# Ikons

## *Classic and Contemporary Masterpieces*

*Wayne A. Thompson*

# Ikons, Classics, and Contemporary Masterpieces

## *of Mineralogy*

Wayne A. Thompson

*A Supplement to*
The Mineralogical Record
2007

*Dedicated to*

my wife, Laura (who passed away October 3, 2006, following a long battle with cancer), for supporting me in all the risks inherent in the buying and selling of minerals; for accompanying me to remote areas of the world, from Pakistan to Mexico; for encouraging me (as a collector in her own right) to keep rather than sell particular specimens; and for the many times she has crawled fearlessly into underground workings to help me dig specimens in the San Francisco, the Flux, the Red Cloud, the Old Yuma and the Grand Reef mines, as well as the Morenci open pit. She has been the most supportive partner any mineral collector could ask for.

In addition to all that, I can't thank her enough for bringing Stevia into our lives.

And I want to thank Stevia for simply being herself.

FRONT COVER: "Blue-Cap" Tourmaline, 13.2 cm, from the Tourmaline Queen mine, San Diego County, California.

BACK COVER: Copper, 13.5 cm, from the Ray Mine, Pinal County, Arizona.



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# Contents



***Species Index:***

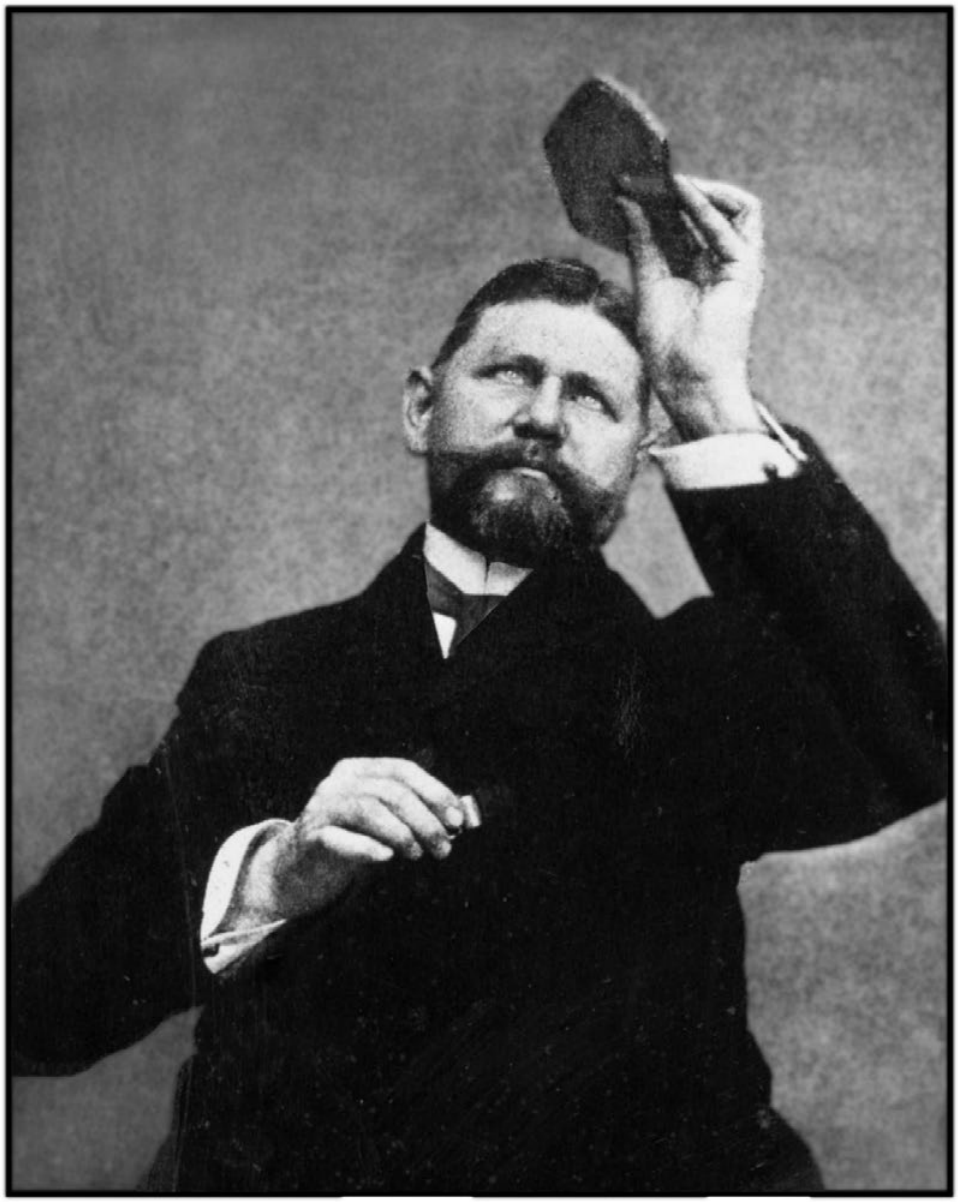
**Showcase of world-class specimens**
**In the collection of Gene and Roz Meieran**

# Introduction

The photos and text presented here are intended to provide a better understanding of a very esoteric and often mysterious subject: the collecting of "world-class" mineral specimens. This is an area of high exclusivity and high financial stakes, nearly inaccessible to most collectors. I hope to give a view here into that mystique. It has been my good fortune over the years to have known many of the world's top mineral collectors, and to have owned or handled many world-class specimens. Consequently it seems appropriate to select examples from among those specimens to illustrate here, documenting for historical purposes the stories of how and where they were found, how I acquired them, and the collections they have been a part of.

What makes a "world-class" specimen—one which, in simplest terms, is suitable for inclusion in the world's finest mineral collections? The question encompasses several categories based on distinctions that most collectors have probably not considered. Some specimens have an unforgettable visual presence, such that their images stay in the memory of the viewer. Some combine exceptional quality with important provenance and historical significance. Others, although collected too recently to be considered "historical," are among the finest of their type. The common unifying factor is the exceptional quality of each piece, but the particular historical aspects and the flavor, so to speak, of their aesthetic impacts can also serve to categorize them in meaningful ways. To discuss these fine points requires terminology: I call the three main categories "ikons," "classics," and "contemporary masterpieces," and will discuss them in more detail in the chapters that follow. All world-class specimens will fit into one of these categories (and some may fit in two).

A brief discussion of the factors that determine quality, value and investment potential is followed by some practical suggestions for collectors who wish to personally build world-class collections. It's true that most readers of the *Mineralogical Record* may not have an opportunity to own such specimens. But then, neither will most of us ever have the opportunity to own a painting by Rembrandt, DaVinci or Van Gogh. Our inability to own them personally need not prevent us from appreciating them and learning all we can about them. On the contrary, world-class specimens are important, universally acknowledged focal points of study. In many ways, studying the Old Masters teaches us things about art that we could not hope to learn from lesser works, and so it is with the greatest mineral specimens—specimens that have achieved the pinnacle of development and perfection in ways only hinted at by lesser specimens. This book is dedicated to the appreciation of such objects as the ultimate expressions of mineralogy.



**This photograph of George F. Kunz holding a superb crystal of kunzite from The White Queen mine in California lends important provenance to the specimen today (it is in the collection of William Larson). Kunzite, the pink gem variety of spodumene, was named after Kunz in 1902.**

# Categorizing World-Class Specimens

## IKONS

An "ikon" can be defined as the ultimate object of comparison. All mineral specimens of the same species, and often all mineral specimens of *any* species, are to be compared to ikons in discussions of quality, significance, impact and memorability. Ikons are aesthetically perfect in their own way. They have "star quality"; once seen, they are utterly unforgettable. Ikons may not possess the very largest crystals, and may not represent the very best colors, but there is something about them that is visually riveting, something that makes all collectors desire to possess them. Ikons achieve their lofty status purely on the basis of visual impact, with little or no consideration of provenance, history, or individual physical qualities. Examples exist in all fields. John Wayne may not have been the most handsome actor, or the most technically skillful in his acting, but he was undeniably a Hollywood ikon who may never be equalled in the public mind. The escalation in value that is typical of an ikon (like the pay scale commanded by Hollywood's top stars) is an excellent example of what collector Steve Smale has called the "Van Gogh Effect." This effect operates when the value of a specimen spikes so rapidly and so high that it nearly defies logic.

Some examples will help to make this definition clear. Ikons pictured in the book *Masterpieces of the Mineral World* (2004) by Joel Bartsch and Wendell Wilson include the following:

The Morganite from the White Queen mine, California (plate 8)
The Cerussite from the Kombat mine, Namibia (plate 19)
The big Copper crystal, from Upper Michigan (plate 23)
The V-shaped Crocoite from Tasmania (plate 27)
The "Rabbit-Ears" Tourmaline from the Tourmaline Queen mine, California (plate 31)
"The Dragon" Gold from the Colorado Quartz mine, California (plate 41)
The Ludlockite from the Tsumeb mine, Namibia (plate 51)
The "Alma Queen" Rhodochrosite from the Sweet Home mine, Colorado (p. 62)
The apple-green Smithsonite from the Tsumeb mine, Namibia (plate 72)

It is a measure of their status as ikons that all of these specimens could have been captioned by sentences beginning "The famous . . ." Most knowledgeable collectors will not have to bother looking these up to know which specimens I'm talking about.

## CLASSICS

"Classic" is a term applied both to great minerals and to the localities that produced them, usually in the 19th or early 20th centuries. A "classic" mineral specimen is among the finest known representatives of its species—or at least it was so in its time. Classic localities (virtually all of them now extinct) exist throughout Europe, where mineral collecting got its start in the 16th century, but others are scattered around the world. True mineral classics are extremely collectible, are nearly impossible to obtain, and are among the best investments in the mineral world. The main reason why they are nearly unobtainable is that, like DaVinci paintings, the best ones were long ago acquired by the great museums of the world and are no longer in private hands.

Classic localities, as mentioned, are usually "extinct"—that is, worked out or inaccessible, with little or no chance of ever producing again. The specimens for which some classic localities are famous may have been challenged or bettered by newer discoveries, but their status as classics remains. For our purposes, a mineral specimen must be of the highest quality, the same quality that distinguished the best from the locality in its heyday, in order to be called a "classic." For example, although Kongsberg, Norway is a "classic locality" for wire silver, not every specimen of wire silver from Kongsberg ranks as a classic *specimen*—just the very best ones.

Some examples of classic localities and their classic specimens include the following (among many others):

Epidote from Knappenwand, Austria
Manganite from Ilfeld, Germany
Galena from Neudorf, Germany
Silver from Freiberg, Germany
Pyromorphite from Bad Ems, Germany
Elbaite from the Island of Elba, Italy
Sulfur from Agrigento, Sicily
Azurite from Chessy, France
Hematite "roses" from Switzerland
Pink fluorite from the Swiss Alps
Bournonite from the Herodsfoot mine, Cornwall, England
Barite from Frizington, England
Stibnite from Ichinokawa, Japan
Blue topaz from Mursinka, Ural Mountains, Russia
Proustite from Chañarcillo, Chile
Chalcocite from Bristol, Connecticut
Wulfenite from the Red Cloud mine, Arizona
Purple apatite from the Pulsifer quarry, Maine
Leaf gold from Breckenridge, Colorado.

Here again, it is worth examining some examples pictured in the literature (if only just for the fun of it!). Classic specimens in the book *The Smale Collection* (2006) by Steve Smale include the following:

Galena, Neudorf, Germany (p. 8–9)
Silver, Kongsberg, Norway (p. 10–11)
Pyrargyrite, Andreasberg, Germany (p. 14–15)

Manganite, Ilfeld, Germany (p. 31–32)
Chalcocite, Cornwall, England (p. 38–39)
Heliodor Beryl, Ural Mountains, Russia (p. 48–49)
Bournonite, Cornwall, England (p. 64–65)
Copper, Michigan (p. 68–69)
Gold, Romania (p. 70–71)
Wulfenite, Red Cloud Mine, Arizona (p. 78–79)
Epidote, Austria (p. 88–89)
Hematite, Cavradi, Switzerland (p. 92–93)
Acanthite, Guanajuato, Mexico (p. 132–133)
Galena, Pseudomorph after Pyromorphite, Germany (p. 154–155)
Azurite on Malachite, Bisbee, Arizona (p. 184–185)
Silver, Kongsberg, Norway (p. 186–187)

Classics are unlike ikons in that most collectors will *not* immediately be able to conjure up an image in their minds of Steve's *particular* specimens of these classics, though all reasonably knowledgeable collectors are very familiar in general with the kinds of specimens that have come from these classic localities.

## CONTEMPORARY MASTERPIECES

The term "masterpiece" is adopted here from the title of the book by Joel Bartsch and Wendell Wilson on the greatest minerals in the Houston Museum of Natural Science: *Masterpieces of the Mineral World*. Wilson and Bartsch, in turn, took the term from the permanent exhibit of great specimens in the Hillman Hall of Minerals and Gems in the Carnegie Museum of Natural History, called the "Masterpiece Gallery." They do not attempt to subdivide the Houston "masterpieces" on the basis of aesthetics, provenance, age or other factors.

The term "masterpiece" is a good one, implying the greatest work of a particular artist (in this case, the artist being Nature); a masterpiece is the work that elevated him or her to the rank of "Master." In a sense, all world-class minerals are true masterpieces of Nature, of the Mineral World, as the Carnegie exhibit and the Houston book admirably demonstrate. But for our purposes here we need to specify those masterpieces that have been dug from the ground relatively recently and do not qualify as "classics" in the historical sense. Some people might call them "Contemporary Classics." If used at all, the term "contemporary classics" should be reserved for specimens produced relatively recently from occurrences that were classic, pre–World War II localities. Tsumeb dioptase would be one example: great specimens came out in the 1920's and 1930's, and again in the 1970's when the "second oxidation zone" was discovered.

I much prefer "Contemporary Masterpieces" as the designation for world-class specimens collected in the post–World War II era, from localities that were unknown as the source of great specimens before that time and which may or may not still be producing. Experience has shown that, although they are somewhat riskier investments than true historical classics, the very best specimens from post-war discoveries are hard to beat. The market value of these pieces may fluctuate somewhat if production continues, but buying the best almost always pays off in the end. Rhodochrosite from the N'chwaning mine in South Africa is a good example of a great mineral that experienced some volatility in price while specimens were actively being mined, but the finest specimens are now highly sought after and are worth many times the original selling price of 30 years ago.

**Showcase of world-class specimens**
**In the collection of Steve Neely**

**Showcase of world-class specimens**
**In the collection of Wayne Sorensen**

# Building a World-Class Collection

## PRE-REQUISITES for building a world-class collection:

(1) **Knowledge**
(2) **A Clear Goal**
(3) **Ambition and aspiration**
(4) **Patience**
(5) **Financial Resources**
(6) **A good memory** (or at least a good camera)
(7) **A Discriminating Mind**
(8) **Decisiveness**
(9) **Courage**
(10) **Equanimity**
(11) **Access**

## KNOWLEDGE

Knowledge is the most important commodity in collecting. Fortunately, the acquisition of that knowledge is an enjoyable process!

**Step one: The Mineralogical Record** has been the international journal of serious mineral collecting since its inception in 1970, and its current editor-in-chief has been at the helm for over 30 years. *The Record*, as it is known, is the voice of experience and authority in our field. So the first step an aspiring world-class collector should take is to acquire a complete set of back issues, and a subscription. Read the whole run of issues and you will develop a perspective on the development and history of mineral collecting, along with a wealth of information on minerals and their localities. Sometimes whole sets can be purchased through booksellers. Many issues are still in print and can be purchased in mint condition through the magazine's website, www.MineralogicalRecord.com. The website itself is also a rich trove of information, including a regular online column by Thomas Moore on things that are new in the Mineral World.

**Step two: Acquire other references** pertinent to world-class collecting. Most of these will include (like the *Mineralogical Record*) good color photography of excellent specimens, and background information on minerals and localities. A good mineralogy text can answer basic scientific questions about mineralogy—John Sinkankas's *Mineralogy for Amateurs* (1962) is an old stand-by which includes good information on the best localities known prior to 1962. The *ExtraLapis* series of softcover books on specific topics is excellent, with superb photography. Peter Bancroft's *Gem and Crystal Treasures* (1984) is probably the greatest, most heavily illustrated treatment ever published on connoisseur-level mineral collecting. *Masterpieces of the Mineral World* by Joel Bartsch and Wendell Wilson (2004) and *The Smale Collection* (2006) by Steve Smale are entirely devoted to documenting great minerals and the information

needed to understand the basics of collecting world-class specimens. The first two so-called "coffee-table books" published for modern-era mineral collectors were *The Mineral Kingdom* by Smithsonian curator Paul E. Desautels (one of the great mineral connoisseurs of all time), and Harvard mineralogist Cornelius Hurlbut's *Minerals and Man*, both published in 1968—copies are easily available on the used book market.

With these works as a start, your personal mineralogical reference library is off and running! You can then acquire additional books on whatever collections, minerals or localities might interest you as time goes by. The main point of this recommendation is simply to avoid collecting in a vacuum! Gather as much information as you can to help you make informed purchases and to enjoy what you buy.

**Step three: See real minerals** by visiting the great mineral museums. In the U.S. these are the Smithsonian Institution (U.S. National Museum of Natural History) in Washington, DC; the American Museum of Natural History in New York City; the Carnegie Museum of Natural History in Pittsburgh; the Natural History Museum of Los Angeles County; the Seaman Mineral Museum in Houghton, Michigan; the Harvard Mineralogical Museum in Cambridge, Massachusetts; and the Houston Museum of Natural Science. In Europe there are also great mineral museums, such as the Natural History Museum in London (formerly called the British Museum); the Natural History Museum, the School of Mines Museum and the Sorbonne in Paris; the National Museum in Prague, and many more. The best guide to these is Ulrich Burchard's *Mineral Museums of Europe* (1986). That work covers only Western Europe, however; Eastern Europe is covered in the *Mineralogical Record*'s special-topic 1988 issue on *Mineral Museums of Eastern Europe* (vol. 19, no. 1—still in print). When you visit museums, be bold and see if you can introduce yourself to the curator. If he has some time to spend with you, you can learn a great deal by asking questions.

It is also important to see mineral specimens in private collections. This means becoming involved socially in the Mineral World, introducing yourself around, getting to know the top collectors, and making visits to see their collections. You'll find that most serious mineral collectors are always delighted to show off their collections and talk about them.

As you study the holdings of the various museums and private collectors you will be building a mental databank of images that you will refer to for the rest of your collecting life. Take notes if necessary. Bring a camera to take snapshots, or a small video camera. Often, what you see will not be pictured in any book or reference work, so your personal experience will become an increasingly important factor in your growth as a mineral collector.

**Step four: Attend mineral shows**—any shows you can, but the big ones are the best**.** In conversations among collectors these are generally referred to by the city name alone. The five most important shows are: (1) ***Tucson*:** The Tucson Gem and Mineral Show, with its dozens of associated "satellite" shows, is the annual Mecca for mineral collectors, literally the greatest show on earth for minerals (first two weeks in February). (2) ***Munich:*** The Mineralientage München, or "Munich Mineral Days," is the no. 2 mineral show in the world (held in November, right after the Oktoberfest). (3) ***Denver:*** The Denver Gem and Mineral Show and associated "satellite" shows, held in mid-September and considered to be the no. 2 show in the United States. (4) ***Springfield:*** The East Coast Gem and Mineral Show in Springfield, Massachusetts, held in August. (5) ***Sainte Marie:*** The Sainte-Marie-aux-Mines Show in France, Europe's no. 2 show (held in late June).

Mineral shows are the best places to meet other collectors, and to see special exhibits of great specimens in private collections as well as museum specimens not

normally on public display. Introduce yourself around, and you will find that mineral collectors are a remarkably friendly group of people. Specify that you are a new collector trying to learn the ropes, and people will bend over backward to help you. And while you're there, stop by the *Mineralogical Record* booth and introduce yourself. Members of the editorial staff are usually there or nearby at Tucson, Denver and sometimes other shows as well. They'll be delighted to meet you, and can help you locate information and people you are looking for.

**Step five: Research the dealers.** The dealer community in the field of mineral collecting is one of the most diverse, interesting, idiosyncratic, passionate and knowledgeable groups of people on the face of the earth. Have fun talking with them, asking questions, and getting to know them. Take notes on their various specialties, so that later you will know whom to go to for what. Check out their biographies in the "Label Archive" section of the *Mineralogical Record* website—a unique resource for people wanting some background on specific dealers. Talk to other collectors and learn what kinds of experiences they've had with various dealers. And try to find out who the top collectors are getting their specimens from. Above all, study the dealers' stocks of specimens, especially right when the show opens, before some of the best things have been sold. See if they'll let you have a look at any "special" specimens they may have under the counter, or set aside for other buyers. Check out their prices, and make what comparisons you can.

**Step six: Take the plunge.** You are now ready to *cautiously* start buying. But first, go back and look again at the three best books on world-class minerals (Bancroft's *Gem and Crystal Treasures*, Wilson and Bartsch's *Masterpieces of the Mineral World* and Steve Smale's *The Smale Collection*). You should now have a clearer perspective on the significance of those pictured specimens. They are not just "good" specimens; they are some of the finest specimens in the world. Many of them are the standards to which you will be comparing other specimens for years to come.

You have by now identified dealers who offer the quality you want, and you have confirmed that they are honest and honorable and that their prices are not wildly out of sync with the market. You have also developed your own taste somewhat, and have found certain kinds of specimens to be particularly appealing—your acquisition targets. Remember that experience is a teacher and that you will inevitably make some mistakes. Be philosophical about it: no education is free, and buying the wrong piece, or not buying the right piece, is all part of the learning process. When you find what you want, don't hesitate to claim it for yourself immediately. Competition can be stiff for the best specimens. Great pieces don't wait for slow buyers! While you're hesitating, another collector is liable to buy it. Top collectors such as Sandor Fuss, Bill Larson, James Horner, Eric Asselborn and Mike Bergmann are all masters of this tactic.

It does not hurt to show your acquisition to top collectors privately and ask for their "off the record" critique of the piece. Although the opinions you will get usually vary to some degree, most top collectors will be close in their assessment of a great mineral.

## A CLEAR GOAL

A clear goal is obviously necessary if you are to avoid purchasing randomly. Know the kind of collection you want to build, and avoid the temptation to buy specimens that don't fit into your master plan. Add to your collection but don't clutter it!

That doesn't mean you can't specialize, or even have multiple goals. Many top collectors have built collections within their collection, and a few have let a sub-collection overtake their entire collection. Bill Larson has over 20 sub-collections! Eric Asselborn's pyromorphite, fluorite and French collections are exceptional. Mike Bergmann's metallic suite is superb, and Wayne Sorensen is building a Pakistan-Afghanistan sub-collection that may grow to dominate his collection. Gene Meieran and Les Presmyk have evolved into collecting almost exclusively gem minerals and Arizona minerals respectively. Steve Smale is proud of his tourmaline sub-collection (a centerpiece of his entire collection).

Specializing allows the addition of pieces that, by themselves, may not seem meaningful, but in the context of a sub-collection can take on great importance. Specialty collections allow a collector to focus his or her attention and resources on a much narrower area and to build collections that make a clear statement. Gene Meieran, for example, has even started a sub-collection within his sub-collection—building what may be the world's finest aquamarine collection, hidden among his numerous great gem crystals.

