MS PRELIMINARY APPRAISAL OF THE RECENTLY PROPOSED CLASSIFICATION OF WISCONSIN LOESS Xeighton, MM #27

APR 0 8 1996

IL GEUL SURVEY

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Summary Statement

In all seven categories listed on a subsequent page, the D.I. ratios of Frye, Glass, and Willman distinguish clearly between the Farmdale, Iowan and Tazewell loesses of Leighton and cross lines in the recent classification of Frye et al. The studies leading to the writing of Circular 334 in part suffered from the authors! failure to recognize the Iowan drift area of Iowa as the chief source of the loess of northwestern Illinois rather than the Mississippi River Valley. Apparently all three workers took for granted that the Peorian of that area, and also along the Ancient Iowa, was similar in history to the Peorian along Illinois River downstream from the Shelbyville moraine. This error fundamentally has given the wrong point of view and a wrong basis for nomenclature and comparison of mineralogy.

The Map of the Eolian Deposits of the United States clearly shows the genetic relationship of the loess of northwestern Illinois and eastern Iowa to the Iowan drift area, and the D.I. ratios support this inference. There is, however, no trace of Tazewell loess ("Richland" of Frye et al) along the Mississippi. It is indeed noteworthy that since Circular 334 was published, Jones, Hay, and Beaver of the University of Illinois report (personal communication) the occurrence of Cretaceous microfossils in the loess of eastern Iowa and northwestern Illinois, microfossils which belong to the Cretaceous of Minnesota. Thus the conclusion seems unavoidable that the loess of northwestern Illinois came largely from the Iowan area.

It is also to be mentioned that the loess on the Tazewell drift directly east of the Green River Basin did not come from the Mississippi but rather from the Tazewell outwash in the basin. The Labradorean-Iowan drift along the north and south sides of the Green River Basin has only negligible quantities of loess, thus denying, too, that Mississippi drainage was a source of Tazewell loess. The succession of Farmdale loess on weathered Illinoian drift and Iowan loess on Farmdale is consistent for the Illinoian drift area up to the Tazewell margin.

Passing to the classic area of the Farm Creek cut (Fig. 3), a cut of international renown ever since Leverett published his monograph in 1899, and to the area of many similar successions northeast of Peoria reaching to beyond the big bend of Illinois River, the D.I. ratios for Farmdale and Iowan loess are found to continue beneath the Tazewell drift, certifying to the former interpretation that these loesses extend under the Tazewell drift (the "Woodfordian" of Frye et al) for scores of miles, thus emphasizing the ambiguity of the name "Morton."

It was many years ago that Baker reported to Leighton (1926, p. 5-9) that the shells of the Iowan loess (then called Peorian) in the Farm Creek section are typical of the Iowan loess at the Iowan drift border.

The Farmdale loess and the Iowan maintain the same relationships to each other and to the underlying Illinoian drift with its weathered zone over much of northwestern Illinois and along the Ancient Iowa Valley, as obtain where they are covered by the Tazewell drift. Thus any application of the new name Roxana to the Farmdale of northwestern and western Illinois lacks precedent.

It is pertinent at this point to recall that Leighton discovered the Farmdale loess, noncalcareous, beneath calcareous Peorian (Iowan now) in Stephenson County, in northwestern Illinois, in 1920, and later that season identified it in the Farm Creek

cut just beneath the Iowan loess, as now known, and resting on the weathered Illinoian till.

Plate I and Table I of Circular 334 give the Farmdale and Roxana units/the same stratigraphic position, but beyond the Shelbyville moraine, the Roxana displaces the Farmdale. The authors overlook the fact that the Farmdale, and the Iowan, too, have been protected from post-Tazewell weathering where covered by Tazewell drift, whereas outside the Shelbyville moraine oxidation has proceeded, eliminating organic matter and changing the color.

The D.I. ratios agree, however, with field tracing to show that the Farmdale loess persists. Indeed, these ratios go even farther and differentiate the Peorian into its two components, Iowan and Tazewell. This is true all the way down Illinois River Valley and down the Mississippi, in contrast to the Roxana crossing boundaries, dipping down to include the Farmdale unit and rising to absorb the Iowan except where a C-14 date, as in the Collinsville section (see W-1055 in Plate I), is given precedence.

This is puzzling and one wonders how the proposed new classification adde to came to be so out of line with the older classification. The chief reason for the unnaturalistic classification is the C-14 dates of shells. On the basis of the shell dates the Peorian loess was given a low stratigraphic position, save for the uppermost 15 feet of the so-called type section, which was assigned to the Peorian, because at the Burdick Branch Section 4 miles away, the C-14 date of some shells was 17,100 \pm 300 (W-730), supposedly Tazewell. But D.I. ratios suggest that the lower 10 feet of the 20-foot section is youngest Tazewell, definitely younger than the date of the shells, and at least 6 feet of the upper portion is post-Tazewell. (See Category VI, second page.). This is some 80-90 feet above the base of the Pleasant Grove School type-section as estimated from the topographic map.

The "Roxana" at the type-section has always been called Peorian by the present writer, except for typical non-calcareous Farmdale at the base which cannot be combined with the overlying. The D.I. ratios bear out the writer.

This stratigraphy makes correlation with the Standard (Collinsville) section, $\frac{1}{2}$ mile to the south, plausible and precise. But the recognition of "Roxana" does not. Hence, the shell dates serve no good purpose and have only confused the literature. This applies also to correlation with the Gale section in Alexander County where the Roxana is far off base. It includes the much weathered Loveland (pre-Illinoian), fossiliferous and some leached Farmdale, and according to the D.I. ratios the Iowan portion of the Peorian. (See the Gale graph in Plate I of Frye et al.).

In the Shawneetown area, on the east side of the southern tip of Illinois, D.I. ratios of the section near the bridge on the east side of the river show that the loess is largely Tazewell, which agrees with the findings of Ray all along the Tazewell valley train of the Ohio, that beneath it is 5 feet of Iowan loess, which corresponds to the thin loess under Tazewell till farther north along the Wabash, that the non-calcareous loess immediately beneath the Iowan loess is Farmdale, with the much weathered Loveland loess below. The elements of this section were all worked out before the new classification was proposed. They still stand and are in accord with D.I. ratios. The same is true for the New Harmony section along Wabash River. (See Leighton and Willman, J. of G., vol. 58, p. 612, 6 and Pl. Ia.)

PRELIMINARY APPRAISAL OF THE RECENTLY PROPOSED CLASSIFICATION OF WISCONSIN LOESS

by Morris M. Leighton Urbana, Illinois

Circular 334 of the Illinois Geological Survey (Frye, Glass, and Willman, 1962) is devoted to a new stratigraphic and mineralogic treatment of the Wisconsin loesses of Illinois. Like the preceding ones on other aspects of the Wisconsin deposits, such as Circular 285 and 304, the advantages and disadvantages, and merits and demerits, of the proposed classification and the old of the present writer are given but slight attention, even though the latter classification has been accepted and documented far beyond the borders of Illinois for many years.

The following tables have been prepared and mimeographed for study of the applicability and significance of the new D.I. ratio, described in Circular 334, page 7, to the time-honored classification. This study would have been helped by more section descriptions, and more sampling with the old classification in mind. All data used herein are from Tables I and IV of the circular. The analysis covers six categories, as follows:

- I. Iowan loess and Farmdale loess extending away from the Iowan drift in eastern Iowa.
- II. Iowan and Farmdale loesses in their occurrence beneath the Tazewell drift in the Farm Creek classic area.
- III. Tazewell loess (upper member of the Peorian) within the area bounded by the Shelbyville moraine.
- IV. Loesses along the segment of Mississippi River--the Ancient Iowa--to the junction of Illinois River.
- V. Farmdale, Iowan, and Tazewell loesses along Illinois River downstream from the Shelbyville moraine.
- VI. Farmdale, Iowan, and Tazewell loesses along Mississippi River below the junction of Illinois River. (Some change in mineralogy due to Missouri River and Ancient Iowa-Mississippi valley-trains.)
- VII. Farmdale, Iowan, and Tazewell loesses along Ohio and Wabash Rivers.

