

MISSOURI BOTANICAL GARDEN

"SHAW'S GARDEN"

2315 TOWER GROVE AVENUE
ST. LOUIS 10, MISSOURI

September 25, 1972

Mr. Michael E. Ruppert
Dept. of Anthropology
University of Nebraska
Lincoln, Nebraska 68508

Dear Mike,

In reply to your letter of September 22nd, we would like to see all of the food plant remains from the Kings Hill site, particularly as we worked over those ~~from~~ from the original ~~excavation~~ excavation.

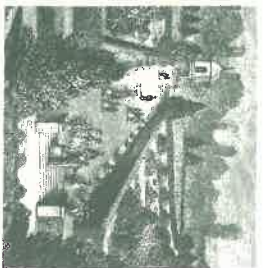
At this time I do not expect to make the Plains Conference, but will go to the Midwestern Conference at Carbondale, Illinois the last week in October. If you should care to come to St. Louis, we will welcome your visit, but shipping by parcel post would probably be less expensive and time consuming for you, unless you will be passing through here anyway. We have found that plant remains, when carefully packed, travel very well through the mail. Fragile stuff between layers of cotton or in plastic vials with a bit of cotton can take a lot of external banging around without harm.

I enjoyed the visit to St. Joe and the opportunity to meet you and your crew and hope to see you again somewhere along the line. Please give my best to the Hennings, Falks and Nickels, should you see them.

Sincerely,

Leonard

Leonard W. Blake



MISSOURI
BOTANICAL
GARDEN

Mr. Michael E. Ruppert
Dept. of Anthropology
University of Nebraska
Lincoln, Nebraska 68508



MISSOURI BOTANICAL GARDEN

"SHAW'S GARDEN"

2315 TOWER GROVE AVENUE
ST. LOUIS 10, MISSOURI

see + return

March 19, 1973

Dr. Dale R. Henning
Dept. of Anthropology
University of Nebraska
Lincoln, Nebraska 68508

Dear Dale,

All of the 130 bags that we have here from the 1972 excavations at King's Hill have been gone over and specimens of plant remains other than wood charcoal, roots etc. have been taken out for identification and measurement. So far, about 1/3rd of these have been checked for identifications etc. I should be able to get over the rest in the next few weeks, as this is less time consuming than sorting.

Corn has been present in all but a very few of the samples and most of the cob and kernel fragments indicate quite large ears. So far, beans have been identified in six samples and squash seeds in two. The following have been noted, which were not present in material which we saw from earlier excavations of several years ago: Uncarbonized seeds of squirting cucumber (Echinocystis lobata) were found. Fruit of this wild plant is edible. Uncarbonized seeds of some sort of blackberry, dewberry etc. (Rubus sp.) have turned up frequently. These seeds are fragile and sometimes are from levels as deep as 5 feet or more below the surface. ^{Nearly} every sample that we have seen has contained seeds, usually carbonized, of wild grape (Vitis sp.) or of the related peppervine (Ampelopsis sp.). A few stones of wild cherry have turned up. So far, we have not seen any watermelon seed or peach stones in the material from the 1972 excavations.

You asked where the Central States Anthropological Society meeting on March 28, 29th and 30th will be held. The Convention and Tourist Board of St. Louis told me this morning over the telephone that it will be at the Sheraton-Jefferson Hotel at 415 North 12th Street. This is on the western edge of downtown St. Louis. We are looking forward to seeing you there.

Sincerely,

Leonard

Leonard W. Blake

1972
23BN1
Rim Shards

715 - IIII	543 - 1	771 - III	622 - 1	559 - 1
756 - ~~IIIIIIIIII~~ IIII	537 - 1	764 - 1	708 - ~~IIIIIIII~~ II	547 - 1
527 - III	731 - 1	745 - II	655 - 1	
706 - II	566 - 1	526 - 1	736 - II	
656 - 1	742 - IIII	520 - 1	697 - 1	
684 - IIII	681 - ~~IIII~~	515 - 1	678 - 1	
731 - ~~IIII~~	682 - ~~IIII~~ I	~~581~~	721 - ~~IIIIIIII~~ IIII	
719 - ~~IIIIIIIIII~~ IIII	737 - IIII	500 - IIII	666 - II	
527	561 - 1	502 - II	696 - III	
534 - 1	510 - 1	676 - II	652 - 1	
685 - ~~IIII~~	604 - 1	~~571~~	686 - 1	
668 - ~~IIII~~ II	658 - ~~IIII~~ II	603 - 1	664 - 1	
725 - IIII	713 - ~~IIIIIIII~~ I	517 - 1	817 - IIII	
659 - 1	571 - II	572 - IIII	597 - II	
538 - II	588 - 1	529 - IIII	563 - 1	
523 - ~~IIII~~	674 - 1	513 - 1	793 - 1	
536 - II	626 (B) - II	555 - 1	740 - ~~IIII~~	
508 - ~~IIII~~ II	530 - II	667 - 1	742 - 1	
692 - 1	733 - ~~IIIIIIII~~ IIII	569 - 1	584 - 1	
511 - ~~IIII~~ IIII	671 - 1	735 - 1	670 - 1	
663 - 1	617 - II	804 - 1	525 - 1	
535 - III	711 - ~~IIIIIIII~~ IIII	573 - 1	542 - 1	

Small rimsheds (in vials)

531 - 2	711 - 2		20
527 - 1	513 - 2		56
713 - 4	719 - 4	total sm	76
754 - 3	677 - 1	rimsheds	
809 - 1	548 - 1		
693 - 3	756 - 1		
728 - 2	564 - 1		
500 - 9	739 - 1		
733 - 12	530 - 1		
508 - 1	504 - 1		
646 - 1	511 - 4		
668 - 3	685 - 1		
608 - 1	total = 20		
721 - 2			
753 - 2			
507 - 3			
656 - 2			
721 - 1			
742 - 1			
543 - 1			
517 - 1			
total = 56			