Bill Larson derives satisfaction from adding a small, cute blue tourmaline to his Namibian collection, or from adding one of the world's finest single peridot crystals from Burma.

Another common specialty is the collecting of single crystals without matrix. Many crystals occur in nature as single crystals, with no attached matrix or other crystals. Others become singles by being broken from matrix accidentally, or deliberately by gem miners who sell them as gem rough by the kilo or gram in some distant part of the globe. Such crystals may be rather simple in a sculptural sense, but remember that their rating is based only on crystal quality. An average tourmaline crystal growing from a beautiful feldspar matrix with associated minerals can be a great tourmaline specimen, even though the quality of the tourmaline crystal itself may be middling. A single crystal, on the other hand, is either great or it is not great. Great single crystals are both valuable and collectible. Doubly terminated singles are even better if all other factors remain the same.

Gene Meieran, Steve Smale and Bill Larson all have magnificent collections of single crystals; these were on display at the 2000 Tucson Show, and most collectors who saw them were duly impressed by the beauty and quality of these specimens.

Goals can change over time. Collecting philosophies evolve with longevity in collecting, and most advanced collectors can trace the changes they have gone through over the years. In the 1960's and early 1970's I was only interested in wulfenite, azurite, vanadinite and other secondary copper-lead-zinc minerals. When Bill Larson and Ed Swoboda hit the now-famous blue-cap tourmaline pocket of 1971/2, I had little interest in tourmaline. But by the late 1980's my interest had shifted to minerals from Brazil, Pakistan and Afghanistan, and the array of great gem minerals found there, including tourmaline. Somewhere along the way, I also acquired a love for silver and gold specimens and the silver sulfosalts. With the acquisition of Eric Asselborn's world-wide suite, which included many great classics, my own attention has been drawn to that area. Gene Meieran, Wayne Sorensen, Mike Bergmann, Steve Neely, Eric Asselborn, Stuart Wilensky, Sandor Fuss and many others have all gone through similar alterations in direction.

## OTHER FACTORS

Knowledge and a clear goal are the two most important factors in building a great collection. The other ten characteristics on the pre-requisites list, while important too, can be described more succinctly. **Ambition and aspiration** are obviously necessary if anyone is going to accomplish great things. Financial resources are as

essential in connoisseur-level collecting as in any comparable field. **A good memory** (or good photographic records) also helps in making critical judgments and decisions about purchases. **A discriminating mind** is particularly essential, inasmuch as fine distinctions and small differences can make the difference between merely good and masterpiece-level mineral specimens.

**Decisiveness**, as mentioned, is especially important. Competition for the best specimens is intense, and if you can't make up your mind, some other collector is liable to step in and eat your lunch. As might be expected, those people who have been the most financially successful in business are also often the most decisive—it tends to go with the territory. Likewise the courage to take risks and go with your gut feeling sometimes can be of great benefit in business as well as connoisseur-level collecting. Go with your strengths. **Equanimity** is also important. When you make mistakes, as we all occasionally do, there is no point in agonizing about them. Cut your losses, chalk it up to the price of doing business, and benefit from the lesson learned.

Of course, the final requirement is simply gaining **access** to the dealers who sell the kind of specimens you like. The collector must do what is necessary to make the connections.

**Showcase of world-class specimens**
**In the collection of Stuart Wilensky**

# Desirability Factors
## *In Mineral Specimens*

Quality, dollar value and investment potential are all intimately related factors in connoisseur-level mineral collecting. Their determinants and their interactions must be carefully assessed and understood if a collector is to successfully build a world-class collection on his own. The components or features that are important in evaluating the desirability of a specimen and its suitability for inclusion in a world-class collection are as follows:

(1) Aesthetics
(2) Condition
(3) Rarity
(4) Associations
(5) Matrix
(6) Provenance
(7) Ranking
(8) Crystal Size
(9) Specimen size

Wendell Wilson, in his essay on "Connoisseurship in Minerals" (*Mineralogical Record*, January-February 1990), addressed these factors, as did Wilson and Bartsch in *Masterpieces of the Mineral World* and Steve Smale in *The Smale Collection*.

## AESTHETICS

Aesthetics is the word most commonly used in mineral terminology to sum up the visual appeal of mineral specimens. It is used repeatedly in books about great specimens and by dealers and collectors describing their best specimens. A single, simple definition of its meaning is elusive—beauty is, of course, in the eye of the beholder. But there is general agreement on the aesthetic factors which make mineral specimens attractive and valuable. These factors are color (rich and clean), luster (bright), transparency (for minerals that can possess this property), morphology (well-formed crystals), overall sculptural quality and arrangement of crystals, and the presence of a comfortably positioned visual focal point or "main crystal."

## CONDITION

***Damage***

As with almost all collectibles, damage in mineral specimens is usually detracts from desirability and value. The lack of any significant or noticeable damage is always very important to the value of a mineral specimen, especially a world-class specimen. We must recognize that absolute perfection is not attainable in nature, at least in specimens larger than microscopic, but nevertheless the lack of visual distractions which are the result of damage is extremely important.

The location of damage is also critical. A tiny near-microscopic nick or chip (referred to as a "wilber") at the base of a crystal is far less important and damaging to value than one at the top or on the termination of the main crystal. The more visible the damage, the more detrimental it is to value. However, while serious damage has a severe effect on the value of a great piece, it does not always exclude a piece from greatness, especially if there are no comparable but undamaged specimens known. Furthermore, some forms of damage can be visually mitigated to some extent—sometimes restoring much of the lost value of the piece.

***Repairs***

Repairs to a mineral specimen are never desirable, but are often unavoidable and are therefore generally accepted, even by the strictest collectors. Steve Smale owns a few repaired specimens (see p. 12 azurite-malachite and p. 4 bournonite in *The Smale Collection*); Eric Asselborn has one as well. Some pockets of great minerals suffered damage long ago from natural forces in the earth, and the specimens that were later recovered all needed repairs (blue-cap tourmaline from the Tourmaline Queen mine is a prime example); others grew in a way that has made them nearly impossible to collect intact. For these reasons, some minerals almost never come unrepaired—you either accept a repaired specimen from the find or you have none at all. The fact is that many of the world's finest mineral specimens are repaired (including, for example, what is by far the world's best phosphophyllite specimen); thus it is impossible to collect the world's finest specimens without accepting the concept of repair.

Of course, the less visible the repair, the better both for the aesthetics and the value. A skillful, more or less invisible repair may devalue a piece by 5% to 20%. Multiple repairs can reduce the value even more; a very noticeable repair may devalue a piece by 20% to 50%. However, some pieces are so great that they are virtually priceless. Being both priceless and repaired raises a interesting question: if they were not repaired, would they be even *more* priceless? The big phosphophyllite, the Bancroft ("Alma Queen") rhodochrosite, and the "Candelabra" and the "Rabbit-Ears" blue-cap tourmalines are all repaired and some are gap-filled. Yet they hold the very highest rank in the mineral hierarchy. When a piece is beyond compare, so great that it is unbeatable, the repair stops being a factor in its value and in its standing in the mineral world. A specimen of this kind is simply what it is—one of the finest mineral specimens known.

Other top collectors who have accepted repairs as an unavoidable part of collecting great minerals include Bill Larson, Gene Meieran, Wayne Sorensen, Ed Swoboda, Dave Wilber, Steve Neely, Stuart Wilensky, Mike Bergmann, and James Horner.

Of course, when offered for sale, any mineral specimen that has been repaired or subjected to any other such work by a preparator should be clearly labeled and/or verbally described as such.

***Reinforcement***

Properly, the term "repair" refers to the reattachment of detached pieces in their precise original position. In the case of reinforcement, the parts have not yet become detached but, because of inherent structural weaknesses or incipient fractures in the specimen, they are *in danger* of becoming detached. Should they eventually break all the way at an awkward moment, irreparable damage, shattering or crumbling might result, and this needs to be protected against. Most collectors approve of reinforcing the weak areas with penetrating binding agents to strengthen and protect the specimen. The only caveat is that the treatment and chemicals used must be specified to new owners, so they don't inadvertently wash the specimen in a chemical that

will attack the binding agent, or subject the specimen unnecessarily to additional reinforcement.

***Fracture-Sealing and Gap-Filling***

In some cases where a specimen has been repaired, small fragments that were crushed or lost cannot be included, and slight gaps result. This kind of damage is commonly seen in gem crystals that were broken by natural tectonic movements or by forces that result when pegmatite pockets suffered explosive decompression during formation. A visible gap can often be sealed with a transparent plastic compound to produce a more pleasing visual effect.

Although still a little controversial, the practice has gradually gained acceptance for use on great specimens by most top-level collectors. The effect on the value is similar to that of a repair—perhaps a reduction in value of 5% to 10%. The rationale is simply to assure that a relatively trivial defect does not distract from the overall visual impact of a truly great specimen. Many well-known great specimens are fracture-sealed and are accepted by most top collectors. The great Azurite on green Smithsonite in *Masterpieces of the Mineral World* has such a filled gap. And, truth be told, most people who have the chance to see and admire these great specimens in person obtain more pleasure from the experience, even if they know exactly where the filled gap is.

In this book, the pink topaz has tiny filled gaps. Many of the blue-cap tourmalines also needed gap-filling or fracture-sealing, as do many other great tourmalines, aquamarines, etc.

***Restoration and Reconstruction***

Many potentially very beautiful and impressive specimens have suffered the loss of larger, less trivial chunks of matrix or crystal than those covered by gap-filling and fracture-sealing techniques. Some of these specimens are worth restoring, rather than simply being discarded or sold for faceting rough. Missing areas can be rebuilt to appear as natural as possible, and missing portions of crystals can be filled with colored epoxy or plastics, and can be finished to simulate the natural surfaces. Missing matrix can be rebuilt with similar materials from the same pocket, such as cleavelandite and mica.

For any potentially great but seriously damaged specimen, everyone devoutly wishes that restoration had not been necessary. But they also want to get some idea of what an important specimen like this might have originally looked like in all its pristine glory. As mineral values rise, restoration is becoming more common, and is a subject of much controversy. But imagine this: suppose the fragments of a lost painting by Leonardo DaVinci were discovered in an excavation in Florence, and 80% of the original painting could be pieced back together. Would art preparators do this, filling in the gaps to make them less conspicuous, or would they just discard the pieces? Would a wealthy private collector jump at the chance to own a real DaVinci, the only one in private hands, even if only 80% complete, or would he turn up his nose?

Each collector must evaluate if and when to accept specimens that have been restored, and must determine the restoration's effect on value and salability. Restoration has a much greater effect on specimen value than repair or fracture-sealing. However, some of the world's finest specimens have been restored, including the "Steamboat" tourmaline (see *The World's Finest Minerals and Crystals* by Peter Bancroft, p. 170), which was at one time considered to be the world's finest tourmaline specimen. Likewise the huge blue euclase in the collection of Gene Meieran has an area of fill on the back of the termination, and yet it is still considered to be one of

the two finest euclase crystals in the world, and is sought after by top collectors and museums. There is no other comparable complete specimen.

It is important to remember that in many other fields of collecting (as with the hypothetical DaVinci painting), including those in which top specimens command similar or higher values than minerals do, restoration and reconstruction is not only totally acceptable; it is considered essential. In a majority of great fossil specimens valued in the high hundreds of thousands of dollars, the question is not "if" it has been restored, but "what percentage" of it is restored, that determines value. In archaeology, a large percentage of ceramic artifacts are partially restored—missing areas being filled and painted to look undamaged. Many baskets, textiles and other perishable artifacts have been restored as closely as possible to their original state, with little or no impact on the value or collectibility of the object (see Wayne Thompson and Grant Richards' editorial in the *Mineralogical Record*, vol. 7, July-August 1976). It is irresponsible to discard a masterpiece in *any* field of collecting because of damage, despite the obvious fact that its value, desirability and comparative rating will be lower than that of a perfect specimen.

## RARITY

As Wendell Wilson has pointed out, rarity by itself has no particular value. However, it serves to greatly enhance the value of specimens having high aesthetic quality. Rarity of a species, rarity of the elements in a species, rarity of a species from a particular locality, rarity of a certain crystal habit or color for a species—all of these forms of rarity will greatly increase the value and desirability of a beautiful specimen but will do little for a poor specimen. Perhaps the ultimate type of rarity is great beauty in a species that is normally found in unattractive specimens.

## ASSOCIATIONS

The presence of attractive or interesting associated species is, like rarity, not necessarily of major value by itself, but serves to enhance the value of beautiful specimens. It gives them more depth and interest mineralogically, and has value in confirming the locality on the label. Associated species can also contribute to aesthetics by adding contrasting colors and sculptural elements.

In special cases, however, a spectacular association can be the key factor which elevates a specimen to world-class status. One of the rarest combinations in mineral collecting is to find two crystals of different species, with aesthetically contrasting properties, attached to each other in a sculpturally aesthetically way, each of which is at or near the peak of quality for its species. This is so rare that in each case it may occur only once in nature, and may be quite unexpected. These unique crystal combinations are beyond the calculations of rarity, and occupy a very special place in the pantheon of ultra-fine mineral specimens.

## MATRIX

The presence of matrix rock or minerals as the base structure for beautiful crystals is almost always desirable. Matrix is a value-enhancer because it makes specimens seem more complete, provides a stable base to hold crystal clusters, and can contribute to the sculptural aesthetics and color contrast of a specimen. A pleasing size, relative to the crystals, is essential. (See Smale's Theory of Economics, p. 7 of *The Smale Collection*.) Exceptions to the need for matrix include two or more crystals in a cluster, and doubly terminated or "floater" crystals.

## PROVENANCE

The provenance of a piece is basically its history, including when it was collected, by whom, and under what conditions. In other words, does the specimen have a story to tell? Labels (old and new), letters, old invoices, and published illustrations and descriptions all help to document a specimen's provenance and add to its historical interest.

One exemplary case is that of Bill Larson's beautiful Pala Chief mine kunzite crystal. What is the story behind it? The crystal appears clearly in an old photo of George Kunz himself, who is seen holding the piece prior to 1905—the photo is reproduced here (p. 6). The specimen also appears in plate no. 1 of Kunz's 1905 book *Gems, Jewelers' Materials and Ornamental Stones of California.* It was sold as part of the Kunz-Tiffany collection to J.P. Morgan, who presented it to the American Museum of Natural History. It was later traded by the Museum to Peter Bancroft in the 1960's, and then sold by Peter to David Wilber along with most of the rest of his collection in the mid-1970s. Wilber traded it to Bill Larson for the Smale blue-cap tourmaline in the mid 1970's. What a great history to have for a specimen! This kind of provenance and background adds to the value and collectibility of a great piece.

Steve Smale, to cite another example, has a pyrargyrite which is depicted in James Sowerby's book *Exotic Mineralogy,* published in 1812 (see *The Smale Collection* p. 15). Many private collections have specimens with museum labels, or specimens that have been on the cover of the *Mineralogical Record, Lapis*, *Rock and Gem*, or *Gems and Gemology*. Stuart Wilensky's picture (p. 4) shows several specimens from his collection, accompanied by the cover photos of those pieces from *Mineralogical Record* and *Lapis*. All of these things make for great provenance and should be carefully recorded. Such provenance can have a great financial and collectible impact on a specimen.

Although great provenance rarely makes an average specimen great, it always makes a great specimen better.

## RANKING

As in all fields of collecting, certain pieces stand out from the others. Whenever a potentially world-class specimen is critiqued by a knowledgeable collector, one of the most important factors is how it compares to other pieces of the same species, not only from the same locality, but from all the best localities worldwide. It is also important to know how attenuated the scale is. In other words, how close in quality is the second-best piece, the tenth best piece, or the 50 next pieces? Some truly great specimens are in a class by themselves, being an order of magnitude better than the second best piece, whereas in the case of other species the top specimen may have 50 or 100 others close on its heels and very nearly as good. In the cases of some species (e.g. fluorite) there are so many superb specimens that it is almost impossible to select one best piece, so the ranking system breaks down entirely.

An in-depth knowledge of all the high-quality specimens in the world's great museums and private collections is essential in making comparative judgements on new specimens. The statement "This is the finest piece I have ever seen!" is only as meaningful as the knowledge and experience of the person making it.

## CRYSTAL SIZE

Larger crystals of a beautiful species are always more desirable than smaller crystals, quality being equal. The reason is simply the relationship between crystal size, aesthetics and rarity. In general, the larger crystals become, the more they tend to develop irregularities and flaws that make them unattractive. Microcrystals are

frequently perfect and beautiful, but are too small to make nice display specimens. Crystals which are unusually perfect for their size are therefore rare and commensurately more desirable—and they make better display specimens.

## SPECIMEN SIZE

Specimen size is not a criterion for determining quality, but it is a major factor in determining value. Quality being equal, larger size always equals higher value—up to a point, at least. Specimens which are too large and heavy to lift may have a somewhat reduced market, though they can still be extremely valuable, especially to museums with room to display them.

As with crystal size, the larger specimens are generally rarer (quality being equal). Most mineral pockets will produce numerous smaller pieces for every larger piece. This rule applies to the ratio of good thumbnails to miniatures; miniatures to cabinets; and cabinets to museum-size specimens. Of course there are exceptions to the rule: in the case of Elmwood calcite, thumbnails are virtually unknown and miniatures are rather rare whereas cabinet-size specimens are the norm.

## SPECIES VALUES

When it comes to high-value world-class specimens, there is a definite hierarchy of status (and dollar-value) among the more than 4,000 known mineral species. With few exceptions this "caste" system is basically dependent upon two factors: beauty and rarity. Intrinsic value (gemstone species, precious metals) and crystal size also have an effect. Rare species that occur in specimens of great beauty are in the first and highest caste. The gemstone species and attractive precious native metals (second caste), and the beautiful but relatively uncommon species (third caste) are comparable to each other in value. Other species that can be very beautiful but are relatively common are in the fourth caste. Attractive rare-to-common species that occur only in small crystals comprise the fifth caste. Species that are very rare but generally unattractive constitute the sixth caste. And the seventh caste, the "untouchables," are those species that are neither attractive nor rare (their presence can actually *decrease* the value of an otherwise commendable specimen!). Within each caste there is also a hierarchy based on the various degrees of beauty and rarity. Remember we are talking only about the very best specimens of each species. The details can be argued about but the overall concept is indisputable.

World-class display collections are drawn almost entirely from species in the first four castes. The greatest phosphophyllites will always be worth more than the greatest azurites, for example. Nevertheless, even species in the fourth caste, such as fluorite, smithsonite and calcite, can exist in exquisite world-class specimens and command six-figure prices, despite being somewhat less rare as species and lacking thus the intrinsic value of the higher castes. Here are some examples:

**First Caste**
(*beautiful and rare*):
Phosphophyllite
Euclase
Cumengéite
Proustite
Scorodite

**Second Caste**
(*gems, native precious metals*):
Beryl (Emerald, Aquamarine, Morganite, etc.)
Corundum (Ruby, Sapphire)
Zoisite (Tanzanite)
Diamond
Gold
Silver

**Third Caste**
(*beautiful and uncommon*)
Wulfenite
Azurite
Dioptase
Pyromorphite
Rhodochrosite

**Fourth Caste**
(*beautiful but common*):
Calcite
Galena
Microcline
Quartz
Smithsonite
Fluorite

**Fifth Caste**
(*rare and beautiful, but only found in small crystals*):
Turquoise
Sugilite
Kosnarite
Siegenite
Variscite
Annabergite

**Sixth Caste**
(*unattractive but rare*):
Girdite
Frondelite
Desautelsite
Celadonite
Talnakhite

**Seventh Caste**
(*unattractive and common*):
Goethite
Kaolinite
Serpentine
Water-soluble minerals
Unstable minerals
Earthy minerals
Organic minerals

## INVESTMENT VALUE

With regard to the categories of world-class specimens, it is safe to say that the **ikon specimens** are the best investments in the mineral world. Because they are so few in number and so universally known, the law of supply and demand makes them the most sought after on a permanent basis, with numerous buyers ready to bid against each other for them at any given time.

**Classics,** old specimens from world-famous and usually extinct occurrences, are also permanently in very limited supply. One of the only circumstances that can drive down the price of a great specimen even temporarily is a sudden glut on the market from a new discovery of specimens of the same species of comparable or better quality, and the chance of that happening with classics is extremely low. On very rare occasions a classic locality will suddenly start producing great specimens again, but rather than driving down the price of the older classic specimens, it is usually the popularity and recognition factor of the old specimens that drives up the price of the new ones!

**Contemporary masterpieces**, great specimens from new discoveries, tend to be more volatile in price while the ultimate total supply is still being determined (that is, while production is still under way). This unsettled period is actually the best time to be aggressive and acquire a world-class specimen. Paul Desautels once declared what has come to be known as "Desautels' Law"—he observed that "the best specimens always come out first." There are exceptions to every rule, but it's remarkable how often this rule is proved right. In general, he who hesitates misses out.

Once a new occurrence is exhausted there is *sometimes* a slight drop in price (just because the dealer community may not be promoting the specimens as actively

once their wholesale sources have dried up). But this dip, if it happens at all, will turn around shortly as everyone begins to realize how rare the top pieces are, and how unlikely it is that any more will be produced. Collectors who held off buying in hopes of seeing lower prices must now try to get a good specimen amidst heavy competition. Eventually the very best pieces find their way to the very best collections, and the specimen prices begin to trend just like those of the classics.

Investment value is enhanced by any factors which make a particular specimen "special" or noteworthy in any way. Examine the specimen's résumé, so to speak, and take all of the factors into consideration. Is it high-ranking in the value hierarchy of species? Does it have a particularly noteworthy provenance that will set it above any similar specimens? Does it have unusually attractive sculptural shape? Does it contain attractive or interesting associated species? Is it a well-shaped matrix specimen? Can it make a claim to being the largest or the best in some way? Is it among the top handful of specimens of the species known? Is it in extraordinarily fine condition, so good that you are amazed anyone could get it out of the mine in such a pristine state? Is it from a famous locality, even though it might not necessarily be the species for which the locality is famous? Does it contain particularly valuable elements like platinum or silver that give the species a special aura of value? The more "selling points" it has, the better its investment value will be.

The only factor that can hurt a specimen's investment value is the discovery of better specimens, something no one can predict. But that uncertainty is one of the things that makes mineral collecting the most exciting and fascinating field of collecting in the world. In no other hobby can incredibly beautiful masterpieces of a kind never before seen in history suddenly emerge! Every year there are new surprises, specimens we could never have dared to invent in our dreams—suddenly appearing out of the ground! Can any collector of rare coins, stamps, classic cars, antiques or Old Masters' paintings ever expect such a thrill in his life, much less on a regular basis? There will never be any *new* Old Masters!

# A GALLERY

## of World-Class Mineral Specimens

# Tourmaline ("Blue-cap")

*Tourmaline Queen mine, Pala District,*
*San Diego County, California*

13.2 cm; The specimen shown here was collected by Ed Swoboda and Bill Larson in 1972 in the Blue-Cap pockets. This is one of the most famous mineral finds of all time and has achieved legendary status. It produced several of the world's finest mineral specimens, including this piece (known as the "Smale Blue-cap"), the piece called "the Rabbit Ears" (in the Houston Museum of Natural Science), "The Candelabra" (in the Smithsonian Institution), a spectacular Proctor morganite on tourmaline (now in the Peter Via collection), a large matrix piece with two blue-cap crystals and morganite (in the Bill Larson collection), and an exquisite piece with two blue-cap crystals on a quartz crystal in the Canadian Museum of Nature in Ottawa. A total of approximately 35 specimens were recovered, including many small single crystals.