The D.I. ratios are surprisingly distinctive for each of the three loessesthe Farmdale, Iowan, and Tazewell. In category I, the D.I. ratios are:

Farmdale-- .2, .4, .4, .6, .6, .6, .3, .5, .4, .8?, .5, .4.

Iowan-- 1.2, 1.1, 1.2, 1.5, 1.8, 1.1, 1.3, 1.3, 1.3, 1.3, .7, 1.4, .9, 1.6, .4?, 1.3, .8, 1.3, 1.0.

Tazewell-- no indication, which is to be expected, since the isopac lines of the Map of Eolian Deposits (1952, Thorp et al.) show that the loess has a genetic relation to the Iowan drift border and to lacustral silts in the Mississippi River Valley known to be of Labradorean Iowan age. See Fig. 1 herein.



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Fir. 3 FARMDALE RAILROAD CUT

8.	Tozewell	Loess,	leached	4.	Eroded	lowan	loess	(Morton	of	Frye	et	ol.)
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- 7. Silt, calcareous
- 6. Bloomington till, pink
- 5. Shelbyville till, gray
- 3. Farmdale loess
- 2b. Weathered Illinoian till
- 2a. Unweathered Illinoian till
- la,b Unoxidized and Oxidized Kanson (?)



Category II: Farmdale-- ,6, .2, .3, .1, .5, .3, .2, .3, .5, .5, .7, .3, .5, .4, .3, .6, .5, .4, 6, .4, .3, .5, Iowah--1.7, 1.2, .9, 1.3, 1.1, .8, .9, 1, 1, .7. Tazewell--no indication, which confirms the view expressed under Category I. Category III: Tazewell--Although widespread, only three outcrops were sampled-the "Richland". Sample 140 is from the basal 1' of a section 10' high. No other sample was taken. Sample 140 gave a D.I. ratio of 3.6. No. 352 from the middle of a 4' section gave 2, and No. 373 from the base of a 4' section gave 1. Such limited sampling is inadequate for this loess of known stratigraphic position. Category IV: Farmdale--.4, .1, .2, .6, .4, .7, .6, .4, .3, .6. Iowan--.8, .8, .8, .7, 1.1, 1.2, .7, 1.2, 1.1, 1.3, .8, 1.2, 1.2, .6?, .5?, 1.4, .7, .7, 1, 1.1, 1.3, 1.4, 1.2, 1.3, .8, 1.3, .8, 1.1, .9, 1.2, .8, 1.1, 1.3, 1.3, .9, .9. Tazewell--no indication. See note at the end of Category IV. Category V: Farmdale--.8,.6,.8?,.8?,.4,.7,.4, .7, .4, .4, .5, .5, .4, .4,, .5, .5, .4, .5, .7, .5, .6, .5, .3, .3, .5, .6, .6, .5, .5, .5, .5, .7, .5, .7, .5, .6, .6, .5. Iowan--1.5, 1.7, 1, 1, 1.2, 1.1, 1, 1, 1, 1, .8, .8, .9, .9, 1.2, 1.1, 1, 1.4, 1.1, .8, .8, .7, .8. .8, .8, .8, 1.1, .9, .8, 1, 1, .9, .7, .8, 1.1, 1, 1, .9, 1, 1.7, 1.6, 1.2, 1.6, 1.6, 1.3, 1, .7, .8, 1.3, 1, 1.1, 1.6, 1, 1.1, .8, .9, 1.5, .7, 1.4, 1.1, 1.1., 1, 1.3, 1, .9, 1.6, 1, .7, .9, 1.5, 1.5, 1.1. Tazewell--2.4, 2, 1.9, 2.7, 2.6, 2.1, 2, 2.1, 1.6, 2.1, 2.6, 2.3, 2.2, 2, 2, 3, 2.8, 2.7, 2.4. The foregoing shows that Leighton's classification of the three Wisconsin loesses, previously based on stratigraphic position and character, as Farmdale, Iowan, and Tazewell, is now supported by the new criterion of the D.I. ratio of Frye, Glass, and Willman who conceived it and have promoted its use, but who did not test it against the Leighton classification of many years' acceptance.

Category VI:

Farmdale--.9?, .6, .6, 1.1?, .6, .6, .5, .3, .5, .9, 1.2?, .8, 1, .9. (The last four readings are the D.I. ratios of calcareous Farmdale loess, which is similar to Iowan loess except in color. The two are separated by a 3' leached zone, an A/C profile.)

Tazewell--.8?, 1.8, 2.4, 2.1, 2, 2.2, 2.7, 2, 2.3, 2.3, 1.8, 1.5, 1.6, 1.5, 3.3, 1.9, 1.5, 2.1, 1.5, 2.

Category VII:

Farmdale--.8, .5, .9?, .5, .8, .3, .4.

Iowan--1.8, 1.5, 1.5, 1.4, .7?.

Tazewell--2.1, 2.4, 2.8, 3, 2.7, 2.3, 2.9, 2.4, 2.2, 2.5, 2.6, 2.9, 3.4, 2.2, 3.5, 4.1, 3.3, 2.5, 1.5, 2.3.

Sample no.	Quadrangle map and detailed location	Thickness	Depth below top	D.I.	Stratigraphic unit
Dubuque Co., 505 504	Iowa Dubuque SSW NV SE, 1-88N-2E do.	201 41	181 21	1.2	Basal Iowan(P) Farmdale (R)
515 514 513 512 511	doCen. W line NW, 32-89N-2 do. do. do. do.	E 15' 15' 15' 3.5' 3.5'	61 81 141 11 2.51	1.1 1.2 1.5 .4	Iowan (P) do. do. Farmdale (R) do.
Clinton Co., 432	Iowa CordovaSE SW SW, 14-81N-6E	401	301	1.8	Iowan
433	do.	401	351	.9	do.
Jackson Co., 501	Iowa SE MI NE, 31-85N-6E	61	51	1.1	Basal Iowan(P)
Carroll Co., 527	Ill. (at Savanna) SavannaSW cor. NW, 11-24N-3E	251	81	1.3	Iowan (P), at least to with-
526 525 524 523	do. do. do.	251 81 81 81	231 1.51 41 71	1.3 .6 .6	Iowan (P) Farmdale (R) do. do.
761	Mt. CarrollW! NW, 10-24N-5E	61	51	1.3	Iowan (P)
Whiteside Co 537 536 535 534	. (at Fulton) ClintonNE NE SW, 21-22N-3E do. do.	351 351 4.71 4.71	51 331 0.21 11	.7 1.4 .3 .5	Iowan (P) do. Farmdale(R, I) do.
222	ao.	4.71	21	•4	d0.
Stephenson C 720 719	o. FreeportNW SW SE, 9-28N-6E do.	31 11	21 0.51	.9 .8	Iowan (P) Farmdale? (R)
Ogle Co. 723	Oregon-SE SW NW, 8-23N-9E	1.31	0.71	1.6	Iowan (M)**

The Iowan Loess and the Farmdale Loess Extending Away from the Iowan Drift in Eastern Iowa

* The name <u>Farmdale</u> has precedence over "Roxana". Sample numbers, thickness, and D.I. ratios are from I. G. S. Circular 334. The misnomer, "Roxana," is indicated by R in parentheses as Farmdale (R) and wherever the D.I. ratio supports the use of the more definitive name Iowan instead of Peorian the designation is made to read "Iowan (P)," for clarity. The recently proposed name, "Morton," for Iowan is ambiguous and it is also placed in parentheses.

