

58th ANNUAL

Franklin—Sterling

**GEM & MINERAL
SHOW**

2014

SATURDAY, SEPTEMBER 27th • 9-5
SUNDAY, SEPTEMBER 28th • 10-4

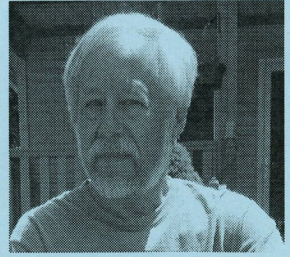
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FRANKLIN, NEW JERSEY
The Fluorescent Mineral Capital Of The World

DEDICATION

Dr. Earl Verbeek is a structural geologist by profession. Born and educated in Pennsylvania, he earned his B.S. and Ph.D. from Penn State and spent most of his career in government work, first for the U.S. Geological Survey in Colorado and then the Bureau of Land Management in Nevada. His specialty was studying fractures in rock: he'd measure every fault, joint and crack in an outcrop, as a first step to understanding the evolution of regional fracture networks and the fluids that migrated through them over time. His methods for fracture measurement are still the 'gold standard' of the USGS.



"Tema Hecht photo"

Growing up in Philadelphia, Earl had strong interests in rocks and minerals, and during his career assembled a large collection of both, including strong suites of the minerals of Franklin and Sterling Hill. On retiring, Earl returned east, and is now Curator and Resident Geologist of the Sterling Hill Mining Museum. He's a quiet man with a talent for not calling attention to himself, so it's worth noting his wide range of roles and achievements on the job and in the community.

As a curator, Earl oversees, organizes, displays, and adds to the interlocking mineral and rock collections and displays at Sterling Hill. As an educator, he, with Mikki Weiss, developed the museum's program of professional development training for science teachers. When it comes to outreach, Earl is the museum's liaison with colleges and universities; he hosts field trips and mine tours for college classes, and corresponds with a network of scientists. (For a quiet man, Earl also does a lot of talking at schools and to civic groups.) Less apparent are his skills at exhibiting minerals, though the evidence is in the public's face during every mine tour, notably at the Thomas S. Warren Museum of Fluorescence. (Earl was the chief planner of the Warren Museum, the world's largest permanent exhibit of fluorescent minerals, and many of his best specimens are on display there.) Collectors may remember Earl's outstanding fluorescent displays of Franklin and Sterling Hill minerals at the 2007 "Springfield show" when the Sterling Hill Mining Museum was the exhibitor, and at the 2008 Tucson Gem & Mineral Show where the display theme was "American Mineral Treasures".

As a geologist, Earl mastered editing, technical writing, and photography. After returning east he edited the *Sterling Hill Newsletter* for a decade, then went on to label and photograph over 2000 specimens at Sterling Hill. For fourteen years he's also been an editor and writer for *The Picking Table*, the award-winning magazine of the Franklin-Ogdensburg Mineralogical Society, Inc. He developed most of the content for the first Sterling Hill website, and is now working on his own website that will eventually describe and picture all the minerals of Franklin and Sterling Hill. To this end he has already photographed another 1500+ specimens, many of which are in the collection of the Franklin Mineral Museum.

Remember Earl's specialty as a geologist, fracture studies? He's measured more than 1100 faults at Sterling Hill, and is presently integrating that information into the first comprehensive study of Sterling Hill's local and regional fracture history. During one of his early outcrop measurements there, he made one of his more surprising discoveries: Princess Sterling the Mine Cat. She hopped onto his chest as he lay prone, with Brunton Compass, feeler gauge, and notebook in hand. A true professional, Earl was unfazed, and Princess became the mine's beloved mascot.

Geologist, mineral collector and exhibitor, educator and scholar, webmaster and photographer, author, editor, and cat lover.... Franklin, my dear, what more do you want in a Renaissance Man?

