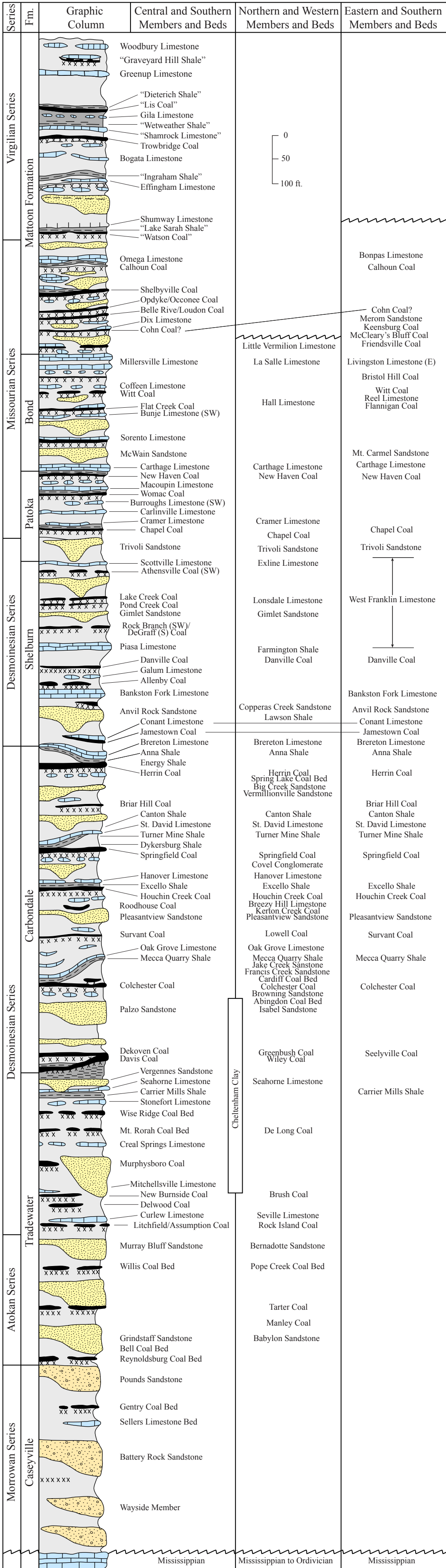


Pennsylvanian Stratigraphic Column



Notes: Rocks present only in subsurface. Local oil-field names have been used informally. Beds in quotes to left are informal beds only used by Weibel in 1991 and have not been adopted formally yet by the ISGS and are subject to change.

A summary of references with changes in Pennsylvanian stratigraphic nomenclature at the ISGS since Bulletin 95:

Russ Jacobson, Geologist
Coal Section, Illinois State Geological Survey
December 2002

This document is a summary of the references where changes have been made to the Pennsylvanian nomenclature in Illinois since 1975. This document represents an addendum to the recently released working chart of current Coal Section ISGS Pennsylvanian Nomenclature since 1975. Ideally a single Pennsylvanian document is needed to replace that of the Pennsylvanian chapter of Bulletin 95 but that is a major project that is only barely started and other commitments mean it may be a long time before such a report is compiled. So this document and the chart are at least a one stop document to help the user through the maze of changes that have happened in our Pennsylvanian nomenclature. Some of the references may not be easy to obtain, hence another reason for the development of this document.

References:

Greb, S. F., and D. A. Williams and A.D. Williamson, 1992, *Geology and Stratigraphy of the Western Kentucky Coal Field*, Kentucky Geological Survey, Bulletin 92, Series XI., 77 p. 1 plate.

Jacobson, R. J., 1983, *Revised Correlations of the Shoal Creek and La Salle Limestone Members of the Bond Formation (Pennsylvanian) in Northern Illinois*: C 529. *Geologic Notes*. 16 p., 1 pl., 11

Jacobson, R. J., 1983, *Stratigraphic Correlations of Seelyville, De Koven, and Davis Coals (Desmoinesian) of Illinois Basin Coalfield* [abs.]; *American Association of Petroleum Geologists Bulletin*, v. 67, p 1456.

Jacobson, R. J., C. B. Trask, C. H. Ault, D. D. Carr, H. H. Gray, W. A. Hasenmueller, D. Williams, and A. D. Williamson., 1985, RPR 1985-K. *Unifying Nomenclature in the Pennsylvanian System of the Illinois Basin*: (Reprinted from *Transactions of the Illinois Academy of Science*, vol. 78, no. 1-2, p. 1-11, 1985.)

Jacobson, R. J., 1987, C 539. *Stratigraphic Correlations of the Seelyville, Dekoven, and Davis Coals of Illinois, Indiana, and Western Kentucky*: 27 p., 2 pls., 12 figs., app.