** The authors of Circular 334 are calling the Iowan loess of northern Illinois, "Morton." What should the loess at the Iowan drift border be called?

-	(and)	
L.	(cont.)	1

Rock Island 311 310	Co. Port ByronNE NE NN, 10-18N-1E do.	101 31	51 1.51	.4? .5	Iowan (P) Farmdale (R)
Henry Co. 319	AnnawanSW NV NW, 15-15N-5E	101	61	1.3	Iowan (P)
Boone Co. 414	BelvidereNE SN NW, 32-46N-3E	11	0.91	.6?	Iowan (P) Probably mixed.
Winnebago Co 420	PecatonicaCen. E line, 5-26N-10E	41	31	.8	Iowan (P)
Stephenson (425	Co. FreeportSW SN NW, 6-26N-8E	61	51	1.3	Iowan (P)
428 427 426	LenaNE NE SE, 5-27N-6E do. do.	2.51 0.51 2.01	21 0.31 1.01	1.0 .4	Iowan (P) Farmdale (F) do. (R)

Sample no.	Quadrangle and location	Thickness	Below top	D.I.	Stratig, unit
Tazewell Co.					
129	PeoriaNE NU NE. 26-26N-4W	2.51	11	1.7	Towan (M)
128	do.	61	11	.6	Farmdale
127	do.	61	<u>7</u> t	.2	do.
			-		
137	MackinawCen. 31-26N-3W	4.1	7.1	1.2	Towan (M)
136	do.	7.1	31	.9	do.
135	do.	3.51	0.51	.3	Farmdale
134	do.	3.51	2.51	.1	do.
133	do.	0.81	0.41	5	do (B)**
-))		0.0	0.4	• /	ao. (11)
695	MackinawCen. 31-26N-3W	3.51	0.51	.3	Farmdale
694	do	3 51	21	2	do
693	do	3 51	3 21	3	do
692	do.	0.81	0.11	.5	$do(\mathbf{R})$
0/~	uo.	0.0	0.4	• >	40. (11)
Bureau Co					
282	Honnonin GUICE CE 27 761 10	F 21	7.8	1 2	Tours (M)
202	de de la prise de la prise de la comercia de la com	L 2.	0.61	1.5	Towall (M)
202	do.	1.2	0.0	•2	Farmale (R, IV)
381	do.	4.01	2.01	.7	do. (R, 111)
380	do.	1.01	0.51	.3	do. (R, II)
379	do.	1.3	0.51	1.1?	do. (R, I)
				(mixed)
		The authors	(p. 51) ca	n ident:	ify the zones
		of Roxana do	wn to 0.5	of a fo	ot, on the ba-
		sis of ???!			
Woodford Co.					
557	DanversNW NE NN. 32-25N-1W	2.61	0.51	1.1	Iowan (M)
556	do.	5.51	1:	.8	Iowan (F)
555	do.	5.51	31	-	Farmdale
554	do.	5.51	4.51	-	do.
553	do.	1.51	1.01	5	do (B)
		>		•	ace. (11)
565	MetamoraCen. SE NE. 20-28N-	21/ 31	11	.9	Towan (M)
564	do	7 51	21	1	Farmdalo
563	do	7 51	18	•4	do
562	do.	7 51	6 51	2	do.
567	do.	21	0.9.	1 00	Toto Common
JOT	u0.	٠ر	2'	T*01	Late Sangamon
Manahall Co					COLLUVIUM (R)
572	Honona NUI NE 16 2011 TU	E 1	1.	1 0	Terrer (16)
572	de de la	2.	4.	1.0	Iowan (M)
216	ao.	0.81	0.4	.0	Farmdale (R, IV)
571	ao.	2.8	0.81	.5	do. (R, III)
570	do.	2.81	1.61	.4	do. (R, III)
569	do.	2.81	2.21	.6	do. (R. III)
568	do.	1.21	0.61	.4	do. (R. II)
567	do.	1.0	0.51	.7	Late Sangamon
				(mixe	d) collumvium
* In all of	the sections of Table II the R	oxana is the			(R, I)
Farmonla	theighten emigrineller colled	Lata dimensiona	an and and		EGT and EGM

Iowan and Farmdale Loesses in their Occurrence Beneath the Tazewell Drift in the Farm Creek Classic Area Near Peoria*

Farmdale of Leighton, originally called Late Sangamon, except samples 561 and 567.
** In Circular 285, p. 11, Frye and Willman describe this section in detail and they
make no mention of Roxana. In the present Circular 334, Fig. 3 shows their hypothetical Altonian (Roxana) glacier closeby with Ancient Mississippi River being a
major source of loess here which the authors unfortunately cannot find.

DeWitt Co.					
548	McLeanNW NE SE, 15-21N-1E	31	0.51	1.0	Iowan (M)
547	do.	31	2.51	.7	Basal Iowan Mixed (M)
546	do.	4.5	1.01	.3	Farmdale (R)
545	do.	4.51	2.51	.5	do.
544	do.	4.51	4.01	.9	do. mixed

II. (cont)

The Ta	zewell Loess (Upper Member of th	e Peorian)	within the	Area H	Bounded
	by the Shelbyvi	lle Morain	e		
Sample no.	Quadrangle and location	Thickness	Below top	D.I.	Stratig. unit
McLean Co. 352 351	LeRoyW SE NE, 29-22N-4E do.	41 41	2.51 3.51	2.0 1.4	Tazewell (Ri) do.
Bureau Co. 373	HennepinSE SE SW, 15-16N-10E	51	41	1.0	Tazewell? (Ri)
Tazewell Co. 140	Peoria SW NW SW,12-26N-4W	10"	91	3.6	Tazewell (Ri)

Sampling inadequate for this extensive loess on Tazewell drift.

III

Sample no.	Quadrangle and location	Thickness	Below top	D.I.	Stratig. unit
Henderson Co					
12/\$	LOWSY- GU NE GU 36 GN TU	37 51	171	8	Town (P)
12/7	MI-MO-OC NG MM WG-Ch	27 51	171	.0 g	do
1216	do.	27 51	27 1	.0 0	do.
1240	do,	27.5	221	•0	do.
1242	ao.	31.5	23	/	00.
1244	do.	31.5	201	1.1	do.
1243	do.	31.5	29.51	1.2	do.
1242	do.	31.5	30.5	.7	do.
1241	do.	41	1:	.4	Farmdale (R)
1240	do.	41	21	.1	do.
1239	do.	41	3.51	.2	do.
Leigh	iton's separations are followed	for the most	t part by Fi	ye et	al.
Hancock Co.					
1236	KeokukCen. Ed. 31-5N-8V	61	41	1.2	Iowan (P)
1235	do.	31	1.51		Farmdale (R)
		-			
Adams Co.					
123/	Mendon-SE cor. 26-2N-9W	221	61	1.1	Towan (P)
1233	do	221	91	13	do
1020	do.	221	131	ġ	do
1001	do.	221	171	1 2	do.
1000	d0.	221	1/1	1.2	du.
1230	do.	221	201	Lok	ao.
1229	do.	41	0.5	.0	Farmdale (R)
1228	do.	4*	1.5"	•4	do.
1227	do.	41	3.51	.7	do.
058	Mondon SE ann 26 2N QU	221	71	62	Tourse (P)
950		221	7.79	.0:	TOWALL (1)
951	d0.	201	17.	2 :	do.
950	ao.	221	201	1.4	ao.
955	do.	41	2.51	.6	Farmdale (R)
1223	QuincyNW NE NW. 23-1S-9W	371	10:	.7	Iowan (P)
1222	do.	371	151	.7	do.
1221	ob	371	181	1.0	do.
1220	do	371	221	1 1	do
1210	do.	271	261	1 2	do.
TATA	do.	271	201	7 1	do.
1210		271	20.51	1.4	do.
1217	do.	371	32.5	1.2	00.
1210	do.	3.71	34.51	1.3	do.
1215	do.	371	361	.8	do.
1214	do.	4"	1.5	•4	Farmdale (R)
Adams Co.		d 1	de.	1 2	Torren (D) Momo
1174	Quincy INW DW DV!, 32-30-7W	0,	0"	1.3	Towan (F) More
				Sal	Thres destrante
1100	Quinat SH ann 22 25 74	151	101	¢	Toursn (D)
1100	do do cor., JR-JD-/W	151	121	1 1	do
11.00	u0.	10.	T).	T.T	de (n)
119.1	ao,	41	R	.9	ao. (R)

