1995. Central States Field Trip.

May 12 - May 25, 1995

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Trine Dr. P. Ross

Stoffer failed to recognize that there were 2 Receptaculites horizons — one in upper Stewartville & also in Cummingsville

Twin Cities Brickyard is shallower & closer to source of silts which by. dropped out due to shallowing

Comments by R. Sloan

On U.S. 52 Wagner Hill Section
5/12/95. 1½ miles S. of Cannon Falls. from
S. end of town at junction with
(1)
West side of U.S. 52. 5 found lanes
1 color slide + 1 B+W white
Photograph. Hammer head on Unit
no. ~~[illegible]~~ 5. Break in slope is prob. shale
at top of Unit 7. C.S.#1. B+W#1. Sherwood Mbr.

Up higher in section C.S.#2. B+W#2
Top of Sherwood Mbr. + overlying Wall Mbr
of Prosser Fm.

Mile Post 93 close to top of section
B+W#3 just a few paces N. of M.P. 93

Cyclicity is about 1' to 2½' through most of section
argill. limestone with very silty-shaly breaks – no
sequence boundaries as such, but there is a change
in amount of argillaceous material entering the
depositional system, pure ls upwards.
St. Paul Minn □ 1:250,000 pencilled location

Levorson + Gerk's Wagner Hill section
in R. Sloan, ed, 1987. Minn Geol. Surv.
Rept. of Invest. 35, Fig. 9·3

S.1

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-9080

on
Kbg
sha

5/12/95. On 1 1½ miles S. end of town at junction with West side of U.S. 52, Cannon Falls. Wagner Hill Section from 5 found lanes

(11)

1 color slide + 1 b+w white Photograph. Hammer head on Unit no. ~~[illegible]~~ 5. Break in slope is prob. shale at top of Unit 7. C.S.#1. B+W#1. Sherwood Mbr.

Up higher in section C.S.#2. B+W#2. Top of Sherwood Mbr. + overlying Wall Mbr of Prosser Fm

Mile Post 93 close to top of section B+W#3 just a few paces N. of M.P. 93

Cyclicity is about 1' to 2½' through most of section argill. limestone with very silty-shaly breaks – no sequence boundaries as such, but there is a change in amount of argillaceous material entering the depositional system, purer ls upwards.

St. Paul Minn ▯ 1:250,000 pencilled location

Hevorson + Gerk's Wagner Hill section in R. Sloan, ed, 1987. Minn. Geol. Surv. Rept. of Invest. 35, Fig. 9-3

5/12/95

(2) Sogn Roadcut 0.1 mile S of intersection of Goodhue roads 9 + 14 on Rd. 14

Photo Rd 14 upper part of section. E. side of southernol of roadcut on County Blvd 14

Photo C.S. #3 butte

Photo C.S. #4 middle part

Photo C.S. #5 showing disturbed bedding at top of Hidden Falls Mbr.

Road cuts on both sides of road. East side shows better overall features but 2 iron-stained horizons are more clearly seen in W. side cut. E side has some large blocks that have fallen down. See notations on graphic sect. Fig. 20.14 Sloan, (ed.) 1987 (We had lunch at this site)

Glenwood Fm is a deep-water clastic unit with pyrite + lime nodules with a "corrosion" zone at base.

Platteville is a complex of two to probably 5 or 6 packages separated by pyritic "corrosion" zone. I take the corrosion zones here to be deep water erosional surfaces of mineral deposition but not sediment deposition — beneath at least two corrosion zones there are beds of

5/12/95

burrowed-filled sediment. I suspect the thickness of the beds ~~height~~ = depth of burrows. Some graded bedding in Carimonia member; some pyritized fossil fragments including bracks (Rapidiomella found on one slab)

Beatrolle + lower Decrah sh are "deep" water deposits of turbidites (calcarenites) and omission surfaces (pyritic), burrowed muds, etc.

(Note: Town of Sogn is just W. of intersection of County roads 9 + 14 on County Rd. 14.)

Up hill (E.) of intersection of county roads 9+14 on County Road 9, there is an old X in higher units of Prosser Fm. It may start at top of Cummingsville. Burrowed lime mud.

This "Plateau" is apparently on Prosser.

5/12/45

Kenyon is west on Minn. 60
– near Zumbrota

5/12/95 County Road 7, Olmsted Co.

(3A) 5/12/95 Cummingsville Type Section

X' - entrance to private property (Xmas trees on fence)

Blue shaly shale forms gently sloping X face as depicted in Fig. 2B-7 (Sloan, ed. 1987). V. burrowed shale - all chewed up

B+W #56 photo. Eight feet of Fraser Fm on N. side of road

B+W #56 photo. Roadcut - east side of road. Top of Cummingsville ~~Mbr~~ Fm; Fairplay Mbr - saw-tooth weathering

The Mostins Mbr of Cummingsville as shown on graphic section in Sloan et al 1987 has more of a "saw tooth" outcrop than indicated. Nice "1m" cycles throughout type Cummingsville - Barden Mbr has 4 (or 5?) "cycles" that have almost no silty breaks, rest has siltstone.

To get to Cummingsville, go South US 52 from Rochester, MN, toward Chatfield and turn on County Rd 7, and travel ca 3.9 miles to roadcut

See Sloan (1987) p.

5/12/95.

*Continue S of Co. rd 7 to T intersection w. Co. Rd 30 ?? turn right & go up hill to section Cummingsville Annex. County road 30

(38) Or W # 7 photo. Glenwood, Decatonica & Platteville. lower part of rd cut

Or W # 8 photo. Middle part of rd cut.

General view of step. Glenwood Fm at bottom

Bicke-bentonite w. close to top of road cut

Unconformity (Seq Boundary) at (or near) top of Glenwood, then Decatonica is a transgr. system tract, deep water Platteville. Wide Carbonates (debris) coming from SE? and shale (Decorah) from northwest ???

Decatonica is difficult to identify - thin shale & rat thin late band overlying shale

* 6/28/98 location - 1998 revised data. Came north from Iowa on Rt S 52, & took MN 30 west for about 4 miles; road cut west of intersection & ~~last~~ ½ mile across bridge

Late afternoon/evening. After following Lonsdale we came to
(4) Masonic Park. Fillmore Co, MN 5/12/95

3 or 4 cycles of 5-6' (1st one at creek level is 4 ft.)

1"-1½" thick (silty) brownish yellow weathering -

heathered upper 3 cycles break down into 1 foot ledges -

L3 is brownish in lighter & slighter darker light gray "clumps"

The location is (and a little beyond) at

3-4 miles N of Spring Valley

Photo B & W & possibly a 2nd photo at Masonic Park.

Went south of Masonic Park about 4 miles and explored the roads in and out of the creek valleys which exposed some of the Stewartville L3. and some of the upper Cummingsville.

Saturday. 5/13/95 "Sugar Clk Section"

left Rochester, south on Hwy 52 through Chatfield to Fountain. Turned west on County Road 8; about 1 mile west a large working ⊠ - excellent exposures

Continued on road ca 1½ miles from turn off. (5A) Road cut at top of hill (west side) has green Decorah Shale overlain by platy late phase of Cummingsville Fm. Road cut is grass covered & small trees are growing

Decorah shale passes through 3 bermas?) to ledges before reaching Platteville - Platteville is poorly exposed but I saw at least 15' of it in stream gully.

(Note - I made 3 collections from this area on 7/16/62 (Ethan G.) See 2 pages typed of strat. section from Sloan & Alexander (1956, GSA Field Guidebook, Oct. 30, 1956 The Ordovician of SE. Minnesota, p. 106)

(5A also)!

2 Photos B&W # # of working ⊠;

- 1 photo of fairly weathered ⊠ wall & other photo of fresh ⊠ wall. Ca 55 ft of Cummingsville Fm; silty platy late ~~at~~ 3 - 6 ft packages of ca 12-15 cycles.

5/13/95

(Note: on Ill 52 north (some distance) excellent exposure of St. Peter Ss. & underlying unit)

grouped into part of one, 2 complete & another top incomplete depositional bundles (4th order cycles)
The ~~lower~~ one part of cycle is lighter-colored & other part of cycle is darker-colored but we can't tell if lighter or darker-colored starts the package;
alternating light & dark layers
lowest incomplete package in X has more shale & silt — thin shale or silty interbeds

53 } Road from which I collected in 1962)
"Side" road (county rd NW of Fountain) on N side of X. Photo B+W# Good view of X
This road branched off of County rd 8 & was more northerly directed. It leads down the hill to creek & has weathered Cummingsville exposed. Towards bottom of hill fairly good exposure of Cummingsville Fm with

5/13/95

"Receptaculitid" 1 ft diam, 30–25 ft above base of Cummingsville

"Brazoria" – 10 to 12 ft above receptaculitid – we discarded the specimen

← cave & flowing creek. Below this unit, covered slope leads short distance to valley floor. As we curved around road, we found another entrance to the cave at 90°

Coffee at Chuckers Bar & Grill, Fountain, Fillmore Co., MN. $1.20.

Sinkholes –

St Minn. 80 to Wykoff, through Wykoff on State 80, to intersection of St. 16 & Co. 5. Took Co. 5 road south. Turned west on Fillmore Co 12. Got to turn off to Graham's ✗ & as it had rained & the road was in v. poor shape, we did not proceed.

We returned to cnt. ~~in~~ & proceeded S on Co. 5 & Co. 12.; then Co. 12 (cnt. labelled Forestville).

(6) Rifle Hill is 1½ miles E & 1 mile N of Cherry Grove pto. Cherry Grove is 9 miles SE of Spring Valley

5/13/95

Rifle Quarry, Fillmore Co. MN.

{ Maquoketa
{ ~~Dubuque~~ fine banded; bedding thickness not v. regular; series of hor ribbons w. thin clay/silt breaks
& ~~Stewartville~~
incl. Frankville Mbr

Stewartville Fm — 8 or 9 major constained bands w. define 1-2 metre cycles. Bands 5-8 ft thick + as thin as 2 ft.

Photos B+W. 1 or 2 photos standing above X on Maquoketa Fm, looking S to X face.
Photos B+W 2 or 3 photos in X

The upper part of Maquoketa Fm forms flat, wide, late edge (stripped) surfaces above X; num. beachs. ("Rafinesquina", "Rhipidomella" solitary coral) are present in some surfaces but do not fill beds; late smooth-weathering micritic $CaCO_3$ mudstones.

Road cut, N. side of road below Maquoketa Fm, exposes a little bit of Elgin Mbr

5/13/95.

poorly exposed, 3 massive ledges of Dubuque & ~~other parts of~~ Stewartville Fm. Down road to 200 yds to Patterson X entrance (part of X rd is a county rd!) Large X face shows Maq Fm, Elgin, Dubuque, Stewartville (photos of N face of X) (Mr Nuage) & Frazer.

Cool part of X

& we saw all except lower 8 or 9' as shown in Henderson & Gerk's graphic section incl. chert layers — there is prominent brown chert layer.

