

PLANT FOSSILS FROM THE ILLINOIS BASIN
AT THE SMITHSONIAN INSTITUTION

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February 1994

The following is a list of fossil plant specimens that were collected in the Illinois Basin and deposited with the National Museum of Natural History, Smithsonian Institution in Washington, D.C. These collections were made largely by geologists and paleontologists of the U.S. Geological Survey between 1885 and 1940. This is not a complete list of Illinois Basin plant material at the Smithsonian, as it does not include extensive collections made by Smithsonian scientists through the years.

At the invitation of William A. DiMichele, paleobotanist with the Smithsonian, I traveled to Washington and examined locality data for the USGS collections. Locality data are handwritten in 12 notebooks in the Type Room of the Paleobiology Department. Many locality notations are incomplete, vague, enigmatic, or refer to geographic features that no longer exist. My assignment was to deduce more complete and accurate geographic and stratigraphic data wherever possible. By referring to modern and vintage topographic maps, geologic maps, coal maps, and other published and unpublished sources, I was able to improve location/stratigraphic data for a large majority of the collections.

For each entry, the original notation from the notebooks is transcribed. This is followed by my discussion and interpretation of the geographic location and the stratigraphic unit or interval of the specimens.

Principal sources of information are: for Kentucky, the geologic quadrangle maps published jointly by the U.S. and Kentucky Geological Surveys; for Indiana, the Preliminary Coal Map Series (published by county) and the Regional Geologic Map Series (scale 1:250,000), both published by the Indiana Geological Survey; for Illinois, the county-by-county Mined-Out-Area-Maps, the Illinois Geologic Quadrangle Series, and other reports and geologic maps published by the Illinois State Geological Survey.

Book 1—Specimens 1-526

68. Coal Measures, Mazon Creek, **Grundy County, Illinois**—from American Museum of Natural History.
The famous Mazon Creek flora and fauna comes from siderite concretions in the **Francis Creek Shale overlying the Colchester Coal**, Carbondale Formation, Desmoinesian Series.
69. **Grundy County, Illinois**—A. H. Worthen Acc. 15658.
This is probably another Mazon Creek collection like #68. A. H. Worthen was the first State Geologist of Illinois.
168. Carboniferous, **Edgar County, Illinois**—wood received from Illinois Geological Survey.
The state geologic map of Illinois (H. B. Willman and others, 1967, Illinois State Geological Survey) shows surface bedrock in Edgar County ranges from the Carbondale Formation (Desmoinesian Series) through the Mattoon Formation (Missourian and Virgilian Series).
222. Grundy County, Illinois—collected by F. L. Green, 1885.
Again, probably Mazon Creek flora, as for #68.
225. Indiana Coal Measures—from F. M. Noe, 1896.
234. Carboniferous, Mazon Creek, Illinois—**from unknown.**
Mazon Creek is in **Grundy County**, but the name Mazon Creek commonly refers to all fossils found in siderite concretions in the **Francis Creek Shale above the Colchester Coal** in northern Illinois. See #68.

290. **Orange County, Indiana**, fossil plants—collector unknown.

The best-known fossil flora from Orange County is that of the **Hindostan whetstone beds** in the lower part of the Mansfield Formation, Morrowan Series. However, surface bedrock in Orange County ranges from the Blue River Group (Meramecian) through the Raccoon Creek Group (Morrowan to lower Desmoinesian). Source: Gray and others, 1970, Indiana Geological Survey, Regional Geologic Map 3.

Book 2—Specimens 527-1043

No specimens from Illinois Basin.

Book 3—Specimens 1044-1590

No specimens from Illinois Basin.

Book 4—Specimens 1591-2215

1799. Station No. 48 Shale, sandstone and siltstone (?) at lower end of cutoff of Wabash River, just below New Harmony, **Posey County, Indiana**—collected by Victor Barnett, July 28, 1898.

Most likely location is SE $\frac{1}{4}$ NW $\frac{1}{4}$, **Sec. 11, T5S, R14W**, Solitude Quadrangle. Present channel of Wabash River cuts directly into bluff at this point, about 1 $\frac{1}{2}$ mile southwest of New Harmony. Old channel (state line) is in floodplain to west. Geologic map of Vincennes Quadrangle (Gray et al., 1970, Indiana Geological Survey Regional Geologic Map 3) indicates Bond Formation here. However, a structure map based on well data (Tanner et al., 1981, Indiana Geological Survey Miscellaneous Map 33) indicates the site is within a graben and the Springfield (V) Coal is approximately 700 feet below sea level or 1050-1100 feet below the surface. This would place the specimens higher stratigraphically, well into the Mattoon Formation and probably of **Virgilian age**.

1800. Perry County, Indiana—specimen discarded.

1801. Station No. 32 Kaskaskia rock in road 3 miles west of Derby, **Perry County, Indiana**, NW $\frac{1}{4}$, **Sec. 31, T5S, R9W** (sic)—collected by Victor Barnett, June 29, 1898.

Correct locality probably is NW $\frac{1}{4}$, **Sec. 31, T5S R1W**, Derby Quadrangle. This site is mapped as **Middle Chesterian**, between Menard and Glen Dean Limestones (Gray et al., 1970). "Kaskaskia" is an old name for the Chesterian Series.

1802. Station No. 34 Cannelton's Co.'s coal bank from shale just over coal, Cannelton, **Indiana**—collected by Victor Barnett, July 2, 1898.

Cannelton Quadrangle, **Perry County**. Mining at Cannelton was predominantly in the **St. Meinrad Coal**. Source: Hutchinson, 1971, Indiana Geological Survey Coal Map 14.

1803. Station No. 45 Coal measure shale $\frac{1}{2}$ mile north of Eckerts (sic), **Crawford County, Indiana**—collected by Victor Barnett, July 19, 1898.

Approximately central part of **Sec. 22, T2S, R2W** (assuming Barnett meant Eckerty). The map of Gray and others (1970, Indiana Geological Survey Regional Map 3) indicates this site to be near the base of the Raccoon Creek Group, which in this area is probably **lower Mansfield Formation, Atokan Series**.

1804. Station No. 44 Shale 3 miles southeast of Eckerts (sic), **Crawford County, Indiana**—collected by Victor Barnett, July 19, 1898.

If Barnett meant Eckerty, this is approximately NE $\frac{1}{4}$, **Sec. 1, T3S, R1W**. Stratigraphically it is either upper Chesterian (above Menard Limestone) or lower Mansfield Formation (Raccoon Creek Group) (Gray et al., 1970, Indiana Geological Survey Regional Map 3).

1805. Station No. 47 Shale at Big Creek bridge west of Blairsville, **Posey County, Indiana**—collected by Victor Barnett, July 26, 1898.
 Bridge across Big Creek on modern U.S. 460 is ½ mile northwest of Blairsville in **SW¼ SW¼, Sec. 16, T5S, R12W**, Wadesville Quadrangle. Geological map of Gray et al. (1970) indicates Patoka Formation, which is of **early Missourian age**.
1806. Station No. 35 Coal: Joseph Naviauxes shale above coal, northeast Ranger P.O., 1½ mile, **Perry County, Indiana**—collected by Victor Barnett, July 6, 1898.
 Ranger is in **Sec. 12, T5S, R3W**, Gatchel Quadrangle. Indicated locality probably is along Sulphur Fork in **NE¼, Sec. 6, T5S, R2W**, near Mississippian-Pennsylvanian boundary.
1807. Station No. 38 Kaskia (sic) shale in bed west across road from schoolhouse, **SW¼, Sec. 31, T4S, R2W, Perry County, Indiana**—collected by Victor Barnett, July 8, 1898.
 Indicated locality in Gatchel Quadrangle is rugged, wooded, terrain. No schoolhouse; nearest road is along Sulphur Fork in **SW¼ SW¼ SE¼, Sec. 31**. "Kaskia" probably should read Kaskaskia, i.e., Chesterian Series. Map of Gray et al. (1970) shows Buffalo Wallow Group (**upper Chesterian**).
1811. Station No. 24 Shale at Ohio River bank, Tell City, **Perry County, Indiana**—collected by Victor Barnett, July 14, 1898.
 Tell City Quadrangle. Shale in the riverbank would be below the St. Meinrad Coal (**near base of Tradewater Formation**). Source: Hutchinson, 1971, Indiana Geological Survey Coal Map 14.
1813. Station No. 47 Shale at Big Creek bridge just west of Blairsville, **Perry County, Indiana**—collected by Victor Barnett, August 5, 1898. See No. 1805.
1814. Station No. 54 Shale in river on Jas. M. Haine's farm in **Sec. 12, T5S, R12W**, west of St. Wendels, **Posey County, Indiana**—collected by Victor Barnett, August 6, 1898.
 Most likely along Clear Creek in **SW¼, Sec. 12**, Kasson Quadrangle. Stratigraphically this is near the Carthage Limestone (formerly called Shoal Creek Limestone) of **Missourian age** (Gray et al., 1970).
1815. Station No. 55 Shale in w. at roadside between St. Wendels and Blairsville, **Indiana**—collected by Victor Barnett, August 6, 1898.
 St. Wendel is in **Sec. 12, T5S, R12W, Posey County**, Kasson Quadrangle, and Blairsville is four miles southwest, in Section 21, same township, Wadesville Quadrangle. There is no direct road between the two towns, so an accurate location cannot be deduced. Most likely, this is in the Patoka Formation (below Carthage Limestone), but it could be lower part of Bond Formation. In either case the specimens are of **Missourian age**. Source: Gray et al., 1970, Indiana Geological Survey Regional Map 3.
1940. Station No. 19 Coal bank, Andrew Mannis, 1½ mile north of Evanston, **Spencer County, Indiana**—collected by Victor Barnett, June 1, 1898.
 The **Mariah Hill Coal** crops out and was mined in several areas 1 to 1½ miles north, northeast and northwest of Evanston. This could be in **Sec. 22, 26, 27, or 28, T5S, R4W**, Fulda Quadrangle. Source: Hutchinson, 1959, Indiana Geological Survey Coal Map 8.
1941. Station No. 21 Shale bluff, Tell City, **Perry County, Indiana**—collected by Victor H. Barnett, June 4, 1898.
 High bluff of Ohio River on south side of Tell City is in **SW¼, Sec. 32, T6S, R3W and Sec. 5, T7S, R3W**. Specimens are stratigraphically close to **St. Meinrad Coal**. See No. 1811.

1942. Station No. 22 Bluff, east bank Anderson, 2 miles above Troy, **Perry County, Indiana**—collected by Victor Barnett, June 8, 1898.

This could be one of several places, depending up whether crow-flight or river mileage was meant. The Anderson River meanders tightly. High east bluffs are in NW¼, **Sec. 7, E½ NE¼, Sec. 7, and SE¼ SE¼, Sec. 6, T6S, R3W**, Fulda Quadrangle. Stratigraphically, this is close to the **St. Meinrad Coal**. Source: Hutchinson, 1971, Indiana Geological Survey Coal Map 14.

Book 5—Specimen 2216-2877

2797. Original No. 9 French Lick (sic), **Orange County, Indiana**, Hindustan (sic) Whetstone—collected by V. H. Barnett, 1898.

French Lick or Hillman Quadrangle. The **Hindustan whetstone beds** are in the lower part of the Mansfield Formation and are of Morrowan to early Atokan age (Russel A. Peppers, unpublished chart).

2799. Station No. 28 Kaskaskia rock 1 mile east of German Ridge P.O., **Perry County, Indiana**—collected by V. H. Barnett, June 23, 1898.

German Ridge (topographic feature) is in SW¼, **Sec. 36, T6S, R2W**, Rome Quadrangle. A site 1 mile east would be in SW¼, **Sec. 31, T6S, R1W**, and would probably be between the Glen Dean and Beech Creek Limestones of middle Chesterian age (Gray et al., 1970).

2800. Station No. 18 Coal bank near Wickliffe, **Crawford County, Indiana**—collected by V. H. Barnett, May 30, 1898.

Wickliffe is located in the SW¼, **Sec. 4, T2S, R2W**, near northeast corner of Birdseye Quadrangle. This is lower part of Raccoon Creek Group, probably Mansfield Formation, **Atokan Series**, (Gray et al., 1970).

2801. Station No. 20 Coal mine, Bergenroth Bros., Troy, **Perry County, Indiana**—collected by V. H. Barnett, June 6, 1898.

The Bergenroth Bros. mine at Troy was a shaft mine in the **St. Meinrad Coal**, located near southeast corner, **Sec. 31, T6S, R4W**, Perry County, Tell City Quadrangle. Source: Hutchinson, 1971, Indiana Geological Survey Coal Map 14.

2802. Station No. 11 From shale under Middle Kaskaskia limestone ¼ mile west of French Lick, **Orange County, Indiana**—collected by V. H. Barnett, May 21, 1898.

The site probably is in the east part of **Sec. 4, T1N, R2W**, Hillman Quadrangle (near border with French Lick Quadrangle). **Middle Chesterian** (Hardinsburg or Big Clifty Formation) is a reasonable call, but cannot be confirmed without a more accurate location. Source: Gray et al., 1970, Indiana Geological Survey Regional Geologic Map 3.

2803. Station No. 25 Coal bank, Powell's, SE¼, **Sec. 27, T6S, R3W**, 3½ miles northeast of Tell City, **Indiana**—collected by V. H. Barnett, June 18, 1898.

The coal bank (i.e., a small-scale, family-operated coal mine) probably was along a large east-trending drainage tributary to Neglie Creek, on the Cannelton Quadrangle, **Perry County**. The map of Hutchinson (1971, Indiana Geological Survey Coal Map 14) shows numerous small drift mines in the **St. Meinrad Coal** in this area.

2809. Station No. 270 "Kaskaskia" 3 miles west of Rome, on Cannelton-Rome Road, NE¼, **Sec. 1, T7S, R2W, Indiana** N.B. p. 13, Shelly sandstone—collected by V. H. Barnett, 1898.

Present-day Indiana Rt. 66 passes through NE¼, **Sec. 1, T7S, R2W, Perry County**, Rome Quadrangle. Rocks of the Buffalo Wallow Group (**upper Chesterian**) are mapped here (Gray et al., 1970, Indiana Geological Survey Regional Geologic Map 3).

2810. Station No. 20C Coal mine, Bergenroth Bros., Troy, **Perry County, Indiana**—collected by V. H. Barnett, 1898. N.B. p. 9.
St. Meinrad Coal (see #2801).
2811. Station No. 1C Coal bank, north side Sampson's Hill, **NE¼, Sec. 6, T2N, R3W, Martin County, Indiana**. 4-6 feet of bluish-gray shale. N.B. p. 1—collected by V. H. Barnett, 1898.
 Several small drift mines operated in the Blue Creek Coal and unnamed coal beds in the **Mansfield Formation (Atokan Series)** in Section 6. Source: Hutchison, 1967, Indiana Geological Survey Coal Map 11. This is in the Shoals Quadrangle.
2812. Station No. 5B Hall's coal outcrop, **NW¼, Sec. 21, T1N, R3W, Dubois County, Indiana**. 5 feet of soft brownish-gray shale. N.B. p. 3—collected by V. H. Barnett, 1898.
 Rusk or Hillham Quadrangle. Most likely spot for outcrop is steep bank east of south-flowing stream in **W½ NE¼ NW¼, Rusk Quadrangle**. The map of Hutchison (1964, Indiana Geological Survey Coal Map 10) shows the French Lick (older) and Pinnick Coals cropping out along this drainage. These units are of **Morrowan age**.
2813. Station No. 2 Sutton coal bank No. 1, **NW¼, NW¼, Sec. 34, T1N, R3W, Dubois County, Indiana**, N.B. p. 1—collected by V. H. Barnett, 1898.
 Probably in ravine east of Cuzco Road, Cuzco Quadrangle. The **French Lick Coal (Morrowan)** crops out in this area. Source: Hutchison, 1964, Indiana Geological Survey Coal Map 10.
2814. Station No. 6 A. C. Harbison's coal bank, south side of Davis Creek, southwest of Crystal, **Dubois County, Indiana**. Coal 1a—collected by V. H. Barnett, 1898, N.B. p. 3.
S½ NW¼, Sec. 28, T1N, R3W, Cuzco or Dubois Quadrangle. The coal map shows the French Lick Coal and an older, unnamed coal bed cropping out here. Reference: as above.

Book 6—Specimens 2878-3563

2997. Petersburg Quadrangle, No. VII Coal, **SE¼ NE¼, Sec. 4, T1S, R8W**. Trav. S4, N.B. 9, p. 4—collected by L. D. Irving, October 30, 1901.
Pike County, Petersburg Quadrangle. The indicated site is on the outcrop of the Millersburg Coal, an approximate **equivalent of the Danville (No. 7) Coal** of Illinois. Source: Wier and Stanley, 1953, Indiana Geological Survey Coal Map 3.
2988. New Harmony, Indiana Quadrangle, 2 miles southwest of Blairsville, **Posey County, Indiana**, N.B. 3, p. 29, TP-0312—collected by Clapp, 1902.
 In or near **SW¼, Sec. 29, T5S, R12W, Wadesville Quadrangle**; or north part of Sec. 31, same township. This is mapped close to the Carthage (formerly Shoal Creek) Limestone, of **Missourian age** (Gray et al., 1970, Indiana Geological Survey Regional Map 3).
3002. Haubstadt Quadrangle, 1 mile south of Cynthiana, **Posey County, Indiana**, E219, N.B. 2, p. 12—collected by Clapp, 1902.
 Most likely from bluffs and gullies east of Big Creek in **SW¼, Sec. 13 or E½ SE¼, Sec. 14, T4S, R12W, Cynthiana Quadrangle**. This is mapped as being in the Patoka Formation a short distance above the West Franklin Limestone and, hence, of **early Missourian age**. Source: Gray et al., 1970, Indiana Geological Survey, Regional Geologic Map 3).
3003. Booneville Quadrangle, west side of **Sec. 5, T5S, R8W**, from horizon of No. 7 coal—collected by M. R. Campbell, 1901.
 The Millersburg Coal, approximate **equivalent of the Danville (No. 7) Coal** in Illinois, has been strip-mined extensively in this area. Source: Wier, 1958, Indiana Geological Survey Coal Map 7.

3005. Booneville Quadrangle, Taylor's coal mine 2½ miles south of Booneville, about 20 feet above No. 5 Coal (?)—collected by M. R. Campbell, 1901.
Near center, **Sec. 11, T6S, R8W, Warrick County**, Booneville Quadrangle. The **Springfield (V) Coal** has been mined here on a large scale. Source: as above.
3007. Haubstadt, Indiana Quadrangle, near St. Joseph, **Vanderburgh County, Indiana**, A321, N.B. 3—collected by Clapp, 1902.
St. Joseph is in **SW¼, Sec. 21, T5S, R11W**, Kasson Quadrangle. Likely area for mines or outcrops is deeply gullied area east of St. Joseph, in Sections 22 and 27. The West Franklin Limestone is in the subsurface; outcropping strata are in the Patoka Formation (**Missourian age**). Source: Friedman, 1954, Indiana Geological Survey Coal Map 5.
3008. New Harmony, Indiana Quadrangle, Blairsville, **Posey County**, R314, N.B. 3, p. 35—collected by Clapp, 1902.
Blairsville is in **Sect. 21, T5S, R12W**, Wadesville Quadrangle. This area is mapped as Patoka Formation (**Missourian**). Source: Gray et al., 1970.
3009. Booneville Quadrangle, Taylor's coal mine 2½ miles south of Booneville, from calcareous beds with 7 feet of top of No. 5 (?)—collected by M. R. Campbell, 1902.
See No. 3005.
3014. Petersburg Quadrangle, extreme southeast corner **Sec. 13, T1S, R9W**—collected by L. D. Irving, October 30, 1901.
Pike County, Indiana; Petersburg Quadrangle. The cropline of the **Springfield Coal** passes a few hundred feet east of the indicated point. Source: Wier and Stanley, 1953, Indiana Geological Survey Coal Map 3.
3453. Hickman, **Kentucky**—collected by L. C. Glenn, August 6, 1903.
Hickman is on Mississippi River in **Fulton County**, in Mississippi embayment; specimens probably are of **Tertiary age**.
3454. Wickliffe, **Kentucky**—collected by L. C. Glenn, August 6, 1903.
Also on Mississippi River in **Ballard County**, just south of Cairo, Illinois. The specimens are probably of **Tertiary age**.
3456. Columbus, **Kentucky**—collected by L. C. Glenn, August 1903.
Columbus is on the Mississippi River in **Hickman, County**; the specimens probably are of **Tertiary age**.

