

CRYSTALLOGRAPHICAL PROPERTIES: Tetragonal. $c=17.49 \text{ \AA}$. $a=34.04 \text{ \AA}$. Small needles bounded by the cleavage forms $a(100)$, and $c(001)$.

PHYSICAL PROPERTIES: $\epsilon=1.545$, $\omega=1.536$. Sp. Gr.=2.61, ± 0.05 .

W. F. FOSHAG

Gumucionite

ROBERT HERZENBERG: Gumucionit, eine neue arsenhaltige Varietät der Schal-
enblende (Gumucionite, a new arsenic bearing sphalerite). *Centr. Min. Geol.*, Abt.
A, pp. 77-78, 1933.

NAME: For Julio F. Gumucio, chief engineer at Llallagua, Bolivia.

CHEMICAL PROPERTIES: An arsenical sphalerite. Zn 64.73, S 32.75, As 0.64,
Fe 0.27, Cd tr., H₂O 1.28, insol. 0.52. Sum 100.19.

PHYSICAL PROPERTIES: Color raspberry red, dirty rose red, sometimes somewhat
brownish; streak pale yellow. Sp. Gr.=3.76. H=somewhat greater than 4. Iso-
tropic.

OCCURRENCE: Found as kidney-shaped, concentric laminated and radiated ag-
gregates, later than cassiterite, quartz, pyrite, etc.

REMARKS: A sphalerite colored by realgar.

W. F. F.

DIRECTORY OF AMERICAN AND CANADIAN
MINERAL COLLECTIONS

SAMUEL G. GORDON, *Academy of Natural Sciences of Philadelphia.*

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KANSAS

BALDWIN CITY BAKER UNIVERSITY.

A general collection of 5776 specimens is in custody of Mr. E. J. Cragoe in the
Museum and Science Hall, and may be seen on Wednesday afternoons on appli-
cation.

EMPORIA COLLEGE OF EMPORIA.

KANSAS STATE NORMAL SCHOOL.

LAWRENCE UNIVERSITY OF KANSAS.

A collection of 500 specimens is displayed in Haworth Building. The syste-
matic collection of 1500 minerals may be seen by application to the custodian,
Dr. Kenneth K. Landes. The collections contain many specimens from the
Tri-state lead and zinc district, the Black Hills, Magnet Cove, and Llano Co.,
Texas.

LINDSBORG BETHANY COLLEGE.

MANHATTAN KANSAS STATE AGRICULTURAL COLLEGE.

MCPHERSON MCPHERSON COLLEGE.

SALINA KANSAS WESLEYAN UNIVERSITY.

TOPEKA WASHBURN COLLEGE, MUSEUM OF NATURAL
HISTORY.

KENTUCKY

BOWLING GREEN OGDEN COLLEGE.

COVINGTON BAKER-HUNT FOUNDATION: WILLIAMS NATURAL HISTORY COLLECTION, MUSEUM AND LIBRARY.

The systematic collection of Mr. G. N. Hobbs (curator) is installed in the Museum.

DANVILLE CENTRE COLLEGE OF KENTUCKY.

FRANKFORT KENTUCKY GEOLOGICAL SURVEY.

Part of the Survey collections are exhibited in the Mines Building, open daily from 8 A.M. to 12 M., and 1 P.M. to 4 P.M.

LEXINGTON TRANSYLVANIA UNIVERSITY.

UNIVERSITY OF KENTUCKY.

Part of the collections of the Kentucky Geological Survey are housed at the University.

LOUISVILLE LOUISVILLE PUBLIC LIBRARY MUSEUM.

Contains the collection of Gerard Troost, the first American crystallographer, the Octavia Allan Shereve memorial cabinet, and part of the J. Lawrence Smith collection.

RUSSELVILLE BETHEL COLLEGE.

LOUISIANA

BATON ROUGE LOUISIANA STATE UNIVERSITY.

A general collection of 2000 specimens is open to visitors Monday to Friday, 8 A.M. to 5:30 P.M. Minerals from the cap rock of salt domes (such as exposed in the nearby Winnfield Quarry) are well represented.

NEW ORLEANS LOUISIANA STATE MUSEUM.

TULANE UNIVERSITY.

Mr. R. A. Steinmayer is custodian of the University's collection of 5000 specimens. The collection which may be seen by appointment includes the Henry A. Ward collection of the New Orleans Exposition of 1884, and the cabinet of the New Orleans Academy of Sciences.

MAINE

ANDOVER E. M. BAILEY.

A general and local collection of 2500 specimens.