We met a young man in a pickup truck who lives in his grandfather's house beyond X on county rd. He said lower 10 ft of X had been filled in during last yr. or two & there was actually about 12 ft of X covered by below water level indicated by Lee & Gerk. He had swum in X as a small 10 yr old boy

5/15/95.

concordant data

(7) Then drove on to "Hubbel's Ravine" 2½ miles ESE of Cherry Grove. Iverson, Gerk & Broadhead (1979) locality M-112. We think this is lower Stewartville Fm in the Minnesota usage of R.S. Stewartville

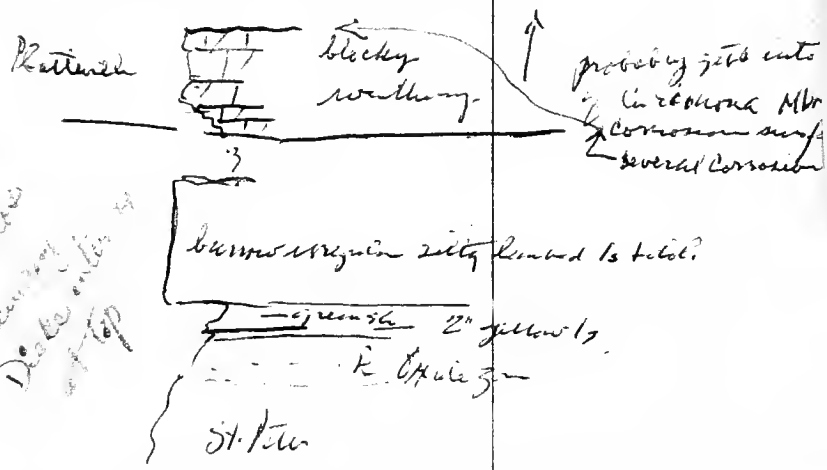
River flat with rock sections on either side. — "Friendly" barking dog.

5/14/95.

4½ miles E of Chatfield on State Hwy 30 (MN), then roadway cut on State Hwy 74 – see section below). about ½ mile W of Troy. ¼ mile W of junction of Hwys 30 & 74. (Maybe 1½ miles of [illegible] [illegible] section for ref.)

Top of lower Glenwood shale is irregularly ~ [illegible] "Mifflin" Member Is. Mifflin is through here [illegible] in a few beds.

(8)



6/25/98 4 photos [illegible]

We then returned to Hwy 30 & proceeded east to Rushford. At Rushford village we stopped at Conoco Station

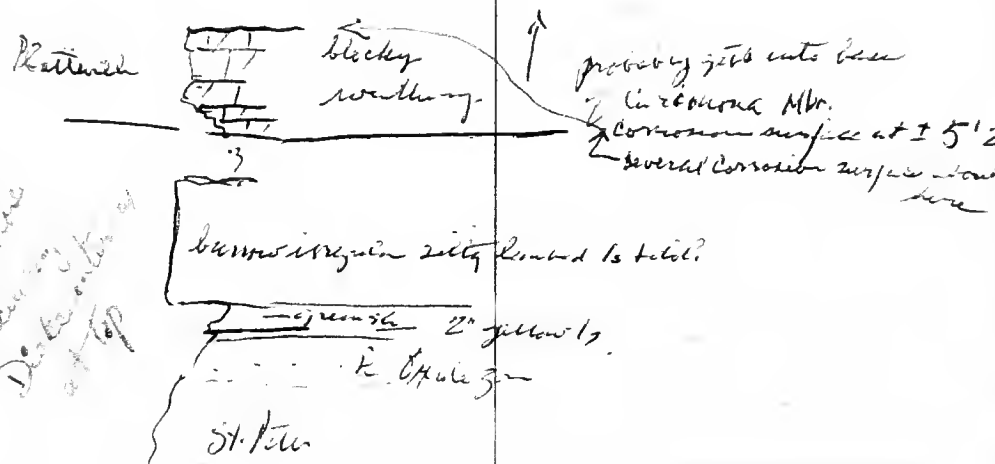
Took Hwy 43 south to Mabel, then Hwy 44 east to Spring Grove. About 3 miles W. of Spring Grove, there are 2 working

5/14/45.

4½ miles E of Chatfield on State Hwy 30 (MN), then roadway exit on State Hwy 74 — see section below). about ½ mile W of Troy. ½ mile W of junction of Hwys 30 & 74. (Maybe 1½ miles from Chatfield) [See sign outcrop section for ref.]

Top of lower Glenwood Shale is irregularly ~~~ overlain by "Mifflin" nodules 1s. Mifflin is throughly burrowed has fossil molds in a few beds.

(8)



6/25/98 4 photos [illegible] Dates [illegible]

We then returned to Hwy 30 & proceeded east to Rushford. At Rushford village we stopped at Conoco Station

Took Hwy 43 south to Mabel, then Hwy 44 east to Spring Grove. About 3 miles W. of Spring Grove, there are 2 working

5/14/95

quarries, 10m each side of Hwy 44. See Fig. 20 in topographic map

(9A) (2 quarries)

Spring Creek X, south side of Hwy

Coll. Bry. 5/14/95/A; float in Decorah Sh

Coll 2. 2 B+W photos in X on S side of Hwy 44

2 B+W photos #19+20 in X on N side of Hwy 44

(9B) X S. side of Hwy 44 (tailings)

Lence slope shows numerous brachiopods – a shell hash in calcarenite. Fine calcilutite below calcarenite. 3"-4" diam orthocerid mollusc; trilobites

(9C)

X N. side Hwy 44

hate ledges (v. thin) 2"-3" – not v. persistent from lower 1/3 to bottom of upper 1/3 of Decorah Shale.

V. dark grey to brownish black hard 1 ft plus thick of shale with shell hash here + there at top of it. Pyrite. & shell hash of brachiopods. This suggests a sudden deepening event creating anoxic shale environment.

5/14/95 Kendalville, Iowa — Eastside of road

(10) X N ½ Kendalville in upper Iowa R. hoc 17. Revorson, Gerk & Broadhead, 1979 B&W photo. Just before bridge over river.

huge Coenopoal at top of Sinsinawa Mbr & burrowed (extensively)

Paulonia X, north bank of Upper Iowa R. at Kendallville, Iowa. SW SW ¼ NE ¼ sec. 33, T 100 N, R 10 W. Sinsinawa 6'10"; Stewartville 35'10"; Dubuque Fm 19'1". Lisle Hill Mbr

See Revorson, Gerk & Broadhead

(11) hoc 33. X 3 miles SE of Kendallville, Iowa. Cattle pt. 2 B&W photos. X at small stream on N side of rd. SW ¼ SE ¼ Sec. 1, T. 99 N, R 10 W.

1 fairly substantial late 2-3 ft made up of 2-3 "beds" — bucated up into pieces — is coming in & appears in section of Maquoketa Fm at top of X

Stewartville Fm 16'11"; Dubuque Fm 34'5" + Maquoketa Fm 17'3"

Saw violets in bloom

5/14/95

Tack US 52 N of Decorah, Twin Springs Rd.
1 Bluff face on road on both sides
½ mile N of junction w. Hwy 9. All
Swartville Fm. Impressive "gateway"
to the city of Decorah

We took St. Hwy 139 south from Kendallville
looked at X on Cattle Creek Road, then
rejoined Hwy 139 which led to Hwy 9
which took us to Decorah, Iowa.
MacDonald's (+ Walmart) not far
5 from intersection of US 52 + St. Hwy 9.

5/14/95

Lewerson, Gerk & Broadhead, loc. 9.
Road cuts Iowa Hwy 4, 7 miles SE of
Decorah, Iowa. SW¼ SW¼ Sec. 14 T NW¼ NW¼ Sec. 9
T97N, R7W.
1 B&W photos
3 C.S. photos → because coun came out

(13) loc. 9. 1 B&W photo; 1 C.S. photo.
Packages of rocks become thinner & less blocky; also more shale coming in at upper 20 ft. See Lewerson & Gerk (1972 Iowa Acad. Sci, Fig. 2) — we agree with graphic sect. for Dubuque here & at loc. 10 (LGB)
We 1st visited this locality, then loc. 9 of Lewerson, Gerk & Broadhead loc. 10.
> gate was locked, but CR walking down road to X. (12) Loc. 10. Roving X. 3½ miles SE ¾ mile E of Decorah →
Single lane bridge crosses stream X on S side of ~~creek~~ road & east side of creek. 12" shaly bed is well seen at both 9 + 10 and is 10 to 12' below Dubuque-Maquoketa contact. (See L, G, & B, 1979)

Both locs 9 & 10 are comparable in what they show. We don't think Dubuque fm is as thick as 34 ft. but only ca 20 ft. — but exposures are limited (also see L, G, & B, 1979 use a "marker" bed which is usually lower than change in to the LS/Sh pattern typical of the Dubuque.)

← this is only at Lookout thinnest

Loc. 10 (contd) NW¼ SE¼ sec. 9, T97N,
R 8 W. Stewartville Fm 17'10". Dubuque 34'7½"
Maquoketa contact.

5/14/95

Passed Potville X, 2½ miles N. of Potville (saw from distance) X east side of road; late afternoon sun showed "golden" X face

See Levorsen, Gerk + Broadhead, 1979 Loc. 53, X 4½ miles N.E. of Potville, Iowa. NW¼SE¼, Sec. 19, T96N, R5W. Stewartville Fm 18'5"; Dubuque Fm 32'3"

(64) Church Street, Luana. X ½ mile N. of town on west side of road. Lea's X. NW¼ SE¼, sec. 5, T95N, R5W. Stewartville Fm. 17'2"; Dubuque 32'4"; Maquoketa 87'3"

2 B+W photos

2? CS photos

A set of beds, identified by thin shaly bands at top and base (± 9-10') is very burrowed, and the burrows filled with more silty carbonate. Swallows have been able to excavate these old burrows for their nests.

Levorsen, Gerk + Broadhead, no. 45

Red quinoin bloom. 1 tree opp. Motel 6 on side street, Devon

We are on Dodge St (≈ US 20)

Supper Clubs. Swallows

Supper clubs Swallows in late joints

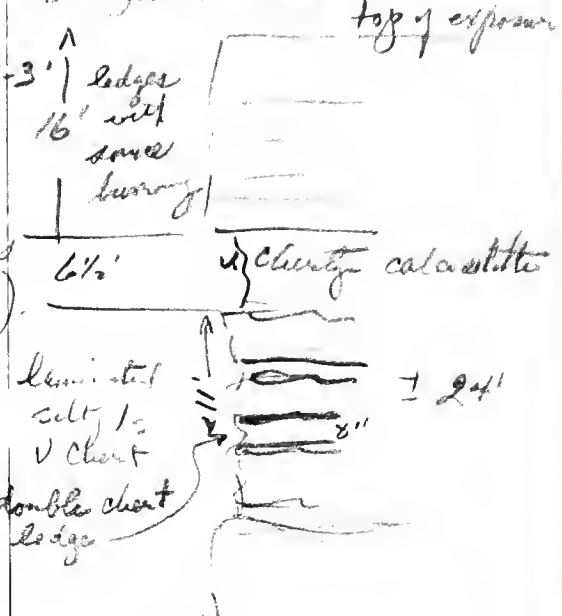
5/15/95. Dubuque, Iowa.

left Motel 6 at 1:15pm after reviewing field notes & locality data. Decided to stay another night (through Tuesday night) while it take in Illinois locality by radiating from Dubuque. Took US 20 west to Dyersville, then Co. Rd 136 through New Vienna to Luxemburg; turned N on State Rd 3 & headed toward Colesburg then on toward Edgewood

5/15/95

Section just west of Twin Bridges Park –

(14) Twin Bridges Park,
Ca 6 miles ~~East~~ West of
Colesburg, Iowa on
State Highway 3 (3-3½ miles
E. Junct with St. Hwy 38).
Tried to find this on L+G '72
and thought it on their
Dunlerth, top of Sherwood
Member. (Chert sequence 3)



Almost 6 miles east of
Edgewood. SRS.
Rifle Hill Mbr
of Stewartville Fm
Photo 2 of W
crosswork pattern
F. thalassoides
burrows

± 20'

Massive weathered
ls. –
some CS and
wavy or chert
3 ½-2" laminae

(15) Clayton County Rd X21, Littleport Rd, starts at
bridge over river & extends ½ mile up
hill. Exposures on both sides of road.
Loc. 57, Levorson, Gerk & Broadhead (1979)
Littleport Roadcut. SE ¼, Sec. 25 + NE ¼
Sec. 36, T92N, R5W. Dubuque Fm. 33'
with Maquoketa Fm contact above & Stewartville

road cut & section

5/15/05

contact below. The lowest chalepanting of Templeton & Wilman (1963) is 7'3" below the base of the marker bed." (L, G & R. 1979, p. 64).

photo 2 B & W coming down hill starting in Maquoketa Fm.

