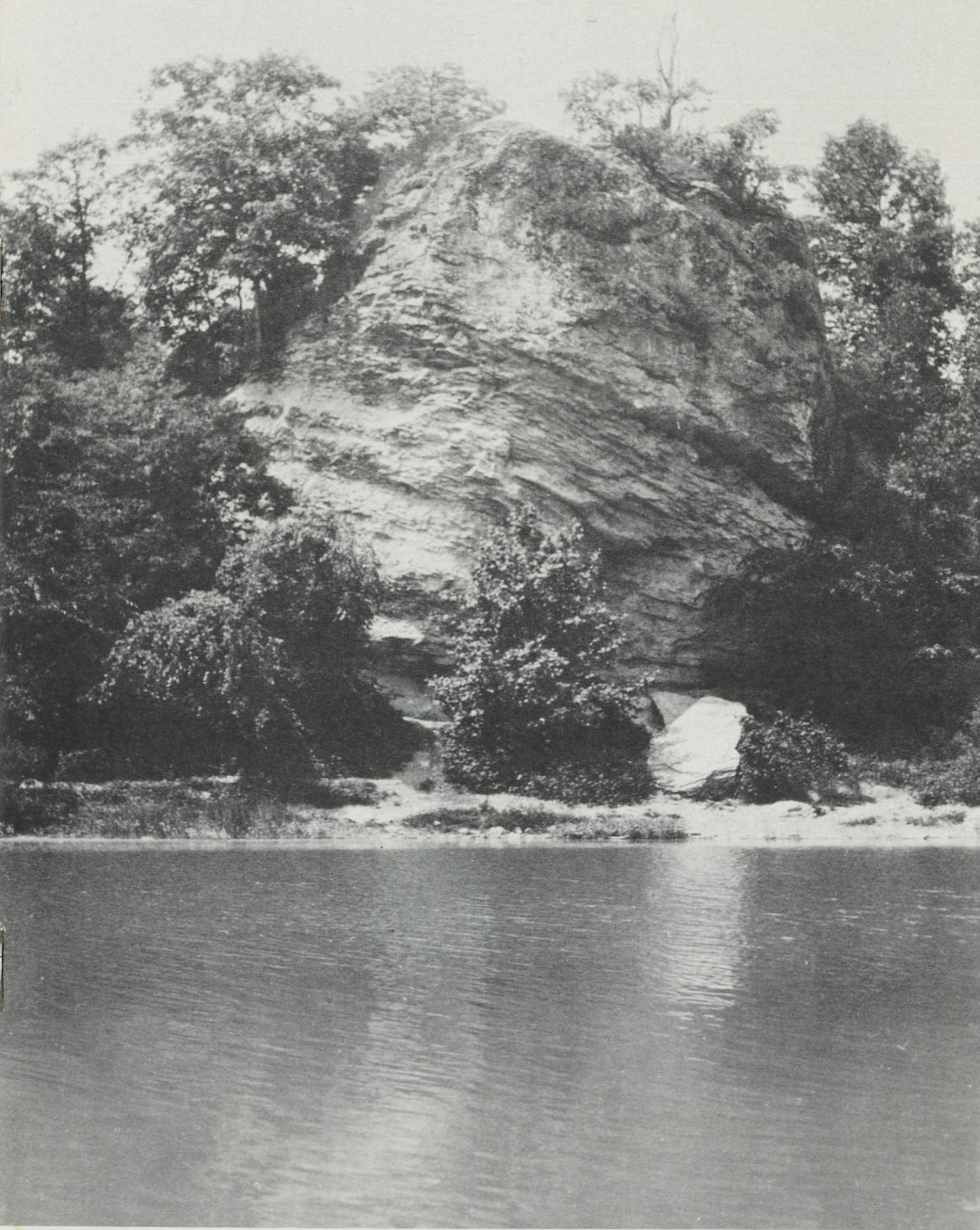




Hanging Rock Natural Area

The U.S. Department of the Interior has designated Hanging Rock and Wabash Reef as National Registered Natural Landmarks. This decision was announced by Sec. of the Interior Don Hodel on May 23, 1986. This registry began in 1962 and now includes 573 Nat'l. Natural Landmarks. Such landmark areas must meet strict scientific criteria qualifying them as nationally significant examples of geological or ecological features representing the best of America's natural heritage.