23BN1 - Tim Shertis

total page 2 - 114

573	708	656	733	715
622	733	708	696	584
674	721	771	754	740
511	721	713	771	670
719	708	817	708	521
733	756	708	733	572
502	733	597	721	525
529	719	658	658	542
708	721	713	754	559
665	644	543	760	529
756	696	708	713	739
756	652	793	713	547
733	686	756	719	572
736	756	756	721	682 - 5 ucom paces
733	721	696	736	
713	721	708	658	
697	708	733	760	
708	721	666	719	
733	721	721	817	
733	644	721	760	
756	745	713	742	
713	721	756	740	
678	708	597	817	
756	733	721	685	
768	713	721	511	

1977

total page 1 - 176

total page 2 - 114

total lg. rimshards 290

total sm. rimshards 76

total all rimshards 366

non shards - 23BN1

715	684	742	756	754	719	731	711
756	523	523	624(B)	711	719	529	733
527	543	715	530	524	731	719	668
706	535	510	733	520	603	530	500
656	684	604	471	515	508	719	624(B)
684	684	511	658	681	517	725	719
731	537	715	713	508	572	508	711
719	731	681	719	500	756	508	667
527	564	658	617	525	756	719	756
534	742	713	719	500	725	719	711
685	681	571	685	711	719	711	529
668	668	535	725	713	711	513	569
725	668	668	711	756	719	711	719
659	682	685	719	508	572	742	756
538	739	739	681	502	511	756	742
523	511	668	771	617	500	719	719
534	668	538	731	676	508	555	735
508	511	588	681	719	719	719	711
692	739	674	764	571	711	719	756
511	523	511	745	511	719	719	804
663	523	706	658	711	685	536	756
535	561	756	719	711	756	719	719

	1966			1972				
	Whole	Frag.	Tot.	Whole	Frag.	~~20/4~~	Tot.	Site Total
Points:	/ 100	513	613	/ 50	212	19	281	/ 894
Endscrapers:	//		326	//			58	// 384
Drills:	//		45	// 18		2	20	// 65
Knives*:	//		62	//			26	// 88
Flake Tools:	//		2093	//			331	// 2424
Total:	3139						716	3855

* includes all medium-size bifaces and beveled tools.

Rate of Recovery:

	1966	1972
Overall:	/ 1/15 ft. ² /	/ 1/2.5 ft. ² /
Points:	// 1/8.5 ft. ² //	// 1/6.2 ft. ² //
	// 1/52.5 ft. ² //	// 1/34.8 ft. ² //
Endscrapers:	// 1/16.1 ft. ² //	// 1/30 ft. ² //
Drills:	// 1/116.6 ft. ² //	// 1/87 ft. ² //
Knives:	// 1/84.7 ft. ² //	// 1/66.9 ft. ² //
Flake Tools:	// 1/2.5 ft. ² //	// 1/5.3 ft. ² //

23BN1 - UNIONID MUSSEL ANALYSIS**

	NUMBER OF VALVES			MIN. NO.	% OF
	LEFT	RIGHT	TOTAL	INDIVID.	TOTAL
<i>Amblema costata</i> (Rafinesque)	9	21	30	21	8.6
<i>Amblema peruviana</i> (Lamarck)	13	10	23	13	6.6
<i>Amblema</i> spp.	13	10	23	13	6.6
<i>Anodonta grandis</i> (Say)	5	11	16	11	4.6
<i>Fusconaia flava</i> (Rafinesque)	2	0	2	2	0.6
<i>Fusconaia undata</i> (Barnes)*	5	3	8	5	2.3
<i>Lampsilis anodontoides</i> (Lea)	3	0	3	3	0.9
<i>Lampsilis siliquoidea</i> (Barnes)	8	2	10	8	2.8
<i>Lampsilis ventricosa</i> (Barnes)	97	44	141	97	40.5
<i>Lampsilis</i> spp.	22	16	38	22	10.9
<i>Lasmigona complanata</i> (Barnes)	5	6	11	6	3.2
<i>Leptodēa fragilis</i> (Rafinesque)	1	0	1	1	0.3
<i>Leptodea laevisissima</i> (Lea)	4	2	6	4	1.7
<i>Leptodea</i> spp.	0	1	1	1	0.3
<i>Ligumia recta</i> (Rafinesque)	0	2	2	2	0.6
<i>Megalonaias gigantea</i> (Barnes)	9	2	11	9	3.2
<i>Plethobasus cyphysus</i> (Rafinesque) *	0	1	1	1	0.3
<i>Proptera alata</i> (Say)	3	1	4	3	1.1
<i>Quadrula pustulosa</i> (Lea)	8	3	11	8	3.2
<i>Quadrula quadrula</i> (Rafinesque)	1	1	2	1	0.6
<i>Strophitus rugosus</i> (Swainson)	2	2	4	2	1.1
TOTAL	210	138	348	233	100.0