The piece shown here was one of two specimens kept by Bill Larson and, according to Bill, this is the finest crystal of all the ones they recovered. It is also one of the few unrepaired pieces. Bill eventually traded it to Dave Wilber for the George Kunz kunzite specimen (pictured here in the photo with George Kunz). Then it went to Steve Smale, who purchased it in 1980 for $40,000 and rocked the mineral world with that price. Wayne Thompson still remembers being shocked at such a large amount of money being paid for a tourmaline. Steve traded the piece to Wayne in 1997, in exchange for 12 extremely fine specimens from Wayne's collection, many of which are pictured here. Houston Museum Curator and President Joel Bartsch considers this piece to be one of the top 10 mineral specimens known, and Sandor Fuss has said it is his number one mineral specimen to own in the world. It is now in the collection of Wayne Thompson.

PUBLISHED:
*Lapidary Journal*, October 1972, p. 1005.
*Mineralogical Record*, September-October 2002, p. 146.
*Rock and Gem*, August 2005, p. 12.
*Steve Smale, The Mathematician who Broke the Dimension Barrier* (2000) by Steve Batterson, p. 191.

STATUS: **Ikon** *and* **Contemporary Masterpiece**

REFERENCE:
A detailed recounting of the story of the blue-cap tourmaline find is given by Ed Swoboda and Bill Larson in their 2002 article, "History of the Tourmaline Queen mine, San Diego County, California," in the *Mineralogical Record*'s special California Pegmatites Issue (vol. 33, September-October, p. 409–425.)

# Bournonite

*Herodsfoot mine, Cornwall, England*

12 cm; This extraordinary classic from a classic locality is one of the finest English bournonites known. There are only a few fine bournonites in private hands, including one pictured in *The Steve Smale Collection* (2006, p. 65), and one in the Bill Larson collection. Among institutions there is one in the Houston Museum of Natural Science collection, pictured in *Masterpieces of the Mineral World* by Wendell Wilson and Joel Bartsch (p. 60), as well as several in the Natural History Museum, London. These great pieces, all collected between 1858 and 1868, were purchased from the miners by British mineral dealer Richard Talling (1820–1883). The one shown here went from Talling to the Neville collection, then to the British Museum, from which Eric Asselborn obtained it in trade. It recently was acquired by Wayne Thompson and Rob Lavinsky, and is now in the Rob Lavinsky collection.

STATUS: **Classic**

REFERENCES:
The best reference to Cornish specimens is *Minerals of Cornwall and Devon* (1987) by British Museum curators Peter Embrey and Robert Symes, co-published by the British Museum and the Mineralogical Record. See also the article "Cornwall's Famous Mines" by Peter Bancroft and Sam Weller, *Mineralogical Record*, vol. 24, July-August, p. 259–283.

# Beryl (Aquamarine)

*Pionheiro mine, Catugi, Tres Barras Valley,*
*Minas Gerais, Brazil*

13.8 cm; This crystal, called the "Pioneer Aquamarine" (after the mine name) may well be the most famous, photographed, published mineral specimen in the world. It was collected by Colatino Ferreira in 1967, as part of one of the greatest aquamarine discoveries in history. It is the sole surviving specimen from nearly 2,000 kilograms of gem-quality aquamarine recovered in the find. This piece was coveted by two young collectors in the 1970's; both Joel Bartsch (now President of the Houston Museum of Natural Science) and Wayne Thompson dreamed about it in their youth. Joel even claims to have had the Pioneer Aquamarine poster on his wall in place of the Farrah Fawcett poster! The crystal was acquired by Herman Bank, from whom it went to Dave Wilber, then to Keith Proctor, then to Joe Freilich, and then to Herb Obodda. From Herb it went to Peter Via, then to Irv Brown, and from Irv to Stuart Wilensky who traded it to Wayne Thompson via Sandor Fuss; it is currently in the Wayne Thompson collection.

PUBLISHED:
*Gems & Gemology,* Cover, Summer, 1984, also shown on p. 88.
*Mineralogical Record*, January-February 2000 (back cover).
Sotheby's Catalog, January 10/12, 2001, p. 75.
Sotheby's Auction ad, January 10/12, 2001.
Keith Proctor poster "Gem Crystals."
*Mineralogical Record*, July-August 2006, p. 330.
*Mineralogical Record*, September-October 1976, p. 218.
*Mineralogical Record*, January-February 1994, p. 59.
*Rocks & Minerals*, Cover, January-February 1988.
*Rocks & Minerals*, January-February 1988, p. 40.
*Rocks & Minerals,* Reprint, 2006, p. 30.

STATUS: **Ikon**

# Wulfenite

*Red Cloud mine, La Paz County, Arizona*

10 cm; This spectacular, world-class specimen was among the two or three finest wulfenites recovered by Wayne Thompson's highly successful mining operation at the Red Cloud mine in 1996, and is one of the world's best for its species. In 1994 Wayne Thompson and James Horner purchased the Red Cloud mine; in 1995 mining operations (under a corporation consisting of Wayne Thompson, James Horner, Bill Larson, Les Presmyk and Gene Meieran) began with open cutting on the vein. On April 1, 1996, Bob Johnson opened what would become by far the largest, most productive pocket ever found at the Red Cloud. This piece was Wayne Thompson's first choice and was in his collection for two years, after which it was traded to Evan Jones. Evan later traded it to Les Presmyk, who sold it back to Wayne Thompson, who sold it to Sandor Fuss, from whom it went to Stuart Wilensky.

STATUS: **Contemporary Classic**

REFERENCES:

The principal references on the Red Cloud mine are Gary Edson's 1980 article, "Famous mineral localities: the Red Cloud mine, Yuma County, Arizona," *Mineralogical Record,* vol. 11, May-June, and Peter Bancroft and Garth Bricker's 1990 article, "Arizona's Silver Mining District," *Mineralogical Record,* vol. 21, March-April. The full story of the 1996 discovery at the Red Cloud mine is recounted in Wendell Wilson's 1996 article "Bonanza at the Red Cloud mine" (*Mineralogical Record,* vol. 27, September-October, p. 347–354.

# Silver

*Kongsberg, Norway*

15 cm; Wire silver from Kongsberg, Norway has been famous among collectors for centuries. The elegant perfection of this piece makes it one of the few silver specimens known as an ikon; Wayne Thompson tried numerous times for more than 20 years to obtain it. The story behind it is interesting. It was noticed in a wicker basket full of minerals which was purchased at the auction of a large New England estate by an antique dealer in 1969/70. Bob Jones saw the piece and was able to purchase it, along with a 15-cm azurite rose from Bisbee, a malachite pseudomorph, a Russian native copper and several other fine specimens. The silver went for $75; it was in the Bob Jones collection for nearly 30 years, and then passed to his son, Evan Jones, for whom it won the Lidstrom Trophy at the Tucson Gem and Mineral Show in 1988. Wayne Thompson traded five great pieces from his collection for this one Kongsberg specimen (four of which are pictured in this publication). It remains in the collection of Wayne Thompson; many top collectors consider it to be the finest Kongsberg silver in private hands.

PUBLISHED:
*Mineralogical Record*, May-June 2004, p. 260.
*Mineralogical Record*, March-April 2006, p. 114.
*Mineralogical Record* (Supplement), "50-Year History of Tucson Show," p. 111.

STATUS: **Ikon** *and* **Classic**

REFERENCE:
The Kongsberg mines were described by Ole Johnsen in his 1986 article, "Famous mineral localities: The Kongsberg silver mines, Norway," *Mineralogical Record,* vol. 17, January-February, p. 19–36.

# Phosphophyllite

*Unificada mine, Cerro Rico de Potosí, Bolivia*

7 cm; Phosphophyllite is one of the "holy grail" minerals for mineral collectors, and very few people are privileged to own a good one, much less a doubly terminated one like the unrepaired matrix piece shown here. It was collected between 1957 and 1962, and is considered by Steve Smale (the current owner) to be the finest known phosphophyllite, thanks to its pristine condition. Possible biases aside, it is among the top four or five larger-than-thumbnail-size specimens in existence. Peter Bancroft originally obtained it on one of his trips to Bolivia, and later sold it to Dave Wilber, from whom it went to Keith Proctor. From Keith it went to Richard Kosnar, and from him to Wayne Thompson; it is now, as mentioned, in the Steve Smale collection.

PUBLISHED:
*Mineralogical Record*, January-February 1999, p. 27 and 55.
*The Smale Collection* (2006) by Steve Smale, p. 97.
*Lapidary Journal,* January 1975.
*Mineralogical Record,* November-December 1980.
*Mineralogical Record,* January-February 2000.
*La Règne Minéral,* May-June 2004.
*Mineralogical Record,* January-February 2002.
*Mineralogical Record,* November-December 2002.

STATUS: **Ikon**

REFERENCE:
The best reference on the phosphophyllite occurrence is Wendell Wilson and Alfredo Petrov's article: "Famous Mineral Localities: Cerro Rico de Potosí, Bolivia," in *Mineralogical Record,* vol. 30, January-February 1999, p. 9–36.

# Topaz

*Ghundao Hill, Katlang, Mardon District, Pakistan*

6.4 cm; Bright pink topaz may well be the most beautiful of all topaz color varieties, and only a very few outstanding specimens exist. There are only three locations worldwide: in the Ural Mountains of Russia; the Ouro Preto district in Brazil; and Ghundao Hill in Pakistan. Pakistan produces the only matrix specimens. The one shown here is among the finest known matrix topazes from Ghundao Hill. It was collected in the early 1990's, and purchased from miners near the mine site by Tahir Iqbal and Wayne Thompson. It remained in the Thompson collection for some years and was then traded to Steve Smale; from Steve Smale it went to Sandor Fuss to Irv Brown and finally to James and Gail Spann in whose collection it now resides.

PUBLISHED:
*Mineralogical Record*, May-June 2006, p. 299.

STATUS: **Contemporary Masterpiece**

# Azurite

*Tsumeb mine, Namibia*

11 cm; This superb specimen of azurite partially altered to malachite was purchased in Namibia by Prosper Williams from an old Tsumeb collection; it had been dug around 1915, probably in the upper workings of the first orebody. Prosper sold it to Steve Smale in 1974 for $4,750; Steve traded it to Wayne Thompson, in whose collection it remained for several years until it was traded back to Smale, who traded it to Sandor Fuss; it was acquired by Stuart Wilensky with the Fuss collection, and is now back in the Smale collection.

PUBLISHED:
*Mineralogical Record*, November-December 2002, p. 511.
*Mineralogical Record*, November-December 1998, p. 591.
*Mineralogical Record*, July-August 2001, p. 315.
*The Smale Collection* (2006) by Steve Smale, p. 13.
Westward Look show poster, 2003.

STATUS: **Contemporary Masterpiece**

REFERENCES:
*The Mineralogical Record*'s 1977 "Tsumeb Issue" (vol. 8, May-June) is the classic reference on this world-famous locality, but has long been out of print. Georg Gebhard's two more recent books, *Tsumeb-I* (1991, in German) and *Tsumeb-II* (1999, in English) are essential references for learning about the Tsumeb deposit.

# Beryl (Heliodor)

*Joerania, Minas Gerais, Brazil*

13.7 cm; This is one of the finest heliodor specimens ever collected, and has often been paired with the "Pioneer" Aquamarine in photos and collections. Originally in the Herman Bank collection, from whom it went to Bill Larson, then to Joe Freilich, then to Stuart Wilensky; it was obtained in a trade by Wayne Thompson and Gene Meieran, and is now in the Gene and Roz Meieran collection.

PUBLISHED:
*Mineralogical Record*, January-February 2000
(the Freilich Collection issue).
Sotheby's Catalog, Freilich Collection (2001).

STATUS: **Contemporary Masterpiece** *and* **Ikon**

# Quartz (Amethyst)

*Margareta mine, Amatitlan, Guerrero, Mexico*

12.2 cm; This specimen is unquestionably one of the finest amethyst specimens in the world. The combination of gemmy, deep purple color (like the finest gem-quality Siberian amethyst), super aesthetics and pristine perfection leaves all competition behind; it is an icon of mineralogy. It is mentioned in *The Smale Collection* (2006), along with a picture of one of the other great Guerrero amethysts, p. 17. It was collected in 1994 by Mexican miners in an area extensively mined by the partnership of Wayne Thompson, Mike New, Gene Meieran and John Lucking, and was in the Wayne Thompson collection for three years. It was then traded to Steve Smale in December 1997, went from there to Sandor Fuss, and is now in the Stuart Wilensky collection.

PUBLISHED:
*Mineralogical Record,* Cover, Mexico IV Issue,
November-December 2004.
*Mineralogical Record,* website homepage title photo.
*Encyclopedia of Minerals* (1999) by Peter Korbel and Milan Novak,
cover and p. 74.

STATUS: **Ikon**

REFERENCE:
The Guerrero amethyst district is described in detail by Manuel Ontiveros, Wendell Wilson and Peter Megaw in their 2004 article, "Famous Mineral Localities: The Guerrero Amethyst Deposits, Mexico," *Mineralogical Record*, vol. 35, November-December, p. 29–37.

# Euclase

*Gachala mine, Colombia*

15 cm; This uniquely large and extraordinarily beautiful, deep blue crystal was purchased jointly from a gem dealer, along with a smaller crystal, by Wayne Thompson, Eric Asselborn and Bill Larson in 1998. The smaller crystal was obtained by Wayne Thompson and Rob Lavinsky, and was sold to a private collector. The crystal shown here is now in the Gene and Roz Meieran collection. It is definitely one of the finest mineral specimens of its size ever found.

PUBLISHED:
*Mineralogical Record,* May-June 2001, p. 259.
*Mineralogical Record* (Supplement), "50-Year History of the Tucson Show," p. 149.

STATUS: **Ikon**

# Pyrargyrite

*Valenciana mine, Guanajuato, Mexico*

15 cm; Every advanced collector who has seen this specimen has been struck by its unforgettable aesthetics. Like "The Snail" rhodochrosite, the perfection and contrast in color are visually striking. Considering also the great provenance, and the extreme rarity of truly fine pyrargyrites, this piece is among the finest mineral specimens known. It was collected ca. 1875 and sold to the British Museum (Natural History), probably by Nathaniel Davidson. The museum traded it to Eric Asselborn, from whom it went to Wayne Thompson, in whose collection it remains today.

STATUS: **Ikon** *and* **Classic**

# Rhodochrosite

*Huallapon mine, Pasto Bueno, Peru*

12.5 cm; This superb specimen is the finest Peruvian rhodochrosite known and compares well to the finest rhodochrosites from Alma, Colorado and South Africa. Collected in the mid 1970's, it was sold to Marion and Hadley Stewart by Ken Roberts. The Stewart collection was purchased by Wayne Thompson and Gary Hansen in 2000. This piece was traded to Gene Meieran, then traded back to Wayne Thompson and ultimately acquired by Sandor Fuss; it is now in the Bruce Oreck collection.

PUBLISHED:
*Mineralogical Record,* July-August 2001, p. 310.
*Mineralogical Record,* March-April 2005, p. 186.
*Mineralogical Record* (Supplement), "50-Year History of Tucson Show," p. 156.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The Huallapon mine and other famous Peruvian mineral occurrences are described in the *Mineralogical Record*'s Peru Issue (vol. 28, July-August), written by Jack Crowley, Rock Currier and Terry Szenics.

# Barite

*Pallaflat Mine, Cumbria, England*

15 cm; Classic English blue barites are among the most sought after of all barite specimens. This gorgeous specimen is one of the finest blue English barites in private hands. It was mined in the 1800's and for many years was in the Bally-Prior Museum in Switzerland. It was traded to Eric Asselborn in 1987; Wayne Thompson and Rob Lavinsky acquired the piece with the Asselborn English mineral collection. It is now in the Rob Lavinsky collection.

STATUS: **Classic**

# Brazilianite

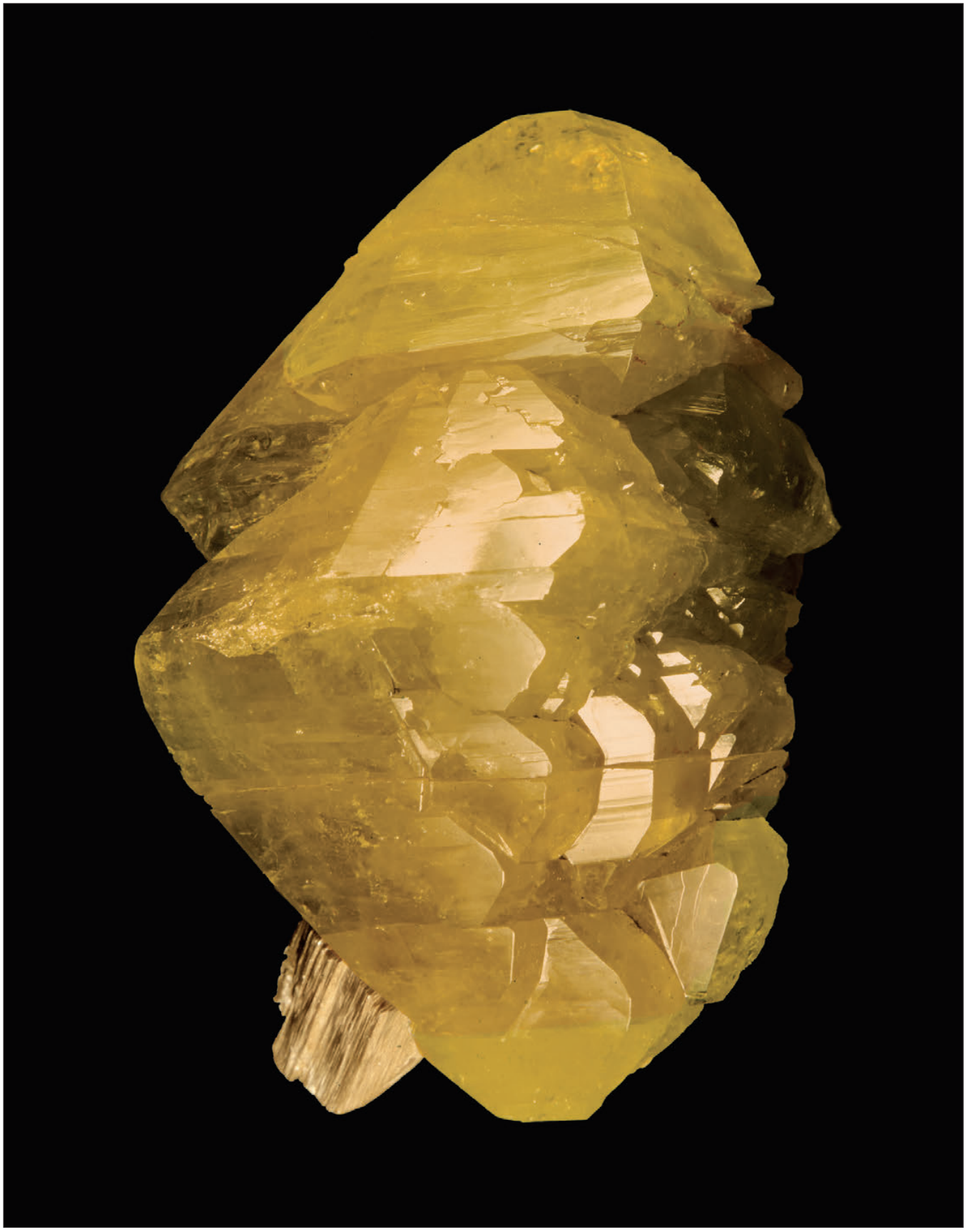
*Córrego Frio, Minas Gerais, Brazil*

15 cm; This beautiful specimen, showing very large, complete, intergrown crystals with attached mica, is one of the finest brazilianites known. Its date of discovery is not definitely known; it may have been collected by Ed Swoboda in 1945/46, or it may have been found later. It was purchased in Brazil by Jack Lowell in 1974, and was taken by Wayne Thompson to the Detroit Show in order to show it to Rich Kosnar, who bought it for $4,000; it is now owned by a private collector.

PUBLISHED:
*Gem and Crystal Treasures* by Peter Bancroft, p. 204.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The locality is well described by Jacques Cassedanne in his article: "Famous mineral localities: the Córrego Frio mine and vicinity, Minas Gerais, Brazil," in *Mineralogical Record,* vol. 14, July-August.



# Copper

*Ray mine, Pinal County, Arizona*

19.2 cm; This piece was collected by Andy Clark, who worked for Wayne Thompson under a contract with Kennecott Copper Corp., and is one of the five best native copper specimens ever recovered from the Ray mine. There were many nice singles and smaller clusters but five pieces were out and beyond, each qualifying to be among the world's finest native copper specimens. The specimen remained in the Wayne Thompson collection for many years, and is now in the Stuart Wilensky collection, having been traded in part for the Pioneer aquamarine.

PUBLISHED:
*Mineralogical Record,* September-October 2005.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The best reference on the minerals of the Ray mine is "Famous Mineral Localities: The Ray Mine" by Robert W. Jones and Wendell E. Wilson in *Mineralogical Record,* vol. 14, September-October 1983.

# Fluorite with Aquamarine and Fluorapatite

*Chumar Bakhoor, Nagar, Northern Areas, Pakistan*

11.5 cm; This is one of the two finest pink fluorite/aquamarine combinations known. It was purchased in Nagar by Tahir Iqbal and Wayne Thompson in 1989. It remained in the Wayne Thompson collection for many years, before going to the Sandor Fuss collection, and then the Steve Smale collection.

STATUS: **Contemporary Masterpiece**

REFERENCES:

For more information on the Pakistani aquamarine district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record,* vol. 16, September–October 1985. Also excellent is the *ExtraLapis English* issue on "Pakistan: Minerals, Mountains & Majesty" (2004).