(at Volga, the Elgin Mbr. of Maquoketa Fm in creek bottom

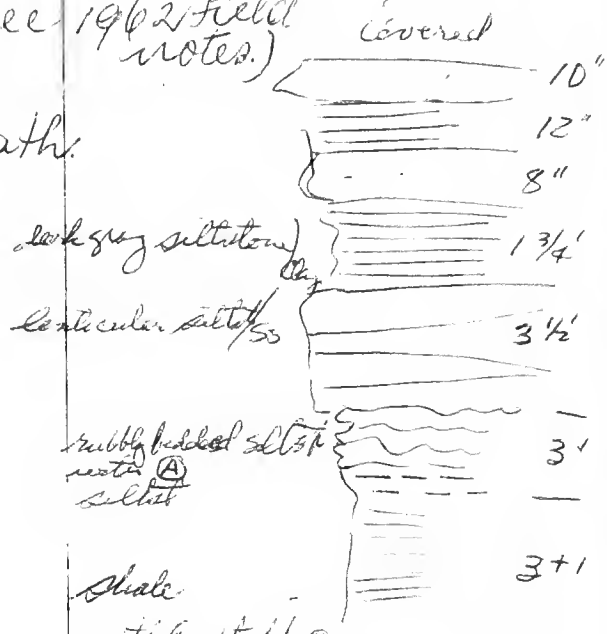
Violets; & mauve flower

5/15/95

(17) Section on road immediately S of Graf on W. side of road. Old railroad bed has been connected to a gravelled bike path. ¼ mile

Photos - 2 B/W 1/100 at f.4

Iowa, Dubuque Co. (see 1962 field notes.)



Float
Coll. 5/15/95A

A. Cathaxonia
solitary corals
encrusting bryozoa
brachiopods

Dolorthoceras sociale

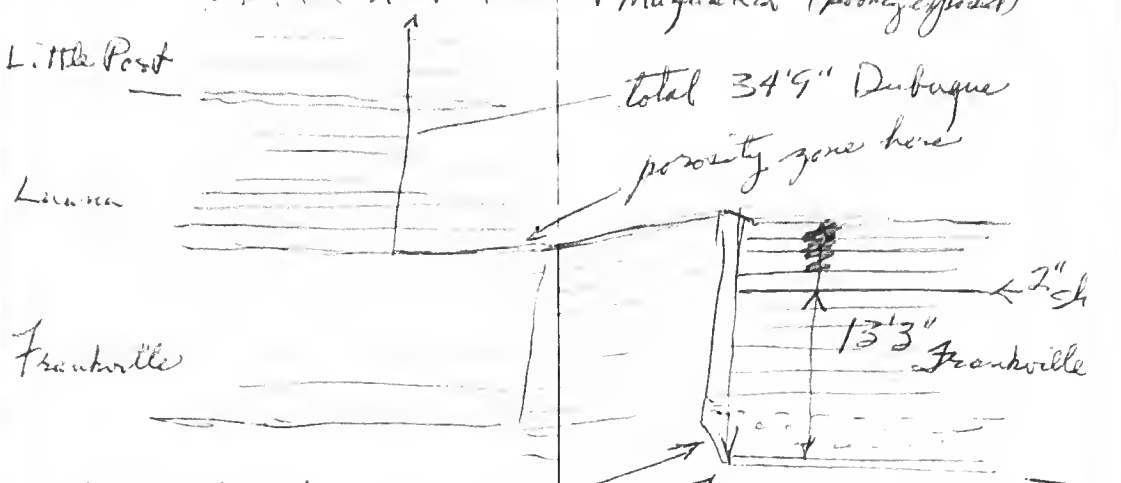
From Graf to intersection of road to Asbury, then east. On the way to Asbury Twin Springs Ck - road section on W side was noted.

~~Cf. Hinds, this is Ton Mbr of Decorah Fm~~

See Henderson & Gerk (1972 p. 113? chart, Fig. 1) but???

→ This is lower part of Maquoketa Fm. Just above Prepanderate Zone
RS

5/15/95 (18) Becker Quarry - Asbury, Iowa 5/15/95



a lower band - v. distinctive & then a few inches up another one. "peck-marked" interval (minicave) v. distinctive band

marker bed of L + G

7½'

of Stewartville

(L, G, + B, 1979) p. 63, + 64 (loc. 58)

Loc. 58, Levorson, Geck + Broadhead (1979 p 64) "Dubuque reference locality, north side of Kaufmann Avenue, just before intersection with N. Grandview

We were not able to walk to face of quarry.

Lilac just beginning to bloom.

5/16/95 (19)

Dubuque. Corner of Loras Blvd & Cox St.
loc. 51. Dubuque type locality - abandoned
X north side of Loras Blvd at Cox St
intersection. SW¼ sec 24, T89N, R3E.
Upper 21'9" of Dubuque Fm. with
Maquoketa contact X has been partly
filled for a parking lot acc. to
Lewerson, Gerk & Broadhead, 1979
loc. 51. 1 B&W photo.

We couldn't see Maquoketa Fm
Beds rippled above clay. Beds 8-10"
acc. to depth of burrowing
There are shales up to a couple inches
- the shales ~~come~~ thicken & thin
Environment of deposition ??? -
a lot of silt in part due to extensive
burrowing "Pockmarks" extensive in
lower half of X
Loras College Alumni Campus
Center is a new bldg so Maquoketa
Fm prob. removed in bldg this structure
Note US20 (Dodge St. is being
widened & there is considerable construction

(20) ½ mile W of Devon St & Dodge St (US20)
intersection. Road cut N side of Dodge St
shows upper part of Dubuque Fm with a

(20) is across from Motel 6 at Dubuque

(20) contd (old road cut)
2 pages back
5/16/95 possible marker bed above to base of section. (L, G & B, 1979, loc. 51)

(21) X on east side of US 52, ca 1½ mile from junction of US 52 & ~~Hwy~~ US 61 Bellevue X. Dubuque Fm & underlying top of Stewartville Fm 1 B&W photo

150 yards south on US 52 to Olde Massey Road; turned into southern entrance of X (v. gullied road in X) where we were at top of Dubuque Fm & weathered Maquoketa Fm slope. 1 B&W photo.

Long grade of road US 52 into St. Donatus from north. Extensive weathered road cut.

Various roadcuts on US 52 into Bellevue. Gas at Conoco, N end of Bellevue
lunch at Wagner's S end of Bellevue
Bellevue State park at top of hill. High massive bluff at top of hill of Silurian dolomite

(22) Maquoketa Fm bottom is covered & we could see v.v. little of it. Overlying unit is Silurian Hopkington Fm & lower part is a v. shaly, silty dolomitic siltstone (see C Ross groups 1/6?

(35) Important in defining is intensity? we would use it to define a feeling and is this physiological? + because part is a already existing mathematical object, a function?

(36)

5/6/95.

Co. Rd Z 54 to Preston, then Iowa Hwy 64 west to Maquoketa
Then ~~Hwy~~ US 61 north to Dubuque

5/6/95/17. SC 8 Sparry calcite from Dubuque Fm

(21)
(23) Opposite our motel, Dubuque Iowa Maquoketa Drive & US 61. Bldg construction site. (Called locally ~~Cleveport~~ Key West) Heavy equipment businesses Extensive weathered shallow slope with 1 float of iron replaced fossils Ironstone in upper/middle part ~~to~~ dark brownish grey at bottom (6'-8' thick) overlain by 3-4 ft of lighter grey shale. There was evidence of fossiliferous material (not recognizable fossils)

5/16/95

(20) contd. Tree 2½" diameter
Large chunks of spurry
calcite from about 3 ft near
top; prob. below Maquoketa Fm
contact Coll. 5/16/95/A.

US Hwy 61 east from Dubuque into
Wisconsin. Excellent roadcut
from Mississippi R up hill
to east.

Redwing blackbirds

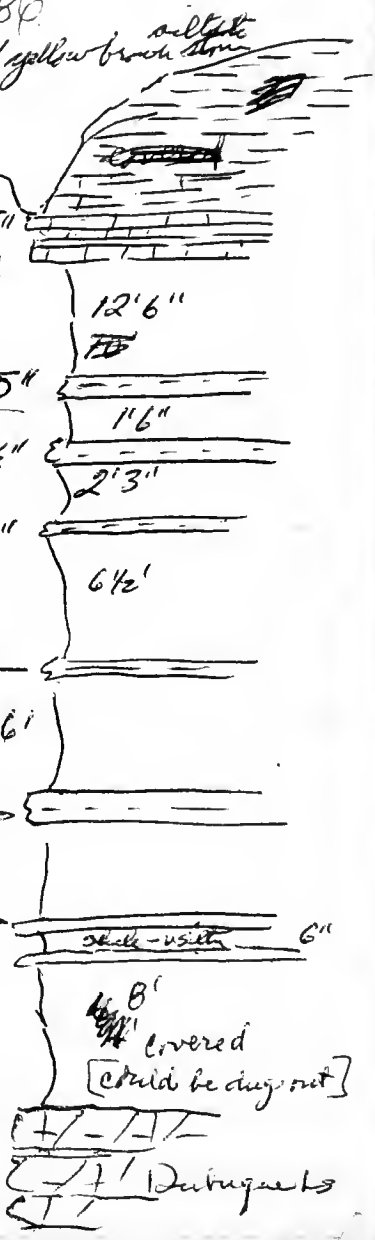
(36) [illegible]

5/17/95

In railroad cut at Scales Mound, ½ mile E of railroad crossing left Dubuque via U.S. 20 to Galena (coffee stop) then Stagecoach Trail to Scales Mound. Photo 184W. (24A)

See Willman et al. 1975, p. 85-86

13 and then into deeply weathered yellow brown silt
yellow brown weathering siltstone
Shaly silt greenish gray grades upwards into
limy, conchoidal weathering;
Siltstone, lt yellowish weathering – greenish gray fresh 8"-12"



Shale, darker gray fissile
Siltstone, lt yellow brown
Shale, lt gray fissile
Siltstone reddish
Shale, silty, fissile, lt gray
siltstone, reddish
Shale, silty, fissile, lt gray
siltstone, beds irregular, red-brown
Shale, silty, fissile, lt. gray
lt yellow brown siltstone burrowed at top
Siltstone, reddish and rubbly at base
Shale, lt brownish gray, silty
Siltstone, lining, smooth weathering
Siltstone, burrowed yellowish brown
(Trilobite frags)

5/17/95 (24B) Upper part of Scales Tom about 5 miles E of Scales Mound on railroad cut. photo 1-B/W

on RR tracks & 1 B+W photo from top (edge of road) looking down on RR cut

Silty shale, lt greenish gray in 2 to 3" beds and regularly interbedded with

Siltstone, very shaly in 2 to 4" beds. — There are at least 22 cycles of these two lithologies regularly repeated through about 14' of exposure above debris that covers base of cut, ie. about 8 to 9' not seen at base of cut above railway level.

