

Mineral Day at the 1939/40 New York World's Fair

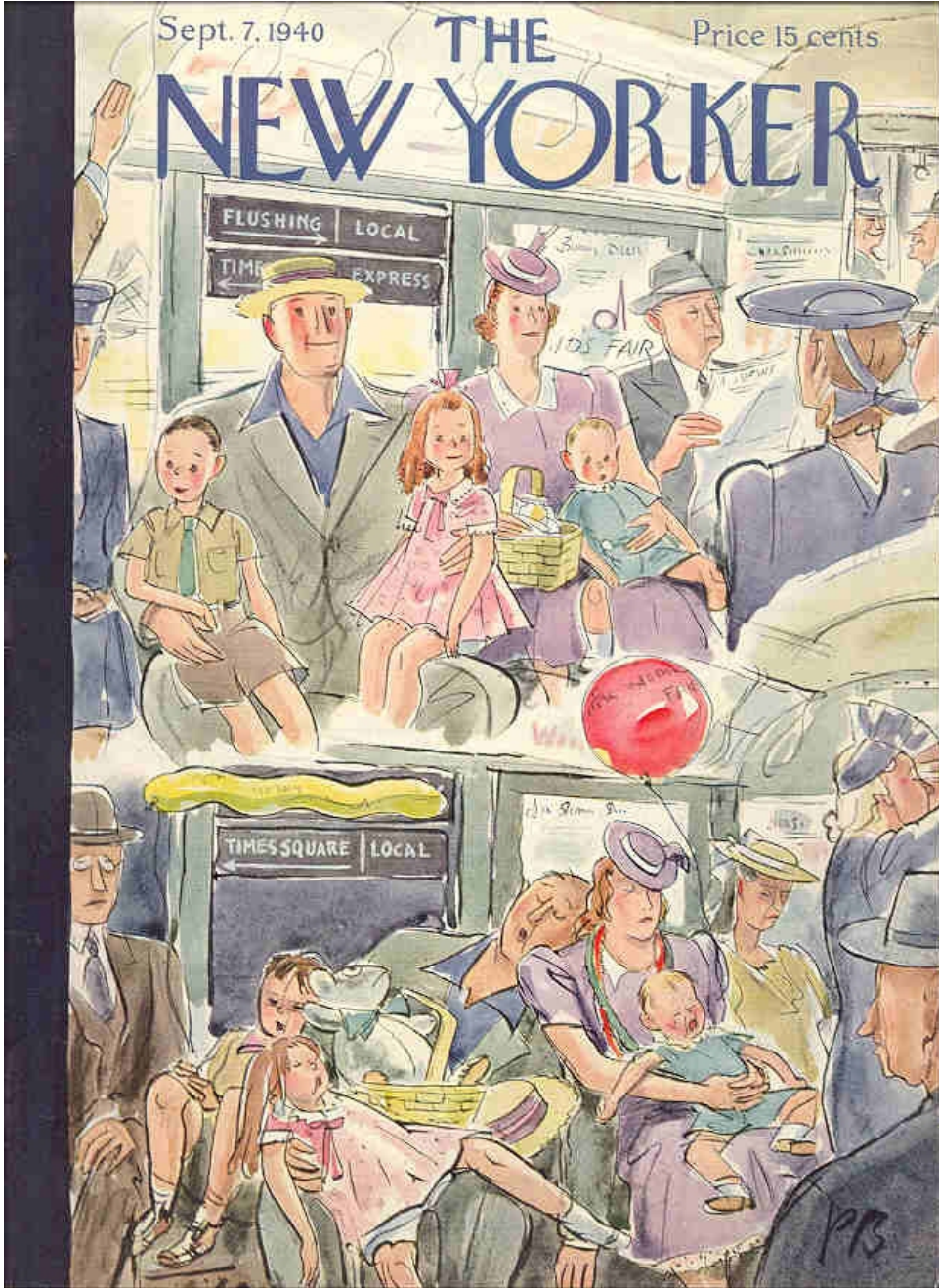
By Mitchell Portnoy



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**Mineral Day
at the 1939/40
New York World's Fair
By Mitchell Portnoy**

Submission for the

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of the
New York Mineralogical Club**



Mineral Day at the 1939/40 New York World's Fair

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Introduction

In June of 1998, Richard Blackman, a great friend of mine and a fellow member of the New York Mineralogical Club, gave me a nearly complete set of *Rocks and Minerals*. He knew how much I enjoy mineral collecting history as well as finding interesting past information about the New York Club. As I worked my way through several decades worth of back issues, I was surprised to see the following announcement on the cover of the February 1940 issue:

MINERAL DAY AT THE WORLD'S FAIR

(New York City)

MON., JUNE 17, 1940

Specially set apart for you and all persons interested in mineralogy

PLAN TO BE THERE

Since I have always had a great interest in anything dealing with my hometown, minerals and gems, as well as information pertaining to the 1939/40 NYC World's Fair, my curiosity was aroused. Multiple questions about this day flooded through my mind. This formed the impetus to write this paper and I began my search for information and collectibles relating to this event.



Bird's-eye view of the Fair scanned from a contemporary postcard.

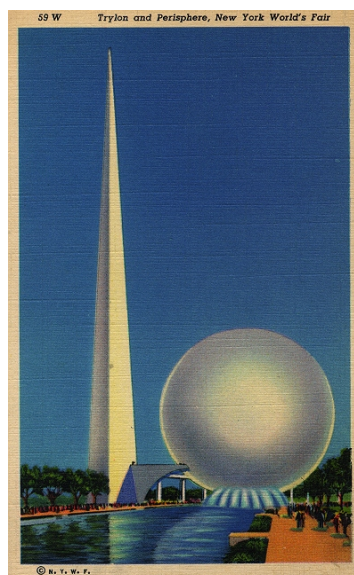
Overview: The 1939/1940 New York World's Fair¹

On April 1, 1939, the New York World's Fair, “Building the World of Tomorrow,” opened on what was once a marshy wasteland and landfill in Flushing Meadows, Queens, New York City. President Franklin Roosevelt formally dedicated the exposition in a speech to 600,000 listeners in a chilly spring breeze. During his short address, the President served notice that the nations of the western hemisphere were “united in a desire to encourage peace and good will among all nations.” From its inception to its closing ceremonies, the Fair promoted one of the tenets of 20th century modernism — the unqualified belief in science and technology as a means to economic prosperity and personal freedom. That would create a world of unlimited goods and services maintained by peace and consumerism. Wedged between the Great Depression — the greatest economic disaster in American history — and the growing international tension that would result in World War II, The World of Tomorrow was a much-needed antidote to the Depression and confusion of the times. It provided the one saving grace which all of America needed — hope.

Anything directly dealing with the Depression and (later) the War was virtually banned from the Fair. Contemporary radio news broadcasts were forbidden on any internal PA systems — only music or materials coming from the Fair’s own radio station were allowed!

This focus on pleasant fantasy in place of the ugly truth of the times was by no means restricted to the Fair and its creators. The two most popular movies of the time — “Gone with the Wind” (playing at the Astor and Little Carnegie movie theaters in Manhattan on June 17, 1940²) and “The Wizard of Oz” — are bursting with historical, psychological and political fantasy. The theme song of this Fair should surely have been “Happy Days are Here Again.”³ The screams of Dachau and the sounds of the breaking windows of *Kristallnacht* were unheard at this Fair.

In the darkest days of the Depression, the Fair’s developers had dreamed of orderly, hygienic cities and houses. They looked ahead to safe, fast travel on luxurious streamlined aircraft, trains, buses, ships and automobiles. Unlike modern architects, whose utopias rarely develop beyond the drawing stage, the first American industrial designers were able to build *their* model city, the 1939 New York World's Fair!⁴ The Fair was the architectural triumph of Art Deco and international modernism.



The Trylon and Perisphere, the Fair’s well-known emblem.

The main symbols of the Fair were the Trylon and Perisphere (see illustration on previous page). The needle-like Trylon rose 620 feet and was connected via bridge to the 18-story Perisphere⁵. Inside was *Democracity*, a model of a perfect world with a thriving central core and pleasant suburbs for nuclear families. The Democracity was high art for model making — it took more than 100 people to keep the exhibit running. The architectural duo appeared on virtually every object connected with the Fair — perhaps 25,000 in total⁶ — including all souvenirs, programs, books, badges, pennants, spoons, plates, pins, key chains, figurines, stamps, etc. The architects were Harrison and Fouilhoux with Henry Dreyfus as the designer. An interesting second-hand connection to the New York Mineralogical Club exists here — John Betts, a former club president (1995), worked for Henry Dreyfus Associates until January 2001.

Unforeseen economic difficulties ultimately hit the Fair hard. After September 1, 1939, the day Nazi Germany invaded Poland, formally beginning World War II, tourism and government funding from Europe virtually disappeared. International attendance collapsed. Many of the international pavilions — Czechoslovakia, Denmark, Netherlands, Norway, Poland to name only a few — closed or nearly closed, relying instead on local interested ethnic communities to keep their doors open.

Due to this unfortunate timing, the investors ultimately lost two-thirds of their investment. The cost to build and run the Fair over the two years was \$155 million but only 44 million visitors paid to get in (adult admission was 75¢ (50¢ in 1940) and under 12 admission was 25¢). Do the math!⁷



An example of a ticket stub from the Fair.

In an attempt to combat this attendance shortfall, the Fair's promoters came upon the idea to increase U.S. attendance by putting a thematic focus on individual days at the Fair. Nearly every day focused on a particular theme — Boy Scouts Day, Girl Scouts Day, Superman Day, and Model Boat Day to name only a few. There was a procedure developed to allow external organizations to secure a day for their particular interest. Thus, **Mineral Day** at the Fair was born.

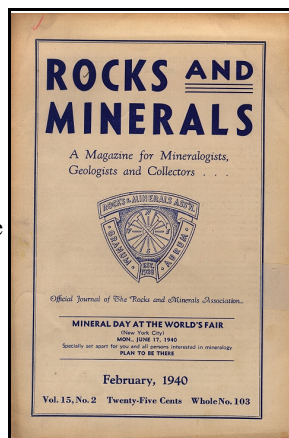
Mineral Day: The Beginnings and Preparations

The first notice of Mineral Day at the Fair was announced with the following enthusiastic, if flamboyant language⁸:

Through the indefatigable activity and enterprise of Mr. Joseph D'Agostino with the Plainfield Mineralogical Society behind him and in the interests of all mineralogists, he has secured from the officials of the World's Fair, the setting aside of June 17, 1940, as Mineralogical (sic) Day. Nothing else is to cast a shadow or dim the limelight that will be turned upon minerals on June 17th. Everything will center upon them. Unusual interest has already been aroused among Governors of the States of the Union and officials of foreign countries. State and national displays promise to be more extensive and prominently displayed than last year⁹. Invitations are to be issued through magazines, newspapers and by radio to all mineralogists, geologists, nature lovers and others who may wish for the first time to enter the precincts of the mineral kingdom.

Mark the calendar or note the date in your diary as an important engagement to be kept. And be there bright and early and stay until the Fair closes on June 17th that you may miss nothing of importance.

Cover of the *Rocks & Minerals* issue in which the first notice of Mineral Day was given. This same notice appeared on all subsequent issue covers through June 1940.