# Cerussite

*Tsumeb mine, Namibia*

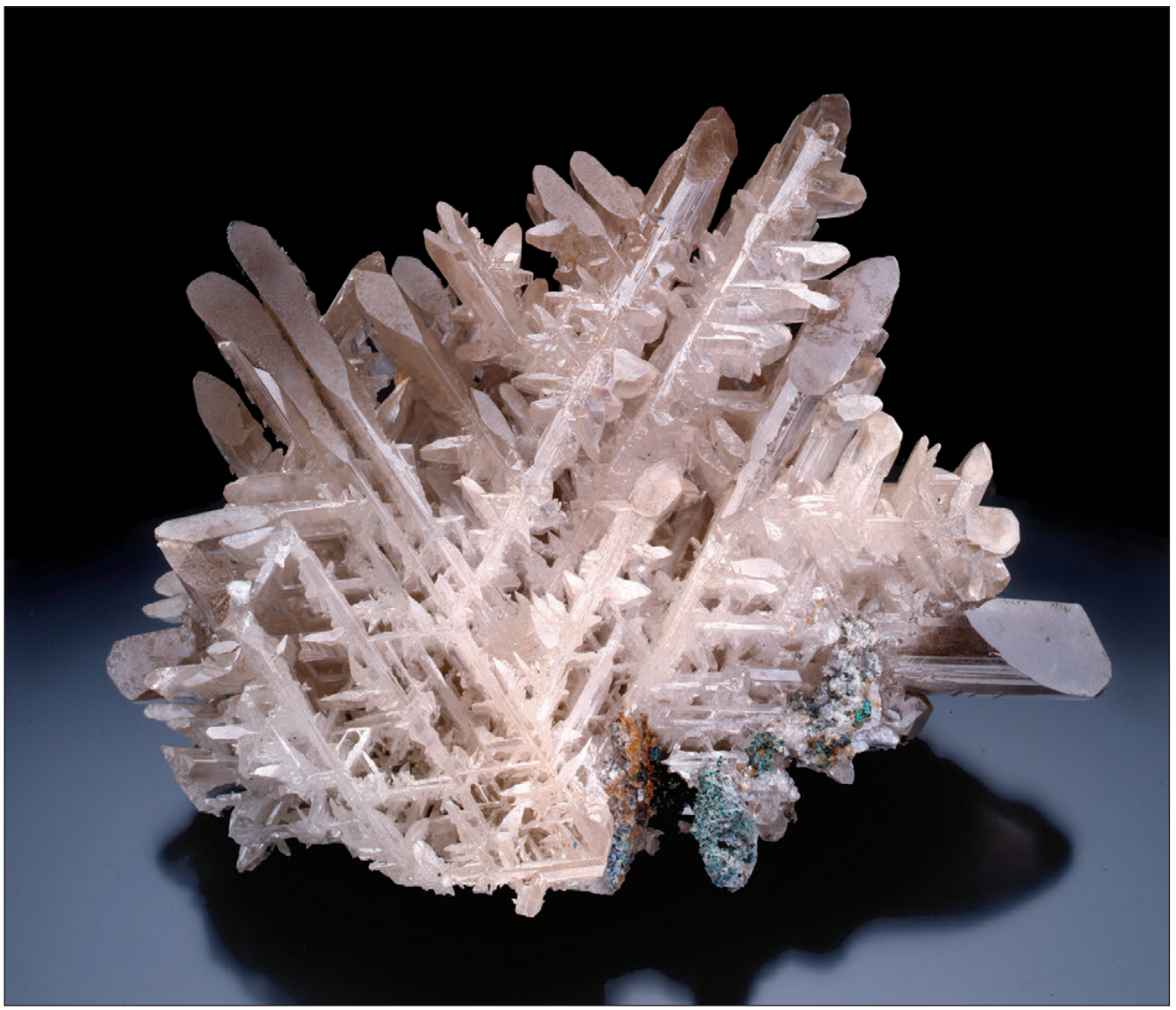
16 cm; This superb reticulated cerussite has virtually no damage. It was collected ca. 1970 from the famous "Snowflake Cerussite pocket" in the Tsumeb mine, along with dozens of other fine cerussite specimens, and was brought to the United States by a South African dealer. In the early 1970's the Desert Inn was the center of the mineral world during the annual Tucson Gem and Mineral Show. Collectors and dealers gathered there from all over the world, bringing their wish lists, their cash and their new-found treasures. In those days, no one knew what minerals would be arriving, or who would have them; thus rumors tended to spread like wildfire. Tsumeb, Brazil and Mexico were at their height of production and prices for the very best specimens, although seemingly high at the time, were measured in hundreds of dollars, not tens of thousands of dollars as they often are today. In 1971 Wayne Thompson was among the first of the tailgaters at the Pima County Fairgrounds (where the show had long been held) to set up a sales room at the nearby Desert Inn. Word spread about a South African dealer who had just opened her door on the first floor, and despite the eager crowd, Wayne was among the first people to get into the room. There he promptly selected this cerussite from amid all the chaos and paid her $600 for it. There was no need to negotiate, as the asking price seemed fair; needless to say, the room was cleaned out in a few hours. Those days at the Desert Inn are remembered by everyone who was there as the best of times.

The specimen was later sold to Bill Berridge, who sold it to Allan Rosenberg. Allan then donated it to the Museum of Science and Technology in Phoenix, who ultimately traded it to Gene Meieran. Entering a second time into the provenance of the piece, Wayne Thompson acquired it from Gene and sold it to Rob Lavinsky, from whom it went to Marshall Sussman. Rob later bought it back; it then went to Sandor Fuss, and from him to French collector Francis Benjamin, in whose possession it remains today.

PUBLISHED:
*Mineralogical Record,* Arkenstone Ad, repeated in numerous issues.

STATUS: **Contemporary Masterpiece**

REFERENCES:
*The Mineralogical Record*'s 1977 "Tsumeb Issue" (vol. 8, May-June) is the classic reference on this world-famous locality, but has long been out of print. Georg Gebhard's two more recent books, *Tsumeb-I* (1991, in German) and *Tsumeb-II* (1999, in English) are essential references for learning about the Tsumeb deposit.



# Fluorite

*North face of Les Droites, Mt. Blanc, Chamonix, France*

22.3 cm; Pink octahedral fluorite from the Alps is one of the "holy grails" of mineral collecting—a classic that has been sought after by mineral collectors since the 18th century. Small specimens are recovered periodically, but large specimens are almost unheard of. The visual appeal of the bright, pink, sharp octahedrons of fluorite to 2.5 cm scattered over the two large connected quartz crystals shown here is truly breathtaking. This is one of two incredible specimens from the same pocket and one of the finest pink fluorites known. It was collected in 1989 by J.F. Charlet and P. Ghilini at an altitude of 3,600 meters, from an open ice-filled cavity on a high cliff face. Also found there was the specimen shown on the cover of the *Mineralogical Record,* vol. 23, May-June 1992. It was originally purchased by Wayne Thompson and Eric Asselborn in 1990; then the joint ownership shifted to Wayne Thompson, Ed Swoboda and Gene Meieran. Later it went to a private collector.

PUBLISHED:
*Rocks & Minerals*, January-February 1998, p. 54.
*Mineralogical Record*, May-June 2006, p. 206.

STATUS: **Contemporary Masterpiece**

# Pyromorphite

*800 Level, Jersey Vein, Bunker Hill mine Kellogg, Idaho*

8.7 cm; This beautiful cluster of pyromorphite crystals from the Bunker Hill mine is one of the finest small cabinet-size specimens to be recovered. The bright green color and the perfect crystals in a large, aesthetic grouping make it especially appealing. The piece was collected in 1993–1994 in the now famous pockets encountered at Bunker Hill mine during lead-zinc-silver mining operations. It was collected by Bob Hopper, in association with Wayne Thompson; it remained in the Thompson collection for several years before being traded to Evan Jones. It is now in the Mike Bergmann collection.

STATUS: **Contemporary Masterpiece**

REFERENCES:

The amazing discoveries at the Bunker Hill mine have been documented in two important articles: Norm Radford and Jack Crowley's "The Bunker Hill Mine, Kellogg, Shoshone County, Idaho," *Mineralogical Record*, vol. 12, November-December 1981, and "Pyromorphite from the Coeur D'Alene District, Idaho," *Mineralogical Record*, vol. 13, September-October 1982.

# Tourmaline (Indicolite) on Quartz

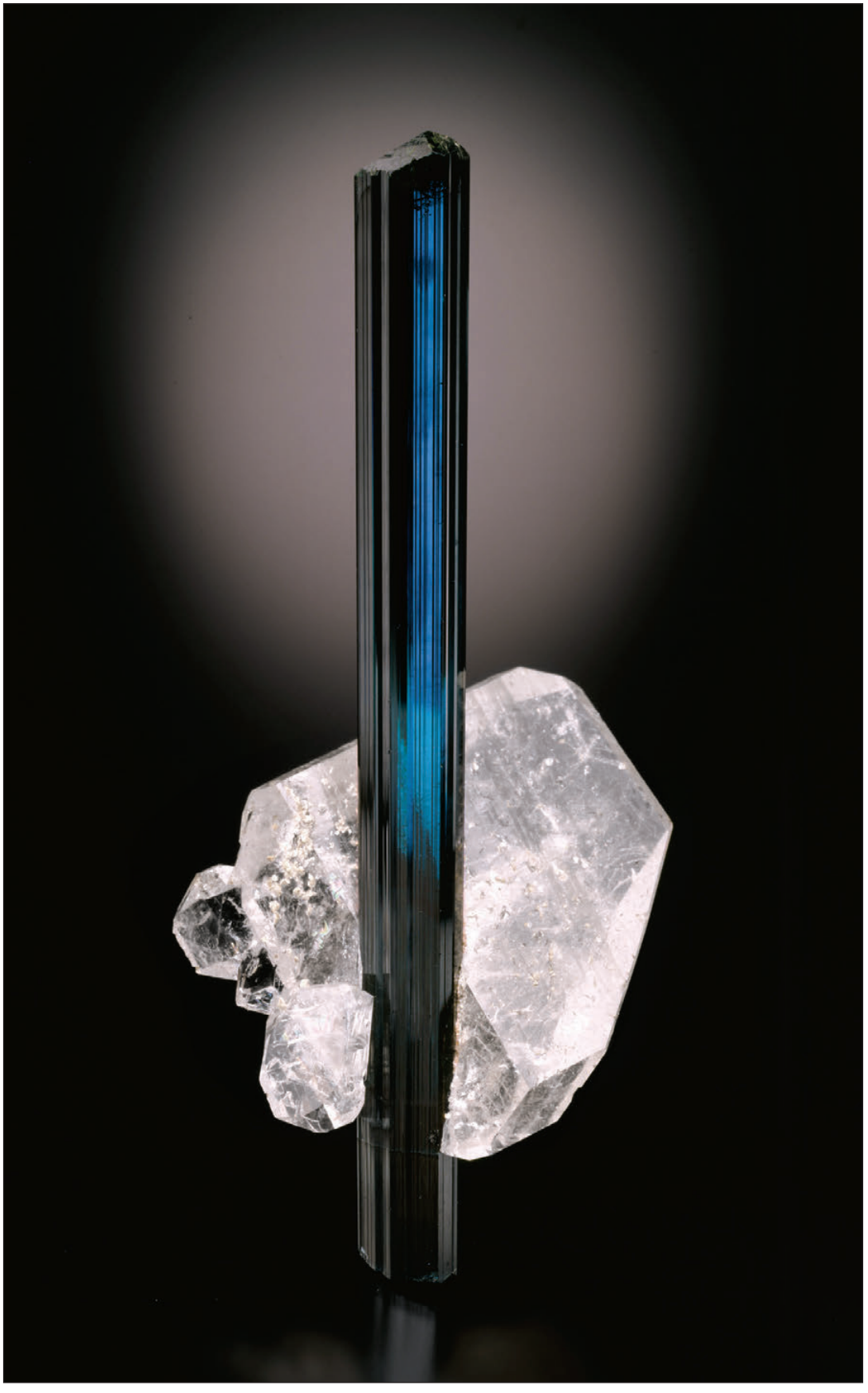
*Manoel Mutuca mine, Virgem da Lapa, Minas Gerais, Brazil*

10.5 cm; Gemmy blue tourmalines on matrix are among the rarest specimens in the tourmaline group. The combination of gemmy blue tourmaline with euhedral quartz attached makes this piece an unforgettable ikon. It was mined in the 1970's, and was acquired by Rich Kosnar from Milton Sklar; Rich then sold it to Keith Proctor, who sold it to Gilles Emringer around 1990. It was then sold via Eric Asselborn to Wayne Thompson, from whom it went to Sandor Fuss. Via Wayne it went to Mike Mulberger, and via Wayne it later went to Gene and Roz Meieran, in whose collection it now resides. It is one of the most famous, most published specimens of the mineral world.

PUBLISHED:
Munich Show poster, 1985.
*Mineralogical Record*, September-October 1985, p. 352.
*Mineralogical Record*, March-April 1999, p. 133.
*Der Turmalin; Eine Monographie* (1990) by Friedrich Benesch, p. 48.
*The Tourmaline Group* (1985) by R.V. Dietrich, p. 193, plate 11A.

STATUS: **Ikon**

REFERENCE:
The Virgem da Lapa locality was described by Jacques Cassedanne and Jack Lowell in their 1982 article "Famous Mineral Localities: The Virgem da Lapa Pegmatites," *Mineralogical Record,* vol. 13, January-February, p. 19–28.



# Beryl (Morganite)

*Conselheiro Pena, Minas Gerais, Brazil*

6.6 cm; Intense pink color, super luster, beautiful morphology, and an aesthetic arrangement on matrix make this one of the world's greatest morganites and an instant ikon. Its known provenance begins with Pierre Laville, from whom it went to Russ Behnke, who sold it to Eric Asselborn; from Asselborn it went to Gilles Emringer, who sold it to Wayne A. Thompson, who sold it to Sandor Fuss; it was traded with the Fuss collection to Stuart Wilensky, and is now in the collection of Peter Via.

PUBLISHED:
*ExtraLapis English,* no. 7, "Beryl and its Color Varieties," p. 95.
*Mineralogical Record,* March-April 2001.
*Mineralogical Record,* cover, November-December 2005.
Westward Look show poster, 2002.
Stuart Wilensky's book *Wilensky's Fine Minerals* (2005) vol. 1, p. 8.
*The Book of Stones* (2005) by Robert Simmons and Naisha Ahsian, p. 259.

STATUS: **Ikon**

# Azurite

*Tsumeb mine, Namibia*

17.8 cm; The large and superb azurite cluster on matrix shows a rare "starburst" arrangement of crystals. It was purchased from an old Tsumeb collection in the late 1990's by Charles Key and Marshall Sussman, who later sold it to Wayne Thompson. It went to Wayne Sorensen, and went to Peter Via through Wayne Thompson.

STATUS: **Contemporary Masterpiece**

REFERENCES:
*The Mineralogical Record*'s 1977 "Tsumeb Issue" (vol. 8, May-June) is the classic reference on this world-famous locality, but has long been out of print. Georg Gebhard's two more recent books, *Tsumeb-I* (1991, in German) and *Tsumeb-II* (1999, in English) are essential references for learning about the Tsumeb deposit.

# Beryl (Aquamarine) with Topaz

*Shigar River Valley, Skardu District, Northern Areas, Pakistan*

15.3 cm; This is probably the finest specimen of matrix aquamarine with topaz known. Collected in the mid-1990's, it was purchased by Wayne Thompson and Tahir Iqbal near the mine site. It then went to Wayne Sorensen, and from him to Gene and Roz Meieran, in whose collection it now resides.

PUBLISHED:
*Lapis,* no. 7, *Beryl and Its Color Varieties,* p. 9.
Peshawar Mineral show poster, 2002.

STATUS: **Contemporary Masterpiece**

REFERENCES:
For more information on the Pakistani aquamarine district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record,* vol. 16, p. 393–411. Also excellent is the *ExtraLapis English* issue on "Pakistan: Minerals, Mountains & Majesty" (2004).

# Silver with Copper

*Wolverine Mine, Keweenaw Peninsula, Michigan*

8 cm; Crystallized silver is among the most elegant of all specimens found in the Michigan copper mines. The specimen shown here is among the finest silver/copper combinations from the classic mines of the Keweenaw. It has an exceptional history and provenance. It was collected in the 1860's, and incorporated into the Captain James Hoatson (1846–1923) collection. From there it eventually went to the Broderick-Hohl collection, from there to the Broco collection, then to the Al and Mary Sweede collection. Finally it went to the Bob Rand collection. It was purchased from the Rand collection by Wayne Thompson and Rob Lavinsky, then traded to Gene and Roz Meieran.

STATUS: **Classic**

REFERENCE:
Don Olson's 1986 article in the *Mineralogical Record*'s Silver Issue, "Native silver occurrences in the copper mines of Upper Michigan," vol. 17, January-February.

# Beryl (Aquamarine) with Schorl

*Shigar River Valley, Skardu District, Northern Areas, Pakistan*

7.2 cm; This is probably the finest specimen to come from Pakistan and is one of the finest mineral specimens known. When it appeared on the cover of the *Mineralogical Record*, it received more comments than any other cover, and it became an instant ikon of mineralogy. It was collected in 1999, purchased by Tahir Iqbal and Wayne Thompson near the mine site; acquired by Sandor Fuss, and traded to Stuart Wilensky, from whom it went to Peter Via.

PUBLISHED:
*Mineralogical Record*, Cover, July-Aug, 2003.
*Mineralogical Record*, November-December, 2003, p. 69.
*Mineralogical Record*, November-December, 2005, p. 490.
Westward Look show poster, 2004.
Ste.-Marie-aux-Mines show poster, 2005.

STATUS: **Ikon**

REFERENCES:
For more information on the Pakistani aquamarine district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record* (1985), vol. 16, p. 393–411. Also excellent is the *ExtraLapis English* issue on "Pakistan: Minerals, Mountains & Majesty" (2004).

# Tourmaline with Quartz

*Paprok, near Nuristan, Kunar Province, Afghanistan*

10 cm; This specimen shows such an aesthetic combination of smoky quartz and feldspar that it has the feeling of a masterpiece painting. It was purchased in northern Pakistan by Wayne Thompson, Tahir Iqbal and Dave Bunk. It went into the Wayne Thompson collection and several years later it was acquired by Sandor Fuss, who traded it to Steve Smale.

PUBLISHED:
*ExtraLapis English,* no. 6, "Tourmaline" issue (2002), p. 103.
*The Smale Collection* (2006) by Steve Smale.

STATUS: **Contemporary Masterpiece**

# Beryl (Heliodor)

*Medina, Minas Gerais, Brazil*

25 cm; This superb crystal is possibly the finest large heliodor crystal known; it closely resembles the Russian heliodor crystal in the book *The Smale Collection*. It was collected in a gem mining venture and was then purchased by Wayne Thompson, Gene Meieran and Pierre Laville from miners at the mine site, and is now in the Stuart Wilensky collection.

STATUS: **Contemporary Masterpiece**

# Hydroxyl-herderite

*Xanda mine, Virgem da Lapa, Minas Gerais, Brazil*

10 cm; Virgem de Lapa produced what are considered to be the world's finest herderite specimens—several great purple crystals—over a period of a year or two and was then abandoned. The piece shown here, collected in 1976, is one of the two or three best, and is free of the internal crazing present in many pieces from this find. It was purchased in Brazil by Arizona dealer Jack Lowell and was offered to Wayne Thompson in 1976, for $8,000, but Wayne couldn't afford it at the time. Jack then sold it to Rich Kosnar, who sold it to David Byers, and it eventually found its way into the Eric Asselborn collection. Wayne (in partnership with Rob Lavinsky) finally obtained it in 2006, along with much of Asselborn's collection, and traded it to Gene and Roz Meieran.

PUBLISHED:
*Book of Stones* (2005) by Robert Simmons and Naisha Aishan, p. 190.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The Virgem da Lapa locality was described by Jacques Cassedanne and Jack Lowell in their 1982 article "Famous Mineral Localities: The Virgem da Lapa Pegmatites," *Mineralogical Record,* vol. 13, January-February, p. 19–28.

# Quartz (Rose)

*Berilo Branco mine, Minas Gerais, Brazil*

10 cm; This beautiful, rose-shaped cluster of crystals is from the first locality ever discovered for high-quality crystallized rose quartz. For many years the mine was confused with the Sapucaia phosphate pegmatite, but was finally revealed by long-time Brazilian dealer Constantino Vasconcelos to be the Berilo Branco mine. There are dozens of great rose quartz specimens known, but this piece is unique. It was probably collected in 1959 by one of the miners working the deposit (Fio Ferreiro, José Gama, João Eduardo, or Paulinho Maritaca). Wayne Thompson acquired it from a private collection and sold it to Wayne Sorensen. Later it went to Bill Larson via Wayne Thompson.

STATUS: **Contemporary Masterpiece**

REFERENCES:

The first known locality for fine rose quartz crystals was the so-called "Sapucaia" (Berilo Branco) mine; the second was the Lavra da Ilha pegmatite; and the third was the Pitora mine. These have all been described in the *Mineralogical Record*. The Berilo Branco mine was the subject of Wendell Wilson's 1999 article: "Famous Mineral Localities: Lavra Berilo Branco, the Original 'Sapucaia' Rose Quartz Occurrence, Minas Gerais, Brazil" in vol. 30, September-October. The Lavra da Ilha occurrence was described in Jacques and Jeannine Cassedanne's 1973 article: "Minerals from the Lavra da Ilha Pegmatite, Brazil," vol. 4, September-October, p. 207–213. And the Pitora mine was described by Jacques Cassedanne and Jeanete Alves in their 1990 article: "Crystallized Rose Quartz from Alto da Pitora, Minas Gerais, Brazil," vol. 21, September-October.

# Topaz with Quartz

*Shingus, Skardu District, Northern Areas, Pakistan*

6.8 cm; The deep, rich color of this topaz, with textbook morphology and the aesthetic combination with quartz on cleavelandite, make this piece an ikon. It was collected around 1992, and was purchased from miners near the mine site by Tahir Iqbal and Wayne Thompson. Wayne sold it to Sandor Fuss, and it was later acquired by Steve Smale.

PUBLISHED:
*ExtraLapis,* Cover, issue no. 13, "Topaz" (1997).
*Mineralogical Record*, May-June 2000, p. 259.
Tucson show poster, 1995.
*The Smale Collection* (2006) by Steve Smale, p. 163.
*Colored Stone* magazine, September 2004.
*The World's Mineral Masterpieces* (2002) by Eberhard Equit, a book of paintings of great mineral specimens.

STATUS: **Ikon**

REFERENCE:
For more information on the Pakistani pegmatite district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record* (1985), vol. 16, p. 393–411.

# Beryl (Aquamarine)

*Blue mine, Shigar River Valley, Skardu District, Northern Areas, Pakistan*

15 cm; This faceting-quality aquamarine crystal on matrix is considered by many top collectors to be the finest matrix aquamarine known. Doubly terminated, on a complete euhedral crystal of snow-white albite, it was collected in 1989 by a Pakistani miner, known simply as Ibrahim, from the locality which Wayne Thompson and Tahir Iqbal named "The Blue mine" (after the intense blue color of the aquamarine there). During several years of mining there Wayne Thompson and his partners found more than 60 pockets filled with muscovite, black tourmaline, quartz and albite, but only one pocket produced aquamarine. Approximately 20 specimens were recovered, only three of them with matrix. This one is by far the finest; it remained in the Wayne Thompson collection for 16 years, and then went to Sandor Fuss, who traded to Gene and Roz Meieran. The Blue Mine is discussed, along with a photo of another aquamarine from this pocket, in *The Smale Collection* (2006) by Steve Smale, p. 54–55.

STATUS: **Contemporary Masterpiece**

REFERENCES:

For more information on the Pakistani aquamarine district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record* (1985), vol. 16, p. 393–411. Also excellent is the *ExtraLapis English* issue on "Pakistan: Minerals, Mountains & Majesty" (2004).