Book 7—Specimens 3563-4585

4146. Minonk Coal Company, Minonk, Illinois No. 2 Coal—collected by David White, August 27, 1906.
Mine shaft located **NE¼ NW¼, Sec. 6, T28N, R2E, Woodford County**. This was an underground mine in the **Colchester (No. 2) Coal**.
4147. Trenton, Illinois. Trenton Coal Co., No. 7 Coal—collected by D. White, Sept. 5, 1906.
Mine shaft located **NE¼ SE¼, Sec. 20, T2N, R5W, Clinton County**. The Trenton Coal Co. South Mine was on underground mine in the **Herrin (No. 6) Coal**; it was active 1897 to 1910.
4148. Pawnee, **Illinois**. Shale over roof of No. 5 Coal—collected by David White, August 29, 1906.
If this is from Pawnee, in southeastern **Sangamon County**, the specimens are from the roof of the **Herrin (No. 6) Coal**, not the **Springfield (No. 5) Coal**. There were large underground mines in the Herrin Coal at Pawnee, but the Springfield Coal is too thin to mine there.

4149. Spring Valley, **Illinois** (near LaSalle) S. V. Coal Co., No. 2 Coal—collected by H. F. Bain and D. White, August 7, 1906.
The Spring Valley Coal Co. had five shaft mines near Spring Valley, **LaSalle County**, all active during 1906. All mined the **Colchester (No. 2) Coal**.
4150. Cardiff Coal Co., Cardiff, **Illinois** "Cardiff Coal"—collected by Bain and White, August 14, 1906.
This was a shaft mine in **Sec. 24, T30N, R8E, Livingston County**. The **Cardiff Coal** was a lenticular coal within the Francis Creek Shale, overlying the **Colchester (No. 2) Coal**.
4155. Troy, **Illinois**, Donk Mine, No. 7 Coal—collected by D. White, Sept. 7, 1906.
The Donk Brothers Coal and Coke co. Donk #3 Mine at Troy, **Madison County**, was a shaft mine in the Herrin Coal, under thick gray shale roof. Location: **NW¼ NW¼, Sec. 9, T3N, R7W, Madison County**.
4169. Kellyville #2, south of Danville, **Illinois**, No. 6 Coal—collected by Van Horn and D. White, August 20, 1906.
The Kellyville Coal Co. Kelly #2 Mine was a shaft mine in the **Herrin (No. 6) Coal**; the shaft was in the **SW¼ SE¼, Sec. 31, T19S, R11W, Vermilion County**.
4175. Edgerly (Etherly ?), **Illinois**, No. 6 Coal—collected by D. White, Sept. 17, 1906.
See next entry.
4178. Etherly, about 10 miles east of Wataga, **Illinois**, No. 6 Coal—collected by David White, Sept. 17, 1906.
There is no town or mine named Etherly (Edgerly ?) about 10 miles east of Wataga. The indicated area is about **Sec. 17 or 18, T12N, R4E, Knox County**. The **Herrin (No. 6) Coal** has been strip-mined extensively in this part of Knox County.
4179. DuQuoin, **Illinois**—collected by D. White, 1906.
The **Herrin Coal** was mined underground extensively in mines in and near DuQuoin, **Perry County**.
4180. Knoxville, **Illinois**, No. 3 Coal—collected by D. White, Sept. 18, 1906.
There is no listing of a mine active in 1906 near Knoxville, **Knox County**. Also, there is no No. 3 Coal in Illinois. Mines active after 1906 near Knoxville worked the **Rock Island (No. 1) and Colchester (No. 2) coals**.
4196. Blossburg, **Illinois** between Briar Bluff and Coal Valley, No. 1 Coal—collected by D. White, 1906.
The indicated area is **northwestern Henry or eastern Rock Island County**, where all coal mining of record was in the **Rock Island (No. 1) Coal**. A Blossomberg Coal Co. operated a mine in 1924-1925 in **Sec. 19, T17N, R1E, Henry County**.
4198. Coal Valley, **Illinois**, Ry. grade but probably from Shumard Mine, No. 1 Coal—collected by E. White, Sept. 23, 1906.
Coal Valley is in eastern **Rock Island County**. All mining of which we have record in the county was in the **Rock Island (No. 1) Coal**.
4204. Sherrard, **Illinois**, No. 1 Coal—collected by D. White, Sept. 21, 1906.
The Coal Valley Mining Co. #2 Mine was active 1895-1919 at Sherrard, in **Sec. 4, T15N, R1W, Mercer County**. It was a shaft mine in the **Rock Island (No. 1) Coal**.
4214. Mine at Colchester, **Illinois**, No. 2 Coal—collected D. White, Sept. 15, 1906.
There were dozens of small mines near Colchester, **McDonough County**. All worked the **Colchester (No. 2) Coal**.
4215. Exeter, **Illinois**, No. 2 (?) Coal—collected by D. White, Sept. 14, 1906.
Exeter is in **NW¼, Sec. 25, T15N, R13W, Scott County**, Winchester Quadrangle. We have records of several small mines in Section 25. All worked the **Colchester (No. 2) Coal**.

4216. Litchfield, **Illinois**. Deep shaft, No. 1 Coal—collected by D. White, Sept. 10, 1906.
 There were two deep shaft mines at Litchfield, **Montgomery County**, but the one active in 1906 operated in the Litchfield Coal, which is approximately **correlative with the Rock Island (No. 1) Coal**.
4217. Meredith Bros., railroad shaft, Augusta, **Illinois**, No. 1 Coal—collected by D. White, Sept. 14, 1906.
 The J. & J. Meredith Bros. Railroad #1 Mine was located in the **SE¼, Sec. 34, T3N, R5W, Hancock County**. It was a shaft mine in the **Colchester (No. 2) Coal**.
4218. Winchester, **Illinois**, mine one mile north of Station. Coal sometimes used by engineers of C. B. & Q. "No. 1 Coal"—collected by D. White, Sept. 12, 1906.
 Probably the Bates Mine, a shaft mine in the **Colchester (No. 2) Coal**, located in **Sec. 21, T14N, R12W, Scott County**; and active 1883-1908.
4219. Exeter, **Illinois**, Ramft's mine. Ferns in coal, No. 1 Coal—collected by D. White, Sept. 13, 1906.
 Ed Ramft's mine, located near Exeter in the **NW¼ NW¼, Sec. 25, T15N, R13W, Scott County**, was a drift mine in the **Colchester (No. 2) Coal**.
4220. Tom Griffith's mine, Roodhouse, **Illinois**, No. 1 Coal—collected by D. White, Sept. 11, 1906.
 No listing of a Tom Griffith's mine, but many small underground mines formerly operated near Roodhouse in the southwest part of **T12N, R11W, Greene County**. All of these mines worked the **Colchester (No. 2) Coal**.
4226. Kewanee, **Illinois**. Partings and roof of No. 6 Coal, Fisher Mine—collected by D. White, Sept. 20, 1906.
 We do not list a Fisher Mine near Kewanee (**T15N, R5E, Henry County**). Several dozen other mines are listed for this township; all worked the **Herrin (No. 6) Coal**.
4227. Elmwood, **Illinois**. Said to be No. 6 but really No. 5—collected by D. White, Sept. 19, 1906.
 The only mine near Elmwood that was active in 1906 was the J. Procter Mine, located in the **NW¼, Sec. 17, T9N, R5E, Peoria County**. It was a shaft mine in the **Herrin (No. 6) Coal**.
4228. Edwards, **Illinois** out of Coal No. 5. Peoria Quadrangle—collected by D. White, August 25, 1906.
 Many underground mines near Elmwood (**Sec. 24, T9N, R6E, Peoria, County**) worked the **Springfield (No. 5) Coal**. More recently, the Herrin (No. 6) Coal has been strip-mined near Elmwood.
4229. German mine ½ mile north of Hollis, **Illinois**, Peoria Quadrangle. Horseback in No. 5 Coal—collected by D. White, August 25, 1906.
 The German Coal Co. Hollis Mine was a slope mine in the **Springfield (No. 5) Coal**, active 1906 to 1931. The slope was near the northwest corner of **Sec. 12, T7N, R7E, Peoria County**.
4232. Pottstown, **Illinois**, probably from Coal No. 1, Peoria Quadrangle—collected by D. White, August 25, 1906.
 The Isaac Wantling & Son mine near Pottstown was active in 1906. It was a shaft mine in the **Colchester (No. 2) Coal**. The shaft was located in the **NE¼ SE¼, Sec. 35, T9S, R7E, Peoria County**.
4235. Eldorado (sic), **Illinois**, mines in town said to be No. 5 Coal—collected by D. White, October 2, 1906.
 Probably either the Eldorado Coal and Coke Co. mine (**Sec. 21, T8S, R7E, Saline County**) or the Harrisburg-Big Muddy Coal Co. (**Sec. 20, same township**), both of which were located at Eldorado, active in 1906, and worked the **Springfield (No. 5) Coal**.

4237. Vickery Mine, 3 miles west of Peoria, **Illinois** No. 6 (?) Coal—collected by D. White, August 25, 1906.
 We list a Vicary Bros. Coal Co. mine, **Peoria County**, but it opened in 1918. Many mines are listed in the area a few miles west of Peoria. A large majority worked the **Springfield Coal**, but the **Herrin Coal** also was mined.
4239. Bend of branch near Reeds S. H. west of Mapleton, above No. 5, near No. 6?, Peoria, **Illinois** Quadrangle—collected by D. White, August 25, 1906.
 Probably along Little Lamarsh Creek, **SE¼, Sec. 19, T7N, R7E, Peoria County, Pekin Quadrangle**. The Springfield (No. 5) Coal was mined here in slope mines and strip mines. The Springfield Coal thus is below drainage, so outcropping strata are **above the Springfield Coal**.
4240. Dekoven, **Kentucky**, lower coal opened at tipple, No. 2, Illinois, No. 6, Kentucky—collected by D. White, October 7, 1906.
 Dekoven Quadrangle, **Union County**. This is **Davis Coal** of current terminology.
4241. Dekoven (Kentucky) Caseyville road, drift in ridge to southeast. "Skunk Coal" of DeWolf's notes—collected by D. White, October 6, 1906.
 The **Bell coal bed** was mined near the base of the bluff just east of the Dekoven-Caseyville road, and the **Ice House coal bed** was mined farther up a ravine, about ½ mile northeast of Mulfordtown, Dekoven Quadrangle, **Union County, Kentucky**.
4242. Battery Rock coal at Sturgeon's opening, Battery Rock opposite Caseyville, Kentucky. No. 1 Coal of Worthen—collected by D. White, October 6, 1906.
 Battery Rock and Sturgeon Hill are in **Sec. 27, T11S, R10E, Hardin County, Illinois**, and coal exposed here is the **Gentry Coal Bed in the Caseyville Formation**. Dekoven Quadrangle, Kentucky-Illinois.
4243. Dekoven, Kentucky, upper coal at tipple, No. 7 Kentucky, No. 3 Illinois—collected by D. White, October 7, 1906.
 This is the **Dekoven coal bed** of current terminology, and the site is in **Union County, Kentucky**.
4244. Battery Rock, Illinois, opposite Caseyville, Kentucky. Supposed No. 2 Coal—collected by D. White, October 4, 1906.
 Battery Rock is located on the Ohio River in the **NE¼ NE¼ SE¼, Sec. 27, T11S, R10E, Hardin County, Illinois**. Strata here are mapped as Caseyville Formation. Most likely the coal is the **Gentry Coal Bed in the middle Caseyville Formation, Morrowan Series**. Source: Baxter and others, 1963, ISGS Circular 342.
4245. Dekoven, Kentucky. No. 7 Coal of Kentucky, No. 5 Coal of Illinois—collected by D. White, October 4, 1906.
 This is **Dekoven coal bed** of current terminology, and the site is in **Union County, Kentucky**.
4246. Old mine, Minonk, **Illinois**—collected by D. White, 1906.
 The "old mine" probably was the Chicago and Minonk Coal and Tile Works, located in the **NE¼, Sec. 7, T28N, R2E, Woodford County**, and active 1870-1901. The Colchester (No. 2) Coal was mined.
4247. Fisher mines, Kewanee, **Illinois**. Clay parting made from old mine, layer from new mine—collected by D. White, Sept. 20, 1906.
 Probably from the **Herrin (No. 6) Coal**. See No. 4226.

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4923. Kil Marnoc (?) Run, $\frac{3}{4}$ mile west of Exeter, **Illinois**, above road bridge near mouth of creek. Lowest bed—collected by D. White, October 13, 1907.
No Kil Marnoc Run on topo map, but a bridge crosses near the mouth of a tributary of Mauvaise Terre Creek and a "quarry" is just upstream of bridge in NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$, **Sec. 26, T15N, R13W, Scott County**, Florence Quadrangle. This is close to the outcrop of the **Colchester (No. 2) Coal**. Source: Smith & Berggren, 1960, ISGS Circular 31.
4924. Murphysboro, **Illinois**. Shale, bench of Big Muddy coal on Grand Tower Div. I.C.R.R. Old mine about $\frac{1}{2}$ mile southwest of Texas Junction—collected by D. White, W. E. Wolf, G. H. Ashby, October 25, 1907.
In or near SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, **Sec. 9, T9S, R2W, Jackson County**, Murphysboro Quadrangle. (See No. 5631 for location of Texas Jct.) No mine was active here during or before 1907. The **Murphysboro Coal** (upper Tradewater Formation) was mined extensively underground in and near Murphysboro since prior to 1900.
4925. Shale below coal at old banks, $1\frac{1}{2}$ mile south of Ava, **Illinois**, Big Muddy Coal—collected by D. White, November 3, 1907.
The Schmidtgal Mine was about $1\frac{1}{4}$ mile south of Ava, near the center of **Sec. 36, T7S, R4W, Jackson County**. The **Murphysboro Coal** was mined. Source: Smith, 1958, ISGS Circular 260.
4926. Shales 20 feet below 2nd sandstone in cut on M. & O. Railroad, $3\frac{1}{2}$ miles east of Ava, **Illinois**—collected by D. White, November 3, 1907.
Location depends on whether distance is crow-flight or along railroad. Assuming the latter, it's probably the cut in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, **Sec. 27, T7S, R3W, Jackson County**, Ava Quadrangle. Stratigraphically, this is a **short distance below the Murphysboro Coal**. Source: Smith, 1959, ISGS Circular 260.
4928. Alto Pass, **Illinois**. Base of conglomerate—collected by D. White, November 4, 1907.
This probably refers to the outcrop of **Caseyville Formation (Morrowan Series)** conglomeratic sandstone immediately east of Alto Pass Village in the NW $\frac{1}{4}$ NE $\frac{1}{4}$, **Sec. 15, T11S, R2W, Union County**, Cobden Quadrangle. I mapped this area but did not observe fossils in the Caseyville.
4929. Neelyville, **Illinois**. Creek bed opposite lower end of switch, under thin coal—collected by D. White, October 12, 1907.
The Norfolk and Western Railroad follows Wolf Run through Neelyville, in the S $\frac{1}{2}$, **Sec. 7, T15N, R12W, Morgan County**, Chapin Quadrangle. This area is mapped as 50 to 100 feet above the **Colchester (No. 2) Coal**, which would put the collection in the vicinity of the **Survant or Houchin Creek Coal**. Source: Smith, 1961, Illinois State Geological Survey Circular 311.
4930. Along M. & O. Railroad, $1\frac{1}{2}$ miles east of Ava, **Illinois**, 2nd sandstone—collected by D. White, October 31, 1907.
The indicated site is in NW $\frac{1}{4}$, **Sec. 29, T7S, R3W, Jackson County**, Ava Quadrangle; but this is gently rolling terrain and no railroad cuts are indicated. Cuts begin to east, in NE $\frac{1}{4}$ of Section 29. Stratigraphically, these cuts are a **short distance below the Murphysboro Coal** (Smith, 1960, ISGS Circular 260).
4931. Lower conglomerate on the Hennery (?) farm near Kincaid Creek, $6\frac{1}{2}$ miles south of Ava, **Illinois**—collected by D. White, November 2, 1907.
This site cannot be located accurately. It is in the Oraville Quadrangle, **Jackson County**, and probably is now submerged in Kinkaid Lake. The designation "lower cgl. (conglomerate)" suggests the **Caseyville Formation**.

4932. Murphysboro, Illinois. Sandstone about 50 feet over Big Muddy coal, ½ mile west of Texas Junction—collected by D. White, October 26, 1907.
More or less same location as No. 4924. The "Big Muddy coal" probably is the **Murphysboro Coal**.
4933. Iron Mt. Railroad about 6 miles below Murphysboro, Illinois, near base of conglomerate (C.M.)—collected by D. White, October 24, 1907.
Assuming "below" means "south", this is near Etherton in **Sec. 4, T10S, R2W, Jackson County**, Pomona Quadrangle. The conglomerate presumably is conglomerate in **Caseyville Formation (Morrowan Series)**.
4934. 1½ miles north of Battery Park, Illinois. Ironstones in thin coal not far above Hearthstone sandstone in ravine up hill north of Sturgeon Hill, second ravine—collected by D. White, October 22, 1907.
This one almost requires a Ouija board. White made other collections near Battery Rock and Sturgeon Hill in **Hardin County**, Dekoven Quadrangle. On this basis, the site is probably somewhere in **Sec. 21, T11S, R10E**, and the strata are **upper Caseyville or lower Tradewater Formations**.
4935. I.C.R.R. cut ¼ mile south of Ozark, Illinois, cut just south of railroad crossing—collected by D. White, November 11, 1907.
Long-abandoned railroad south of Ozark, Johnson County passes through rugged terrain, but there is no cut or crossing ¼ mile south of Ozark. Indicated area is **Sec. 34, T11S, R4E, Johnson County**, Creal Springs Quadrangle. This could be **basal Tradewater or upper Caseyville Formations**.
4936. Murphysboro, Illinois. Crossing I.C. (Billy Bryan) Railroad ravine ¾ to 1 mile southwest of M. & O. Railroad bridge—collected by D. White, October 27, 1907.
This one is highly ambiguous. A ravine, now occupied by Carbon Lake, is 1.0 mile southwest of the bridge that carries a spur of the I.C. Railroad across the Big Muddy River. Carbon Lake is in the **SW¼ SW¼, Sec. 9, T9S, R2W, Jackson County**, border of Murphysboro and Pomona Quadrangles. Stratigraphically, this is a **short distance below the Murphysboro Coal**. (Smith 1958, Illinois State Geological Survey Circular 260).
4937. South end of Ozark, Illinois, railroad cut—collected by David White, November 12, 1907.
See No. 4935.
4938. Blair No. 2 Mine, 1½ mile northwest of Murphysboro, Illinois, Big Muddy Coal parting—collected by David White, October 27, 1907.
The Gus Blair or Bug Muddy No. 2 Mine was a shaft mine in the **Murphysboro Coal**, active 1907-1920. The shaft was located in the **NW¼ SE¼, Sec. 32, T8S, R2W, Jackson County**.
4939. Schmidtzall Mine, 1½ mile northwest of Murphysboro, Illinois, Big Muddy coal parting—collected by David White, October 26, 1907.
We list a Schmidgall mine that was active 1929 to 1936. Other mines in the vicinity all worked the **Murphysboro Coal**. See No. 4938.
4940. Railroad cut opposite Parker, Illinois Railroad Station. Shale lens in sandstone—collected by David White, November 13, 1907.
Probably in **SE¼ SW¼ NW¼, Sec. 17, T11S, R4E, Johnson County**, Creal Springs Quadrangle. Mapped as Abbott Formation (now **lower Tradewater**) by Trask and Jacobson, 1990, ISGS Map IGQ-4.
4941. Railroad cut ¼ mile above Buncombe, Illinois, base lower conglomerate—collected by David White, November 7, 1907.
Location as given doesn't make sense. Specimens presumably came from **Caseyville** (basal Pennsylvanian) conglomeratic sandstone within 1-2 miles north of Buncombe, most likely in **Sec. 11, T12S, R2E, Johnson County**, Vienna Quadrangle.