This provoked an enthusiastic reaction in the mineral community. As noted in *Rocks and Minerals*:

Much interest has been awakened by our announcement in the February 1940 issue . . . Many members are expressing a desire that it may be possible for them to be present at the Mineral Day at the Fair on June 17th realizing that special efforts are being made to make the mineral exhibits from states and nations of outstanding importance.¹⁰

A National Advisory Committee of the Mineral Day at the World's Fair was formed.¹¹ The first meeting was held on Wednesday, February 21, 1940, at 3:00 p.m. in the offices of Joseph D'Agostino in the RCA (now GE) Building, Radio City, Rockefeller Center, New York City. The committee (with only seven members present) discussed the preliminary plans and policies for the event. The meeting adjourned at 4:45 p.m. to meet again at the discretion of the Chairman (Joseph D'Agostino).

The National Advisory Committee, a diverse and esteemed group of professionals, consisted of:

John G. Baragwanath, American Institute of Mining and Metallurgical Engineers;
Dr. H.C. Drake, Editor, Mineralogist Magazine
Joseph D'Agostino, Secretary, Plainfield Mineralogical Society
A.L. Eaton, The Desert Magazine
M.L. Ehrmann, Mineral Dealer
Dr. William F. Foshag, President, Mineralogical Society of America
Samuel Gordon, Academy of Natural Sciences, Philadelphia
Dr. Alfred C. Hawkins, U.S. Department of Agriculture
James L. Head, Mining Club
Dr. Walter F. Hunt, Editor, The American Mineralogist
Dr. Meredith E. Johnson, State Geologist of New Jersey
Dr. Paul Kerr, Secretary, Mineralogical Society of America
Dr. David H. Newland, State Geologist of New York
Dr. H.C. Parmalee, Editor, Engineering & Mining Journal
Dr. Frederick H. Pough, American Museum of Natural History, New York City
M.F. Reed, Northwest Federation of Mineral Societies
C.D. Woodhouse, California Federation of Mineral Societies
T.A. Wright, President, Plainfield Mineralogical Society
James S. Wroth, Mining & Metallurgical Society of America
Peter Zodac, Editor, Rocks and Minerals

The second meeting of the Advisory Committee was held on March 27 at the same location.¹² The Committee discussed plans for the day's program and the individuals who would be in charge. There was much optimism expressed:

*The big event is creating considerable interest throughout the country judging from the large number of letters pouring into the offices of Rocks and Minerals. Collectors from everywhere are planning to attend and they are very enthusiastic about it, too. From all indications, the Mineral Day at the World's Fair will be the greatest mineralogical show ever staged on earth.*¹³

It was decided that the day's mission was to be "a noncommercial event intended only for the purpose of stimulating interest in mineralogy and allied earth sciences."¹⁴



The issuance and sale of gummed labels to raise funds and promote the Fair, a specific event, booth or activity was a common practice at the time. Hundreds of these items were issued for the Fair's numerous attractions and are much sought-after collectibles today. These stamps were meant to be placed on letters and other private correspondence as a form of advertising. (In the days before e-mail, metered mail and cheap telephone rates, this was an effective course of action.) One needs only think of the modern-day sale and use of Christmas Seals as a more familiar example.¹⁵

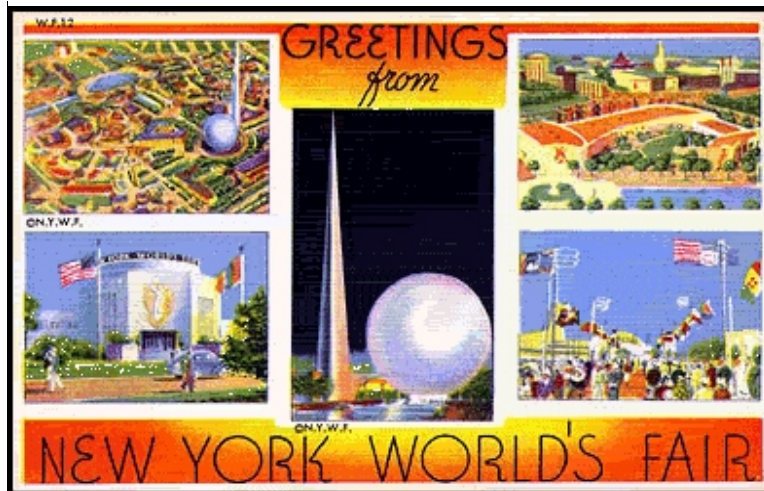
Green and yellow Mineral Day stamps were issued by the Committee (see illustration, left).¹⁶ They were sold for 1¢ each and a large number of these stamps were sold by Joseph D'Agostino.

Lastly, at this second meeting five additional members were named to the National Advisory Committee:

Dr. H. R. Aldrich, Geological Society of America
Dr. H. A. Beuhler, State Geologist of Missouri
Dr. Burnham S. Colburn, Southern Appalachian Mineral Society
Dr. M.M. Leighton, State Geologist of Illinois
Capt. Garland Peyton, Director, Division of Mines, Mining and Geology, Georgia

DO NOT FORGET

that Monday, June 17th, is your day at the New York World's Fair.
This will be no small event for it is expected that many thousands of mineralogists and those interested in minerals will be there that day. Special displays of minerals and of gems and jewels will feature this occasion.¹⁷

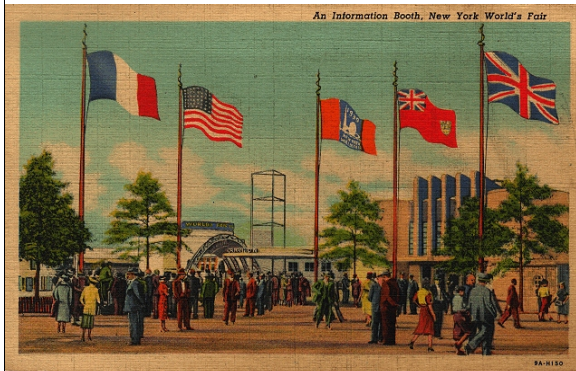


June 17, 1940: Mineral Day at the Fair

U.S. mineral enthusiasts may well have been eagerly looking forward to attending Mineral Day at the Fair, but people in Europe — where the War had been raging for nearly ten months — surely had other things on their mind as did most Americans. This was the day France all but surrendered to the Nazis invaders and an “armistice” was about to be signed.¹⁸

Nevertheless, this Monday in June arrived and the announced event took place. What follows is a schedule and description of the many components of Mineral Day.

Activities began at 10:00 a.m., the standard daily Fair opening time.



One of many entrance gates at the Fair.

A man stationed at every entrance gate to the Fair gave to each interested visitor a copy of the official program for Mineral Day and a questionnaire to be filled out and deposited into a nearby ballot box — a stub (with an identifying number) was to be retained. This questionnaire entitled the attendee to compete for prizes which were later given out — fifteen \$5.00 mineral specimens.¹⁹ (Not bad for 1940!)²⁰

Registration of the members of the Mineralogical Society of America in Assembly was held (in the Hall of Metals?).

The Jonker Diamond and other stones went on display at this time in the Hall of Metals. This was reported in the *New York Times*:

*An important inanimate visitor to the fair was the largest of the 12 stones cut from the famous Jonker Diamond. Weighing at 123.35 carats, the gem — priced at \$1,000,000 — was shown . . . in a special electric safe with an unshatterable form.*²¹



The Hall of Metals.

The original uncut diamond was 726 carats and found near Pretoria, South Africa. Its cutter and owner was Harry Winston who would in later years give the Hope Diamond to the Smithsonian.

Focus: The Jonker Diamond²²

A rounded crystal with a cleavage face that weighed 726 carats when it was picked up by a hitherto unlucky digger, Jacobus Jonker, in the alluvial diggings of Elandsfontein, near Pretoria, in 1934. It is considered by many who have studied it to be the finest gem diamond ever discovered.

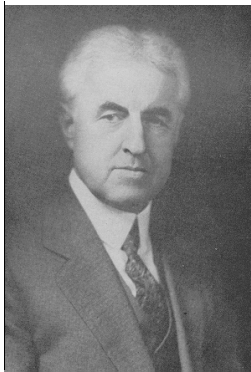
The Diamond Corporation bought it for £70,000 and it was eventually sold to Mr. Harry Winston of New York, for a figure reported to be \$700,000. He had it cut into twelve perfect gems, all being emerald-cuts except for one which was marquise, and totaled 358 carats. The largest is an emerald-cut with 58 facets, which at first weighed 142.90 carats, but was subsequently recut to 125.65 carats. King Farouk of Egypt bought it, and at the time it was reputed to be valued at \$1,000,000 U.S. At the beginning of his exile in 1952, he sold it to the Himalayan state of Nepal. It is now believed to be privately owned in Japan.

The fourth largest polished stone was sold in 1975 to a South American collector for £276,609.

(For more detailed information and a picture of Shirley Temple holding this diamond, see the photocopy in the Appendix of a page copied from the GIA's gem course chapter relating to diamonds.)

During the observance of Mineral Day a letter from former President Hoover was read declaring that "minerals have risen to an importance in our national economy second only to food products."²³ It should be remembered that Hoover had been a geologist and mining engineer by degree and profession before entering into politics. He and his wife, Lou, had translated a 16th century Latin text on mining, *De Re Metallica* (by Georgius Agricola, 1494-1557). Their work earned them an award from the Mining and Metallurgy Association.

At 1:00 p.m. an address was given by Dr. Frederick H. Pough in the Hall of Metals.



James Manchester

At 7:00 p.m. there was a banquet/dinner held in Washington Hall (it had a restaurant). Presumably this was when James G. Manchester delivered his address "Fifty Years of Mineral Collecting from Maine to Florida."²⁴ Manchester was one of America's most noted mineral collectors. At the time he was a New York Mineralogical Club member and author of *Minerals of New York City and Its Environs*.²⁵ In his speech, he related many of his personal collecting experiences and anecdotes about famous contemporary mineralogists he knew. He was something of an amateur poet and there is a sense of that graceful and colorful wordsmithing talent throughout the talk. Given the historical importance of Manchester, I have reproduced this address in full in the Appendix.

The fair closed at 10:00 p.m., as usual and Mineral Day at the Fair ended.

Other Mineral, Gem, Jewelry or Mining Exhibits at the Fair

It should come as no surprise that minerals, metals, jewelry and gems already had a presence at the Fair, even before Mineral Day. Minerals and gemstones are highly aesthetic besides being of economic importance. They make great displays and can certainly put a sparkle on the face of any State or Nation!

There was a precedent for a mineralogical focus at a world's fair — the enormous Universal Exposition of 1900 in Paris. According to Wendell Wilson (who based much of his information on the contemporary writings of George Kunz):

*It drew mineral exhibits from around the world on a scale unprecedented. It attracted over 50 million visitors. The Paris World's Fair was arguably the greatest single mineral event in history.*²⁶

The following section of this paper contains evidence of additional exhibitions or activities that occurred during the Fair itself relevant to the topic of mineralogy. In addition, flyers that were distributed at various domestic and international pavilions, containing information about mining, famous jewels/gemstones, mineralogical history, etc., are presented and illustrated. This list is by no means complete and more research will follow— there seems not to have been a George Kunz-like writer around at the time to provide a comprehensive mineralogical overview of the 1939/40 New York Fair.

There were other related Fair “Days” including **Gold & Silver Day** and **Diamond Day**.