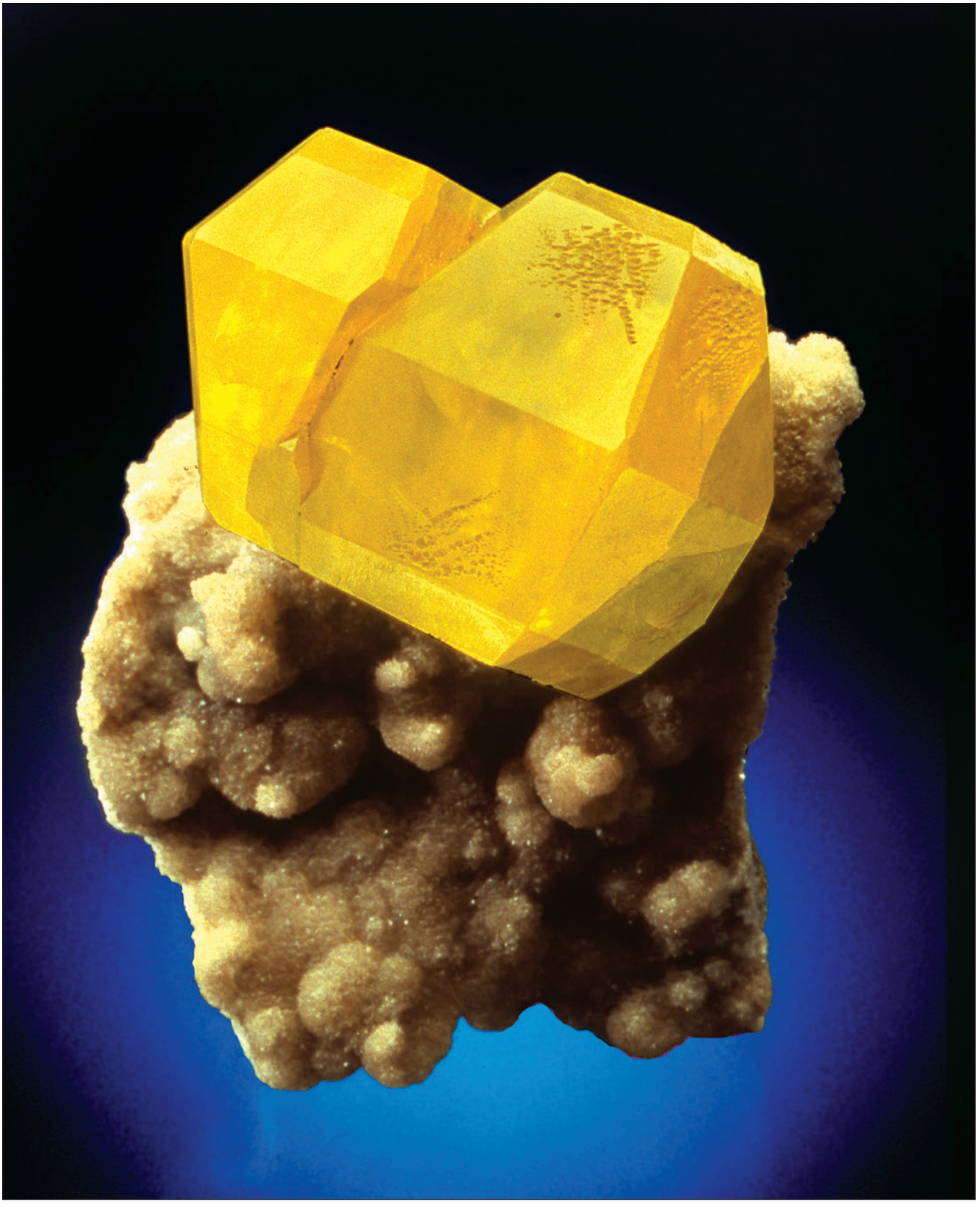
# Sulfur

*Cozzodisi mine, Agrigento, Sicily, Italy*

11 cm; The Sicilian sulfur deposits produced fine specimens for over a century, before finally closing a few decades ago. This extraordinary sulfur specimen is a classic, and is among the most aesthetic sulfurs known. It was collected in a famous pocket discovered during mining in 1860's, and was purchased by the Swiss collector Carl Franz Bally; it was later incorporated into the collection of his son, Eduard Bally-Prior (1847–1926), which became the foundation for the Bally-Prior Museum in Schönenwerd, Switzerland. It was acquired from the museum in the 1980's by Eric Asselborn, whose collection was recently acquired in part by Wayne Thompson and Rob Lavinsky; it has since been sold to a private collector.

PUBLISHED:
*Kristalle* (1939) by Alfred Ehrhardt, p. 40.

STATUS: **Classic**



# Beryllonite with Tourmaline

*Paprok, Nuristan, Afghanistan*

16 cm; This incredible combination of two extraordinary minerals—a world class beryllonite grown around an exceptional red tourmaline—is one of the two finest known. It was collected in the mid-1990's, and was purchased from Afghan miners in northern Pakistan by Tahir Iqbal and Wayne Thompson, who sold it to a private collector.

STATUS: **Contemporary Masterpiece**

# Chrysoberyl sixling twin

*Itaguaçu, Espirito Santo, Brazil*

4.6 cm; This superb specimen is a modern-day classic. It was collected by the late Allan Caplan in 1940 (see Allan Caplan interview, *Mineralogical Record,* November-December 1980, p. 357). A single pocket produced most of the world's finest chrysoberyls. This piece is one of a dozen great specimens known from the find. Although there is no precise information about how many were found, Caplan stated that a "gunny sack full" was recovered. Caplan's account is one of the great stories in mineral collecting and it helped inspire a young Wayne Thompson to pursue a career in mineral mining and recovery. Other Caplan chrysoberyls are in the William Larson collection, the Wayne Leicht collection, the Houston Museum of Natural Science, and the Smithsonian Institution. The example pictured here was purchased from an old collection by Wayne Thompson and Gene Meieran; it is now in the Gene and Roz Meieran collection.

STATUS: **Contemporary Masterpiece**

# Tourmaline with Lepidolite

*Pederneira mine, San José da Safira, Minas Gerais, Brazil*

8.2 cm; The lepidolite on this specimen is equal in quality to the finest ever found. In combination with the nearly flawless, deep gemmy green tourmaline crystals, it makes for unbeatable aesthetics. While most tourmaline specimens from the Pederneira mine are heavily repaired, this piece is unrepaired. It was collected in 1999 from the first pocket found in the second phase of mining at Pederneira. A second pegmatite was located and mined in 1999. Mining first began there around 1980, and lasted several years. This piece was one of three magnificent specimens from the original pocket acquired from Brazilian miners by Wayne Thompson, Gene Meieran and Pierre Laville. It is now in the Gene and Roz Meieran collection. Another of the three pieces purchased that day appears here in the photo of Stuart Wilensky's showcase p. 4; and the third one was pictured on the Westward Look Show poster in 2005.

PUBLISHED:
Jeff Scovil Christmas Card, 2005.

STATUS: **Ikon**

# Liroconite

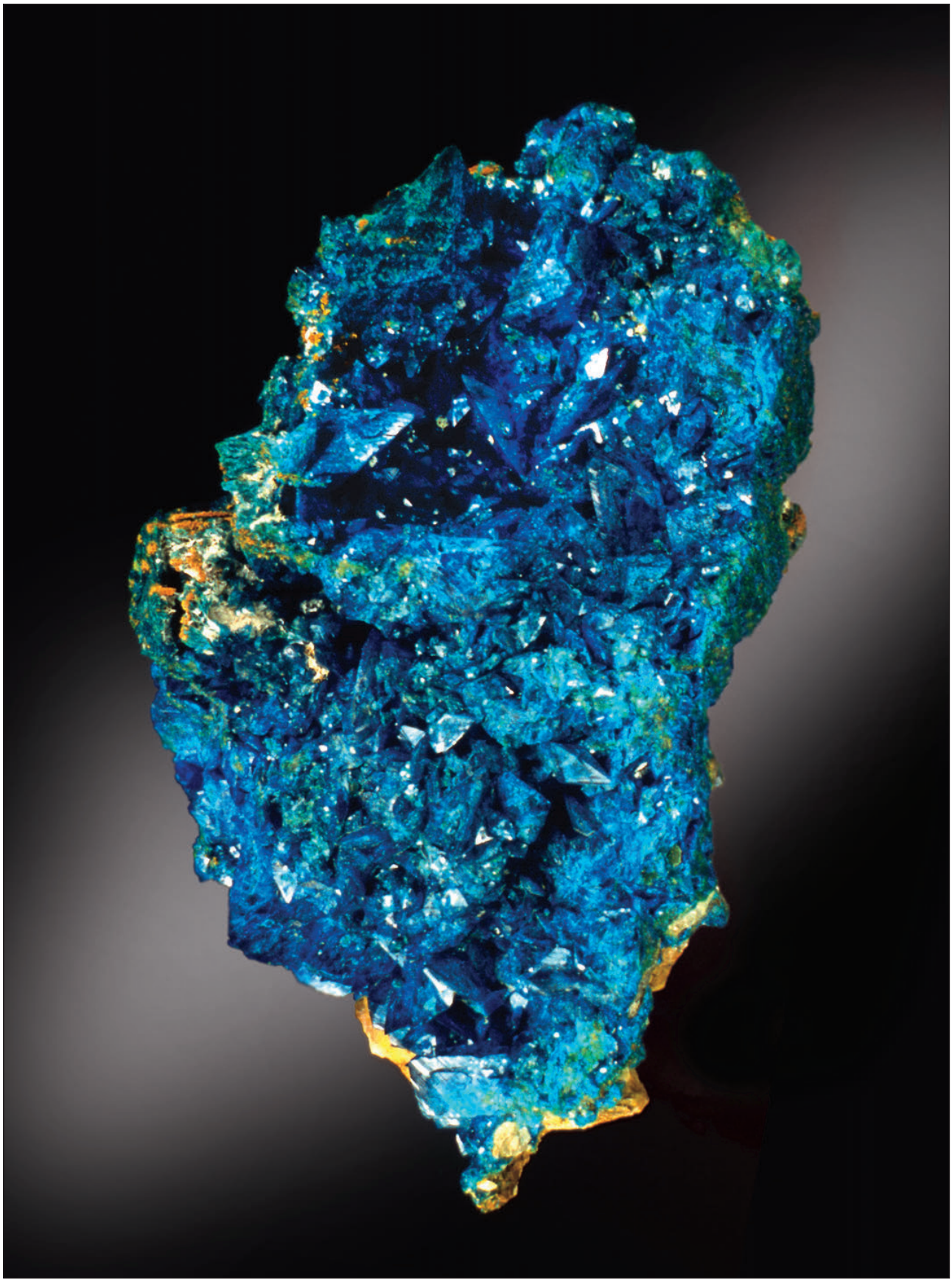
*Wheal Gorland-Wheal Unity vein, Gwennap parish, Cornwall, England*

8.5 cm; The exceptional color of liroconite makes it extremely desirable, but it is one of the most difficult of all Cornish classics to obtain. The large specimen shown here is one of the two or three finest liroconites known. It was traded from the British Museum to Eric Asselborn in 1986, and was acquired in 2006 by Wayne Thompson and Rob Lavinsky, who sold it to a private collector.

PUBLISHED:
*Encyclopedia of Minerals* (2002) by Petr Korbel and Milan Novak, p. 186.

STATUS: **Classic**

REFERENCES:
The best reference to Cornish specimens is *Minerals of Cornwall and Devon* (1987) by British Museum curators Peter Embrey and Robert Symes, co-published by the British Museum and the Mineralogical Record. See also the article "Cornwall's Famous Mines" by Peter Bancroft and Sam Weller, *Mineralogical Record*, vol. 24, July-August 1993, p. 259–283.



# Rhodonite

*Morro de Mina, Conselheiro Lafaiete, Minas Gerais, Brazil*

6 cm; This specimen is from a locality in Brazil that has produced gem rough and embedded, damaged rhodonite crystals for a number of years. In the last couple of years, however, it has produced a small number of higher quality specimens, including this extraordinary piece which is among the largest fine crystals of deep red rhodonite known. Parts of the crystal are faceting-grade. Broken Hill, Australia is famous for producing the world's finest rhodonite specimens, but this piece (although of a different habit) compares favorably to the best from Broken Hill. It was originally purchased by Wayne Thompson and Jerry Romanilla. It then went to Rob Lavinsky, and is now in a private collection.

STATUS: **Contemporary Masterpiece**

# Topaz ("Imperial")

*Antonio Pereira mine, Antonio Pereira Dom Bosco,*
*Minas Gerais, Brazil*

8.9 cm; Many great "imperial" (deep orange) topazes have been recovered from the mines around Ouro Preto, Minas Gerais, Brazil, but nearly all are loose singles. The one shown here may be the finest cluster of imperial topaz crystals known. It was collected in the mid 1970's, and was part of a large lot of gem material acquired by gemstone dealer Kevin Patterson. Fortunately, Kevin's father saved four single crystals from the lot and held them as specimens. Wayne Thompson's wife, Laura Thompson, met Kevin and introduced him to Wayne, who then was able to purchase the four crystals. Later, when Wayne and Gene Meieran were looking at the four pieces, they realized that two of the crystals fit together to make this incredible specimen! It is now in the Gene and Roz Meieran collection.

PUBLISHED:
*Krystallos Brazil* by Sonia Ramseca.
*Mineralogical Record*, September-October 1999, p. 346.
Cover *Lapis* magazine, May 2000.
*Mineralogical Record* (Supplement, January-February 2004), "50-Year History of the Tucson Show," p. 149.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The Ouro Preto topaz mines were described by Jacques Cassedanne in his 1989 article: "Famous Mineral Localities: The Ouro Preto Topaz Mines," *Mineralogical Record,* vol. 20, p. 221–233.

# Manganite

*Ilfeld, Harz Mountains, Thuringia, Germany*

12 cm; The greatest locality by far for superb manganite specimens is Ilfeld in the Harz Mountains of central Germany. Lustrous black crystal clusters from this old classic locality have been treasured by collectors since the 19th century. The specimen shown here is among the finest manganites known—a classic in every sense of the word, and unique because of the large single crystal standing out of a field of average size crystals, with excellent luster and no damage. The specimen shown here was discovered in a bombed-out house at the end of World War II, with a label showing it to be from the "Wittig Collection." It was acquired by a German mineral museum and traded later to Eric Asselborn, from whom it went to Wayne A. Thompson and Rob Lavinsky in 2006.

STATUS: **Classic**

# Proustite

*Dolores Tercera mine, Chañarcillo, Chile*

5 cm; A fine Chilean proustite with good form and brilliant red transparency is another of the "holy grail" specimens for mineral collectors, though very few collectors will ever be privileged to own a really good one—fewer than a dozen exist in museums and private collections worldwide. The piece shown here is especially remarkable for the trilling twinning. It was collected in the last half of the 19th century, and was held in a private collection for many years before being acquired by Wayne Thompson and Gene Meieran, and is now in the Bill Larson collection.

STATUS: **Classic**

REFERENCE:
The best review of the locality is Robert B. Cook's "Famous mineral localities: Chañarcillo, Chile" in *Mineralogical Record*. vol. 10, July-August 1979, p. 197–204.

# Beryl (Aquamarine)

*Medina, Minas Gerais, Brazil*

19.3 cm; The etch patterns on this lustrous, sharp, flawless, richly colored crystal make this piece glow. Collected during a gem mining venture in the mid 1990's, it is one of the finest two or three aquamarine crystals known, according to Sandor Fuss. Approximately 20 to 30 fine specimens were recovered at the same time; most were purchased by Wayne Thompson, Gene Meieran and Pierre Laville. It remained in the Wayne Thompson collection for several years before being traded to Gene and Roz Meieran. Another specimen from this find is illustrated on p. 113 in *The Smale Collection* (2006) by Steve Smale.

STATUS: **Contemporary Masterpiece**

# Epidote

*Knappenwand, Untersulzbachtal, Austria*

10 cm; This is an unrepaired (many Austrian epidotes are repaired) aesthetic cluster of epidote crystals with a small group of byssolite needles. It was probably collected in the late 19th century or early 20th century. Its known provenance begins with the collection of Godehard Schwethelm (1899–1992), one of the most important early to mid-20th century collections built in Europe. It was acquired by Helmut Brückner with the rest of the Schwethelm collection and sold to Wayne Thompson, from whom it went to a private collector.

STATUS: **Classic**

REFERENCE:
The locality and its history have been admirably described by R. Seeman in his article "Famous mineral localities: Knappenwand, Untersulzbachtal, Austria" in *Mineralogical Record,* vol. 17, May-June 1986.

# Spodumene (Kunzite) with Beryl (Morganite)

*Darra-e-Pech district, near Nuristan, Kunar Province, Afghanistan*

20 cm; The hot-pink beryl ("morganite") alone would have been equal to the world's finest matrix morganite, but with the purple spodumene ("kunzite") and pale bluish platy albite ("cleavelandite"), this piece ranks among the world's finest known mineral specimens. It was collected in early 1990's, and was purchased from an Afghanistan gem dealer by Wayne Thompson, Gene Meieran and Karl Kemph. It was later sold to a private collector, who kept it for over 10 years; it was recently sold by Wayne Thompson through Sandor Fuss and is now in the Stuart Wilensky collection.

PUBLISHED:
*Mineralogical Record,* Cover, September-October 1993.
*Mineralogical Record,* November-December 2000, p. 507.
French calendar, Jeff Scovil, 2000.

STATUS: **Contemporary Masterpiece**

# Legrandite

*Ojuela mine, Mapimí, Durango, Mexico*

8.4 cm; This extraordinary specimen, one of fewer than 20 great legrandites known, comes from the world's only locality for good specimens—Level 5 of the famous Ojuela mine. The large, lustrous, sharp and colorful crystals make this one of the better specimens known. It was collected in the 1960's and sold to Gene Schlepp by miners in Mapimi. Gene sold it to Richard Kosnar, who sold it to Marion and Hadley Stewart. Wayne Thompson and Gary Hansen purchased the Stewart collection following Marion's death, and sold the legrandite to Bill Larson, who still owns it today.

PUBLISHED:
*Mineralogical Record*, May-June 2001, p. 208.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The occurrence is described in Thomas Moore's comprehensive monograph, "The Ojuela mine, Mapimí, Durango, Mexico," in *Mineralogical Record*, vol. 34, September-October 2003, p. 1–91.

# Pyrargyrite

*Las Chispas mine, Arizpe, Sonora, Mexico*

15.5 cm; This is one of the finest pyrargyrites known, and by far the best from this classic locality. Joel Bartsch, Curator and President of the Houston Museum of Natural Science, considers it to be one of the 50 finest minerals he has seen. It was probably mined in the late 1800's, and was purchased in the 1970's by a private collector. It remained in that collection until 2003, when it was purchased jointly by Wayne Thompson and Doug Wallace; it is now in a private collection.

STATUS: **Classic**

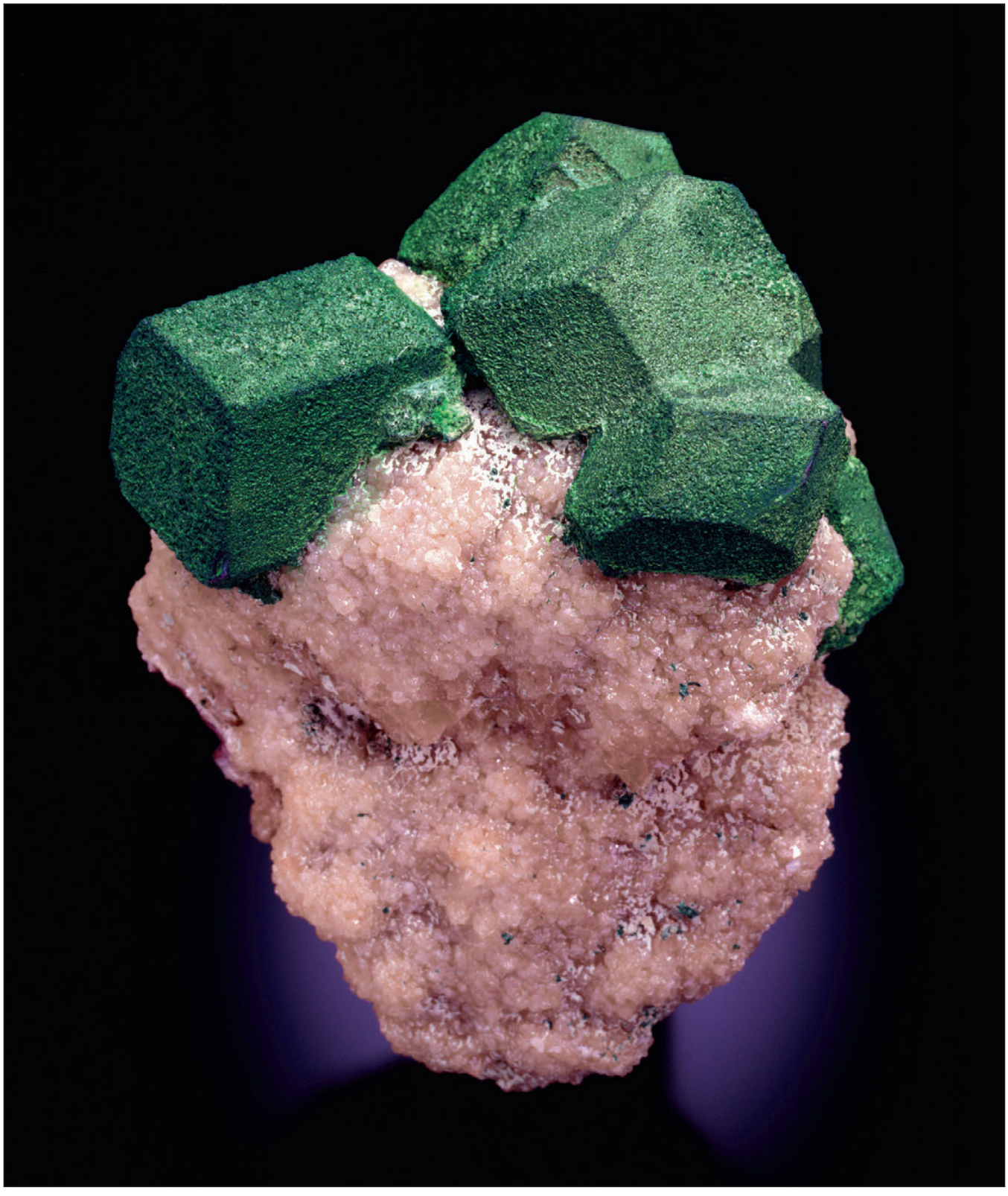
# Malachite on Cuprite

*Emke Farm, Onganja, Seiss, Namibia*

13.7 cm; This piece was collected in 1976 from the famous pocket at the Onganja mine in Namibia. With perfection in matrix and crystals, and exceptional aesthetics, color and great crystal size combined, it is among the two or three finest examples from this find of a few hundred pieces. A large portion of this pocket was purchased by Walter Kahn, and this particular piece was held out by the Kahn family as the finest of them all. It remained in their collection until it was obtained by Eric Asselborn, from whom it went, with much of his collection, to Wayne Thompson and Rob Lavinsky in 2006; it has since been sold to a private collector.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The best reference on the Onganja mine is the 1996 article by Bruce Cairncross and Stuart Moir: "Famous mineral localities: The Onganja Mining District, Namibia," in *Mineralogical Record,* vol. 27, March-April, p. 85–97.