** Identifications by Robert E. Warren

* Identification uncertain; specimen(s) currently being analyzed by Dr. Paul Parmalee, Illinois State Museum

one and
a carbon
for 27H

VERTEBRATE FAUNAL REMAINS FROM THE KING HILL SITE, 23BN1, MISSOURI

Mammal	# of elements	Min. # of Individ.	Av. lbs. of meat per indiv.	Total lbs. of meat per species	%
Order Marsupialia					
Opposum (<i>Didelphis marsupialis</i>)	9	1	8.5	8.5	.02
Order Insectivora					
Least Shrew (<i>Cryptotis parva</i>)	1	1	--	--	--
Eastern Mole (<i>Scalopus aquaticus</i>)	8	1	--	--	--
Order Chiroptera					
Silver-haired Bat (<i>Lasiurus noctivagus</i>)	1	1	--	--	--
Order Lagomorpha					
Eastern Cottontail Rabbit (<i>Sylvilagus floridanus</i>)	11	2	1.75	3.5	t
Order Rodentia					
Woodchuck (<i>Marmota monax</i>)	6	2	5.6	11.2	.03
Thirteen-lined Ground Squirrel (<i>Citellus cf. tridecemlineatus</i>)	1	1	.35	.35	t
Eastern Fox Squirrel (<i>Sciurus niger</i>)	7	2	2	4	t
Plains Pocket Gopher (<i>Geomys bursarius</i>)	33	4	.7	2.8	t
Beaver (<i>Castor canadensis</i>)	161	10	38.5	385	1.12
White-footed Mouse (<i>Peromyscus sp.</i>)	37	14	--	--	--
Eastern Wood Rat (<i>Neotoma floridana</i>)	1	1	1	1	t
Prairie Meadow Mouse (<i>Microtus ochrogaster</i>)	5	2	--	--	--
Muskrat (<i>Ondatra zibethicus</i>)	1	1	2	2	t
Norway Rat (<i>Rattus norvegicus</i>)	1	1	1	1	t
Order Carnivora					
Dog/Wolf/Coyote (<i>Canis sp.</i>)	600	26	10	260	.75
Red Fox (<i>Vulpes fulva</i>)	2	1	4	4	t
Black Bear (<i>Euarctos americanus</i>)	185	5	210	1050	3.05
Raccoon (<i>Procyon lotor</i>)	173	25	17.5	437.5	1.27
Badger (<i>Taxidea taxus</i>)	1	1	12.5	12.5	.03
Spotted Skunk (<i>Spilogale putorius</i>)	15	3	4	12	.03
Striped Skunk (<i>Mephitis mephitis</i>)	29	8	4	32	.09
Puma (<i>Felis concolor</i>)	3	1	15	15	.04
Bobcat (<i>Lynx rufus</i>)	5	1	70	70	.20

	# of elements	Min. # of indiv.	Av. lbs. of meat per indiv.	Total lbs. of meat per indiv.	%
Order Artiodactyla					
<u>Elk</u> (<i>Cervus canadensis</i>)	45	2	350	700	2.03
<u>White-tailed Deer</u> (<i>Odocoileus virginianus</i>)	1795	38	100	3,800	11.04
<u>Bison</u> (<i>Bison bison</i>)	257	42	650	27,300	80.01
2 <u>Cow</u> (<i>Bos taurus</i>)	8	1	--	--	--
2 <u>Pig</u> (<i>Sus scrofa</i>)	4	1	--	--	--
Total Mammal	3405	200		34,109.55	99.16
Bird					
Order Pelecaniiformes					
<u>White Pelican</u> (<i>Pelecanus erythrorhynchos</i>)	1	1	10	10	.03
Order Anseriformes					
<u>Swan</u> (<i>Olar</i> sp.)	2	1	15	15	.04
<u>Canada Goose</u> (<i>Branta canadensis</i>)	4	2	15.5	11	.03
<u>Mallard</u> (<i>Anas platyrhynchos</i>)	4	1	2	2	t
<u>Green-winged Teal</u> (<i>Anas carolinensis</i>)	2	1	.5	.5	t
<u>Redhead Duck</u> (<i>Anas valisineria</i>)	2	1	1	1	t
Order Falconiformes					
<u>Turkey Vulture</u> (<i>Cathartes aura</i>)	6	2	5	10	.03
<u>Redtailed Hawk</u> (<i>Buteo jamaicensis</i>)	6	2	5	10	.03
<u>Hawk</u> (Spp.)	5	1	22	2	t
<u>Golden Eagle</u> (<i>Aquila chrysaetos</i>)	4	2	6	12	.03
Order Galliformes					
<u>Ruffed Grouse?</u> (<i>Bonasa umbellus</i>)	5	2	1.5	3	at
<u>Greater Prairie Chicken</u> ? (<i>Tympanuchus cupido</i>)	4	2	1.5	3	t
<u>Bob White Quail</u> (<i>Colinus virginianus</i>)	7	1	.5	.5	t
<u>Immature Grouse</u> (Spp.)	5	2	.5	1	t
<u>Wild Turkey</u> (<i>Meleagris gallopavo</i>)	165	13	8.5	110.5	.32

