

# ISCA 2024 FALL WORKSHOP & MEETING

Location: Giant City State Park Lodge  
460 Giant City Lodge Road  
Makanda, IL 62958

Date: Wednesday, October 2<sup>nd</sup>, 2024

Time: 10:00 AM -4:00 PM



## Agenda Items

**9:30 AM – 10:00 AM** Workshop Registration

**10:00 AM – 12:30 PM** **JOSEPH A. DEVERA**  
PRINCIPAL RESEARCH SCIENTIST IN  
PALEONTOLOGY AND FIELD GEOLOGIST  
ILLINOIS STATE GEOLOGICAL SURVEY

**HEATHER CAREY**  
ARCHAEOLOGIST  
U.S. FOREST SERVICE  
SHAWNEE NATIONAL FOREST

**KRISTI DODSON**  
PUBLIC SERVICE ADMINISTRATOR,  
ILLINOIS DEPARTMENT OF NATURAL  
RESOURCES  
OFFICE OF MINES AND MINERALS  
LAND RECLAMATION DIVISION

**12:30 PM** Invocation/Lunch

**1:30 PM** Travel to soil pits

### Additional information

Car-pooling to soil pits is highly encouraged.

Soil pits are located at 3373 W Pleasant Hill Road, Carbondale, IL 62903.

## 2024 Fall Meeting Speakers

### **Joseph A. Devera**

Joseph A. Devera received a BS in Geology from Northern Illinois University in Dekalb, IL in 1980. He then received his MS in Geology from Southern Illinois University in Carbondale in 1986. Joseph worked with Exploration Services as a Well Site Geologist in the Illinois Basin prior to starting as a Field Geologist with the Illinois State Geological Survey (ISGS) in 1985. Since then, he has served as ISGS Senior Paleontologist and Field Geologist from 2008-2016 and was promoted in 2016 to his current position as the Principal Research Scientist in Paleontology and Field Geology. Joseph started as an Adjunct Professor at SIU in 2004 where he teaches a variety of classes – mineralogy, paleontology, physical geology, carbonate petrography, and introduction to field geology. Mr. Devera has authored or co-authored over fifty 7.5' geologic quadrangles in Illinois including Southern Illinois, St. Louis Metro East area, central Illinois, and currently the Quad Cities area. He has also worked in West Texas, New Mexico, and Morocco. His main interests consist of geologic mapping, invertebrate paleontology, Paleozoic depositional systems, ichnology, and stratigraphy.