ACRES, Inc., through a lease arrangement made in 1962 with the owners, Mr. & Mrs. Joseph Swan of Lagro, has been happy to help manage Hanging Rock. The intent has been to promote interest and study of this exhumed reef, and to offer it some additional protection and care.



Henry Hamilton mentions in his Letters that Hanging Rock was used by his advance party. The party would wait there for Hamilton, "the hair trader," then continue on. They called the rock Sugar Loaf and used it as a major reference point in describing Wabash River locations. On the historical marker along U.S. 24 near the Forks of the Wabash we learn further: "During the 18th. century French and English traders passed this way and, in 1778 Henry Hamilton (Lt. Gov. of Detroit) brought 171 British troops and 350 Indians with 40 boats through the portage enroute to retake Fort Sackville at Vincennes."

From the July 12, 1924 Huntington Herald Press comes the following: "...did anyone ever tell you about the painter that carried off a child over near Hanging Rock? I confessed to having heard a legendary story of that kind. His use of the word "painter" called up old times, for the early settlers always called panthers "painters." Chris then rehearsed the Hanging Rock painter and child story. A mother went to a spring to get a bucket of water, leaving her two-year-old child in the cabin. The little one tried to follow the mother and somewhere along the path the child was nabbed by a panther. The mother's awful cries were heard by neighbors and soon all of Lagro turned out to assist in the rescue. Mr. Spath says the trail could be followed by marks where the little one was dragged. He told me it was Jim Pence, a school teacher, who found the child and it was not seriously injured beyond surface bruises." You might be interested to know that this Chris Spath went on to tell the reporter about how a Dr. William Shaffer "brought me around in fine shape" by giving him a mixture of codliver oil and whisky for his quick consumption (tuberculosis).

PLANTS

Ultimately ACRES intends to compile a listing of all species found at Hanging Rock, be they birds, mammals, insects, plants or others. At this writing we can supply only a beginning with a listing of a few plants. YOU ARE URGED TO REPORT TO ACRES THE NAMES OF ANY NEW SIGHTINGS YOU CAN CONFIRM, ALONG WITH YOUR NAME AND THE DATE SIGHTED. Larry Bieberich supplies the following fourteen: Virginia cowslip (bluebells) - Mertensia virginica, Snow trillium - Trillium nivale, Appendaged waterleaf - Hydrophyllum appendiculatum, Heart-leaved skullcap - Scutellaria ovata, Wahoo - Euonymus atropurpureus, Hoptree - Ptelea trifoliata, Columbine - Aquilegia canadense, Rock sandwort - Arenaria stricta, Honewort - Cryptotaenia canadensis, Bloodroot - Sanguinaria canadensis, Alum root - Heuchera americana, Moonseed - Menispermum canadense, Wing stem (Yellow ironweed) - Actinomeris alternifolia, Meadow parsnip - Thaspium barbinode.

Richard Powell, in his Evaluation of Hanging Rock, added the following to the above list: Sycamore - Platanus occidentalis, Silver maple - Acer saccharinum, Buckeye - Aesculus glabra, American elm - Ulmus americana, Hackberry - Celtis occidentalis, Blue ash - Fraxinus quadrangulata, Chinkapin oak - Quercus muhlenbergii, Sugar maple - Acer saccharum, Basswood - Tilia americana (the last four above are found on the rock itself), Stonecrop - Sedum ternatum, Solomon's seal - Polygonatum biflorum, False Solomon's seal - Smilacina racemosa, Mullein - Verbascum lychnitis, Wild geranium - Geranium maculatum. Powell added: "Purple cliffbrake - Pellaea atropurpurea was reported from this site but was later reported to be absent (Lindsey et al, 1969). Mr. Lee Casebere, Assistant Director, Division of Nature Preserves, reports that purple cliffbrake is still present. Chas. C. Deam, in his 1940 Flora of Indiana said "My Wabash County specimen was found about a mile southeast of Lagro on Hanging Rock, which is 84 feet high. It is probably extinct there now since that place has become a picnic ground."