# Tourmaline on Smoky Quartz

*Paprok, Nuristan, Afghanistan*

13 cm; The nearly flawless, gemmy, hot-pink, mirror-lustered tourmaline crystal with a fantastic termination, perched on the black smoky quartz, makes this piece one of the most beautiful tourmaline specimens in the world. It was collected around 1990 and purchased from Afghan miners in northern Pakistan by Tahir Iqbal and Wayne A. Thompson. It was in the Wayne Thompson collection for many years, and was then in the personal collection of his wife, Laura; it was finally acquired by a private collector.

PUBLISHED:
*Mineralogical Record*, May-June 1994.
*ExtraLapis English,* no. 6, "Tourmaline" issue (2002), p. 86.

STATUS: **Contemporary Masterpiece** *and* **Ikon**

# Zoisite (Tanzanite)

*Merelani Hills, Arusha district, Tanzania*

7.9 cm; A superb undamaged group of crystals with excellent color and luster; very few tanzanite specimens consist of more than a single crystal. Collected in the mid-1990's, it was purchased from a gemstone miner in Tanzania by Wayne Thompson, and is now in Gene and Roz Meieran collection.

PUBLISHED:
*Mineralogical Record* (Supplement, January-February 2004), "50-Year History of the Tucson Show," p. 149.

STATUS: **Contemporary Masterpiece**

# Gold

*Farncomb Hill, Breckenridge, Colorado*

11.5 cm; These superbly crystallized leaves of gold (actually extremely flattened twins) comprise one of the finest preserved gold specimens from the famous Breckenridge area, a great historical location and one of the most notable gold specimen producers in the world. It was collected in the 1880's and acquired by John F. Campion, who arranged for his collection to go to the Denver Museum of Natural History; the museum later traded it to Richard Kosnar, from whom it went to Wayne Thompson. It remained in Wayne's collection for two years, and then went to the James Horner; it is now in the Bryan Lees collection.

PUBLISHED:
F. L. Ransome's (1911) monograph: "Geology and Ore Deposits of the Breckenridge District, Colorado."
*Mineralogical Record*, January-February 2001, p. 31.
*Rock and Gem,* July 2006, cover and p. 13.

STATUS: **Classic**

REFERENCE:
The Breckenridge district and its gold specimens were described by Ed Raines and Art Smith in their 1987 article "Famous mineral localities: Breckenridge," in the *Mineralogical Record* Gold Issue, vol. 18, January-February, p. 51–61.

# Beryl (Aquamarine)

*Shigar River Valley, Skardu District, Northern Areas, Pakistan*

19.5 cm; The crystal size and perfection, pleasing sky-blue color, luster and arrangement on contrasting matrix, make this piece among the finest matrix aquamarines known. It was collected in 1991, and was purchased by Tahir Iqbal and Wayne Thompson near the mine site;
it remained in the Wayne Thompson collection for many years, until it was acquired by a private collector.

PUBLISHED:
*Mineralogical Record,* November-December 1997, p. 507.
Cover of the book *Photographing Minerals, Fossils and Lapidary Materials* (1996) by Jeff Scovil.
Ste.-Marie-aux-Mines show poster, 1999.

STATUS: **Contemporary Masterpiece**

REFERENCES:
For more information on the Pakistani aquamarine district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record* (1985), vol. 16, p. 393–411. Also excellent is the *ExtraLapis English* issue on "Pakistan: Minerals, Mountains & Majesty" (2004).

# Spessartine

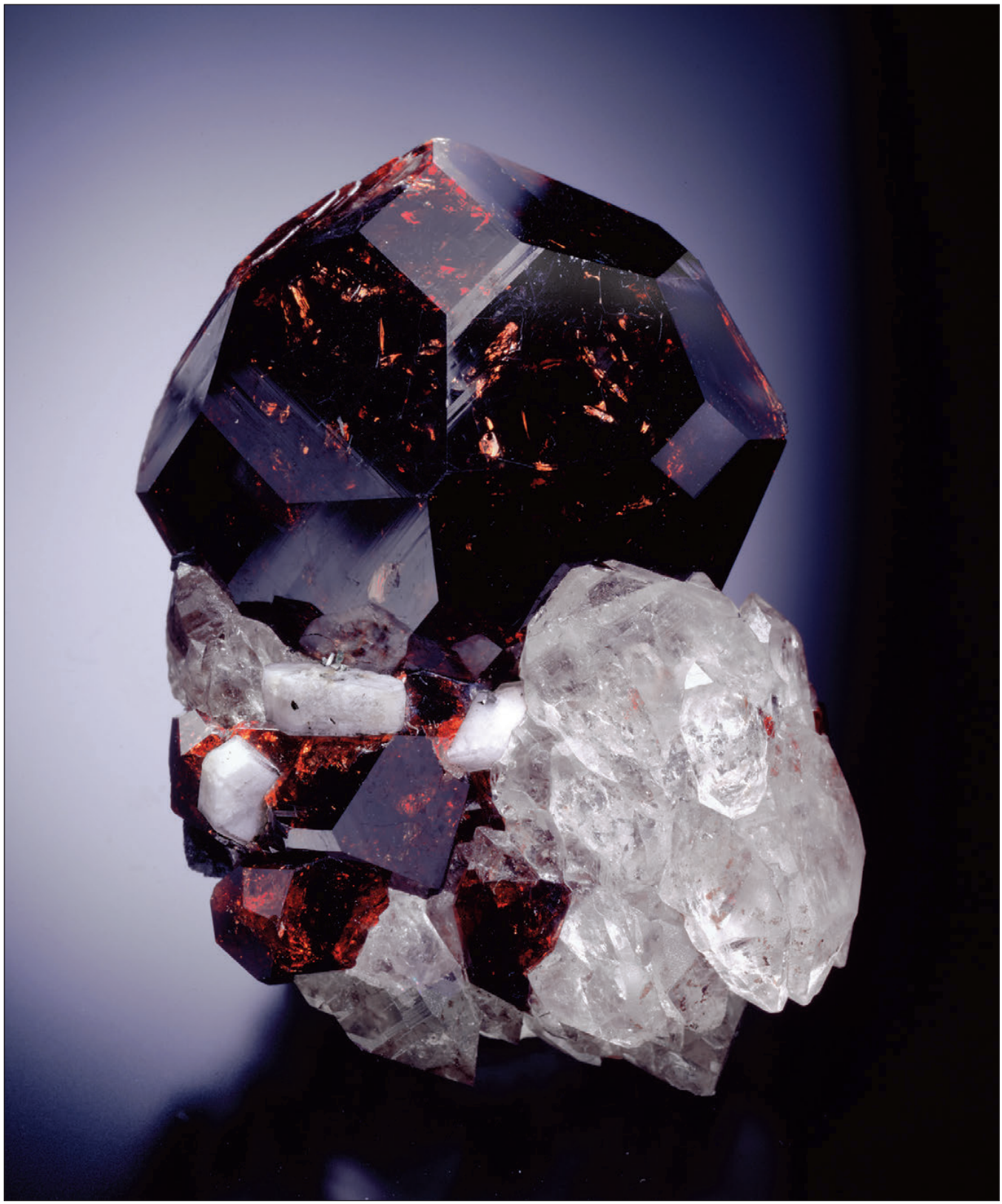
*Shigar Valley, Skardu District, Northern Areas, Pakistan*

11 cm; This incredibly sharp, lustrous textbook crystal has internal flashes of fire and none of the crazing or fracturing common to almost all the garnets from northern Pakistan. It sits aesthetically on a matrix of crystallized quartz, and is a strong candidate for the world's finest garnet matrix specimen. Collected in 2006, it was purchased at the mine site by Tahir Iqbal and Wayne Thompson, and was subsequently acquired by Sandor Fuss. It is now in the Stuart Wilensky collection.

STATUS: **Contemporary Masterpiece**

REFERENCES:

For more information on the Pakistani aquamarine district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record* (1985), vol. 16, p. 393–411. Also excellent is the *ExtraLapis English* issue on "Pakistan: Minerals, Mountains & Majesty" (2004).



# Spodumene (yellow)

*Darra-e-Pech district, near Nuristan,*
*Kunar Province, Afghanistan*

18 cm; A beautiful, large, sharp, gemmy, bright yellow crystal of spodumene with a second crystal flaring off the side. Fine specimens of yellow spodumene are rare, and this may be the finest yellow spodumene known. It was collected in 1999, and purchased from miners in northern Pakistan by Tahir Iqbal and Wayne Thompson. It is now in the Gene and Roz Meieran collection.

STATUS: **Contemporary Masterpiece**

# Copper

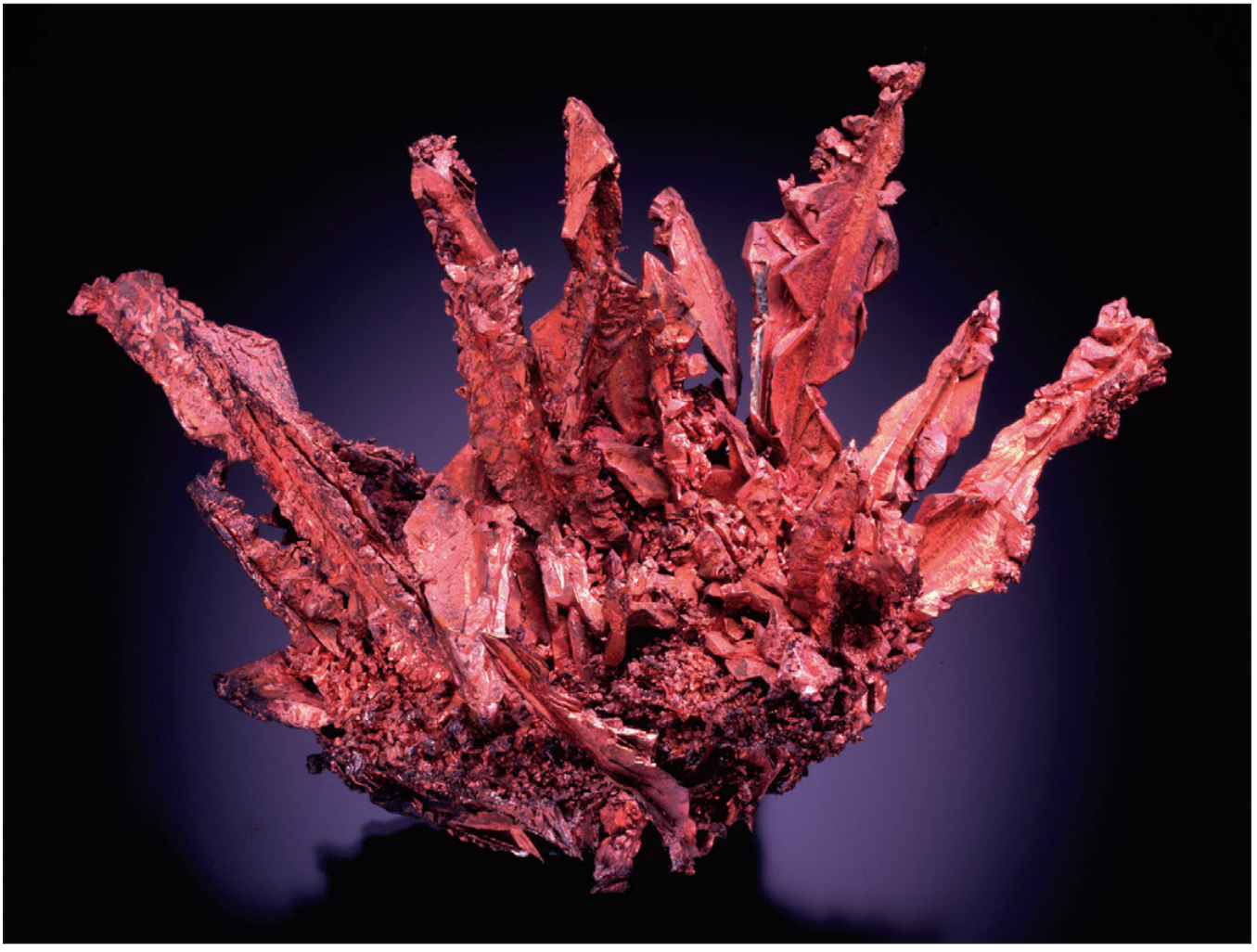
*Sacramento mine, Bisbee, Arizona*

12.5 cm; This specimen is by far the finest crystallized copper known from the mines of Bisbee, and is among the finest coppers from any locality. It was collected by Bob Kuhlmeyer, who worked for 50 years underground as a miner in Bisbee. His collection of Bisbee and southern Arizona minerals was among the finest ever assembled. After his death in 1976 the collection was given by his brother to a family friend and it disappeared for several years. Wayne Thompson was one of many collectors who had befriended Bob Kuhlmeyer, and he spent many hours with Bob listening to his recollections about mining at Bisbee and where he found many of his finest specimens. Around 1981 Wayne received a call from his friend Jim Vacek, who had located the collection in Phoenix only a few miles away from Wayne's house—and it was for sale! Wayne could not afford to buy the collection outright, so he made a deal with Les Presmyk and Tony Potucek. They bought it, and Wayne (and Mike New) took the copper specimen as their finder's fee. Wayne trimmed away a mass of wire coppers and discovered the core of exceptional crystals hidden inside. Les Presmyk then bought Mike New's half-interest in the piece. A few years later Wayne sold his half of the piece to Les for $2500, and it remains in the Les and Paula Presmyk collection today.

PUBLISHED:
*Mineralogical Record*, September-October 1983, p. 326.

STATUS: **Contemporary Masterpiece**
*from a classic locality – a* **"Contemporary Classic"**

REFERENCES:
The best references on the minerals of Bisbee are Richard Graeme's "Famous Mineral Localities: Bisbee, Arizona" (*Mineralogical Record,* vol. 12, September-October 1981) and his "Bisbee Revisited: An Update on the Mineralogy of This Famous Locality" (*Mineralogical Record,* vol. 24, November-December 1993).



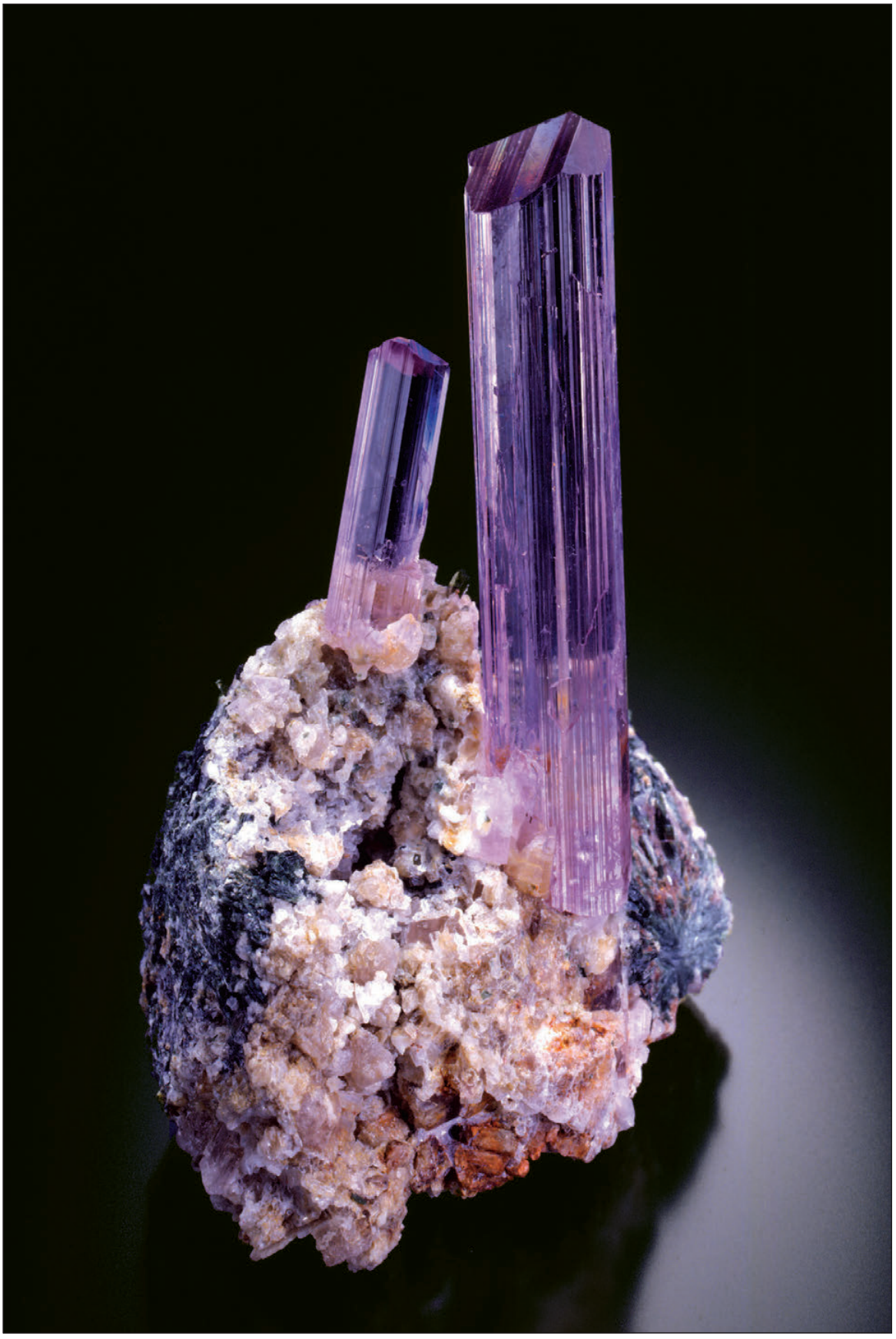
# Scapolite

*Badakhshan, Afghanistan*

10 cm; Little is known about the scapolite occurrence in the remote Badakhshan region of Afghanistan, but it has produced some beautiful crystals, usually in the 2 to 5-cm range. With perfect aesthetics, good color and luster, and sharp crystals, this specimen, the largest found on matrix, may well be the finest purple scapolite known. It was collected in 2003, and purchased by Tahir Iqbal and Wayne Thompson in northern Pakistan from Afghan miners. It was then traded to Gene and Roz Meieran, in whose collection it remains today.

PUBLISHED:
*Mineralogical Record*, May-June 2005, p. 299.

STATUS: **Contemporary Masterpiece**



# Silver

*Batopilas, Chihuahua, Mexico*

10 cm; Batopilas is justly famous for superb specimens of crystallized herringbone silver (usually embedded in calcite). The aesthetically beautiful specimen of wire silver shown here is one of only two wire groups preserved from Batopilas. The other is in the University of Arizona Mineral Museum, part of the Miguel Romero collection, originally from the Andrew Carnegie collection. These would be great silver specimens from anywhere. The piece shown here was acquired by Bill Lewis from a well-known old East Coast collection and was sold to Tom McKee for $65. Tom etched it out of a lump of calcite. Wayne Thompson and Les Presmyk purchased the Mexican collection of Tom McKee following his death in 1986. The Batopilas silver remained in the Wayne Thompson collection for many years before finally being traded to Evan Jones; Evan Jones later transferred it to Gene and Roz Meieran, in whose collection it remains today.

PUBLISHED:
Tucson show poster 1994.
*Mineralogical Record*, September-October 2000, p. 397.

STATUS: **Classic**

REFERENCE:
The Batopilas district was described by Wendell Wilson and Chris Panczner in their article, "Famous mineral localities: The Batopilas District, Chihuahua, Mexico," in *Mineralogical Record*, vol. 17, January-February 1986, p. 61–80.

# Beryl (Aquamarine) with Fluorapatite

*Chumar Bakhoor, Nagar, Northern Areas, Pakistan*

16.5 cm; This specimen combines a cluster of beautiful hot pink large apatite crystals with a pleasing blue cluster of aquamarine crystals on muscovite. It was collected by local specimen miners in 1989 when Chumar Bakhoor was still a new locality. It is the finest known aquamarine/apatite combination. Tahir Iqbal and Wayne Thompson purchased it from miners in Nagar in 1989. It remained in Wayne's collection for a number of years, and was then acquired by Gene and Roz Meieran.

PUBLISHED:
*Mineralogical Record,* September-October 1981, p. 343.

STATUS: **Contemporary Masterpiece**

REFERENCES:
For more information on the Pakistani aquamarine district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record* (1985), vol. 16, p. 393–411. Also excellent is the *ExtraLapis English* issue on "Pakistan: Minerals, Mountains & Majesty" (2004).

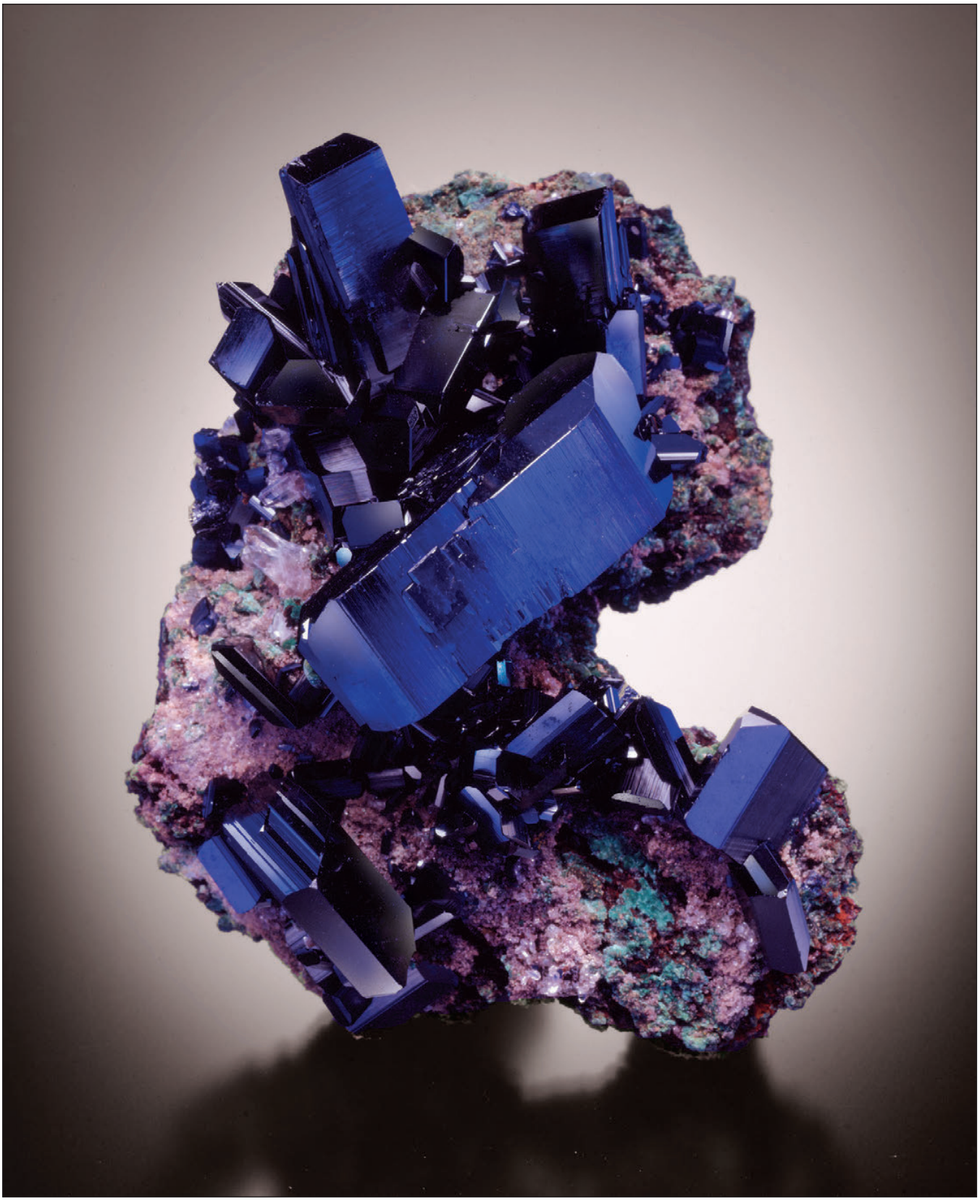
# Azurite

*Tsumeb mine, Namibia*

11 cm; This is one of the finest azurite specimens ever found at Tsumeb; Charles Key claims that less than 50 top-quality Tsumeb azurites were ever recovered, number one being the "Newmont Azurite." The one shown here was purchased by Marion and Julius Zwiebel in the 1970's; they sold it to a Swiss collector, from whom it went to French collector Eric Asselborn. Obtained by Wayne A. Thompson and Rob Lavinsky with the Asselborn collection; it then went to Bruce Oreck via Sandor Fuss.