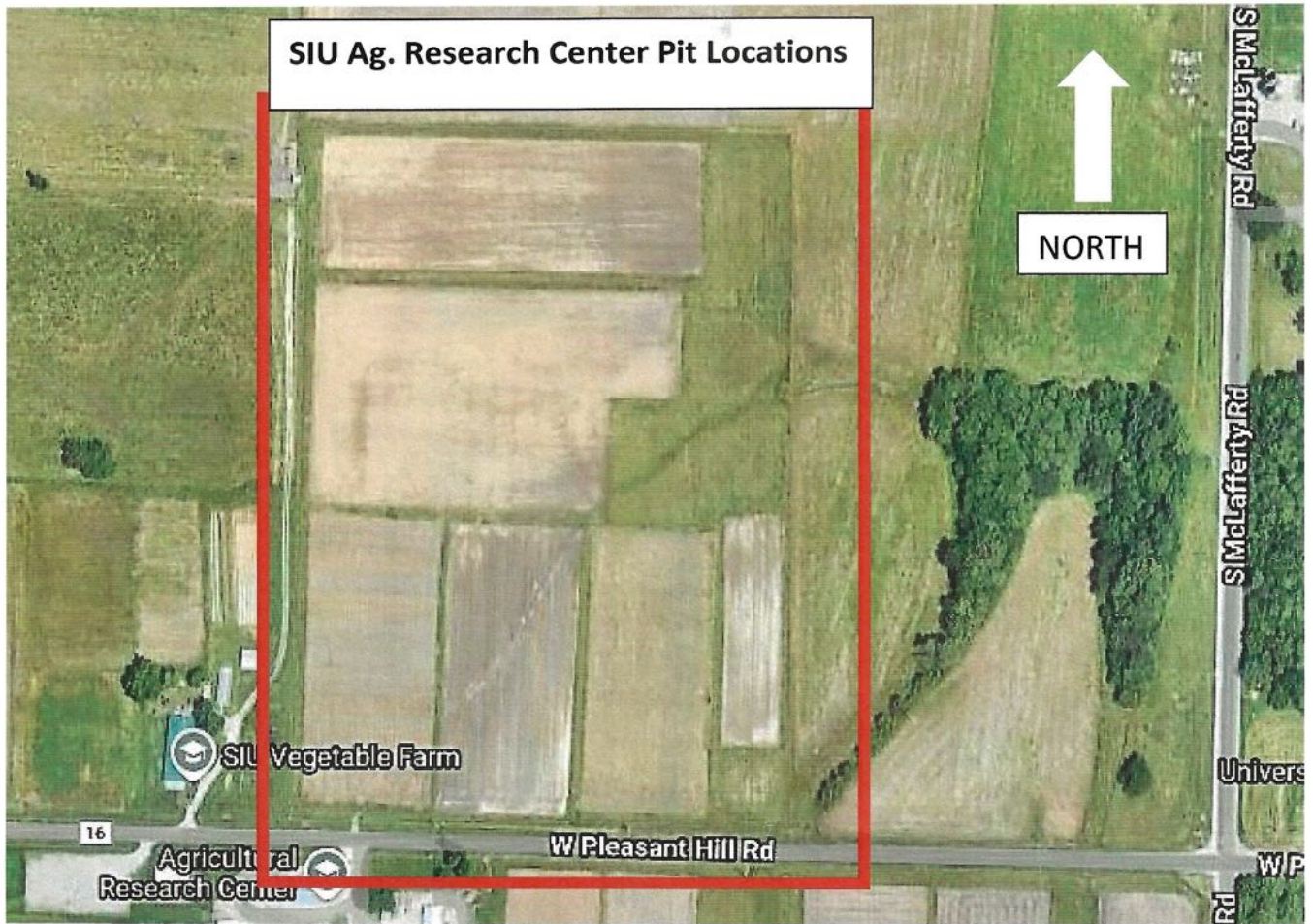
### **Heather Carey**

Heather Carey has been a professional archaeologist working for the U.S. Forest Service – Shawnee National Forest for the past twenty-one years. She received a BS in Historic Preservation and a MA in Anthropology and currently serves as the Forest's Heritage Program Manager and Tribal Liaison. Heather's archaeological career has been focused on cultural resource management, which has provided her broad experience and knowledge in a variety of areas. She has worked at both pre-contact and historic period sites, is familiar with cultural resource laws and compliance, manages numerous archaeological collections, and communicates archaeological information to others through interpretation and outreach. Heather is also responsible for maintaining positive relationships and dialogue with eleven federally recognized tribal partners. In addition, she serves as President of the Illinois Chapter of the Trail of Tears Association.

### **Kristi Dodson**

Kristi serves as the Public Service Administrator with the Illinois Department of Natural Resources (IDNR) Office of Mines & Minerals – Land Reclamation Division (LRD). She has been employed with the LRD for the past 10 years stationed in the Northern District Office in Springfield, Illinois. She started her career with LRD as a Land Reclamation Specialist (inspector) and then moved to a Wildlife Technical Specialist role in 2016. Kristi has served as the Bond Unit Manager, the GIS Unit Manager, and the Soil Units Manager for the past 6 years. Her education background consists of a Master of Science in Biology from Sul Ross State University in Alpine, Texas and a Master of Arts in Environmental Planning and Management from the University of Illinois at Springfield. Prior to moving to Illinois and joining the LRD, Kristi worked as an Assistant Professor of Biology (and an occasion Instructor in the Physical Education Department) at South Plains College in Levelland, Texas. Kristi and her husband enjoy boating, biking, hiking, gardening, cooking, and playing with their cats.





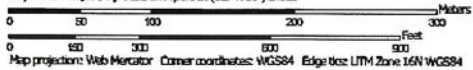
**292 =ARC 1, 291=ARC 2, 290=ARC 3, 289=ARC 4**  
3373 W Pleasant Hill Road, Carbondale, IL 62903.