The **Hall of Metals** (see picture on p.11) was erected by the Fair Corporation to house exhibits relating to mining and fabrication of various metals used in modern industry. One of its most popular and educational exhibits described the mining and refining of copper.²⁷

Copper & Brass Industry Exhibit in the Metals Building

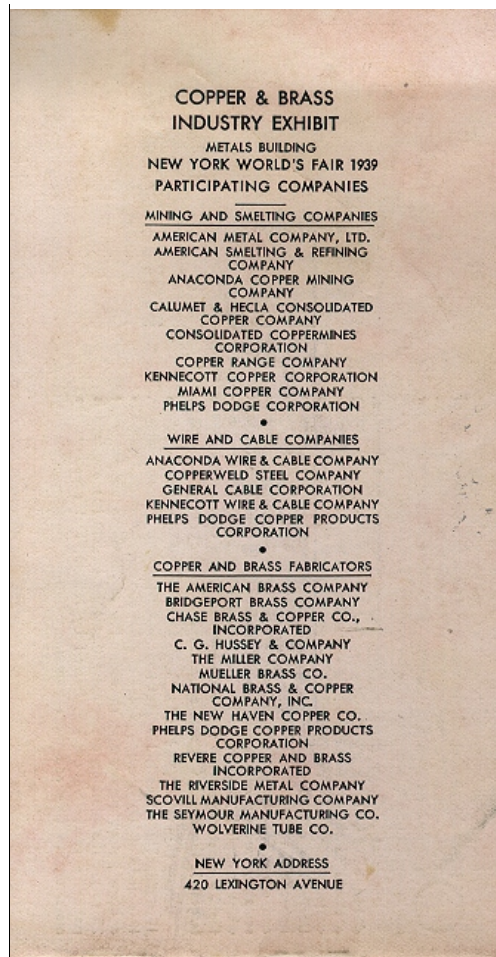


The Copper & Brass Industry Exhibit was a popular one at the fair. This 3" x 6" booklet was distributed free to all visitors. As stated in the booklet:

We hope you enjoy your trip through our exhibit, and it is a pleasure for us to present this little souvenir booklet which describes the history of Copper! Man's most useful metal—Old as Time, Modern as Tomorrow.

The booklet contains information about the history of copper, Renaissance copper artistry, the early copper industry and its later importance for the electric power industry, mining, smelting, refining, sheet rolling, and processing. Finally, it discusses copper's role in architecture and in the structure of the Statue of Liberty, a relevant topic for a NYC world's fair.

As you can see from this scan of the back of the booklet, virtually all of America's important copper industry companies participated in this exhibit:



Parts of this exhibit ultimately found their way into the collection of the American Museum of Natural History. In a memo from Fred Pough²⁸:

From the Copper and Brass Industry Exhibits we have received the model of the copper atom together with explanatory labels; plexiglass protective sheets and a sound apparatus, to explain the workings of the model, known as a Robophone.

In addition, we received an open cut mine model and a second model showing the workings of a shaft and stopes. Together with this display were a number of mine cars and electrical equipment parts.

And lastly, during a ceremony held in the Hall of Metals, examples of various metals were put into a time capsule. (This will be opened in 5,000 years!)

House of Jewels

The House of Jewels, located on Constitution Mall, was a small pink building. Inside was a display of a fabulous fortune in jewels—fourteen million in all.²⁹ The famous Tiffany Diamond, then the largest canary diamond in the world was there; also a pearl said to be the largest then in existence; wonderful diamond, emerald, ruby and sapphire necklaces; star stones of great size and beauty; new jewel designs in two- and three-tone gold, all exquisitely mounted by the world's greatest jewelers.

Eight million dollars were represented in diamonds alone.³⁰ The diamond exhibit, in the standing amphitheater at one end of the building, was the largest collection of rough and polished gems ever shown to the public at one time. It was a dramatic, multimedia exhibit:

As you stand in awe before so much wealth and beauty, there is soft music, the lights are dimmed and an unseen speaker tells you 'The Story of Diamonds', illustrating this talk by spotlighting little piles of diamond crystals, or a beautifully cut gem stone. As the talk nears its close, the central figure is lighted, a magnificent spiralling (sic) tower fifteen feet high, surmounted by a diamond studded globe showing the diamond mining centers of the five continents.³¹

This item is a single folded sheet distributed in the building. The House of Jewels was sponsored by Tiffany & Co., Cartier, Black Star & Frost-Gorham, Marcus & Co., Udall & Ballou, The Diamond Corporation, Harry Winston, and De Beers. (All but Winston are listed on the back of the flyer.) Here's how they described themselves: "The House of Jewels dramatically presents jewelry and diamonds at the New York World's Fair, and amazing indeed is this concentration of value and beauty."



HOUSE OF

Ever since the beginning of recorded time, precious stones have been sought for personal adornment. This ageless desire exists today and will be transmitted with certainty to the World of Tomorrow.

The House of Jewels dramatically presents jewelry and diamonds at the New York World's Fair, and amazing indeed is this concentration of value and beauty. Craftsmen have worked for months to design and create the jewels displayed — jewels both beautiful in execution and authentic in fashion. Pearls, Diamonds, Emeralds, Rubies, Sapphires, and precious stones of every variety are on view in the jewelers' windows.

The Diamond Exhibit includes diamond crystals of all shades and sizes, as they occur in nature, and finished stones of fabulous value. It is the largest assortment ever to

The floor plaque in the portion of the House of Jewels combines the alchemic symbols related to the jewelers art.

○ Gold. ◡ Silver. ⊕ Platinum. △ Air.
 ⊙ Crystal. ▲ Fire. ◡ Water. + Acid.
 ⊕ To Purify.

JEWELS

be shown to the public at one time. You learn that 15 tons of material must be mined and sorted to obtain a single one-carat cut stone of fair quality, and you marvel at the years of toil and effort necessary to produce the stones that are shown in this Diamond Display.

As you enter the House of Jewels, the design on the left-hand panel of the door symbolizes the extraction of the Diamond from the earth. Man reaches down through the layers of the earth's strata — black shale, melaphyre, quartzite and blue ground — to the diamond — pure carbon, transformed by heat and pressure too intense to comprehend into a miracle of fire and brilliance. The Greek "ADAMAS" invincible is truly descriptive of this King of all precious stones — the hardest and the most imperishable substance known to man — the Diamond.

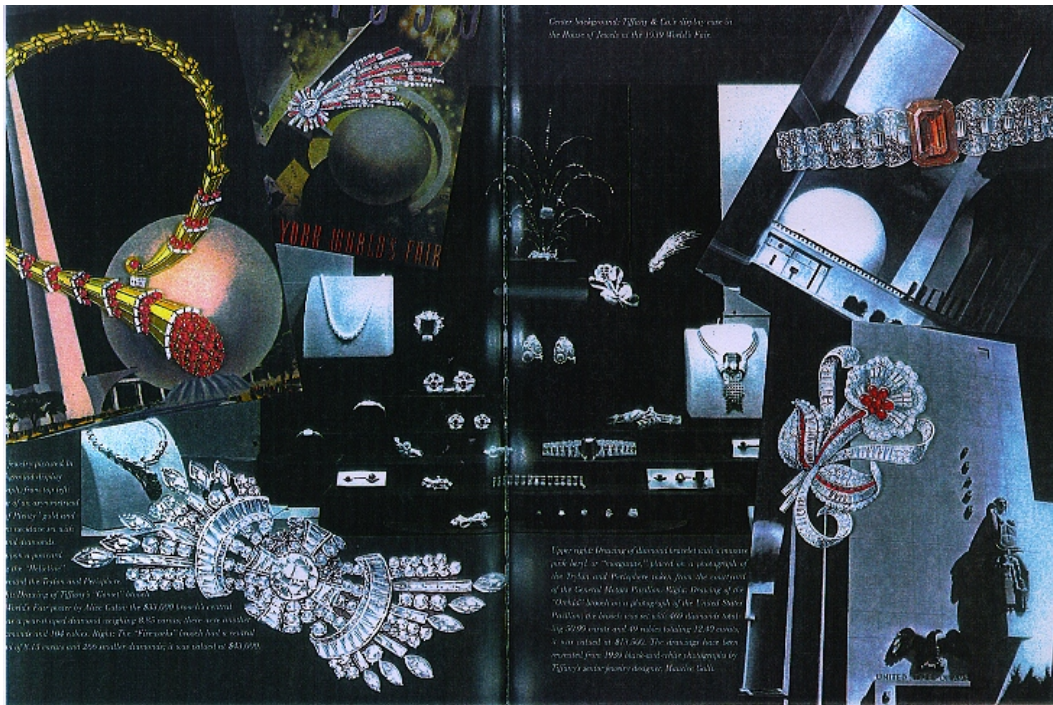
The design on the upper right panel of the entrance door represents the romantic origin of the natural Pearl — the only gem of great beauty and value that comes from the sea.

Symbolization of the precious metals. Central motif — Platinum; the two seated figures — Silver (LUNA) and Gold (SOL). The hands above the heart indicate tokens of affection.

Focus: Tiffany & Co. in the House of Jewels

“Tiffany & Co. celebrated publicly with an astounding display in the Fair’s House of Jewels. It featured a great ruby and diamond comet brooch and a ‘fireworks’ diamond clip honoring the advent of the aeronautic age. There was a ruby and diamond orchid brooch . . .; and there was metallic jewelry in a new style of scrolling gold accented with gemstones that would lead jewelry design into the 1940s.”³²

Here is a partial photograph of the exhibit surrounded by some of the jewels themselves:



In this Edward Steichen photograph (left) for Vogue (June 15, 1939, p.23), the model wears jewelry exhibited by Tiffany’s at the Fair: a diamond bracelet and four emerald and diamond clips. The clips were part of a tiara that Tiffany made to display the 75-carat emerald now known as the “Hooker Emerald” (see Hooker Emerald Focus, next page).

In another photo by Steichen (right) you can see a vanity case and lipstick that was set with 6 rubies and 46 diamonds. The bracelet (valued at the time by Tiffany at \$26,000) was set with 606 diamonds weighing a total of 74.85 carats. Clipped to the hat is a diamond brooch.



Focus: The Hooker Emerald³³

The illustration below shows Tiffany's designers' preliminary drawings for tiaras to be displayed at the Fair. The one at the top, center, made of diamonds and sapphires, makes reference to the Statue of Liberty. In the center you can see a drawing of the magnificent 75-carat square-cut emerald it had purchased at the 1911 sale of the Turkish Sultan Abdul Hamid II's property in London. The tiara could be separated into clips — see the Steichen photo on the previous page. In 1950 Tiffany reset the tiara's central emerald in a brooch, surrounding it with 129 diamonds; five years later publishing heiress Mrs. James Stewart (Janet Annenberg) Hooker purchased it. Mrs. Hooker gave the brooch to the Smithsonian Institutions' National Museum of Natural History in 1977, and the museum currently displays the "Hooker Emerald" in the 1950 Tiffany setting.



Here's another image of working drawings for jewels to be displayed at the Fair.³⁴ The necklace at the center and lower right, with a huge, 200-carat aquamarine and 429 diamonds was then valued at \$28,000. The necklace above it is made of diamonds and sapphires; the side elements could be detached and worn as clips.