4942. Gartsides Mine, 1 mile north of Murphysboro, **Illinois**—collected by David White, 1907.
The Gartside Coal Co. #3 Mine was located in the **SW¹/₄, Sec. 33, T8S, R2W, Jackson County**. It was active 1891 to 1911 and worked the **Murphysboro Coal**.
4943. I.C.R.R. cut $\frac{1}{2}$ mile south of Ozark, **Illinois**, east of deep hollow—collected by David White, November 11, 1907.
Mostly likely in **SW¹/₄ NW¹/₄, Sec. 27, T11S, R4E, Johnson County**, Creal Springs Quadrangle. mapped as **Abbott (lower Tradewater) Formation** by Trask and Jacobson, 1990, ISGS Map IGQ-4.
4944. Black cut C. & E.I. Railroad $3\frac{1}{2}$ miles north of Baucombe (sic), **Illinois**—collected by David White, 1907.
Mostly likely spot is a cut in the **S¹/₂ SW¹/₄ SE¹/₄, Sec. 35, T11S, R2E, Johnson County**, Goreville Quadrangle. Mapped as **Dutchman Creek sandstone lentil**, between Pounds and Battery Rock Sandstone Members of **Caseville Formation** by Jacobson, 1991, ISGS Map IGQ-7.
4945. Murphysboro, **Illinois**. Billy Bryan Railroad. Shale at brickyard and mine ravine, south of brickyard hollow, Big Muddy coal—collected by David White, October 29, 1907.
The **shale that overlies the Murphysboro Coal** was worked by the Murphysboro Paving Brick Co. at Murphysboro, **Jackson County**. Source: Shaw and Savage, 1912, USGS Murphysboro-Herrin Folio No. 185. I cannot find the exact location of the brickyard.
4946. Frank Caeson's mine, 4 miles southeast of Giveville (?), **Illinois**, under upper conglomerate—collected by David White, November 8, 1907.
Jacobson (1991; ISGS Map IGQ-7) mapped three small drift mines along a ravine near the center of **N¹/₂, Sec. 32, T11S, R3E, Johnson County**, Goreville Quadrangle. These mines operated in a coal a short distance below the Murray Bluff Sandstone Member of the **Tradewater Formation**.
4947. Braidwood, **Illinois**—collected by David White, June 13, 1907.
4948. Braidwood, **Illinois**, Wilmington Coal—collected by David White, June 13, 1907.
Both collections probably from **Francis Creek Shale, overlying Colchester Coal**, mined extensively at and near Braidwood, **Will County**. The Colchester is the only coal mined in Will County.
4949. Colchester, **Illinois**. Chas. Johnson clay bank, just below clay drifts—collected by David White, 1907.
Pottery clay formerly was mined near Colchester, **McDonough County**, from multiple or "stacked" underclays **beneath the Colchester Coal**. These underclays may range from Atokan through lower Desmoinesian age. Stratigraphic position cannot be determined without a precise location and a measured section.
4950. Colchester, **McDonough County, Illinois**. No. 2 Coal at old coal dumps—collected by David White, June 29, 1907.
This is **Colchester Coal** from the type area.
4951. Colchester, **Illinois**. Dark carbonaceous shale just under clay worked at C. H. Myers clay bank, 2 miles west of town, 8 or 9 feet above base of coal measures—collected by D. White, June 28, 1907.
Numerous clay pits are roughly 2 miles west of Colchester, **McDonough County**. The specimens, being from **near base of Pennsylvanian**, are likely of Atokan age. See no. 4949.

4952. Over thin coal just over the "Hearthstone" in little hollow in hill along railroad 1½ mile north of Battery Rock Siding, Illinois—collected by David White, October 22, 1907.
The 1916 edition of the Shawneetown, Illinois-Kentucky, 15-minute quadrangle map shows a spur of the Illinois Central Railroad extending south from Dekoven, **Union County, Kentucky** (Dekoven 7½-minute quadrangle) to the Ohio River shore, north of Battery Rock, which is a topographic feature on the Illinois side of the river. This spur may be Battery Rock Siding. The location is still too vague to determine stratigraphic level of the collection. Most likely, it is from the **Tradewater Formation**.
4953. Corydon, **Kentucky**, Corydon Coal Co., Jones Bros., Coal No. 12—collected by White, Wolf, Ashley, November 16, 1907.
Corydon is in the Poole Quadrangle, **Henderson County**. According to Fairer (1973, USGS Geologic Quadrangle map GQ-1088), the No. 12 (Paradise) coal bed is less than 9 inches thick but the slightly higher No. 13 (Baker) coal bed reaches 6½ feet thick. Fairer also states that no coal mining has taken place in the quadrangle. I would surmise that if there were a mine at Corydon, it was probably in the **No. 13 (Baker) coal bed**.
4954. Smith Mill Coal and (Cooper) **Henderson County, Kentucky**, Smith Mill—collected by Wolf and Ashley, 1907.
Johnson and Norris (1974, USGS Geologic Quadrangle Map GQ-1215, Smith Mills Quadrangle) state "Coal in the **No. 13 coal zone** was formerly mined from two shafts at Smiths Mills...Mining reportedly began about 1902...".
4955. Murphysboro, **Illinois**. Little quarry in ledge of south of railroad tracks 1 mile west of M. & O. Railroad crossing on I.C.R.R.—collected by D. White, October 25, 1907.
Probably NW¼ NW¼ SW¼, **Sec. 8, T9S, R2W, Jackson County, Murphysboro** Quadrangle. Map shows a steep hillside immediately south of railroad and east of Jones Quarry Creek. This is mapped a **short distance below the Murphysboro Coal**. Source: Smith, 1968, ISGS Circular 260.
4956. Same as No. 4955, but a little higher and further up little hollow.
4957. 3 miles southeast of DuQuoin, **Illinois**—collected by David White, November 15, 1907.
Inadequate information, was it a mine or an outcrop? The site is in southeastern **Perry County**, where the Modesto Formation (late **Desmoinesian Series**) crops out, and the Herrin (No. 6) Coal was formerly mined.
4958. Paradise Mine, 3½ miles southeast of DuQuoin, **Illinois**—collected by David White, 1907.
We list several Paradise Mines in the vicinity of DuQuoin, but none of these were active in 1907. Mines southeast of DuQuoin, **Perry County**, worked the **Herrin (No. 6) Coal**.
4959. Bales Mine, 7 miles northwest of Mt. Stirling (sic.), **Illinois**—collected by David White, October 9, 1907.
This likely refers to the M. F. Bates #2 Mine, located in the SE¼, **Sec. 14, T1N, R4W, Brown County**, and active 1906 to 1911. The Bates Mine was one of several small drift and slope mines that worked the **Colchester (No. 2) Coal** northwest of Mt. Sterling.
4960. Streator, **Illinois**, Acme Mine "First vein" Coal No. 7 (?)—collected by David White, June 14, 1907.
The Acme Coal Co. #1 Mine at Streator, active 1893 to 1914, was a shaft mine in the **Herrin (No. 6) Coal** located in **Sec. 24, T31N, R3E, LaSalle County**.
4961. Kangley, **Illinois**, Star Mine No. 4 "3d vein" (No. 2)—collected by David White, June 15, 1907.
Located at Kangley, northwest of Streator, the Star Coal Co. #4 Mine was a shaft mine in the **Colchester (No. 2) Coal**. The shaft site was NE¼ NE¼, **Sec. 21, T31N, R3E, LaSalle County**. The mine was active 1887 to 1918.

4962. Carbon Cliff, **Rock Island County, Illinois**. Fire clay pit, base of XII—collected by David White, June 18, 1907.
Carbon Cliff is in **T17N, R1E, Rock Island County**. Pennsylvanian claystones stratigraphically close to the **Rock Island (No. 1) Coal** formerly were mined here.
4963. Ripley, **Illinois**. Sandstone just above Lower Carboniferous, just north of town—collected by David White, October 1907.
North part Sec. 33 or south part **Sec. 28, T1N, R2W, Brown County, Ripley Quadrangle**. The sandstone presumably is **basal Pennsylvanian**.
4964. Spillertown, **Illinois**. Stripping "No. 7" Coal—collected by D. White, November 14, 1907.
Spillertown is located in **Sec. 6, T9S, R3E, Williamson County** (just north of Marion). No strip mines active in 1907 are listed, but dozens of mines have operated near Spillertown. Most of these worked the **Herrin (No. 6) Coal**; some worked the **Springfield (No. 5) Coal**.
4965. Mine at Braidwood, **Will County, Illinois**—collected by David White, June 1907.
The **Colchester Coal** was mined here extensively.
4966. Colchester, **McDonough County, Illinois**. Vein is nearby old bank of Coal No. 2—collected by David White, June 1907.
Presumably specimens are from **Colchester Coal or adjacent strata**.
4967. Gilchrist, **Illinois**. No. 1 Coal—collected by David White, June 21, 1907.
Numerous underground mines operated in the **Rock Island (No. 1) Coal** near Gilchrist, in **T14N, R2W, Mercer County**.
4958. Fort Branch mine, Fort Branch, **Indiana**, 40 feet below No. V vein—collected by T. E. Williard, July 18, 1908.
The Fort Branch Coal and Mining Company operated an underground mine in the **Springfield Coal** from 1904 to 1930. The mine was located on the south side of Fort Branch in **Sec. 23 and 24, T3S, R11W, Gibson County**. Source: Friedman, 1954, Indiana Geological Survey Preliminary Coal Map 4.
4989. Oswald Mine, Princeton, **Indiana**, Vein IV—collected by T. E. Williard, July 18, 1908.
The Princeton Mining Company's Oswald Mine operated 1896-1923 in the **Springfield Coal**. The shaft was in **SE¼, Sec. 1, T2S, R11W, Gibson County**. Source: Friedman, 1954, Indiana Geological Survey Preliminary Coal Map 4.
4990. Wheatland Mine, ½ mile west of station at Wheatland, **Indiana**, Vein VII—collected by T. E. Williard, July 24, 1908.
The Washington-Wheatland Coal Co., Wheatland Mine, was an underground mine located in **Donation 106, T3N, R8W, Knox County**. It operated in the **Danville Coal** from 1904 to 1909 and later operated in the **Springfield Coal**. Source: Wier and Powell, 1967, Indiana Geological Survey Preliminary Coal Map 12.
4991. Indiana Brick Co. shale pit, 1 mile north of Brazil, **Clay County, Indiana**, just above **Upper Block Coal**—collected by T. E. Williard, August 4, 1908.
This listing has to be taken at face value, because many coal and clay mines operated in the area indicated.
4992. Mine No. 2, Blackburn, **Indiana**, Vein V—collected by T. E. Williard July 22, 1908.
The S. W. Little Coal Co., Blackburn No. 2 Mine was a shaft mine in the **Springfield (V) Coal**, active 1907-1922. The tipple was located in the **NW¼ NW¼, Sec. 13, T1N, R8W, Pike County, Monroe City Quadrangle**. Source: Wier and Stanley, 1953, Indiana Geological Survey Coal Map 3.

4993. Massey Coal Co. No. 2 slope mine, ½ mile southwest of Massey, **Indiana**. Vein 45 feet above Vein V—collected by T. E. Williard, July 21, 1908.
 The Massey Coal Co. Massey Mine was a slope mine in the **Springfield (V) Coal**, located in about the **SW¼ NW¼, Sec. 4, T2S, R8W, Pike County**, Oakland City Quadrangle. A coal bed 45 feet above the Springfield is probably the Briar Hill or Bucktown (Vb) Coal. The town of Massey is nonexistent. Source: Wier and Stanley, 1953, **Indiana Geological Survey Coal Map 3**.
4994. No. 1 slope mine at Muren (Carbon), **Indiana**, Vein V—collected by T. E. Williard, July 21, 1908.
 The Central Indiana Coal and Mining Co. Muren Mine was a slope mine in the **Springfield (V) Coal** and was active 1907-1921. The tippie was located in the **SE¼ SW¼, Sec. 2, T2S, R8W, Pike County**, Oakland City Quadrangle. Source: Wier and Stanley, 1953, **Indiana Geological Survey Coal Map 3**.
4995. Ayrshire Mine #4, Ayrshire, **Indiana**, Vein V (?)—collected by T. E. Williard, July 21, 1908.
 This was a slope mine in the **Springfield (V) Coal**, active 1900-1921. The tippie was located in about the **NW¼ NE¼, Sec. 6, T2S, R7W, Pike County**, Winslow Quadrangle. Source: as above.
4996. Syndicate No. 8 Mine, 4½ miles southwest of Clinton, **Indiana**, Vein IV(?)—collected by T. E. Williard, August 3, 1908.
 No record of a Syndicate No. 8 Mine in either **Vigo or Vermillion County**. There were several large underground mines in the **Survant (IV) Coal** in northwestern Vigo County, about 5 miles southwest of Clinton.
4997. Vandalia No. 4 Mine, Linton, **Indiana**, Vein IV—collected by T. E. Williard, July 30, 1908.
 The Vandalia Coal Co. No. 4 Mine was a shaft mine in the **Survant (IV) Coal**, located in **Sec. 23, T7N, R7W, Greene County**, and active 1903-1912.
4998. P. Fry Mine, Jasonville, **Indiana**, Vein IV—collected by T. E. Williard, July 30, 1908.
 The Frye Coal Co. Queen No. 1 Mine was a shaft mine in the **Survant (IV) Coal**, located in **Sec. 4, T8N, R7W, Greene County**, and active 1903-1914. Source: Hutchison and Hasenmueller, 1988, **Indiana Geological Survey Coal Map 17**.
5000. Mammoth Mine, 1 mile south of **Shelburn, Indiana**, Vein VI—collected by T. E. Williard, July 27, 1908.
 The Mammoth Vein Mine in the west-central part of **Sec. 2, T8N, R9W, Sullivan County**, operated 1903-1914 in the **Hymera Coal**. Source: Weir, 1952, **Indiana Geological Survey Preliminary Coal Map 2**.
5001. Kelley Mine, 5 miles northeast of Sullivan, **Indiana**, Vein VI(?)—collected by T. E. Williard, July 27, 1908.
 No Kelley Mine listed in **Sullivan County**. Both **Springfield (V) and Hymera (VI) Coals** were mined underground northeast of Sullivan.
5017. Big Siam Mine, 1 mile north of West Terre Haute, **Indiana**, Vein IV—collected by T. E. Williard, August 1, 1908.
 No Big Siam is listed for **Vigo County**. The **Seelyville (III), Survant (IV), and Springfield (V) Coals** all were mined underground north of West Terre Haute.
5365. Snoddys Mine near Mills, **Fountain County, Indiana**; said to be No. IV Coal, probably VI, just over 5 feet of limestone—collected by David White, November 12, 1908.
 The Snoddy Mine was a slope mine in an unnamed coal bed in the **Staunton Formation**, located in the **SE¼, Sec. 1, T18N, R9W, Fountain County**. The coal bed, at elevation 530 feet, was 5.5 feet thick and had a shale roof. Source: Hutchison, 1961, **Indiana Geological Survey, Preliminary Coal Map 9**.

5366. Covington, **Indiana**. Bluff of Wabash R. R. north of Rodgers place, 2 to 4 feet above the Mansfield Sandstone, just under V Coal—collected by David White, November 12, 1908.
Site information is ambiguous. Did White mean Wabash River or Railroad? This could be at or near the Rodgers Mine (#5368) and most likely is **Staunton Formation**. Source: Hutchison, 1961. This is either **Fountain or Warren County**.
5367. Zufall's Mine, 7 miles northwest of Covington, **Indiana**—collected by David White, 1908.
No Zufalls Mine listed for **Fountain or Warren County**. The mines nearest to the area indicated lay 4 to 5 miles north and northwest of Covington in the north part of **T20N, R9W, Warren County**. These mines operated in the **Minshall Coal** and in slightly younger, unnamed coal beds in the **Staunton Formation**. Source: Hutchison, 1961.
5368. Old Rodgers Mine, west bank of Wabash River, west of Covington, **Indiana**, Coal VI—collected by David White, August 12, 1908.
The Rodgers Mine was located where U.S. 136 crosses the New York Central Railroad, approximately **600' from SL, 1300' from EL, Sec. 27, T20N, R9W, Warren County**. It was a shaft mine in an unnamed coal bed in the **Staunton Formation**. The coal reportedly was 2.0 feet thick and overlain by gray sandy shale. Source: Hutchison, 1961.
5369. McDonald's Mine, Coal Creek, **Fountain County, Indiana**—collected by David White, November 13, 1908.
Hutchison (1961) does not list a McDonald's Mine, but shows numerous mines near Coal Creek in **Sec. 1, T18N, R9W**, and adjacent sections. These mines were drifts and shallow shafts to an unnamed coal bed in the **Staunton Formation**.
5370. On No. 6 Coal just above Butler Bridge over Fall Branch, 7½ miles northwest of Attica, **Indiana**—collected by David White, November 6, 1908.
Fall Creek flows into Big Pine Creek, a tributary of the Wabash River, about 5 miles northwest of Attica. The coal map of Hutchison (1961) shows the outcrop of the **Minshall Coal** and numerous small drift and shaft mines to the **Minshall Coal** in this area, the central part of **T22N, R8W, Warren County, Williamsport Quadrangle**.
5371. Grape Creek coal roof, Dering Coal Co.'s No. 4, **Vermilion County, Illinois**—collected by DeWolf, November 18, 1908.
The Dering Coal Co. No. 4 Mine was a large shaft mine in the **Herrin Coal** (commonly called Grape Creek Coal). The shaft was in the **NW¼ SW¼, Sec. 15, T18N, R12W, Vermilion County**, and the mine was active from 1905-1917.
5372. Third Vein Coal Co.'s near Hollis, **Peoria County, Illinois**. Roof of Coal No. 2 (?)—collected by DeWolf, November 23, 1908.
The Third Vein Coal Co. Orchard Mine, active 1901-1910, worked the **Colchester (No. 2) Coal**. The shaft was located in the **center N½, Sec. 14, T7N, R7E, Peoria County**.
5373. Grape Creek Coal roof, Dering Coal Co. Mine No. 4, **Vermilion County, Illinois**—collected by DeWolf, November 18, 1908.
See No. 5371.
5382. Upper part (above conglomerate), main quarry in the Mansfield Sandstone at Mansfield, **Indiana**—collected by David White, November 14, 1908.
Sandstone quarries were northeast of Mansfield village along Raccoon Creek in **Sec. 5, T14N, R6W, Parke County**. The sandstone is in the **upper part of the Mansfield Formation**. Source: Hutchison, 1976, Indiana Geological Survey Bulletin 54, p. 40.

5383. Chicago Sewer Pipe Co., 1½ mile southwest of Brazil, **Indiana** below Coal IV and III—collected by D. White, November 17, 1908.
Chicago Sewer Pipe Co. operated a shaft mine in the **Upper Block Coal** prior to 1911 (?). The shaft was located in or near the SW¼ SW¼ SE¼, **Sec. 1, T12N, R7W, Clay County, Brazil West Quadrangle**. Coal was 4.0 feet thick and 38 feet below surface. Source: Hutchison, 1956, Indiana Geological Survey, Preliminary Coal Map 6.
5390. Herrin, **Williamson County, Illinois**—collected by David White, 1908.
Type area of **Herrin Coal**, but Springfield Coal also has been mined nearby.
5391. Mine ½ mile south of Christopher, Illinois—collected by David White, 1908.
This would be United Coal Co. No. 1, later Old Ben Coal Co. No. 12, a shaft mine in the **Herrin Coal**, active 1907-1938. The shaft was in the NW¼ NW¼, **Sec. 30, T6S, R2E, Franklin County**.
5392. Half-Moon Mine, DuQuoin, **Illinois**—collected by David White, 1908.
We list a New Moon and an Old Moon Mine, as well as a Jupiter Mining Co. and a Star Coal Co., but no Half Moon Mine near DuQuoin, **Perry County**. All of the more than 100 mines listed in the DuQuoin area worked the **Herrin (No. 6) Coal**.
5393. Griffith Switch Northwestern Clay Works, 6 miles northeast of Viola, **Illinois**—collected by David White, July 14, 1908.
Wanless (1929, ISGS Bulletin 57, p. 143) describes the Northwestern Clay Manufacturing Company at Griffin, on the lime between **Sec. 4, T14N, R1W, and Sec. 33, T15N, R1W, Mercer County**. The shale mined here lay **between the Rock Island (No. 1) and Colchester (No. 2) Coals**. In a measured section (p. 74) Wanless reports that plant impressions occur in this shale above a thin, lenticular coal bed about 12 feet above the Seville Limestone.
5394. One mile north of Christopher, **Illinois**, Zeigler District Co.'s Mine—collected by David White, October 26, 1908.
The Zeigler District Coal Co. North Mine, later Old Ben No. 10 Mine, was a shaft mine in the **Herrin Coal**, located in the west part of **Sec. 24, T6S, R1E, Franklin County**.
5395. Old Willis Mine, ½ mile northwest of Bryden, **Illinois**, No. 2 Coal—collected by David White, 1908.
See No. 5633 for location of Bryden. Probably this was Willis Coal Co. No. 2 Mine, located NE¼ NW¼, **Sec. 27, T7S, R3W, Jackson County**. It was a slope mine in the **Murphysboro Coal**.
5416. Sandstone with fucoids, Princeton Formation, 2½ miles south of Ste. Genevieve, **Missouri**—collected by G. H. Girty, 1908.
Probably from the Aux Vases Sandstone or, possibly, sandstone lenses in the upper part of the Ste. Genevieve Limestone, (**Meramecian Series**). Source: Weller and St. Clair, 1928, Missouri Bureau of Geology and Mines, vol. 22, 2nd Series.
5626. Orig. No. 1. NW¼, **Sec. 11, T7S, R3E, J. B. Schimpf Mine, Murphysboro Quadrangle, Illinois**—collected by E. W. Shaw in charge, 1909.
A J. B. Schimpf Mine, located in the NW¼ NW¼, **Sec. 12, T7S, R3W, Jackson County**, was active 1904 to 1914. It was slope mine in the **Murphysboro Coal**.
5627. Orig. No. P. 14. Jake Schimpf mine roof, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw in charge, 1909, 5 miles northwest of Virgennes (sic).
See No. 5626.
5628. Orig. No. 2. Sato, Nesbit, and Wilson Mine, NW¼, **Sec. 22, T7S, R3W, Murphysboro Quadrangle, Illinois**—collected by E. W. Shaw, 1909.
Most likely this was the Nesbit and Wilson Mine, a drift mine in the **Murphysboro Coal** active 1909-1913 and located in the SE¼ NE¼ NW¼, **Sec. 22, T7S, R3W, Jackson County**.