THE WABASH RIVER LOOKING EAST FROM THE TOP OF HANGING ROCK

THE HANGING ROCK REEF

Jack A. Sunderman/Robert C. Weber

Introduction

The prominent landmark known as Hanging Rock is nationally known for its origin as an ancient reef, its excellent exposure of ancient rock features, and its complex erosional history. Hanging Rock is a remnant of an ancient bioherm or reef that has undergone attack by oceans, glaciers, streams, and weathering agents. The Hanging Rock reef has been most noticeably affected, however, by the erosion of the Wabash River, and now appears about to succumb to this most recent attack.

Geologic Studies of Indiana Reefs

The Wabash reef.--The most famous Indiana reef, and one of the most famous in the world, is the Wabash reef, exposed in cross section along the Penn Central Railroad cut on the east edge of the town of Wabash. The Wabash reef is about 400 feet wide where crossed by the railroad cut, and both the flanks and the central core of the reef are well exposed. This reef was the first rock mass to be positively identified as an ancient reef, complete with corals and other fossils, a central massive core with in-place fossils, and sloping flank beds consisting of clastic fossil debris. Initial work on this reef was first published in 1926 and 1928, along with data on other Indiana reefs, by E.R. Cumings and Robert R. Shrock. Figure 1 is a duplication of their 1928 sketch of the Wabash reef, which has appeared in numerous textbooks and other publications as an example of a typical ancient reef. The most detailed publication on the fossils and general geology of the Wabash reef was by D. A. Textoris and Albert V. Carozzi, in 1959.

The Hanging Rock Reef.--Perhaps the most famous naturally-exposed Indiana reef is Hanging Rock, which is exposed along the south bank of the Wabash River about one mile southeast of the town of Lagro. Cumings and Shrock described some features of the Hanging Rock reef in their publication. Since that time, several other authors have mentioned Hanging Rock and have described some of its characteristics. William D. Thornbury (1954, 1969), in a world-renowned textbook on geomorphology, showed a photograph of hanging rock and used it as a prime example of an exhumed reef that has been sliced in half by stream erosion. The only detailed study of the Hanging Rock reef was by Daniel Textoris and Albert V. Carozzi, in a 1964 publication on all the major Silurian reefs known in northern Indiana at the time. These authors drew a cross section of Hanging Rock and briefly described its fossils and bedding characteristics. The reef also has been visited by numerous professional and educational groups in studies of the Wabash Valley reef area (for example, see Sunderman, 1983).

The Geologic History of Hanging Rock

The Wabash Platform.--The history of Hanging Rock began about 400 million years ago, during the part of geologic time known as the Silurian Period.

Throughout Silurian time, a shallow inland sea covered most of north America, including all of Indiana. The northern Indiana

and northwestern Ohio area has been named the Wabash Platform, for Silurian time, because the sea in this area was shallower than in the adjacent basins of Eastern Ohio, Michigan and Illinois. Corals, stromatoporoids, bryozoa, crinoids, sponges, and other sea-creatures living on the Wabash Platform built numerous small mounds or bioherms on the seafloor, and some built large reefs that extended up into the zone of wave activity.

A Midwest reef archipelago.--Large discontinuous barrier reefs, including the so-called "Fort Wayne Bank," were established around the margins of the Michigan Basin in Silurian time. South of the barrier reefs, in Indiana and adjacent states, isolated reef mounds grew in large numbers on the Wabash Platform, producing a type of reef archipelago. All of these Silurian reefs were eventually buried in seafloor muds that were later compressed into layers of rock hundreds of feet thick. Commercial excavations and erosion by natural agents have removed some of the overlying rock and have exposed some of the reefs to our view. Numerous examples of these reefs now appear in rock quarries, stream cuts, road cuts, and railroad cuts in northwestern Ohio, northern Indiana, and northeastern Illinois.