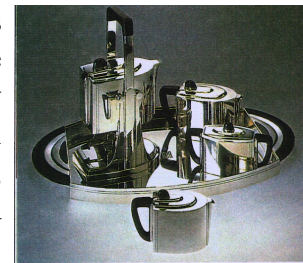
Tiffany exhibited many spirited examples of “Cocktail Style” jewelry. Cocktail Society refers to members of a New York social elite who needed jewelry that could be worn both day and night due to their “full social calendar.” The sculptural **“Flower” Clip** (1939) is Tiffany’s own interpretation of American “Flower Style” jewelry popularized by the Duchess of Windsor.³⁵

The actual clip, illustrated here, is composed of emeralds, yellow and colorless diamonds, platinum and gold.

This illustration shows some additional floral and bird jewelry designs for the Fair.



This tea set was displayed in the House of Jewels at the Fair. It was designed by Albert B. Barney, head of Tiffany’s design department in the 1930s and 1940s. It is made of sterling silver with bakelite handles and New Zealand jade finials. Other silver objects on display included a cocktail shaker embellished with moonstones set in gold with a lighthouse design, trays, drinking cups, and cigarette boxes. They all were done in streamlined Art Deco designs.



This beautiful spoon, created in sterling silver by Tiffany in the shape of the Trylon and the Perisphere, was available for sale at their Fair exhibit. On the back of the bowl it says *New York Worlds Fair 1940*. On the Trylon it says *Tiffany & Co*. It is one of the treasures of my personal World’s Fair collection.



Albania

*Displays of the country's products include crude and refined oil, olive oil, olives, tobacco, dairy foods, dry fruits, wool, furs, hides, **silverware**, **semi-precious stones**, **minerals**, rugs, perfumes, embroideries and national costumes.*³⁶

Australia



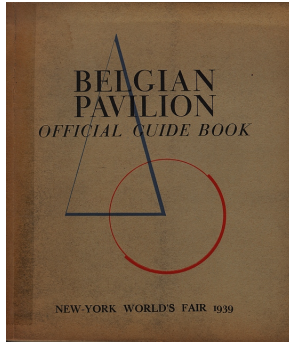
The Australia Pavilion was located on the Lagoon of Nations, next to the British Pavilion (see illustration below).

Its exhibits focused on economic opportunities which existed in Australia and its wealth of raw materials, including minerals.

This 20-page, beautifully illustrated booklet was given out to exhibit attendees. It contains mining production information about gold, silver, lead, iron, copper and other minerals. Unfortunately, there are no pictures of either the pavilion's exhibit or minerals/mining in Australia.



Belgium



The Belgian Pavilion, located on Constitution Mall, featured exhibits of its minerals in a large gallery devoted to industry. There is a case-by-case description of them, and a map giving the building's floor plan (though sadly, no photographs) in the Belgian Pavilion's *Official Guide Book*, pictured here. In addition:

*The Belgian Congo's exhibit occupies one entire wing and features a priceless collection of diamonds and diamond tools loaned by Antwerp Diamond traders. Included in the collection of gems is a facsimile of a bronze statue of the Late King Albert in diamonds, and several allegories in precious stones. There is a complete diamond cutting plant. . .*³⁷

*With the Belgian Congo's mining industry yearly growing in importance, it was not surprising to find that five big showcases were needed to display exhibits of gold, copper, cobalt, tin and radium, while facing them are maps of the principal mining centers and establishments.*³⁸



Belgian Congo: Diamonds



This 20-page booklet on diamonds and mining in the Belgian Congo was distributed at the exhibit. Although titled as pictured, the content actually is about diamond and other mining in the region (and that is what its inner title page says). There is no information or pictures related to the Fair exhibit at all.

The first ten pages concentrate on the history of diamond mining in the Congo, where they are exported and cut, and a history of overall diamond production. The second half of the booklet relates the “present situation of mining deposits and their exploration.”³⁹ This includes an overview of metal deposits (copper, gold, lead, tin, etc.) and other mineral substances (salt, coal, petroleum, etc.). The booklet is filled with interesting historic photographs and production tables. It ends with a few paragraphs of possible commercial activities and what the future holds, mineralogically speaking, for the Belgian Congo.

Brazil

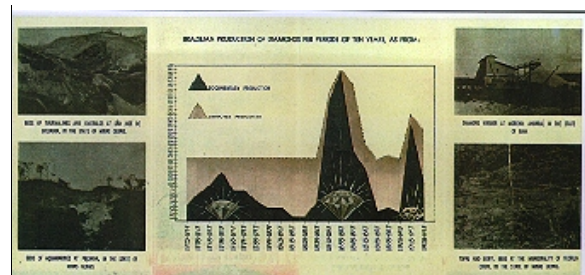
It should come as no surprise to any modern mineral collector that Brazil had a beautiful display of its mineral wealth: “The mineral exhibit features precious minerals, gold and diamonds, and samples of other ores.”⁴⁰

Based on a memo of November 13, 1940 from Pough regarding “specimens of material received from the . . . Brazil Building”⁴¹ after the fair closed, it also included uraninite, samarskite, columbite, magnetite, euxenite, smokey quartz (one ca. 75 lbs.), rose quartz (ca. 200 lbs), aventurine quartz (ca. 75 lbs.), a barite crystal (ca. 50 lbs.) and several groups of white quartz crystals.

Pictured here is a selection of the many “official publications” distributed at the Brazil Pavilion. These colorful pamphlets all include informative, descriptive text, and black and white photographs. Some also contain maps, diagrams, and production graphs. All of these flyers have a map on the reverse side showing the locations in Brazil where the deposits were found.



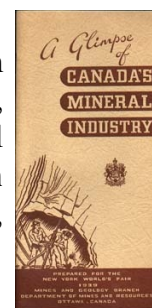
Sample Open Brazil Brochure, Outside



Sample Open Brazil Brochure, Inside

Canada

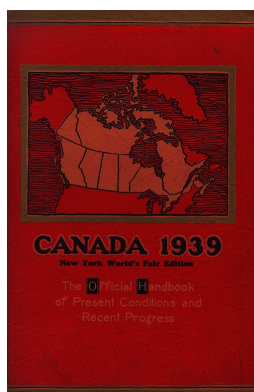
This 32-page brochure was prepared for the Fair by the Mines and Geology Branch of the Department of Mines and Resources, Mines and Geology Branch, Ottawa, Canada in 1939. It provides, as stated in its title, a glimpse of Canada's mineral industry. More important, on page 31 it has an overview of **“The Dominion Government's Mineral Exhibit at New York World's Fair.”** Like the Brazil flyers, there is a commercial bent to the information. Here is the full text:



The mineral exhibit installed in the Canadian Pavilion by the Department of Mines and Resources has been designed to utilize the limited space available to the best advantage in presenting a few of the high-lights of Canada's widely diversified mining industry. The exhibit relates only to those minerals in the production of which Canada has already attained, or is rapidly attaining, a leading position among world producers, such minerals, including gold, nickel, copper, asbestos, lead and zinc, the platinum metals, radium and petroleum.

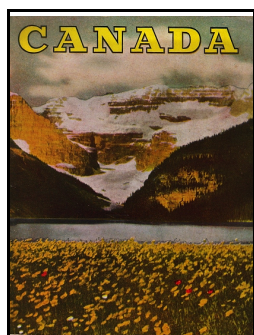
Occupying the lower foreground of the exhibit is a large map of the Dominion, showing the six major physiographic regions, the principal railway and aerial transportation routes, and the locations of the mines and areas from which these minerals are produced. Above and behind this map is a stage opening, behind which is a revolving stage in eight sectors, each presenting by a combination of models in the foreground and a pictorial background, a scene of outstanding interest in the relation to the production of one of these minerals in Canada (lead and zinc being associated in one of these sectors).

The present rate of production is illustrated by the use of models; other salient information is also presented. As each sector of the revolving stage in turn registers behind the stage opening, the producing areas on the map of the section of the mineral industry depicted are illuminated, and the operating mechanism halts for the time necessary to enable the spectator to obtain a general appreciation of Canada's position as a producer of that particular mineral.



In addition, this book — ***Canada 1939 - The Official Handbook of Present Conditions and Recent Progress - New York World's Fair Edition*** — was available in the Canadian pavilion. Chapter V is dedicated to Mines and Minerals. Topics include the growth of mineral production in Canada, metallics (e.g., gold, silver, copper, nickel, etc.), fuels (e.g., coal, oil, gas, peat), non-metallics (e.g., salt, asbestos, gypsum), clays, and recent mineral production.

There is some historical information but the emphasis is on economics and investments. The handbook includes many tables, graphs, and photographs.



Another booklet, produced by the Canada Trade Association, exists but it merely repeats information, charts, and diagrams contained in the Handbook.

Chile

At the north end of Continental Avenue, the Pavilion (Theodore Smith Miller, designer) is surrounded by a garden typical of the Chilean countryside. . . . **The Hall of Mining tells the story of the Andes ore mining industry, showing its development and improved production methods. The northern nitrate fields are illustrated.**⁴²

Children's World: Coal

"Koko" is the story of a piece of coal from the time it is mined, through its conversion in a furnace to carbon dioxide, to its re-absorption into a tree to help the tree grow. This 32-page children's booklet was published as an official souvenir of the "Children's World" at the 1939 New York Worlds Fair. The booklet was obviously intended for young elementary school children. It is written in a simplified style that appears rather quaint by modern standards. It contains seven full page and one 1/3 page cartoon-type illustrations of similar style and quality to the one shown on the front cover. As can be seen from the back cover, a series of similar books on other science topics were produced as well.



Cuba

The booklet illustrated below was distributed at the Cuba Pavilion at the Fair. Like many similar international handouts, it has a commercial/tourist focus. Several pages, with illustrations and drawings, relate the “marvelous mining opportunities in Cuba for the enterprising.” Minerals discussed include gold, copper, iron and manganese.



Dominican Republic

Pictured here is the large, 32-page bi-lingual (Spanish/English) booklet distributed by the Dominican Republic at the Fair.



One page (p. 25) describes the nation's mineral wealth, ores, quarries, marbles, etc. Some of the mineral specimens discussed are still collected today. For example:

In the province of Santiago, large samples of amber (fossil resin) have been found.

Referenced also is an exhibit:

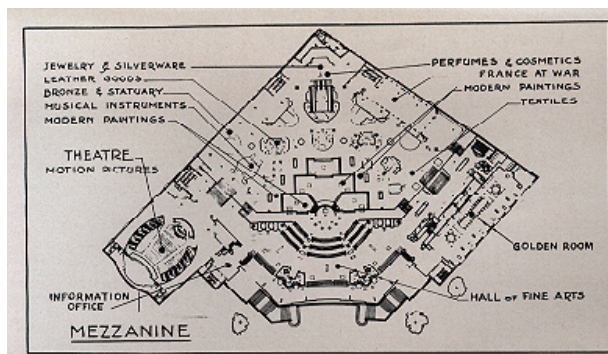
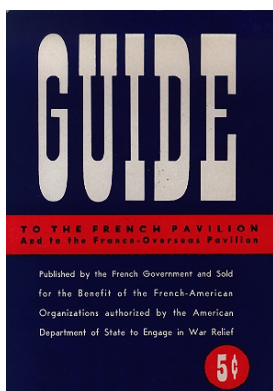
The visitor to the Dominican Pavilion at the New York World's Fair, located in the Hall of Nations, can see a complete collection of 70 varieties of ores and can obtain there a descriptive folder in Spanish and English.