Soil Map—Jackson County, Illinois



Map Scale: 1:3,530 if printed on A portrait (8.5" x 11") sheet.



**SCORECARD**  
**REGION 3 SOILS CONTEST**  
**October 10 & 11, 2024**



1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
Total	_____	_____

Contestant I.D. OFFICIAL

Site No. ARC 1

Horizons 6

Describe to a depth of 120 cm

Nail in third horizon at 36 cm

**I. Soil Morphology**

**Score:**

Horizonation				Boundary		Texture					Color			Structure		Cons.	Soil Features			Score
Master		Sub. (2)	No. (2)	Lower Depth (cm) (2)	Dist. (2)	Sand% (±5%) (2)	Clay% (±5%) (2)	CF Mod. (2)	Sand Mod. (2)	Class (2)	Hue (2)	Value (2)	Chroma (2)	Grade (2)	Shape (2)	Moist Strength (2)	Redox		Efferv. (2)	Possible (40)
Prefix (2)	Let. (2)																Depl. (2)	Conc. (2)		
-	A	p	-	21	A	3	15	-	-	SIL	10YR	4	3	2	GR	FR	Y	Y	-	
-	AE	-	-	31	C	3	17	-	-	SIL	10YR	5	3	2	SBK	FR	Y	Y	-	
-	E	-	-	40	C	3	13	-	-	SIL	10YR	6	3	2	SBK	FR	Y	Y	-	
-	B	t	1	71	C	3	36	-	-	SICL	10YR	5	3	3	PR	VFI	Y	Y	-	
-	B	t	2	100	C	3	32	-	-	SICL	10YR	5	3	2	PR	FI	Y	Y	-	
-	B	txg	-	120+	-	6	24	-	-	SIL	10YR	6	2	2	ABK	FI	Y	Y	-	

**II. Soil Profile Characteristics**

**Score:**

Hydraulic Conductivity (10)		Loading Rate at 75 cm (5)	Effective Soil Depth (5)	Water Retention Difference (5)	Soil Wetness Class (5)
Surface (5) <input type="checkbox"/> High <input checked="" type="checkbox"/> Mod. <input type="checkbox"/> Low	Limiting Layer (5) <input type="checkbox"/> High <input checked="" type="checkbox"/> Mod. <input type="checkbox"/> Low	0.52 gpd/ft <sup>2</sup> (3)  Ref. (2) <b>F5</b>	<input type="checkbox"/> V. shallow (< 25 cm) <input type="checkbox"/> Shallow (25 to 49 cm) <input type="checkbox"/> Mod. Deep (50 to 99 cm) <input type="checkbox"/> Deep (100 to 150 cm) <input checked="" type="checkbox"/> Very deep (> 150 cm)	<input type="checkbox"/> Very low (< 7.5 cm) <input type="checkbox"/> Low (7.5 to < 15 cm) <input type="checkbox"/> Mod. (15 to < 22.5 cm) <input checked="" type="checkbox"/> High (≥ 22.5 cm)	<input checked="" type="checkbox"/> (< 25 cm) <input type="checkbox"/> (25 to 49 cm) <input type="checkbox"/> (50 to 99 cm) <input type="checkbox"/> (100 to 150 cm) <input type="checkbox"/> (> 150 cm)



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**October 10 & 11, 2024**



1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
Total	_____	_____

Contestant I.D. OFFICIAL  
 Site No. ARC 2  
 Horizons 5  
 Describe to a depth of 115 cm  
 Nail in third horizon at 68 cm