STATUS: **Contemporary Masterpiece**

REFERENCES:
*The Mineralogical Record*'s 1977 "Tsumeb Issue" (vol. 8, May-June) is the classic reference on this world-famous locality, but has long been out of print. Georg Gebhard's two more recent books, *Tsumeb-I* (1991, in German) and *Tsumeb-II* (1999, in English) are essential references for learning about the Tsumeb deposit.



# Spodumene (Kunzite) with Smoky Quartz

*Darra-e-Pech district, near Nuristan, Kunar Province, Afghanistan*

13.5 cm; The combination of a large, sharp, gemmy, richly colored kunzite crystal with a fine, dark smoky quartz on matrix gives this piece exceptional aesthetics. It is one of the finest matrix kunzites known. It was collected in the late 1990's, and purchased from miners in northern Pakistan by Tahir Iqbal and Wayne A. Thompson. It has since been sold to a private collector.

STATUS: **Contemporary Masterpiece**

# Smithsonite

*Tsumeb mine, Tsumeb, Namibia*

12.5 cm; This uniquely beautiful specimen is the world's finest copper-rich smithsonite, colored a rare and beautiful turquoise-blue by trace amounts of copper. (Copper-rich smithsonite is usually apple-green, and some of the larger crystals on this specimen do have apple-green cores.) It was purchased from a Namibian miner in 1976 by New York mineral dealers Miriam and Julius Zweibel, and was offered for sale in their motel room at the Marriott Hotel in Tucson during the 1977 Tucson Gem and Mineral Show. The asking price then was $3000—and no one bought it! It has since become famous for its extraordinary turquoise-blue color, and is on the regret list of everyone who saw it back then but couldn't afford it (including Wayne Thompson and Wendell Wilson). It was eventually sold to a private collector, and 25 years later was purchased by Wayne Thompson and Doug Wallace; they sold it to Tsumeb specialist Marshall Sussman, who sold it to Rob Lavinsky; it is now in the collection of Stuart Wilensky.

PUBLISHED:
*Mineralogical Record,* Tsumeb Issue, May-June 1977, p. 76.
*Mineralogical Record*, vol. 36, July-August, p. 316.

STATUS: **Ikon**

REFERENCES:
*The Mineralogical Record*'s 1977 "Tsumeb Issue" (vol. 8, May-June) is the classic reference on this world-famous locality, but has long been out of print. Georg Gebhard's two more recent books, *Tsumeb-I* (1991, in German) and *Tsumeb-II* (1999, in English) are essential references for learning about the Tsumeb deposit.

# Silver

*Kongsberg, Norway*

9.2 cm; Wire silver from Kongsberg, Norway has been famous among collectors for centuries. Great provenance and great aesthetics make this historical specimen one of the finest known outside of the Kongsberg Mining Museum. It was collected in antiquity, and was acquired by the German collector Fred Cassirer (1888–1979) (see *Mineralogical Record*, vol. 10, p. 307, September-October 1979); it was later purchased from Cassirer's heirs by Keith Proctor, who traded it to Wayne Thompson and Gene Meieran; it remains in the Gene and Roz Meieran collection today.

PUBLISHED:
*Mineralogical Record,* September-October 1979, in the memoirs of Fred Cassirer, p. 311.
*Rocks & Minerals,* January-February 1988, p. 47.

STATUS: **Classic** *and* **Ikon**

REFERENCE:
The Kongsberg mines were described by Ole Johnsen in his 1986 article, "Famous mineral localities: The Kongsberg silver mines, Norway," *Mineralogical Record,* vol. 17, January-February, p. 19–36.

# Beryl (Morganite)

*Visto do Rio, Conselheiro Pena, Minas Gerais, Brazil*

9.2 cm; This is an extremely fine, large, sharp, lustrous, gemmy, exceptionally colored morganite and is one of the finest single morganite crystals known. It was collected in the famous find of 1983 and was purchased by Constantino Vasconcelos in Governador Valadares, Brazil; then it went into an old Swiss collection, from which Eric Asselborn obtained it in the mid-1990's; from Eric it went to Wayne Thompson, and then to Gene and Roz Meieran.

STATUS: **Contemporary Masterpiece**

# Galena on Siderite

*Neudorf, Saxony-Anhalt, Germany*

7 cm; Neudorf galenas are much sought-after for their historical significance, their interesting morphology (typically with a more or less equal development of the cube, octahedron and dodecahedron forms), their high luster and attractively associated siderite. The exceptional specimen shown here was collected in the early 1900's, and was among the few pieces in the Giepel collection held back by the Zschweigat family; most of the remainder of the collection was sold to a university in Germany. This piece was obtained by Stefan Stolte and Akim Karl, from whom it went to Eric Asselborn, and from him to Wayne Thompson and Rob Lavinsky; it has since been sold to a private collector.

PUBLISHED:
*Encyclopedia of Minerals* (2002) by Petr Korbel and Milan Novak, p. 35.

STATUS: **Classic**

# Topaz

*Limoeiro mine, Virgem da Lapa, Minas Gerais, Brazil*

12.5 cm; Blue and pink topaz are the rarest colors for the species. Fine blue specimens come from the Ural Mountains In Russia, the Princess Ann mine in Zimbabwe, the Little Three mine in San Diego County, California, and from the Virgem de Lapa pegmatites in Brazil, among others. The finest of all these are the ones from the Limoeiro and Xanda mines at Virgem da Lapa. The specimen shown here was collected in 1976 from a remarkable series of pockets at the Limoeiro mine. The world's finest blue topaz crystals and purple hydroxyl-herderite specimens were recovered there, along with world-class microlites, geocronites and tourmalines. The mines were abandoned and mostly inaccessible by 1980. This piece is by far the finest blue topaz on matrix from the Limoeiro mine and the best known blue topaz matrix specimen in the world.

In 1976, a young Wayne Thompson held this piece in his hand. Jack Lowell, who had purchased it at the mine, offered it to Wayne for $8,000, but it was an impossible price for him to meet at the time and he never got over having to pass on it. For more than 20 years Wayne dreamed of gaining ownership, which he finally achieved. Jack had ended up selling the specimen to Dave Wilber, who traded it to Bill Larson. It remained in the Larson collection for approximately 25 years, until Bill finally traded it to Wayne. Wayne enjoyed owning it for 7 years before it was acquired by Sandor Fuss. It is now in the Stuart Wilensky collection.

PUBLISHED:
*Gem and Crystal Treasures* (1984) by Peter Bancroft, p. 205.
*Mineralogical Record*, January-February 1995, p. 26.
*Mineralogical Record*, November-December 2005, p. 477.
*Mineralogical Record*, January-February 2006, p.64.
*ExtraLapis*, no. 13, "Topaz" (1997), p. 50.
Westward Look Show poster, 2006.

STATUS: **Contemporary Masterpiece**

REFERENCES:
The Virgem da Lapa locality was described by Jacques Cassedanne and Jack Lowel in their 1982 article "Famous Mineral Localities: The Virgem da Lapa Pegmatites," *Mineralogical Record,* vol. 13, January-February, p. 19–28.

# Tourmaline

*Jonas Mine, Itatiaia, Conselhero Pena, Minas Gerais, Brazil*

16.1 cm; This is one of the finest gem tourmaline crystals on matrix from the Jonas mine, and one of the finest tourmaline specimens known. It was collected in 1978 by Ailton Barbosa in the famous Jonas Pocket, one of the greatest mineral finds in history. It was later purchased in Brazil from a consortium of Brazilian dealers by Steve Smale in 1980/81. This piece appears (before it was trimmed) in the Wendell Wilson painting of the reconstructed pocket. It was then sold by Wayne Thompson to a private collector, and is now in the Houston Museum of Natural Science.

PUBLISHED:
*Masterpieces of the Mineral World* (2004) by Wendell Wilson and Joel Bartsch, p. 100.

STATUS: **Contemporary Masterpiece**

# Beryl (Emerald)

*Cosquez mine, Colombia*

12.5 cm; Two large gemmy emeralds of the finest color and quality. This is a true gem emerald on matrix with several exceptional calcite crystals. It is among the finest matrix gem emerald specimens known. It was collected in 1978 and held by the mine owner, Victor Caranza, and a Colombian emerald dealer. Wayne Thompson and Bill Larson then purchased this specimen in partnership with the mine owner. This piece was named "the Yamile" after the owner's daughter. It is now in a private collection.

PUBLISHED:
*Joyeria Colombiana Historia y Arte*, by Rodrigo Moncada, 2000, p. 126–127; on p. 128 it is shown being held by William Boyajian (who was at that time the President of the Gemological Institute of America); on p. 129 it is shown being held by one of the miners at the mine in 1978.

STATUS: **Contemporary Masterpiece**

REFERENCE:
An excellent reference on Colombian emeralds is the *ExtraLapis English* issue on "Emeralds of the World" (2002).

# Silver

*Dolores Tercera mine, Chañarcillo, Chile*

13 cm; This beautifully graceful piece is one of the finest silvers known, and is probably the finest silver specimen ever to come from Chañarcillo. Wayne Thompson first saw it at the Dijon, France Show around 1992 and was unable to forget it. It was collected by a mine manager in Chañarcillo in the late 1800's, and was given to his brother, Max Phillip Giepel, whose collection was sold after his death in 1925 to a university in Germany. This piece and a few others were held out of the sale and were obtained by Stefan Stolte and Akim Karl, who sold it to Eric Asselborn. It was recently obtained by Wayne Thompson and Rob Lavinsky, and is now in the Wayne Thompson collection.

STATUS: **Classic**

REFERENCE:
The long-abandoned Chañarcillo mines and their minerals are described by Robert B. Cook in his 1979 article, "Famous Mineral Localities: Chañarcillo, Chile," *Mineralogical Record,* vol. 10, July-August, p. 197–204.

# Tourmaline with Quartz

*Cruzeiro mine, Minas Gerais, Brazil*

12.5 cm; This piece is an example of nice minerals combining to make an exceptional specimen. The tourmaline crystals are good, and the quartz is a fine, complete crystal, but the sculptural quality of the combination is so aesthetically pleasing and interesting that it becomes a great mineral specimen. Known as "The Walking Tourmaline," it was mined in 1970's. Dave Wilber acquired it from Milton Sklar for $600, and later sold it to Keith Proctor, from whom it went to Sandor Fuss, and then via Wayne A. Thompson it went to the Gene and Roz Meieran collection.

PUBLISHED:
*Rock and Gem* magazine, Cover.
*The Tourmaline Group* (1980) by R.V. Dietrich, p. 193, Plate 11B.
*Gems and Gemology*, Summer 1985, p. 91.
*Mineralogical Record* (Supplement, January-February 2004), "50-Year History of the Tucson Show," p. 107.
*Mineralogical Record*, January-February 2000, p. 15.

STATUS: **Ikon**

REFERENCE:
The best reference on the Cruzeiro mine is the 1980 article by Jacques Cassedanne, Jeannine Cassedanne and D.A. Sauer: "Famous Mineral Localities: The Cruzeiro Mine, Past and Present," *Mineralogical Record,* vol. 11, November-December.

# Fluorite

*Bratsaii, Göschener Alp, Canton Uri, Switzerland*

20.3 cm; Pink octahedral Swiss fluorite is one of the most sought-after classics in mineral collecting. Small specimens are recovered periodically in the Swiss and French Alps, but large specimens are almost unheard of. The large matrix cluster shown here, collected by Swiss strahlers in 1953, is in excellent condition, with good pink color, associated quartz crystals, and sculptural aesthetics; this is one of the finest Swiss pink fluorites ever collected. It was in an old Swiss collection for many years, until it was purchased by Wayne Thompson and Eric Asselborn and sold to a private collector.

STATUS: **Classic**

# Beryl (Aquamarine)

*Shigar River Valley, Skardu District, Northern Areas, Pakistan*

8.5 cm; Although no mineral specimen can be called absolutely perfect, this piece challenges even the most discriminating collectors to find a flaw. It is considered by many to be the finest matrix aquamarine known. Collected in 1999, it was purchased near the mine site by Tahir Iqbal and Wayne Thompson, and is now in the Houston Museum of Natural Science.

PUBLISHED:
*Masterpieces of the Mineral World* (2004) by Wendell Wilson and Joel Bartsch, p. 22 and 54.

STATUS: **Ikon**

REFERENCES:
For more information on the Pakistani aquamarine district see "Gem Pegmatites of the Shingus-Dusso Area, Gilgit, Pakistan" (by Ali H. Kazmi, Joseph J. Peters & Herbert P. Obodda) in *Mineralogical Record* (1985), vol. 16, p. 393–411. Also excellent is the *ExtraLapis English* issue on "Pakistan: Minerals, Mountains & Majesty" (2004).

# Gold

*Colorado Quartz mine, Mariposa, California*

2.9 cm; The two well-formed intergrown gold crystals shown here make this piece one of the finest gold specimens known. It was collected by John Emmett and Larry Lehto (owners of the Colorado Quartz mine) in 1994. They had bulldozed an open cut and were using a metal detector when this piece and two or three others were recovered. Although the Colorado Quartz mine has never produced a large number of gold specimens, several of the world's finest crystallized golds have come form this vein. The piece shown went from John and Larry to Buzz Gray and Bill Forrest, and was later obtained by Wayne Thompson and Doug Wallace, and is now in the Gene and Roz Meieran collection.

PUBLISHED:
*ExtraLapis,* issue no. 5, Gold, p. 1.
*Mineralogical Record*, January-February 2000, p. 85.
*Mineralogical Record* (Supplement, January-February 2004), "50-Year History of the Tucson Show," p. 167.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The Colorado Quartz mine was described in Kampf and Keller's article in the *Mineralogical Record*, "The Colorado Quartz mine, Mariposa County, California: a modern source of crystallized gold" (November-December 1982).

# Tourmaline (Indicolite) with Quartz

*Santa Rosa District, Itambacuri, Minas Gerais, Brazil*

12 cm; With a brilliant blue color, gem clarity, super luster and excellent aesthetics, this piece ranks among the world's finest tourmaline specimens. It was purchased in Brazil from miners at the mine site by Pierre Laville, Wayne A. Thompson and Gene Meieran. It remained in the Wayne Thompson collection for many years, but was finally acquired by a private collector, who then traded it to Steve Smale, in whose collection it now resides.

PUBLISHED:
*Mineralogical Record*, March-April 2005, p. 199.
Lyon Show Poster, 2001.
*The Smale Collection* (2006) Steve Smale, p. 119.
*Le Règne Minéral* magazine, September-October 2002.
*Gems and Gemology*, Fall 2000, p. 266.

STATUS: **Ikon**

# Wulfenite with Mimetite

*San Francisco mine, Sonora, Mexico*

9.5 cm; This beautiful specimen was among those recovered in the spectacular 1994 find by Wayne Thompson, James Horner and Ed Swoboda. That discovery confirmed the locality as one of the world's great wulfenite occurrences. A combination of large, amber-orange wulfenite crystals with red-orange mimetite makes for aesthetic perfection. This is one of the two or three best wulfenite specimens recovered from San Francisco mine, and is one of the finest wulfenites known. It was collected by Ed Swoboda and was Wayne Thompson's first choice out of thousands of specimens collected during a four-year mining venture. Approximately 2,000 feet of tunnel were driven into the heart of the vein looking for wulfenite. This specimen was in the Wayne Thompson collection for several years and was then traded to Evan Jones. Evan later traded it to Wayne Sorensen, and it then went to Bruce Oreck via Wayne Thompson. It is now in the Stuart Wilensky collection.

PUBLISHED:
*Mineralogical Record,* January-February 1998, p. 63.
*Mineralogical Record,* September-October 1995, p. 488.
Ste.-Marie-aux-Mines show poster, 2002.
French calendar by Jeff Scovil, 2000.

STATUS: **Contemporary Masterpiece**

REFERENCE:
The story of the discovery is recounted in Thomas Moore's comprehensive 2004 article: "The San Francisco mine, Sonora, Mexico," *Mineralogical Record,* vol. 35, November-December, p. 41–61.

# Quartz (Rose)

*Alto da Pitora mine, Minas Gerais, Brazil*

17.5 cm; This is an extremely beautiful, aesthetic specimen of rose quartz. There are dozens of great rose quartz specimens known, but this is an outstanding piece. Collected in the 1980's from a relatively new occurrence, it was purchased from the Constantino Vasconcelos family (a Brazilian family of mineral miners and dealers) by Wayne Sorensen and trimmed into this exceptional specimen. Sorensen sold it through Wayne Thompson to Steve Neely, in whose collection it remains today.

PUBLISHED:
*Mineralogical Record*, March-April 2006, p. 115.

STATUS: **Contemporary Masterpiece**

REFERENCES:
The Pitora mine is the third great Brazilian rose quartz occurrence to be discovered. The first was the "Sapucaia" (Berilo Branco) mine, and the second was the Lavra da Ilha pegmatite. These have all been described in the *Mineralogical Record.* The Berilo Branco mine was the subject of Wendell Wilson's 1999 article: "Famous Mineral Localities: Lavra Berilo Branco, the Original 'Sapucaia' Rose Quartz Occurrence, Minas Gerais, Brazil" in vol. 30, September-October. The Lavra da Ilha occurrence was described in Jacques and Jeannine Cassedanne's 1973 article: "Minerals from the Lavra da Ilha Pegmatite, Brazil," vol. 4, September-October, p. 207–213. And the Pitora mine was described by Jacques Cassedanne and Jeanete Alves in their 1990 article: "Crystallized Rose Quartz from Alto da Pitora, Minas Gerais, Brazil," vol. 21, September-October.

# Euclase

*Gachala mine, Colombia*

4.1 cm; This extraordinary, deep blue crystal was purchased jointly from a gem dealer, along with a larger crystal, by Wayne Thompson, Eric Asselborn and Bill Larson in 1998. The larger crystal went to Gene Meieran; the piece shown here was obtained by Wayne Thompson and Rob Lavinsky, and was sold to a private collector. This small specimen is considered by many collectors to be the finest euclase known (although it seems impossible to better the much larger Gene Meieran piece). It is definitely one of the finest mineral specimens of its size (of any species) ever found.

STATUS: **Ikon**

# Rhodochrosite on Manganite

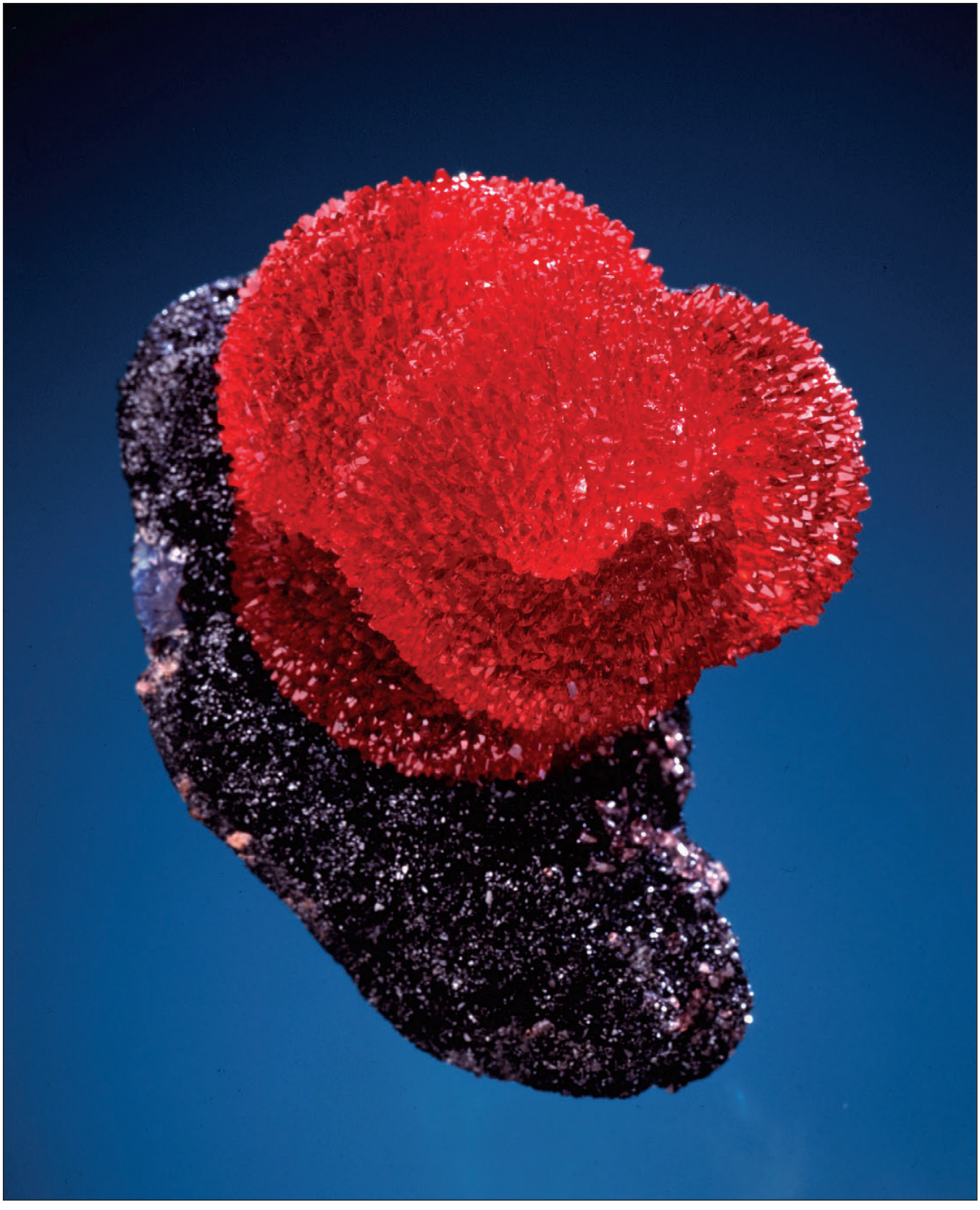
*N'Chwaning mine, Kuruman, South Africa*

8 cm; This rhodochrosite, known as "the Snail," is one of the most famous ikons in the Mineral World, comparable in status to the Mona Lisa in the Art World. The internal glow is mesmerizing; it is somehow more than a great rhodochrosite, and set a record price for a mineral specimen when it was sold a few years ago. Collected in 1976 in the great series of pockets encountered during manganese mining at the N'Chwaning mine in South Africa, it was purchased in Africa by Bill Larson while on his honeymoon with wife Jeanne. It remained in the Larson collection for nearly 30 years, and then went to a private collection in a trade/cash deal arranged by Wayne Thompson. It was later traded back to Bill Larson through Wayne Thompson.