Exhumation of the reef.--Millions of years passed after the reef was buried by sediment before the reef was again exposed to view. During Late Paleozoic and Mesozoic time streams removed most of the overlying rock and may have exposed the reef, to stand as a prominent hill, somewhat as we see it today. Pleistocene Ice Age glaciers and meltwater streams probably removed more of the rock cover, but they also buried the reef once again beneath a cover of glacial clay "till" and sand and gravel "outwash."

The erosion that finally exhumed the reef has been brought about by the Wabash River. Pleistocene versions of the Wabash River carried torrents of water from melting glaciers that easily stripped away the cover of glacial sediment. When solid bedrock was encountered by the river, the reef resisted the erosional processes much more effectively than any remaining interreef rock or the glacial sediment covering it. Thus for a time the reef remained as a rock buttress projecting out into the river's path. Eventually the river's erosional processes prevailed, however, and the northern flank and central reef core were removed by the river.

What we see today

The hemi-klint.--The Hanging Rock of today is but a small part of the original organic reef, whose central core probably extended well out across the present Wabash River. What we see in cross section today (Fig. 2) is thus only the southern flank of the reef, called by some a hemi-klint, or exhumed half-reef.

The reef strata.--As we face the reef from the river's edge, we can see the following features. All of the rock exposed here belongs to the Wabash Formation (of Late Silurian age), which is divided into members. The lowermost featureless rocks, up to about head height (Fig. 2), consist of subreef rock--the strata on which the reef began to grow. Its geologic name is the Mississinewa Shale Member

and it consists mainly of silty dolomite. Above this rock are wedge-shaped remnants of the reef core that slope away from the viewer (Fig. 4) and must have formed on the south slope of the reef edge. This rock is known as the Huntington Facies (or simply as "reef rock") and probably is equivalent to the interreef rock known as the Liston Creek Limestone Member. This part of Hanging Rock is mainly nodular limestone and cherty limestone. The Hanging Rock reef is thus one of the very few undolomitized Silurian limestone reefs in the Midwest.

Many large reefs have a central core surrounded by so-called "flank beds" produced by erosion and transport of reef debris down the reef edge. According to Textoris and Carozzi (1964), the Hanging Rock reef formed below the zone of wave activity and thus exhibits no true flank beds. The wedge-shaped core beds seen here were produced mainly by lateral growth of the central core that formerly existed just to the north of us. Farther up on the cliff, indentations have been differentially weathered into the cliff face (Fig. 3). These indentations represent layers of interreef carbonate muds that settled on the reef margin during times when the reef was not expanding. The interreef beds are less resistant to erosion than the core beds, thus allowing weathering processes to differentially remove them.

Very few large fossils remain in their original growth positions at Hanging Rock, mainly because the central part of the reef core has been eroded away. Most of the fossils that do remain are only fragments of the shells and stems of the numerous crinoids, bryozoa, stromatoporoids, sponges, and other marine organisms that once flourished here. A diligent search, however, may still turn up a well-preserved crinoid stalk or some other fossil, to give the visitor a glimpse into Silurian time, when the Hanging Rock reef was a living part of the sea-covered Wabash Platform.

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- Sunderman, J. A., and G. W. Mathews (eds.), 1975, Silurian Reef and Interreef Environments of Northern Indiana: *Field Guidebook of Great Lakes Section, Society of Economic Paleontologists and Mineralogists*, 94 p. [Description of Wabash reef and several other Silurian reefs in the Wabash Valley area, and description of unusual features associated with them.]
- Thornbury, W. D., 1954, 1969, *Principles of Geomorphology*: John Wiley & Sons, Inc., New York, N. Y., 1st and 2nd ed's, 594 p. [Contains famous photograph of Hanging rock and description of erosional history, on p. 24, 1954, and p. 25, 1969 edition.]