✓
VERTEBRATE FAUNAL REMAINS
THE KING HILL SITE, 23BN1, MISSOURI

	^{5a} Number Elements	^{6a} Min. No. of indiv'l	^{7b} Av. lbs. of meat per indiv'l	^{8b} Total lbs. of meat per specie	^{9b} Per- cent
MAMMAL					
Order Marsupialia					
<u>Opposum</u> (<i>Didelphis</i> <i>marsupialis</i>)	9	1	8.5	8.5	.02
Order Insectivora					
S * <u>Least Shrew</u> (<i>Cryptotis</i> <i>parva</i>)	1	1	---	---	---
* <u>Eastern Mole</u> (<i>Scalopus</i> <i>aquaticus</i>)	8	1	---	---	---
Order Chiroptera					
* <u>Silver-haired Bat</u> (<i>Lasionycteris</i> <i>noctivagans</i>)	1	1	---	---	---
Order Lagommorpha					
<u>Eastern Cottontail Rabbit</u> (<i>Sylvilagus floridanus</i>)	11	2	1.75	3.5	t
Order Rodentia					
<u>Woodchuck</u> (<i>Marmota monas</i>)	6	2	5.6	11.2	.03
<u>Thirteen-lined Ground</u> <u>Squirrel</u> (<i>Citellus</i> cf. <i>tridecemlineatus</i>)	1	1	.35	.35	t
<u>Eastern Fox Squirrel</u> (<i>Sciurus niger</i>)	7	2	2	4	t
<u>Plains Pocket Gopher</u> (<i>Geomys bursarius</i>)	33	4	.7	2.8	t
<u>Beaver</u> (<i>Castor cana-</i> <i>densis</i>)	161	10	38.5	38.5	1.12
* <u>White-footed Mouse</u> (<i>Peromyscus</i> sp.)	37	14	---	---	---
<u>Eastern Wood Rat</u> (<i>Neotoma floridan</i>)	1	1	1	1	t
* <u>Prairie Meadow Mouse</u> (<i>Microtus ochrogaster</i>)	5	2	---	---	---
<u>Muskrat</u> (<i>Ondatra</i> <i>zibethicus</i>)	1	1	2	2	t
<u>Norway Rat</u> (<i>Rattus</i> <i>norvegicus</i>)	1	1	1	1	t
Order Carnivora					
<u>Dog/Wolf/Coyote</u> (<i>Canis</i> sp.)	600	26	10	260	.75
<u>Red Fox</u> (<i>Vulpes fulva</i>)	2	1	4	4	t

	⁵⁹ Number Elements	⁶⁷ Min. No. of indiv'l	⁷⁶ Av. lbs. of meat per indiv'l	⁸⁵ Total lbs. of meat per specie	⁹⁶ Per- cent
<u>Black Bear</u> (<i>Euarctos americanus</i>)	185	5	210	1050	3.05
<u>Raccoon</u> (<i>Procyon lotor</i>)	173	25	17.5	437.5	1.27
<u>Badger</u> (<i>Taxidea taxus</i>)	1	1	12.5	12.5	.03
<u>Spotted Skunk</u> (<i>Spilogale putorius</i>)	15	3	4	12	.03
<u>Striped Skunk</u> (<i>Mephitis mephitis</i>)	29	8	4	32	.09
<u>Bobcat</u> (<i>Lynx rufus</i>)	5	1	70	70	.20
<u>Puma</u> (<i>Felis concolor</i>)	3	1	15	15	.04
Order Artiodactyla					
<u>Elk</u> (<i>Gervus danadensis</i>)	45	2	350	700	2.03
<u>White-tailed Deer</u> (<i>Odocoileus virginianus</i>)	1795	38	100	3800	11.04
<u>Bison</u> (<i>Bison bison</i>)	257	42	650	27300	80.01
** <u>Cow</u> (<i>Bos taurus</i>)	8	1	---	---	---
** <u>Pig</u> (<i>Sus scrofa</i>)	4	1	---	---	---
Total Mammal	3405	200		34109.55	99.16

BIRD

Order Pelecaniiformes

<u>White Pelican</u> (<i>Pelecanus Erhthyrhynchos</i>)	1	1	10	10	.03
--	---	---	----	----	-----

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Order Anseriformes

<u>Swan</u> (<i>Olar sp.</i>)	2	1	15	15	.04
<u>Canada Goose</u> (<i>Branta canadensis</i>)	4	2	5.5	11	.03
<u>Mallard</u> (<i>Anas platyrhynchos</i>)	4	1	2	2	t
<u>Green-winged Teal</u> (<i>Anas carolinensis</i>)	2	1	.5	.5	t
<u>Redhead Duck</u> (<i>Anthia valisineria</i>)	2	1	1	1	t

Order Falconiformes

<u>Turkey Vulture</u> (<i>Cathartes aura</i>)	6	2	5	10	.03
<u>Redtailed Hawk</u> (<i>Buteo jamaicensis</i>)	6	2	5	10	.03
<u>Hawk</u> (Spp.)	5	1	2	2	t
<u>Golden Eagle</u> (<i>Aquila chrysaetos</i>)	4	2	6	12	.03

	⁵⁹ Number Elements	⁶⁷ Min. No. of indiv'l	⁷⁶ Av. lbs. of meat per indiv'l	⁸⁵ Total lbs. of meat per specie	⁹⁶ Per- cent
Order Galliformes					
<u>Ruffed Grouse?</u>	5	2	1.5	3	t
(Bonasa umbellus)					
<u>Greater Prairie Chicken?</u>	4	2	1.5	3	t
(Tympanuchus cupido)					
<u>Bob White Quail</u>	7	1	.5	.5	t
(Colinus virginianus)					
<u>Immature Grouse (Spp.)</u>	5	2	.5	1	t
<u>Wild Turkey (Meleagris gallopao)</u>	165	13	8.5	110.5	.32
Order Gruiformes					
<u>Sandhill Crane (Grus Canadensis)</u>	2	1	10	10	.03
Order Columbiformes					
<u>Domestic Pigeon</u>	1	1	1	1	t
(Columba livia)					
Order Strigiformes					
<u>Barn Owl (Tyto alba)</u>	2	1	1	1	t
<u>Long Eared Owl (Asio otus)</u>	6	2	2	4	t
<u>Owl (Spp.)</u>	1	1	1	1	t
Order Passeriformes					
<u>Common Crow (Corvus grachryhynchos)</u>	48	4	1	4	t
<u>Passerine (Spp.)</u>	1402	56	.25	14	.04
Total Bird	1684	100		226.50	.65