PUBLISHED:
*Mineralogical Record*, May-June 1978, p. 143.
*Mineralogical Record*, May-June 1981, p. 180.
*Mineralogical Record*, January-February 1993, back cover.
*Mineralogical Record*, May-June 1999.
*Gem and Crystal Treasures* (1984) by Peter Bancroft, p. 334.
Tucson show poster 2002.
*Mineralogical Record* (Supplement, January-February 2004), "50-Year History of the Tucson Show," p. 81 and 100.

STATUS: **Ikon**

REFERENCES:
The three best references on the N'Chwaning mine and related deposits (know as the Kalahari Manganese Field) are Wendell Wilson and Pete Dunn's 1978 article: "Famous Mineral Localities: The Kalahari Manganese Field" (*Mineralogical Record,* vol. 9, May-June), the 1991 article by Ludi von Bezing and others entitled "The Kalahari Manganese Field: an Update," in *Mineralogical Record* vol. 22, July-August, and the 1997 book by Bruce Cairncross and others, entitled *The Manganese Adventure*.



**Copper crystal group, 12.5 cm, one of the five great copper specimens collected at the Ray mine, Pinal County, Arizona.**

# About the Author

## *A Personal Scrapbook*

**Laura and Wayne Thompson (with two Medina aquamarine crystals)**

Wayne A. Thompson was born September 2, 1950. His mother was born in New Mexico in 1914 and grew up in Ajo, where his grandfather worked as an electrical engineer in the mine.

He began collecting minerals at age 6 or 7 and collected vanadinite underground in the Apache mine with his father and uncle in 1960, at the age of 10. About that time he and his friend Les Presmyk joined the Arizona Mineralogical Society and the 4-H Mineral Club of Marc and Cliff Watson. Wayne attended his first Tucson Gem and Mineral Show in 1960, and hasn't missed one since. In 1963 he purchased a collection of Tiger minerals from author Bob Jones. Working three paper routes to support his collection, he bought specimens from local dealers like Scott Williams, Dave New and Jim Mueller.

In college Wayne majored in Geology but spent most of his time collecting at many of Arizona's great localities. Numerous trips to the Apache, Rowley, Old Yuma, Flux, Defiance, Grand Reef, 79 and Red Cloud Mines produced dozens of pockets of fine minerals including wulfenite, smithsonite, aurichalcite, vanadinite, cerussite and linarite.

In 1972, during his senior year in college, he took time off to mine for specimens at the San Francisco mine in Sonora, Mexico and opened a 3 by 5 by 6-foot pocket of lemon-yellow wulfenite crystals to 3 inches on pale orange mimetite. He never returned to school, instead spending several months exploring abandoned mines in northern Mexico. A number of new, potentially important localities were discovered, but before he could begin to seriously mine any of them, fate intervened.

On a return trip to Arizona he met Archie Griffith, a miner who had collected minerals with his brother George Griffith at the Mammoth-St. Anthony (Tiger) mine for the mining company. Together they decided to revisit the Tiger. Archie supplied Wayne with maps and locations in the mine, and for two years Wayne and a few other now-prominent mineral collectors explored the mine at Tiger, spending up to three days at a time underground. They located the linarite/caledonite stope, the diaboléite stope, a 300-foot exposure of cerussite (reticulated and V-twins) and several wulfenite veins, but the leadhillite (their principal target) proved to be inaccessible. On the 660 Level, a then-unknown mineral was found, later named *creaseyite* in 1975 by Williams and Bideaux (based on earlier specimens found by S.C. Creasey and others).

With Gary Fleck at the Red Cloud mine (1969)


Wulfenite with mimetite, 9 cm, from the San Francisco mine

Wayne with a San Francisco mine wulfenite (1971)

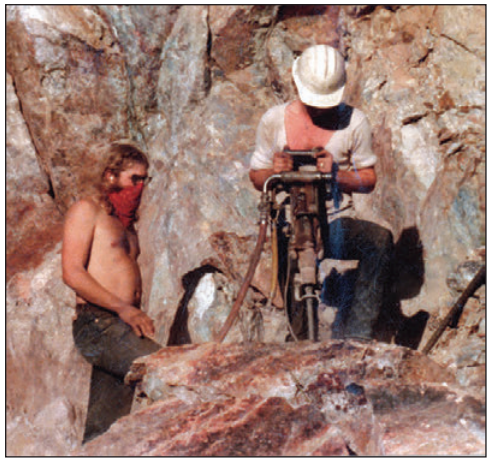
With Ed Swoboda at the San Francisco mine (1992)

Laura Thompson underground at the San Francisco mine (1994)

Descending a shaft, San Francisco mine (1990)

Wayne made a total of 33 trips and spent 1500 hours exploring underground at Tiger. He located and recorded many promising areas to collect, but before serious mining for minerals could begin, Wayne's company, Southwestern Mineral Associates, Inc., secured contracts with Phelps-Dodge Corporation to collect minerals at Bisbee, Morenci, Metcalf, Ajo and Silver City (New Mexico). The Tiger project had to be abandoned unfinished, and full-time specimen mining under the contract with Phelps-Dodge became the priority.

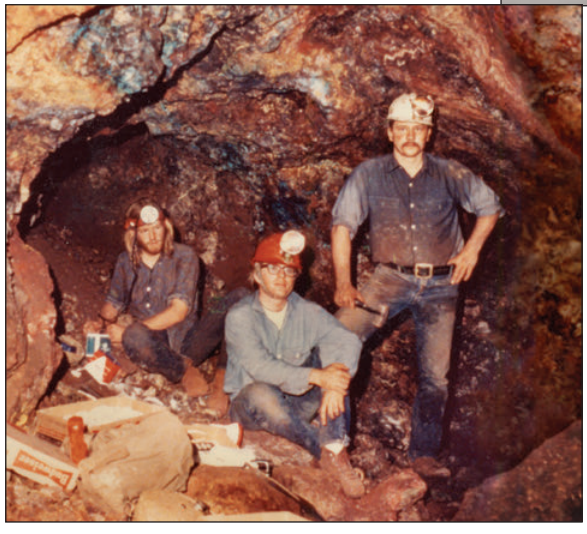
Bisbee was the first target, and several weeks of underground collecting produced some nice rosettes of azurite on malachite, but news of a big zone of azurite and malachite at Metcalf drew their attention and operations were moved to that mine.



With Don McCoy, drilling at the Grand Reef mine (1980)

Linarite crystal, 2.7 x 3.5 cm, from the Grand Reef mine (Arizona-Sonora Desert Museum collection)

With Laura at the Morenci open pit (1991)



With Doug Miller (center) and Wendell Wilson in the "wulfenite stope," 79 mine (1971)

Laurelite pocket found at the Grand Reef mine (a detached portion became the type specimen for laurelite, grandreefite, pseudograndreefite and aravaipaite (Les Presmyk collection)

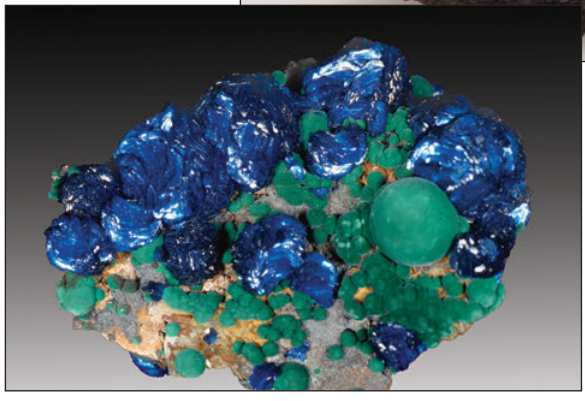
For over a year Wayne (with Gary Fleck and Andy Clark) produced tens of tons of azurite on malachite (specimens and decorator material) from the Metcalf mine. During this time, trips were also made to Morenci, less than a mile away, and several very productive zones were discovered there. As the Metcalf operation was winding down, Morenci began to produce exceptional zones of azurite/malachite stalactites, "swords" of azurite blades to nearly 2 inches, groups of bladed azurite and malachite pseudomorphs, and dioptase. The operation at Morenci, worked by Wayne, Stan Esbenshade, Jimmy Dunn, Wayne Chartier, and Brian Huntsman, lasted for over 25 years and produced tens of thousands of specimens (Les Presmyk, who bought many of the finest pieces, has a Morenci-Metcalf collection that is incredible).

Also, in 1975 Wayne (with Mike New and Gary Fleck) started a project at Ajo which yielded hundreds of azurite-on-malachite pseudomorphs with crystals to 1.5 inches.

Chrysocolla pseudomorphs, 12.7 cm, from the Ray mine (1977)

Wulfenite, 6.5 cm wide, from the Red Cloud mine (1996) (Les Presmyk collection)

Azurite stalactite on malachite, 12 cm, from the Morenci mine (Les Presmyk collection)



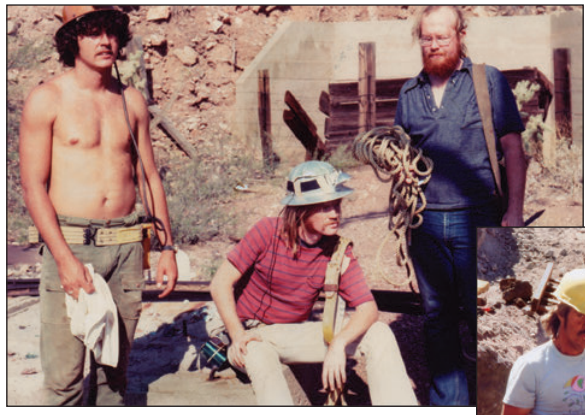
Malachite pseudomorph, 7 cm, from the New Cornelia mine, Ajo

"Electric blue" azurite on malachite, 9 cm, from the Morenci mine (Les Presmyk collection)

In 1975, Wayne (with his brother Loren and Grant Richards) leased the red beryl claims from the Hodges family in Beaver, Utah and collected a number of fine specimens there.

In 1976 Southwestern Mineral Associates secured a contract with Kennecott Copper Corporation at the Ray mine, and for several years Wayne (with Andy Clark, Gary Fleck, Ed Anderson, Wayne Johnson, Pat Garrett, Don McCoy, Wendell Wilson, Jack Lowell and others) collected many thousands of specimens of native copper, drusy quartz on chrysocolla, dioptase, cuprite and the exceptional pockets of chrysocolla pseudomorphs after azurite (the best in the world).

During the late 1970's and the 1980's many other projects produced thousands of specimens of azurite (La Sal, Utah), barite (Grand Junction, Colorado), smoky quartz (Lincoln County, New Mexico), and wulfenite (from several different discoveries). Wayne had, by that time, put in over 10,000 hours collecting underground.



With Tom Lindsey (left) and brother Loren (right) at the Mammoth-St. Anthony mine, Tiger (1972)

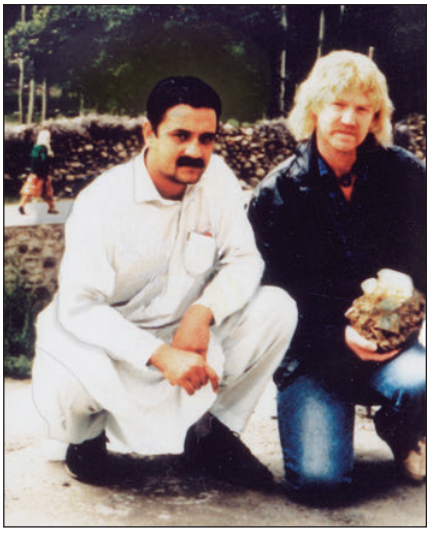
Amethyst, 12 cm, from Las Vigas, Veracruz, Mexico (Gene Meieran collection)

With Bud Standley at the Red Cloud mine (1996)


With recently mined Red Cloud wulfenite specimens (1996)

Wayne leased the Grand Reef mine (Graham County, Arizona) and the Blanchard mine (in New Mexico), the latter producing exceptional linarite specimens. At the Grand Reef mine, Wayne and his wife Laura (with Bob Johnson and Ed Anderson) discovered four new minerals (grandreefite, pseudograndreefite, aravaipaite and laurelite, all described in 1989). Wayne also bought the Old Yuma mine and the Veta Grande claims from Dick Jones (a legendary Arizona field collector, who died in 1981). Fine wulfenites and hematites were collected at these mines. Richard Bideaux was a partner in the Old Yuma mine operation, and also in Southwestern Mineral Associates.

In 1990, Wayne Thompson, Ed Swoboda and James Horner leased the San Francisco mine (the fourth time for Wayne) and began a four-year mining project. Ed lived at the mine and pushed approximately 2,000 feet of incline drift to intersect the zone where Wayne's pockets of 1972 had been collected. Three main pockets were found and many thousands of fine wulfenite specimens were recovered, including some of the best ever collected there. One pocket was approximately 5 by 6 by 13 feet, completely lined with wulfenite crystals.



With Pakistani partner
Tahir Iqbal in Hunza,
Pakistan (1989)

Aquamarine beryl, 9 cm,
from Shigar, Pakistan
(Gene Meieran collection)

Kunzite spodumene,
9.7 cm, from Pech,
Nuristan, Afghanistan

Tanzanite zoisite, 5 cm, from
Block D, Arusha, Tanzania
(Gene Meieran collection)

Brazilianite crystal, 4.3 cm, from
Corrego Frio, Minas Gerais,
Brazil (John Lucking collection)

Epidote crystal group, 10.9 cm,
from the Northwest Frontier, Kenya

In the late 1980's and early 1990's, projects and partnerships in Pakistan, Brazil and Mexico yielded many exceptional specimens.

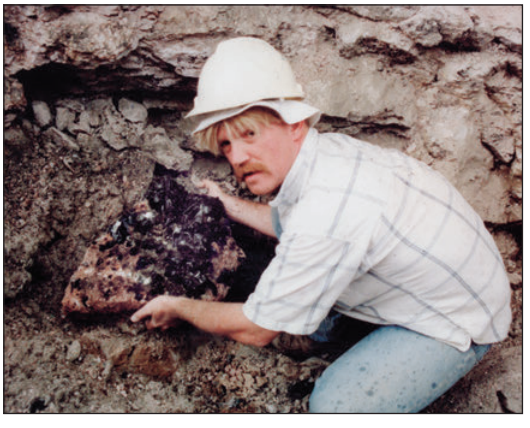
In Vera Cruz, Mexico and later in the state of Guerrero, amethyst was mined and hundreds of specimens were produced (with Mike New, Gene Meieran, and John Lucking). Projects in Tanzania and Namibia also produced some fine specimens. Numerous mining projects in Pakistan and Afghanistan with Tahir Iqbal met with varied results, but many fine aquamarines, tourmalines, kunzites, etc., were produced. Over a period of nearly 20 years, hundreds of world-class specimens were purchased in Pakistan.

Pyromorphite, 8.3 cm, Bunker Hill mine, Idaho (Bill Larson collection)

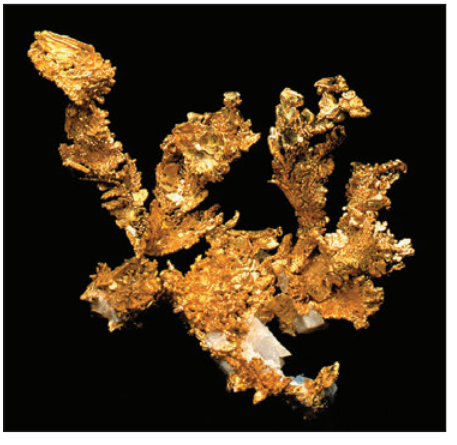
Pyromorphite, 5.6 cm, from the Bunker Hill mine, Idaho (Helmut Brückner collection)

With Mike Hunerlock (left), John De Maria and Gene Meieran (right) at the De Maria gold mine, California (1990)

Sorting gold specimens, De Maria mine (1997)



Collecting a plate of green tourmaline at the Otjua mine, Namibia (1991)



Gold, 8 cm, De Maria mine, California (Steve Smale collection)

In Brazil, mining projects met with limited success, but superb brazilianites were collected at the Corrego Frio mine. A chrysoberyl project and a topaz project met with less success, but many world-class specimens from other localities were purchased, including most of the famous Medina aquamarines found in the mid-1990's.

In the mid-1990's Wayne and Gene Meieran helped finance the De Maria gold mine in California, and a few exceptional gold specimens were produced. Wayne and James Horner worked with Bob Hopper at the Bunker Hill mine in Kellogg, Idaho, where Bob collected a remarkable series of pyromorphite pockets over a two-year period; the project yielded hundreds of world-class pyromorphites that Wayne later sold.

White albite on tourmaline, 15.4 cm, Haramosh Mountains, Skardu Pakistan

With Gene Meieran buying topaz specimens at Klein Spitzkoppe, Namibia (1991)

At the site of an earlier aquamarine discovery near Skardu, Pakistan (1992)

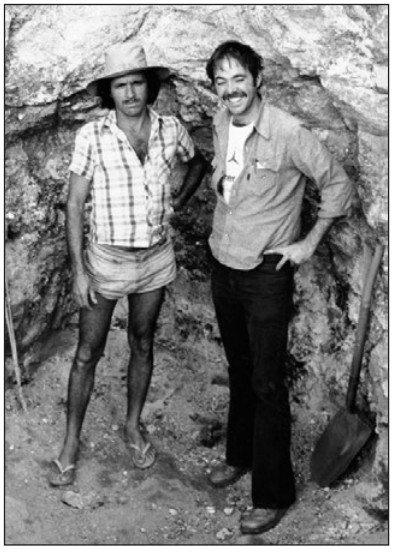
Underground at the San Francisco mine with Ed Swoboda (left) and Gene Meieran (1992)

With Laura in the Northern Areas, Pakistan, negotiating for specimens

In 1994 Wayne and James Horner purchased the famous Red Cloud mine, Arizona, at a Federal Court auction and formed a corporation with Les Presmyk, Bill Larson and Gene Meieran. In 1995 an open-cut specimen-mining operation was started, and on April 1, 1996 Wayne's employee Bob Johnson opened the largest, most productive pocket ever collected at the Red Cloud mine. Thousands of specimens were collected by Bob and Don McCoy, Bud Standley, Graham Sutton and Jimmy Dunn, including nearly 100 gorgeous, world-class examples of wulfenite.

During the late 1990's many other projects in Pakistan and Brazil again yielded fine specimens from time to time. In early 2001, Wayne and the legendary African explorer Campbell Bridges recovered hundreds of fine epidote specimens from a new locality in Northern Kenya. As this is being written, Wayne is involved in several exploratory or small ventures on three continents with high hopes for future production.

Jack Lowell at a pegmatite in Brazil



Buzz Gray and Bill Forest at the Benitoite Gem mine

Evan Jones and his 1983 Tucson Show exhibit, which includes a large wire silver specimen later obtained by Wayne

Doug Wallace mining quartz in Arkansas (1988)


Jimmy Dunn mining specimens at the Morenci mine

Stan Esbenshade mining specimens at the Morenci mine

Andy Clark drilling at the Apache mine (1978)

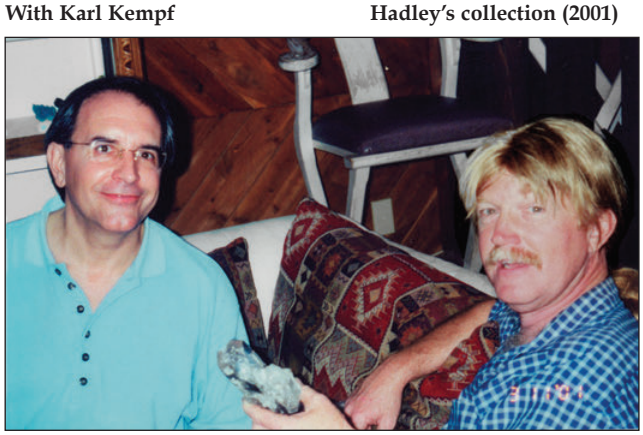
Bruce Oreck

Stuart Wilensky

Gary Hansen with E. Hadley Stuart, when Wayne and Gary bought Hadley's collection (2001)

With Eric Asselborn in Chamonix, France (1992)

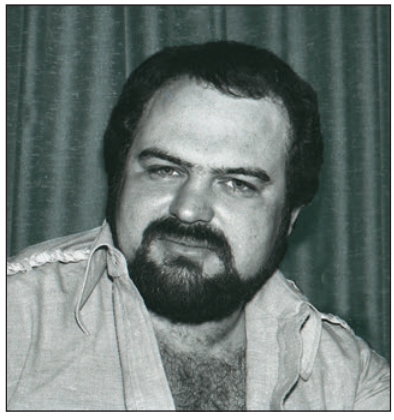
With Karl Kempf



With Pierre Laville (center) and Gene Meieran

With Keith Proctor

Rich Kosnar



James Horner at Wayne's home, looking at Afghan tourmalines

Marshall Sussman


With Sandor Fuss (owner of the poster specimen, obtained from Wayne)

With Bill Larson at the birthday party of Laura's nephew Kyle

Mike Bergmann

With Rob Lavinsky (Tucson Show)

Francis Benjamin

Peter Via

With Ralph Clark (center)
and Steve Neely

Wayne Sorensen

With Steve Smale

With Helmut Brückner

With Les Presmyk

# Acknowledgments

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I also wish to thank Jeff Scovil, Harold and Erica Van Pelt, and Jeff Kurtzeman for providing the excellent specimen photographs. Gene Meieran, William Larson, Stuart Wilensky, Steve Smale and Sandor Fuss kindly made available specimens from their world-class collections for photography.

My special thanks to Wendell E. Wilson, who edited the manuscript and provided useful discussions and suggestions while the text was in preparation. It was a tremendous benefit to have a sympathetic and articulate editor who worked with me at every stage, who understood connoisseurship and what I wanted to say about it, and who was able to create an elegant graphic design to contain it all. Thanks also to Anthony Kampf, George Robinson, Art Soregaroli and Steve Morehead for reviewing the final draft.

Finally, my sincere thanks to my late wife, Laura, who provided support, encouragement, advice and companionship on collecting trips with me for nearly 30 years. I will love her forever.

# Photo Credits

**Specimen photos:**
***Jeff Scovil:*** Page 4, 10-top, 10-bottom, 16, 27, 29, 31, 33, 35, 37, 38, 41, 45, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 178, 180-top, 182 (except middle-right), 183, 184, 185, 186, front cover, back cover

***Harold & Erica Van Pelt:*** Page 31, 43, 47, 49, 85, 107, 157

***Wendell Wilson:*** Page 180-upper-middle, 182-right

***Jeffrey Kurtzeman:*** Page 55, back cover

**With daughter Stevia (who already has her own mineral collection), examining a large euclase crystal from Colombia (see p. 175)**