MINERAL SPECIES FOUND AT FRANKLIN-STERLING HILL, NJ

Revised by the Mineral List Committee, June 2014

(fmm1954@earthlink.net)

Acanthite	Bianchite	Cuspidine
Actinolite	Biotite*	Cyanotrichite
Adamite	Birnessite	
Adelite	Bornite	Datolite
Aegirine	Bostwickite	Descloizite
Akrochordite	Brandtite	Devilline
Albite	Breithauptite	Digenite
Allactite	Brochantite	Diopside
Allanite-(Ce)	Brookite	Djurleite
Alleghanyite	Brucite	Dolomite
Almandine	Bultfonteinite	Domeykite
Analcime	Bustamite	Dravite
Anandite		Duftite
Anatase	Cahnite	Dundasite
Andradite	Calcite	Dypingite
Anglesite	Canavesite	
Anhydrite	Carrollite	Edenite
Annabergite	Caryopillite	Epidote
Anorthite	Celestine	Epidote-(Pb)
Anorthoclase	Celsian	Epsomite
Antlerite	Cerussite	Erythrite
Apatite-(CaF)	Chabazite-Ca	Eserpite
Apophyllite-(KF)	Chalcocite	Euchroite
Apophyllite-(KOH)	Chalcophanite	Eveite
Aragonite	Chalcopyrite	
Arsenic	Chamosite	Fayalite
Arseniosiderite	Charlesite	Feitknechtite
Arsenopyrite	Chloritoid	Ferrimolybdite
Atacamite	Chlorophoenicite	Ferro-actinolite
Augite	Chondrodite	Flinkite
Aurichalcite	Chrysocolla	Fluckite
Aurorite	Chrysotile-2m	Fluoborite
Austinite	Ciavcullite	Fluorite
Axinite-(Fe)	Clinochlore	Fluoro-edenite
Axinite-(Mn)	Clinoclase	Forsterite
Azurite	Clinohedrite	Fraipontite
	Clinohumite	Franklinfurnaceite
	Clinozoisite	Franklinite
	Clintonite	Franklinphillite
	Conichalcite	Friedelite
	Connellite	
Bakerite	Copper	Gageite
Bannisterite	Corundum	Gahnite
Bariopharmacosiderite	Covellite	Galena
Barite (IMA = baryte)	Cryptomelane	Ganomalite
Barylite	Cumingtonite	Ganophyllite
Barysilite	Cuprite	Genthelvite
Bassanite	Cuprostibite	Gersdorffite-P213
Baumhauerite		
Bementite		
Berthierite		



Gerstmannite

Glaucochroite
Glaucodot
Goethite
Gold
Goldmanite
Graeserite
Graphite
Greenockite
Grossular
Groutite
Grunerite
Guérinite
Gypsum

Haidingerite
Halotrichite
Hardystonite
Hastingsite

Hauckite

Hausmannite
Hawleyite
Hedenbergite
Hedyphane
Hellandite-(Y)
Hematite
Hemimorphite

Hendricksite

Hercynite
Hetaerolite
Heulandite-Na
Hexahydrite

Hodgkinsonite**Holdenite**

Hübnerite
Humite
Hydrohetaerolite
Hydrotalcite
Hydrozincite

Illite*

Ilmenite

Jacobsite

Jarosewichite

Jerrygibbsite
Johannsenite
Johnbaumite
Junioite

Kaolinite

Kentrolite

Kittatinnyite**Kolicite**

Köttigite

Kraisslite

Kuttnahorite

Larsenite

Laumontite

Lavendulan

Lawsonbauerite

Lead

Legrandite

Lennilenaepite

Leucophoenicite

Linarite

Liroconite

Lizardite

Löllingite

Loseyite

Magnesiophornblende

Magnesoriebeckite

Magnesio**chlorophoenicite**

Magnetite

Magnussonite

Malachite

Manganberzeliite

Manganesehörnesite

Manganhumite

Manganite

Manganocummingtonite

Manganosite

Marcasite

Margarite

Margarosanite

Marialite

Marsturite

Mcallisterite

Mcgovernite

Meionite

Meta-ankoleite

Metalodèveite

Metazeunerite

Microcline

Miguelromeroite

Mimetite

Minchillite

Molybdenite

Monazite-(Ce)