REPTILE

Order Testudines					
<u>Common Snapping Turtle</u>	57	2	7.5	15	.04
(Chelydra serpentina)					
<u>Ornate Box Turtle</u>	150	5	.3	1.5	t
(Terrapene ornata)					
<u>Painted Turtle</u>	3	1	.25	.25	t
(Chrysemys picta)					
<u>Soft Shelled Turtle</u>	17	1	1.5	1.5	t
(Trionyx sp.)					
<u>Turtle (Pseudemys/Graptemys/Chrysemys)</u>	41	1	.5	.5	t
Order Squamata					
<u>*Snake (Colubridae sp.)</u>	66	1	---	---	---
<u>Snake (Crotalidae sp.)</u>	7	1	2	2	t

	⁵⁹ Number Elements	⁶⁷ Min. No. of indiv'l	⁷⁶ Av. lbs. of meat per indiv'l	⁸⁵ Total lbs. of meat per specie	⁹⁶ Per- cent
*Snake (Spp.)	<u>9</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
Total Reptile	350	12		20.75	.05

FISH

Order Teleostei					
Long Nose Gar (Lepisosteus osseus)	1	1	1	1	t
Short Nose Gar (Lepisosteus platostomus)	2	1	1	1	t
Gar (Lepisosteus sp.)	~~75~~ 7	---	---	---	---
Goideye (Hiodon alosoides)	4	1	1	1	t
Northern Pike (Esox lucius)	4	1	1	1	t
Smallmouth Buffalo (Ictiobus bubalus)	2	---	---	---	---
Bigmouth Buffalo ^{cyp} (Ictiobus ~~sup~~ prinellus)	13	---	---	---	---
Buffalo (Ictiobus sp.)	61	5	7	35	.10
Sucker (Catostomidae sp.)	177	1	2	2	t
Black Bullhead (Ictalurus ~~punctatus~~)	10	1	2	2	t
Channel Catfish (Ictalurus punctatus)	13	2	5	10	.03
Sunfish (Centrarchidae spp.)	2	1	1.5	1.5	t
Total Fish	<u>1046</u>	<u>14</u>		<u>53.5</u>	<u>.15</u>

AMPHIBIAN

Order Salienta					
Toad (Bufo sp.)	12	1	---	---	---
Frog (Rana sp.)	7	1	---	---	---
Frog (Hylidae spp.)	<u>10</u>	<u>1</u>	---	---	---
Total Amphibian	29	3		---	---
Grand Total	<u>6514</u>	<u>329</u>		<u>34410.3</u>	<u>100.01</u>

* = Not considered a food source

** = Animals not utilized by prehistoric inhabitants

t = Trace

August 17, 1972

Mr. Don Reynolds
Mr. Michael Fisher
St. Joseph Public Museum
St. Joseph, Missouri

Dear Don and Mike:

I just thought I'd send you a note and let you know that King, Ludwickson and I should be back down to St. Joseph Wednesday and Thursday of next week (August 23 & 24). As things stand at present we should arrive around noon on Wednesday.

Dr. Henning expressed a desire to obtain measurements on the lithic material (probably just the projectile points and scrapers) from your Fanning collections. It would probably be most convenient to temporarily bring these materials back to Lincoln, if this presents any problems the materials could be measured down there.

No word as of yet concerning funds for a week-end excavation at Fanning this fall, but we should have a better picture of our financial situation by September 1.

If any changes in our plans for next week occur, I'll give you a call. Make reservations at the Bucket Shop!

Sincerely,

Mike Ruppert

VERTEBRATE FAUNAL REMAINS
THE KING HILL SITE, 23BN1, MISSOURI

	Number Elements	Min. No. of indiv'l	Av. lbs. of meat per indiv'l	Total lbs. of meat per specie	Per- cent
MAMMAL					
Order Marsupialia					
<u>Opposum</u> (<u>Didelphis</u> <u>marsupialis</u>)	9	1	8.5	8.5	.02
Order Insectivora					
* <u>Least Shrew</u> (<u>Cryptotis</u> <u>parva</u>)	1	1	---	---	---
* <u>Eastern Mole</u> (<u>Scalopus</u> <u>aquaticus</u>)	8	1	---	---	---
Order Chiroptera					
* <u>Silver-haired Bat</u> (<u>Lasionycteris</u> <u>noctivagans</u>)	1	1	---	---	---
Order Lagommorpha					
<u>Eastern Cottontail Rabbit</u> (<u>Sylvilagus floridanus</u>)	11	2	1.75	3.5	t
Order Rodentia					
<u>Woodchuck</u> (<u>Marmota monax</u>)	6	2	5.6	11.2	.03
<u>Thirteen-lined Ground</u> <u>Squirrel</u> (<u>Citellus</u> cf. <u>tridecemlineatus</u>)	1	1	.35	.35	t
<u>Eastern Fox Squirrel</u> (<u>Sciurus niger</u>)	7	2	2	4	t
<u>Plains Pocket Gopher</u> (<u>Geomys bursarius</u>)	33	4	.7	2.8	t
<u>Beaver</u> (<u>Castor cana-</u> <u>densis</u>) <u>Castor canadensis</u>	161	10	38.5	38.5	1.12
* <u>White-footed Mouse</u> (<u>Peromyscus</u> sp.)	37	14	---	---	---
<u>Eastern Wood Rat</u> (<u>Neotoma floridana</u>)	1	1	1	1	t
* <u>Prairie Meadow Mouse</u> (<u>Microtus ochrogaster</u>)	5	2	---	---	---
<u>Muskrat</u> (<u>Ondatra</u> <u>zibethicus</u>)	1	1	2	2	t
<u>Norway Rat</u> (<u>Rattus</u> <u>norvegicus</u>)	1	1	1	1	t
Order Carnivora					
<u>Dog/Wolf/Coyote</u> (<u>Canis</u> sp.)	600	26	10	260	.75
<u>Red Fox</u> (<u>Vulpes fulva</u>)	2	1	4	4	t

