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NEW ALBANY SHALE

Age:

Devonian and Mississippian

Type designation:

Type locality: The name "New Albany Black Slate" was first used by Borden (1874, p. 158) in describing 104 ft (32 m) of well-exposed rocks along the Ohio River at New Albany, Floyd County, Indiana (Hasenmueller, 1986).

History of usage:

The unit had previously been known as the Louisville-Delphi Black Slate but was referred to by Blatchley and Ashley (1898, p. 19-20) as both the New Albany Shale and the Genesee Shale. The term "New Albany" has been used in the literature since that time (Hasenmueller, 1986).

Description:

The New Albany Shale is composed of brownish-black carbon-rich shale, greenish-gray shale, and minor amounts of dolostone and dolomitic quartz sandstone (Lineback, 1968, 1970) (Hasenmueller, 1986). As recognized by Lineback, the formation consists of five members in southeastern Indiana. In ascending order they are: (1) the Blocher Member, brownish-black to grayish-black, slightly calcareous pyritic shale; (2) the Selmier Member, greenish-gray to olive-gray shale; (3) the Morgan Trail Member, brownish-black to olive-black fissile siliceous pyritic shale; (4) the Camp Run Member, greenish-gray to olive-gray shale interbedded with brownish-black shale and; (5) the Clegg Creek Member, brownish-black to black pyritic shale rich in organic matter (Hasenmueller, 1986). A sixth member of the New Albany Shale, the Ellsworth Member, was recognized by Lineback (1968, 1970) in the northern part of the Illinois Basin in Indiana (Hasenmueller, 1986). There the Ellsworth Member consists of two parts: a lower part of interbedded brownish-black shale and greenish-gray shale and an upper part of greenish-gray shale. In west-central and southwestern Indiana greenish-gray shale occupying the same position as the greenish-gray shale in the upper part of the Ellsworth has been included in the Ellsworth Member by later workers (Bassett and Hasenmueller, 1980; Hasenmueller and Bassett, 1981) (Hasenmueller, 1986). The Blocher, Selmier, and Ellsworth Members have been recognized and mapped in the subsurface (Lineback, 1970; Hasenmueller and Bassett, 1980; and Bassett and Hasenmueller, 1980) (Hasenmueller, 1986). The Selmier, Morgan Trail, and Camp Run Members and part of the Clegg Creek Member are equivalent to the Blackiston Formation of Campbell (1946) (Hasenmueller, 1986). The Sanderson Formation (which includes the Falling Run Bed as recognized here), the Underwood and Henryville Formations, and the Jacobs Chapel Shale of Campbell (1946) are now included in the upper part of the Clegg Creek Member (Hasenmueller, 1986).

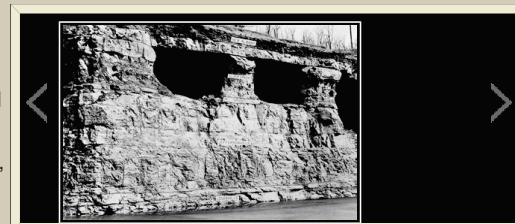
Distribution: The New Albany Shale is widespread west and southwest of the Kankakee and Cincinnati Arches in Indiana. The New Albany crops out in southeastern and north-central Indiana and attains a maximum thickness of 337 ft (103 m) in Posey County and a minimum thickness of 85 ft (26 m) in Harrison County (Hasenmueller and Bassett, 1981) (Hasenmueller, 1986).

Boundaries:

The New Albany Shale paraconformably overlies the Muscatatuck Group (Middle Devonian) (Hasenmueller, 1986). The New Albany is overlain by the Rockford Limestone throughout much of the Illinois Basin; in areas from which the Rockford is absent the shale is overlain by the New Providence Shale of the Borden Group (Hasenmueller, 1986).

Correlations:

The New Albany Shale is mostly Late Devonian in age and includes conodonts indicative of the dol through doVI divisions of the German Devonian standard (Hasenmueller, 1986). The upper 2 to 6 ft (0.6 to 1.8 m) of the New Albany in the southern Indiana outcrop area is Mississippian in age and includes conodonts indicative of the cul division of the German standard and the lower part of the cull division (Hasenmueller, 1986). A conodont fauna corresponding to that in the *Siphonodella sulcata* Assemblage Zone in the Hannibal Shale of the upper Mississippi Valley has been recognized in the Underwood Bed of the New Albany Shale (Lineback, 1970) (Hasenmueller, 1986).



The New Albany Shale is a widely recognized unit and is in large part correlative with the Antrim Shale of northern Indiana and Michigan, the Ohio Shale of Ohio and eastern Kentucky, the New Albany Shale of Kentucky, the New Albany Group of Illinois, and the Chattanooga Shale of Tennessee and south-central Kentucky (Hasenmueller, 1986). Parts of the New Albany Shale are also equivalent to the Sunbury Shale of Michigan, Ohio, northern Indiana, and eastern Kentucky; the Olentangy Shale, the Bedford Shale, and the Berea Sandstone of Ohio and eastern Kentucky, and the Ellsworth Shale of Michigan and northern Indiana (Hasenmueller, 1986). (See Huddle, 1934; Campbell, 1946; Lineback, 1970; and Hasenmueller and Bassett, 1981.)

Regional Indiana usage:

Illinois Basin (COSUNA 11)

Supergroup: *none*

Group: *none*

Formation: *New Albany Shale*

Illinois Basin Margin (COSUNA 12)

Supergroup: *none*

Group: *none*

Formation: *New Albany Shale*

Cincinnati Arch (COSUNA 13)

Supergroup: *none*

Group: *none*

Formation: *New Albany Shale*

Kankakee Arch (COSUNA 14)

Supergroup: *none*

Group: *none*

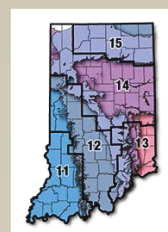
Formation: *New Albany Shale*

Misc/Abandoned Names:

Louisville-Delphi Black Slate, Genesee Shale, Blackiston Formation, Sanderson Formation

COSUNA areas and regional terminology

Names for geologic units vary across Indiana. The Midwestern Basin and Arches Region COSUNA chart (Shaver, 1984) was developed to strategically document such variations in terminology. The geologic map (below left) is derived from this chart and provides an index to the five defined COSUNA regions in Indiana. The regions are generally based on regional bedrock outcrop patterns and major structural features in Indiana. (Click the maps below to view more detailed maps of COSUNA regions and major structural features in Indiana.)



COSUNA areas and numbers that approximate regional bedrock outcrop patterns and major structural features in Indiana.



Major tectonic features that affect bedrock geology in Indiana.

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