This magazine, a special issue of the *Dominican Republic*, created for the New York World's Fair, was distributed at this pavilion. It was published by the Dominican Chamber of Commerce of the United States. It contains statistical tables and diagrams about exports, including gold and other minerals.

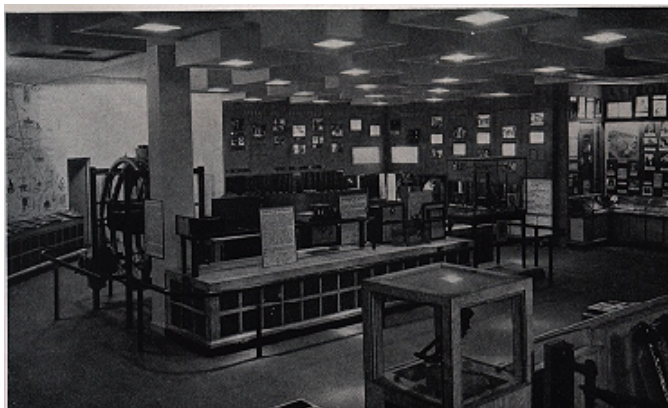
France

Given France's premier place in the history of mineralogy, it is surprising how little significance it was given in France's large pavilion. Their exhibits focused mainly on travel, tourism, history and commercial luxury items. But there were some objects on view relevant to mineralogy. The 1940 Official Guidebook states: "On exhibit are . . . precious stones (valued at \$5,000,000). . ."⁴³ The Guide to the French Pavilion, pictured here, locates the stones in the Rotunda of Honor on the Mezzanine in the area labeled "Jewelry & Silverware".



The Guide also states:

In the Hall of Sciences is told the story of French pioneers in the realms of science. Much of the actual equipment used in the most significant research is here on display. Most interesting perhaps, is the simple original equipment used by the discoverers of radium — Pierre and Marie Curie.



Section of the Hall of Sciences as pictured in the Guide.

It is interesting to note that Marie (Sklodowska) Curie was an honorary member of the New York Mineralogical Club.

Great Britain



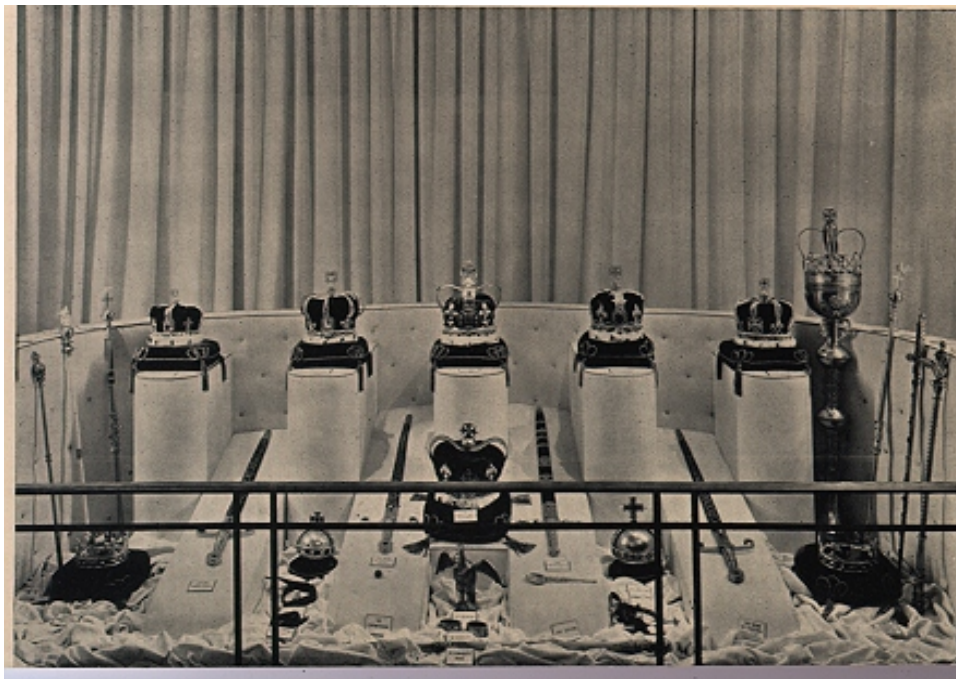
This was a guidebook distributed in the British Pavilion. There are also references to Australia, New Zealand and other areas within the former British Empire.

The pavilion itself was built in the contemporary modernist style, with the main entrance doors in nickel silver (see illustration on page 21). The structure was finished in a material containing mica as one of its ingredients, giving the building a glittering appearance when the sun was out.⁴⁴

There were at least two rooms within the Pavilion relevant to this paper's topic: *The Crown Jewels* and *The Silver Room*.

The Silver Room had examples, both historic and modern, of the works of British silversmiths and goldsmiths. Included in the exhibit were chalices, trays, cups, medals, coins, etc, from private, church, corporate, governmental and royal collections.

In an annex next to the Royal Room one could see *replicas* of the Crown Jewels of Great Britain. This included most of the famous crowns, stones, scepters and other regalia with which we are familiar (I have disappointed several people recently in telling them this fact since they had attended the fair and thought they had seen the actual jewels.) The real Crown Jewels, were (and are), of course, safely situated back in the United Kingdom.⁴⁵



View of the Crown Jewels Exhibit, British Pavilion, 1939-40 New York World's Fair, taken from the Pavilion's guidebook.

A Hall of Metals, which was meant to show the importance of mines and metals in the history of Great Britain and civilization in general, was located in the pavilion. However, according to the Guidebook, this was replaced by exhibits relating to modern arms and armaments. Remember, Britain was already engaged in the war with Germany and was surely making a political statement.

Greece

*In The Hall of Nations, the Exhibit presents in pictorial and dioramic form, the story of Greece and the glory of her ancient culture. . . . exhibits include fine quality silks, handmade embroideries in traditional designs, hand-woven oriental rugs, **colored marble**, emory from the Island of Naxos, textiles, handicrafts, glass, ceramics, hammered silver objects, chemicals and **minerals**.*⁴⁶

Home Building Center: Anthracite Coal Exhibit

Judging from this label (left) and pin (right) that exist, there was an exhibit dedicated to anthracite, “The 7 Star Fuel” in the Home Building Center.



India

David Trevas (b. 1917), NYMC member and 1939 fair-goer, recalls seeing exquisite jewelry at the India Pavilion. He especially remembers that they were selling beautiful rubies at what seemed to be “cheap” prices.⁴⁷ (Then again he was earning \$25/week at the time and the value of a dollar has changed over 60 years.)

Japan

Japan did not have much in its pavilion related to minerals or jewelry. It did, however, have this one (tacky) related display (description from NYWF Views, p 16):

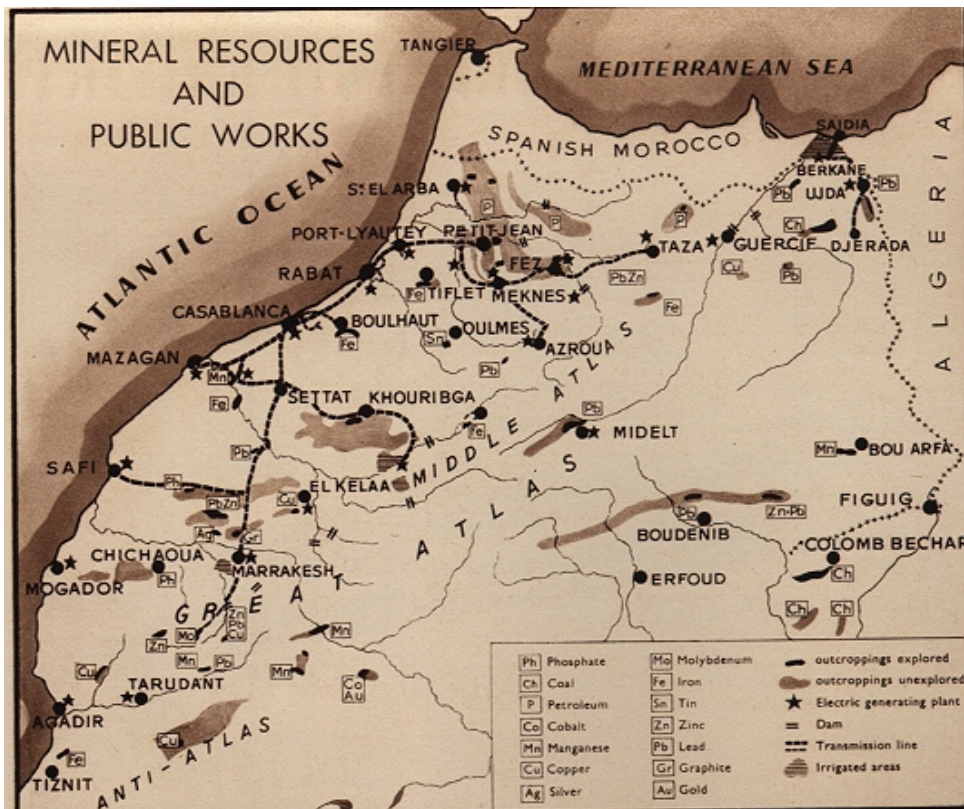
A fortune in cultured pearls is modeled into this replica of the Liberty Bell of the United States.



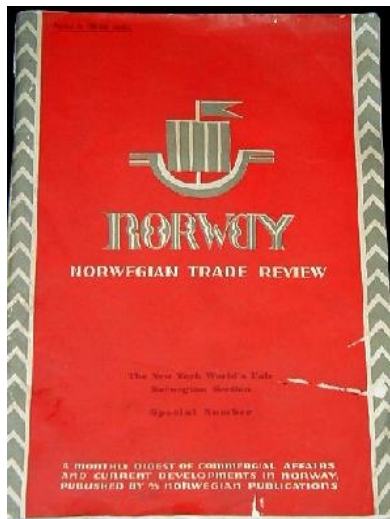
Morocco



Within a lavish guidebook handed out at the Morocco Pavilion, there is a multi-page writeup about Morocco's minerals which "after agriculture . . . constitute the greatest source of its wealth". The text focuses on phosphates, coal, lead, tin, iron and manganese. Also included is a detailed map of the locations of these and other mineral resources pictured here.



Norway



The Norway Pavilion was located on Federal Place. This booklet, published by the Norwegian Trade Review (in an edition of only 100,000) was distributed to the public at the Fair. Not surprising, its focus is commerce, trade, industry and tourism.

However, in an overall description of the pavilion and its exhibits, we discover that the mineral enthusiast had something special to see:

“The hall will also accommodate the most recent finds of silver made at the Kongsberg mines, nuggets of silver heavier than a man can lift.”⁴⁸

Other mineral-related items in this trade review include export and ore production tables, articles on Norway’s nitrate and aluminum industries, and some interesting advertisements for microminerals.

Peru

Symbolizing the artistic and industrial aims of Peru, the Pavilion on Presidential Row North, contained exhibits of the country's archeological and historical backgrounds. Here characteristic displays of the pre-Inca and Inca civilizations included a presentation of mummies shown exactly as they are found in the ancient tombs with their funereal garments, jewelry, rugs and dressing material . . . Sculptures, paintings, tapestries, gold and silver, stained and painted glass were exhibited throughout the Pavilion.⁴⁹

Romania

The Romanian House (Federal Place, facing the Court of Peace), was a four-storied building, with stone balconies modeled after the manner of the country's monasteries. A large room, the "Hall of Handicrafts," was devoted to exhibits of glassware and pottery, embroidery, jewelry and musical instruments. Romania's National Pavilion is built entirely of marble from Ruschitz . . . Under an immense ceiling of rock salt, internally lighted columns and panels of alabaster adorned the interior.