Monohydrocalcite

Mooreite

Muscovite

Nasonite

Natrolite

Nelenite

Neotocite

Newberyite

Niahite

Nickeline

Nontronite

Norbergite

Ogdensburgite

Ojuelaite

Opal

Orthoclase

Orthospierite

Otavite

Parabrandtite

Paragonite

Parammelsbergite

Pararealgar

Parasymplesite

Pargasite

Pectolite

Pennantite

Petedunnite

Pharmacolite

Pharmacosiderite

Phlogopite

Picropharmacolite

Piemontite

Powellite

Prehnite

Pumpellyite-(Mg)

Pyrite

Pyroaurite

Pyrobelonite

Pyrochroite

Pyrophanite

Pyrosmalite-(Mn)

Pyroxferroite

Pyroxmangite

Pyrrhotite

Quartz

Rammelsbergite

Realgar

Retzian-(La)

Retzian-(Nd)

Rhodochrosite

Rhodonite

Richterite

Roebblingite	Sussexite	Yeatmanite
Roméite	Synadelphite	Yukonite
Rosasite	Synchysite-(Ce)	
Rouaite		Zincite
Roweite	Talc	Zinkenite
Rutile	Tennantite	Zircon
	Tephroite	Znucalite
Safflorite	Tetrahedrite	
Samfowlerite	Thomsonite-Ca	
Sarkinite	Thorite	
Sauconite	Thortveitite	
Schallerite	Thorutite	
Scheelite	Tilasite	
Schorl	Titanite	
Sciarite	Todorokite	
Scorodite	Torreyite	
Seligmannite	Tremolite	
Sepiolite	Turneaureite	
Serpierite		
Siderite	Uraninite	
Sillimanite	Uranophane-alpha	
Silver	Uranospinite	
Sjögrenite	Uvite	
Skutterudite		
Smithsonite	Vesuvianite	
Sonolite		
Spangolite	Wallkilldellite	
Spessartine	Wawayandaite	
Sphalerite	Wendwilsonite	
Spinel	Willemseite, variety pimelite	
Starkeyite	Willemite	
Sterlinghillite	Wollastonite	
Stibnite	Woodruffite	
Stilbite-Ca	Wulfenite	
Stilbite-Na	Wurtzite	
Stilpnomelane		
Strontianite	Xonotlite	
Sulfur (IMA = sulphur)		

