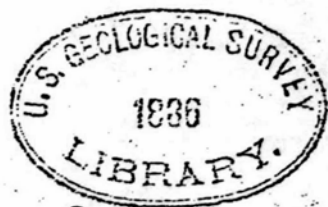


Miscellaneous publications, no. 7.

[Circular No. 4.]



The Geological and Natural History Survey

OF
MINNESOTA.

THE MUSEUM.

DUPLICATE SPECIMENS FOR EXCHANGE.

[Minneapolis
Johnson, Smith & Harrison
1878].

EXCHANGES.

In the Museum of the University are many duplicate specimens of minerals which will be exchanged for others not in the Museum. A catalogue of most of these can be seen in the Sixth Annual Report on the Geological and Natural History Survey. They are generally in crystalline form, and have been correctly identified and labeled. They are from well known mineral localities, viz:

Calamine,	Ogdensburg, N. J.
Calamine and Smithsonite,	Ogdensburg, N. J.
Datolite,	Bergen Hill, N. J.
Natrolite,	Bergen Hill, N. J.
Calcite,	Bergen Hill, N. J.
Mesolite,	Bergen Hill, N. J.
Quartz Crystals,	Hot Springs, Ark.
Willemite— <i>Var.</i> Troostite,	Franklin, N. J.
Zincite (ruby),	Franklin, N. J.
Amphibole (Hornblende),	Franklin, N. J.
Sphaerite,	Franklin, N. J.
Pectolite (Crystallized),	Bergen Hill, N. J.
Brown Garnet,	Franklin, N. J.
Phlogopite,	Franklin, N. J.
Franklinite,	Franklin, N. J.
Franklinite and Zincite,	Franklin, N. J.
Pyroxene,	Franklin, N. J.
Gahnite (Dysomite),	Franklin, N. J.
Graphite,	New York.
Tourmaline (green),	Franklin, N. J.
Talc,	Franklin, N. J.
Apatite,	Franklin, N. J.
Amphibole and Titanite (sphen),	Franklin, N. J.
Black Garnet,	Franklin, N. J.
Pyroxene (Jeffersonite),	Franklin, N. J.
Garnet— <i>Var.</i> Melanite,	Franklin, N. J.
Prehnite,	Bergen Hill, N. J.
Feldspar,	Turin, N. Y.
Apophyllite,	Bergen Hill, N. J.
Epidote,	Franklin, N. J.
Franklinite and Tephroite,	Franklin, N. J.
Franklinite, Zincite and Tephroite,	Franklin, N. J.
Magnesite,	Hoboken, N. J.
Stilbite,	Bergen Hill, N. J.
Ægirite,	Near Magnet Cove, Ark.
Limonite,	Staten Island, N. Y.
Smoky Quartz,	Magnet Cove, Ark.
Analcite,	Bergen Hill, N. J.
Barite,	Cheshire, Ct.

Rutile— <i>Var.</i> Nigrine,	Magnet Cove, Ark.
Phosphatic Nodules,	Charleston, S. C.
Franklinite and Willemite,	Franklin, N. J.
Brown Tourmaline,	New York City.
Wernerite (Scapolite)	Franklin, N. J.
Green Willemite,	Franklin, N. J.
Niccoliferous Pyrites,	Franklin, N. J.
Quartz (calloused)	Crystal Mountains, Ark.
Sussexite,	Franklin, N. J.
Orthoclase,	Colorado.
Brookite,	Magnet Cove, Ark.
Chlorastrolite,	Isle Royale, L. Sup.
Cassiterite,	Durango, Mexico.
Topaz,	Durango, Mexico.
Spinel (Ruby),	Franklin, N. J.
Ruby, Sapphire, &c,	Franklin, N. J.
Opal,	Hungary.
Columbite,	Haddam, Ct.
Quartz, perfect crystals, doubly terminated,	Herkimer Co., N. Y.
Topaz (colored),	Durango, Mexico.
Durangite,	Durango, Mexico.
Menaccanite,	Switzerland.
Agate and Chlorastrolite,	Isle Royale, L. Sup.
Magnetite,	Stockholm, N. J.
Magnetite,	Franklin, N. J.
Opal (Cacholong),	Georgia.
Chrome Sand,	Media, Pa.
Fossil Hematite,	Brush Hill, Pa.
Pyroxene (in lava),	Vesuvius, Italy.
Botryoidal Limonite,	Kentucky, Tennessee and Connecticut.

