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New Mexico uranium minerals

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This is one of many related papers that were included in the 2021 NMGS Fall Field Conference Guidebook.

Annual NMGS Fall Field Conference Guidebooks

Every fall since 1950, the New Mexico Geological Society (NMGS) has held an annual [Fall Field Conference](#) that explores some region of New Mexico (or surrounding states). Always well attended, these conferences provide a guidebook to participants. Besides detailed road logs, the guidebooks contain many well written, edited, and peer-reviewed geoscience papers. These books have set the national standard for geologic guidebooks and are an essential geologic reference for anyone working in or around New Mexico.

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NEW MEXICO URANIUM MINERALS

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PRIMARY URANIUM MINERALS AND MINERALS FREQUENTLY CONTAINING U AS IMPURITIES FROM NEW MEXICO*

(*as defined on page 306 by Lauf, R.J., 2016, *Mineralogy of Uranium and Thorium*: Atglen, Schiffer Publishing, 352 p.)



Uraninite, UO_2 , with hematite and calcite
Specimen is 15 cm across.
NMBGMR Museum No. 13133, Section 25 Mine, Ambrosia Lake District,
McKinley County, NM. Gift of William Bergloff.



Coffinite, $U(SiO_4) \cdot nH_2O$, in sandstone
Specimen is 12 cm across.
NMBGMR Museum No. 15808, Section 23 Mine, Ambrosia Lake District,
McKinley County, NM. Gift of Nick Ferris.



Samarskite, $YFe^{3+}Nb_2O_8$
Specimen is 5 cm tall.
NMBGMR Museum No. 6011, Petaca District, Rio Arriba Co., NM.



Xenotime, $Y(PO_4)$
 Specimen is 3 cm tall.
 NMBGMR Museum No. 12715, Truchas Mine, Nambe District, Santa Fe County, NM.



Polycrase, $Y(Ti,Nb)_2(O,OH)_6$
 Crystal is 3 cm across.
 Mary Mine, Petaca district, Rio Arriba Co., NM. On loan from Mel Stairs.



Euxenite, $(Y,Ca,Ce,U,Th)(Nb,Ta,Ti)_2O_6$
 Specimen is 5 cm across.
 NMBGMR No. 18309, White Signal District, Grant County, NM.



Microlite, $U_{2-m}Ta_2O_{6-w}OH_n$, with quartz and microcline
 Crystal is 0.8 cm across.
 NMBGMR Museum No. 15592, Harding Mine, Picuris District, Taos County, NM. Gift of Dave Bunk.



Pyrochlore, $U_2Nb_2O_6(OH,F)$, on orthoclase
 Crystal is 1.5 cm across.
 NMBGMR Museum No. 13483, Rociada District, Mora County, NM. Gift of Al and Betty Tlush.



Allanite, $\{Ca^{2+}, Sr^{2+} REE^{3+}\}_2 \{Al, Fe, Mn^{3+}, Fe, Mg^{2+}\}_3 (Si_2O_7)(SiO_4)(OH)$
 Center crystal is 1 cm across.
 NMBGMR Museum No. 10021, Mina Terra Estrella, Lincoln County, NM.
 Gift of Mac Canby and Peter Evatt.

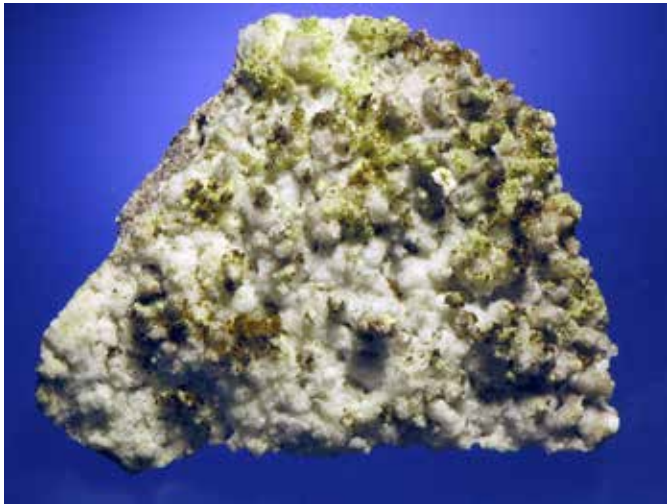


Monazite, $Ce(PO_4)$
 Crystal is 5 cm across.
 NMBGMR Museum No. 12683, Cow Camp, San Miguel County, NM.



Columbite-Tantalite, $(Fe, Mn)Nb_2O_6$
 Crystal is 3.5 cm across.
 NMBGMR Museum No. 18327, Petaca District, Rio Arriba County, NM.

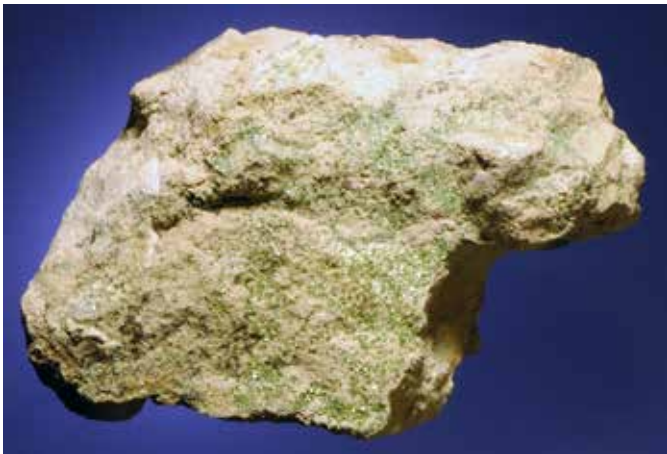
SECONDARY URANIUM MINERALS



Andersonite, $\text{Na}_2\text{Ca}(\text{UO}_2)(\text{CO}_3)_3 \cdot 6\text{H}_2\text{O}$, with gypsum and calcite on sandstone
Specimen is 10 cm across.
NMBGMR Museum No. 18960.



