

Hannibal Shale¹

Hannibal Group

Hannibal Shale (in Easley Group)

Lower Mississippian: Northeastern Missouri, western Illinois and southeastern Iowa.

Original reference: C. R. Keyes, 1892, *Geol. Soc. America Bull.*, v. 3, p. 289.

J. M. Weller, 1948, (abs.) *Am. Jour. Sci.*, v. 246, no. 3, p. 150. In type area in Mississippi Valley, Easley group (new) consists of Hannibal shale and Chouteau limestone and related groups or formations.

L. A. Thomas, 1949, *Geol. Soc. America Bull.*, v. 60, no. 3, p. 410. Lateral tracing by means of well cores and similarity of conodont assemblages indicates that Hannibal formation grades laterally into English River and Prospect Hill siltstones of Iowa. Term Hannibal has priority over English River; therefore English River and Prospect Hill are considered members of Hannibal formation.

M. A. Stainbrook, 1950, *Am. Jour. Sci.*, v. 248, no. 3, p. 209, 210. English River siltstone and Maple Mill shale are not considered members of Hannibal shale.

L. E. Workman and Tracey [Tracy] Gillette, 1956, Illinois Geol. Survey Rept. Inv. 189, p. 8 (fig. 1), 20-28. Rank raised to group. Includes formations that lie above Louisiana limestone and beneath the Chouteau. Comprises (ascending) Glen Park siltstone, Maple Mill shale, and English River siltstone. Where the Louisiana is absent, group rests on the Saverton, and where Saverton is absent it lies on Grassy Creek shale. In small area in westernmost Illinois, McCraney formation of North Hill group overlies the Hannibal and where neither the Chouteau nor McCraney is present, the Hannibal is overlain by Osage strata.

T. J. Laswell, 1957, Missouri Geol. Survey and Water Resources Rept. Inv. 22, p. 9 (fig. 2), 34-39, pl. 1. Formation described in Bowling Green quadrangle where it is 90 to 121 feet thick. Composed of two lithologies: upper siltstone to fine-grained sandstone and lower silty shale. Unconformably overlies Louisiana wherever latter is present; where Louisiana is absent, formation lies unconformably on Saverton. Underlies Chouteau formation; where Chouteau is absent, underlies Burlington formation.

M. G. Mehl, 1960, Denison Univ. Jour. Sci. Lab., v. 45, art. 5, p. 98, 99. Unconformably overlies Cuivre shale (new) in Pike County, Mo.

Named for exposures at Hannibal, Marion County, Mo.

Hannibal shale. (Of Kinderhook group.)

Mississippian: Northeastern Missouri, southeastern Iowa, and western Illinois.

C. R. Keyes, 1892 (Geol. Soc. Am. Bull., vol. 3, p. 289). *Hannibal shales*.—Fossiliferous shales, 70 to 100 ft. thick; upper portion sandy in places and often forms rather compact shaly ss.; lower portion bluish or greenish clay shales. Equiv. of Vermicular shales of Swallow. Underlies Chouteau ls. and overlies Louisiana ls. All included in Kinderhook group.

This continued for many years to be definition of Hannibal sh.

R. C. Moore, 1928 (Mo. Bur. Geol. and Mines, vol. 21, 2d ser., table opp. p. 282), showed Glen Park ls. as underlying Hannibal sh. and overlying Louisiana ls. in Jersey and Calhoun Counties, SW. Ill., and that elsewhere (Pike Co., central western Ill., and Pike and other counties in Mo.) the Hannibal is uncon. on Louisiana ls., the Glen Park being absent. In 1935 (Rept. 9th Ann. Field Conf. Kans. Geol. Soc., p. 245) Moore showed Hannibal sh. as present in only W. Ill. and NE. Mo., and that in S. Ill. and SE. Mo. the Fern Glen is uncon. on Glen Park, through absence of Chouteau ls. and Hannibal sh.

Named for exposures at Hannibal, Marion Co., Mo.

1961

Hannibal formation

Collinson, Charles, The Kinderhook Series in the
Mississippi Valley: Kansas Geol. Soc. Guidebook,
26th Ann. Field Conference

p. 100-101, 103, 106

G(267)
qK13

Kinderhook
Mississippian

W Illinois

5738-62

Hannibal Fm.

