

Kentucky Geological Survey,
Bulletin No. 7.

**THE SILURIAN, DEVONIAN AND IRVINE FORMATIONS
OF EAST-CENTRAL KENTUCKY.**

1906.



MAP OF NORTH-CENTRAL KENTUCKY AND ADJACENT PARTS OF OHIO AND INDIANA.

Areas underlain by Silurian strata, either exposed or covered by Devonian and later formations, indicated by dots. Areas in which Silurian strata are absent are left blank. Areas in which the Clinton is absent occur between Dupont, Westport and Osgood in Indiana.

Kentucky Geological Survey,

CHARLES J. NORWOOD, Director.

BULLETIN No. 7.

The Silurian, Devonian and Irvine Formations of East-Central Kentucky,

WITH
AN ACCOUNT OF THEIR CLAYS AND LIMESTONES.

Preliminary Report by
AUG. F. FOERSTE.

Office of the Survey: Lexington, Ky.

1906

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Letter of Transmittal.

*To His Excellency, J. C. W. BECKHAM,
Governor of Kentucky.*

SIR: I have the honor to herewith transmit for publication a bulletin, prepared by Professor Aug. F. Foerste, on the Silurian, Devonian and Irvine Formations of East-Central Kentucky, with an account of their clays, limestones, mineral waters and water horizons.

The report is divided into three parts. Part I. deals with the classifications of the several formations, and with the geographic distribution of their subdivisions, in accordance with the better knowledge of them that has been acquired since the earlier work of William M. Linney (deceased). The great excellence of the pioneer work of Mr. Linney on the Kentucky Silurian (then known as Upper Silurian) is heartily conceded by all who are acquainted with the subject; but the urgent necessity for a classification which will accord with more recent knowledge and present terminology is well recognized by all geologists who have worked or who expect to work in Kentucky regions where Silurian or Devonian rocks form the substructure of the ground. The usefulness of a correct classification of our rocks—the bearing it has upon the study of the economic geology of the State—has been discussed in my Report of Progress for 1904-'05. The numerous sections and page maps, showing the distribution of various members of the formations, will prove of much value in connection with the preparation of the soil map of the State. Professor Foerste has taken pains to give full lists of fossils which characterize the more important beds, thus rendering his report of especial service to local investigators.

Part II. deals with the economic values of the formations

under consideration. In this section is discussed, among other subjects, the availability of Devonian and Silurian clays and limestones for the manufacture of cements. A good foundation is here laid for the technological investigations that are to follow in due course.

In Part III. are given descriptions, with plates, of some of the fossils that characterize the principal Silurian beds referred to in the preceding parts of the report. The local worker will find this a very useful feature of the bulletin, since it will enable him to discriminate individual beds of the formation, and teachers in the advanced schools of the State will find it helpful in their work.

Very respectfully,
C. J. NORWOOD,
State Geologist.

Addendum.

This report was prepared for publication in 1905, but various causes have delayed its passage through the press. This has not been altogether unfortunate, since it has enabled Professor Foerste to include notes on some observations made in 1906, the date which the title page now bears.

Letter of Submittal.

PROFESSOR CHARLES J. NORWOOD,

Director, Kentucky Geological Survey.

SIR: I have the honor to submit herewith a report on the Silurian and Devonian formations of East-central Kentucky, with an account of the economic availability of their clays and limestones. To this is added a brief discussion of the Irvine formation, which includes the extensive clay deposits used for the manufacture of pottery at Waco and Bybetown or Portwood, in Madison county. The report is of necessity merely preliminary to further investigations, since the field work of the last season has left many questions of stratigraphic and economic interest unanswered. In the investigation of the Red river area I was materially assisted by John Goff, a resident at Indian Fields.

Respectfully,

AUG. F. FOERSTE,

Assistant Geologist.

Dayton, Ohio, Nov. 1, 1905.