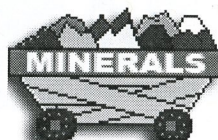


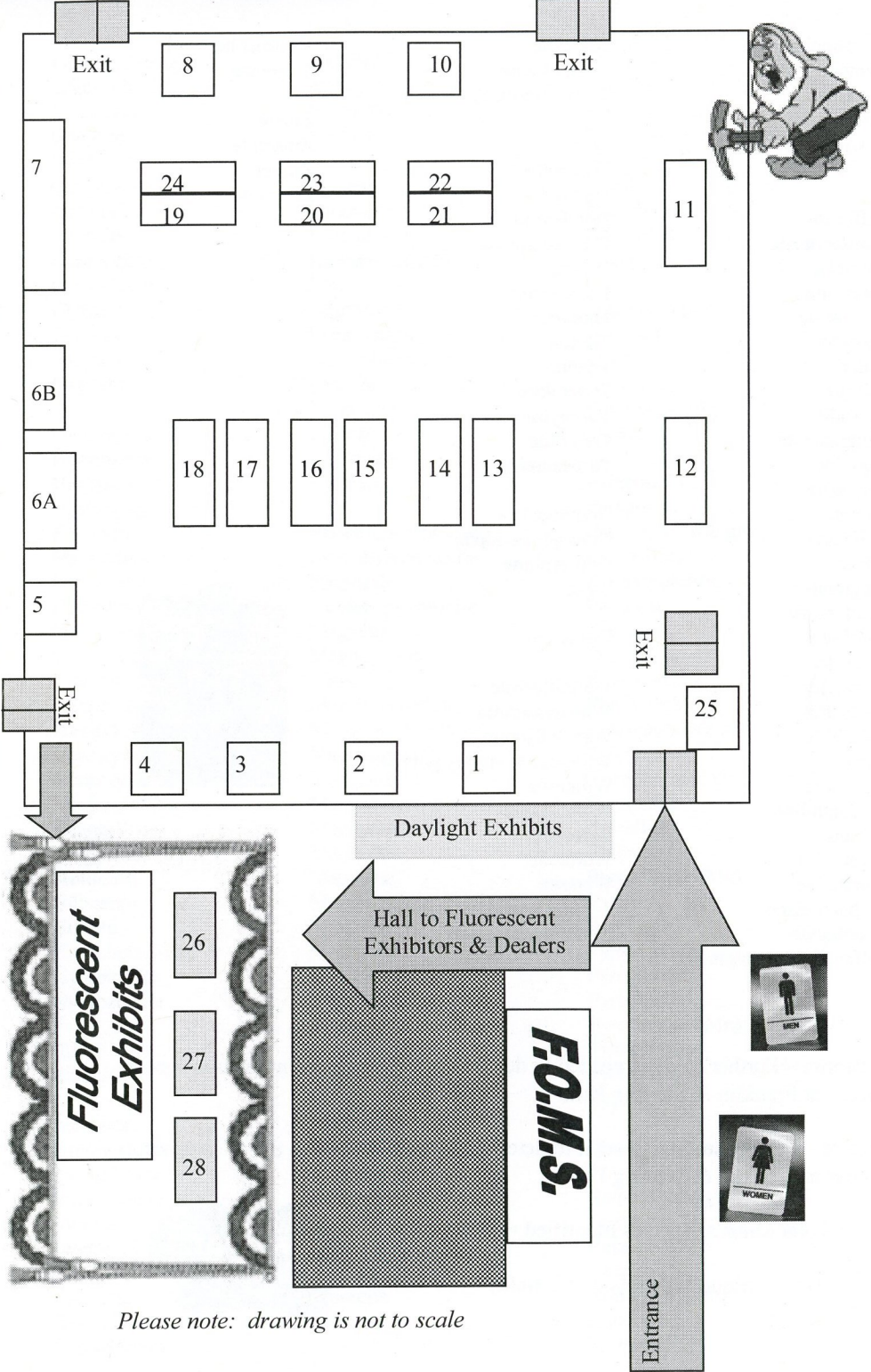
*Biotite – Further study is needed to determine which species in the mica group occur at Franklin & Sterling Hill.

*Illite – Further study is needed to determine which species in the mica group occur at Franklin & Sterling Hill.

Total Mineral Species Identified = 359

Total Unique Minerals = 19 (**bold**)





Please note: drawing is not to scale

Booth #	Dealer's Name	Booth #	Dealer's Name
1	Nature's Window	14	Amazon Imports
2	Alan's Quality Minerals	15	Gary's Gem Garden
3	Exotic Minerals	16	Gem Art Studio
4	Deen Gems	17	Village Silversmith
5	China South Seas Inc.	18	Village Silversmith
6A	The Sacred Stone	19	Raj Minerals Inc.
6B	The Kyanite King	20	Crystal Dawn Gems
7	Argentum Sales	21	Momma Wanna Jewelry
8	Exotic Minerals	22	SilverRocks Inc.
9	Fowlers Wire Wrapping	23	Jessie's Gems
10	The Mineral Cabinet	24	Geosand
11	Stonetrust	25	P&E Solutions
12	Eccentricities	26	E-bay Sales
13	Land of Crystal	27	Gorignak
		28	Fluorescence