W. D. NEVEL.

AUGUSTA KENNEBEC HISTORICAL SOCIETY, HALL LITHGOW LIBRARY BUILDING.

MAINE STATE MUSEUM.

BRUNSWICK BOWDOIN COLLEGE.

The general collections in the Science Building (Department of Chemistry) and in custody of Prof. M. P. Cram, include the cabinets of Francis Alger, and George Warren Hammond. They may be seen weekdays. The Cleaveland cabinet in the Main Hall may be seen on application at the Dean's office.

BUCKFIELD PERIEN S. DUDLEY.
HOWARD M. IRISH.

EAST SUMNER WILSON BONNEY.

HINCKLEY BATES MUSEUM of the Good Will Homes and
Schools.

LEWISTON BATES COLLEGE MUSEUM.

The collections of minerals and rocks were begun by Dr. F. T. Tubbs. Since 1929 they have been in charge of Dr. Lloyd W. Fisher. The collections consist of about 1000 specimens for student study; a collection of Maine minerals, especially pegmatite materials; the E. C. Rich collection; a special series of rocks from the Lewiston quadrangle; and fossils of the Eastport district. The collections, housed in the laboratory rooms, are open to the public 9-12 A.M. and 2-5 P.M. daily except Sundays. The displays are on the fourth floor of Carnegie Science Hall.

LIVERMORE MISS FLORENCE NELSON.

NORWAY GEORGE A. HOWE.

GEORGE NOYES.

ORONO UNIVERSITY OF MAINE.

The collection numbers 2000 specimens, with many specimens in storage for lack of space. The collection was founded by Lucius H. Merrill who furnished many of the rarer minerals.

PARIS HAMLIN MEMORIAL HALL, C. E. Sham, Librarian.

Three hundred specimens of tourmaline crystals and cut tourmalines from Mount Mica may be seen at any time on payment of 10 cents: in summer on Mondays from 2:30 P.M. to 4 P.M., on Wednesdays from 7:30 P.M. to 9 P.M., and in winter, on Wednesdays from 2:30 P.M. to 4 P.M. and 7:30 P.M. to 9 P.M.

PARIS HILL ARTHUR VALLEY.

Owens collection of the late Loren B. Merrill.

PORTLAND GEORGE S. BLACK, 19 Atlantic Street.

PHILIP C. FOSTER, Westminster Avenue.

HERBERT M. HAVEN, 500 Forest Avenue.

M. L. KEITH, 151 Pleasant Street.

A local collection.

H. WALLACE NOYES, 83 West Street.

A collection of 1000 general and local specimens.

PORTLAND SOCIETY OF NATURAL HISTORY MUSEUM, A. H. Norton, Curator.

22 Elm Street. Open from 2 P.M. to 5 P.M. on weekdays. An extensive series of minerals is on exhibition. The earlier collection of minerals of C. H. Hitchcock was destroyed by fire in 1866.

RIDLONVILLE CHARLES F. MARBLE.

A local collection of 800 specimens.

THOMASTON KNOX ACADEMY OF ARTS AND SCIENCES: KNOX MUSEUM, Norman W. Lermond, Curator.

The museum, open every day of the week, houses a general collection of 2500 specimens.

WATERVILLE COLBY COLLEGE.

WEST PARIS STANLEY PERHAM.

MARYLAND

ANNAPOLIS MARYLAND GEOLOGICAL SURVEY COLLECTION.

In part, in the State House.

U. S. NAVAL ACADEMY.

BALTIMORE GOUCHER COLLEGE, Museum.
JOHNS HOPKINS UNIVERSITY.

Contains some specimens of the Maryland Geological Survey, as well as the O. D. Allen Collection.

MARYLAND ACADEMY OF SCIENCES.

Contains the Ferdinand C. Chatard, and E. A. Dalrymple collections.

UNIVERSITY OF MARYLAND

ELLCOTT CITY ROCK HILL COLLEGE.

PYLESVILLE BENNET C. WHEELER.

A general collection of 4000 specimens.

WESTMINSTER WESTERN MARYLAND COLLEGE.

MASSACHUSETTS

AMHERST AMHERST COLLEGE.

The collections, which include the cabinets of Francis R. Allen, Charles U. Shepard (minerals and meteorites), Edward B. Underhill, and the third collection of George Frederick Kunz, are housed in the Geology-Biology Building. Dr. Frederick B. Loomis is custodian. It may be seen daily from 8 A.M. to 6 P.M., and in summer by application to the college guide.

MASSACHUSETTS AGRICULTURAL COLLEGE.