Siam (now Thailand)

The Siamese Section of the Hall of Nations was decorated and furnished in a style typical of this Far Eastern country. Siamese industrial activities are portrayed, and here you may gaze upon native handiwork: niello silverware, golden lacquer work, mother-of-pearl, carved ivory, jewelry and peacock feathers, zircons, and sapphires.⁵⁰

Southern Rhodesia (now Zimbabwe)

The exhibit demonstrates the scenic beauties of the Colony and describes its leading industries – tobacco-growing, gold-mining, and agriculture.⁵¹

Turkey



The Turkish Pavilion was on Market Street and designed “in the classical Turkish style with modern implications.” Inside was an exhibit of interest to us:

To the right of the main entrance is the Exhibit of the Eti Bank. Various of the mineral products of Turkey will be on display here.

(Both quotations taken from flyer, left)

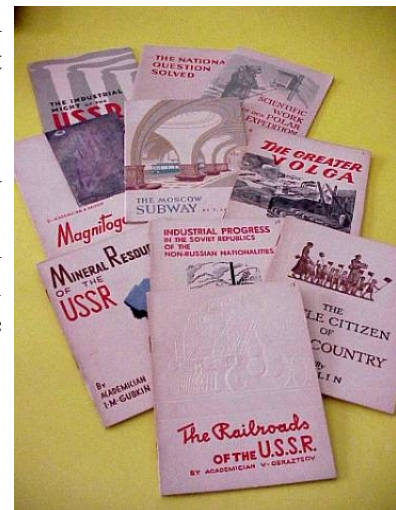


USSR (now Russia)

Irving Horowitz remembers a huge boulder of magnetite from Magnitogorsk on display in this pavilion and a brochure given out describing Soviet mineral resources and mining activity.⁵²

An image on eBay that I saw on June 20, 2000 confirmed this. (Note the pamphlets about the USSR’s Mineral Resources and Magnitogorsk on the left side of the illustration below.)

The owner graciously provided me with photocopies of each booklet. They are each about 20 pages long and contain historical and contemporary information as well as black and white photographs.



United States

Many of the approximately 30 states represented at the Fair had exhibits relevant to this paper’s topic. Here are some details⁵³:

Georgia

Georgia's exhibit in the Court of States is housed in a building which shows the uncompromising colonial architecture of the deep South . . . Various exhibits display gold coins and gold nuggets, (and) a complete line of minerals . . .

Missouri

The Missouri Building is distinguished by a facade of Greek design, a replica of the front of the Rolls County Court House, erected at New London, Missouri, in 1856. In dioramic form the exhibit illustrates the story of Missouri's various resources . . . with horticulture, stock raising and rich mineral deposits contributing to her well-being, Missouri naturally makes a display of such resources.

Nevada

To most people, the Comstock Lode stands for Nevada. Mining has been and still is the very essence of its existence, and with this goes an easy life, a hard life, one built on the spirit of venture, though not necessarily in the sense of being dependent on the wheel of fortune. Mount Davidson is a magic name, for it is the richest mine in the world.

Pennsylvania

An exact model of Philadelphia's famous Independence Hall, the Exhibit comprises displays which are modern in spirit. In the section known as the Hall of Progress, large neon lights suggest "Keystones to Progress." The wall exhibits comprise three major divisions: natural resources, industrial resources, and human resources. Depicting the achievements in farming, mining, power, manufacturing, transportation and communication, commerce and finance, education, recreation, welfare and health, a rich display consists of original products and manufactured goods, of panoramas and enlarged photographs.

Utah

By means of dioramas, the State of Utah exhibits reproductions of its many attractions. The agricultural and mining industries for which this State is famous are the subjects of this realistic treatment.

Washington

Towering bronze columns and native woods of the State decorate the facade of the Washington Building. Occupying a plot 6,000 square feet in area, it presents a magnificent display of the "Evergreen Empire."

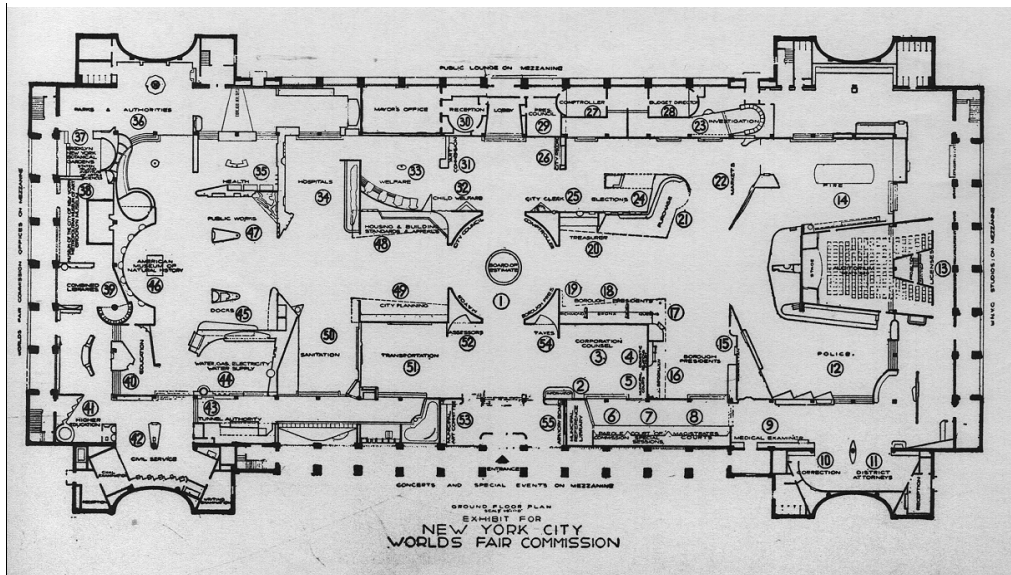
The Exhibit tells the story of the State's abundance of natural wealth-forests, minerals and fisheries. Especially interesting is the replica of a mine in operation from which the visitor may learn about the seventy-five known minerals essential to industry.

West Virginia

A black diamond weighing in excess of six tons is West Virginia's inescapable reminder that she leads the world in bituminous coal mining. This chunk of wealth, one of the largest blocks of soft coal ever brought to daylight, occupies the center of the exhibit floor.⁵⁴

City of New York Building — The American Museum of Natural History

The AMNH had every intention of participating in this Fair on a rather grand scale if we judge by the vast quantity of archival material available relating to the Flushing event. Many were mineral-related (see copy of Fair “suggestions” memo in Appendix). Before long, however, political and financial realities kicked in. The Museum management did not want to create an exhibit that would discourage paying tourists from going to the Museum proper. In addition, the idea to create a mini-planetarium was abandoned since the needed equipment could only be purchased in Germany.



The Museum was ultimately given an alcove within the City of New York Building which was located directly in front of the Trylon and Perisphere. The exhibit (No. 46 on the left side of the floor plan above) was composed of a large mural, a central pedestal and seven dioramas, all relating to the Museum’s overall activities and public exhibits.⁵⁵



Of these seven miniature dioramas one was geology related (about Mount Vesuvius) and another was mineral-related (a dull piece of mica under polarized glass). Presumably Fred Pough had something to do with both. The mineral and gem wealth of the AMNH went unheralded here.

Even this pathetic display was criticized! In a memo from Pough dated July 19, 1939, replying to a Mr. Smyth he states:

The vertical division to be seen in the rear sheet of Polaroid in the Museum's exhibit at the World's Fair is the junction between two strips of the Polaroid material. Made in standard widths it is impossible to obtain a single sheet capable of covering the entire area when it is so wide. There is no crack or fault in the material.

(See Appendix for copy of this memo.)

Epilogue

The majority of the illustrations used in the paper are scans of original booklets, cards and other materials that I have collected over the course of several years while writing this paper. They will form the basis of a planned exhibition, perhaps at the next New York Mineral Show. In addition, a talk/lecture is planned where I will use these same images as illustrations for the talk's content.

There are, however, a number of items that I would like to obtain to "complete" my collection of items relating to minerals or gems from the 1939/40 New York World's Fair. These include:

Mineral Day

Mineral Day Questionnaire

Mineral Day Official Program

Mineral Day Button (? exists)

Mineral Day Stamp

World's Fair Daily from June 17, 1940

Fair Entry Ticket with Mineral Day printed on it (? exists)

Any advertisement(s) announcing the Day

Picture of Washington Hall, where the Mineral Day banquet was held

Belgium/Belgian Congo

Photo of exhibits

Brazil

Photo of exhibits

Canada

Photo of exhibits

Dominican Republic

Ores flyer; photos of exhibit

USSR

Photo of exhibits

Some Additional Open Questions

- ◆ What was the actual procedure for getting a day named?
- ◆ Do minutes exist for the Mineral Day Committee meetings?
- ◆ What documents for Mineral Day exist at the archives at the New York Public Library?
- ◆ How were the Mineral Day Committee members selected?
- ◆ What did Fred Pough talk about at his Mineral Day lecture?
- ◆ What minerals were given as prizes on Mineral Day? Who won them? Was there a special label made for them? Do they even exist any longer?
- ◆ What did the other exhibitors (besides Tiffany's) show in the House of Jewels?
- ◆ Can the items that Fred Pough obtained for the American Museum of Natural History be identified?

Appendix

Fifty Years of Mineral Collecting from Maine to Florida

by James G. Manchester

(Address at the Mineral Day at the World's Fair (New York City), June 17, 1940) ⁵⁶

The first mineral collector either crawled out of a cave, or clambered down a tree, and among the first objects he appropriated for his own use were rocks and minerals owing to their applications for useful and decorative purposes. From that time to this, minerals have played an important part in the arena of humanity and the progress of civilization may be measured by the ability of man to discover in minerals the powers hidden within.

From the cradle to the grave modern man places his chief reliance upon minerals, or their derivatives. The first substances appropriated to the newborn babe are mineral substances, boracic acid and nitrate of silver, dropped in weak solution in the eyes to prevent possible blindness, and Vaseline, a petroleum product, applied to every other part of the body to soothe the tender skin and hasten its development. Everything man eats, wears, buys or sells, is composed of or produced by the aid of minerals, including the pen with which he signs his last will. Eventually he will shuffle off this mortal coil on an iron bed and when his body is placed in the ground a rock will mark its last resting place, denoting that beneath that stone is a human body returning to the purely mineral environment from, which it originated. Dust to dust.

In recent years more laymen have become interested in minerals and many new societies and clubs have been formed to promote the study of minerals. How can we account for this increased interest? Some say the depression — people desiring an outlet for their leisure time. Personally, I believe the many new discoveries made involving the use of minerals, which have been given much space in the newspapers, has aroused interest and curiosity among laymen. Then again the schools are giving more time to this branch of the natural sciences, and there is that great organization, the Boy Scouts, from which are recruited many who take up minerals as a hobby. In recent years a number of magazines have been launched which give the story of minerals in a non-technical manner. All these have been factors in arousing an interest in minerals. It is reasonable, therefore, to expect that minerals should attract a large following.