Franklin – Sterling Show Fluorescent Exhibits

Richard Bostwick - Exhibit Coordinator

1. Franklin Mineral Museum, *Rocks "Glowhounds" Love*
2. Earl Verbeek, *Jablonski Fever*
3. Steven Kuitems, *Franklin Delights*
4. Steven Kuitems, *More Franklin Delights*
5. Andrew K. Mackey, *Mine Finds*
6. Richard Keller, *Pretty Little Pocketites*
7. Denis DeAngelis, *Shortwave Sunshine*
8. Chris Luzier, *Franklin and Sterling Hill Sphalerites*
9. Howie Green, *Where in the World is Wollastonite?*
10. Harold (Pat) Hintz, *Modern Art*

Daylight Exhibits

Steven Phillips—Exhibit Coordinator

1. Dick Hauck, *Ribbon Ore*
2. Dick Hauck, *Agate*
3. Franklin Mineral Museum, *Franklin-Sterling Hill Garnets*
4. Mark Mayfield, *Franklin & Ogdensburg Minerals*
5. Steven Kuitems, *Franklin Classics*
6. Phamily Minerals LLC, *Willemite*
7. Brandon Hirsch, *Fluorescent Minerals & their Activators*

Fluorescent Minerals of Franklin and Sterling Hill, N.J.

A 2014 CHECK-LIST BASED ON OBSERVATIONS OF CONFIRMED SPECIMENS

By Richard Bostwick, with the assistance of

Earl Verbeek, Mark Boyer, Paul Shizume, Steven Kuitems, Richard Keller, Paul Carr and others.

FL = fluoresces; PH = phosphoresces; SW=shortwave ultraviolet radiation (UVC);
MW=midwave ultraviolet radiation (UVB); LW=longwave ultraviolet radiation (UVA).

The Franklin-Sterling Hill area has more fluorescent minerals than anywhere else on earth, and nothing is simple at this locality. This check-list is not a treatise, so the descriptions are condensed and simplified. The most common fluorescent response is listed first. The UV wavelength or wavelengths listed for a mineral are those under which its fluorescence is brightest; "FL red SW" means that the mineral typically fluoresces red in shortwave UV, but may fluoresce less brightly under MW and/or LW. (Uncommon but significant fluorescences are in parentheses.) Subtleties such as fluorescent hue, saturation, and intensity are usually not mentioned.

For assistance in identification, the minerals are listed by assemblage, in brackets: [FM] = Franklin Marble. [W] = weathering minerals. [O] = ore minerals. [V] = vein minerals. [C] = calcisilicates. [AC] = altered calcisilicates. Not all local minerals fit neatly into this scheme. {FO} = Franklin only; {SHO} = Sterling Hill only.

CAVEAT: while mineral fluorescence can be a powerful tool for mineral identification, it should be used in conjunction with other identification techniques. Misidentifications based on fluorescence alone are common.

Albite: FL red SW [C]

Anorthite: FL pale yellow SW; rare, associated with corundum [FM]

Apatite-(CaF): FL bright to weak orange, "peach" SW [O,C], FL blue MW [FM]

Apophyllite-(KF): FL, PH weak white SW [V]

Apophyllite-(KOH): FL, PH weak white SW; rare [V] {FO}

Aragonite: FL, PH white/"cream" LW (FL green SW); [W]

Axinite-(Mn): FL orange-red to red SW, PH very weak [AC,V]

Barite: FL bright "cream" SW (FL yellow SW, MW, LW, can also PH) [O,C,V]

Barylite: FL violet SW, best seen under iron arc; rare [AC] {FO}

Bassanite: FL, PH violet SW; rare. [V] {SHO}

Bustamite: FL cherry red LW. [C, AC]

Cahnite: FL, PH "cream" SW. [V] {FO}

Calcite: typically FL bright orange-red SW with brief red-orange PH (also FL white, "cream," yellow, orange, green, red, cherry red, blue, violet; can change FL with UV wavelength; often PH). [all assemblages]

Canavesite: FL, PH violet LW; rare [V] {SHO}

Celestine: FL, PH "cream" LW (FL violet SW) [V]

Cerussite: FL yellow LW [W]

Chabazite: FL green SW [V]

Charlesite: FL pale blue SW, usually coated with cream-FL gypsum [AC] {FO}

Chondrodite: FL yellow to orange-yellow to yellow-orange SW [FM]

