

Faking It

FORGERY OF ART AND COLLECTIBLES HAS THRIVED SINCE THE DAYS OF ANCIENT ROME. TODAY EVEN THE WORLD OF FOSSILS IS NOT IMMUNE

When Art Imitates Art

Through the ages, copies of artworks have proliferated. But not always have they intended to deceive

BY PAUL DENIS with SARA IRWIN

For centuries, forgery of art and collectibles has plagued the world, and the end, it seems, is nowhere in sight. In ancient Rome, when Greek art became popular, it was copied to meet the demand. During the Middle Ages relics associated with Christ and the saints were highly prized and reproduced in great quantities. Renaissance sculptors imitated ancient Roman sculptures and fobbed them off as genuine antiquities. By the 19th century, just about every kind of art object was being forged.

Sometimes artisans intentionally copy much older objects, and over time these copies are misunderstood and marketed as originals. But more often, forging begins when a collecting mania takes off and the number of people seeking a type of object skyrockets. As genuine material becomes scarce, its price escalates. That's when forgers, conspiring with unscrupulous dealers, step in—and reap handsome profits for their efforts.

The story behind Greek Tanagra figurines perfectly illustrates how intentional forgeries can spring up. One of the best-known types of Greek terracotta statuettes, these figurines are named for the ancient Greek town of Tanagra, where they were produced throughout the 3rd century BCE. Usually, the small sculptures depict a fashionable woman standing in a relaxed pose, elegantly clothed in a thin tunic and cloak. The people of Tanagra buried their dead with offerings—often these figurines, vases, or other household items. For 2,000 years their graves and the terracotta statuettes remained undisturbed.

Then, in 1871 local villagers began finding the tombs and looting them. Within a few years, almost 10,000 graves were plundered, flooding the Athenian market with thousands of genuine Tanagra figurines. Their fine workmanship, style, and elegance quickly caught on in the rest of Europe and the figurines became a collecting phenomenon from London to St. Petersburg. Before long, demand far exceeded the ever-diminishing supply. By 1876, outright forgeries were being mass-produced, and counterfeit statuettes quickly swamped the art markets of Europe.

Some copies are strikingly similar to the real thing. But telltale signs give away a forgery. The base and figurine of forgeries were sometimes cast as a single piece, whereas genuine Tanagra figurines, like the ROM's example, were always crafted separately from their bases. In the

forgeries, the faces are poorly executed and the folds of the clothing often are very lightly modeled and almost lifeless compared to the genuine example. Finally, the surface of the forgeries looks artificial with encrusted dirt and bogus patches of white slip, and the clay is far more brownish than the authentic light orange-brown clay. Despite these clues, Tanagra forgers enjoyed great success in the late 19th and early 20th centuries.

Advances in science have made it easier than it was a century ago to catch the cleverest forgeries. A test called thermoluminescence can determine when clay was fired in a kiln—proving, for example, whether a figurine was fired only 100 years ago or more than 2,000.

example: GREEK TANAGRA FIGURINE



Left: Standing Woman, Terracotta, about 250-225 BCE.

Right: Standing Woman, Terracotta, late 19th century.

The base and figurine of forgeries were sometimes cast as a single piece, whereas genuine examples were crafted separately from their bases.



With Chinese collectibles, it's a different story. The Chinese have been collecting antiques since at least the Northern Song dynasty (960–1127). Demand at that time outstripped supply, and the shortfall was filled not by forgers but by artisans honestly replicating ancient objects. When they did not have a real antique to copy, they often referred to illustrations in woodblock catalogues. The intent of these “archaistic” pieces was not necessarily to mislead. Copying was seen as paying respectful homage to the past. But in today's market, these reproductions can be mistaken for the artifacts they imitated, and passed off to the unwary as originals.

Two jade cicadas from the ROM's collection illustrate the difficulty of authentication. One is simply carved, with few details, while the other is beautifully detailed, down to the spots on the wings. The plainer one probably came from an Eastern Han dynasty (25–220 CE) burial, where it would have been placed on the tongue of the deceased. Jade was believed to stop the body from decaying; the cicada represented immortality and resurrection. The detailed example is fairly recent, about 100 years old, inspired by more ancient pieces. For collectors, there is no way of knowing if the newer piece was intended to deceive. It may have been made simply as a beautiful little amulet or decorative object.

In China today, as in many other countries, there are enterprises that thrive on the production of fake antiques. They duplicate a wide variety of artifacts ranging from “Neolithic” jade carvings and painted-and-carved lacquer objects to bronze and ceramic vessels. Some target the tourist trade, but others go straight to the antiques market, where they fool unsuspecting buyers and dupe even seasoned experts.

With the trend toward steep increases in art prices, the forger's nefarious trade will certainly continue to grow. That's why it's imperative for collectors to educate themselves with as much knowledge as possible by visiting museums, handling genuine objects offered for sale by respected dealers and auction houses, and remembering the savvy collector's motto: “buy the book before the coin.”