5629. Orig. No. P. 2. South of center, **Sec. 15, T8S, R3W**, bank of creek, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw, 1909.
Oraville Quadrangle, **Jackson County**. If the location is accurate the site is **just below the Murphysboro Coal**, according to Smith (1958, ISGS Circular 260).
5630. Orig. No. P. 4. Walbeiser R. R. cut, east of road near center of north side, **Sec. 33, T8S, R3W**, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw, 1909.
The site (probably **NE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec.33**) is currently submerged in Kinkaid Lake. Oraville Quadrangle, **Jackson County**. Stratigraphically it is **a short distance below the Murphysboro Coal**. Source: Smith, 1958, ISGS Circular 260.
5631. Orig. No. P. 5. Near Texas Junction, center **NW $\frac{1}{4}$, Sec. 10, T9S, R2W**, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw, 1909.
Texas Junction was the junction of Illinois Central Railroad main line and spur into Murphysboro, located about **400' NL, 500' WL, Sec. 10, T9S, R2W, Jackson County**, Murphysboro Quadrangle. This is **close to the outcrop of the Murphysboro Coal**. Source: as above.
5632. Orig. No. P. 1. **NW $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 8, T8S, R3W**, 3 miles south and 2 miles east of Ava, **Jackson County, Illinois** overlying 2 feet of coal, Murphysboro Quadrangle—collected by E. W. Shaw, 1909.
M. W. Fuller, ISGS field note, 1933, records shale with beautifully preserved fossil plants, overlying 1'4" of coal here. The sandstone overlying the shale contains quartz pebbles, which indicates **Caseyville or lower Tradewater Formation**.
5633. Orig. No. P. 6. Southern pair of banks of the four, $\frac{1}{2}$ mile southeast Bryden center **NE $\frac{1}{4}$, Sec. 35, T7S, R3W**, Murphysboro Quadrangle, **Jackson County, Illinois**—collected by E. W. Shaw, 1909.
Probably the banks (small drift mines for coal) were in steep bluff southeast of Long Creek at border of Ava and Oraville Quadrangles. No trace remains of Bryden. It probably was a siding or small community along the Gulf, Mobile, and Ohio Railroad. The nearest mine of which we have record is a strip mine in the **Murphysboro Coal**, located near the center of Section 35 and active prior to 1936.
5636. Orig. No. P.11, Bryden Mine, E side of **SE $\frac{1}{4}$, Sec. 27, T7S, R3W**, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw, 1909.
The Bryden Coal & Coke Co. Mine was in the **NE $\frac{1}{4}$, Sec. 21, T7S, R3W, Jackson County**. The **Murphysboro Coal** was mined. Several mines are listed in Section 27; all worked the Murphysboro Coal.
5637. Orig. No. P.10. **SE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 35, T7S, R3W**, base of ravine, at water edge, $\frac{1}{2}$ mile east of Union School, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw, 1909.
Oraville Quadrangle, **Jackson County**. This is **below the Murphysboro Coal** (Smith, 1958, ISGS Circular 260).
5638. Orig. No. P. 12. **SE $\frac{1}{4}$ of SW $\frac{1}{4}$, Sec. 11, T7S, R3W**, W. F. Johnson mine, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw, 1909.
We list two W. F. Johnson mines in **Sec. 11, T7S, R3W, Jackson County**. One was a slope mine active 1904-1906 and the other a shaft mine active 1910-1917. Both worked the **Murphysboro Coal**.
5639. Orig. No. P. 15. Old mines of Sato, $\frac{3}{4}$ mile N of Bryden, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw, 1909.
Numerous small slope, shaft and drift mines in the **Murphysboro Coal** were in the area indicated, approximately **Sec. 22, T7S, R3W, Jackson County**.

5640. Orig. No. P. 3. Near R.R. on S side of ravine, NW cor **Sec. 26, T8S, R3W**, Murphysboro Quadrangle, **Illinois**—collected by E. W. Shaw, 1909.
More precisely, **SW¼ NW¼ NW¼, Sec. 26, T8S, R3W, Jackson County**, Oraville Quadrangle. Railroad abandoned, site submerged by Kinkaid Lake. G. H. Cady (ISGS field notes, 1930) reports **Murphysboro Coal** in streambed nearby.
5641. **NW¼ SW¼, Sec. 26, T8S, R3W**, gully ½ mile SE of I.C.R.R. bend, Murphysboro Quadrangle, **Jackson County, Illinois**—collected by E. W. Shaw, 1909.
This site is probably under waters of Kinkaid Lake also. Field notes by H. E. Culver, 1924, indicate nearby slope and shaft mines in "No. 2" (**Murphysboro**) **Coal**. The specimens probably are from the shale overlying this coal. The map of Smith (1958, ISGS Circular 260) confirms this to be along the outcrop of the Murphysboro Coal.

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6230. Westville, **Illinois**, Grape Creek Coal, Kelly No. 3 Mine and the mine on the Big Four R.R.—collected by David White, August 12, 1910.
The Kelly No. 3 Mine was a large underground mine in the **Herrin Coal**. It was active 1896 to 1917 and the shaft was located near the center of the **N½, Sec. 7, T18N, R11W, Vermilion County**.
6231. Country bank in first hollow below Grape Creek, **Illinois**. Grape Creek Coal—collected by David White, August 11, 1910.
Grape Creek joins the Vermilion River in **Sec. 34, T19N, R11W, Vermilion County**. The "first hollow below" (south, downstream ?) Grape Creek may be the ravine in the central part of the **SW¼, Sec. 34**. This is in the Danville SE Quadrangle. Grape Creek Coal is the **Herrin (No. 6) Coal**.
6232. Sherrard, **Illinois**—collected by David White, August 8, 1910.
Sherrard is located in the northeast corner of **Mercer County**, south of Moline. The **Rock Island Coal** was mined in the vicinity.
6250. Baker Shaft, 1 mile west of Clay, **Kentucky**. Over top coal? probably near base of Conemaugh—collected by David White, July 28, 1910.
Webster County, Providence Quadrangle. The outcrop of the **No. 13 (Baker) coal bed** is about 1 mile west of Clay, and this coal is approximately equivalent to the base of the Conemaugh Formation in the Appalachian Basin. Older coal beds in the Carbondale Formation, however, have been mined near Clay.
6251. No. 7 Mine, 1¼ miles NW of Clay, **Kentucky**. Baker Coal—collected by David White, July 28, 1910.
Webster County, Providence Quadrangle, **Baker (No. 13) coal bed**.
6252. Wabash Clay Co., Veedersburg, **Indiana**. Between the two coals in clay pit (five clays)—collected by David White, August 9-10, 1910.
Several shale pits near Veedersburg are along the croplines of the **Upper Block and Minshall Coals**, which also were mined on a small scale. Veedersburg is near the common corner of **T19 and 20N, R7 and 8W, Fountain County**. Source: Hutchison, 1961, Indiana Geological Survey, Preliminary Coal Map 9.
6253. Same site as above; in refuse, may possibly have been derived from "stripping" over the upper coal, in lower end of pit—collected by David White, August 10, 1910.
See above.

6254. New Empire Mine, Empire, **Kentucky**, 3½ miles north of Crofton, Kentucky—collected by David White, August 4, 1910.
Christian County, Crofton Quadrangle. The **No. 4 (Mannington)** and slightly older **Empire coal bed** were both mined at Empire. The New Empire Mine is not identified on the geologic map, however. Source: Kehn, 1977, USGS Map GQ-1361.
6255. Petersburg Mining Co. mine, Mannington, **Kentucky**—collected by David White, August 2 and 4, 1910.
Christian-Hopkins county line, Crofton-Nortonville Quadrangle line. According to Palmer (1976, Nortonville, GQ-762) the coal mined at Mannington was the **No. 4 coal bed**, below the Curlew Limestone. Russel Peppers, using palynology, places this coal just above the Curlew Limestone.
6256. Terry Mine, 1 mi SW of Mannington, **Kentucky**—collected by David White, August 4, 1910.
Crofton Quadrangle, Christian County. The shaft of the Terry Mine is near the northwest corner of the quadrangle. The **No. 4 (Mannington) coal bed** was mined. Source: Kehn, 1977, USGS Map GQ-1361.
6257. Carrsville, **Kentucky**, 1½ miles SW of Carrsville, I. C. White's old opening, coal over lowest conglomerate—collected by David White, August 8, 1910.
This is in **Livingston County**, Shetlerville, Illinois-Kentucky Quadrangle. A coal shaft about 1½ mile southwest of Carrsville probably reached the **Gentry coal bed of the Caseyville Formation**. Source: Amos, 1965, USGS Map GQ-400.
6258. Tradewater Coal and Coke Co. at Dawson, **Kentucky**. Dawson Coal—collected by David White, August 1, 1910.
Most likely this is Dawson Springs, which is on the Tradewater River in the Dawson Springs Quadrangle, southwest **Hopkins County**. The **Dawson Springs (No. 4) coal bed**, which was mined at Dawson Springs, is shown to be beneath the Curlew Limestone by Kehn (1966, USGS Map GQ-573). However, according to Russel A. Peppers (palynologist) this coal is younger than the Curlew.
6254. I.C.R.R. grade about 3 miles west of Dawson, **Kentucky**, top of basal big ss ("Battery Rock") of the Pottsville—collected by D. White, July 31, 1910.
There is a cut along the Illinois Central Railroad 3 miles southwest of Dawson Springs, 2000' north and 9000' east of southwest corner of Dawson Springs Quadrangle, **Hopkins County**. This is mapped as Caseyville Formation, and likely is equivalent to upper part of Battery Rock Sandstone, as indicated. Source: Kehn, 1966, USGS Map GQ-573.
6260. Claxton, **Kentucky** between Claxton signal, 1 mile west of station, and Mile Post L173—collected by David White, July 31, 1910.
To locate this one precisely probably would require a time machine, as the signal and milepost undoubtedly have been changed since 1910. Claxton is in **Caldwell County** near the northeast corner of the Princeton East Quadrangle. It is about 2 miles east of Walche cut, which contains well-known exposures of the Chesterian Series. Westward from Claxton, one passes down-section from **Caseyville (basal Pennsylvanian) to Renault (lower Chesterian; Mississippian)**.
6261. Base of Pottsville shales just above limestone near Eureka schoolhouse, 4 mi north of Princeton, **Kentucky**—collected by D. White, July 29, 1910.
Eureka School (shown on old Princeton 15-minute topo map) was **7500' from SL, 4500' from WL**, Olney 7½-minute quadrangle, **Caldwell County**. It is mapped on St. Louis Limestone (Mississippian) but the **Caseyville Formation** crops out within ½ mile north of the school on the north side of the Tabb Fault system. Source: Trace and Kehn, 1968, USGS Map GQ-742.

6262. Old Davis, new Crittenden Mine, half-way between Sturgis and Dekoven, **Kentucky**, "9" (new No. 6) Coal, basal Allegheny—collected by David White, 1910.
Union County, eastern Dekoven Quadrangle. Presumably the coal is the **Davis (No. 6) coal bed**.
6263. Dekoven, **Kentucky**. "3 foot" coal (upper coal) opening near tipple—collected by David White, 1910.
Union County, Dekoven Quadrangle. Presumably **Dekoven (No. 7) coal bed**.
6264. Indian Hill, west of Dekoven Coal branch, **Kentucky**, about 70' below the Curlew ss. Type locality of Curlew ss Upper Pottsville—collected by David White, July 25, 1910.
Union County, Dekoven Quadrangle, **middle Tradewater Formation**. The Curlew Sandstone (now called the Granger Sandstone) overlies the Curlew Limestone.
6265. Dekoven, **Kentucky**. "4 foot" coal (lower coal) tipple grade level, near Station—collected by David White, July 22, 1910.
Union County, Dekoven Quadrangle, **Davis (No. 6) coal bed**.
6266. Railroad cut just north of Empire, **Kentucky**, about 3 miles north of Crofton, on old route—collected by David White, August 4, 1910.
Christian County, Crofton Quadrangle. A cut along the Louisville and Nashville Railroad 0.6 mile northeast of Empire exposes strata from the Empire coal bed through the Curlew Limestone (**middle Tradewater Formation**). Source: Kehn, 1977, USGS Map GQ-1361.
6267. One specimen from Hillman, 1½ miles NW of Dawson, **Kentucky**—collected by David White, August 2, 1910.
Hopkins County, Dawson Springs Quadrangle. Neither the current nor the 1911 topo map shows Hillman. The **Dawson Springs coal bed** crops out in the area indicated (Kehn, 1966, USGS Map GQ-573).
6268. Second L. & N. R.R. cut north of Crofton, **Kentucky**. Kanawha flora—collected by David White, August 4, 1910.
I have examined the cuts north of Crofton, **Christian County**, in detail for a study of the Pennyrile Fault System. Without a more accurate description of the sampling locality, it is impossible to specify the location or stratigraphic horizon. Most likely, this collection is from the **Tradewater Formation**.
6269. Enon, **Kentucky**, sandstone probably less than 30' of base of Pottsville (possible somewhat higher)—collected by David White, July 30, 1910.
The tiny community of Enon is near the southwest corner of the Shady Grave Quadrangle, **Caldwell County**. Basal **Caseyville** strata crop out nearby (Trace and Palmer, 1971; USGS Map GQ-880).
6270. Above the "Block ss" near old Bell slope, about 3 miles south of Grangertown, **Union County, Kentucky**. Upper Pottsville—collected by D. White, July 26, 1910.
Dekoven Quadrangle. Vague location precludes confirmation of stratigraphic horizon. The Bell coal bed is at the base of the **Tradewater Formation** in this area.
6271. Lynches' coal bank at Charleston, **Kentucky**—collected by David White, August 2, 1910.
Charleston is in the north-central part of the Dawson Springs Quadrangle, **Hopkins County**. The **Dawson Springs (No. 4) coal bed** has been mined extensively in and around Charleston (Kehn, 1966, USGS Map GQ-573).
6907. Box A. Dawson Springs, **Kentucky**, Norton Coal—received from Kentucky Geological Survey, February 15, 1915.
If the sample is from Dawson Springs in **Hopkins County**, it is most likely from the **Dawson Springs coal bed**.

6908. Same, from floor of Robertson coal.
See above.
6909. Box B. Nortonville coal south of fault, Mannington ?, **Kentucky**—received from Kentucky Geological Survey, February 15, 1915.
 Nortonville Quadrangle, **Christian or Hopkins County**. The designation Nortonville coal is obsolete. Possibly, this is the **Mannington (No. 4) coal bed** (equivalent to the Dawson Springs coal bed).
6910. Box B. Mannington Coal, Mannington, **Kentucky**—received from Kentucky Geological Survey, February 15, 1915.
 Crofton Quadrangle. See above.
6911. Box C. Flener Coal, Flenerville, **Kentucky**—collected by A. F. Crider, November 17, 1914 through Kentucky Geological Survey.
 The Aberdeen coal bed crops out at Flener, **Butler County**, Flener Quadrangle. The Aberdeen coal bed is about 40 feet above an "unnamed limestone bed" that I strongly suspect to be the Lead Creek Limestone Member of the **lower Tradewater Formation**. Source: Gildersleeve, 1972, USGS Map GQ-1049.
6912. Box C. Floor of Smith coal, South Hill, **Kentucky**—collected by A. F. Crider, 1914 through Kentucky Geological Survey, February 15, 1915.
 South Hill Quadrangle, **Butler County**. The Mining City coal bed has been mined extensively north of South Hill, but faults bring older rocks of the **Tradewater Formation** to the surface south of these mines. Coal prospects or adits to the Foster (?) coal bed are in the village of South Hill. Source: Moore, 1974, USGS Map GQ-1180.
6913. Boxes D and E. Topmiller Mine, Morgantown, **Kentucky**—received from Kentucky Geological Survey, February 15, 1915.
 Morgantown Quadrangle, **Butler County**. Coal mining near Morgantown is in the **No. 4 coal bed and the younger Mining City coal bed**. Source: Gildersleeve, 1972, USGS Map GQ-1040.
6914. Box F. No. 7 Mine, Clay, **Kentucky**—received from Kentucky Geological Survey, February 15, 1915.
Webster County, Providence Quadrangle. Several coal beds, including the **No. 13 (Baker), No. 11 (Herrin), and No. 9 (Springfield)**, have been mined within two miles of Clay.
6915. Box H. Smith Mills Mine, **Kentucky**—received from Kentucky Geological Survey, February 15, 1915.
Henderson County, Smith Mills Quadrangle. Johnson and Norris (1974, USGS Map GQ-1215) report that the **No. 13 coal zone** was mined in two shafts at Smith Mills.
6916. Box H. Corydon Mine, **Kentucky**—received from Kentucky Geological Survey, February 15, 1915.
Henderson County, Poole Quadrangle. The **No. 9 and No. 13 coal beds** are reported to be of minable thickness, but there is no record of mining. Source: Fairer, 1973, USGS Map GQ-1088.
6917. Box B. Gish Mine, **Kentucky**—received from Kentucky Geological Survey, February 15, 1915.
 This may have been at Gishton in the west-central part of the Central City West Quadrangle, **Muhlenberg County**. About three miles south are large strip mines in the **No. 11 and No. 12 coal beds**. Source: Palmer, 1969, USGS Map GQ-831.

7046. Float lower part of Pottsville, northwest corner Golconda Quadrangle, **Illinois**—collected by Stuart Weller, 1915.

This would be the northwest corner of the Shetlerville 7½-minute quadrangle, **approximately S½, Sec. 1, T12S, R6E, Pope County**, where Baxter et al. (1967, ISGS Circular 413) mapped **lower Abbott (Tradewater) strata**.

7137. At head of second drain north of road east from Caseyville, Illinois, 185 feet above Bell Coal, Shawneetown Quadrangle—collected by David White and W. Lee.

This probably should read Caseyville, **Kentucky, Union County**, Dekoven Quadrangle. The indicated stratum is **middle Tradewater Formation**.

7138. On road east from Caseyville, **Illinois**, Block "slate" below the coal, **117 feet above Bell Coal**, Shawneetown Quadrangle—collected by David White and W. Lee.

Again, **Union County, Kentucky**, Dekoven Quadrangle.

7139. In ravine north of road east from Caseyville, Illinois (sic), Shawneetown Quadrangle. Horizon **160 feet above Bell Coal**—collected by David White and W. Lee.

Again, **Union County, Kentucky**, Dekoven Quadrangle.

7140. Immediately above **Ice House coal**, Dekoven, Illinois (sic), Shawneetown Quadrangle. In ironstones—collected by David White.

Union County, Kentucky; Dekoven Quadrangle. Ice House coal bed is in mid-lower Tradewater Formation.

7141. Barnaby Mine, 4 miles SW of Sturgis, Illinois (sic). From sandstone **just below Bell Coal**—collected by David White.

Union County, Kentucky, probably in Dekoven Quadrangle. Bell coal bed is base of Tradewater Formation; the underlying sandstone is in the Caseyville Formation.

7142. Above coal **40 feet above Bell coal**, Shawneetown, **Illinois** Quadrangle—collected by Wallace Lee.

The location is a lost cause; the stratigraphic horizon is **lower Tradewater Formation**, above the coal sometimes called Western Kentucky No. 2.

7143. 4 foot (sic) coal, 1 mile south of the Saline Mine, Shawneetown, **Illinois**—collected by David White, 1915.

The **Davis Coal** in this area used to be called the 4-foot coal. The cropline of the Davis passes less than 1 mile south of Saline Mines in **Sec. 35, T10S, R9E, Gallatin County**, Saline Mines Quadrangle. Source: Smith, 1958, ISGS Circular 228.

7329. Golconda Quadrangle, **Illinois**, 1½ miles northwest of Eichorn, Rosiclare sandstone next above O'hara—collected by Charles Butts, 1916, 1 specimen.

Rosiclare or Aux Vases Sandstone is of Mississippian age; **late Meramecian or early Chesterian**, depending on whose version of the series boundary you prefer. The Aux Vases is mapped in the area indicated (probably **Sec. 3, T12S, R7E, Pope County**, Shetlerville Quadrangle). Source: Baxter et al., 1967, ISGS Circular 413.

7342. One mile SW of Cloverport on Owensboro road, **Breckinridge County, Kentucky**. Tar Springs Sandstone, 15-20 feet below top—collected by Charles Butts, 1915, one specimen.

Cloverport Quadrangle, Breckinridge County. Stratigraphy (**Chesterian Series**) confirmed by geologic map (Bergendahl, 1965, USGS GQ-273).

