liston Creek</td>
<td>1</td>
</tr>
<tr>
<td>12-BI-289-05</td>
<td>Flake, Shatter</td>
<td>Jeffersonville</td>
<td>1</td>
</tr>
<tr>
<td>12-BI-289-06</td>
<td>Flake, Shatter</td>
<td>Delaware</td>
<td>1</td>
</tr>
<tr>
<td>12-BI-289-07</td>
<td>Flake, Shatter</td>
<td>Unidentified</td>
<td>1</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Cultural Period</th>
<th>Existing</th>
<th>Added</th>
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</thead>
<tbody>
<tr>
<td>Unidentified Prehistoric</td>
<td>78</td>
<td>139</td>
</tr>
<tr>
<td>Paleoindian (ca. 10,000 – 7500 B.C.)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Archaic</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Early Archaic (ca. 8000 – 6000 B.C.)</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Middle Archaic (ca. 6000 – 3500 B.C.)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Late Archaic (ca. 4000 – 700 B.C.)</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Woodland</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Early Woodland (ca. 1000 – 200 B.C.)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Middle Woodland (ca. 200 B.C. – A.D. 600)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Late Woodland (ca. A.D. 500 – 1200)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Late Prehistoric/Mississippian (A.D. 1000-1650)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Historic (post A.D. 1400)</td>
<td>22</td>
<td>47</td>
</tr>
</tbody>
</table>
### Documented Points Within Blackford County
(points added from survey in red)

<table>
<thead>
<tr>
<th>Cultural Period</th>
<th>Projectile Point Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paleoindian</td>
<td>Clovis, Hi Lo, Palmer</td>
</tr>
<tr>
<td>Early Archaic</td>
<td>Charleston, Kirk Corner Notched, Kirk, Kanawha, Decatur, Thebes</td>
</tr>
<tr>
<td>Middle Archaic</td>
<td>Raddatz</td>
</tr>
<tr>
<td>Late Archaic</td>
<td>Matanzas, Trimble, Riverton, Merom Cluster, Etley</td>
</tr>
<tr>
<td>Early Woodland</td>
<td>Robbins, Meadowood, Adena</td>
</tr>
<tr>
<td>Middle Woodland</td>
<td>Steuben Expanded Stemmed, Jack’s Reef</td>
</tr>
<tr>
<td>Late Woodland</td>
<td>Madison, Hamilton, Triangular Cluster</td>
</tr>
</tbody>
</table>
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)
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

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
- Brian Kitterman Family
- Ron Enochs
- Eric and Jenny Garrett
- Craig Miller
- Greg and Rita Miller
- James and Judy Clarkson
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?
Contact Info

- Christine Keller, Archaeologist
- Applied Archaeology Laboratories,
  Department of Anthropology,
  Ball State University
- ckkeller2@bsu.edu or (765) 285-5328
Black, Glenn A.


Jackson, C. and J. Vosvick

Jeske, Robert J. and Larry N. Stillwell

1994b Blackford County Industrial Park: Archaeological Phase II Test Excavations of 12-Bl-110 in Hartford City, Blackford County, Indiana. MS on file Applied Archaeology Laboratories, Ball State University, Muncie.

Stillwell, Larry N.