Jacobson Russell J.; with contributions by Steven P. Esling, Thomas A. Leonard, and Leon R. Follmer. 1992, B 97. *Geology of the Goreville Quadrangle, Johnson and Williamson Counties, Illinois*: 32 p., 20 figs

Jacobson. Russell J., and C. Pius Weibel. 1993, IGQ 11. *Geologic Map of the Makanda Quadrangle, Jackson, Union, and Williamson Counties, Illinois*: Scale 1:24,000

Nance, Roger B., and Colin G. Treworgy. 1981, C 515. Strippable Coal Resources of Illinois. Part 8: Central and Southeastern Counties: 32 p., 2 pls., 11 figs., 10 tables

Nelson, W. J., 1983, The Turner Mine Shale Member: A Newly Named Stratigraphic Unit of the Carbondale Formation: , C 529. Geologic Notes. 16 p., 1 pl., 11 figs

Nelson, W. John, Joseph A. Devera, Russell J. Jacobson, Donald K. Lumm, Russell A. Peppers, Brian Trask, C. Pius Weibel, Leon R. Follmer, Matthew H. Riggs, Steven P. Esling, Elizabeth D. Henderson, and Mary S. Lannon. 1991, B 96. Geology of the Eddyville, Stonefort, and Creal Springs Quadrangles, Southern Illinois: 85 p., 58 figs., 7 tables, 1 plate.

C. Pius Weibel and W. John Nelson. 1993, IGQ 12. Geologic Map of the Lick Creek Quadrangle, Johnson, Union, and Williamson Counties, Illinois: Scale 1:24,000

Nelson, W. John, 1996, B 102. Bedrock Geology of the Paducah 1° x 2° Quadrangle, Illinois, Kentucky, and Missouri: 40 p., 6 figs., 1 table, 5 separate plates.

Nelson, W. John, and C. Pius Weibel. 1996., B 103. Geology of the Lick Creek Quadrangle, Johnson, Union, and Williamson Counties, Southern Illinois: 39 p., 24 figs., 1 table, 1 pl

C. Brian Trask, James E. Palmer, and Russel A. Peppers., 1983, Revision of Nomenclature for the Springfield (No. 5) Coal Member of Illinois:, C 529. Geologic Notes. 16 p., 1 pl., 11

Weibel, C. Pius, (ed.), 1991, Sequence Stratigraphy in mixed clastic-carbonate strata, Upper Pennsylvanian, East Central Illinois, 21st Annual Field Conference, Great Lakes Section SEPM, 80 p.

Weibel, C. Pius, W. John Nelson, Lynne B. Oliver, Steven P. Esling. 1993., B 98. Geology of the Waltersburg Quadrangle, Pope County, Illinois: 41 p., 27 figs, 4 tables

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, (R.J. Jacobson, W.J. Nelson, H.H. Damberger, C.P. Weibel and R.A. Peppers of the Illinois State Geological Survey; W.A. Hasenmueller, N.R. Hasenmueller, D.L. Eggert, and C.H. Ault of the Indiana Geological Survey; S.F. Greb and D.A. Williams of the Kentucky Geological Survey; M.E. Hopkins;, H. Lamkin, Jr.; and R.L Langenheim of the University of Illinois) , 2001, Toward A More Uniform Stratigraphic Nomenclature For Rock Units (Formations and Groups) of The Pennsylvanian System In The Illinois Basin, Illinois Basin Consortium Study 5, Joint publication of the Illinois State Geological Survey, Indiana Geological Survey and Kentucky Geological Survey, 26 p., 1 Plate

Trask, C. Brian, and Russell J. Jacobson. 1990, IGQ 4. Geologic Map of the Creal Springs Quadrangle, Illinois: Scale, 1:24,000.

Changes (by formation in ascending order)

Raccoon Creek Group

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this group as the standard group as the basin-wide group for the Caseyville through Tradewater Formations. Abandoned use of the McCormick and Kewanee Groups that covered this interval.

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this group as the standard group as the basin-wide group for the Caseyville through Tradewater Formations. Abandoned use of the McCormick and Kewanee Groups that covered this interval.

Caseyville Formation

Nelson and others, 1991: Changed the Wayside Sandstone Member to the Wayside Member, and abandoned the Term Lusk Shale member in favor of the single term Wayside Member, changed the rank of the Gentry Coal from member to a bed.

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this formation as the standard basin wide formation in Kentucky and Illinois

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this formation as the standard basin wide formation in Kentucky and Illinois

Jacobson and Weibel, 1993 and Nelson and Weibel, 1993: Found that the so-called type Drury Member was not equivalent to the interval between the Pounds and Battery Rock Sandstones as originally described, and thus Nelson and Weibel, 1996 abandoned the term and left the interval unnamed.