Chrysotile-2m: FL "tan" (orange-yellow) SW [V] {FO}

Clinohedrite: FL, PH bright orange SW [V] {FO}

Corundum: FL cherry-red LW [FM]

Cuspidine: FL bright orange-yellow SW with brief orange-red PH; MW FL has violet tint. [AC] {FO}

Datolite: FL "cream" SW [AC,V] {FO}

Diopside: FL blue SW, FL pale yellow MW, LW [FM]

Dolomite: FL, PH red SW (in "crazy calcite") [O]

Dundasite: FL pale yellow SW, MW, LW; rare [W] {SHO}

Dypingite: FL, PH blue SW, MW, LW [V]

Epsomite: FL "cream" LW, violet MW [W]

Esperite: FL bright lemon-yellow SW, weak PH [C] {FO}

Fluorborite: FL "cream" SW [FM, V]

Fluorite: typically FL, PH blue-green SW, MW, LW (can FL, PH white, pale yellow, greenish-yellow, green, violet-blue, blue-violet). [most assemblages]

Genthelvite: FL green LW, SW, MW, (rarely FL yellow to orange MW), [C, V]

Greenockite: FL cherry-red LW; rare [W] {FO}

Grossular: FL cherry-red LW; very rare [C] {FO}

Gypsum: FL, PH white, pale yellow, blue SW, MW, LW [V,W]
Guerinite: FL, PH pale yellow SW, MW, LW; rare [W] {SHO}
Hardystonite: FL violet to violet-blue SW, MW, LW [C] {FO}
Hedyphane: FL “tan,” “cream” SW, rarely bright orange SW [V] {FO}
Hemimorphite: FL, PH white to pale yellow SW, MW, LW, rarely FL green, blue [W]
Hexahydrite: FL, PH white SW, MW, LW [W] {SH}
Hodgkinsonite: FL cherry-red MW/LW [V]
Humite: FL pale yellow SW; rare [FM]
Hydrocalcite: FL “cream” LW; rare [V] {FO}
Hydrozincite: FL bright blue SW (can PH pale yellow, also FL yellow MW, LW) [W]
Johnbaumite: FL bright to weak orange SW [C, V]
Junitoite: FL pale yellow LW; rare [V] {FO}
Magnesiohornblende: FL greenish-blue SW [FM]
Margarite: FL weak white (“gray”) SW, MW, LW [FM]
Margarosanite: FL bright blue, red SW; red, orange MW; weak red, orange LW [AC] {FO}
Marialite: FL orange SW, pink LW; rare [FM]
Mcallisterite: FL “cream” SW [W] {SHO}
Meionite: FL pinkish red, orange-yellow SW, MW; FL orange-yellow LW [FM,C]
Meta-ankoleite: FL green SW; rare [V] {SHO}
Metalodèveite: FL green SW, rare [V] {SHO}
Microcline: FL blue, red SW [C]
Minehillite: FL violet-blue MW, weak violet SW, weak pale yellow LW [AC] {FO}
Monohydrocalcite: FL green SW, PH white [W] {SHO}
Nasonite: FL pale yellow SW, MW [AC] {FO}
Newberyite: FL “cream” SW, rare [W] {SHO}
Norbergite: FL bright to weak yellow SW, less bright MW [FM]
Pargasite: FL greenish-blue SW [FM]
Pectolite: FL, PH orange SW, less bright MW [AC] {FO}
Pharmacolite: FL, PH white SW, MW, LW; rare [W] {SHO}
Phlogopite: FL yellow SW [FM]
Picropharmacolite: FL, PH white LW, rare [W] {SHO}
Powellite: FL yellow SW, MW [C,W]
Prehnite: FL variable orangeish pink SW [AC] {FO}
Quartz: FL yellow, pale orange SW, MW; FL green SW [V]
Rhodonite: FL weak deep red SW, very rare [V] {FO}
Roebingite: FL red SW with brief red-orange PH [AC] {FO}
Samfowlerite: FL weak red SW; rare [V] {FO}
Scheelite: FL orange-yellow, pale yellow SW, MW, (blue SW) [C,V,FM]
Smithsonite: FL, PH pale yellow SW, MW, LW; rare [V,W]
Sphalerite: FL, PH orange, blue, orange-yellow, yellow-orange, green LW, MW, SW [O, C, V]
Spinel: FL cherry red LW [FM]
Starkeyite: FL, PH white SW, MW, LW, rare [W] {SHO}
Strontianite: FL violet SW; rare [V] {FO}
Talc: FL yellow SW, MW, LW [V,O]
Thomsonite: FL pale yellow SW; rare [AC] {FO}
Tilasite: FL yellow SW; rare [V] {SHO}
Titanite: FL yellow-orange SW [FM]
Tremolite: FL blue SW (yellow LW) [FM]
Turneaureite: FL bright orange SW [C] {FO}
Uranospinitite: FL green SW; rare [W] {SHO}
Uvite: FL orange-yellow SW [FM]
Willemite: typically FL bright yellowish green SW, with occasional vivid PH; also can FL green MW, LW. More rarely FL, PH yellow, greenish yellow, orange-yellow, and (!) pale blue. [O, C, AC, V, W]
Wollastonite: FL bright to moderate orange, yellow-orange, orange-yellow, yellow, best under SW; PH is often “redder” than FL [C] [AC]
Xonotlite: FL, PH violet SW, MW, LW [AC] {FO}
Zincite: FL yellow LW, MW, SW [O,V]
Zircon: FL orange SW, MW [C, FM]
Znucalite: FL green SW, MW [W] {SHO}