Buyer Beware

The Hidden Cost of Counterfeits BY PAUL DENIS

Today's forgers go far beyond the art market, creating all manner of phony consumer goods: designer clothing, jewellery, watches, and luggage, DVDs and CDs, electronic equipment and computer software, pharmaceuticals, and even food. Counterfeits are everywhere and no product or business is immune from being hijacked. The internet has enabled rapid expansion of the trade in counterfeit goods, offering thousands of knock-offs and spurious works of art and collectibles for sale every day.

It may seem innocent enough

to purchase knocked-off or pirated goods. But apart from costing companies billions, there can be disappointment and unexpected dangers in these purchases. Black market CDs, DVDs, and entertainment equipment are often poorly made. Pirated computer software may be faulty or infected with spyware and nasty viruses. Knock-off household products and automotive parts are sometimes so sub-standard that they have caused fires in the home and serious and fatal car accidents. Counterfeit hockey equipment may not offer the expected, if any, protection. Bogus pharmaceuticals and

contaminated food can lead to illness and death. The internet sites that peddle much of this contraband can be fronts for identity and credit card theft rings. The list goes on. Even buying a knock-off Louis Vuitton handbag or a pair of fake Calvin Klein jeans or Nike running shoes can have consequences not immediately apparent. While legitimate companies suffer significant losses in sales revenue and governments corresponding losses in tax revenue, there are further implications: retail stores may be unable to compete with outlets that sell bootlegged products and may be forced to lay off staff or close their doors.

In order to keep prices low, businesses that do make knock-offs frequently pay slave wages, and their workers—adults and children alike—often labour long hours in unsafe factories and overcrowded sweatshops. And all too often, the proceeds end up in the coffers of organized crime cartels. Those who buy counterfeit consumer goods or dress in fake designer labels are mistaken to think no one is getting hurt. Consumers, taxpayers, workers, and all kinds of large and small businesses end up suffering the consequences.

Jade cicadas, 996.119.3 and 932.16.194.

example: CHINESE JADE CICADA



Left: Cicada, Jade, Eastern Han dynasty, 25–220 CE.

Right: Cicada, Jade, Qing dynasty, 19th – early 20th century.

Forgery or Homage to the Past?

These carved jade cicadas illustrate the problem in authenticating Chinese works. For hundreds of years, copying was seen as paying respectful

homage to the past. So there is no way of knowing if this 19th-century cicada was simply inspired by a piece like the one made during 25-220 CE or if it was made to be passed off as an actual older piece.

How To Avoid Knock-Offs

Five tips from the RCMP and the Canadian Standards Association

1. Be suspicious of any item that is deeply discounted. If it sounds too good to be true, it probably is.
2. If the quality of the packing, design, colour, and printing is shoddy, inaccurate, or strange in appearance, walk away.
3. Look for spelling mistakes and typos. They are a sure giveaway.

4. Always buy brand-name items from highly regarded, well-known retailers with clearly stated return or exchange policies.
5. Always purchase medications and health products from reputable sources.

When is a Fossil Not a Fossil?

Amber, trilobites, and insects—most any seasoned researcher of fossils knows the tell-tale signs of phony specimens

BY JANET WADDINGTON

It's not only in the art and retail worlds that fakes are found.

In 1726, noted natural scientist Johann Beringer published a scholarly discussion of hundreds of fossils that were completely fake. They had been carved from stone and presented to him as authentic fossil finds. It was the ultimate fossil hoax. Invertebrate fossils have long been popular as collectibles, and as their attractiveness and market values have risen, so too has the temptation to improve on nature. Here are a few forgeries the ROM has come across.

Fossils of trilobites—extinct relatives of crabs and sow bugs—are particularly collectible. Morocco is famous for its superbly preserved trilobite fossils. It is also home to a strong cottage industry dedicated to making less-than-perfect fossils more attractive to unsuspecting buyers.

A large trilobite (*Phacops* sp.) found without a tail, has had one from another specimen skillfully grafted into the matrix. But the tail is from a slightly larger animal—a fact immediately obvious to any trilobite aficionado. As well, it was added in the wrong place, making the animal too long. A little digging with a needle revealed the join. Ironically, the trilobite's own tail is actually there, just slightly displaced. We were pleased to acquire this inexpensive fraud as a good example of Moroccan skill.

A second trilobite has parts that were “replaced” by another common forgery technique in which parts are carved into the matrix and painted to match the fossil. The giveaway here is often a lack of bilateral symmetry. Highly doctored fossils usually have

a chiselled rock surface, which helps hide joins, although authentic fossils may be chiselled, too. Sometimes glues and paints fluoresce under ultraviolet light, giving away the forgery. This one is fairly typical of fakes from Morocco.