	Number Elements	Min.No. of indiv'l	Av. lbs. of meat per indiv'l	Total lbs. of meat per specie	Per- cent
7, <u>Black Bear</u> (~~Euarctos~~ ^{Ursus} americanus)	185	5	210	1050	3.05
<u>Raccoon</u> (Procyon lotor)	173	25	17.5	437.5	1.27
<u>Badger</u> (Taxidea taxus)	1	1	12.5	12.5	.03
<u>Spotted Skunk</u> (Spilogale putorius)	15	3	4	12	.03
<u>Striped Skunk</u> (Mephitis mephitis)	29	8	4	32	.09
<u>Bobcat</u> (Lynx rufus)	5	1	70	70	.20
<u>Puma</u> (Felis concolor)	3	1	15	15	.04
Order Artiodactyla					
<u>Elk</u> (~~Cervus~~ canadensis)	45	2	350	700	2.03
<u>White-tailed Deer</u> (~~Odocoileus~~ virginianus)	1795	38	100	3800	11.04
<u>Bison</u> (Bison bison)	257	42	650	27300	80.01
** <u>Cow</u> (Bos taurus)	8	1	---	---	---
** <u>Pig</u> (Sus scrofa)	4	1	---	---	---
Total Mammal	3405	200		34109.55	99.16

BIRD

Order Pelecaniiformes

<u>White Pelican</u> (~~Pelecanus~~ ^{Erythrorhynchus} erythrorhynchus)	1	1	10	10	.03
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Order Anseriformes

<u>Swan</u> (Olar sp.)	2	1	15	15	.04
<u>Canada Goose</u> (Branta canadensis)	4	2	1.5	11	.03
<u>Mallard</u> (Anas platyrhynchos)	4	1	2	2	t
<u>Green-winged Teal</u> (Anas carolinensis)	2	1	.5	.5	t
<u>Redhead Duck</u> (~~Anthia~~ ^{Aythya} americana valisineria)	2	1	1	1	t

Order Falconiformes

<u>Turkey Vulture</u> (Cathartes aura)	6	2	5	10	.03
<u>Redtailed Hawk</u> (Buteo jamaicensis)	6	2	5	10	.03
<u>Hawk</u> (Spp.)	5	1	2	2	t
<u>Golden Eagle</u> (Aquila chrysaetos)	4	2	6	12	.03

	Number Elements	Min.No. of indiv'l	Av. lbs. of meat per indiv'l	Total lbs. of meat per specie	Per- cent
Order Galliformes					
<u>Ruffed Grouse?</u> (Bonasa umbellus)	5	2	1.5	3	t
<u>Greater Prairie Chicken?</u> (Tympanuchus cupido)	4	2	1.5	3	t
<u>Bob White Quail</u> (Colinus virginianus)	7	1	.5	.5	t
<u>Immature Grouse (Spp.)</u>	5	2	.5	1	t
<u>Wild Turkey (Meleagris gallopavo)</u> <i>gallopavo gallopavo</i>	165	13	8.5	110.5	.32
Order Gruiformes					
<u>Sandhill Crane (Grus canadensis)</u>	2	1	10	10	.03
Order Columbiformes					
<u>Domestic Pigeon</u> (Columbo livia)	1	1	1	1	t
Order Strigiformes					
<u>Barn Owl (Tyto alba)</u>	2	1	1	1	t
<u>Long Eared Owl (Asio otus)</u>	6	2	2	4	t
<u>Owl (Spp.)</u>	1	1	1	1	t
Order Passeriformes					
<u>Common Crow (Corvus brachyrhynchos)</u> <i>brachyrhynchos</i>	48	4	1	4	t
<u>Passerine (Spp.)</u>	1402	56	.25	14	.04
Total Bird	1684	100		226.50	.65

REPTILE

Order Testudines					
<u>Common Snapping Turtle</u> (Chelydra serpentina)	57	2	7.5	15	.04
<u>Ornate Box Turtle</u> (Terrapene ornata)	150	5	.3	1.5	t
<u>Painted Turtle</u> (Chrysemys picta)	3	1	.25	.25	t
<u>Soft Shelled Turtle</u> (Trionyx sp.)	17	1	1.5	1.5	t
<u>Turtle (Pseudemys/Graptemys/Chrysemys)</u>	41	1	.5	.5	t
Order Squamata					
<u>*Snake (Colubridae sp.)</u>	66	1	---	---	---
<u>Snake (Crotalidae sp.)</u>	7	1	2	2	t

	Number Elements	Min.No. of indiv'l	Av. lbs. of meat per indiv'l	Total lbs. of meat per specie	Per- cent
* <u>Snake</u> (Spp.)	<u>9</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
Total Reptile	350	12		20.75	.05

FISH

Order Teleostei					
<u>Long Nose Gar</u> (Lepis- osteus osseus)	1	1	1	1	t
<u>Short Nose Gar</u> (Lepisosteus plato- stomus)	2	1	1	1	t
<u>Goldeye</u> (Hiodon alosoides)	4	1	1	1	t
<u>Gar</u> (Lepisosteus sp.)	757	---	---	---	---
<u>Northern Pike</u> (Esox lucius)	4	1	1	1	t
<u>Smallmouth Buffalo</u> (Ictiobus bubalus)	2	---	---	---	---
<u>Bigmouth Buffalo</u> (Ictiobus cyprinellus)	13	---	---	---	---
<u>Buffalo</u> (Ictiobus sp.)	61	5	7	35	.10
<u>Sucker</u> (Catostomidae sp.)	177	1	2	2	t
<u>Black Bullhead</u> (Ictalurus melas)	10	1	5	10	.03
<u>Channel Catfish</u> (Ictalurus punctatus)	13	2	5	10	.03
<u>Sunfish</u> (Centrar- chidae spp.)	2	1	1.5	1.5	t
Total Fish	1046	14		53.5	.15