Some surfaces have fragments (1/4") of organic material (something like a flatten "grass"). Worm burrows in siltstone faces, Trilobite frags. (? Isotelus?)

Slightly limy (limey) bed about 4' down from top of exposure with gray appearance on one surface (? top surface) 1/2" ripple crests about 2' wide in some places. Bands of pyrite nodules in some beds —

Question (??) could the upper part of this railroad cut be as high as NW Illinois facies of H. Hutchinson ??

Could the 22 cycles (or thereabouts) correlate with the cyclicity in the Cincinnati area

5/17/95. Dubuque US20 to Galena to Scales Mound on Stage ~~Coach~~ Coach Trail. Then after looking at Scales Mound area, we took road to Apple Rv. Canyon St. Park - road closed to Apple Rv. Canyon. Went south to Mt. Carroll, Brookville, Polo, Dixon to Mendota

US51 to Bloomington & I74 to Urbana. Arrived in rain

5/18/95.

Urbana, Illinois — visited university
Took Interstate 74 to Indianapolis then I-70 to Englewood/
Dayton Ohio. The Motel was ca 9 miles
N of Dayton. It rained heavily from
just east of Urbana.

Stopped at rest area/tourist
information centers at Ill. entrance
to Indiana & also Ohio.

5/19/95 West of Camden, Ohio

Dayton, Ohio. Visited Wright State Univ. library & xeroxed 4 articles on U. Ord. stratigraphy.

(25) West of Camden on Route 725 on old abandoned Rte. 725 1 mile W. of bridge on West side of creek. Excellent exposures in east side of creek. Preble Co, Ohio

Not [illegible] shale, esp. with thin siltstone [illegible] Spirifer sp., [illegible] other brachs. [illegible] [illegible]

4'

Abandoned Road cut is now overgrown. Upper part of shale w. some late ledges in a recent cut for a house on N side of road.

* 5/19/95 A through G.

Check name of creek/river →

See 1963 field notes for location of 1995 big collections (6-11-63 AA + AB etc.)

Triple marks on late ledges throughout

Side creek comes in on W side of old road — main river — strong thin-bedded lits.

(X) 3 B+W photos at upper 3/4 cut

4 B+W photos at bottom of creek where extensive river bank section

5/19/95

Chi saw 2½ foot diameter colony of ramose sp.; branch diam ca 1 cm; no monticules. This was a huge float block in river bed at bottom of creek, just upstream from bridge ("new" bridge). Old bridge has been removed

(See Wiggins & Perry locality 16 which is upstream to North

We took some float samples to see if they approximated to collection sites in 1963 so we would have an orientation on where we were in old road cut section. Coll. 5/19/95A-F. Coll. 5/19/95G was float in roadway gravel.

Rate is a bluish-green-grey; v. nodular bedding; v. diverse fauna & extensive burrowing

At bottom of creek, late more thickly bedded incl. calcarenite bed of at least 1½ feet

Interstate 70. - 14 miles E. of Ohio line - macadam - good road section

5/20/95

left Englewood/Dayton & headed west on Interstate 70. Took US 27 south through Richmond, Indiana, on 227 because of fire on US 27. Good road cut w. good late exposure - several sections along this road rejoined US 27 before 227 splits off to east. Good exposure of shale & thin-late beds just S of Richmond on US 27. Contd S to Liberty Rd cut on Indiana 44 W. of town is grass covered; no exposures.

Gasoline at Liberty

This day we tried to have Fox's (1962) sections & locations.

Union Co. Fox (1962)

5/20/95 2 miles ± west of Liberty Ind. on north side of Indiana 44, west of creek just west of turn off to "Treaty Line road." Very poorly exposed road cut.

(240)

~~[illegible]~~ 5/20/95 E float from near arrow

Small [illegible] (float) ? → Shale & silt [illegible] 2 levels of [illegible] with fossils

5/20/95/D

float 5/20/95 C
Coral Coll.

5/20/95/B ? "Tetradium"

ledge [illegible] 1/2 [illegible] (unidentified [illegible]) 2-4" interbeds of green [illegible] clay [illegible] ±12' exp.

ledge of 2" fossil calcarenite with green [illegible] calcisiltite (as [illegible]) interbeds 15 to 19 feet exp.

with Tetradium & ~~[illegible]~~ Tubiporites
"stick" tropstoms (float)
5/20/95/A

Site is also;
1/2 mile E of Ind. 44 to Rushville [illegible]
& Quakertown State Park
upper part of Brookville Fm & lower part of Liberty Fm

5/20/95 Ate lunch at stream edge.
We continued on Indiana 49 to Connersville, then took (121) to meet US52 crossed US52 to take small unnumbered road to Buena Vista. "Rolling" roads but no exposures in paved road sections; contd. to S to Hamburg & then east on gravel road for ± 2 miles to "bluff" along N. side of valley.
Road cut on N. side of road w. ledges of coarse fossil hash (many brachs.) - calcarenite (6"-8" ledges); sparry calcite
silty calcisiltite makes up some ledges
Road cut is too weathered to put a section together.
(27) Collection 5/20/95/F - float; middle part of Liberty Fm. E Hamburg

? see Ettgard + Berry 1964, section 1. p. 18-19.

5/20/95 (28) locality of Hay, Pope & Frey (1981)
Bonwell Hill, Indiana
1 road step inside Vt. Brookville 1/4
mile east of road into dam spillway
1 photo B+W looking toward Wyneswill
cut on west side of road at top of
exposure. Indiana 101 road cut.
large bivalve cast across, along
radial ribbing
Plectorthis
Strange "calcified algal outline"
= hash of ~~bivalves~~ bracks - forms decimetre
layer perpendicular to bedding plane
(up on end) & recatching pattern

2 photos B+W 2/3 of the way down cut
Hay, Pope & Frey unit 3A is graded beds with iron oxide
stains, phosphorite (?) and now brown yellow weathering
top ~~has~~ sparry calc. cements.

5/20/95 G. From "Excello" of Brookville
Fm. — from bottom of float
5/20/95 H. Float from prob. 3a of Hay
Pope & Frey.
5/20/95 J. Float, Red by weathering
5/20/95 K. Float from lower part of unit 3a or top of 2a from ~~shale~~ limy silty shale

5/28/25. Flower part Bonwell Hill cont'd
K Tree of Liberty on top of
Waynesville
N. most likely came from top of
Waynesville

5/20/95.

(29) Gun Hill. ½ mile N of turnoff road to Gun Hill Tavern. On next hill N across shallow valley from Gun Hill (Note N side of Gun Hill exposes similar.

2 B+W photos. 1 stone lower part, 2nd one middle part + 3rd one upper part of east side of road cut

Indiana 101 road cut

loose big. Coll 5/20/95/L. Slab had fee big. weathering out from upper beds of Brookville Fm. (Hay, Pope + Frey, 1981, p. 84 Fig. 9).

5 photos B+W

5/20/95/L. Big. bed 15 ft above base of Whitewater Fm

5/20/95/M - some trepos (large, 2 tiers)

5/20/95/N. - "Homotrypa" bed 2 collections

going up hill 5/20/95/O - few specimens - top of section? am not certain of collection bed.

5/29/95.

Note. Road section on W side, about mile S. of city of Richmond city limits. Thickness of thin-bedded limey shales 20 ft.

5/21/95

Stop 1 (2:30pm) RR cut at north edge of

(30) Wright Brothers Memorial Hill, Fairborne, Ohio

2 B/W photos to S; 1 B/W photo of N. side. June

Ledges of lt brown to tan, limy siltstone/sandstone 2-2½' platy bedding 1' graded cont. = lt tan gray

(includes a mud. calcareous grainstone) green ash gray

some burrowing

Shale, med to light gray, v silty. ±25'

+ calcarenite

55% ferruginous, vuggy w/ spary cal, molds filled with siltst 51% lt grayish gray

ledge at top is nearly planar. 4-5'

Ls. ledges below are v. shaly & silty and poorly exposed. In fact this could be a covered predominantly shaly interval with thin shaly ls. interbeds ±22'

XH
XB
XMT

3" to 4" ledge of "Homotrypa"

includes green gray siltst

June says these are full of bryoz.

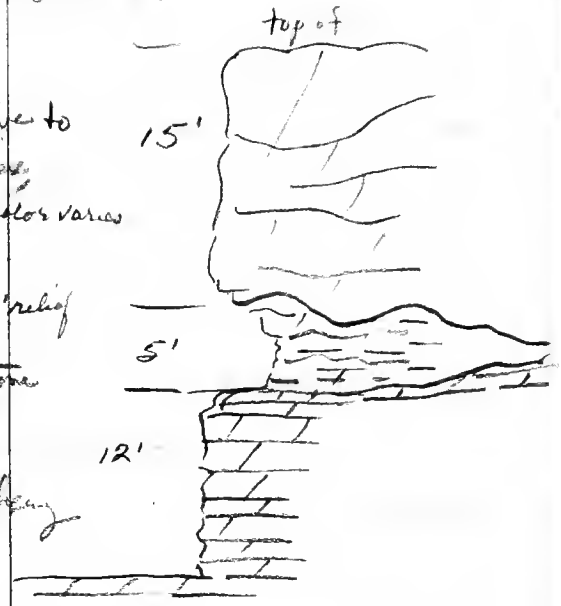
5/21/95-A = Homotrypa band at top = XH (about 6"-8" thick Homotrypa?)

5/21/95-B- = XB (Rythopora?) 2 collections

5/21/95/C- = XMT (Mixed trepostomes) 2 collections

5/21/95 General area of Fairborn, Ohio
(of Ohio 235)

(81) X N side of road ~~1/2~~ 1/4 mile E from intersection of Interstate 675 & Ohio 235
Broad quarry shows:



Dolostone, uneven bedding, massive to thin bedded, biohermal in places, light gray - yellowish, whitish, color varies on weathering

Shale, dark gray top; some reddish weathering; greenish dolostone from this interval.

Dolostone, lt. reddish brown weathering 4 to 6" beds.

Quarry floor is on a mottled green dolostone

12 ft unit & 15 ft unit.

1 photo N side X showing no shale/silty shale
1 photo B&W of pock-marked surface of X face
Bisher Fm is pock-marked & burrowed.

2 photos, B&W. east side of X showing 5 ft shale "lens"

Amer. Aggregates Inc. Fairborn Lite Plant

(18)

5/22/95

Finished packing samples about 11:30am took samples to UPS at 1508 Brandt Pike, E. Dayton. went P.C. about 1½ miles further ~~on~~ along of Ohio 201. Sent postcard to Rich & Barb Cen

Hamburgers at Riverside near Interstate 75. Then took I-675 to meet US 35 US 35 to Xenia then back through Xenia & picked up Ohio 380 south & after several attempts stopped at Caesar Creek State Park information centre. Here we obtained maps

3 Bt W photos at Spillway

5/22/95 (32) Holland (1993) locality
Cacaar Lake Spillway (+ tail)

Spillway section of Holland 1993, saw about 27'± of limestone and siltstone with numerous bryozoa, brachs. and burrows. Some beds have wavy bedded lower surfaces, some have wavy bedded upper surfaces, some have both. One or two beds have concoidal fracture, 2" to 5" thick, these can only be traced for about 30 to 40 yards before they are truncated by ripple surfaces. Two kinds of bryozoans in general, smaller one near base of section, several species; larger "Homotrypa" are extensive near top. "Prestons", Helicetellaspp, large solitary corals common. These have a cyclicity of 3' to 5' of v. silty bs and bs and bs + thinner siltstones.