Loesses along the segment of Mississippi River--the Ancient Iowa--to the junction of Illinois River

.8? Basal Farmdale (R) (Mixed) Notes The above data show no indication of Tazewell Loess along this segment of Mississippi River, such as is shown in Category V along Illinois River below the Shelbyville moraine. Instead the data indicate only the Iowan component of the Peorian loess. Iowa River is known to have carried an Iowan valley train. As for to exist above or below Rock Island, hence the waters that deposited the outwash of had prevailed in the Green River basin during Tazewell times, and the underloaded character of the Mississippi obtained in Cary times as it had in Tazewell times. The classification proposal of Frye et al is berrier of these concepts.

the Green River basin south of Dixon, it contains Tazewell outwash but none is known the Green River basin were not overloaded after entering the much larger Mississippi River. During Cary times the conditions along Rock River were similar to those that

6.51 272 Nebo--NE NW SE, 16-7S-2W 1.3 Iowan (P) 271 41 31 1.3 Iowan (R) do. 481 121 61 Nebo--SW SE NW, 26-7S-4W .9 Iowan (P) Calhoun Co. 101 151 40 Hardin-SE SE, 32-105-2W .9 Iowan (P) 39 2.51 1.51 do.

Nebo--NW NE SE, 9-5S-6W

Nebo-SW SE NE. 26-55-6W

do.

do.

do.

Pike Co. 1193

1192

1191

1185

1184

barren

IV. (cont.)

7.51

7.51

3.51

51

31

81

51

6.81

2.01

2.51

1.51

1.2 Iowan (P)

1.1

.8 Basal Iowan(P)

.3 Farmdale (R)

Iowan (P)

.6 Farmdale (R)

Farmdale, Iowan, and Tazewell Loesses along Illinois River Downstream from the Shelbyville Moraine

In this and succeeding categories, it will be noted that the D.I. ratio of Frye <u>et al</u> is distinctly higher for the younger Tazewell loess than for the Iowan. It now appears that we can employ the D.I. ratio to differentiate the Iowan and Tazewell components of the Peorian.

Sample	Quadrangle map and detailed location	Thickness	Depth below top	D.I.	Stratigraphic unit
Mason Co. 360 359	DelavanNW SE NW, 6-21N-4W do.	71 71	51 6.51	1.5 3.8	Iowan (P) Mixed, basal
	Sample 359 came from just above the	weathered	Illinoian or	n a sl	ope.
488	PetersburgNW NW NE. 33-20N-61	1 121	71	2.4	Tazewell (P)
487	do.	12'	11.51	1.7	Iowan (P)
486	do.	31	11	1.0	do. (R)
485	do.	31	2.51	.8	Farmdale (R)
577	Petersburg-SE NE NW. 36-20N-71	1 401	381	1.0	Towan, basal (P)
576	do.	9.51	21	.6	Farmdale (R)
575	do.	9.51	51	.82	do.
574	do.	9.51	71	.87	do.
214	Higher sampling of the 40-foot sec	tion would	probably sho	w Taz	ewell.
1.81.	Mason City-Cen NE: 25-19N-5W	101	91	12	Resal Towan (P)
1.83	do	31	1 51	1.	Farmdale (R)
405	This section was short sompled pro	hahlw miss	ing the Tage	•4	rarmuare (II)
	THE Secoron was shot - sampled, pro	DOGOTA TITOS	THE ONE TABE	WCLL .	
Menard Co).				
580	TallulaSE cor., 34-18N-6W	151	121	1.1	Iowan (P) No
			5	ample	s above 12
579	do.	101	4*	1.0	do. (R)
578	do.	101	91	.7	Basal Farm-
	Sampling is incomplete.				dale (R)
Fulton Co	0.				
333	Canton-SE NE NW, 36-8N-2E	10"	71	1.0	Iowan, basal (P)
332	do.	0.81	0.41	•4	Farmdale (R)
855	GlasfordNE SE NE. 10-6N-5E	181	141	1.0	Iowan (P)
854	do.	181	151	.8	do.
853	do.	181	15.81	.8	do.
852	do	181	16.31	.9	do.
851	ob	181	16.81	.9	
850	do	181	17 31	12	do
81.9	do.	191	17 01	1 7	do.
818	do.	10.	11.0	1.1	do.
040	do.	0.5.	0.21	1.0	uo. (r)
041	Sampling is incomplete, for the upp	er 14 feet	. Sampl	.e too	close to top.
001		-		0.0	
884	havanaNE SE SW, 2-4N-3E	T.\.	11	2.0	Tazewell (P)
000		1	his represen	its pr	oper sampling.
883	do.	171	21	1.9	do.
882	do.	171	31	2.7	do.
881	do.	171	41	2.6	do.