Tradewater Formation

Jacobson, 1991, and Weibel and others 1993, reintroduced the use of the Tradewater into Illinois, abandoning the use of the Spoon and Abbott Formations.

Nelson and others, 1991: changed the rank of the Reynoldsburg Coal from a member to a bed, named and recognized the Tunnel Hill Coal bed from field data found during mapping, correlated the Delwood Coal Member to the Bidwell Coal found above the Murray Bluff sandstone, a coal found below the Murray Bluff Sandstone was found to be new and named the Old Town Coal Bed, lowered the rank of the Wise Ridge Coal from a member to a bed, named the Carrier Mills Shale Member for a widespread mappable black shale unit.

Jacobson, 1992: Recognized a coal correlative to the Bell Coal Bed of Kentucky for a coal found above the Reynoldsburg. This was likely correlative to the Tunnel Hill Coal Bed of Nelson and others 1991 and Jacobson and Trask 1990 a term which Jacobson did not use in this report.

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this formation as the standard basin wide formation in Kentucky and Illinois

Nelson, 1996: Utilized the term Bell Coal Bed as the basin wide term in Illinois and Kentucky for the first coal above the Reynoldsburg Coal Bed in the lower Tradewater Formation.

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this formation as the standard basin wide formation in Kentucky and Illinois

No Group Name

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, abandoned the Kewanee Group in favor of no group name for this interval.

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this formation as the standard basin wide formation in Kentucky and Illinois

Carbondale Formation

Nelson, 1983: Named the black shale above the Springfield Coal, the Turner Mine Shale Member of the Carbondale Formation.

Trask, 1983; As a precursor to the 1985 pub below they abandoned the term Harrisburg Coal in favor of one coal name in Illinois (the Springfield Coal).

Jacobson et al., 1985, abandoned use of terms Shawneetown, Summun, Harrisburg Coal in favor of basinwide Survant, Houchin Creek, and Springfield Coals. Abandoned use of term Shoal Creek Limestone in favor of basinwide term Carthage Limestone.

Jacobson, 1983, 1987: Correlated the Seelyville Coal with the Dekoven and Davis Coals of southern/southeastern Illinois.

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this formation as the standard basin wide formation in Kentucky and Illinois

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this formation as the standard basin wide formation in Kentucky and Illinois

McLeansboro Group

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this group as the standard basin wide group in Kentucky and Illinois and Indiana

Shelburn Formation

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this formation as the standard basin wide formation in Kentucky and Illinois and Indiana.

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this formation as the standard basin wide formation in Kentucky and Illinois and Indiana

Patoka Formation

Patoka Formation

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this formation as the standard basin wide formation in Kentucky and Illinois and Indiana.

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this formation as the standard basin wide formation in Kentucky and Illinois and Indiana

Bond Formation

Jacobson, 1983; Revised the correlation of the LaSalle Limestone back to the Millersville/Livingston Limestones and the Hall Limestone to the middle of the Bond Formation and Little Vermillion Ls. to the base of the Mattoon Formation (northern Illinois).

Jacobson, 1983, 1987: Correlated the Seelyville Coal with the Dekoven and Davis Coals of southern/southeastern Illinois.

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this formation as the standard basin wide formation in Kentucky and Illinois and Indiana.

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this formation as the standard basin wide formation in Kentucky and Illinois and Indiana

Mattoon Formation

Nance and Treworgy, 1981, added Bristol Hill Coal, Keensbug Coal, Bell Rive/Louden Coal, Oconee Coal, made revisions to what they admitted is a sequence that is was still uncertain: Woodbury over Greenup Ls, and Gila Ls from above Reisner to above Greenup noted uncertainty in position of the Cohn Coal

Wiebel, 1991, moved Gila Ls. back below the Greenup, moved the Trowbridge Coal above the Bogata Ls., moved the Cohn Coal (whose position was uncertain in Nance and Treworgy) to above the Merom Sandstone, demoted the Effingham Limestone to an informal unit "Effingham limestone."

He also identified informal new units; below the Shumway Limestone: "Teutopolis shale, Lake Sarah limestone, Watson coal;" between the Effingham and Bogata Ls; "Ingraham shale;" between the Gila Ls and Trowbridge Coal; "Wetweather shale, Shamrock limestone;" above the Gila Ls; "Dieterich shale and Lis coal;" above the Greenup Limestone; "Graveyard Hill shale".

Greb and others, 1992: As part of a new agreement between Illinois and Kentucky and Indiana, adopted this formation as the standard basin wide formation in Kentucky and Illinois and Indiana.

Tri-State Committee on Correlation of the Pennsylvanian System in the Illinois Basin, 2001, IBC 5: The formal 3 state survey publication (currently in PDF on CD OFS-? Indiana GS) that adopted this formation as the standard basin wide formation in Kentucky and Illinois and Indiana