"Several" collections There are 6 or 7 (check photos) of these cycles which are more silty in the lower 1 or 2 and then become less silty upwards.

3 collections

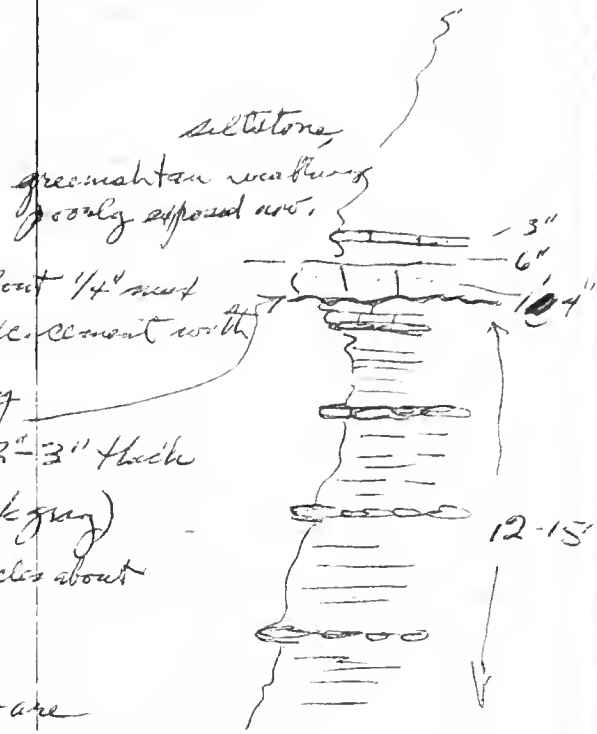
5/22/95/A – float from E wall of spillway (walked across flat)

5/22/95/B – N side of roadway float

5/22/95/C – on top of road in place.

Same units as at Wright Bros. Mem. Hill RR moved-weathered zone. Bottom is below this cut

5/22/95. (33) Caesar Lake Dam ~~at~~ spillway
Lower section at Dam outlet. (Attick)



Calcarenite of shell frags about 1/4" max dimension. Sparry calc. cement with some reddish weathering

Cycles of nodular Ls. 2"-3" thick and tiny shale (dark gray) and very thin ls. Cycles about 3 to 5' thick

Bryozoans present, but are small and fragmentary in these thin limestones

2 B+W photos.

2 collections
~~5/22/95/A~~ float
CR visited this - "wet shoes"

5/22/95.

Left Cacaw's Cr State Park at/near Hazeyburg, went to Corwin then west to Waynesville (very much titivated tourist town); come & hamburger here. ~~Then took~~ In exiting at Waynesville, we saw our 1963 road section, which for the most part is overgrown, then to "coffee" break stop above.

Drove to Lebanon & then Clarksville, explored several roads & did not find suitable sections.

Took Hwy 350 east to Hwy 730 & then turned north on Hwy 730 about 1 mile to Cowan Lake Spillway & Dam 1 B&W photo at Spillway

5/22/95

(34) Cowan Lake Spillway

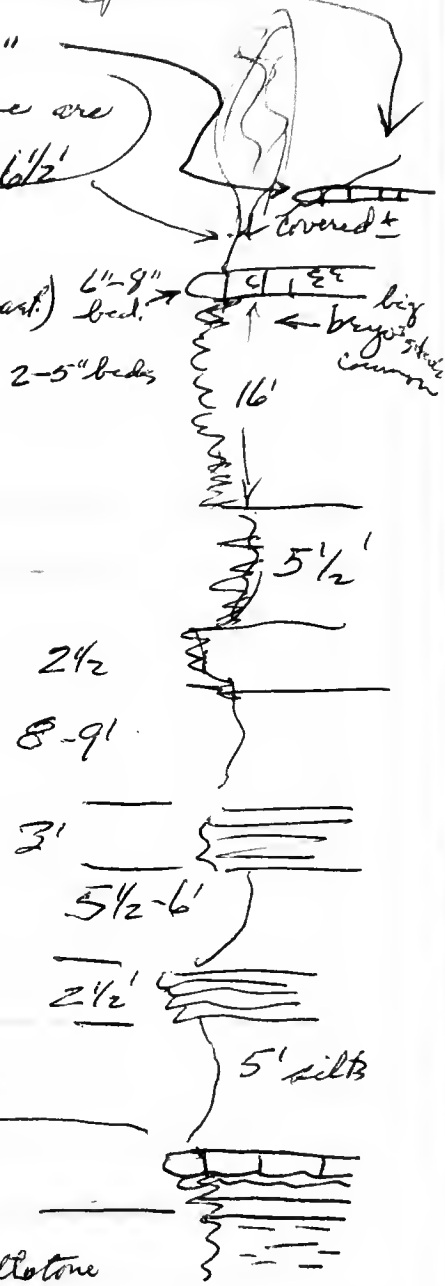
Glacial till above

Coarse calcarenite sandstone – 10" to 12"

brownish yellowish tan silts above are weathered and not defined as beds. 6½'

Calcarenite, sparry calc. cement, orangish red upper surface is sandy (Quart.) 6"–9" bed. → big bryozoan stick common

that trickles down into burrows 2–5" beds



Calcarenite packstone fossil 3" to 5" beds with thin interbeds of siltstone. bryozoa + brachs.

Pelecypod (Pecten) brachs (Ref) 4' siltstone

only rare bryozoa

(fishermen state maintenance personnel picked up road signs)

5/22/95

From Cowan Lake Spillway we took Hwy 730 to Blanchester, then Ohio 28 to Mulberry (driving through town) then I 275 to exit for Ohio 125 where motel is located

All the mowed "lawns" & street right-of-ways.

5/23/95

Motel recreation Cincinnati, East 3960 Nine Mile Road. §23 34. Motel SE cor. I275 & Ohio 125

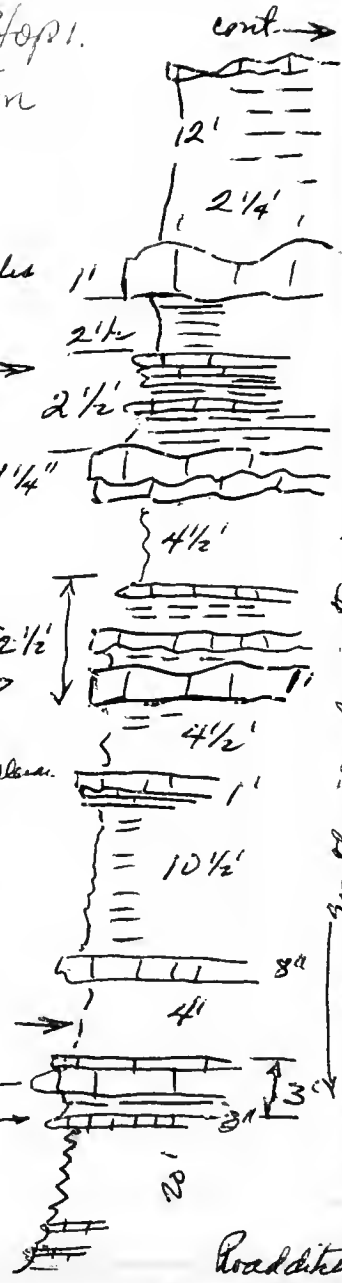
(35) Travelled on I275 to Ohio 32 and stopped at 2nd Batavia exit at Bacon Road.

(Hay, Pope & Hay, 1981 - Batavia, Stop 1.

Lower stop (Stop 1 of H, P, + F) Kope Fm

(on ramp to highway)

cont →



siltstone w/ a few thin calcarenite siltstone

4" ripples

~50' above base

5/23/95B

calcarenite,

calcarenite siltstone, burrowed →

calcarenite, grainstone/packstone massive →

Calcarenite, ferriginous weathering - top is almost flat. base is silty + gradation of

siltstone, limy shaly sandy

Packstone, bryos + brachs →

5/23/95A →

Brachiopod, grainstone/packst. brown stained Fe_2O_3 grandalale

Crinoid bed - surface is a columnal pavement →

some fine winnowed calcarenite

Siltstone, gray, tan weathering, limy, burrowed

5/23/95. Hay, Pope & Frey (1981)

More brachiopods

Continued from previous page.

Calcarenite

Siltstone w a few thin calcarenites — these thicken + thin on outcrop

Calcarenite ferruginous Ls

Continued

5/23/95. (Hay, Pope & Frey, 1981 Stop 2A)

30

Ls., 1"-3" wavy bds, and interbedded dark gray siltstone, large brach & bryoz common, 5/23/95/C Flood

↑ Below

Massive calc siltstone bed. 1½'+ from uppermost 30

prominent large scale ripple bed surf →

Shale/siltstone 2-2½' - Miamitown shale

Ls. ledges, 2½-4" thick, very silty, burrowed, ferruginous bedding is relatively "even", generally poorly exposed.

Fauvers

etc

42'

base v. poorly seen

Photo B+W of part of section shown by blue ink band, photo taken, however, on face to get sunlight on it

5/23/95/C - montticulose, stemmed & flat broad colonies that are 2-3" broad & ⅓" thick

Road cut section along Ohio rte 32 on southern side

5/23/95 "Excello" Mbr. of "Brookville" Fm. on Ohio 132 at
(87) Filager Rd about 3/4 mile NE of 132 junction w/122.
(Frey, Pope & Frey, 1981. Stop 2B
BW of east side of road cut.

Some beds with brachs & few bryos, but in calcarenites the rocks are too silty for brachs & bryos!
"Excello" mbr of "Brookville" Fm.

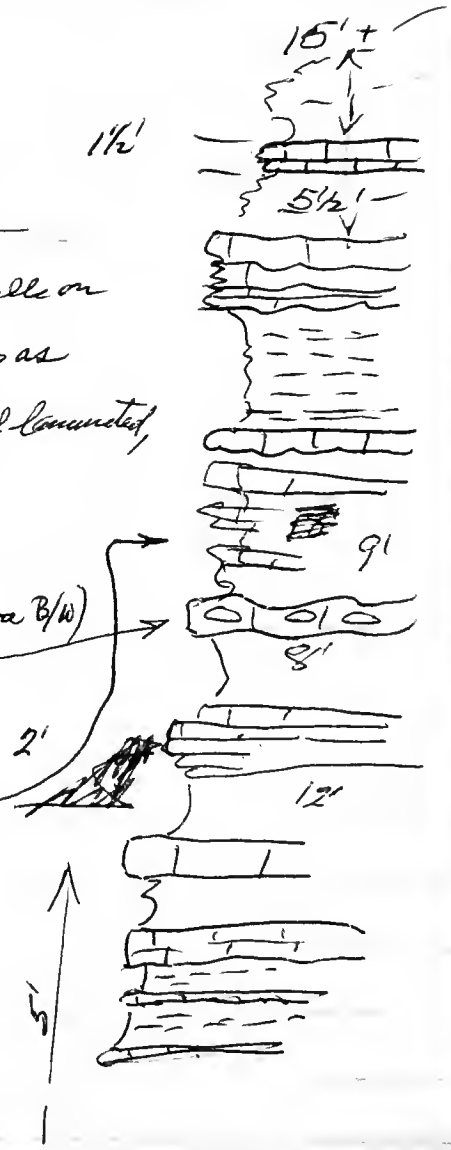
Poorly exposed ledges of ls + siltstone

Siltstone, green, calc., burrowed, shale on some surfaces as "leg" surfaces or as "colonization" surfaces; some well laminated,

Calc. with 2"-3" siltstone pebbles (picture B/W)
?, = Top Mt Auburn/base of Arnheim?

opposite 5/23/95 D
Filager Rd. (float)

Calc. siltstone, greenish gray, burrowed and 2"-3" irregular ledges of calcs. fossil b. grainstone/packs brachs + trilob, + some bryos.