7344. ¾ mile east of S. Killman, **Breckinridge County, Kentucky** on L. H. and St. L. R.R., Tar Springs sandstone, shaly facies. 2 specimens—collected by Charles Butts, 1915.

I cannot locate S. Killman in Breckinridge County. The Tar Springs Sandstone is **middle Chesterian**.

7345. ½ mile east of Rose Creek School, Equality, **Illinois** Quadrangle. Shaly member in middle of Tar Springs Sandstone. One specimen—collected by Charles Butts, 1916.
Rose Creek School was southeast of Herod on 1916 edition of topo map. A likely spot for Tar Springs (**Chesterian Series**) outcrops is along Rose Creek in the NW¼ SW¼, **Sec. 11, T11S, R7E**, Pope County, Herod Quadrangle (Baxter et al., 1967, ISGS Circular 413).
7346. 5 miles east of Vienna, **Illinois**. Palistine (sic) sandstone. One specimen—collected by Charles Butts, 1915.
Johnson County, Bloomfield Quadrangle. This may or may not be Palestine Formation, but it is definitely **middle Chesterian**.
7357. Orig. No 2B. S½, **Sec. 33, T9N, R8W**, Gillespie, **Illinois** Quadrangle—collected by Wallace Lee.
ISGS field notes by J. M. Weller (1927) and H. R. Wanless (1930, 1931) describe dark gray shale "with abundance of ferns" below the Carlinville Limestone in a streambed near the center of the S½ of **Sec. 33, T9N, R8W, Macoupin County**. This is in the upper part of the Modesto Formation, between the Chapel (No. 8) and Womac Coals (**early Missourian**).
7359. Orig. No. 6 B. Needle Creek, NW¼, **Sec. 21, T9N, R7W**, Gillespie Quadrangle, **Illinois**—collected by Wallace Lee.
C. E. Needham, 1929, ISGS field notes, reports plant remains in shale immediately underlying the Carlinville Limestone on the north side of the road at the bridge over Spanish Needle Creek, SE¼ SW¼ NW¼, **Sec. 21, T9N, R7W, Macoupin County**. The Carlinville Limestone is in the upper part of the Modesto Formation, between the Chapel (No. 8) and Womac Coals (**early Missourian age**).

Book 10—Specimens 7513-8958

7915. Sandy ch. parting below the "thin-bedded" orange and the lower massive part of the "orange ss.". Harrisburg Quadrangle, **Illinois, Pope County**, near center W½ W½, **Sec. 4, T11S, R6E**. Ravine about 300 feet east of the road corner—collected by Henbest and White, August 2, 1928.
Original field note shows collecting locality about 300 feet east of center of west line of Section 4. *Annularia* and a few other plant remains were collected from sandy shale overlain by thin-bedded orange sandstone and underlain by massive, coarse, ferruginous sandstone. The strata were steeply dipping. My mapping (Nelson and Lumm, 1990, ISGS Map IGQ-5) shows the area to be complexly faulted, so the stratigraphic horizon is uncertain. It is most likely **Abbott (lower Tradewater Formation)**.
7916. Shales with coal 28" between conglomerate at Battery Rock ss. Mine, about 300 yards east of north-south road, in gully. N½ of N½, **Sec. 7, T11S, R6E**, Harrisburg Quadrangle, Saline County, **Illinois**—collected by Henbest and White, August 2, 1928.
Original field note states abundant plant fossils were collected from shale 6 to 12 inches above coal at a local drift mine. I observed coal 900' from NL, 2600' from WL, **Sec. 7, T11S, R6E, Pope (not Saline) County**, Eddyville Quadrangle. It is in the **Caseyville Formation** a short distance below the base of the Pounds Sandstone Member. Source: Nelson and Lumm, 1990, ISGS Map IGQ-5.

7917. Shale over coal just above conglomerate, (lower conglomerate of Battery Rock ss.), and under upper conglomerate, center SE $\frac{1}{4}$ SE $\frac{1}{4}$, **Sec. 31, T10S, R7E**, Equality Quadrangle, **Saline County, Illinois**—collected by Henbest and White, August 1, 1928.
The original note gives the location as SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, but center SE $\frac{1}{4}$ SE $\frac{1}{4}$ fits the topography better. This site in the Herod Quadrangle is mapped as **Caseyville Formation**, just below the Battery Rock Sandstone Member (Baxter et al., 1967, ISGS Circular 413). Plant fossils reportedly were abundant, well preserved and diverse.
7918. Probably from upper conglomerate, Battery Rock ss, N $\frac{1}{2}$, **Sec. 7, T11S, R6E**, **Saline County, Illinois**, Harrisburg Quadrangle—collected by Henbest and White, August 2, 1928.
See No. 7916. "Upper conglomerate" would be Pounds Sandstone Member of **Caseyville Formation**.
7919. Upper part of "Green" shale, near center W. side SE $\frac{1}{4}$ SE $\frac{1}{4}$, **Sec. 6, T11S, R6E**, **Pope County**, Harrisburg Quadrangle—collected by Henbest and White, August 2, 1928.
The original field notes give the location as Section 5 and indicate the strata are Tradewater. Nelson and Lumm (1990, Eddyville Quadrangle, ISGS Map IGQ-5) mapped **upper Abbott (Tradewater)** in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 5, and Caseyville in SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 6. The correct location, therefore, is probably in Section 5. The collection consists of two specimens of *Neuropteris rarinervis* from shale about 10 feet below a sandstone that contains stigmarian root casts.
7920. Orig. Lot No. 6. Green shale, about 10 to 20' below coal, in ravine about 400 feet NE of local mine, Brownfield Quadrangle, **Pope County, Illinois, Sec. 14, T12S, R6E**, 1 mile north of Raum on Barker farm—collected by Henbest and White, August 3, 1928.
Original field notes confirm the locality to be the NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 14, Waltersburg Quadrangle. The collection was made from shale 5 to 10 feet below a coal that was locally strip mined. I observed and plotted the coal while mapping the Waltersburg Quadrangle. The coal is near the base of the Tradewater Formation and **probably is equivalent to the Bell coal bed in Kentucky**. Source: Weibel, Nelson, and Devera, 1991, ISGS Map IGQ-8.
7921. Orig. Lot No. 7. Over coal, 25 feet below Curlew Limestone, NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, **Sec. 27, T10S, R6E**, Harrisburg Quadrangle, **Saline County, Illinois**—collected by Henbest and White, August 4, 1928.
In Eddyville 7 $\frac{1}{2}$ -minute quadrangle. Collection is from **shale overlying Delwood coal bed**, which is below Mitchellsville (not Curlew) Limestone, **upper Tradewater Formation**. Source: Nelson and Lumm, 1990, ISGS Map IGQ-5. See also ISGS Bulletin 96.
7922. Pottsville plants, coal 25 feet below Curlew Ls. center N. side, SW $\frac{1}{4}$ SE $\frac{1}{4}$, **Sec. 23, T10S, R6E** (ink crossed out and "NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 27" written in pencil), **Saline County, Illinois**—collected by Henbest and White, August 4, 1928.
Original field note shows that a collection was made on August 4, 1928 at the site in Section 23. A "good" collection of plant fossils was made from shale directly overlying a coal bed that has a shale parting. About 25 feet above the plant horizon is a limestone identified as the Curlew. My mapping (unpublished) in this area indicates that the coal is the Delwood and the limestone is the Mitchellsville. These strata are slightly younger than the true Curlew Limestone, **upper Tradewater Formation**.

7923. Shale about 8' below coal, in river bluff at Grayville, **Illinois**, just below ferry. This coal is 50-100' above Friendsville coal zone—collected by Henbest and White, July 31, 1928.
 Legal location approximately SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, **Sec. 21, T3S, R14W, Edwards County**. Plate 1 of Nance and Treworgy (1981, ISGS Circular 515) shows the Flannigan Coal (?) cropping out at Grayville. The Flannigan Coal is in the middle part of the Bond Formation and is older than the Friendsville Coal. The Flannigan Coal is of **Missourian age**.
7924. Chester plants, near center of W $\frac{1}{2}$, **Sec. 32, T10S, R7E, Saline County, Illinois**—collected by D. White.
 This site is in the Herod Quadrangle, and is mapped as the Palestine Formation, **Chesterian Series** (Baxter et al., 1967, ISGS Circular 413). This could be a stream cut along Gibbons Creek, or a roadcut along Illinois Route 34.
7925. Stonefort Formation, black shale near top of formation, **Sec. 29, T10S, R6E, Harrisburg Quadrangle, Saline County, Illinois**—collected by Henbest and White, August 1928.
 An original field note by Henbest and White, dated August 7, 1928, reports collecting fossils from black shale above the Stonefort Limestone Member in a ravine about 1,000 feet south of Duncan School. This places the site about 1,000 feet south of the northwest corner of Section 29. In mapping this area, I observed the **Carrier Mills Shale Member**, a black, fissile shale overlying the Stonefort Limestone, cropping out at the site indicated. This is near the top of the **Tradewater Formation**. Henbest and White report that fish remains and very rare plant fossils were collected from canneloid black shale here.
7926. Stonefort Group-Bald Hill Coal, coal bank in ravine, just east of schoolhouse on outskirts of Stonefort, **Illinois**, Harrisburg Quadrangle, Williamson County—collected by Henbest and White, August 6, 1928.
 The probable location is the W $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, **Sec. 25, T10S, R4E, Saline, County**, Stonefort Quadrangle. The Bald Hill Coal is currently called the **Mt. Rorah Coal (upper Tradewater Formation)**. Source: Nelson and Lumm, 1991, ISGS Map IGQ-6.
7927. Lot 13. Battery Rock coal horizon, near center S. side of SE $\frac{1}{4}$ NW $\frac{1}{4}$, **Sec. 36, T11S, R4E, Johnson County, Illinois**, a few yards north of streambank—collected by Henbest and White, August 1928.
 Original field notes indicate collection was made in bank and bed of Cedar Creek, a short distance north of the fork. The probable location is **2200' from NL, 1700' from WL, Sec. 36**, in the Stonefort Quadrangle. Numerous, varied, and well-preserved plant fossils were gathered from a 4-foot section of shale. DiMichele and I collected plant fossils from a spot very close to the one described by Henbest and White. Stratigraphically, this is in the **upper part of the Drury Member of the Caseyville Formation**. (Nelson and Lumm, 1990, ISGS Map IGQ-6).
7928. New line of I.C.R.R. in **Saline County, Illinois**; long cut at M.P.E. 62 and R. 18—collected by Henbest and White, August 7, 1928.
 Notation may refer to railroad mileposts, which may no longer exist. There is no mention in ISGS field notes of plant fossils at any cut along the Illinois Central in Saline County. Henbest described a section in a railroad cut in the NE $\frac{1}{4}$ NE $\frac{1}{4}$, **Sec. 30, T10S, R5E**, and SW $\frac{1}{4}$ SE $\frac{1}{4}$, **Sec. 19, T10S, R5E**. Strata in this cut are **upper Tradewater Formation**. However, there is no direct evidence that the samples come from this cut.

7929. Pottsville plants, about 8" or more above basal conglomerate (0-12" thick) of the "Orange"? sandstone, upper thin-bedded portion, NE¼, **Sec. 7, T11S, R5E**, south end of I.C.R.R. cut, **Pope County, Illinois**—collected by Henbest and White, August 8, 1928.
Referring to the original field notes and the modern topo map, the collection was made in the NE¼ SW¼ NE¼, **Sec. 7**. Plant fossils and a few marine invertebrates were taken from the conglomerate at the base of a sandstone which disconformably overlies shale at the south end of the railroad cut. Nelson and Lumm (1990, ISGS Map IGQ-6) map the sandstone near the base of the Spoon Formation, close to the position of the Oldtown coal bed (**equivalent to the Rock Island Coal**).
7930. Lot 12, Pottsville plants. Horizon uncertain, not lower than Battery Rock Coal horizon. about 300-900' north of center, **Sec. 29, T 11S, R5E, Pope County, Illinois**—collected by Henbest and White, August 9, 1928.
Stonefort Quadrangle. This area is mapped **near base of Abbott (Tradewater) Formation**. Source: Nelson and Lumm, 1990, ISGS Map IGQ-6.
7931. Lot 14, Pottsville-Caseyville. Battery Rock shale, at waterfall, in hillside ravine N. of house, **Sec. 2, T12S, R6E, Pope County, Illinois**—collected by Henbest and White, 1928.
Referring to original field notes and topo maps, the site is probably a steep gully on the south side of a tributary of Lusk Creek, **2700' from NL, 500' from EL, Sec. 2, Eddyville Quadrangle**. The collection was "unusually good" and came from a dark gray shale underlying a thick crossbedded sandstone. Stratigraphically, this is **mid-lower Abbott Formation or lower Tradewater Formation**, possibly near the horizon of the Ice House coal bed. Source: Nelson and Lumm, 1990, ISGS Map IGQ-5.
7932. Lot 15. Stonefort member of Pottsville, Stonefort upper coal, first Illinois Central R.R. cut north of Highway No. 1, northeast of Stonefort about 1 mile—collected by Henbest and White, August 13, 1928.
There are two railroad cuts north of present-day U.S. Hwy. 45 about 1 mile northeast of Stonefort. One cut is in NW¼ NE¼ NE¼, the other is in NW¼ NW¼ NE¼, **Sec. 30, T10S, R5E, Saline County, Illinois**, Carrier Mills Quadrangle. Original field notes indicate that a poor collection of plant fossils was obtained from shale overlying the **Wise Ridge Coal, upper Tradewater Formation**. For a measured section, see Nelson and others, 1991, ISGS Bulletin 96, p. 40.
7933. In lower Stonefort coal, Stonefort, **Saline County, Illinois**, old coal bank just north of school-house—collected by Henbest and White, August 13, 1928.
Probably same site as No. 7926, but in **Wise Ridge Coal**, which overlies Mt. Rorah Coal, **upper Tradewater Formation**.
7934. Ss. "orange"? Illinois Central R.R. cut (new line) north of M.P.E. 63 (Rt. 17)—collected by Henbest and White, August 8, 1928.
Enigmatic reference to railroad mileposts again. See No. 7928 and No. 7929.
7935. Murray Bluff formation, over coal about 18 feet below "brown" sandstone, Pottsville Group, **Sec. 34, T10S, R6E, Saline County, Illinois**—collected by D. White and L. G. Henbest, August 15, 1928.
Original field notes plot the location accurately. It is the mouth of an old drift mine **1300' from the NL, 900' from the WL, Sec. 34, T10S, R6E**, Eddyville Quadrangle. The drift mine operated in the **Delwood Coal, Tradewater Formation**, as shown by Nelson and Lumm, 1990, ISGS Map IGQ-5. Plant fossils were reported to be scarce. The collection probably came from the shale parting in the Delwood Coal or shale immediately overlying the coal. The notes do not indicate whether an in situ exposure or shale from a waste pile was collected.

7936. Murray Bluff Formation, shale over coal and beneath the "brown" ss, Pottsville Group. At mine in ravine, **Sec. 3, T11S, R6E, Saline County, Illinois**—collected by D. White and L. G. Henbest, August 15, 1928.

Original field notes confirm that the mine was in the **SW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 3, Eddyville Quadrangle**. This is the type locality of the **Delwood Coal. Tradewater Formation**. Source: Nelson and Lumm, ISGS Map IGQ-5 and ISGS Bulletin 96. The collection came from shale directly overlying the coal.

7937. Lot 20. Murray Bluff, roof shale of coal, below "brown" ss, Pottsville Group. **Sec. 2, T11S, R5E, Saline County, Illinois**—collected by D. White and L. G. Henbest, August 15, 1928.

Original field notes indicate the collection came from shale directly overlying the coal in a drift mine, located **600' from the SL, 2100' from the EL, Sec. 2, T11S, R5E, Eddyville Quadrangle**. This coal is the Oldtown Coal, **equivalent to the Rock Island Coal**. Source: Nelson and Lumm, 1990, ISGS Map IGQ-6, also Bulletin 96.

7942. Lot 2 Pottsville-Tidewater (sic). At local mine, east side of E. & E.I. R.R., about $\frac{5}{8}$ mile N. of Hudgens Mill, in gully 15 rods E. of R.R., **Sec. 12, T10S, R2E, Williamson County, Illinois**—collected by White and Henbest, August 20, 1928.

Indicated location is **NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 12, T10S, R2E, Marion Quadrangle**. No confirmation of a mine or plant fossils here. This should be stratigraphically **near the Murphysboro Coal** according to W. Smith, 1958, ISGS Circular 228.

7943. Lot 22, Pottsville-Tidewater (sic). Little slope mine in bank of South Fork Saline River, N. of house in **N $\frac{1}{2}$, Sec. 24, T10S, R2E, Williamson County, Illinois**—collected by Henbest and White, August 20, 1928.

The original field notes indicate the mine was about **1300' from SL, 300' from WL, Sec 24**. Other ISGS field notes describe numerous small slope and drift mines along the riverbank in the **W $\frac{1}{2}$ SW $\frac{1}{4}$ and SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 24**. The notes mention plant fossils in shale on the mine dumps and in sandstone exposed in a roadcut. Palynological study of coal from this site by Russel A. Peppers indicates correlation with the Tarter Coal (northwestern Illinois) or the Ice House/Willis Coal (Kentucky-southern Illinois) and in the **lower part of the Tradewater Formation**.

7944. Lot 23. Pottsville-Drury Shale. **SE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 17, T11S, R2E, Johnson County, Illinois**. In gully bank $2\frac{1}{4}$ miles W. and $\frac{3}{4}$ mile N. of Goreville—collected by White and Henbest, August 20, 1928.

Lick Creek Quadrangle, probably an outcrop in NE-trending ravine. Original notes state that plant fossils occurred in soft, plastic, laminted shale. Strata are in **lower part of Tradewater Formation**, probably within 100 feet of base of formation. Source: Weibel and Nelson, ISGS, Map IGQ Series in press (Lick Creek Quadrangle).

7945. Lot 24. Pottsville-Lick Creek. In shale below ? the massive ss. in quarry in north end of I.C.R.R. cut; south of old quarry about $\frac{1}{4}$ mile. About $2\frac{1}{2}$ mi. N of Cobden, **Illinois**—collected by Henbest and White, August 21, 1928.

Original field notes and topo map indicate the cut is about **1300' from SL, 1800' from EL, Sec. 4, T11S, R1W, Union County, Makanda Quadrangle**. The cut exposes the Keller sandstone lentil and older strata of the **Caseyville Formation**. These rocks are laterally equivalent to the Wayside Member and are older than the Battery Rock Sandstone Member. The collections came from **shale underlying the Keller Sandstone**. Source: Jacobson and Weibel, 1993, ISGS Map IGQ-11.

7946. Pottsville-Drury Shale (Equivalent at least in part to "Orange ss") (Wayside) 1¼ mi. W. of Wayside: extreme NW¼ NW¼, **Sec. 16, T11S, R1E, Union County, Illinois**. At bend or road in gully nearly on section line—collected by White and Henbest, August 22, 1928.
The original field notes indicate a site in a stream bed up the east fork of the stream about 500 feet south of the road. This apparently is about **300' from NL, 2200' from WL, Sec. 16, T11S, R1E**, Lick Creek Quadrangle. The collection was obtained from shale, which is poorly exposed. If the locality is in the NW¼ NW¼ of Section 16, it is in the **lower Tradewater Formation**; but if it is at the spot indicated in the original notes, it is **uppermost Caseyville**. Source: Weibel and Nelson, in press, ISGS Map IGQ Series.
7947. Lot 26, Pottsville-Caseyville?. Shales at base of Pottsville, just above Lower Carboniferous, about 5 miles SW of Goreville, near top of hill near center S½ S½, **Sec. 4, T12S, R2E, Johnson County, Illinois**—collected by White and Henbest, August 22, 1928.
Original notes indicate the **SW¼ SW¼ SE¼, Sec. 4, T12S, R2E**, Vienna Quadrangle. Strata are **Wayside Member of Caseyville Formation**. Nelson and DiMichele collected fossil plants from what may be the same locality.
7948. Lot 27, Pottsville, below cliff-forming ss. Breck farm, under ss bluffs, SW of road, near center, **Sec. 17, T8S, R4W, Jackson County, Illinois**—collected by White and Henbest, August 23, 1928.
The original field notes indicate collections were made from two sites, one in the NE¼ NE¼ SW¼, the other in the SE¼ NW¼ SE¼, **Sec. 17, T8S, R4E**, Raddle Quadrangle. A measured section indicates plant fossils are from shale in the **lower part of the Caseyville Formation**, underlying a bluff-forming pebbly sandstone and 40 to 50 feet above the base of the Pennsylvanian.
7949. Lot 28, Pottsville, near local mines, **SW¼ SW¼, Sec. 28, T10S, R1W, Jackson County**. In ravine about 75' north of road—collected by White and Henbest, August 24, 1928.
Makanda Quadrangle. Coal crops out along NE-trending ravine. Original notes indicate plant fossils were in shale directly overlying the coal. Mapping and palynological analysis by Russel A. Peppers indicate **lower Tradewater Formation**, but correlation to named units is uncertain. Jacobson and Weibel, 1993, ISGS Map IGQ-11.
7950. Pottsville Group, Murray Bluff Formation, shale on Curlew Limestone. In ravine by roadside, **Sec. 22, T10S, R6E, Saline County, Illinois**—collected by D. White and L. G. Henbest, August 14, 1928.
Original field notes indicate the site was about **100' from SL, 300' from WL, Section 22, Harrisburg Quadrangle**. The collection came from shale between the "Curlew Limestone and the Curlew Sandstone" and was described as "good for that particular horizon." The limestone, however, is the **Mitchellsville Limestone Member of the Tradewater Formation**, which is younger than the Curlew. See Nelson and others, 1991, ISGS Bulletin 96, p. 37.
7951. Lot 29. Pottsville-Drury. Bone coal from the bed that is mined here. Clay Lick, ¾ mile west of the cement state road, near center **SW¼, Sec. 32, T10S, R1W, Jackson County, Illinois**. SW-dipping coal in country bank near bed of stream—collected by White and Henbest, August 25, 1928.
Makanda Quadrangle. Geologic map shows coal outcrop and several collapsed adits on the northeast side of Clay Lick Creek in the **NE¼ NW¼ SW¼, Sec. 32**. The coal is mapped in the **upper part of the Caseyville Formation**. This was a split seam: upper coal bench 2.1 feet thick, claystone parting 1.9 feet thick, lower coal bench 1.6 feet thick. Source: Jacobson and Weibel, 1993, ISGS Map IGQ-11; also Lamar, 1925, ISGS Bulletin 48.