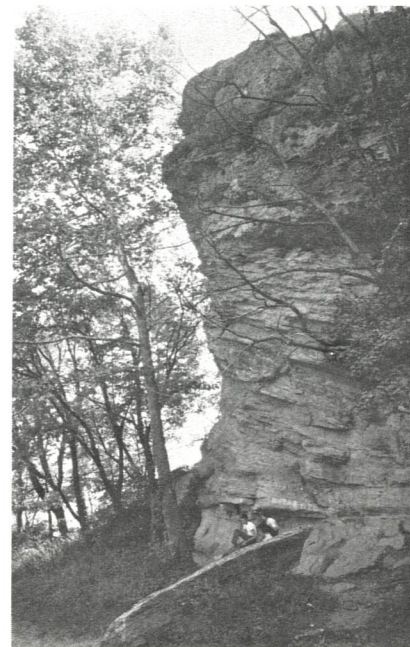


FIGURE 2

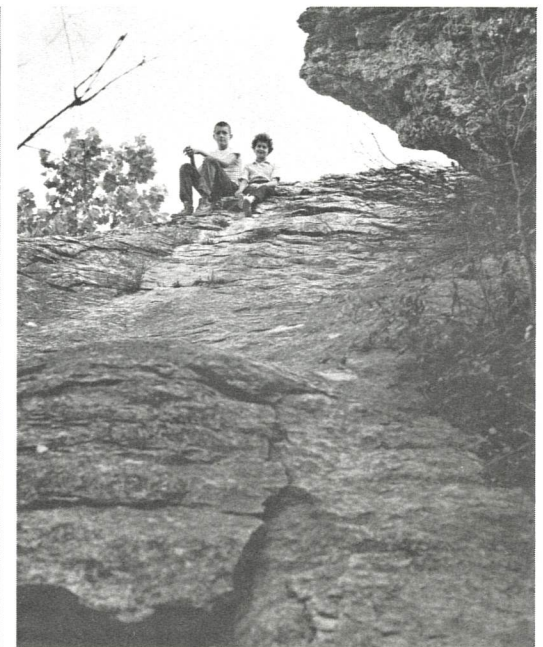


FIGURE 3



FIGURE 1

The Legend of Hanging Rock

Chief Godfroy tells a very interesting story about the Hanging Rock and what his tribe of Miami Indians believe concerning this very unusual rock formation. The story is a true one according to the Miami Indian chief.

Wy-nu-sa was a beautiful Miami Indian maiden who thought she was in love with two handsome, strong, and stalwart Indian braves. Both of the young men were deeply in love with the beautiful Indian maiden. However, Wy-nu-sa wasn't able to decide which Indian brave she wanted to marry.

To the two young suitors Wy-nu-sa said, "You two young men will have to fight a duel at the top of Hanging Rock at a particular time which I will set. The brave which wins the fight may marry me, but the brave which loses the duel will be plunged to his death in the swirling waters of the river below the rock."

The two young men agreed to the plan and a certain moonlit night was scheduled for the duel. On the appointed night the two young men climbed to the top of Hanging Rock to fight for the love of the Indian maiden, Wy-nu-sa. The Indian maid climbed to the top of the rock, also. She stood in the background and watched the fight. Secretly she loved one of the Indian braves more than the other one, but she wouldn't admit this fact to anyone, not even to herself. The battle raged on until finally one brave fell over the edge of the rock and plunged to his death below. The Indian brave who was the victor came over to Wy-nu-sa to claim her as his bride.

When Wy-nu-sa saw the brave she screamed, "I do not love you! You have killed my own true love. I cannot live without him!" With this exclamation the Indian maid ran to the edge of the rock and jumped off into the water. The Miami Indians believe she is now with her true lover in The Happy Hunting Grounds.

Ballad of Hanging Rock

Come all you romance lovers,
Come listen while I tell
The fate of poor Wy-nu-sa,
A fair young Indian belle.