5/24/95 Took Ohio rte 125 from Williamsville

Ohio 125 road N+S of White Oak Creek; excellent long road cut sections. Holland (1993) lists this section 8 miles west of intersection US 68 + Ohio rte 125 (12:15pm lunch $1.47 at Georgetown)
(Posted 4 aerogrammes at Amelia P.O. to Herbert Holdsworth, Pat Holdsworth, Joan Bushworth + Rev. C. Tyndall re Mary's death) (See 196 field notes)

(38) Took US 68 N from Georgetown; ended up on Hammer Rd which intersected ~~Dean Rd~~ Delhi-Arnheim Road which we took to Arnheim. Madman to Edwards Rd SE of Arnheim about 3 miles S+E of Arnheim weathered late on N side — several discontinuous exposures; also ~~at~~ lower part of section in small ck on E side of ck (photo B+W of late ledge in creek) (large "stromatolites" almost 2"-2½" across) (burrowed ~~late~~ siltstone; some thin late ledges (2'-3" thick

On curve around hill after crossing

Mile of section
small ck 20 chs on east side
we have lower "spary calcite"
(red weathering rock) up at next
exposure is silty lime mudstone
w. many knobs & few layers
5.5 miles of bridge at Anthem
on Brownstown - Anthem Rd
Hammer Rd then Trinity Rd into Sardinia

Stop 53, Hoy, Pope & Kelly 1954 Rexroad et Kleffner 1954

5/24/95. About 1 mile west of junction of 41 and 32 on highway 32 near Peebles Ohio

(39)

2 B/W photos

Peebles dol. – light + v. light gray, some bands

"Transition" – burrowed silt filled burrows in a dol-x bedded, sparry calcite "bands" common

Lilley – upper part very shaly + silty, dark gray, 1/4" bedding, laminated appearance

Muddy, ledge forming siltstone near middle of shaly interval

dolomitic trans.

Dolostone, x bedding, massive,

silty partings

Lilley

Dolost, x bedded, massive (beach?)

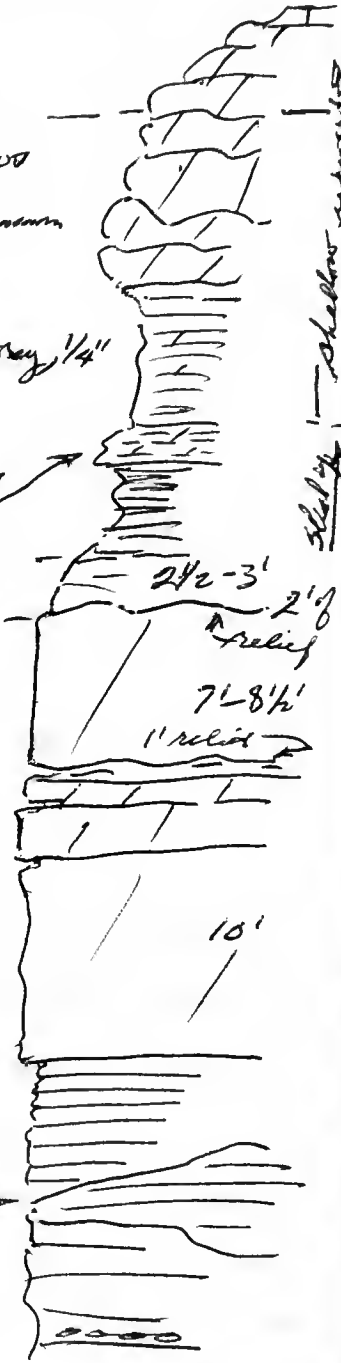
Dolost. sandy, + sandy silty dol.

2-4" beds (bars or mixed fluvial)

2½-3' cut + fill surfaces (several)

Bisher

alt pebble conglo. 20' below top of this unit



5
8/24/95

(Cont.) from previous page

Brailer

Dolost., very ~~hugy~~, silty brown ~~orange~~ weathering burrowed, some fossil frags. 15'
siltst. pebbles common

Gray shale + siltstone, poorly exposed (erosional sharp contact)

Estill

– Check this!

35-
40'

top poorly exposed

med. Gray shale with a few 1" limestone bands exposed in gully on S. side of highway parcel 1998 6/16/98

4'

? Check at

3 3" gray silt 6' 12'

2" siltstone

2' gray/reddish siltstone

gray 1'

2'

5/24/95 (40) Ohio St Rte 41 immediately S. of crossing of Ohio Brush Cr. 1.4 mile S. of Jacksonville, Ohio

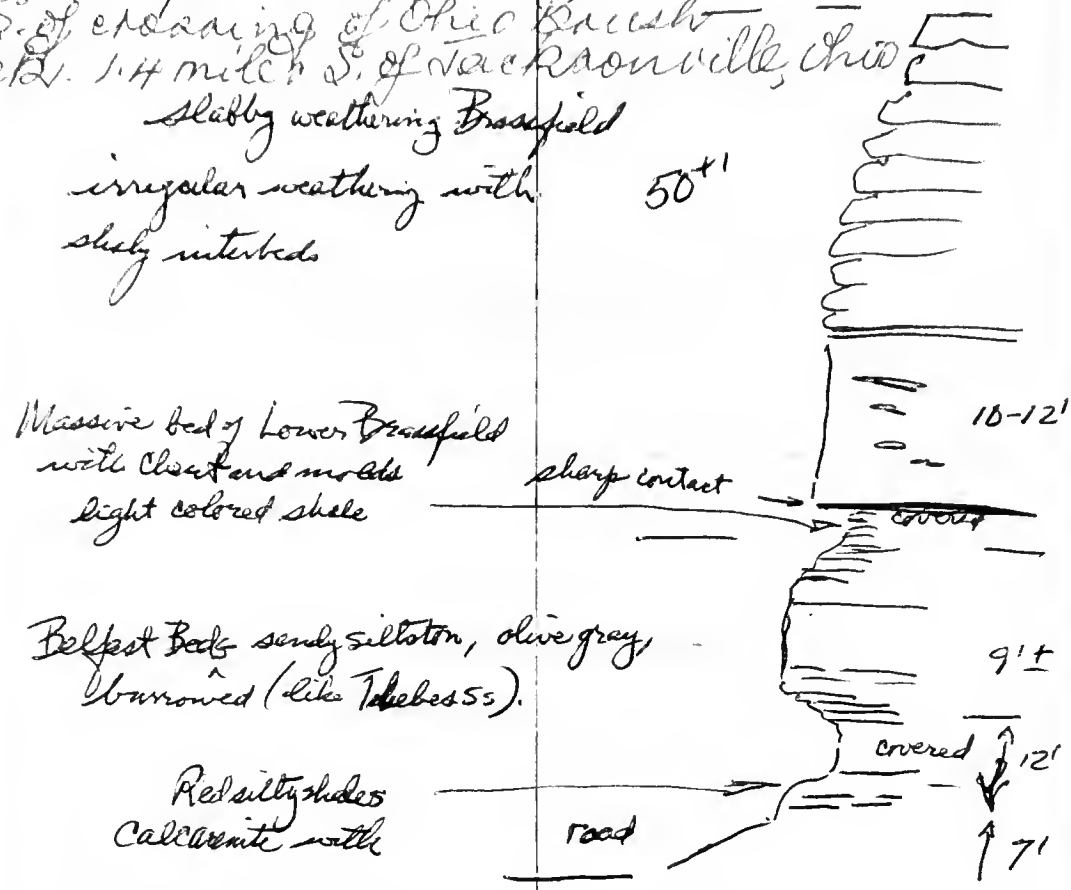


Photo 24W West face of roadcut Coll. 5/24/95/A. Float at "base" of Belfast on ledge above road. 20+3' thick at Ohio Brush Creek, Stop 5A Rexroad & Kleffner, 1984, Field Guide GSA Ann. Mtg.

(41)

5/24/95

1/4 mile farther south on Highway 41

sharp contact with lower Brassfield

Slabby siltstone

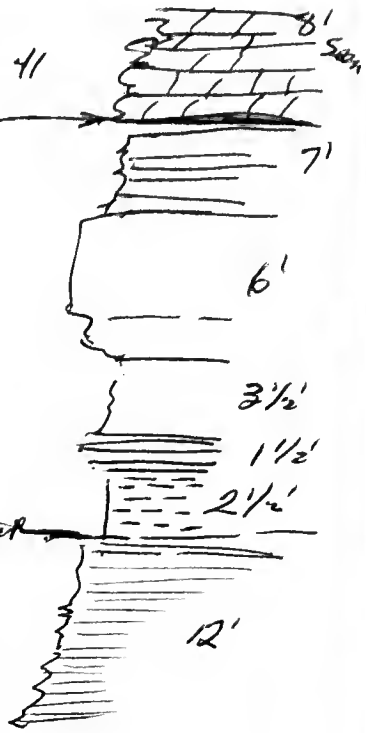
Massive siltstone

bands of clay rich and silt rich clastics

laminated siltstone

Massive, unbedded siltstone sharp contact

Red beds shale with limonitic bands of calc. siltstone



2 B/W + 1 color photos of W. side of road

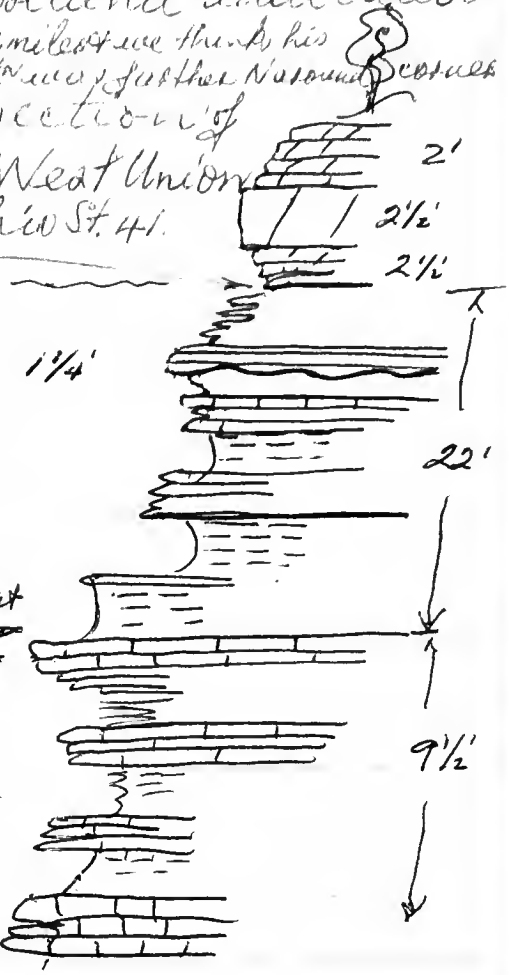
Road cut is Immediately N of Murphin Ridge Rd which enters from W side of Hwy 41

Took Ohio St Road 41 south to West Union. Road cut exposures on West side of road

5/24/95 (#2) (Holland loc.) Holland indicated 5.2 miles we think his section was further N around curves

2½ miles N of E of intersection of Ohio St. 41 & Ohio St. 41 N of West Union on Ohio St. 41.

Brassfield shaly contact



burrowed calc. dolomite siltstone,

small solitary corals

crinoids, bryozoa.