AMPHIBIAN

Order Salienta					
<u>Toad</u> (Bufo sp.)	12	1	---	---	---
<u>Frog</u> (Rana sp.)	7	1	---	---	---
<u>Frog</u> (Hylidae spp.)	<u>10</u>	<u>1</u>	---	---	---
Total Amphibian	29	3		---	---

Grand Total	6514	329		34410.3	100.01
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* = Not considered a food source

** = Animals not utilized by prehistoric inhabitants

t = Trace

VERTEBRATE FAUNAL REMAINS
THE KING HILL SITE, 23BN1, MISSOURI

	Number Elements	Min. No. of indiv'l	Av. lbs. of meat per indiv'l	Total lbs. of meat per specie	Per- cent
MAMMAL	-4	-4	-4	-3	-1
Order Marsupialia					
<u>Opposum</u> (<i>Didelphis</i> <i>marsupialis</i>)	9	1	8.5	8.5	.02
Order Insectivora					
* <u>Least Shrew</u> (<i>Cryptotis</i> <i>parva</i>)	1	1	---	---	---
* <u>Eastern Mole</u> (<i>Scalopus</i> <i>aquaticus</i>)	8	1	---	---	---
Order Chiroptera					
* <u>Silver-haired Bat</u> (<i>Lasionycteris</i> <i>noctivagans</i>)	1	1	---	---	---
Order Lagommorpha					
<u>Eastern Cottontail Rabbit</u> (<i>Syivilagus floridanus</i>)	11	2	1.75	3.5	t
Order Rodentia					
<u>Woodchuck</u> (<i>Marmota monas</i>)	6	2	5.6	11.2	.03
<u>Thirteen-lined Ground</u> <u>Squirrel</u> (<i>Citellus</i> cf. <i>tridecemlineatus</i>)	1	1	.35	.35	t
<u>Eastern Fox Squirrel</u> (<i>Sciurus niger</i>)	7	2	2	4	t
<u>Plains Pocket Gopher</u> (<i>Geomys bursarius</i>)	33	4	.7	2.8	t
<u>Beaver</u> (<i>Casot cana-</i> <i>densis</i>)	161	10	38.5	38.5	1.12
* <u>White-footed Mouse</u> (<i>Peromyscus</i> sp.)	37	14	---	---	---
<u>Eastern Wood Rat</u> (<i>Nertoma floridan</i>)	1	1	1	1	t
* <u>Prairie Meadow Mouse</u> (<i>Microtus ochrogaster</i>)	5	2	---	---	---
<u>Muskrat</u> (<i>Ondatra</i> <i>zibethicus</i>)	1	1	2	2	t
<u>Norway Rat</u> (<i>Rattus</i> <i>norvegicus</i>)	1	1	1	1	t
Order Carnivora					
<u>Dog/Wolf/Coyote</u> (<i>Canis</i> sp.)	600	26	10	260	.75
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<u>Raccoon</u> (Procyon lotor)	173	25	17.5	437.5	1.27
<u>Badger</u> (Taxidea taxus)	1	1	12.5	12.5	.03
<u>Spotted Skunk</u> (Spilogale putorius)	15	3	4	12	.03
<u>Striped Skunk</u> (Mephitis mephitis)	29	8	4	32	.09
<u>Bobcat</u> (Lynx rufus)	5	1	70	70	.20
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Order Artiodactyla					
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<u>White-tailed Deer</u> (Odocoileus virgin- ianus)	1795	38	100	3800	11.04
<u>Bison</u> (Bison bison)	257	42	650	27300	80.01
** <u>Cow</u> (Bos taurus)	8	1	---	---	---
** <u>Pig</u> (Sus scrofa)	4	1	---	---	---
Total Mammal	3405	200		34109.55	99.16

BIRD

Order Pelecaniiformes					
<u>White Pelican</u> (Pelecanus Edithr- hynchos)	1	1	10	10	.03
Order Anseriformes					
<u>Swan</u> (Olar sp.)	2	1	15	15	.04
<u>Canada Goose</u> (Branta canadensis)	4	2	1.5	11	.03
<u>Mallard</u> (Anas platy- rhynchos)	4	1	2	2	t
<u>Green-winged Teal</u> (Anas carolinensis)	2	1	.5	.5	t
<u>Redhead Duck</u> (Anthia valisineria)	2	1	1	1	t
Order Falconiformes					
<u>Turkey Vulture</u> (Cathartes aura)	6	2	5	10	.03
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<u>Hawk</u> (Spp.)	5	1	2	2	t
<u>Golden Eagle</u> (Aquila chrysaetos)	4	2	6	12	.03