1961

Spreng. A. C., Mississippian System, in The Strati-
graphic succession in Missouri: Missouri Geol.
Survey and Water Resources, 2d ser., v. 40 (263)
M6r

p. 54-55

Kinderhookian Ser.
Miss.

Missouri

Hannibal fm.

1961

McCracken, M. H., (compiler) and others, Geologic map of Missouri (1:500,000): Missouri Div. of Geol. Survey and Water Res.

Kinderhook
Miss.

Missouri

Hannibal Fm.

1964

Conkin, J. E., and Conkin, B. M., Mississippian
foraminifera of the United States. Part I, The
Northview Formation of Missouri: Micropaleontology,
vol. 10, no. 1

Fig. 3, p. 26

602
qM57

In Deal Survey V 35

Miss.

SW Missouri

Hannibal fm.

1961

Howe, W. B. (Coord.) and Koenig, J. W. (Ed.), The stratigraphic succession in Missouri: Missouri Geol. Survey and Water Resources [Report], v. 40, 2nd Ser.

(263)

M6r

p. 42, 50, 54-55

Disconformably overlies Louisiana fm. in places.

Locally overlies Grassy Creek, Callaway, or Maquoketa.

Overlain by Chouteau gp. or Burlington fm.

Kinderhookian Ser.

Mississippian

Missouri

Hannibal Sh.

1964

Odom, Ed., and others, Geological Science Field
Trip, Jonesboro area: Illinois Geol. Survey Guide
Leaflet 1964-D (253)
q115gsf

Fig. 3

Kinderhookian

Miss.

So. Illinois

Hannibal fm.

1965

Conkin, J. E., and others, Mississippian foraminifera of the United States; pt. 2- The Hannibal formation of northeastern Missouri and western Illinois: Micropaleontology, v. 11, no. 3.

p. 335, 340

Kinderhookian
Miss.

NE Mo.
W. Ill.

Hannibal

1967

Collinson, Charles, Devonian of the North-Central
Region, United States: Internat. Symp. on
Devonian System: Canada. Alberta Soc. Petroleum
Geol., Calgary, v. 1, (D. H. Oswald, ed.).

p. 933-971

335
qIn8p

939, 962

Miss.

SW. Ill., NE. Mo.

Hannibal Sh.

1967

Willman, H. B. and others, Geologic Map of Illinois:
Illinois. State Geol. Survey, Dept. Registration &
Education, scale at 1:500,000. (1" = 8 mi.)

Miss.

N. Illinois

Hannibal Fm.
(Chouteau Gp.)

1967

Conkin, J. E. and Conkin, B. M., Arenaceous
Foraminifera as a Key to Upper Devonian-Lower
Mississippian Relationships in the Type
Mississippian Area: Kansas. Univ., Dept.
Geology, Spec. Pub. 2.

p. 85-101 G(267)
89 K135sp

Low. Miss.

NE, Mo.

Hannibal Gp.

1968
pub.

Conkin, J. E. and Conkin, B. M., Devonian-
Mississippian Boundary in the type Mississippian
Area of North America: in Abs. for 1967, GSA Spec.
Paper 115.

p. 38-39

G(200)
G29sp

incl. Glen Park Ls. Mbr.

Low. Miss.

NE. Mo.-W. Ill.

Hannibal fm.

1968
pub.

Conkin, J. E. and Conkin, B. M., Devonian-
Mississippian Boundary in the type Mississippian
Area of North America: in Abs. for 1967, GSA Spec.
Paper 115.

p. 38-39

G(200)
G29sp

Low. Miss.

NE. Mo.-W. Ill.

Hannibal Sh.

1968

Frey, R. P., Distribution and Genesis of Dolomite
in Kinderhook Rocks of Missouri: Dissert. Abs.,
sec. B, v. 28, no. 9, Mar.

p. 3750

043
qD63

Kinderhookian
[Low. Miss.]

Mo.

Hannibal Fm.
(Chouteau Gp.)