5/24/95 B — lt gray silt

Calcarenite/grainstone — road level

sandy

cross bedded in some beds.

calcarenite grainstone burrowed.

small crinoid bed

Need to workout Holland's strat sect graphs.

a very hot day - 85°F - w. sun!! = ?°F

5/25/95. Thursday.

V. heavy rain on Wed. night & Thurs. morning. Car trunk leaked & part was wet. Needed sponges

Afternoon — took Ohio Broad 125 to Georgetown. See Holland (1993-

Approach to Georgetown from west

W. side Whitcoal Cr. (43)

covered

Ls. 8" ledge at top of exposure

Ledge of LS. and siltstone/shale

Coll. 5/25/95 A float (see 5/23/95 C)

trepsind. wide broad sp. "potatochip"

Shale/silty with a few thin ls beds

Photo B+W

(float has "Bicberms" & "Refinesquina" "pectinid" bivalve.

V. Thinbedded shale & limestone

Total 4 B+W photos to cover whole ofc.

↓ cont.

5/25/95

East side of Whiteoak Creek valley on Ohio St. Rd. 125. — in road cut, there 6 or 7 lots of shale complete below the rock section exposed on west side of Whiteoak Creek — see bottom of this western exposure on the next page.

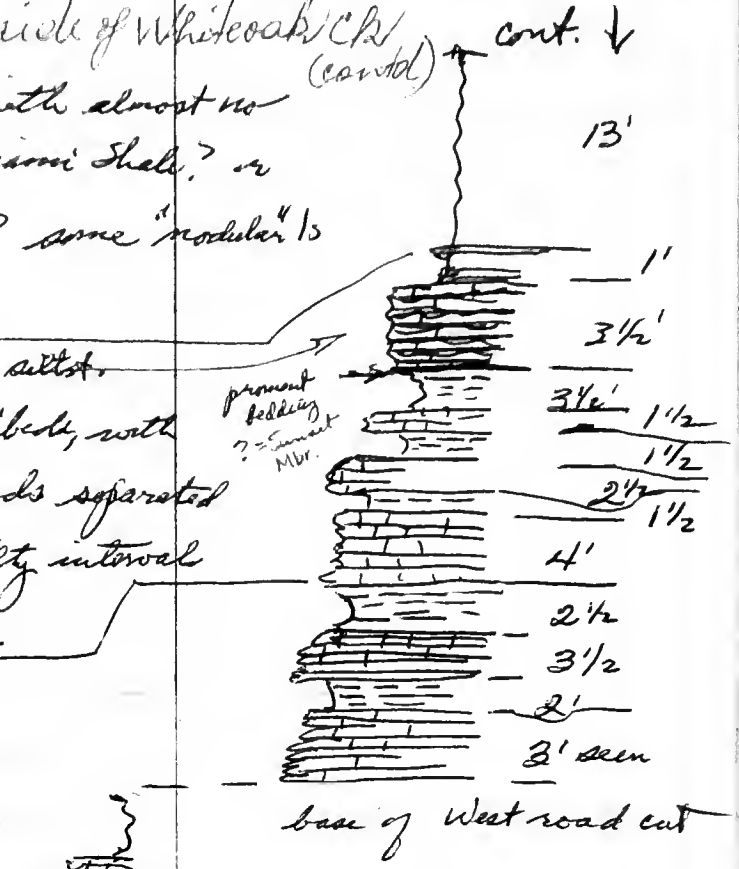
5/25/95. West side of Whiteoak/CR (contd)

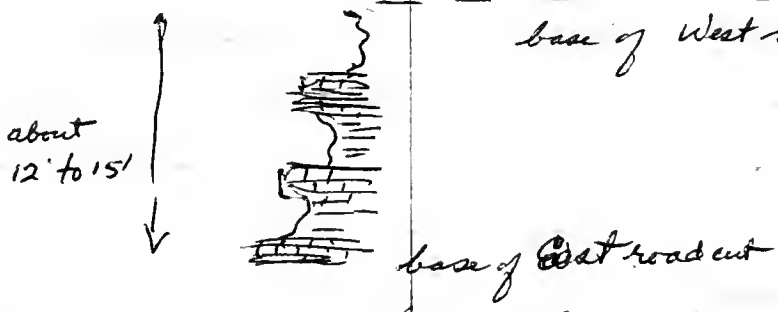
Shale/siltstone with almost no thin ls. ? Miami Shale ? or another shale ? some "nodular" ls but very thin

Ls. calcareous + silty.

Ls, thin bedded 1" to 2" beds, with shaly/silty interbeds separated by 2'± more silty interval a vague cyclicity

Ls. as above

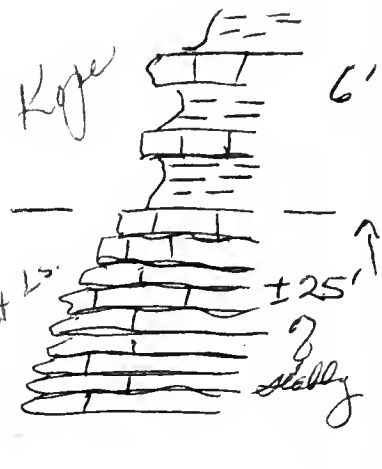




Total of 6or 7 cycles below lower shale (see previous page)

5/25/95. Point Pleasant. Holland's loc.
Turn off U.S. 52; stream exposure on N side
Stop at about .6 mile west of Pt. Pleasant city limits. Creek exposure

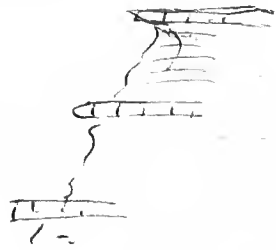
Ls. ledges (8") with 1' to 1½' siltstones



Limestone - slabby -
8" to 18" beds with thin siltstones - forms ledges in stream

Up private road to Quarry Creek Lane
exposure of lst & siltstone in NW side of access road about 20' above section sketched above; two-thirds of the way up the hill

Ls. in 2"-3" ledges in a deeply weathered shale + brown siltstones



Coll. 5/25/95/B - float but prob from a ledge right there.

5/7/95 to 6-20-95

Field trip Spring 1995. Log of study site areas

Total miles travelled 8,525 miles

1 Cannon Falls, MN

2 Sogn, MN

3 3H/3B Cummingsville & Cummingsville Annex

4 Masonic Park

5 5H/5B Fountain - W. of Fountain & other is N of Fountain

6 Rifle Hill, MN

7 Wubbel's Ravine, MN

8 E. of Chatfield, MN

9 9H/9B. 3 miles of Spring Grove, MN.

10 Kendallville, Iowa

11 ca 3 miles S & E of Kendallville, Iowa

12 3½ miles S + ¾ mile E of Decorah, Iowa

13 7½ miles SE of Decorah, Iowa

14 Church Street, Iwana, Iowa

15 Littlepoint road at bridge

16 Twin Bridges Park, ca 6 miles W of Coleburg

17 Graf, Iowa

18 Asbury, Iowa

19 Dubuque, Iowa - Loras College

20 W. outskirts of Dubuque. Heron & Dodge Streets

21 ⊗ S.E. of Dubuque, Iowa

22 Bellevue, Iowa

23 Key West, west of Dubuque, Iowa

(24) 24A/24B. Seales Mound
(25) Camden, Ohio
(26) 2 miles west of Liberty, Indiana
(27) ca 2 miles E. of Hamburg, Indiana
(28) Bonnell Hill, NE Brookville, Indiana
(29) Gart Hill; NE Brookville, Indiana
(30) RR cut at Wright Bros. Mem. Hill, Dayton Ohio
(31) Ames Aggregates Inc. X, Fairborn Fairborn Gate Plant
(32) Caesar Lake Spillway, Ohio
(33) Caesar Lake Dam, Ohio
(34) Cowan Lake Spillway, Ohio
(35) Near Batavia, Ohio Stop 1 of Hay, Pope + Hay, Oh Rte 32
(36) Near Batavia, Ohio Stop 2A of H, P + F (1981) 1981 Rte 32
(37) Nr. Batavia, Stop 2B, H, P + F, 1981. Ohio 132
(38) Arnheim, 3 miles S + W? of village
(39) Nr. Peebles, Ohio. Rexroad + Kleffner 1984
(40) 1.4 miles S of Jacksonville, Ohio - Ohio Brush Creek Stop 5B
(41) 1/4 miles S of (40)
(42) 3.2 miles N of West Union, Ohio
(43) W. side of Whiteoak Creek, W. of Georgetown Ohio
(44) Point Pleasant, Ohio
(45) at intersection of Ky 8 + Ky 1109. Near
(46) Meyer + Tobin (1981) Stop 2 on Ky 8, 1 mile W of (46) Meldahl Dam
(47) Maysville, Ky. US 68 at Hilltop Shopping Center
(48) Mason (Reidlin) Rd near junction w. Ky. 16.

(49) Stoadcut 3.1 miles N. of Madison, IN on US 421

(50) Roadcut on US 42 2½ miles east of Bedford, Ky

(51)

(52)

(53)

(54)

(55)

Locally this unconformity cuts through most of the Edenian and the Pt. Pleasant and rests on the Eden

②

~~In a~~ In general, ~~Edenian strata are~~ the Kope facies is composed of 1 to 3 meter cycles of thick silty shales and thin silty limestones, ~~and thin~~ made up of lime mudstones, wackestones and some packstones. These "deeper water" facies are ~~likely~~ 5th order ~~cycles~~ parasequences (Milankovich); some are group into poorly organized 4th order ~~parasequence~~ parasequence sets.

Near the crest of the Cincinnati Arch, these "deeper water" facies give way to ~~cycles~~ parasequences in which shelly fossils ~~that~~ gradually increase in their ~~amount of shell fossils~~ and ~~the~~ silty limestones predominate, presumably ~~as~~ in somewhat shallow water because both east and west of the Cinc. Arch. shale/limestone cycles continued to predominate well into the middle Maysvillian.

~~The~~ Within the middle Maysvillian, at the top of the Hamilton shale, (and removing it over large areas) a prominent ~~sequence~~ boundary (unconformity and) separates the Fairmont and ~~the Hope~~ Bellevue beds ~~of the~~ in view in the city of Cincinnati ~~area~~, and toward the east.

Fri Jul 01 1994

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GSA Cincinnati '81 field trip guide
BARCODE: 0001302000466
REC NO: i15974479

RILEY NELSON KINMAN
CIVIL & ENVIRON ENGG
M.L. 071
INSTITUTION: Univ. of Cincinnati
PATRON TYPE: OhioLINK Faculty

Insert A

The Cincinnatian Series (Stage?) ~~was~~ may be broadly characterized as a gradually shallowing upward succession from deeper water ramp mud-carbonate facies into shallow water dolomitic siltstone and dolofilmestone facies. At it's base ~~is~~ a ~~sudden rapid~~ abrupt change from the predominantly carbonates of the underlying Lexington Group into shale-siltstone/thin limestone ~~cycles~~ paracycles.