A few exchanges also will be made of a large number of other species.

In the progress of the Geological Survey a number of duplicates have been collected of specimens from all the geological formations of the State, and they are now offered for exchange for similar specimens from other States and countries. These are of convenient form and size for display in museum cases, dressed roughly with a hammer to the dimension of three inches by four inches. The fossils of the Lower Silurian have not been studied sufficiently as yet to allow of distribution or general exchange, although many duplicates have been collected. A lithological examination with the microscope is being made of the crystalline rocks of the State, from the cupriferous series to the Laurentian, and finally, series of these, showing their variations, with corresponding thin sections will be offered for exchange. The rock samples that are ready for exchange are as follows:

CRETACEOUS.

Samples of shale, lignite, sand and sand-rock, marl and clay, and crystals of Selenite, from points in the Minnesota valley and southern Minnesota.

DEVONIAN.

Samples of fine quarried limerock, and of coarse magnesian limerock.

UPPER SILURIAN.

Rock supposed to be of the Niagara, from Fillmore county.

LOWER SILURIAN.

The Maquoketa, or Hudson River shale.

Trenton limestone, green shale, and dark combustible shale from Rice county.

The Lower Trenton, forming the brink of the falls of St. Anthony.

Marble from the Lower Trenton at Faribault.

Harsh Magnesian limestone from the Galena.

St. Peter sandrock (very friable, white).

Shakopee limestone—Featherstonhaugh's "fawn colored" limestone as seen at Kasota; the famous "Kasota stone."

Jordan sandrock (friable, white).

St. Lawrence limestone; also with glauconitic Greensand.

Arenaceous, impure limerock from the St. Lawrence.

St. Croix sandrock, also shale, bluffs of the Mississippi.

Lingula shale, Taylor's Falls, with fossils of the Potsdam.

Potsdam, or Red Quartzite, from the celebrated Pipestone quarry in Pipestone county, and Catlinite from the same; ripple-marked slabs of the same, also sand-polished surfaces.

Red shale and sandrock, and coarse conglomerate, from the northern part of the State.

The cupriferous series; * trap and amygdaloids, diorites, &c., with many zeolite minerals, particularly laumontite, thomsonite, saponite, prochlorite, and agates and chlorastrolites.

Gray quartzite and slate, the argentiferous formation.

Jasper beds, containing flint, chalcedony, and iron ore.

HURONIAN.

Talcose and micaceous crystalline rocks, the auriferous rocks of Vermilion lake.

LAURENTIAN.

Syenites, granites, and their associates and variations.

THE DRIFT, ETC.

Samples of soils, clays, marls, peats, fossiliferous limestone boulders, lamellar calcite from the pre-glacial bluffs of the Lower Silurian; also iron scales from the pre-Cretaceous bluffs of the Shakopee. Decomposed upper portion of the Huronian and Laurentian, where immediately overlain by the Cretaceous, forming an impure Kaolin. Crag, Travertine, Indian paint, and "paint rock" from Redwood Falls, on the Minnesota. Interglacial peat and wood, and silicified wood. Magnetic Iron-sand, from Lake Superior.

Persons desiring to make exchange, or to present specimens to the Museum should correspond with the undersigned.

N. H. WINCHELL, CURATOR.

THE UNIVERSITY OF MINNESOTA,)
Dec. 2, 1878. }

* Another circular will be issued relating to the Crystalline rocks and their minerals.