V. (cont.)

880	Havana (cont.)	171	5.51	2.1	Tazewell (P)
879	do.	171	71	2.0	do.
878	do.	171	81	2.1	do.
877	do.	171	8.51	1.4	Iowan (P)
876	do.	171	91	1.1	do.
875	do.	171	10.5	.8	do.
874	do.	171	11.51	.8	do.
873	do.	171	12.51	.7	do
872	ob	171	1/1	8	do
871	do.	171	14 51	8	do
870	do	171	151	8	do
869	do.	178	15 51	.0	do.
868	do.	171	161		do.
967	do.	171	16 51	T.T	do.
007	d0.	17.	10.7.	.9	
000	d0.	17.	17.	.0	
805	do.	1.5	0.5	•4	Farmalle (F)
864	do.	1.51	Tr	•4	do.
863	do.	8.51	0.51	.5	do. (R)
862	do.	8.51	1.5	.5	do. (R)
861	do.	8.51	21	•4	do. (R)
860	do.	8.51	41	.4	do. (R)
000					1. (D)
859	do.	8.51	5.51	.5	ao. (R)
859 858	do. do.	8.51	5.51	.5	do. (R) do. (R)
859 858 857	do. do. do.	8.51 8.51 8.51	5.51 6.51 7.51	.5 .5 .4	do. (R) do. (R) do. (R)
859 858 857	do. do. do.	8.51 8.51 8.51	5.51 6.51 7.51	•5 •5 •4	do. (R) do. (R) do. (R)
859 858 857	do. do. do. HavanaNW NW NE, 11-4N-3E. Exp	8.5 8.5 8.5 osure of o	5.5 6.5 7.5 utwash (88	.5 .5 .4 35–892)	do. (R) do. (R) do. (R) is not
859 858 857	do. do. do. HavanaNW NW NE, 11-4N-3E. Exp described and cannot be evaluated	8.51 8.51 8.51 osure of o	5.5' 6.5' 7.5' utwash (88	.5 .5 .4 35–892)	do. (R) do. (R) do. (R) is not
859 858 857 Schuyler Co	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exp described and cannot be evaluated . (Frederick-South)	8.5 8.5 8.5 osure of o	5.5' 6.5' 7.5' utwash (88	.5 .5 .4 35–892)	do. (R) do. (R) do. (R) is not
859 858 857 Schuyler Co 600	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exp. described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE. 18-1N-1E	8.51 8.51 8.51 osure of o d. 261	5.5' 6.5' 7.5' utwash (88	.5 .5 .4 35-892) 1.6	do. (R) do. (R) do. (R) is not Tazewell (P)
859 858 857 Schuyler Co 600 599	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exp. described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do.	8.51 8.51 8.51 0sure of o d. 261 261	5.5' 6.5' 7.5' utwash (88 3' 8'	.5 .5 .4 35-892) 1.6 2.1	do. (R) do. (R) do. (R) is not Tazewell (P) do.
859 858 857 Schuyler Co 600 599 598	do. do. do. HavanaNW NW NE, 11-4N-3E. Exp described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do.	8.51 8.51 8.51 0 sure of or d. 261 261 261	5.5' 6.5' 7.5' utwash (88 3' 8' 11'	.5 .5 .4 35-892) 1.6 2.1 2.6	do. (R) do. (R) do. (R) is not Tazewell (P) do. do.
859 858 857 Schuyler Co 600 599 598 597	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exp described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do.	8.51 8.51 8.51 0 sure of or d. 261 261 261 261 261	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. Towan (P)
859 858 857 Schuyler Co 600 599 598 597 596	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exp described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do.	8.51 8.51 8.51 0 sure of or d. 261 261 261 261 261 261	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. Iowan (P) do.
Schuyler Co 600 599 598 597 596 595	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Expe described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do.	8.51 8.51 8.51 0sure of or d. 261 261 261 261 261 261 261 261	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0 2'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. Iowan (P) do. do.
Schuyler Co 600 599 598 597 596 595 597	do. do. do. do. do. HavanaNW NW NE, 11-4N-3E. Expe described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do.	8.51 8.51 8.51 osure of or d. 261 251 7.51 7.51	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .9 7	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. Iowan (P) do. do. (R, IV) do.
Schuyler Co 600 599 598 597 596 595 594 593	do. do. do. do. do. HavanaNW NW NE, 11-4N-3E. Expe described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do.	8.51 8.51 8.51 0sure of or d. 261 261 261 261 261 7.51 7.51 81	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 1.0 .9 .7	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. Iowan (P) do. do. (R, IV) do. do. (R, IV)
Schuyler Cc 859 858 857 Schuyler Cc 600 599 598 597 596 595 594 593 593 592	do. do. do. do. do. do. HavanaNW NW NE, ll-4N-3E. Expe described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do.	8.5 ¹ 8.5 ¹ 8.5 ¹ 8.5 ¹ osure of o d. 26 ¹ 26 ¹ 26 ¹ 26 ¹ 26 ¹ 26 ¹ 7.5 ¹ 8 ¹ 8 ¹	5.5' 6.5' 7.5' utwash (88 3' 11' 17' 24' 0.2' 3.5' 1' 6'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .9 .7 .8	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. Iowan (P) do. do. (R, IV) do. do. (R, IV) do. do. (R, III) Formdolo (P III
Schuyler Cc 600 599 598 597 596 595 594 593 592 591	do. do. do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exp described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.51 8.51 8.51 8.51 0 261 61 61 61 61 61 61 61 61 61 61 81 81 61 61 81 81 61 81 61 81 81 81 61 81	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5' 1' 6'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 1.0 .9 .7 .8 .5	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. lowan (P) do. do. (R, IV) do. do. (R, IV) do. do. (R, III) Farmdale (R, III)
Schuyler Cc 600 599 598 597 596 595 594 593 592 591 590	do. do. do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exp. described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.51 8.51 8.51 8.51 0 261 61 61 41	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5' 1' 6' 1'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .9 .7 .8 .5 .7	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. lowan (P) do. do. (R, IV) do. do. (R, IV) do. do. (R, III) Farmdale (R, III do. (R, II)
Schuyler Cc 600 599 598 597 596 595 594 593 592 591 589 589	do. do. do. do. do. HavanaNW NW NE, 11-4N-3E. Expo described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.5! 8.5 8.5 8.5 0 sure of or d. 26 26 26 26 26 26 7.5 8 7.5 8 6 6 4. (.)	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5' 1' 6' 1' 4'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .7 .8 .5 .7	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. lowan (P) do. do. (R, IV) do. do. (R, II) Farmdale (R, III) do. (R, II) do. do.
Schuyler Cc 859 858 857 Schuyler Cc 600 599 598 597 596 595 594 593 592 591 589 588 588	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Expo described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.5° 8.5° 8.5° 8.5° 8.5° 26° 6° 6° 6° 6°	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5' 1' 6' 1' 4' 3'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .7 .8 .5 .7 .5 .6	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. lowan (P) do. do. (R, IV) do. do. do. (R, III) Farmdale (R, III) do. do. do. (R, I)
Schuyler Cc 859 858 857 Schuyler Cc 600 599 598 597 596 595 594 593 592 591 589 588 587	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exped described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.51 8.51 8.51 2.51 2.51 2.61 61 61 61 61 61	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5' 1' 6' 1' 6' 1' 4' 3' 5'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .7 .8 .5 .7 .5 .6 .5	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. lowan (P) do. do. (R, IV) do. do. do. (R, II) Farmdale (R, III) do. do. do. (R, I) Illinoian silttil?
Schuyler Cc 859 858 857 Schuyler Cc 600 599 598 597 596 595 594 593 592 591 589 588 587 61.0	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Expo described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.51 8.51 8.51 2.51 2.51 2.61 2.51 61 61 61 61 61 61 61 6	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5' 1' 6' 1' 4' 3' 5' 8'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .7 .5 .6 .5 1.1	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. do. lowan (P) do. do. (R, IV) do. do. (R, IV) do. do. (R, III) Farmdale (R, III do. (R, I) Illinoian silttil? Iowan (P)
Schuyler Cc 859 858 857 Schuyler Cc 600 599 598 597 596 595 594 593 592 591 589 588 587 61.0 609	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Expo described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.51 8.51 8.51 251 261 201 101 101	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 17' 24' 0.2' 3.5' 1' 6' 1' 6' 1' 5' 8' 1'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .7 .8 .5 .7 .5 .6 .5 1.1 1.0	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. lowan (P) do. do. (R, IV) do. do. do. (R, II) Farmdale (R, III) do. do. do. (R, I) Illinoian silttil? Iowan (P) do. (R)
Schuyler Cc 859 858 857 Schuyler Cc 600 599 598 597 596 595 594 593 592 591 589 588 587 61.0 609 608	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exped described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.51 8.51 8.51 251 261 61 61 61 101 101 101	5.5' 6.5' 7.5' utwash (88 3' 8' 11' 24' 0.2' 3.5' 1' 6' 1' 4' 3' 5' 8' 1' 3'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .7 .5 .5 .5 1.1 1.0 1.0	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. lowan (P) do. do. (R, IV) do. do. do. (R, II) Farmdale (R, III) do. do. do. (R, I) Illinoian silttil? Iowan (P) do. (R)
859 858 857 857 857 857 598 597 598 597 596 595 594 593 592 591 589 588 587 61.0 609 608 607	do. do. do. do. HavanaNW NW NE, 11-4N-3E. Exped described and cannot be evaluated . (Frederick-South) BeardstownSW NE NE, 18-1N-1E do. do. do. do. do. do. do. do. do. do.	8.51 8.51 8.51 251 261 101 101 101 101 101	5.5' 6.5' 7.5' utwash (88 3' 8' 1' 24' 0.2' 3.5' 1' 6' 1' 4' 3' 5' 8' 1' 3' 5'	.5 .5 .4 35-892) 1.6 2.1 2.6 1.0 1.0 .7 .8 .5 .7 .5 .6 .5 1.1 1.0 1.0	do. (R) do. (R) do. (R) is not Tazewell (P) do. do. lowan (P) do. do. (R, IV) do. do. do. (R, III) Farmdale (R, III) do. do. do. (R, I) Illinoian silttil? Iowan (P) do. (R) do. (R) do. (R)

An explanation of the topographic setting of the above exposure is in order.