Cuprosklodowskite, $\text{Cu}(\text{UO}_2)_2(\text{SiO}_3\text{OH})_2 \cdot 6\text{H}_2\text{O}$
Specimen is 11 cm tall.
NMBGMR Museum No. 13172, Iron Mountain No. 2 District, Sierra County, NM. Gift of Robert Weber.



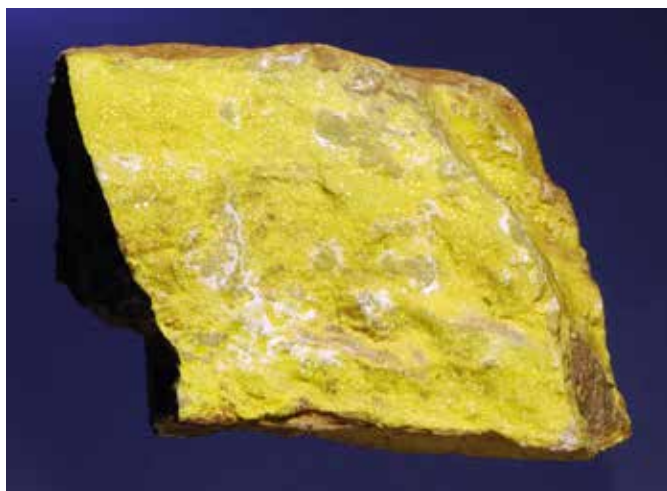
Metatorbernite, $\text{Cu}(\text{UO}_2)_2(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$, on sandstone
Specimen is 8 cm across.
NMBGMR Museum No. 13169, Jeter Mine, Ladrone District, Socorro County, NM. Gift of Robert Weber.



Autunite, $\text{Ca}(\text{UO}_2)_2(\text{PO}_4)_2 \cdot 10\text{-}12\text{H}_2\text{O}$, on sandstone
Specimen is 9 cm across.
NMBGMR Museum No. 16180, Jeter Mine, Ladrone District, Socorro County, NM. Gift of Robert H. Weber.



Carnotite, $K_2(UO_2)_2V_2O_8 \cdot 3H_2O$, on sandstone
 Specimen is 6 cm long.
 NMBGMR Museum No. 12690, Carrizo Mountain, San Juan County, NM.



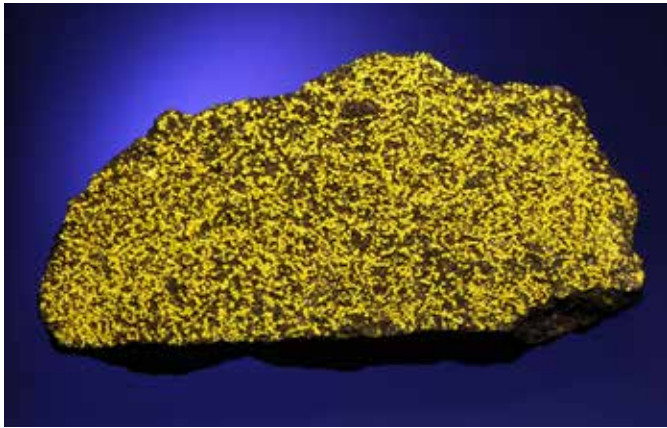
Tyuyamunite, $Ca(UO_2)_2(VO_4)_2 \cdot 5-8H_2O$ on limestone
 Specimen is 9 cm across.
 NMBGMR Museum No. 7606, Section 9 Mine, Ambrosia Lake District, McKinley County, NM.



Bayleyite, $Mg_2(UO_2)(CO_3)_3 \cdot 18H_2O$ on sandstone
 Specimen is 7 cm across.
 NMBGMR Museum No. 12998, Poison Canyon, Ambrosia Lake District, McKinley County, NM.



Metatyuyamunite, $Ca(UO_2)_2(VO_4)_2 \cdot 3H_2O$ on limestone
 Specimen is 8 cm across.
 NMBGMR Museum No. 16310, Ambrosia Lake District, Cibola County, NM.
 Gift of Hilja K. Herfurth.



Zippeite, $K_3(UO_2)_4(SO_4)_2O_3(OH) \cdot 3H_2O$, on coffinite and sandstone
Specimen is 17 cm across.
NMBGMR No. 18498, Grants District, Cibola County, NM. Gift of Gary and Priscilla Young.



Uranophane, $Ca(UO_2)_2(SiO_3OH)_2 \cdot 5H_2O$, on calcite
Crystals are about 1-2 cm long.
NMBGMR Museum No. 13134, Section 25 Mine, Ambrosia Lake District, McKinley County, NM. Gift of William R. Berglof. Photograph by Jeff Scovil.



Liebigite, $Ca_2(UO_2)(CO_3)_3 \cdot 11H_2O$, on calcite and sandstone
Crystals are approximately 4 cm long.
NMBGMR No. 17769, Section 23 Mine, Ambrosia Lake District, McKinley County, NM. Gift of the Sanchez Collection.



Kasolite, $Pb(UO_2)(SiO_4) \cdot H_2O$, on granite
Photomicrograph is 2 mm across.
NMBGMR Museum No. 19056, Red Hills, Sierra County, NM. Specimen and photomicrograph a gift of Jerry Cone.