Besides the utilitarian and scientific interest in minerals, there is their aesthetic beauty in which amateur mineral collectors are mostly interested. To the average layman mineralogy is thought to be a deep and difficult study. To appreciate and to understand minerals does not require long hours of study. Tramping over the fields and delving among the rocks in the search for specimens is a healthful diversion.

Longfellow says "All things come round to him who will but wait," but in collecting minerals if you are going to sit around and wait you cannot go places. The slogan of an advertising firm "Keeping everlastingly at it brings success" it seems to me applies, to the mineral collector. Recreational hours devoted to the collecting and the studying of minerals should not be permitted to encroach upon one's vocational hours. If you have a hobby, ride it, if the hobby rides you, failure in your vocation will result. I have never regretted the day, when, as a very young man, I was shown a small collection of minerals; the owner of this collection presented me with a quartz crystal from Herkimer County, New York, and from that day to this minerals have been my hobby.

My first mineral crystal collected was found in a small vug or pocket in a glacial boulder of white quartz exposed at low tide on the shore of Narragansett Bay in Rhode Island. This boulder, after being broken away from its rocky ledge by the glacier coming down from the North, had

been so rolled about that its angular outline had become much rounded and the rock deposited on the shore of the bay. That this crystal should remain loose in the pocket of this boulder which had been lapped by tidal waters for thousands of years, is beyond comprehension.

My guide and mentor in those early days of collecting, often told me of his collecting experience in Maine, that on one of his trips he brought home many specimens, so many in fact, that when he stepped off the train the bottom fell out of his box and the specimens were scattered about the station. This sounded rather intriguing to a beginner, but it was many years before I was able to visit Maine to find out that my friend was correct in his glowing description of the possibilities of collecting minerals in that State. Upon the occasion of my first visit I met Mr. Pulsifer, the owner of a feldspar mine on Mt. Apatite noted for the wonderful apatite crystals found there. He showed me one specimen, a crystal about 2½ inches in diameter. His price was \$500. A few years later the same specimen turned up in New York and was being offered for sale at \$400. Later I saw the specimen at Rutgers University, where Col. Washington A. Roebling had an exhibition of minerals recently acquired. Upon inquiry I found out that the Colonel and the mineral dealer could not come to an agreement as to the terms of the sale. The dealer left and Mrs. Roebling noted the discomfort of the Colonel at not being able to acquire the specimen, Mrs. Roebling arose to the occasion, however, and traced the specimen back to the miner from whom she purchased it at a cost of \$250. and later presented it to Colonel Roebling on his birthday. The specimen is now lodged with the Roebling Collection at the Smithsonian Institution in Washington.

Of course all are acquainted with the story how the tourmaline deposit on Mt. Mica was discovered by two boys and to me this was a hallowed spot. Tourmaline, while a comparatively modern stone, has its legends and romances as interesting as some of the older stones I well remember reading about the complexity of the chemical composition of tourmaline in Ruskin's "Ethics of the Dust," a series of lectures delivered at a girl's school. In telling of tourmaline Ruskin writes:

"A little of everything;
There's always flint, and clay, and magnesia in it;
And the black is iron according to its fancy;
And there's boracic acid, if you know what that is, and if you don't, I cannot tell you today, and it doesn't signify;
And there's potash and soda;
And on the whole, the chemistry of it is more like a mediaeval doctor's prescription than the making of a respectable mineral."

Ruskin was an ardent collector of minerals and was a voluminous and passionate exponent of the beauties of nature as expressed in them. He was an inculcate in men's minds of all that is beautiful and lovely, both in nature and in art. He was a close associate of the Pre-Raphaelites and believed as they did that art should render the spirit of nature truthfully.

The Portland, Connecticut, pegmatite quarries have always been of interest to the mineral collector. On one occasion I witnessed the destruction of a large pink beryl crystal by one of the quarry workmen. Soon after along came a teacher with a class of boys. The teacher told his class that the mineral was rose quartz but later changed his determination when he was advised that much of the coloring was due to blood from the cut fingers of a too enthusiastic mineral collector picking over the fragments for gem material. There are many interesting mineral localities in

Connecticut, notably the kyanite at Judds Bridge, the garnets at Redding and the iron mine dumps at Roxbury.

A locality that stands out in my memory is the Diamond Hill section of Herkimer County, New York, noted for the remarkable quartz crystals found there. I shall never forget the sensation of walking over the newly ploughed fields in the early Spring, after a light rain, and there sparkling in the sunlight were those lustrous quartz crystals looking like gems from the lapidary, each one resting on its own pedestal of earth. The pioneers in building their stone fences in this area were not interested in the quartz crystals that fell out of the cavities when the rock was being broken but the modern collector searches along the stone walls to collect these gem-like crystals.

Fortunate indeed is the mineral collector who resides in the Metropolitan Area of New York City. Here are rocks of various geological horizons-sedimentary, igneous and metamorphic. Probably no other like area in the world has been subjected to such a vast artificial removal of rock through engineering enterprises. In this area there have been operated from time to time no less than three hundred iron mines and twenty copper mines, but the discovery of richer deposits in other localities necessitated the abandonment of operations. In Colonial times the rocks provided the sulfuric acid and arsenic required in those days. Rich deposits of zinc and manganese are present and these mines have provided much wealth to their owners.

Several incidents stand out in my memory in connection with the collecting of minerals in this area. Entering late one Saturday afternoon an excavation on upper Broadway, where the rock was being removed for the erection of an apartment building, I saw in the material evidence of a feldspar crystal. The removal of this specimen was put over until the next day. During the night there had been a snowstorm and everything out of doors was covered with three or four inches of snow. Early that Sunday morning people on their way to church witnessed the strange sight of a man climbing over the rocks and brushing off the snow with a whisk broom. Eventually the rock was found and the crystal removed. The specimen turned out to be a remarkably well developed orthoclase crystal. The sequel to this Sunday morning romance was the receipt of a letter from the publishers of a well known encyclopedia asking permission to reproduce an illustration of this particular specimen in a forthcoming edition of the encyclopedia.

On another occasion there was a fine specimen of gem chrysoberyl found in an excavation at Broadway and 164th Street. There had been a thunderstorm that afternoon and after dodging in and out of doorways trying to reach home without getting wet, the sun came out and in examining the rocks in this particular excavation, which were black from the rain, there stood out against the dark background a yellowish-green chrysoberyl crystal. Many other gems and semi-precious stones have been taken out of the Manhattan rocks but time does not permit a detailed description except to say that the list includes aquamarines, golden beryls, spessartite garnets, citrine quartzes and brown tourmalines. The specimens themselves may be seen in the collection of local minerals sponsored by the New York Mineralogical Club on display in the American Museum of Natural History, New York City.

The hills of Westchester County, in the vicinity of Bedford, New York, are mined for mica, quartz and feldspar. These operations, begun by a discouraged farmer, have been actively worked for nearly seventy years. Upon the occasion of my first visit to the locality hand drilling was in use, black powder for blasting purposes, and a huge stone wheel crushed the ore, the power being furnished by a horse harnessed to the wheel and plodding along a circular pathway. This is a far cry from the modern mill in operation at the present time. The powdered rock is shipped to various industrial plants. In the removal of this rock many minerals of interest to the collector have been uncovered, some 52 varieties having been listed.

The Bedford locality is known for its fine rose-colored quartz, some of the material being suitable for cutting into ornaments. Just at the turn of the century, upon one of my visits, there was collected semi-transparent rose-colored quartz. This was turned over to a lapidary for cutting and polishing and in the finished material was a polished sphere showing a six-rayed star by transmitted light. The story of this find was published and some years later similar material, mounted in jewelry, appeared on sale in jewelry stores. The material had been cut into spheres, the position of the star located and then cut into hemispheres, the backs of which were treated with quick-silver; the star is noted by letting the light enter the stone to be reflected from the mirrored or gilded back; the trade name of starlite was given to the stone, a name subsequently given to the blue zircon from Siam. A number of radioactive minerals are found in the Bedford quarries. The most interesting of these is the mineral uraninite, a uranium oxide. An examination of the rocks will sometimes disclose a small black uraninite crystal surrounded by a brown halo on the matrix; this halo is caused by emanations from the radium content of the uraninite crystal. The mineral uraninite degenerates through a series of minerals, of which radium is one, ultimately reaching the end product which is called uranium-lead. Physicists have computed the breaking up of the uranium atom and it is possible to make a computation as to the maximum age of any rock from the proportion of uranium and uranium-lead present. It is reported that such an analysis applied to the Bedford deposit has demonstrated that the age of the rocks in the Metropolitan area is vastly in excess of what the early geologists supposed.

Across the Hudson River there are the famous Palisades of the Hudson which have provided minerals of unusual interest, many of which are scattered in museums throughout the world. This trap ridge has been pierced by many tunnel and open cuts for transportation purposes, requiring the removal of a vast amount of rock. During the construction of the Erie Railroad "open cut" at Jersey City (1908-1911), I visited the workings nearly every Saturday afternoon for two years, regardless of weather conditions. Construction was conducted twenty four hours a day in eight hour shifts. During these two years I met only one other collector, who, being busy during the day with his job as a house painter had to confine his collecting to nights. On several occasions, when the days were growing shorter during the winter months, I met him coming to the excavation with a lantern. He was an enthusiastic and discriminative collector and many of his specimens found their niche in the Roebling and Canfield collection now in the Smithsonian Institution.

The most outstanding specimens collected in the Erie "open cut" excavation were some loose datolite crystals showing no point of contact with the matrix. These were found at the bottom of a small cavity. The problem was, how did these crystals form without showing evidence of attachment to a matrix? Upon examination with a pocket magnifier, it is noted that running through the crystals are fine threads of an asbestiform mineral. No doubt when the solution in this cavity was changed to a solution that would produce datolite crystals the threads of asbestos still ran across the cavity and it was around these threads that the crystals were formed. When the solution evaporated, the crystals fell to the bottom of the cavity where they were later found.

We all know of the wonderful minerals collected in the Watchung trap rock quarries of New Jersey. The mineral that I remember mostly is a specimen of natrolite collected at the lower New Street quarry in West Paterson. One Saturday morning, many years ago, I called Mr. Gratacap, then curator of minerals at the American Museum of Natural History, and asked if the West Paterson quarry had renewed operation for the season. He said, yes, that a collector had been in to the museum the day before and showed him some splendid natrolites that had just been taken out. I visited the quarry that afternoon and found evidences of someone having recently worked in one of the cavities. I took up the work where the previous collector had left off and after a while removed from the cavity a very fine cluster of natrolite crystals. Natrolite, when conditions

are right, has a tendency to crystallize out in bunches of crystals looking like pom-poms or hemispheres. This particular specimen I had taken out was half a hemisphere. When it was illustrated in a recent bulletin of the New York Mineralogical Club, I received a letter from the curator of minerals in a foreign museum saying that he felt quite sure that they had the other half of my specimen in their museum. After some correspondence it was decided that this was so. There were very few collectors in those days and who the particular person was that worked the cavity the day before has never been found out as it was many years after the occurrence that the matter was brought up.

The clay pits in this area are not without interest to collectors. I know of nothing more thrilling than that experienced in breaking open the siderite or clay ironstones found in the clay pits of New Jersey. To break open one of these stones in the bright sunlight and watch the moisture disappear and the sparkling pyrite crystals with their iridescent colors slowly come to view is a joy reserved only for those fortunate enough to be present.