Museum of Zoology and Geology.

BOSTON BOSTON SOCIETY OF NATURAL HISTORY. 234
Berkeley Street.

Edward Wigglesworth, Custodian. The Museum contains a remarkable display of New England minerals, with 150 species represented in the 10,000 specimens. Early collections acquired by the Society included those of Charles T. Jackson, J. E. Teschermacher, and Thomas T. Bouve. The museum is open daily from 9 A.M. to 4.30 P.M., and on Sundays from 1.30 P.M. to 4.30 P.M.

BOSTON UNIVERSITY, Commercial Museum.
CHILDREN'S MUSEUM. Olmstead Park, Jamaica
Plain.

Mildred E. Manter, Director. About 1500 mineral specimens are exhibited daily from 9 A.M. to 5 P.M., Sundays from 1.30 to 5 P.M. (closed Thanksgiving and Christmas). A large collection now in storage will be exhibited in a new building.

CAMBRIDGE HARVARD UNIVERSITY, Mineralogical Mu-
seum.

Professor Charles Palache, Curator. The exhibits include: (1) an outstanding crystal collection, (2) a systematic series (in part), (3) unusual specimens of gem minerals: tourmaline, beryl, topaz, etc., (4) a suite of minerals from Franklin, New Jersey, (5) a group of huge gypsum crystals, and (6) a large meteorite collection. The principal mineral collection is that of the late Albert F. Holden (who had purchased the Losey collection of Franklin minerals), bequeathed to the university with an endowment fund. Other Harvard collections include the Liebner collection, the Elwood P. Hancock cabinet, containing choice specimens from Franklin and Tilly Foster—crystals worked out of the matrix with unrivalled skill and artistry, the Stanton collection (Franklin minerals), the G. Flink collection, in part, of Langban minerals; the Augustus Hemlin collection of tourmalines, the Garland gem minerals, the M. Bellow collection of minerals from Portugal and Portuguese colonies, the F. Ahlfeld collection of Bolivian minerals, the Bigelow agates, and the Clarence Bement collection (in part) of minerals in box mounts for the microscope; also the J. Lawrence Smith collection of meteorites. Only a part of these are exhibited.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY,
69 Massachusetts Ave.

A collection of 5000 specimens is maintained for teaching and research.

CHESTNUT HILL BOSTON COLLEGE (University Heights), Mu-
seum in Science Building.

Minerals are exhibited in three cases.

CONWAY MRS. EDWARD KOEBER.

Collection of her grandfather, the late Henry A. Weeks of Chesterfield, Mass.

- DOVER DOVER HISTORICAL AND NATURAL HISTORY SOCIETY.
- FALL RIVER PUBLIC LIBRARY.
 Contains the collection of James G. Manchester (in part); numbering about 3000 specimens, and including many choice Erie cut minerals.
- FITCHBURG MRS. F. W. PIERCE, 82 Summer Street.
 WALLACE LIBRARY AND ART BUILDING.
 George E. Nutting, Librarian. A case of minerals, presented by John H. Daniels, may be seen from 9 A.M. to sunset on weekdays, and from 1.30 P.M. to 4 P.M. on Sundays.
- FRAMINGHAM HISTORICAL AND NATURAL HISTORY SOCIETY.
- FRANKLIN J. W. BAKER, R.F.D. 2, Box 8.
 A general collection of 2600 specimens including many from Rhode Island. (He purchased the Silas Carr and Eddy-Racine collections.)
- GLOUCESTER CAPE ANN SCIENTIFIC AND LITERARY ASSOCIATION.
- LEOMINSTER LEOMINSTER PUBLIC LIBRARY-MUSEUM, West Street.
 Florence E. Wheeler, Custodian. A general collection in 6 cases is exhibited daily from 9 A.M. to 9 P.M.
- MARLBOROUGH MARLBOROUGH SOCIETY OF NATURAL HISTORY.
- MARION MARION NATURAL HISTORY SOCIETY.
- MILTON A. B. WILBOUR, 200 Blue Hill Parkway.
- NORTHAMPTON SMITH COLLEGE.
 A collection of 7000 specimens is housed in Seelye Building. Included are the Hitchcock, Clark, and Morganthau collections.
- PITTSFIELD MUSEUM OF NATURAL HISTORY AND ART.
 Contains the Daniel Clark Collection.
- SALEM PEABODY MUSEUM.
 A. P. Morse, Curator. Although the collection of over 5000 specimens is a general one, Essex County minerals are fully represented. The Museum is open daily.
- SOUTH HADLEY MOUNT HOLYOKE COLLEGE.
 A fire some years ago destroyed all of the collections. A new collection, which already numbers 1000 specimens is on exhibition, and may be seen when the college is in session. The collection is housed in the Clapp Laboratory.
- SPRINGFIELD MUSEUM OF NATURAL HISTORY.
- TAUNTON BRISTOL COUNTY ACADEMY OF SCIENCES.