Beardstown--SW SW NW, 23-1N-1W

623-626A Rejected after field examination because samples were taken from discontinuous cuts along a highway on a pre-Wisconsin dissected slope from upland to valley--bottom, without precise documentation.

Cass Co. 99-106 Re	BeardstownCen. E line, 11-18N- ejected for same reason as above.	llW. Cotto	onwood Sch	ool se	ction.
110	do.	401	201	1.7	Iowan (P)
109	do.	401	271	1.6	do.
108	do.	401	321	1.2	do.
107	do.	40"	381	1.6	do.
No	o samples of the uppermost 201.				
672	Beardstown-SW SW NW, 23-1N-1W	201	6.51	2.3	Tazewell (P)
671	do.	201	7.51	2.2	do.
670	do.	201	81	2.0	do.
669	do.	201	8.51	2.0	do.
668	do.	201	91	1.6	Iowan (P)
667	do.	201	101	1.3	do.
666	do.	201	121	1.0	do.
665	do.	201	14:	.7	do.
664	do.	201	16"	.8	do.
663	do.	201	201	.6	do. (mixed?)
The	ese samples have the same location	as 626B-629	9, but not	the s	ame spacing.
662	Beardstorm-SW NE SW 23-1N-1W	131	31	_	Tourn (P)
661	do	131	51	13	do do
660	do	131	81	10	do
659	do	131	101	1 1	do
658	do	131	121	16	do
657	do	251	11	10	do (B)
656	do	251	71	1 1	do. (11)
655	do	251	121	7 7	do.
651	do.	251	17 51	4.1	do.
653	do	251	221	.0	do.
652	do.	251	2/ 21	1 0	do.
С)~ ТI	his is a high aloning overgung mode	in connect	tion with	highup	uo.
TI	ne loess was deposited on a valley iven.	slope, hend	ce true th	icknes	s cannot be
Scott Co.	Brown's Mound section.				
284	GriggsvilleNE SE, 27-14N-13W	251	251	3.0	Tazewell (P)
283	do.	251	10"	1.3	Iowan (P)
282	do.	251	211	1.0	do.
281	do.	211	41	.9	do. (R)
Tł	ne above 76-foot section is incompl	etely sampl	Led.		
Greene Co.	Hillview raodcut.				
933	PearlSW SW NE, 27-12N-13W	12'	31	1.6	Iowan (P)
932	do.	121	41	\$ 1.0	do.
931	do.	121	5.51	.7	do.
930	do.	12"	71	.9	do.
929	do.	121	8.51	1.5	do.
928	do.	121	101	1.5	do.
927	do.	12'	11:51	1.1	do.
926	do.	3.51	0.51	.5	Farmdale(R. IV)
925	do.	3.51	1.51	.3	do.
924	do.	3.51	2.51	.3	do.
923	do.	3.51	3.51	.5	do.
922	do.	71	0.51	.6	do.

T (agent)	
a 1	COLLO.)	

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921	Pearl (cont.)	71	2.51	.6	do.	
920	do.	71	4.51	.5	do.	
919	do.	71	6.51	.5	do.	
918	do.	3.51	0.51	.5	do.	(R, II)
917	do.	3.51	1.71	.5	do.	
916	do.	3.51	31	.7	do.	
915	do.	61	0.51	.5	do.	(R, I)
914	do.	61	3.51	.7	do.	
913	do.	61	51	.5	do.	
	The topographic position is not sta	ated. Does	this cut	extend	to the	upland?
944	PearlSW NE NE, 28-10N-13W	301	101	2.8	Tazewe	ell (P)
943	do.	301	121	2.7	do.	
942	do.	301	16:	2.4	do.	
941	do.	301	201	1.5	Iowan	(P)
940	do.	301	241	.7	do.	
939	do.	301	26.51	1.4	do.	
938	do.	301	28.51	1.1	do.	
937	do.	301	29.51	1.1	do.	
936	do.	31	0.51	.6	Farmda	ale (R)
935	do.	31	1'	.6	do.	
934	do.	31	2.51	.5	do.	
	This was a beautiful succession of	loesses whe	en seen in	the fie	ld some	e years
	ago but at that time the Peorian co quantitative separation can be made	ould not be	different	iated.	Now a	

Sample no.	Quadrangle map and detailed location	Thickness	Depth below top	Stratigraphic D.I. unit
Madison	Co. Pleasant Grove School section Roxana silt)	n (type section	of Frye a	nd Willman's
12 11 10-A 10 8 8BB 8B 8B 8B 8AA 8A	Monks MoundCen.SE, 20-3N-8W do. do. do. do. do. do. do. do. do. clevation of base estimated 450- A.T. by Leighton) NoteIn Table I, p. 19, Circula called type sectionis shown to lies beneath "Roxana I." Such estimated	15: 11: 12: 20: 20: 4: 4: 4: 4: 4: 4: 4: 4: 4: 4	10: 6: 7: 5: 10: 1: 2: 3: 3.5: . IV"in t. eoria," and "type sect:	.9 Iowan (P) .7 do. (R, IV) .8 do. (R, III) .6 do. (R, II) .9 do. (R, II) .9? Farmdale (R, I) .6 do. (R, I) .6 do. (R, I) .9? Mixed (R, I) .9? Mixed (R, I) he case of this so- 16' of "Roxana II" ion" are unfortunate.
19 18 17	St. JacobSW SE NE, 31-3N-6W do. do.	7.51 7.51 7.51	31 2.51 51	1.0 Iowan (P) 1.0 do. (R) .9 do. (R)
20 21 22 23	Alton Quarry SectionSE SW H 10-5N-10W do. do. do. Notes: 1. In a previous work, p divided into two unit loess, unfossiliferou cated at the top, and careous loess, sparse are unquestionably di 2. Sample 23 is Illinoia zons of a soil profil 3. Leighton questions th Tazewell.	TE, (12)12' (14)19' (5)19' 2' 2. 24, Circular 2, the lower a 1, the upper a f 2) fossilifero 1, the upper a f 2) fossilifero 1, "entirely w 2," according 1, ratio f	91 101 16.51 11 304, the 1 five-foot y tan, and ourteen-fo us, and pi Farmdale a ithin the to Circula or No. 20.	.8? Tazewell (P) 1.3 Iowan (R) 1.1? Farmdale (R) 2.3 Illinoian(R,I) Roxana silt is noncalcareous sharply trun- ot weakly cal- nkish tan. They nd Iowan. A- and B- hori- r 304, p. 24. It is probably
30-36	Table IV provides no D.I. ratios	for these samp	les. Henc	e, this omission.
83 84 85 86	CollinsvilleCen. SE NW, 13- do. do. do. No description of section, classi	-3N-8W 13 14: 14: 14: 14: fication tenta	91 51 9.51 121 tive.	1.8 Tazewell (P) 1.0 Iowan (R) 1.0 do. (R) .9 do. (R)
87 88 89	Monks MoundW NE SW, 32-3N- do. do. No description of section or elev	7W 10: 5.5: 5.5: vation, classif	7! 1.5! 3.5! ication te	<pre>1.3 Iowan (P) .6 Farmdale (R) .6 do. (R) ntative.</pre>

Farmdale, Iowan, and Tazevell Loesses along Mississippi River below the Junction of Illinois River