Time permits the mention of only one more locality. Very many years ago I sent from my New England home a few cents to a mineral dealer in New York City and obtained a specimen labeled "Chalcedony pseudomorph after coral, Tampa Bay, Florida." This particular specimen acquired in those early days seemed so attractive that throughout all these years I have had a desire to visit the locality where this specimen came from. After a lapse of more than forty years this desire has been fulfilled and for the past four winters many pleasant hours have been spent collecting in the vicinity of Tampa and the experience gained is the culmination of all collecting that had gone on before. The specimens are found during a very low tide in what are known as the silex beds at Ballast Point in Hillsborough Bay, not Tampa Bay. The local residents know nothing, or care nothing about them. The locality has been the Mecca for collectors for over one hundred years. The varieties of chalcedony noted are sard, sardonyx, black onyx, carnelian, agate, flint and chert. Much of the material is suitable for cutting into semi-precious stones for jewelry mounts. There is an endless display of color. To collect successfully one must depend upon the wind, the water, the tide and the moon. It is rare indeed that these elements will cooperate for the benefit of mineral collectors.

As I said at the beginning my first quartz crystal was found in a glacial boulder exposed at low tide and probably what may mean my final collecting days were spent in tidal waters gathering these remarkable specimens in Florida — an unusual experience, that one's mineral collecting over a long period of time should begin and end in the water, almost the last place to look for mineral specimens.

We who collect minerals as a hobby have much to be thankful for. Our interest takes us from what may be called the drudgery of an everyday existence. We see in these mineral crystals a continual struggle for perfection; they show the marvelous work of Mother Nature produced when she was in one of her best moods. To study and to ponder over these creations is a diversion that cannot help but make this a happier world to live in and the approaching night seems but the awakening of a new dawn. It's been a great life.

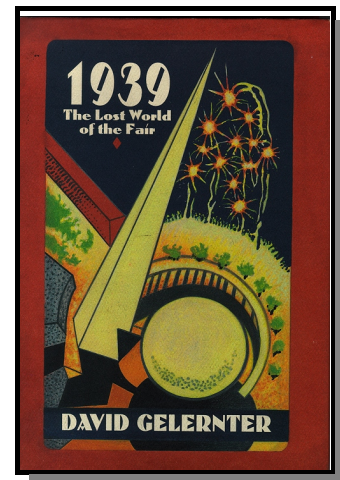
Official Fair Guide Book

Pictured here is the “*Official Guide Book*” for the 1940 Fair. There are many editions of this book, which contains 168 pages. It was first made available in early 1939, even before the Fair was officially opened. The Guide Book lists all pavilions and exhibitions, the members of the Fair’s Board of Directors, Committees, and management staff, in addition to generic Fair information. It is a good source for pavilion descriptions and exhibition content.



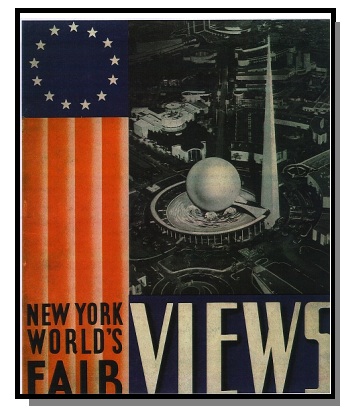
1939: The Lost World of the Fair

Pictured here is a recent book by David Gelernter (Free Press, New York, 1995) that gives a “virtual reality” picture of the Fair. Better than any other book that I have read, this work gives you a feeling and emotional sense of going to the Fair (in addition to providing human-level details). Highly recommended.



Views of the New York World's Fair

Pictured here is a 48-page book published by the Quality Art Novelty Company, Inc of Long Island City, N.Y (1939). It has little text but does have black & white photographs of virtually every building, event, fountain and sculpture at the Fair. Since most of the photographs have people in them, it gives a great sense of the Fair’s scale and grandeur. This is a rather rare (and expensive!) book.



Additional Supporting Documents

Endnotes and References

1. It is beyond the scope of this paper to delve too deeply into the Fair itself but an overview of it is needed to properly place the Fair's mineral-related exhibits and Mineral Day into some context. There are hundreds of books and articles available about this Fair. *1939: The Lost World of the Fair*, Free Press, New York, 1995 by David Gelernter is a wonderful book about the New York Fair written by a prominent scientist.

2. *New York Times*, June 17, 1940.

3. The actual theme song, *Rising Tide*, by William Grant was played continually in the Perisphere.

4. Donald J. Bush, *The Streamlined Decade*, Braziller, New York, 1975, p. 3.

5. See *The New York World's Fair in Pictures*, Quality Art Novelty Co., Long Island City, NY, 1939, for stunning photographs of many views of the Trylon and Perisphere.

6. Larry Zim, Mel Lerner, and Herbert Rolfes, *The World of Tomorrow: The 1939 New York World's Fair*, Harper & Row, 1988.

7. *Voices from the 1939 New York World's Fair* Internet website.

8. *Rocks and Minerals*, February, 1940, p. 60.

9. Activities, displays and international information related to minerals, mining and gems were present at the show even before Mineral Day on June 17, 1940. Some additional information about this will be discussed towards the end of this paper.

10. *Rocks and Minerals*, March, 1940, p. 89.

11. *Rocks and Minerals*, April, 1940, p. 129.

12. *Rocks and Minerals*, May, 1940, p.161.

13. Ibid. Peter Zodac, a Committee member, is not specifically cited as the source of this good news but it was likely from him since he was R&M's editor at the time. The Paris Exposition of 1900 has also been labeled the "greatest" mineral show of all time. People in the mineral world are rarely at a loss for hyperbole.

14. Ibid.

15. The promoters of the Munich and NYC mineral shows have continued this tradition of designing attractive gummed labels for use on mailings to promote their show.

16. John Riccardelli, a 1939/40 NY Fair expert, says that there is a blue and silver as well as a multicolored version of this label. He owns one of them in mint (unused) condition but he has never seen one used on a mailed envelope in 25 years of collecting and dealing in '39-'40 Fair memorabilia. The image of the Mineral Day stamp was supplied to me by Dr. J. Alexander

Speer, Executive Director of the Mineralogical Society of America on January 30, 2001.

17. Notice from the June 1940 *Rocks and Minerals*.

18. Headline and related stories, *New York Times*, June 17, 1940. With Paris fallen and the German conquest of France reaching its conclusion, Marshal Henri Pétain replaced Paul Reynaud as prime minister and announced his intention to sign an armistice with the Nazis. The next day, French General Charles de Gaulle, not very well known even to the French, broadcast from England, urging his countrymen to continue the fight against Germany. A military hero during World War I, Pétain was appointed vice premier of France in May of 1940 to boost morale in a country crumbling under the force of the Nazi invasion. Instead, Pétain, who took over the reins of the French government after Reynaud chose resignation over surrender, decided to arrange an armistice with the Nazis. The armistice, signed by the French on June 22, went into effect on June 25, and more than half of France was occupied by the Germans. In July, Pétain took office as “chief of state” at Vichy, a city in unoccupied France. The Vichy government under Pétain collaborated with the Nazis.

19. *Rocks and Minerals*, June, 1940, p.189.

20. The same Fair expert mentioned above says there was a button distributed. He has never seen one in person but saw one listed for sale (at \$350!) in a “pins and buttons” auction catalog.

21. *New York Times*, June 18, 1940.

22. Bruton, Eric; *Diamonds*, 2nd Edition; Chilton Book Co., Radnor, PA, 1978.

23. *New York Times*, June 18, 1940.

24. *Rocks and Minerals*, August, 1940, p.255.

25. For a good biography of Manchester (1871-1948) consult the *Bulletin of the New York Mineralogical Club*, October 1998 in which his obituary is reproduced.

26. Wilson, Wendell E.; L'Exposition Universelle de 1900 - Paris: The Greatest Mineral Show of All Time; *Mineralogical Record*, Vol 21, No. 1, Jan-Feb 1990, pps. 63-82. Once again there are many New York Mineralogical Club connections at this earlier show. For example, Wilson's article is mostly composed of George Kunz' description of mineral and gem exhibits at this show (they are reproduced in full). There are excellent pictures, diagrams and references throughout the article.

27. Taken from the back of the *Halls of Metals* postcard illustrated above. Architects of the Metals Building were William Gehron and Morris & O'Connor.

28. Internal Museum memo to Mr. Rex Johnson, November 13, 1940 (See Appendix for a copy)

29. *Official Guide Book - The World's Fair of 1940 in New York - For Peace and Freedom*; Rogers, Kellogg, Stillson, Inc.; New York, 1940, p.77. According to a research assistant in the Library of Congress that I spoke to on August 15, 2000, you can use a multiplier of 12 to equate 1940 dollars with a dollar today. She based her reply on a 1995 Department of Labor table of the

historical value of the U.S. dollar. The value of \$14 million in 1940 would thus equate today to the staggering amount of \$175 million.

30. Ibid. Today's value: \$96 million (see previous note).

31. Ibid.

32. **Tiffany's 20th Century: A Portrait of American Style** by John Loring; Harry N. Abrams, New York, 1997 p.92.

33. Ibid, p 110.

34. Ibid, p.111.

35. The Jewelry and Gemstones of Tiffany & Co. 1853-2000 exhibition pamphlet.

36. ExpoArchive.com

37. **Official Guide Book - The World's Fair of 1940 in New York - For Peace and Freedom**; Rogers, Kellogg, Stillson, Inc.; New York, 1940, p.18.

38. **Belgian Pavilion Official Guidebook**, p.28.

39. **Diamond** flyer, p. 13.

40. **Official Guide Book - The World's Fair of 1940 in New York - For Peace and Freedom**; Rogers, Kellogg, Stillson, Inc.; New York, 1940, p. 23.

41. Internal Museum memorandum to Mr. Rex Johnson, November 13, 1940 (See Appendix).

42. ExpoArchive.com.

43. **Official Guide Book - The World's Fair of 1940 in New York - For Peace and Freedom**; Rogers, Kellogg, Stillson, Inc.; New York, 1940, p.55.

44. **1940 Guide to the British Pavilion**, p.10.

45. The real Crown Jewels cannot legally be moved out of England according to Ken Scarratt, an expert on the Jewels. He related this information during a lecture delivered to the New York Mineralogical Club on November 10, 1999.

46. ExpoArchive.com.

47. Testimony from a telephone conversation held with D. Trevas on July 13, 1999.

48. **Norway: Norwegian Trade Review**, Vol. 10 #4, 1939 p. 14.

49. ExpoArchive.com.

50. ExpoArchive.com.

51. ExpoArchive.com.

52. Testimony from a telephone conversation held with I. Horowitz on July 19, 1999.

53. See ExpoArchive.com for most of the information in this section.

54. *Official Guide Book - The World's Fair of 1940 in New York - For Peace and Freedom*; Rogers, Kellogg, Stillson, Inc.; New York, 1940, p. 126.

55. The floor plan is taken from the *Official Guide to City of New York Exhibit Building: New York World's Fair 1939 and 1940*. See copy of "Exhibits" memo taken from the AMNH archives. The building is one of the few still standing today, home to the Queens Museum. It also briefly housed the United Nations.

56. *Rocks and Minerals*, August, 1940, pps. 255-260. Reprinted with permission.