1968

Conkin, J. E., Conkin, B. M., and Canis, W. F.,
Mississippian foraminifera of the United States-
pt. 3-the limestones of the Chouteau Group in
Missouri and Illinois: in *Micropaleontology*,
v. 14, no. 2, Apr.

p. 133-178

Kinderhook-Osage
Low. Miss.

NE. Mo. & W. Ill.

Hannibal fm.

[1969]

Collinson, Charles, Devonian-Mississippian
Biostratigraphy of northeastern Missouri and western
Illinois: N. Am. Paleont. Conv. Gdbk. #3, Sept.

p. 1-23

3, stops 2 + 6

in USGS library
but not catalogued

incl. Hamburg oolite [mbr.](Pike Co., MO)

2.79

incl. Nutwood mbr. (Calhoun Co., IL)

MLH

Low. Miss.

MO IL

Hannibal Fm.

1969

Brown, D. D., Palynology of the Hannibal Formation
(Lower Mississippian) of Northeast Missouri and
Western Illinois: Dissert. Abs., sec. B, v. 30,
no. 4, Oct. p. 1750-51

043

qD63

incl. Nutwood Mbr. (realloc.)

Low. Miss.

NE. Mo. & W. Ill.

Hannibal Sh. (pt.)

1969

Rexroad, C.B., Conodonts from the Jacobs Chapel Bed
(Mississippian) of the New Albany Shale in Southern
Indiana: Indiana. Geol. Survey Bull. 41.

p. 1-55

(252)

2 & 3

B

corr. with Jacobs Chapel Bed

Kinderhookian
Low. Miss.

Miss. V. only
S. Ind.

Hannibal Fm.

1970

Wagner, R.G., Guidebook to the Highway Geology
of Missouri, Route 79TR, Hannibal to Clarksville:
Mo. Assoc. Geol., 17th Ann. F.T. Sept.

p. 1 - 17

G(263)

4 - 5

qAs75g

picked up to show use

Kinderhookian Ser.

Miss.

NE. Mo.

1972

Hannibal Ss.

Golden, Julia and Nitecki, M. H., Catalogue
of Type Specimens of Fossil Brachiopods in
Field Museum of Natural History: Fieldiana
Geol., Field Mus. Nat. Hist., Chicago,
v. 25, Geol. Ser., Feb.

p. 1-307

G(253)

F46

52

(to show use)

Miss.

Louisiana,
Mo.

Hannibal Sh. (max. - 100')

1968

Canis, W. F., Conodonts and Biostratigraphy of the
Lower Mississippian of Missouri: J. Paleont., v. 42,
no. 2, Mar.

G(200)

p. 525-555

J83p

527 (F. 2)

525, 528

blue-green sh.
yellow-brown sts.

(Kinderhookian)

Low. Miss.

NE. MO

Hannibal Sh (75-100')

1973

Willman, H. B., Geology along the Illinois Waterway--A
Basis for Environmental Planning: Illinois Geol Survey,
Circ #478 (253)
p. 1-48 qI16i

[detailed lith & good refs]

8-9(F.2 & 3)

19

gray sh w/ sts

(Kinder)
Miss

IL

Hannibal Fm. (here lith. & age ch.)

1973

Conkin, J. E. & Conkin, B. M., The Paracontinuity and the Determination of the Devonian-Mississippian Boundary in the Lower Mississippian Type Area of North America: Kentucky Univ. Louisville, Stud. in Paleont. & Stratig. #1.

G(238)

p. 1-36

qL931sp

1, 8 (F. 4), 20 (F. 10)

14-age here considered entirely Kinderhook sh. & sts.

blue-gray & olive-gray

incl. Cuivre Mbr.

Horton Creek Mbr. (new, f.p.)