Way down in Indiana
Where Wabash waters glide,
There stands a lonely boulder
High on the river side.

There lived an Indian maiden
Wy-nu-sa was her name;
A lovely woodland flower
With cheeks of wild rose flame.

She had a fond young lover,
A warrior true and bold;
A gay and dashing hunter
Who loved this maid of old.

One night as late they lingered
In love dreams there alone;
The lovers' moon was shining
Down on the hanging stone.

A jealous hearted rival
Stole down the river side;
There slew Wy-nu-sa's lover
And hurled him in the tide.

With cries of bitter anguish,
In her wild grief and woe;
The brokenhearted maiden
Leaped in the stream below.

There with her own true lover
In tender love and pride;
In all her youthful beauty
The fair Wy-nu-sa died.

For many years no lovers
Would venture there alone.
For since Wy-nu-sa perished there
It is a haunted stone.

They say when skies are dreary,
And Wabash waters sigh;
When the lovers' moon smiles wanly
They hear her mournful cries.

When fireflies light the waters,
And ghostly shadows glow;
They see a phantom maiden
Leap in the stream below.

So! come you romance lovers,
My story now is told.
You've heard the Indian legend
Of this fair maid of old.

If on some lonesome evening
You venture there alone;
You may see the Indian maiden
Leap from the hanging stone.

Written by Stormy Sellers

The sources for The Legend of Hanging Rock and the Ballad of Hanging Rock were Miami Indian Stories as told by Chief Clarence Godfroy to compiler and Editor Martha Una McClung, 1961, Light and Life Press, Winona Lake, Indiana, and Wabash County History, Bicentennial Edition, 1972, Linda Robertson, Editor, Walsworth Publishing Co., Inc., Marceline, Mo. 64658.

For other detailed information about the Miamis you are urged to read from The Miami Indians by Bert Anson, 1970, Univ. of Okla. Press, Norman.

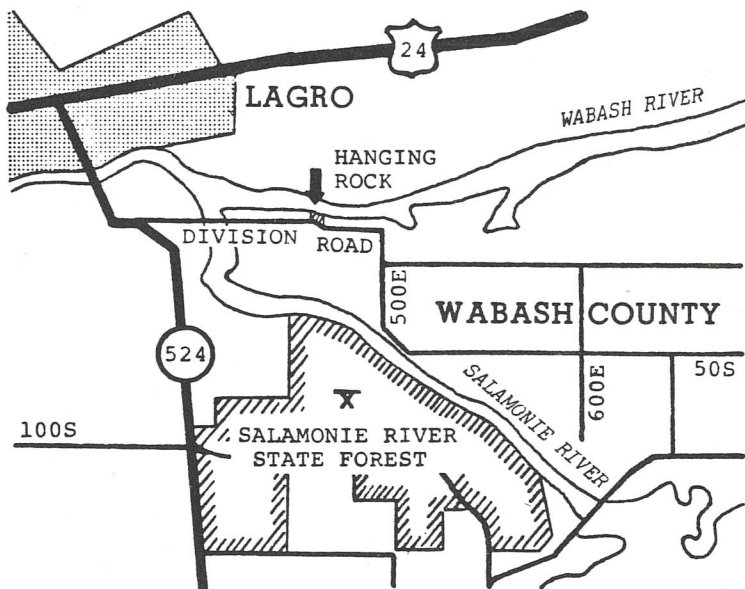


Hanging Rock has long been popular for picnics and bank-side fishing. Here on top of the rock some ACRES members have satisfied their desire to climb for a better vista.



From its back side Hanging Rock looks a bit less formidable than from the waters of the Wabash River

Photograph Identifications: The cover is from an October 1935 post card provided by Judy Esterline. Those other photographs with a vertical or square format were taken by Sheldon Hine in the 1960's. (The boy and girl in some of his pictures are Cindy and John Swan.) photographs with a horizontal format were taken in the fall of 1985 by Bob Weber.



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