IDDADV

APR 0 8 1996

VI. (cont.)

961	CollinsvilleNW NE SN, 4-3N-8W	201	31	3.3	Post-Taze-
960	do	201	61	3.0	do? (P)
900	do.	201	101	21	
777		20.	10.	K.4	Tazewett (r)
	Burdick Branch Section, road cut ascer	aing to	upland, 54	UTA.T	., estimated
	by Leighton. 90± higher than the base	e of the	Pleasant G	rove S	chool Section.
	The D.I. ratios of the Burdick Branch	Section	indicate d	istinc	tly younger
	loess in the upper 6 to 8 feet than the	ne Tazew	ell or Iowa	n. (S	ee Leighton.
	1962. Jour. of Geology. v. 68. p. 528-	.552.)			
998	Monks Mound-SE NW NE. 29-3N-8W	71.51	61	2.1	Tazewell (P)
007	do	77 51	121	20	do
006	d0.	77 51	171	2.2	do.
005	do.	71.51	221	27	do.
990	d0.	11.5.	~~* 071	20	du.
994	do,	71.5	271	2.0	ao.
993	do.	71.51	321	2.3	do.
992	do.	71.51	35.51	2.3	do.
991	do.	71.51	40"	1.4	Iowan (P)
990	do.	71.51	451	1.2	do.
989	do.	71.51	521	1.3	do.
988	do.	71.51	56.51	1.1	do.
987	do.	71.51	621	.8	do.
986	do.	71.51	661	1.3	do.
985	do	71 51	68 51	1 5	do
981	do	71 51	711	1 2	do
104	This magnificant aut is under mihed	Tt in a	-logo noig	hhon +	a the Discount
	This magnificent cut is undescribed.	10 18 8	crose uers	HDOL 0	o one rieasano
	Grove School Section which is only $\frac{1}{2}$ is	nie to	the north,	and th	eir bases ac-
	cording to the topographic map have the	ie same	elevation.	It ha	a no "Rovana"
					S no nondita
	loess. In other words nearly 50 feet	of "Rox	ana" was de	posite	d at the
	loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section	of "Rox on of th	ana" was de e "Roxana s	posite ilt"	d at the but none $\frac{1}{2}$
	loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord	of "Rox on of th ler to r	ana" was de e "Roxana s efer to unn	posite ilt"	d at the but none $\frac{1}{2}$ outh section
	loess. In other words nearly 50 feet Pleasant Grove School-the type section mile to the south. It might be in ord as the Standard Section of the Peorian	of "Rox on of th ler to r h Loess,	ana" was de e "Roxana s efer to unn identified	posite ilt" amed s as Pe	d at the but none $\frac{1}{2}$ outh section orian in
	loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334.	of "Rox on of th ler to r h Loess,	ana" was de e "Roxana s efer to unn identified	posite ilt" amed s as Pe	d at the but none $\frac{1}{2}$ outh section orian in
	loess. In other words nearly 50 feet Pleasant Grove School-the type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334.	of "Rox on of th ler to r h Loess,	ana" was de e "Roxana s efer to unn identified	posite ilt" amed s as Pe	d at the but none $\frac{1}{2}$ outh section orian in
St.	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type sectio mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section.</pre>	of "Rox on of th ler to r Loess,	ana" was de e "Roxana s efer to unn identified	posite ilt" amed s as Pe	d at the but none $\frac{1}{2}$ outh section orian in
St. 1026	 loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W 	of "Rox on of th ler to r Loess, 1 25.51	ana" was de e "Roxana s efer to unn identified 61	posite ilt" amed s as Pe 1.8	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P)
St. 1026 1025	 loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. 	of "Rox on of th ler to r Loess, 1 25.5! 25.5!	ana" was de e "Roxana s efer to unn identified 61 101	posite ilt" amed s as Pe 1.8 1.5	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do.
St. 1026 1025 1024	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 1 25.51 25.51 25.51	ana" was de e "Roxana s efer to unn identified 6' 10' 14'	posite ilt" amed s as Pe 1.8 1.5 1.6	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do.
St. 1026 1025 1024	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 1 25.51 25.51 25.51	ana" was de e "Roxana s efer to unn identified 6' 10' 14' 18'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do.
St. 1026 1025 1024 1023	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 1 25.51 25.51 25.51 25.51	ana" was de e "Roxana s efer to unn identified 6' 10' 14' 18' 22 5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do.
St. 1026 1025 1024 1023 1022	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 1 25.51 25.51 25.51 25.51 25.51	ana" was de e "Roxana s efer to unm identified 0' 14' 18' 22.5' 23.5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do.
St. 1026 1025 1024 1023 1022 1021	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 1 25.51 25.51 25.51 25.51 25.51	ana" was de e "Roxana s efer to unm identified 0' 10' 14' 18' 22.5' 23.5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 1 25.5! 25.5! 25.5! 25.5! 25.5! 25.5!	ana" was de e "Roxana s efer to unn identified 10' 14' 18' 22.5' 23.5' 25'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W</pre>	of "Rox on of th ler to r 1 Loess, 1 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5!	ana" was de e "Roxana s efer to unm identified 0' 10' 14' 18' 22.5' 23.5' 23.5' 25' 1'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W</pre>	of "Rox on of th ler to r 1 Loess, 1 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5!	ana" was de e "Roxana s efer to unn identified 0' 10' 14' 18' 22.5' 23.5' 25' 1' 3'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W</pre>	of "Rox on of th ler to r 1 Loess, 25.5' 25.5' 25.5' 25.5' 25.5' 25.5' 14: 14: 14:	ana" was de e "Roxana s efer to unm identified 0' 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W</pre>	of "Rox on of th ler to r 1 Loess, 25.5 25.5 25.5 25.5 25.5 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 12 25 25 25 25 25 25 25 25 25 25 25 25 25	ana" was de e "Roxana s efer to unn identified 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015	loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do. do. do.	of "Rox on of th ler to r Loess, 25.5 25.5 25.5 25.5 25.5 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 14 25.5 12 25 25 12 25 25 12 25 25 12 25 25 12 25 25 12 25 25 25 25 25 25 25 25 25 25 25 25 25	ana" was de e "Roxana s efer to unn identified 0' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 1.6 1.5 1.9 1.5 1.0 .9 .8 .7 1.0	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014	loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do. do. do.	of "Rox on of th ler to r Loess, 25.5 25.5 25.5 25.5 25.5 25.5 14 14 14 14 14 14 14 14 14 14	ana" was de e "Roxana s efer to unn identified 0' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7 1.0 1.0	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 25.5 25.5 25.5 25.5 25.5 25.5 14 14 14 14 14 14 14 7 7	ana" was de e "Roxana s efer to unn identified 0' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7 1.0 1.0 1.0	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 25.5!	ana" was de e "Roxana s efer to unm identified 0' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2' 3.5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7 1.0 1.0 1.0 1.0	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 14: 14: 14: 14: 14: 14: 14: 7! 7! 7! 7!	ana" was de e "Roxana s efer to unm identified 0' 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2' 3.5' 5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7 1.0 1.0 1.0 1.0 1.0	d at the but none $\frac{1}{2}$ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W do. do. do. do. do. do. do. do. do. do.</pre>	of "Rox on of th ler to r 1 Loess, 25.5 25.5 25.5 25.5 25.5 14 14 14 14 14 14 14 14 7 7 7 7 7 7	ana" was de e "Roxana s efer to unm identified 0' 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2' 3.5' 5' 5' 5' 5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7 1.0 1.0 1.0 1.0 1.0	<pre>d at the but none ½ outh section orian in Tazewell (P) do. do</pre>
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 1010	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NM, 25-2N-9W</pre>	of "Rox on of th ler to r 1 Loess, 25.5 25.5 25.5 25.5 25.5 14 14 14 14 14 14 14 7 7 7 7 7 7 7	ana" was de e "Roxana s efer to unm identified 6' 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2' 3.5' 5' 6.5' 0.5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	<pre>d at the but none ½ outh section orian in Tazewell (P) do. do</pre>
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 1010	loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NM, 25-2N-9W do. do. do. do. do. do. do. do.	of "Rox on of th ler to r 1 Loess, 25.5 25.5 25.5 25.5 25.5 14: 14: 14: 14: 14: 14: 14: 7 7 7 7 7 12: 12:	ana" was de e "Roxana s efer to unm identified 6' 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2' 3.5' 5' 6.5' 0.5'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .7 1.0 1.0 1.0 1.0 1.0 1.0 .8 1.0 .8 1.0 .8 .7	<pre>d at the but none ½ outh section orian in Tazewell (P) do. do.</pre>
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 1010 1009 1008	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W</pre>	of "Rox on of th ler to r 1 Loess, 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 25.5! 14! 14! 14! 14! 14! 7! 7! 7! 7! 7! 12! 12!	ana" was de e "Roxana s efer to unm identified 6' 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2' 3.5' 5' 6.5' 0.5' 2'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	<pre>d at the but none ½ outh section orian in Tazewell (P) do. do.</pre>
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 1010 1009 1008 1007	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type sectiod mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W</pre>	of "Rox on of th ler to r 1 Loess, 25.5!	ana" was de e "Roxana s efer to unm identified 6' 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2' 3.5' 5' 6.5' 0.5' 2' 4'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	<pre>A at the but none ½ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.</pre>
St. 1026 1025 1024 1023 1022 1021 1020 1019 1018 1017 1016 1015 1014 1013 1012 1011 1010 1009 1008 1007 1006	<pre>loess. In other words nearly 50 feet Pleasant Grove Schoolthe type section mile to the south. It might be in ord as the Standard Section of the Peorian Circular 334. Clair Co., large pit section. French VillageNE NW NW, 25-2N-9W</pre>	of "Rox on of th ler to r 1 Loess, 25.5! 2	ana" was de e "Roxana s efer to unm identified 6' 10' 14' 18' 22.5' 23.5' 25' 1' 3' 5' 9' 13' 0.5' 2' 3.5' 5' 6.5' 0.5' 2' 4' 6'	posite ilt" amed s as Pe 1.8 1.5 1.6 1.5 3.3 1.9 1.5 1.0 .9 .8 .7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	<pre>Ito Rokana d at the but none ½ outh section orian in Tazewell (P) do. do. do. do. do. do. do. do. do. do.</pre>