Low. Miss.

w, IL & nw, MO

Hannibal Mbr (max 100') (here adopted by IN) 1974
(New Albany Sh)

Becker, L.E., Silurian and Devonian Rocks in
Indiana southwest of the Cincinnati Arch: IN
Dept. Nat. Resources, G.S. B. no. 50. (252)
p. 1-83, pl. 1. [good corr. ch. in pocket] B
[geog ext to IN] of Keyes, 1892

4, 45, 48-author proposes applying name to "green-
graysh^{sh} under black sh of New Albany" & ref sec design
under: Rockford Ls (Low Miss)

over: unnamed mbr of New Albany Sh (M Dev to Low
Miss)

Low Miss

subsurf.

sw, c, s. IN

Hannibal Fm

1975

Conkin, J. E. and Conkin, B. M., The Devonian-
Mississippian and Kinderhookian-Osagean Boundaries in
the East-Central United States are Paracontinuities:
Louisville Univ (KY) Stud in Paleont and Strat no 4.
p 1-54

G(238)
qL931sp

incl Cuivre Mbr (ne. MO)
Horton Creek Mbr (w. IL)

over: Saverton Sh (w. IL)
over: Louisiana Ls (ne. MO)

Low Miss

Pike Co
ne. MO; w. IL

Hannibal Sh
(New Albany Gp)

1976

Reinertsen, D. L.; Berggren, D. J.; Killey, M. M.; Geol
Sci Field Trip...Carrollton Area: IL G.S. Guide Leaflet
#1976 A & C. (253)

p. 1-37

qI15gsf

2(F.1)..strat sec

over: "Glen Park" Ls, New Albany Gp (10')

Low.Miss

wc.IL

Hannibal Fm [add lith, gp assign]
(Chouteau Gp)

1979

Anderson, K. H. and others, Geologic Map of Missouri:
MO G.S., scale 1:500,000. Note on map says: "This map
contains strat names in current use as established by
Stratigraphy Committee of the MO Geol Survey."

(Kinderhookian Ser)
Miss

e&ne.MO

Hannibal Mbr
(New Albany Sh)

1979

Lechler, P. J.; Hasenmueller, N. R.; Bassett, J. L.;
Leininger, R. K., Distribution and geochemical character-
ization of the Hannibal Member of the New Albany Shale in
Indiana: U.S. DOE, Tech Info Center, 3rd Eastern Gas
Shales Symp Oct, Hilma Barlow, ed
p. 511-525

P(200)
En27merc
SP 79/6

correl w/ Jacobs Chapel (top), Henryville, Underwood, and
Falling Run Beds (se.IN outcrop area)

under: Rockford Ls (Low & M.Miss) or
New Providence Sh (M.Miss)

over: Clegg Creek Mbr, New Albany Sh (U.Dev)

Illinois Basin, subsurface

Dev to (mostly) Miss

IN

Hannibal Sh.
(New Albany Gp.)

1981

Cloos, M. and Baxter, J., Subsurface variation in the
high-calcium Dolbee Creek Limestone in western
Illinois: IL G.S. IL Mineral Notes #78, Jan. p. 1-23,
5(F.3)...strat. relationships (253)

q115imn

3, 7, 8(F.5)...shows sts + sh facies, 14

under: McCraney Ls., North Hill Gp.
unit is base sec.

Low. Miss.(Kinderhookian)

w. IL

Hannibal Sh (max 34 m)
(New Albany Sh Gp)

1981

Cluff, R. M.; Reinbold, M. L.; Lineback, J. A., The New Albany Shale Group of Illinois: IL G.S. Circ. 518 p. 1-83, plates(4)..geophys log x-secs (separate)

1.."to some extent each fm grades lat into another"

3.."drill-holes & outcrops are studied for (253) hydrocarb potential"; 55(F.46)..age & correl qI16i

50-54; 54.."relative proportions of Dev & Miss strata are not known" incl. Nutwood Mbr

in some places: not distinct fr Saverton Sh

under: Burlington or Chouteau Ls (Miss)

over: Horton Creek, Louisiana, Saverton (U.Dev-Low.Miss)

equiv to: Jacobs Chapel, Henryville, & Falling Run Beds

U.Dev to Low.Miss

(IL Basin) IL

Hannibal Sh (100') [State usage] [overview]

1986

Thompson, T.L., Paleozoic succession in Missouri, Part 4:
Mississippian System: MO Dept Nat Res, Div Geol & Land
Survey, Rept Inv 70 (263)

p. 1-182..[excellent reference: incl history of M6ri
nomen and figs for each unit]

19-23; 23.."future work may determine that the Cuivre
shale should be recog as formal mbr of Hannibal"

under: Burlington Ls (Osage)

over: Louisiana Ls (Late Dev)

(early Kinderhookian)

Miss

ne MO