**I. Soil Morphology**

**Score:**

Horizonation				Boundary		Texture					Color			Structure		Cons.	Soil Features			Score
Master		Sub. (2)	No. (2)	Lower Depth (cm) (2)	Dist. (2)	Sand% (±5%) (2)	Clay% (±5%) (2)	CF Mod. (2)	Sand Mod. (2)	Class (2)	Hue (2)	Value (2)	Chroma (2)	Grade (2)	Shape (2)	Moist Strength (2)	Redox		Efferv. (2)	Possible (40)
Prefix (2)	Let. (2)																Depl. (2)	Conc. (2)		
-	A	p	-	25	A	3	17	-	-	SIL	10YR	4	3	2	SBK	FR	-*	Y	-	
-	B	t	-	55	C	3	36	-	-	SICL	10YR	5 or 6	3	3	ABK	FI	Y	Y	-	
-	B	tg	1	82	C	3	33	-	-	SICL	10YR	6	2	2	PR	FI	Y	Y	-	
-	B	tg	2	105	C	3	29	-	-	SICL	10YR	6	2	2	PR	FI	Y	Y	-	
-	B	txg	3	115+	-	6	26	-	-	SIL	10YR	6	1	2	ABK	FI	Y	Y	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**II. Soil Profile Characteristics**

**Score:**

Hydraulic Conductivity (10)		Loading Rate at 75 cm (5)	Effective Soil Depth (5)	Water Retention Difference (5)	Soil Wetness Class (5)
Surface (5) <input type="checkbox"/> High <input checked="" type="checkbox"/> Mod. <input type="checkbox"/> Low	Limiting Layer (5) <input type="checkbox"/> High <input checked="" type="checkbox"/> Mod. <input type="checkbox"/> Low	0.52 _____ gpd/ft <sup>2</sup> (3) Ref. (2) <b>F5</b>	<input type="checkbox"/> V. shallow (< 25 cm) <input type="checkbox"/> Shallow (25 to 49 cm) <input type="checkbox"/> Mod. Deep (50 to 99 cm) <input type="checkbox"/> Deep (100 to 150 cm) <input checked="" type="checkbox"/> Very deep (> 150 cm)	<input type="checkbox"/> Very low (< 7.5 cm) <input type="checkbox"/> Low (7.5 to < 15 cm) <input type="checkbox"/> Mod. (15 to < 22.5 cm) <input checked="" type="checkbox"/> High (≥ 22.5 cm)	<input type="checkbox"/> (< 25 cm) <input checked="" type="checkbox"/> (25 to 49 cm) <input type="checkbox"/> (50 to 99 cm) <input type="checkbox"/> (100 to 150 cm) <input type="checkbox"/> (> 150 cm)

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1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
Total _____	_____

Contestant I.D. OFFICIAL  
 Site No. ARC 3  
 Horizons 6  
 Describe to a depth of 110 cm  
 Nail in third horizon at 40 cm

**I. Soil Morphology**

**Score:**

Horizonation				Boundary		Texture					Color			Structure		Cons.	Soil Features			Score
Master		Sub. (2)	No. (2)	Lower Depth (cm) (2)	Dist. (2)	Sand% (±5%) (2)	Clay% (±5%) (2)	CF Mod. (2)	Sand Mod. (2)	Class (2)	Hue (2)	Value (2)	Chroma (2)	Grade (2)	Shape (2)	Moist Strength (2)	Redox		Efferv. (2)	Possible (40)
Prefix (2)	Let. (2)																Depl. (2)	Conc. (2)		
-	A	p	-	13		3	17	-	-	SIL	10YR	4	2	2	SBK	FR	Y	Y	-	
-	E	g	1	33		3	15	-	-	SIL	10YR	4	2	1 or 2	PL or SBK	FR	Y	Y	-	
-	E	g	2	52		3	21	-	-	SIL	10YR	4	2	2	SBK	FI	Y	Y	-	
-	B	t	1	72		3	28	-	-	SICL	10YR	5	4	2	PR	FI	Y	Y	-	
-	B	t	2	92		3	30	-	-	SICL	10YR	5	4	2	PR	FI	Y	Y	-	
-	B	tg	-	110+	-	3	33	-	-	SICL	10YR	5	2	1	PR	FI	Y	Y	-	