7952. Pottsville—laminated shale under sandstone, **SE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 34, T7S, R3W, Jackson County**, about $\frac{1}{2}$ mile E. of Union School and $2\frac{1}{4}$ miles W. of Oraville—collected by White and Henbest, August 25, 1928.
Oraville Quadrangle. This is **below the Murphysboro Coal**, according to Smith, 1958, ISGS Circular 260.
7953. Lot 31. Pottsville. In shale, probably Drury, **NW $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 14, T11S, R1W, Union County, Illinois**. Elev. about 700' in main gully extending due west of road about $1\frac{1}{2}$ mile SE of Topping School—collected by White and Henbest, August 26, 1928.
Makanda Quadrangle. The indicated spot is **600' from NL, 500' from WL, Section 14**, and is stratigraphically about 20 feet above the top of the **Keller sandstone lentil of the Caseyville Formation**. This is equivalent to the upper part of the Wayside Member. Source: Jacobson and Weibel, 1993, ISGS Map IGQ-11.
7954. Lot 32. Pottsville, Makanda. In shale over coal, near center **SE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 3, T10S, R1E (sic) Carbondale Quad**. Country bank in branch behind farm...about 1 mile east of Boskydell, Illinois—collected by White and Henbest, August 27, 1928.
Carbondale Quadrangle. Correct location (shown in original field notes) is **NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 3, T10S, R1W, Jackson County, Illinois**. Unpublished ISGS field note by Harold R. Wanless describes shale containing plant stem and leaf impressions and overlying coal at this site. Wanless believed the coal to be the Ice House (**lower Tradewater Formation**), but that cannot be verified.
7955. Lot 33. Pottsville-Lick Creek. I.C.R.R. cut through contact of Mississippian and Pottsville as mapped by Lamar (1925; ISGS bulletin 48) near center **W $\frac{1}{2}$, Sec. 9, T11S, R1W, Union County, Illinois**—collected by White and Henbest, August 26, 1928.
Makanda Quadrangle. This cut is **2300' from SL, 1400' from WL of Sec. 9**, and indeed contains **contact of Caseyville Formation (Pennsylvanian) on Kinkaid Limestone (Mississippian)**. Original notes indicate that poorly preserved plant impressions were found in crossbedded sandstone just above the base of the Caseyville. Source: Jacobson and Weibel, 1993, ISGS Map IGQ-11.
7956. 1 specimen, Stonefort Group, Pottsville. Near Macedonia School, Harrisburg Quadrangle, **Illinois**—collected by D. White, August 1928.
Macedonia School was near center **N $\frac{1}{2}$, Sec. 22, T10S, R6E, Saline County, Harrisburg Quadrangle**. The specimen should be upper Tradewater, probably between the Mitchellsville Limestone and Carrier Mills Shale (Nelson, unpublished data).
7958. Limestone quarry on east side of C. B. & Q. R.R., halfway between Winchester and Aalsey, **Illinois**—collected by D. White, Sept. 1, 1928.
A. H. Bell (ISGS field notes, 1929) describes a limestone quarry in the **NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 18, T13N, R12W, Scott County**. This is on the east side of the C. B. & Q. R.R. about midway between the towns named. Limestone in and near the quarry is coarsely crinoidal and cherty, and probably is Burlington or Keokuk Limestone (**Osagian Series; Mississippian**). Plant fossils are not mentioned.
7959. Coal mine on basal coal (No. 2) 1 mile north of Winchester, on west side of railroad. Ls. from beneath the coal, small nodules in black shale over coal—collected by D. White, Sept. 2, 1928.
This probably was the Wm. H. Bates Coal Co. mine, a shaft mine in the **Colchester (No. 2) Coal** located in the **NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 21, T14N, R12W, Scott County, Illinois**; and active 1883 to 1908.
How White found exposures in 1928 is a mystery.

7960. Lot 35. Pottsville—very dark, carbonaceous black shale, 2-5" above the contact and under the coal, 1½ miles east of Alsey, **Illinois**. SW¼ NW¼, **Sec. 4, T13N, R12W, Scott County**. East side of road in ravine—collected by White and Henbest, Sept. 4, 1928.

Original field notes confirm the legal location given above, although this site is 3 miles north, not east of Alsey. The notes further indicate that the collection came from very dark carbonaceous shale, underlying a thin coal and only a few inches above the base of the **Pennsylvanian**. Preservation and variety of fossil plants were good.

7961. Lot 36, Pottsville, at base of Pennsylvanian, bed of branch coming into larger creek at bend of road about 1 mile west of Exeter, **Sec. 23, T15N, R13W, Scott County, Illinois**—collected by White and Henbest, Sept. 4, 1928.

Probably SW¼ SW¼ SE¼, **Sec. 23**, Florence Quadrangle. The original field note indicates abundant plant fossils came from **silty shale at the base of the Pennsylvanian System**. Another field note (G. H. Cady, 1928, ISGS) describes sandy shale with plant fossils overlying sandstone with *stigmara* impressions at the base of the Pennsylvanian unconformably overlying the Salem (?) Limestone.

7962. Lot 37. Pottsville—base of Pottsville, about 200 feet further downstream, south of Lot 36, same section, collectors and date.

See above.

7963. Lot 38. Pottsville—near Bernadotte, Vermont Quadrangle, about 3 miles north of Ipava, **Sec. 19, T5N, R2E, Fulton County, Illinois**—collected by White and Henbest, Sept. 3, 1928.

An original field note dated Sept. 5, 1929 describes plants collected "in the bluff south of the road, on the south side of the creek about 500 feet east of bridge at foot of hill" in the SW¼ NE¼ SW¼, **Sec. 19**. Considering topography, the correct location is probably about **1800' from SL, 2500' from WL, Sec. 19, T5N, R2E**, Smithfield 7.5-minute quadrangle, in a cutbank of an unnamed tributary of the Spoon River. The collection came from "partings in coal about 20 feet below the Pottsville Knobby." There are copious field notes in the ISGS files, including notes by Harold Wanless (1929), with detailed measured sections. The "Pottsville Knobby" evidently is the Seahorne Limestone, and the coal from which fossils were collected is the **Rock Island Coal**, which overlies the type Bernadotte Sandstone. See Wanless, 1957, ISGS Bulletin 82. Geologic Section 37, p. 203.

7964. Lot 40. Pottsville—beneath Stonewall clays and just over basal sandstone of Pottsville, 1½ miles NNW of Macomb, **Sec. 25, T6N, R3W, McDonough County, Macomb Quadrangle, Illinois**—collected by White and Henbest, Sept. 6, 1928.

A field note by Harold Wanless (1929) describes the section in an abandoned clay pit near the **center of the NE¼, Sec. 25, T6N, R3W**, Macomb 7.5-minute quadrangle. Wanless reported plant remains in claystone overlying a hard, quartzitic sandstone containing *stigmara*; but this sandstone is not at the base of the Pennsylvanian. Wanless did not identify any strata in the measured section. The state geologic map shows the site to be near the Abbott-Spoon formation contact, i.e., **close to the position of the Rock Island Coal**.

7965. Lot 41. Pottsville, shales over basal sandstone, (sandstone about 10" thick on limestone conglomerate). Dickey Stonewall clay pits (stripping) near Colchester, **Illinois**, near center SW $\frac{1}{4}$, Sec. 11, T5N, R8W, **McDonough County**, Colchester Quadrangle—collected by White and Henbest, Sept. 7, 1928.

An original field note for this date reports rare plant fossils from **shale overlying basal Pennsylvanian sandstone** at the Dickey Clay Pit, near the center of the SE $\frac{1}{4}$, Sec. 11, T5N, R8W. The true location must be **Sec. 11, T5N, R4W, Colchester 7.5-minute quadrangle** (R8W is not in McDonough County). I cannot further resolve the location of the clay pit between the two conflicting locations (SE $\frac{1}{4}$ or SW $\frac{1}{4}$). Stratigraphically, this is just above the Babylon Sandstone if the field notes are correct.

7966. Old shale pit close to Marietta Station, **Fulton County, Illinois**—collected by White and Henbest, Sept. 1928.

Marietta is in the SE $\frac{1}{4}$, Sec. 16, T6N, R1E, Fulton County, Bushnell East Quadrangle. There are numerous field notes for sites near Marietta, especially for ravines along the railroad in the N $\frac{1}{2}$, Sec. 21, T6N, R1E, Adair Quadrangle. A note by Harold Wanless (1929) describes the section in a "quarry face" in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 21. Wanless did not observe plant fossils here, but J. M. Weller (1931) observed plant fossils in two nearby outcrops. The strata are **between the Rock Island and Colchester Coals**.

7967. Lot 42. Pottsville—area reported on by Savage in ISGS Bulletin 38. Fossils in a thin-bedded, relatively clean quartz sandstone NW of St. Augustine, SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, **Sec. 36, T9N, R1W, Warren County, Avon Quadrangle, Illinois**—collected by White and Henbest, Sept. 2, 1928.

The indicated site is along a ravine tributary to Cedar Creek in the Avon 7.5-minute quadrangle. Original field notes state that the stratigraphic position was uncertain, and "A fair variety of plants associated with *Megalopteris* were found." A field note by Harold Wanless (1929) gives a measured section at this site, but does not mention plant fossils. A thin-bedded quartzose sandstone near the top of the section probably was the collection horizon. Wanless believed this sandstone to be in the Seville cyclothem (**near Rock Island Coal**).

7968. Lot 43. Pottsville ? at shaft of mine on top of hill SE of Augusta, Hancock County; near center E $\frac{1}{2}$, Sec. 36, T3N, R5W, **Illinois**—collected by White and Henbest, Sept. 9, 1928.

Original notes place the site south of Williams Creek in the SE $\frac{1}{4}$ NE $\frac{1}{4}$, **Sec. 26, T3N, R5W, Augusta Quadrangle**. These notes state that plant fossils occurred in pyrite nodules in the coal and also (rarely) in the roof shale. ISGS field notes and the mined-out area map for Hancock County verify that the mine was in Section 26, not Section 36. Several shaft mines that worked the **Colchester (No. 2) Coal** are listed in Section 26, although none exactly meet the description given in White and Henbest's field notes.

7969. Lot 44. Pottsville ? See ISGS Bulletin 43. Mine dump SE of Berwick, **Illinois**, Sec. 20, T9N, R1W, **Warren County**—collected by White and Henbest, Sept. 11., 1928.

An original field note for this date indicates a collection was made from shale underlying crossbedded sandstone in a streambank in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, **Sec. 20, T9N, R1W, Warren County**. Possibly, two separate collections were made, one from a mine dump and the other from the streambank. Notes by L. E. Workman (1925) mention plant fossils at the streambank exposure and place the horizon **about 10 feet below the Rock Island Coal**. The map of Searight and Smith (1968, ISGS Circular 439) indicates outcrops of the Rock Island Coal in Section 20. No commercial mines are recorded, but field notes suggest the Rock Island Coal was mined for local use here.

7970. Limestone near base of St. Louis Limestone, SW of Blandinsville, **Illinois**—collected by White and Henbest, Sept. 10, 1928.
 Blandinsville is in Sections 32 and 33, T7N, R4W, **McDonough County**, Blandinsville Quadrangle. The nearest exposures of St. Louis Limestone (**Meramecian Series**), described in ISGS field notes, are southwest of Blandinsville in Sections 6 and 7, T6N, R4W. The notes do not mention plant fossils in the St. Louis.
7971. Lot 45. Pottsville—sandstone outcrop 5' high on N. side of stream, 300 yds. W. of Rt. 3, 6 mi. N. of Monmouth, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 29, T12N. R2W, **Warren County**, Monmouth Quadrangle, **Illinois**—collected by White and Henbest, Sept. 12, 1928.
 The legal location given above does not fit the topography (Monmouth 7.5-minute quadrangle). An original field note for this date reports a collection from sandstone believed to be **3 to 5 feet above the base of the Pennsylvanian**, in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, **Sec. 29, T12N, R2W**. This site fits the topography, assuming present-day U.S. Rt. 67 is Rt. 3 of the notes. The site is now submerged in Lake Warren, which is unfortunate, because White and Henbest (in original notes) stated that plant fossils were abundant, excellently preserved and diverse.
7972. Lot 46. Pottsville—Thin discontinuous lenses in cross-bedded sandstone, near railroad track, Wyoming Hill, 3 miles south of Fairport, Sec. 34, T17N, R1W, **Muscatine County, Iowa**—collected by White and Henbest, Sept. 13, 1928.
 The original field note gives the location as the NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, **Sec. 34, T77N, R1W**, Muscatine County, Illinois City 7.5-minute quadrangle, and 300 to 400 feet east of the west end of the railroad cut and 10 to 15 feet above track level. The railroad cut is on the north bluff of the Mississippi River. Plant fossils reportedly were sparse, but well-preserved.
 A measured section in Ravn and others (1984, Iowa Geological Survey, Technical Information Series No. 12, p. 9) shows the section at this site. Plant fossils occur in **siltstone overlying the Wildcat Den Coal Member of the Caseyville Formation**, a unit of Morrowan age.
7973. Lot 47. Pottsville—stiff bituminous shale over thin coal, about 40 feet above the RR track, Wyoming Hill, near **NE corner Sec. 34, T77N, R1W, Muscatine County, Iowa**—collected by White and Henbest, Sept. 13, 1928.
 Original field notes state a considerable variety of plant fossils were found in shale overlying a thin coal bed and overlain by sandstone. Referring again to Ravn others, 1984, p. 9, the coal is the **Wyoming Hill Coal Member of the Caseyville Formation**, and this is the type locality.
7974. Lot 48. Pottsville—shales under coal which underlies the bluff-forming sandstone capping the hill. Same site as #7972 and #7973.
 Referring once again to Ravn and others, 1984, p. 9, this collection is from beneath the type **Wyoming Hill Coal Member of the Caseyville Formation**.
7975. Lot 49. In shale at base of Pottsville, clay shales by stream about 300' E. of Lot 45, Sec. 29, T12N, R2W, **Warren County, Illinois**—collected by White and Henbest, Sept. 12, 1928.
 The specimens presumably are **basal Pennsylvanian**.

7976. Lot 50. Pottsville—in coarsely laminated clay shales about 15' below sandstone, near Rock River south of East Moline, near center of NE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 19, T17N, R1E, **Rock Island County, Illinois**. About 10 feet above Rock Island Coal—collected by White and Henbest, Sept. 14, 1928.

The indicated site is south of the Rock River. The original note (same date, same stratigraphic section) indicates a site north of the Rock River in NE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 9, T17N, R1E, Coal Valley Quadrangle. Sketch maps accompanying the original note confirm that the location north of the river is correct.

A measured section by Harold Wanless for the SE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 9 records shale with abundant, beautifully preserved plant fossils (cordaites, fern leaves, *Sphenophyllum*, *Annularia*, *Neuropteris*, and others) in the lower part of a ravine that drains southeast to the Rock River. Wanless regarded the shale as lying a **short distance above the Rock Island Coal**, confirming White and Henbest's stratigraphic call.

7977. Lot 51. Pottsville—shales under the coal at mouth of ravine west of drift mine opening over Rock River, Sec. 9, T17N, R1E, **Rock Island County, Illinois**—collected by White and Henbest, Sept. 14, 1928.

Original note states that White and Henbest believed the shale to lie **below the Rock Island Coal**. A note by D. M. Moody (1958) reports "numerous plant fossils" (world renowned location)" in shale at the mouth of the ravine in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 9, T17N, R1E, Coal Valley Quadrangle.

7981. Fucoids—St. Louis Ls. (?). About 1 $\frac{1}{2}$ miles west of Colchester, **Illinois**—collected by Henbest and White, Sept. 6, 1928.

This is probably in or near the SW $\frac{1}{4}$, Sec. 11, T5N, R4W, **McDonough County**, Colchester Quadrangle. The St. Louis Limestone (**Meramecian Series**), overlain by Pennsylvanian strata, has been quarried along the East Fork of the LaMoine River. Fucoids are nondescript, generally tubular or trial-like features in rock; commonly they are burrows.

7982. Top of Mississippian. Run just below western Stonewall pits, 1 $\frac{1}{2}$ miles NW of Colchester, **Illinois**—collected by Henbest and White, Sept. 8, 1928.

The Colchester 7.5-minute topo map shows claypits on the north side of the East Fork of the LaMoine River, about 1 $\frac{1}{2}$ miles NNW of the center of Colchester, in the S $\frac{1}{2}$ SW $\frac{1}{4}$, Sec. 1, T5N, R4W, **McDonough County**. No field notes are available for these pits, but at other pits near Colchester clay was mined from beds near the base of the Pennsylvanian system unconformably overlying the St. Louis Limestone (**Meramecian; Mississippian**).

7988. Mercer Group, above wagon road and under upper big ss. in Wyoming Hill, 2 miles southwest of Fairport, Iowa—collected by David White, Sept. 22, 1907.

This vague notation illustrates David White's poor sense of direction. A point 2 miles southwest of Fairport, **Iowa** would be in Illinois. The actual site is probably the same as #7972, #7973, and #7974, and the strata are **Caseyville Formation** (Morrowan; Lower Pennsylvanian).

7990. Mine dump at Litchfield, **Illinois**, Henbest Station, St D5. May come from coals below No. 6, 125' and 225' both below Lee's No. 2—collected by Cady, Henbest, and Ball, August 9, 1929.

The Litchfield Coal, **approximately equivalent to the Rock Island Coal**, was mined at Litchfield, **Montgomery County**. The Lowell Coal, which is probably equivalent to the Servant Coal, also was mined here, along with the Herrin Coal.

7995. Origs. No. I-1 and I-2. Fossil plants from the Palestine Sandstone, SE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 16, T36N, R5W, Campbell Hill Quadrangle, southwestern Illinois—collected by C. L. Cooper and J. R. McGehee of Oklahoma Geological Survey, sent to H. D. Miser Dec. 4, 1929.

These foreigners probably read the township off the Missouri side of the Campbell Hill 15-minute topo map. The correct location is probably SE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 16, T8S, R5W, Jackson County, Rockwood 7.5-minute quadrangle. Specifically, it is probably a cut bank of Degognia Creek located 900' from SL, 2000' from WL of Sec. 16. This happens to be very close to the type section of the Cora Member of the Clore Formation. The measured section (Swann, 1963, ISGS Report of Investigations 216, p. 41) shows the Clore Formation overlying the Palestine Sandstone. These strata are of **late Chesterian age**.

8040. Base of Pottsville—Samson Hill, $\frac{1}{2}$ mile east of the junction of Shoals Road and Route 150, 2 miles south of Shoals, **Indiana**—collected by E. T. Benson and D. White, 1930.

Sampson Hill is west of U.S. Rt. 150 on the 1960 edition of the Shoals 7.5-minute topographic map. The location thus is vague and ambiguous. A likely spot for outcrops would be deep ravines on the south side of Sampson Hill about $\frac{1}{2}$ mile west of Rt. 150 near the center of Section 6, T2N, R3W, Martin County, Indiana. Base of Pottsville would be **base of Mansfield Formation**, in current Indiana Geological Survey classification.