	Number Elements	Min.No. of indiv'l	Av. lbs. of meat per indiv'l	Total lbs. of meat per specie	Per- cent
Order Galliformes					
<u>Ruffed Grouse?</u> (<i>Bonasa umbellus</i>)	5	2	1.5	3	t
<u>Greater Prairie Chicken?</u> (<i>Tympanuchus cupido</i>)	4	2	1.5	3	t
<u>Bob White Quail</u> (<i>Colinus virginianus</i>)	7	1	.5	.5	t
<u>Immature Grouse (Spp.)</u>	5	2	.5	1	t
<u>Wild Turkey</u> (<i>Meleagris gallopao</i>)	165	13	8.5	110.5	.32
Order Gruiformes					
<u>Sandhill Crane</u> (<i>Grus Canadensis</i>)	2	1	10	10	.03
Order Columbiformes					
<u>Domestic Pigeon</u> (<i>Columbo livia</i>)	1	1	1	1	t
Order Strigiformes					
<u>Barn Owl</u> (<i>Tyto alba</i>)	2	1	1	1	t
<u>Long Eared Owl</u> (<i>Asio otus</i>)	6	2	2	4	t
<u>Owl</u> (Spp.)	1	1	1	1	t
Order Passeriformes					
<u>Common Crow</u> (<i>Corvus grachrrhynchos</i>)	48	4	1	4	t
<u>Passerine</u> (Spp.)	1402	56	.25	14	.04
Total Bird	1684	100		226.50	.65

REPTILE

Order Testudines					
<u>Common Snapping Turtle</u> (<i>Chedlydra serpentina</i>)	57	2	7.5	15	.04
<u>Ornate Box Turtle</u> (<i>Terrapene ornata</i>)	150	5	.3	1.5	t
<u>Painted Turtle</u> (<i>Chrysemys picta</i>)	3	1	.25	.25	t
<u>Soft Shelled Turtle</u> (<i>Trionyx sp.</i>)	17	1	1.5	1.5	t
<u>Turtle</u> (<i>Pseudemys/Graptemys/Chrysemys</i>)	41	1	.5	.5	t
Order Squamata					
* <u>Snake</u> (<i>Columbridae sp.</i>)	66	1	---	---	---
<u>Snake</u> (<i>Crotalidae sp.</i>)	7	1	2	2	t

	Number Elements	Min.No. of indiv'l	Av. lbs. of meat per indiv'l	Total lbs. of meat per specie	Per- cent
*Snake (Spp.)	<u>9</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
Total Reptile	350	12		20.75	.05

FISH

Order Teleostei					
Long Nose Gar (Lepis- osteus osseus)	1	1	1	1	t
Short Nose Gar (Lepisosteus plato- stomus)	2	1	1	1	t
Goldeye (Hiodon alosoides)	4	1	1	1	t
Gar (Lepisosteus sp.)	757	---	---	---	---
Northern Pike (Esox lucius)	4	1	1	1	t
Smallmouth Buffalo (Ictiobus bubalus)	2	---	---	---	---
Bigmouth Buffalo (Ictiobus cyprinellus)	13	---	---	---	---
Buffalo (Ictiobus sp.)	61	5	7	35	.10
Sucker (Catostomidae sp.)	177	1	2	2	t
Black Bullhead (Ictalurus melas)	10	1	5	10	.03
Channel Catfish (Ictalurus punctatus)	13	2	5	10	.03
Sunfish (Centrar- chidae spp.)	2	1	1.5	1.5	t
Total Fish	<u>1046</u>	<u>14</u>		<u>53.5</u>	<u>.15</u>

AMPHIBIAN

Order Salienta					
Toad (Bufo sp.)	12	1	---	---	---
Frog (Rana sp.)	7	1	---	---	---
Frog (Hylidae spp.)	<u>10</u>	<u>1</u>	---	---	---
Total Amphibian	29	3		---	---
Grand Total	<u>6514</u>	<u>329</u>		<u>34410.3</u>	<u>100.01</u>

* = Not considered a food source

** = Animals not utilized by prehistoric inhabitants

t = Trace

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single page

23BN1 - UNIONID MUSSEL ANALYSIS**

	NUMBER OF VALVES			MIN. NO.	% OF
	LEFT	RIGHT	TOTAL	INDIVID.	TOTAL
<i>Amblema costata</i> (Rafinesque)	9	21	30	21	8.6
<i>Amblema peruviana</i> (Lamarck)	13	10	23	13	6.6
<i>Amblema</i> spp.	13	10	23	13	6.6
<i>Anodonta grandis</i> (Say)	5	11	16	11	4.6
<i>Fusconaia flava</i> (Rafinesque)	2	0	2	2	0.6
<i>Fusconaia undata</i> (Barnes)*	5	3	8	5	2.3
<i>Lampsilis anodontoides</i> (Lea)	3	0	3	3	0.9
<i>Lampsilis siliquoidea</i> (Barnes)	8	2	10	8	2.8
<i>Lampsilis ventricosa</i> (Barnes)	97	44	141	97	40.5
<i>Lampsilis</i> spp.	22	16	38	22	10.9
<i>Lasmigona complanata</i> (Barnes)	5	6	11	6	3.2
<i>Leptodea fragilis</i> (Rafinesque)	1	0	1	1	0.3
<i>Leptodea laevisissima</i> (Lea)	4	2	6	4	1.7
<i>Leptodea</i> spp.	0	1	1	1	0.3
<i>Ligumia recta</i> (Rafinesque)	0	2	2	2	0.6
<i>Megalonaias gigantea</i> (Barnes)	9	2	11	9	3.2
<i>Plethobasus cyphus</i> (Rafinesque) *	0	1	1	1	0.3
<i>Proptera alata</i> (Say)	3	1	4	3	1.1
<i>Quadrula pustulosa</i> (Lea)	8	3	11	8	3.2
<i>Quadrula quadrula</i> (Rafinesque)	1	1	2	1	0.6
<i>Strophitus rugosus</i> (Swainson)	2	2	4	2	1.1
TOTAL	210	138	348	233	100.0

** Identifications by Robert E. Warren

* Identification uncertain; specimen(s) currently being analyzed by Dr. Paul Parmalee, Illinois State Museum