Mineral nomenclature in this fluorescent mineral check-list conforms to the 2014 list of local mineral species, compiled by the Mineral List Committee and included in this program. Comments about the fluorescent mineral check-list can be e-mailed to rbostwick@att.net.



The Franklin Mineral Museum board of trustees would like to thank everyone who helped produce this show for the 58th year. This is our once-a-year fundraiser that helps support the museum and continue our work.



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SATURDAY 9/26/15
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59TH ANNUAL
FRANKLIN-STERLING
GEM & MINERAL SHOW



Franklin Mineral Museum Membership

Please join us. The museum was established in 1964 dedicating itself to preserving and maintaining the mineralogy and mining heritage of the local area. In providing educational and scientific research, the museum continues this today. With your help, the museum will continue for future generations.

You can make a difference.

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Memberships renew on March 31 of every year

Yearly memberships include the following:

1. Personalized membership card
2. Museum newsletter
3. 10% discount in the gift shop, excludes consignment and monographs
4. Discounts on children's birthday parties
5. A special week of holiday shopping discounts, last week of November

Exhibit/collecting and guest passes vary with each membership type as do membership benefits. Call the museum (973-827-3481) or check out the website for details.

Collecting passes are not valid for special collecting events

Web: www.franklinmineralmuseum.com • Email: mineralinfo@earthlink.net



Please complete this form and submit with payment

**Franklin Mineral Museum,
32 Evans Street, Franklin, NJ
07416**

Please print clearly

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Amount Enclosed _____ CK or CC (please circle)

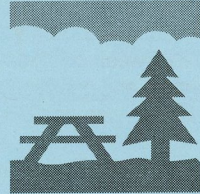
FRANKLIN MINERAL MUSEUM



The museum features rare and unusual minerals, world-famous fluorescent minerals, fossils, artifacts, a mine replica and hands-on rock collecting on a 3.5 acre mine dump.

Gift
Shop

Picnic
Area



Please check out our website:

www.franklinmineralmuseum.com.

Group Rates (Class trips etc.) Book Early!!!

Museum Hours:

March*- November

Sat: 10:00 am - 5:00 pm

Sun: 11:00 am - 5:00 pm

Mon - Fri: 10:00 am - 4:00 pm

(March * weekdays by appointment only)

**The Franklin Mineral Museum
32 Evans Street
Franklin, New Jersey 07416
973-827-3481**



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