REPORT NA FQGL03 Western Foun
Fiscal Year: 92 G/L Transactior
As Of 30-AF

Fund: 320036 Charles & June Ross Schol Endow-P (Fund Type 61)

	Acct	Trans Date	Document Number	Document Ref Num	Tran Type	Description / Ve
Beginning Balance	S131	>	>	>	>	Claim on WWU Cas
		06-APR-92	G9210042		J089	Dist earning Qtr
		08-APR-92	G9210269		J089	To L-T Pool - 3G
		14-APR-92	G9210061		J096	92-93 Spending A
		15-APR-92	G9210062		J096	91-92 Spending A
		21-APR-92	G9210286	GA914925	J096	Prior Yr Gift Ac
		21-APR-92	G9210286	GA914925	J096	Reverse G9220233
		28-APR-92	G9210397		J089	Move fm ST Cash
		28-APR-92	G9210426	G9210061	J096	Correct FY92 Spe
Ending Balance	S131	>	>	>	>	Claim on WWU Cas
Beginning Balance	S191	>	>	>	>	Claim on WF Long
		08-APR-92	G9210269		J089	To L-T Pool - 3G
		25-APR-92	G9210329		J089	LT Pool Qtr 3 Ir
		28-APR-92	G9210397		J089	Move fm ST Cash
Ending Balance	S191	>	>	>	>	Claim on WF Long
Beginning Balance	X101	>	>	>	>	Fund Balance
Ending Balance	X101	>	>	>	>	Fund Balance
Beginning Balance	X112	>	>	>	>	Growth factor FY
Ending Balance	X112	>	>	>	>	Growth factor FY
Beginning Balance	X150	>	>	>	>	Redistribution o
		21-APR-92	G9210286	GA914925	J096	Prior Yr Gift Ad
Ending Balance	X150	>	>	>	>	Redistribution o
*****				Subttl		Fund 320036 Charles & June R

Across the crest of the Cincinnati Arch,
~~The~~ upper Maysvillian and lower to middle Richmond ~~age~~ strata
are composed of ~~couplets of~~ couplets of 4th order paraesequence
sets that alternate between ~~slightly and very~~ more ~~silty~~ silty-
rich carbonate paraesequences and more ~~to~~ carbonate-rich ones.
~~For most part~~ ~~Although~~ Carbonate packstones are common, grainstones
are ~~less so,~~ relatively rare. ② Presumably these are ~~interpreted~~
the result of alternating times of slightly deeper ~~and~~ or slightly shallower ~~and~~ depositional facies on a mid-carbonate ramp
position, however, they may represent ~~times of~~ having different amounts
of clay and silt being introduced into the depositional system.
~~"Recurrent"~~ "Recurrent" faunal facies are ~~common in~~ characteristic of several of
these alternating depositional packages.

REPORT NAME FQGL03
Fiscal Year: 92

Western Found
G/L Transaction
As Of 30-AP

Fund: 280036 Charles & June Ross Schol Endow-I (Fund Type 21)

	Acct	Trans Date	Document Number	Document Ref Num	Tran Type	Description / Ve
Beginning Balance	S131	>	>	>	>	Claim on WWU Cas
		07-APR-92	G9210063		J096	92-93 1% Admin F
		14-APR-92	G9210061		J096	92-93 Spending A
		15-APR-92	G9210062		J096	91-92 Spending A
		28-APR-92	G9210426	G9210061	J096	Correct FY92 Spe
Ending Balance	S131	>	>	>	>	Claim on WWU Cas
Beginning Balance	X101	>	>	>	>	Fund Balance
Ending Balance	X101	>	>	>	>	Fund Balance
Beginning Balance	X112	>	>	>	>	Growth factor FY
Ending Balance	X112	>	>	>	>	Growth factor FY
*****				Subttl		Fund 280036 Charles & June R

Across the crest of the Cincinnati Arch, within the Mc Millan ~~interval represents three "members"~~ ~~The~~ formation, the carbonate-rich ~~Bellevue, Corryville, and Mt. Auburn are only a large~~ Bellevue ~~parts~~ was deposited ~~in~~ relatively shallow water, the Corryville parasequences in deeper water and the Mt. Auburn relative shallow parasequence ~~in deeper water~~ ~~deeper~~: ~~and these make up one depositional sequence that may not have well developed highstand systems tracts.~~ ~~In a general sense these three "members" make up a successional progressively deepening faunal facies, with~~ These faunal facies are repeated in reverse order upward through the ~~the~~ Arnheim formation from the deepwater carbonates in the base of the Sunset ~~to shallower water~~ with its "recurrent" Corryville faunas near its top, to the Oregonia with its fossil "hash" near its top.

REPORT NAME: FQGL01 Western Foun
Fiscal Year: 92 Trial Bal

Fund: 280036 Charles & June Ross Schol Endow-I (Fund Type 21)
Orgn:

Acct	Acct Title
S131	Claim on WWU Cash
**	Level 2 Account Type 10
Subttl	Cash and Short-Term Investments
S320	Interest Receivable
**	Level 2 Account Type 12
Subttl	Receivables
S600	Due from Other Funds
**	Level 2 Account Type 15
Subttl	Interfund
****	Level 1 Account Type 01
Subttl	Assets
W100	Expenditure Control
W110	Budgeted Expenditure Control
W120	Revenue Control
W180	Transfer Control
W200	Budgetd Chng to Fund Balance
**	Level 2 Account Type 30
Subttl	Control Accounts
****	Level 1 Account Type 03
Subttl	Control Accounts
X101	Fund Balance
X109	Restricted Fund Balance
X112	Growth factor FY91
X198	Start of System Accruals
**	Level 2 Account Type 40
Subttl	Fund Balance
****	Level 1 Account Type 04
Subttl	Fund Balance
******	* * * * * * Fund Totals * * * * * *
	Assets:
	Liabilities and Fund Balance:
	Net:

Minnesota

5/12/95. Cannon Falls, Minn. (Wagner Hill section)

Sogn Roadcut, Goodhue Co.

Cummingsville & Cummingsville Annex

Masonic Park, Fillmore Co.

Roadcut & quarry 1 mile W. of Fountain & alternate road

Float in Decorah Shale.
5/14/95/A Spring Grove X (2 bags)

5/15/95/A ¼ mile S. of Graf, lower part of Maquoketa Fm.

5/16/95/A Sparry calcite. Dubuque.

5/21/95/A
5/21/95/B.
5/21/95/C
N side of RR cut at Nedge of Wright Bros. Memorial Hill, Fairborn, Ohio

5/19/95/A
5/19/95/B
5/19/95/C
5/19/95/D.
5/19/95/E
5/19/95/F
5/19/95/G.

See strat. section collected 6/11/63 - AA through AH. Old road just west of Camden on Paint Creek, parallels State 725 Brookville fm, prob. lower part.

5/20/95/A
B
C
D
E

2 miles ± W. of Liberty, Indiana, road cut on Indiana 44. Union Co. (See Fox 1962).

F — Near N. Hamburg. Union Co See Fox, 1962.

G
H
I
K

Bonwell Hill, mile NE of Brookville, Indiana (Hay, Pope & Frey, 1981)

L
M
N
O

½ mile N of road to Gar Hill Marina.

5/22/95/A. float. Caesar Lake Spillway Holland's (1993) section. Ohio

5/22/95/B. float. Caesar Lake Spillway Ohio

5/22/95/C. On top of road cut at Caesar Lake Spillway Ohio

5/23/95/A ~~Bauer road~~ Exit 1 (W side) Batavia Ohio. Road cut on on ramp, lower units float (Hay, Pope & Frey 1981, Stop 1. Ohio 32. N. side

5/23/95/B. Exit 1 (W. side) Batavia, Ohio. Road cut on ramp entrance to Ohio 32. Opp. side - S. side - thicker section float. (Hay, Pope & Frey, 1981, Stop 1.

5/23/95/C. Stop 2A of Hay, Pope & Frey, 1981 Float; Bellvue Shale E. Road ~~cu~~ cut, S. side, Ohio 32 near Batavia, Ohio

5/23/95/D. Stop 2B of Hay, Pope & Frey, 1981 Float. "Excello Mbr." of Brookville Fm. on Ohio 132 at Filager Rd.

5/24/95/A. W. face of road cut - float at base of Belfast Mbr. on ledge above road. Ohio St. rte 41, immed. S. of crossing of Ohio ~~Bch~~ Brush Ck. 1.4 miles S. of Jacksonville, Ohio

5/24/95/B. Holland loc. 3.2 miles N of intersection of Ohio St. rte 247 & 41 in West Union, Ohio. Brassfield Fm.

5/25/95/A. Holland loc. W. of Georgetown Ohio. Road cuts along Ohio State Route 125 on (~~W~~ N side of road cut) on W side of Whiteoak Creek

5/25/95/B Holland's (1993) Pt. Pleasant loc. Stream exposures on NE side of U.S. 52, 0.3 miles W. of western city limits of Pt. Pleasant, Ohio.

5/26/95/A. Meyer et al. Stop 2 on Ky Hwy 8. (1981) Float in lower few ft of Kope Fm Near Meldahl Dam on Ohio River

5/26/95/B. Reference Meyer et al. (1981). Float with at least 2 lithologies. Hill cut at back of Hilltop shopping center on US 68, Maysville, Ky

5/27/95/A. Reidlin (Mason) Road Cut at Intersection of Mason Rd & Ky St. Hwy 16 See p. 50, Tobin & Pryor in Meyer et al. (1991) road log — strat. section. Coll. lower part of Fairview Fm, ± 30 ft above base of fm.

5/31/95/A. Holland (1993), Madison No. 3; roadcut on east side of US 421, 3.1 miles N. of intersection with Indiana Hwy 56 in Madison, Indiana

5/31/95/B. — 2 collections at 2 diff. positions in strat. section

5/31/95/B-D. Same strat. section

5/31/95/G to 5/31/95/H & 5/31/95/J

Redford, Ky. Holland (1993). Roadcut on U.S. 42, 2.5 miles east of intersection

Road Log. Spring Field Trip May-June, 1995

Sunday May 7. Elm - Ellensberg via Snoqualmie Pass

Monday May 8. Ellensburg - Missoula

Tuesday May 9. Missoula - Billings - Sheridan

Wednesday May 10 Sheridan - Mitchell

Thursday May 11. Mitchell - Rochester

Friday May 12. Rochester

Saturday May 13. Rochester

Sunday May 14. Rochester - Dubuque

Monday May 15. Dubuque

Tuesday May 16. Dubuque

Wednesday May 17. Dubuque - Urbana

Thursday May 18. Urbana Ill - Kingwood / Dayton Ohio

Friday, May 19. Englewood/Dayton

Saturday May 20. Englewood/Dayton

Sunday May 21. Cincinnati East

Monday May 22 Cincinnati East

Tuesday, May 23 Cincinnati East

Wednesday, May 24. Cincinnati East

Thursday May 25. Cincinnati East

Friday, May 26. Cincinnati East

Saturday, May 27. Elizabethtown, Ky.

Sunday, May 28. Elizabethtown, Ky

Monday, May 29 Elizabethtown, Ky.

Tuesday, May 30. Jeffersonville, IN.

Wednesday, May 31. Jeffersonville, Indiana

Jeffersonville to St. Louis 175 miles

Thursday, June 1. St. Louis, MO. Fenton Motel p. 148
or St. Louis South, p. 149

St. Louis to Tulsa 400 miles

Friday, June 2. Tulsa, OK. Tulsa East Motel p. 185

Tulsa to Amarillo 400 miles

Saturday, June 3 Amarillo, TX Hotel p.
Amarillo Motel p. 201

Amarillo to Albuquerque 400 miles

Sunday, June 4 Arrive Albuquerque, NM

164

Holland, S. M., 1993, Sequence stratigraphy of a carbonate-clastic ramp, the Cincinnatian Series (Upper Ordovician) in its type area: Geological Society of America Bulletin v. 105, p. 306-322.

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Weiss, M. P. + Norman, C. E, 1960.
Ohio Geol. Survey Inf. Circular v. 26, p. 1-14.