8041. Mansfield sandstone, Braxtons Quarry north of French Lick, **Indiana**—collected by E. T. Benson and D. White, 1930.

The French Lick 7.5-minute topo map indicates a quarry about 3 miles NNE of French Lick in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 24, T2N, R2W, Orange County. Sandstone quarries near French Lick operated in the **Hindustan whetstone beds** of the lower Mansfield Formation, late Morrowan (?) age.

8042. Mansfield sandstone, Chaillaux Quarry, Bonds, **Indiana**—collected by Benson and White, 1930.

Bonds is a community of two houses, located in Sec. 21, T3N, R2S, Orange County, Huron Quadrangle. The nearest quarry is $1\frac{1}{2}$ mile southeast of Bonds at Hindostan, SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 26, T3N, R2W, Georgia Quadrangle. The **Hindustan whetstone beds** in the lower part of the Mansfield Formation were quarried.

8043. Upper Pottsville, north end of L. & N. cut one mile north of Crofton, **Kentucky**—collected by Benson and White, 1930.

The railroad cut that begins about 1 mile north of Crofton (**Christian County**, Crofton Quadrangle) exposes a complexly faulted succession of rocks ranging from the Menard Limestone (**Chesterian**) upward through the middle part of the Tradewater Formation (**Atokan to Desmoinesian**). Sources: Kehn, 1977, USGS Map GQ-1361; Lumm and others, 1991, Southeastern Geology, vol. 32, no. 1, p. 43-59.

8044. Kaskaskia limestone, Liberty Church, Bloomington Quadrangle, **Indiana**—collected by Benson and White, 1930.

A Liberty Church is about **600 feet north of the center of Sec. 11, T8N, R3W, Greene County**, Whitehall 7.5-minute quadrangle, old Bloomington 15-minute quadrangle. The site is mapped as **West Baden Group (lower Chesterian)** by Gray and others, 1979, Indiana Geological Survey, Regional Geologic Map 1 (Indianapolis Sheet). The Reelsville and Beaver Bend Limestones are in the West Baden Group.

8045. Mansfield sandstone. Pinnick Quarry, west of French Lick, **Indiana**—collected by Benson and White, 1930.

The most likely site is the quarry in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, **Sec. 32, T2N, R2S, Orange County**, Hillham Quadrangle. This is close to the type locality of the Pinnick Coal, which was named for a local landowner and directly overlies the **Hindustan whetstone beds**. The Pinnick quarry probably was a whetstone quarry. See Shaver and others, 1986, *Indiana Geological Survey Bulletin* 59, entry on Pinnick Coal.

8046. Kaskaskia sandstone, one mile northwest of Hendricks, **Indiana**, Bloomington Quadrangle—collected by Benson and White, 1930.

Hendricksville is about 10 miles west of Bloomington in the NE $\frac{1}{4}$, **Sec. 14, T8N, R3W, Greene County**, Whitehall Quadrangle. A site 1 mile northwest of Hendricksville would be near Liberty Church (see #8044). The collection probably is from the **West Baden Group of early Chesterian age**.

8047. Pottsville coal, Sampson Hill coal mines, 2 miles south of Shoals, **Indiana**—collected by Benson and White, 1930.

For probable location, see #8040. The coal map of Hutchison (1967, *Indiana Geological Survey Coal Map* 11, Martin County) shows slope and drift mines in the French Lick, Blue Creek, Mariah Hill, and unnamed **Mansfield Formation** coals around Sampson Hill. A more precise location is needed to determine which coal Benson and White collected from.

8057. Basal sandstone quarry, 3 miles east of Cannelton, **Indiana** near Lafayette Springs—collected by Benson and White, 1930.

There is no Lafayette Springs shown on the current Cannelton 7.5-minute topo map. A point 3 miles due east of central Cannelton would be near the Ohio River in the S $\frac{1}{2}$, **Sec. 12, T7S, R3W, Perry County**. **Basal Pennsylvanian** strata unconformably overlie Chesterian rocks here.

8058. Pottsville, near base of Illinois section, along roadside in northwest corner of Vienna Quadrangle, southwest of Goreville, **Johnson County, Illinois**—collected by Benson and White, July 31, 1930.

This may be the same site as #7947 (**Wayside Member of Caseyville Formation**).

8059. Pottsville—old prospect from up hollow 1 $\frac{1}{2}$ miles west of Carrsville, **Livingston County, Kentucky**. Just under whetstone beds—collected by Benson and White, July 30, 1930.

Numerous drift mines in the **Gentry coal bed, middle Caseyville Formation**, are along Coalmine Hollow about 1 mile west of Carrsville, Shetlerville Quadrangle (Amos, 1965, *USGS Map* GQ-400).

8081. Cannelton Coal Bed #9, Kindles No. 2, NE of Tell City, **Indiana**—collected by Benson and White, 1930.

There is no listing of a Kindle or Kindles mine in **Perry County, Indiana**. The St. Meinrad Coal and an unnamed coal in the **Mansfield Formation** were mined northeast of Tell City (Hutchison, 1971, *Indiana Geological Survey Coal Map* 14).

8082. Cannelton Coal bed #9 (Kindles #2) 1 $\frac{1}{2}$ miles southeast of Cannelton, **Indiana**—collected by Mr. Fred Heck for Benson and White, 1930.

The site is probably in **Sec. 14, T7S, R3W, Perry County**, where several drift and slope mines worked the St. Meinrad Coal (Hutchison, 1971, *Indiana Geological Survey Coal Map* 14).

8091. R.R. cut 4 miles N. of Cobden, **Illinois**. First exposure of Pottsville on L.C. Ls. Basal red of Pottsville—collected D. White, October 5, 1908.

The railroad cut described at #7955 is roughly 4 miles north of Cobden, **Union County**, and is the southernmost cut along the Illinois Central to show Pennsylvanian strata. This is **basal Caseyville Formation**.

8125. Plants from I.C.R.R. cut between the two quarries, 2 miles south of Makanda, **Illinois**—collected by D. White, October 8, 1908.
This is most likely the cut described at #7945, which is 2 miles south of Makanda, **Union County**, and near at least one quarry. The strata are **lower Caseyville Formation**.
8181. Pennsylvanian-Jubilee Creek, Jubilee Township, **Peoria County, Illinois**—collected by Chase, 1931.
Jubilee Creek is a tributary of Kickapoo Creek and it winds for several miles through T10N, R6E, Peoria County, Oak Hill Quadrangle. Strata exposed along the creek span the **upper part of the Carbondale Formation**.
8348. F. Carson's mine, 4 m. E. of Goreville, **Illinois**. Same place as last year—collected by D. White, Oct. 12, 1908.
"Last year" may refer to #4946. Small mines in the N½, Sec. 32, T11S, R3E, **Johnson County**, operated in an unnamed coal a short distance below the Murray Bluff Sandstone Member of the **Tradewater Formation**.
8349. 1 piece red grl (?), Goreville, **Illinois** ledge—collected by D. White, 1908.
Get out the Ouija board again. The **Caseyville and Tradewater Formations** crop out around Goreville.
8350. 2 pieces, shale parting near top of 1st cut on Big Four R.R., No. of Parker, **Illinois**—collected by D. White, Oct. 14, 1908.
The site is probably in the north part of **Sec. 17, T11S, R4E, Johnson County**, Creal Springs Quadrangle, in either upper Abbott or lower Spoon Formation (**middle Tradewater**). Source: Trask and Jacobson, 1990, ISGS Map IGQ-4.
8351. Upper ss. series, above the thin coal in R.R. ditch, about 1½ mi. E. of Ava, **Illinois**—collected by D. White, Oct. 16, 1908.
This is probably along the Gulf, Mobile and Ohio R.R. in the N½, **Sec. 29, T7S, R3W, Jackson County**, Ava Quadrangle. No field notes are available. Stratigraphically this is a **short distance below the Murphysboro Coal** (Smith, 1958, ISGS Circular 260).
8352. First cut east of Parker, **Illinois** on Big Four R.R., just at top of shale (ss parting)—collected by D. White, Oct. 14, 1908.
See #8350.
8353. 1 piece, Hennesey well, 1 mile NE of Goreville, **Illinois**—collected by D. White, Oct. 11, 1908.
This one looks like a lost cause. We have no record of a Hennesey well here. Rocks at the surface northeast of Goreville are **Tradewater Formation**.
8354. 10 pieces, Cordaites shale under thin coal E. of Parker, **Illinois**—collected by D. White, 1908.
Insufficient information to locate with confidence, but this may be the same as #8350.
8355. Wilson Mine at Custer, **Illinois**—collected by D. White, 1908.
Custer is, or was, a community near Toluca near the **center of Section 30, T30N, R1E, Marshall County**, Varna Quadrangle. The only mine close to Custer was the Devlin Coal Co. or Toluca Coal Co. mine in Sec. 8, T29N, R1E. It was an underground mine in the **Colchester Coal**.
8357. Probably Pottsville, Big Four R.R. fork, 1 mile NE of Parker, **Johnson County, Illinois**—collected by D. White, 1908.
White evidently got his distance, direction, or both wrong; as there is no fork in the Big Four R.R. at or near 1 mile NE of Parker (This site would be close to New Burnside, a larger community than the now-abandoned Parker). There was a fork at Parker, and another about ¾ mile southeast of Parker. See #8350.
8358. Cut at station, Parker, **Illinois**—collected by D. White, Oct. 22, 1908.
This is probably the same as #4940.

8359. 1 piece Tunnel Hill, **Illinois**, south end of tunnel, base of shale—collected by D. White, Oct. 20, 1932.
 The indicated location is about **1800' from SL, 500' from EL, Sec. 35, T11S, R3E, Johnson County**, Creal Springs Quadrangle. Strata are slightly younger than the Tunnel Hill coal bed, which is **equivalent to the Bell coal bed**. Source: Trask and Jacobson, 1990, ISGS Map IGQ-4.
8360. Parker, **Illinois**, Big Four R.R., 1st cut S. of I.C. trestle, about 1 mile south of Parker Station—collected by D. White, Oct. 21, 1908.
 This may be a cut near the **center of the NW¼, Sec. 20, T11S, R4E, Johnson County**, Creal Springs Quadrangle. This cut is in upper Abbott Formation (**mid-lower Tradewater**). Source: As above.
8361. 1 piece, Makanda, **Illinois**, just at base of cliff—collected by D. White, Oct. 17, 1908.
 Cliffs at Makanda (southeastern **Jackson County**, Makanda Quadrangle) are sandstone of the **lower Tradewater Formation**, overlying a shaly basal Tradewater interval. Source: Jacobson and Weibel, 1993, ISGS Map IGQ-11.
8362. 8 or 10 (?) drawers of land plants from either Chester or lower Coal Measures, from bed of branch crossed by road about midway between Enon and Ruth P.O., in northwestern part of **Caldwell County, Kentucky**. Locality is about 12 mi. NW of Princeton—collected by E. O. Ulrich, 1894.
 Enon is near the southwest corner of the Shady Grove 7.5-minute quadrangle, but I cannot locate Ruth. Geologic maps depict faulted **Chesterian and Caseyville strata** near Enon.
8363. Kuykendall farm, between Marion Break and subsidiary break to N.W. about ¾ mi. to SW of Marion, **Kentucky**. Chester, probably lower Birdsville Formation—collected by E. O. Ulrich, 1894.
 The location description is enigmatic. The site is close to the Claylick Fault System, which trends NE-SW through Marion, **Crittenden County**, and juxtaposes **Cypress and Bethel Sandstones (lower Chesterian)** on the southeast, upthrown side, against Menard Limestone and Waltersburg Sandstone (middle Chesterian) on the northwest. The most likely unit for plant fossils is the upper Cypress, which contains coal. Source: Trace, 1966, USGS Map GQ-547.
8364. Camehls Creek between Wyoming and Muscatine, Iowa. Sweetland Creek beds—Chemung—collected by David White, June 19, 1907.
 Camehls Creek does not appear on topographic maps, but the type locality of the Sweetland Creek Shale is in Sec. 27, T77N, R1W, **Muscatine County, Iowa**, on the Illinois City 7.5-minute quadrangle. This site is about 6 miles east of Muscatine. The Sweetland Creek Shale is a unit of **Late Devonian age**.
8365. 3 specimens, bank South Fork of Saline River N. of house in N½, Sec. 24, T10S, R2E, **Williamson County, Illinois**. Little slope mine on bank of Little Saline River—collected by White and Henbest, 1928.
 The information is imprecise and contradictory as to which stream the samples came from. Field notes by Cady, Wanless, and others record several drift or slope mines along the South Fork Saline River in the SW¼ NW¼ and W½ SW¼ of Section 24. These notes also mention plant fossils observed on mine dumps and in a roadcut.
See #7943.
8363. Makanda, **Illinois**. Ravine on E. side, back of store, just under sandstone ledge—collected by D. White, Oct. 8, 1908.
Lower Tradewater—see #8361. Legal location probably is **1100' from SL, 800' from WL, Sec. 27, T10S, R1W, Jackson County, Makanda Quadrangle.**

8370. Lot 5, **Pope County**, Harrisburg Quadrangle, **Illinois**. Sh. from margin of water level in old gouge stripping in bed of stream about 250 yards above the wagon road crossing of Bear Branch, Sec. 32, T11S, R6E, over the upper Battery Rock cgl.—collected by Henbest and White, Aug. 3, 1928.

The site probably is about **2000' from NL, 1000' from WL of Section 32** in the Eddyville Quadrangle. This is mapped **near the base of the Abbott (Tradewater) Formation**. Source: Nelson and Lumm, 1990, ISGS Map IGQ-5.

8371. Collection isolated or detached, and sacks containing it marked, "shipped from Harrisburg, **Illinois**, August 17, 1928, without label." I (D.W.) suspect that it is lot 14, U.S.G.S. #7931, and notebook p. 37. Supposed Battery Rock horizon—collected by Henbest and White, Aug. 17, 1928.

See #7931, which is lower Tradewater Formation.

8634. French Lick, Indiana, Wortinger's whetstone quarry, **Hindustan whetstone beds**—collected by H. R. Wanless and C. B. Read, Sept. 3, 1937.

The exact location may never be known, but the stratigraphic position presumably is as given.

8635. Chaillaux Quarry, Orangeburg, **Indiana, whetstone beds**—collected by C. B. Read, Sept. 1937.

See #8042.

8636. Sandy shale just above coal, 40' above R.R. grade, Wyoming Hill, **Iowa**—collected by C. B. Read, Aug. 27-28, 1937.

See #7973.

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9190. R. Brian farm, 2 miles northeast of Berryville, **Illinois**—collected by S. H. Mamay, November 1952; 1955 with Yochelson.

Berryville is in southeastern Richland County, and the R. Brian farm is shown on a 1951 plat book to be in the NW¼ NW¼, **Sec. 7, T2N, R13W, Lawrence County**, Berryville 7.5-minute quadrangle. Field notes by G. H. Cady (1936) and W. A. Newton (1936) describe outcrops of a coal bed that is overlain by crinoidal limestone and contains coal balls—masses of limestone replacing the coal. Both the coal balls and an underlying shale are described as containing abundant plant fossils. Pius Weibel determined this to be the **Calhoun Coal Member of the Mattoon Formation (near top of Missourian Series)**. The type section of the Calhoun Coal is only 6 miles west of the Brian farm. Source: Weibel and others, 1989, GSA Field Trip Guidebook No. 17, Missouri Geological Survey, Special Publication 5, p. 141-169.

9407. **Putnam County, Indiana**. 10117.77-97. Above lowest coal in roof shale, about 10 feet from Chester (Mansfield)—collected by C. B. Read, Sept. 3, 1937.

Unless field notes of Read can be located, the location is a blank. Presumably, the specimens are of **basal Pennsylvanian age** within 10 feet of the basal unconformity.

9408. Chaillaux Quarry, Orangeville, **Indiana. Whetstone beds**—collected by C. B. Read, Sept. 1937.

See #8042.

9706. Murphysboro Quadrangle, **Illinois**. Old entry of Templeton mine, 2¼ miles west of hard road, **Sec. 9, T9S, R2W, Jackson County**. Murphysboro coal roof—collected by C. B. Read, Sept. 7, 1937.

No Templeton Mine is listed in Jackson County, but several mines in and near the indicated location operated in the **Murphysboro Coal**.

9707. **Jackson County, Illinois.** 0404.83 Campbell Hill Quadrangle, gully in NW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 4, T7N, R7S (sic). About Murphysboro in age—collected by C. B. Read, Sept. 9, 1937.
- The legal location is obviously in error; it probably should read NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 4, T7S, R4W, Jackson County, Willisville 7.5-minute quadrangle. There are copious field notes for this area, which lend themselves to several possible interpretations. The strata are folded, tilted, and faulted along the Cottage Grove Fault System. Several coal beds are exposed, but no plant fossils other than root impressions were mentioned. The exposed strata were interpreted by Harold Wanless as being **upper Tradewater and lower Carbondale Formation (about Stonefort Limestone to Colchester Coal)**.
9708. Danville, Illinois. Grape Creek seam at Pawnee Shaft and at Kelly No. 2—collected by Campbell, June 1899.
- The Pawnee Coal Company operated a shaft mine in the **Herrin Coal** from 1892 to 1899. The shaft was located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 5, T18N, R11W, Vermilion County. The Kelly No. 2 Mine also was a shaft mine in the **Herrin Coal**, and it was active from 1891 to 1914. The Kelly shaft was located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 31, T19N, R11W, Vermilion County.
9709. Gildhirst's Mine, 3 $\frac{1}{2}$ miles WSW of Viola, Illinois. Coal No. 1—collected by David White, July 15, 1908.
- No Gildhirst Mine is listed for **Mercer County**, but several small shaft mines were active circa 1908 in the **Rock Island Coal**, southwest of Viola in Sec. 32, T14N, R2W, Mercer County.
9710. Delafield, Illinois. Diamond drill cores from a depth of 271 feet 8 inches—collected by Jon A. Udden, 1906.
- A coal-test boring was made prior to 1906 at Delafield in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 25, T4S, R5E, Hamilton County. The driller's log of this hole indicates the bottom of a coal bed 1'2" thick at the depth of 271'8". This coal is 166 feet above the top of the Carthage Limestone, and most likely is the **Flannigan Coal Member of the Bond Formation, Missourian Series**. Nance and Treworgy (1981, ISGS Circular 515) report that the Flannigan Coal crops out in Hamilton County and averages about 130 feet above the Shoal Creek (now called Carthage) Limestone.
9711. Delafield, Illinois, diamond drill cores formerly labelled 23A—collected by Udden, 1906.
- This is the same borehole as above, but the depth is unknown. The hole had a total depth of over 900 feet.
9712. Carbondale Quadrangle, Illinois. R.R. cut on I.C. R.R. near center of Sec. 4, T11S, R1W. In Drury Shale—collected by C. B. Read, Sept. 1937.
- This is probably the same site as #7945.
9713. Illinois—Murphysboro coal horizon ? Shale in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 9, T7S, R4W, Campbell Hill Quadrangle, Jackson County—collected by C. B. read, Sept. 9, 1937.
- The indicated site is a cut bank of a north-flowing stream just east of Campbell Hill, on the Willisville 7.5-minute quadrangle. Field notes by G. H. Cady (123) describe shale and sandstone along the stream, but Cady does not mention plant fossils. A note by H. E. Culver (1922-24) mentions plant impressions in sandstone at or near this site. Harold Wanless (1931 field notes) describes indistinct plant remains and "fairly well preserved fern leaves" in shale at the site. Wanless believed these strata to lie a short distance below the DeLong cyclothem, which translates to **upper Tradewater Formation**, probably between Murphysboro and Mt. Rorah Coals.

9714. Carbondale Quadrangle, Illinois, SE¼ SW¼ NW¼, Sec. 2, T10S, R1W, Jackson County. Brownest shale below brown ss.—collected by C. B. Read, Sept. 10, 1937.

H. R. Wanless (1934 field notes) measured a section along a secondary road (no longer extant) south of a west-flowing creek at the indicated location (in Carbondale 7.5-minute quadrangle). Wanless described a section of interbedded shale and sandstone, containing plant fossils including *Neuropeteris ovata*, *calamites* and unidentified stems. The stratigraphic position is not indicated. The strippable coal map of Smith (1958, ISGS Circular 260) indicates the locality to be a short distance below the Murphysboro Coal, which was strip-mined northeast of the locality at slightly higher elevation. Also, this locality is probably younger than the type Boskydell marine zone (about 2½ miles southwest), which, according to Peppers (1993, ISGS Circular 553) is younger than the Rock Island Coal and may be equivalent to the Curlew Limestone. Hence, the specimens collected by Read are probably **between the Rock Island and Murphysboro Coals**.

9715. Marion Quadrangle, Illinois. 0335.61 Johnson, SW¼ SE¼, Sec. 35, T11S, R2E, Johnson County. R.R. cut on C. & E.I. R.R., upper Drury—collected by C. B. Read, Sept. 16, 1937.

See # 4944.