**II. Soil Profile Characteristics**

**Score:**

Hydraulic Conductivity (10)		Loading Rate at 75 cm (5)	Effective Soil Depth (5)	Water Retention Difference (5)	Soil Wetness Class (5)
Surface (5) <input type="checkbox"/> High <input checked="" type="checkbox"/> Mod. <input type="checkbox"/> Low	Limiting Layer (5) <input type="checkbox"/> High <input type="checkbox"/> Mod. <input type="checkbox"/> Low	0.52 _____ gpd/ft <sup>2</sup> (3)  Ref. (2) <b>F5</b> _____	<input type="checkbox"/> V. shallow (< 25 cm) <input type="checkbox"/> Shallow (25 to 49 cm) <input type="checkbox"/> Mod. Deep (50 to 99 cm) <input type="checkbox"/> Deep (100 to 150 cm) <input checked="" type="checkbox"/> Very deep (> 150 cm)	<input type="checkbox"/> Very low (< 7.5 cm) <input type="checkbox"/> Low (7.5 to < 15 cm) <input type="checkbox"/> Mod. (15 to < 22.5 cm) <input checked="" type="checkbox"/> High (≥ 22.5 cm)	<input checked="" type="checkbox"/> (< 25 cm) <input type="checkbox"/> (25 to 49 cm) <input type="checkbox"/> (50 to 99 cm) <input type="checkbox"/> (100 to 150 cm) <input type="checkbox"/> (> 150 cm)

The 1 or 2 in the 2nd horizon means either mod or low are correct for HC, LL.



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1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
Total _____	_____

Contestant I.D. OFFICIAL  
 Site No. ARC 4  
 Horizons 6  
 Describe to a depth of 150 cm  
 Nail in third horizon at 52 cm

**I. Soil Morphology**

**Score:**

Horizonation				Boundary		Texture					Color			Structure		Cons.	Soil Features			Score
Master		Sub. (2)	No. (2)	Lower Depth (cm) (2)	Dist. (2)	Sand% (±5%) (2)	Clay% (±5%) (2)	CF Mod. (2)	Sand Mod. (2)	Class (2)	Hue (2)	Value (2)	Chroma (2)	Grade (2)	Shape (2)	Moist Strength (2)	Redox		Efferv. (2)	Possible (40)
Prefix (2)	Let. (2)																Depl. (2)	Conc. (2)		
-	A	p	-	27		3	20	-	-	SIL	10YR	4	2	2	SBK	FR	-	Y	-	
-	B	t		39		3	28	-	-	SICL	10YR	5	3	2	PL or SBK	FR	Y	Y	-	
-	B	tg	1	67		3	36	-	-	SICL	2.5Y	6	2	3	ABK	FI	Y	Y	-	
-	B	tg	2	101		3	32	-	-	SICL	2.5Y	6	2	2	PR	FI	Y	Y	-	
-	B	tg	3	123		3	30	-	-	SICL	2.5Y	6	2	2	SBK	FI	Y	Y	-	
-	B	tg	4	150+	-	3	29	-	-	SICL	2.5Y	5	2	1	SBK	FI	Y	Y	-	

**II. Soil Profile Characteristics**

**Score:**

Hydraulic Conductivity (10)		Loading Rate at 75 cm (5)	Effective Soil Depth (5)	Water Retention Difference (5)	Soil Wetness Class (5)
Surface (5) <input type="checkbox"/> High <input checked="" type="checkbox"/> Mod. <input type="checkbox"/> Low	Limiting Layer (5) <input type="checkbox"/> High <input type="checkbox"/> Mod. <input checked="" type="checkbox"/> Low	0.52 _____ gpd/ft <sup>2</sup> (3)  Ref. (2) <b>F5</b>	<input type="checkbox"/> V. shallow (< 25 cm) <input type="checkbox"/> Shallow (25 to 49 cm) <input type="checkbox"/> Mod. Deep (50 to 99 cm) <input type="checkbox"/> Deep (100 to 150 cm) <input checked="" type="checkbox"/> Very deep (> 150 cm)	<input type="checkbox"/> Very low (< 7.5 cm) <input type="checkbox"/> Low (7.5 to < 15 cm) <input type="checkbox"/> Mod. (15 to < 22.5 cm) <input checked="" type="checkbox"/> High (≥ 22.5 cm)	<input type="checkbox"/> (< 25 cm) <input checked="" type="checkbox"/> (25 to 49 cm) <input type="checkbox"/> (50 to 99 cm) <input type="checkbox"/> (100 to 150 cm) <input type="checkbox"/> (> 150 cm)