TUFTS COLLEGE TUFTS COLLEGE: BARNUM MUSEUM.

A general collection of 8000 specimens.

WELLESLEY SHELLEY W. DENTON, 24 Denton Road.

A general and local collection of several thousand specimens. Specializes in gem minerals.

WELLESLEY COLLEGE.

Contains the Horace I. Johnson Collection of New England Minerals.

WILLIAMSTOWN WILLIAMS COLLEGE.

Teaching collections of several thousand specimens are maintained in Clark Hall, and may be seen daily by appointment. Prof. H. F. Cleland is Custodian.

WORCESTER CLARK UNIVERSITY, Educational Museum.

COLLEGE OF THE HOLY CROSS

MRS. H. W. GODDARD, 190 Salisbury Street.

Collection of the late H. W. Goddard.

WORCESTER NATURAL HISTORY MUSEUM.

MICHIGAN

ADRIAN ADRIAN COLLEGE.

ALBION ALBION COLLEGE.

ALMA ALMA COLLEGE, HOOD MUSEUM OF NATURAL HISTORY.

H. M. MacCurdy, Director. The exhibits include the Alexander Winchell collection of 6000 specimens of minerals, rocks, and fossils.

ANN ARBOR UNIVERSITY OF MICHIGAN, Natural Science Building.

Dean Edward H. Kraus, Director. The University collections are located in Room 2071, and comprise a general systematic collection (including the Lederer cabinet, principally of European minerals), a gem collection of natural crystals and cut stones, a collection of polished slabs of architectural and decorative stones, a collection of Michigan rocks and minerals, and a crystal collection. The room is open to visitors daily, except Sundays and Holidays, from 8 A.M. to 5 P.M.

BATTLE CREEK MUSEUM OF NATURAL HISTORY OF THE BATTLE CREEK PUBLIC SCHOOLS.

BLOOMFIELD HILLS CRANBROOK INSTITUTE OF SCIENCE.

C. A. Newcomb, Jr., and William B. Colburn, Curators of Minerals. The Museum, endowed by Mr. and Mrs. George Booth in 1929, is located in the Institute of

Science Building of the Cranbrook Foundation, and is 12 miles distant from Detroit. It is open daily from 9 to 5 except on Saturdays and Sundays. Showy minerals, particularly from Michigan, are featured.

DETROIT CHILDREN'S MUSEUM, 96 Putnam Street.

Gertrude A. Gillmore, Curator. A small mineral collection may be seen on weekdays and Sunday afternoons.

EAST LANSING MICHIGAN STATE COLLEGE.

S. G. Bergquist, Custodian. A general collection, rich in Michigan minerals, may be seen on application.

GRAND RAPIDS KENT SCIENTIFIC MUSEUM.

H. E. Ward, Curator. A general collection of 2000 specimens.

HILLSDALE HILLSDALE COLLEGE.

HOUGHTON MICHIGAN COLLEGE OF MINING AND TECHNOLOGY, Mineralogical Museum.

An extensive series of minerals, with many remarkable specimens of calcite and copper from the Michigan copper mines.

J. T. REEDER, 318 College Avenue.

A collection of 2500 mineral specimens, including choice Michigan minerals.

KALAMAZOO KALAMAZOO PUBLIC MUSEUM AND ART INSTITUTE.

DuPortal D. Porter, Curator of Minerals. Exhibits include part of the private collection of Mr. Porter. Open daily, except Sunday, from 2 to 5.

DUPORTAL D. PORTER.

A large general collection, the nucleus of which was the collection of Charles Miller (Grand Rapids).

PORT HURON PUBLIC LIBRARY, MUSEUM.

SAGINAW FRED DUSTIN, 705 S. Fayette Street.

A collection containing an extensive series of Isle Royale semi-precious gems, and similar materials from drift, Indian village sites, or river beds.

ST. JOHNS J. D. JANES.

About 700 specimens, mostly from the southwestern States.

THREE OAKS CHAMBERLAIN MEMORIAL MUSEUM.

Harold Barton, Custodian. A general collection of 1500 specimens, specializing in Lake Superior iron and copper minerals. Open every day, except Sunday.

(To be continued)