9716. Marion Quadrangle, Johnson County, Illinois, NW¼, Sec. 4, T12S, R2E. In gully, Wayside shale—collected by C. B. Read, Sept. 1937.

Bill DiMichele and I collected plant fossils from shale along a north-flowing stream about 2200' from NL, 2000' from EL, Sec. 4. Additional exposures are downstream several hundred feet. The plant-bearing shale is in the Wayside Member of the **Caseville Formation**, about 60 to 70 feet above the base of the Pennsylvanian.

The same strata may crop out along a steep west-facing slope in the NW¼ of Section 4.

9717. Old Willis Mine, ½ mile NW of Bryden, Illinois. Probably Coal #2—collected by David White, Oct. 16, 1908.

The Willis Coal Co. #2 Mine, active 1901 to 1905, was a slope mine in the **Murphysboro Coal**, located NE¼ NW¼, Sec. 27, T7S, R3W, Jackson County.

9718. Rock Island County, Illinois, shale just under the underclay of #1 Coal at Carbon Cliff, Mrs. Butterworth's estate—collected by C. B. Read, Aug. 26, 1937.

This is in or near the W½, Sec. 4, T17N, R1E, Rock Island County. Numerous field notes describe strata exposed in clay pits, ravines, and small coal mines here. Presumably, the collection came from **beneath the Rock Island Coal**.

9719. Williamson County, Illinois. 0906.83, SE¼ Sec. 6, T10S, R4E, near bridge across south fork of Saline River—collected by C. B. Read, Sept. 1937.

Harold R. Wanless (1933 field notes) described the section in a roadcut near the bridge; the location is approximately 1100' from SL, 900' from EL, Sec. 6, in Crab Orchard 7.5-minute quadrangle. Wanless noted abundant stems and leaves of plants in shale directly underlying an 8"-thick coal, which in turn is overlain by dark silty shale that contains marine invertebrates. These rocks are roughly midway between the Dekoven and Springfield Coals, which were strip-mined extensively south and north (respectively) of the site. I believe the coal is the **Survant Coal**. The older Colchester Coal and younger Houchin Creek Coal both are overlain by black fissile shale, whereas the Survant generally has gray shale or siltstone roof, as observed here.

9720. Marion Quadrangle, Illinois. SE $\frac{1}{4}$, Sec. 15, T11S, R3E, on north-flowing tributary of Larkin Creek, above coal—collected by C. B. Read, Sept. 1937.
 Harold R. Wanless 1933 field notes) observed shale containing abundant plant stem and leaf impressions along a gully in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 15, T11S, R3E, Johnson County, Creal Springs Quadrangle. Trask and Jacobson (190, ISGS Map IGQ-4) mapped the exposure as **just below the Murray Bluff Sandstone Member of the Abbott (now Tradewater) Formation**. They also observed (unpublished notes) coal outcrops or prospect pits at several places in the SE $\frac{1}{4}$ of Section 15.
9721. Bardstown Quadrangle (sic), Illinois. SW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 8, T1N, R12W, RR cut on C.B. & Q., no date or collector.
 The correct location is undoubtedly SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ (or vicinity) in Sec. 8, T1N, R1E, Schuyler County, Beardstown Quadrangle. A note by W. V. Searight (1925) for this site records fossil plants in a siltstone **about 18 feet above the base of the Pennsylvanian System**. The note further states that A. C. Noe identified *Linopteris*, *Palmatopteris*, *Enimopteris*, *Sphenopteris*, *Mariopteris*, *Cordiantis*, and *Cycadoficales sporangeum* in the field. Fossils were collected by Noe and an unidentified third party.
9722. Carbondale Quadrangle, Illinois, NE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 16, T11S, R1E, in gully s. of road. Drury Shale. DW25—collected by C. B. Read, Sept. 1937.
 This is in Union County, Lick Creek Quadrangle. Pius Weibel (1990 field notes) observed siltstone outcrops and sandstone float containing a *Lepidodenron* mold at this locality. The strata are probably **basal Tradewater Formation** (Weibel and Nelson, in press, ISGS IGQ-12, Lick Creek Quadrangle).
9723. Carbondale Quadrangle, Illinois, SE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 17, T11S, R2E, Drury Shale—collected by C. B. Read, Sept. 1937.
 This is in Johnson County, Lick Creek Quadrangle. I observed no fossils in mapping this area. The strata are in the **lower part of the Tradewater Formation**. Source: as above.
9724. Beardstown Quadrangle, Illinois, SW $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 19, T2N, R12W, roadside just below Union School—collected by C. B. Read, Aug. 18, 1937.
 Union School (Onion School on topo map) was located near the center of the west line of Sec. 19, T2N, R1E, Schuyler County, Beardstown 15-minute quadrangle. The "road below" the school extends northwest into the NE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 24, T2N, R1W. A measured section by Harold R. Wanless (1930 field notes) for this site records abundant and well-preserved plant fossils in **silty shale underlying the Colchester Coal**. Wanless made a collection and identified *Annularia sphenophylloides*, *Neuropteris rarinervis*, *Odontopteris*, *Pecopteris sp.*, *Cordaites*, and *Calamites*. Wanless also noted that the school was named Union, not Onion. Bill DiMichele and I collected plant fossils from this site in the early 1980s and confirmed the correct location and Wanless' stratigraphic interpretation.
9725. Union School, Beardstown Quadrangle, Illinois—collected by C. B. Read.
 Same as above.
9726. Illinois, NE $\frac{1}{4}$, Sec. 4, T14N, R1W, in Northwestern Clay Mfg. Co. pit, about 1000' E. of Alexis Quadrangle. In clay shale about 8' above base of section and below ss.—collected by C. B. Read, Aug. 26, 1937.
 This is in Mercer County, New Windsor Quadrangle. Notes by Harold Wanless and others indicate that plant fossils occurred in **gray shale overlying the Seville Limestone and Rock Island Coal** in the clay pit. The clay pit, near the northeast corner of the section, is now abandoned and flooded.

9727. Murphysboro Quadrangle, **Illinois**.

That's all she wrote. This is probably in **Jackson County** and close to the **Murphysboro Coal**.

9778. DW 31, Carbondale Quadrangle, **Illinois**. NW corner, Sec. 14, T11S, R1W, shale in gully—collected by C. B. Read, Sept. 1937.

See #7953.

9779. Shale of Pope Creek (?) age at Tarter Bridge, Vermont Quadrangle, **Illinois**—collected by C. B. Read.

Tarter Bridge across the Spoon River was located **2000' south of NE corner of Sec. 2, T5N, R1E, Fulton County**, Smithfield 7.5-minute quadrangle. The bridge is named on the 1921 edition of the Vermont 15-minute quadrangle. Field notes describe several well-exposed sections near the bridge, but do not mention plant fossils other than rootlets and macerated debris. J. M. Weller (1931 field notes) described a section that extends from above the Colchester Coal to the St. Louis Limestone (Mississippian), along the large northeast-trending ravine that joins Spoon River just east of the bridge. In current stratigraphy, the Pope Creek Coal is in the **Abbott (lower Tradewater) Formation** and is approximately equivalent to the Upper Block Coal in Indiana and the Ice House Coal in Union County, Kentucky (R. A. Peppers, unpublished chart).

9780. Shale just above Wiley Coal, NW¼ SW¼, **Sec. 27, T9N, R2E, Knox County**, 1¼ miles north of London Mills, Avon Quadrangle, **Illinois**—collected by C. B. Read, Aug. 20, 1937.

Harold R. Wanless (1929) described sections in the bluffs of Spoon River and adjacent ravines in the SW¼ of the indicated section, London Mills 7.5-minute quadrangle. In a ravine near the center of the SW¼, Wanless observed silty shale containing "well preserved remains of fern leaves" overlying a thin coal and overlain by glacial deposits. Wanless also observed plant fossils in the high bluff of Spoon River in the NE¼ SE¼ SW¼, of Section 27. Most likely, Read collected from the ravine mentioned first above. Wanless considered the plant-bearing shale to be a facies of the Isabel sandstone, which lies **a short distance below the Colchester Coal**.

9781. Shale of Pope Creek age at Tarter Bridge, Vermont Quadrangle, **Illinois**—collected by C. B. Read.

See #9779.

9782. Murphysboro Quadrangle, **Illinois**. I.C. Ry. cut ½ mile west of (illegible), SW¼, **Sec. 36, T7S, R3W**,—collected by E. W. Shaw in charge.

The Illinois Central Railroad runs through Oraville at the indicated legal location (**Jackson County**, Oraville Quadrangle), but the topography is greatly rolling and no railroad cuts are indicated. There are no field notes for this locality. The coal map of Smith (1958, ISGS Circular 260) indicates that Oraville lies on strata **slightly above the Murphysboro Coal**.

9783. Beardstown Quadrangle, **Illinois**, east center SW¼ NE¼, **Sec. 8, T1N, R12W**, railroad cut on C.B. & Q.—collected by C. B. Read, Aug. 17, 1937.

See #9721.

9784. Rock cut 1 mile east of Glenburn, **Vermilion County, Illinois**. Above Coal 7—collected by Beede and Bybee, July 25, 1912.

The indicated area is NW¼, **Sec. 5, T19N, R12W**, border of Collison and Danville NW 7.5-minute quadrangles. This is in Kickapoo State Park and in an area where the **Danville Coal** was strip-mined extensively. Field notes for Section 5 do not mention plant fossils.

9785. Babylon shale at Sweetland Creek, Iowa, 4 miles above road (U.S. 61)—collected by C. B. Read, 1937.

This is probably in **Section 10 or 15, T77N, R1W, Muscatine County, Illinois City Quadrangle**. U.S. 61 formerly ran along the foot of the Mississippi River bluff at the mouth of Sweetland Creek. No field notes were found for the indicated area. "Babylon shale" probably refers to **basal Pennsylvanian strata**, which in this area are of Morrowan age and rest unconformably in Devonian strata.

9786. DW 32, Campbell Hill Quadrangle, Illinois—collected by C. B. Read, 1937.

This could refer to David White's Lot 32, #7954; but that collection is from the Carbondale Quadrangle.

PAM:WJN\MISC.94\IB-SMITH.TBL

Book 12—Specimens 11,005-11,800
None from Illinois Basin

THE END

CROSS REFERENCE LIST for PLANT FOSSILS FROM THE ILLINOIS BASIN
AT THE SMITHSONIAN INSTITUTION

JUN. 27 1994

By W. John Nelson
March, 1994

The following is a geographic and stratigraphic cross-reference list for plant fossils that were collected in the Illinois Basin and are curated at the National Museum of Natural History, Smithsonian Institution, in Washington, D.C. These fossils were collected between 1870 and 1940 by geologists and paleontologists working for the U.S. Geological Survey. This cross-reference accompanies a catalogue of the plant fossil collections, in which I deciphered the often-sketchy original location and stratigraphic notes on file at the Smithsonian. Numbers in this list refer to Smithsonian collection numbers, which are listed in numerical order in my catalogue.

GEOGRAPHIC CROSS REFERENCE

ILLINOIS

Brown County: 4959, 4963
Clinton County: 4147
Edgar County: 168
Edwards County: 7923
Franklin County: 5391, 5394
Fulton County: 7963, 7966, 9779, 9781
Gallatin County: 7143
Greene County: 4220
Grundy County: 68, 69, 222, 234(?)
Hamilton County: 9711, 9712
Hancock County: 4217, 7968
Hardin County: 4242, 4244, 4934
Henry County: 4196(?), 4226, 4247
Jackson County: 4924, 4925, 4926, 4930, 4931, 4932, 4933, 4936, 4938, 4939,
4942, 4945, 4955, 4956, 5395, 5626, 5627, 5628, 5629, 5630, 5631, 5632,
5633, 5636, 5637, 5638, 5639, 5640, 5641, 7948, 7949, 7951, 7952, 7954,
7995, 8351, 8361, 8363, 9706, 9707, 9713, 9714, 9717, 9727, 9782, 9786
Johnson County: 4935, 4935, 4940, 4941, 4943, 4944, 4946, 7346, 7927, 7944,
7947, 8058, 8348, 8349, 8350, 8352, 8353, 8354, 8357, 8358, 8359, 8360,
9715, 9716, 9720, 9723
Knox County: 4175, 4176, 4180, 9780
La Salle County: 4149, 4960, 4961
Livingston County: 4150
Macoupin County: 7357, 7359
Madison County: 4155
Marshall County: 8355
McDonough County: 4214, 4949, 4950, 4951, 4966, 7965, 7970, 7981, 7982
Mercer County: 4204, 4967, 5393, 6232, 9709, 9726
Montgomery County: 4216, 7990
Morgan County: 4929
Peoria County: 4227, 4228, 4229, 4232, 4237, 4239, 5372, 8181

Perry County: 4179, 4957, 4958, 5392
Pope County: 7046, 7329, 7345, 7915, 7916, 7918, 7919, 7920, 7929, 7930, 7931,
8370, 8371
Richland County: 9190
Rock Island County: 4198, 4962, 7976, 7977, 9718
Saline County: 4235, 7917, 7921, 7922, 7924, 7925, 7928, 7932, 7934(?), 7935,
7936, 7937, 7950, 7956
Sangamon County: 4148(?)
Scott County: 4215, 4218, 4923, 7958, 7959, 7960, 7961, 7962
Schulyer County: 9721, 9724, 9725, 9783
Union County: 4928, 7945, 7946, 7953, 7955, 8125, 9722, 9778
Vermilion County: 4169, 5371, 5373, 6230, 6231, 9708, 9784
Warren County: 7967, 7969, 7971, 7975
Will County: 4947, 4948, 4965
Williamson County: 4964, 5390, 7926, 7933, 7942, 7943, 8365, 9719
Woodford County: 4146, 4246

INDIANA

Clay County: 4991, 5383
Crawford County: 1803, 1804, 2800
Dubois County: 2812, 2813, 2814
Fountain County: 5365, 5366, 5369, 6252, 6253
Gibson County: 4958, 4989
Greene County: 4997, 4998, 8044, 8046
Knox County: 4990
Martin County: 2811, 8040, 8047
Orange County: 290, 2797, 2802, 8041, 8042, 8045, 8634, 8635, 9408
Parke County: 5382
Perry County: 1801, 1802, 1806, 1807, 1811, 1813, 1941, 1942, 2799, 2801,
2803, 2809, 2810, 8057, 8081, 8082
Pike County: 2997, 3014, 4992, 4993, 4994, 4995
Posey County: 1799, 1805, 1814, 1815, 2988, 3002, 3008
Putnam County: 9407
Spencer County: 1940
Sullivan County: 5000, 5001
Vanderburgh County: 3007
Vigo County: 4996(?), 5017
Warren County: 5367, 5368, 5370
Warrick County: 3003, 3005, 3009
Unknown: 225

IOWA

Muscatine County: 7972, 7973, 7974, 7988, 8364, 8636, 9785

KENTUCKY

Ballard County: 3454 (Mississippi embayment; Tertiary (?))
Breckinridge County: 7344
Butler County: 6911, 6912, 6913

Caldwell County: 6254, 6260, 6261, 6269, 8362
Christian County: 6254, 6255, 6256, 6266, 6268, 8043
Crittenden County: 8363
Fulton County: 3453 (Mississippi embayment; Tertiary (?))
Henderson County: 4953, 4954, 6915, 6916
Hickman County: 3456 (Mississippi embayment; Tertiary (?))
Hopkins County: 6258, 6267, 6271, 6907, 6908, 6909, 6910
Livingston County: 6257, 8059
Muhlenberg County: 6917(?)
Union County: 4240, 4241, 4243, 4245, 4952, 6262, 6263, 6264, 6265, 6270,
7137, 7138, 7139, 7140, 7141, 7142(?)
Webster County: 6250, 6251, 6914

MISSOURI

Ste. Genevieve County: 5416

STRATIGRAPHIC CROSS REFERENCE

See attached chart for stratigraphic column. Series assignments in Pennsylvanian System are taken from an unpublished palynological chart by Russel A. Peppers of the ISGS. Many specimens were taken from coal mines, in which the coal seam is identified, but the exact collecting horizon was not specified. Probably the majority are from the roof shales, but some are from the floor or from intra-seam partings.

DEVONIAN SYSTEM

8364

MISSISSIPPIAN SYSTEM

Osagian Series

7958

Meramecian Series

5416, 7329, 7970, 7981

Chesterian Series

1801, 1804?, 1806?, 1807, 2799, 2802, 2809, 6260?, 7342, 7344, 7345, 7346,
7924, 7995, 8040, 8044, 8046, 8362?, 8363

PENNSYLVANIAN SYSTEM

Basal Pennsylvanian, age uncertain

4963, 7960, 7961, 7962, 7965, 7971, 7975, 7982, 8057, 9407, 9721, 9783

Morrowan Series

Caseyville Formation (Ill., Iowa and Ky.); lower Mansfield Formation (Ind.).
1803?, 1804?, 1806?, 2800?, 2812, 2813, 2814, 4242, 4928, 4931, 4933,
4934?, 4935?, 4937?, 4941, 4944, 5632, 6257, 6254, 6260?, 6261, 6269,
7141, 7916, 7917, 7918, 7926, 7945, 7946?, 7947, 7948, 7951, 7953, 7955,
7972, 7973, 7974, 7988, 8047, 8058, 8059, 8091, 8125, 8349?, 8362?,
8636, 9712, 9715, 9716, 9785

Hindustan whetstone beds. 290?, 2797, 8041, 8042, 8045, 8634, 8635, 9408

Bell Coal and equivalents. 1802, 1811, 1941, 1942, 2801, 2803, 2810, 6270,
7920, 8081, 8082

Atokan Series

Lower Tradewater Formation and upper Mansfield (Ind.) (Bell Coal to Rock Island Coal). 1940, 2811, 4241, 4940, 4943, 4946, 4949?, 4951?, 4952?,
5382, 6254, 6264, 6266, 6268, 6911, 6912?, 7046, 7137, 7138, 7139, 7140,
7142, 7915?, 7919, 7930, 7931, 7943, 7944, 7946?, 7949, 7954?, 7977,
8043, 8348, 8349?, 8350?, 8352?, 8353?, 8354?, 8357?, 8358, 8359, 8360,
8361, 8363, 8365, 8370, 8371, 9718, 9720, 9722, 9723, 9779, 9781, 9786?

Brazil Formation (Indiana). 4991, 5383, 6252, 6253

Desmoinesian Series

Rock Island Coal and equivalents. 4196, 4198, 4204, 4216, 4962, 4967, 5370,
6232, 7929, 7937, 7963, 7964?, 7967, 7969, 7976, 7990?, 9709, 9726

Staunton Formation (Ind.). 5365, 5366, 5367, 5368, 5369

Strata between Rock Island and Murphysboro Coals. 4926, 4930, 4936, 4955,
4956, 5393, 5395, 5629, 5630, 5637, 6255, 6256, 6258, 6267?, 6271,
6907?, 6908?, 6909, 6910, 6913, 7921, 7922, 7928?, 7934, 7935, 7936,
7950, 7952, 7956?, 7966, 8350?, 8351, 8352?, 8354?, 8357?, 9714, 9778

Murphysboro Coal. 4924, 4925, 4932, 4938, 4939, 4942, 4945, 5626, 5627, 5628,
5631, 5633, 5636, 5638, 5639, 5640, 5641, 7942, 9706, 9717

Strata between Murphysboro and Dekoven Coal. 7925, 7926, 7932, 7933, 9782

Dekoven Coal. 4243, 4244, 4245, 6263, 9707, 9713

Davis Coal. 4240, 6262, 6265, 7143

Colchester Coal. 68, 69, 222, 234, 4146, 4149, 4214, 4215, 4217, 4218, 4219,
4220, 4232, 4246, 4923, 4947, 4948, 4950, 4959, 4961, 4965, 5372, 7959,
7968, 8355, 9724, 9725, 9780

Cardiff Coal. 4150

Survant to Houchin Creek Coals. 4929, 4996, 4997, 4998, 9719

Springfield Coal. 3005, 3009, 3014, 4228, 4229, 4235, 4237?, 4239, 4958, 4989,
4992, 4995,

Briar Hill Coal: 4993

Herrin Coal. 4147, 4148?, 4155, 4169, 4175, 4178, 4179, 4226, 4227, 4247,
4957, 4958, 4960, 4964?, 5371, 5390?, 5391, 5392, 5394, 6230, 6231, 9708

Hymera Coal. 5000, 5001?

Baker (W. Ky. No. 13) Coal. 4953, 4954, 6250?, 6251, 6915

Danville Coal. 2997, 3003, 4990, 9784

Position unknown. 4180, 5017, 6914, 6916, 6917, 8181, 9727

Missourian Series

1805, 1813, 1814, 1815, 2988, 3002, 3007, 3008, 7357, 7359, 7923, 9190, 9710,
9711

Virgilian Series

1799

TERTIARY SYSTEM (Mississippi embayment)

3453, 3454, 3456.