VI. (cont.)

1005	French Village (cont.)	121	81	.7	do.
1004	do.	121	111	.8	do.
1003	do.	101	0.51	.8	do. (R. I)
1002	do.	10*	1.51	.8	do.
1001	do.	10:	31	.8	do.
1000	do.	101	51	.8	do.
999	do.	101	71	.8	do.
999A	do.	10:	10'	.8?	Mixed. Farm- dale as de- scribed.

Notes: 1. With the Standard Section of the Peorian intervening, correlation with the Pleasant Grove School Section is absurd.

2. The lower 3 feet of this 10-foot unit is noncalcareous Farmdale and cannot be combined with what overlies it.

Randolph Co.	Highway cut on slope.				
1030	CoultervilleSW SE SW, 7-6S-5W	41	21	2.1	Tazewell (P)
1029	do.	5.51	21	.7	Iowan (R)
1028	do.	5.51	4.81	.8	do.
1056	BaldwinNW NE NE, 24-5S-7W	6.51	21	1.5	Tazewell? (P)
1055	do.	6.51	3.51	1.3	Iowan (P)
1054	do.	6.51	4.58	1.0	do.
1053	do.	6.51	61	.7	do.
1052	do.	2.51	0.51	.5	Farmdale (R)
1051	do.	2.51	21	.3	do.
1050	do.	2.51	2.41	.5	do.
1049	do.	21	0.51	.6	Colluvium? (R.I)
1048	do .	21	1.51	.6	do.

No description of section; classification tentative.

457 Chester--NW NW NE, 32-75-6W 15' 11' 1.3 Iowan (P) A fine section along Mississippi River. It merits description and further sampling.

Alexander	Co. Gale Section			
473	Jonesboro, Cen., 33-14S-3W	251	61	2.0 Tazewell (P)
472	do,	251	121	1.3 Iowan (P)
471	do.	251	181	2.1? do. (P)
470	do.	251	23.51	1.6 do. (P)
469	do.	251	24.91	1.3 do. (P)
468	do.	61	0.31	.9 Farmdale (R. IV)
467	do.	61	2.5!	1.2? do.
466	do.	81	0.51	.8 do. (R. III)
465-B	do.	81	61*	1.0 do.
465-A	do.	81	7.51	.9 do.
464	do.	71	1:	.8 do. (R, II)
463	do.	71	65	.5 do.
462	Pre-Wisconsin	61	18	.9 Loveland (R.I)
				Much weathered.
461	do,	61	31	.7 do.
460	do.	61	51	.6 do.

*Shells of terrestrial putmonates from the lower part of the 8-foot unit gave a C-14 date of 37,000± 500 (W867). The organisms used in part the dead carbonate of the calcareous loess for their shells. Hence the date is unreliable.

Sample no.	Quadrangle map and detailed location	Thickness	Depth below top	D.I.	Stratigraphic unit
Union C	o. Ky. Shawneetown Bridge Section			No	
480	1 mi. SE Shawneetown Bridge	201	181	data	Tazewell (P)
479	do	51	2.51	do.	Iowan (P-
		-			transition)
478	do	61	0.51	do.	Farmdale (R)
477	do.	61	31	do.	do.
1091	Same as above	201	11	2.1	Tazewell (P)
1090	do.	201	31	2.4	do.
1089	do.	201	51	2.8	do.
1088	do.	201	71	3.0	do.
1087	do.	201	91	2.7	do.
1086	do.	201	11:	2.3	do.
1085	do.	201	132	2.9	do.
1084	do.	201	16:	2.4	do.
1083	do.	201	181	2.2	do.
1082	do.	51	0.51	1.8	Iowan (P. trans*)
1081A	do.	51	2.51	1.5	do.
1081	do.	51	43	1.5	do.
1080	do.	61	11	.8	Farmdale (R)
1079	do.	61	31	.5	do.
1078	do.	61	51	.9?	do.
	*Called Roxana silt by Frye, Leonar	d, and Will	man in Cir	c. 304	, p. 30.

Farmdale, Iowan, and Tazewell Loesses along Ohio and Nabash Rivers

The sections of loess along the Indiana-Kentucky border have been studied by Dr. Louis L. Ray of the U. S. Geological Survey.

Posey Co.,	Indiana New Harmony Section				
1148	New Harmony-SE NW SW, 1-5S-14W	341	21	2.5	Tazewell (P)
1147	do.	341	61	2.6	do.
1146	do.	341	101	2.9	do.
1145	do.	341	131	3.4	do.
1144	do.	341	161	2.2	do.
1143	do.	341	19!	3.5	do.
1142	do.	341	221	4.1	do.
1141	do.	341	25.51	3.3	do.
1140	do.	341	291	2.5	do.
1139	do.	1.51	0.51	1.4	Iowan (P. trans.)
1138	do.	4.51	0.51	.5	Farmdale (R.II)
1137	do.	4.51	2.51	.8	do.
1136	do.	4.51	41	.3	do.
1135	do.	1.51	0.81	.4	do. (R, I)
Wabash Co.	, Ill.				
1156	Mt. CarmelNE NW NE, 8-1S-12W	61	21	1.5	Tazewell (P)
1155	do.	61	51	2.3	do.
1154	do.	1.51	0.51	.7	Iowan? (R)
	No description given Classificatio	n tentativ	10	*	

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