In Lebanon, the Cretaceous rocks are well known for beautifully preserved fossils of fish as well as shrimp and squid relatives. Unfortunately, here too, many fossils are highly restored for sale. Small shrimp are often outlined with reddish paint, and their antennae either accentuated or actually added with a fine paintbrush.

The squid-like belemnite fossil shown at the bottom of the page, showing its internal shell, ink sac, and other internal structures, supposedly demonstrates the rare preservation of the soft body outline. Part of the soft body *may* have been visible originally, but “excavating” the fossil would not have revealed anything more: soft parts tend to appear only as slight colour differences on the fossil's surface. By applying a damp swab we were able to remove the paint used to enhance this fossil. We keep it as a wonderful example of “buyer beware.”

Another common target for fraud is amber, which has been prized for millennia for use in jewellery or amulets. Clear amber often contains the remains of insects that became trapped in the sticky resin—nature's flypaper. Incidents of fake amber abound. Look-alike amber jewellery has been made from glass and a variety of synthetic resins, and often includes insects for an “authentic” appearance.



Left: Plate from *Lithographiae Wirceburgensis* printed in 1726 by Johann B. A. Beringer at Würzburg University, Germany. The fake fossils came to be known as “The Lying Stones.”

Top right: Fantasy fossil insect made from fossil bits. Originated in a street market in Java.

Bottom right: Fossil squid-like animal showing internal shell and ink sac as well as an outline of soft body parts. The soft parts are painted on. There's a repaired break in the fish's head, which is also painted on. Mid-Cretaceous (112 million years old), Lebanon.

Fantasy fossil, ROM 54234.

Chemical and physical tests can identify fake amber. But there are also visual clues: look for obvious flow lines from casting of liquid resin and inclusions that are too perfect. The fat flies in this large sphere show no signs of having struggled or of being munched by predators while immobilized by the resin. And faint layering is visible where the liquid resin was poured. Real amber is soft, but brittle. It would be extremely difficult to form a sphere this size from real amber. This piece was purchased knowingly as a fake by a private collector and donated to the ROM.

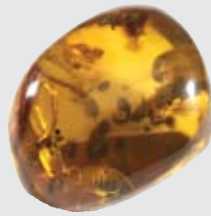
A smaller irregular piece is real amber with tiny insects as well as fragments of plants, bark, and insect frass—the stuff you'd expect to find trapped in a flow of sticky resin.

Some fake fossils are just plain fun. A fantastic insect forged from various fossils—barnacles, oyster shells, and sea urchin spines—was offered for sale by a serious fossil dealer, who had picked it up in a street market in Java knowing it wasn't real. We had to have it for our “pseudofossil” collection. It would have remained pure whimsy had we not received an email enquiry several years later from someone wanting more information about a giant fossil insect she had bought in Sumatra. It was identical to our fantasy fossil.

A reputable vendor will not hesitate to point out repairs or even major reconstruction of a fossil. Sadly, though, many fossils being offered for sale have changed hands so often that the inexperienced proprietor of a small rock shop may be disinclined, or unable, to tell you about such manipulations. So don't forget to look for the telltale signs of a fake.

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example: AMBER



Left: An unidentified termite with eggs and frass, preserved in real amber. Miocene (15 million years), near Santiago, Dominican Republic.



Right: This 2-inch (5-cm) sphere of synthetic resin contains modern flies and possible chunks of real amber. Dominican Republic.

fake!

Check the Insects

Amber is a common target for fraud. Often, insects are added to make it look realistic. The fat flies in the fake sphere on the right look too perfect to be authentic

inclusions. The tiny insects and fragments of plants, bark, and insect frass embedded in the real piece are what you'd expect to find trapped in a real flow of resin.

example: TRILOBITE



Left: A well-preserved, slightly restored example of *Phacops* sp. It has mineral-filled cracks that go through the rock and the fossil, usually a good indication that the fossil has not been highly restored. Devonian (370 million years old), Morocco.



Right: Restored composite of the trilobite *Phacops* sp. Arrows indicate the added pygidium (tail) and the trilobite's own pygidium still partially embedded in the matrix. Devonian (370 million years old), Morocco.

example: TRILOBITE

fake!



Left: A highly restored and carved specimen of the trilobite *Acadoparadoxides briareus*. Middle Cambrian (505 million years old), Morocco.

Right: Complete *Acadoparadoxides briareus*. Purchased from a reputable collector/dealer. Middle Cambrian (505 million years old), Morocco.

Look for Lopsidedness
Parts of the trilobite on the left have been faked—they've been carved into the rock and painted to match the real fossil. The giveaway, as here, is often a lack of bilateral symmetry. The real *Acadoparadoxides* has 18 thoracic segments. This fake has only 13 to 15 and they do not match up from one side to the other.

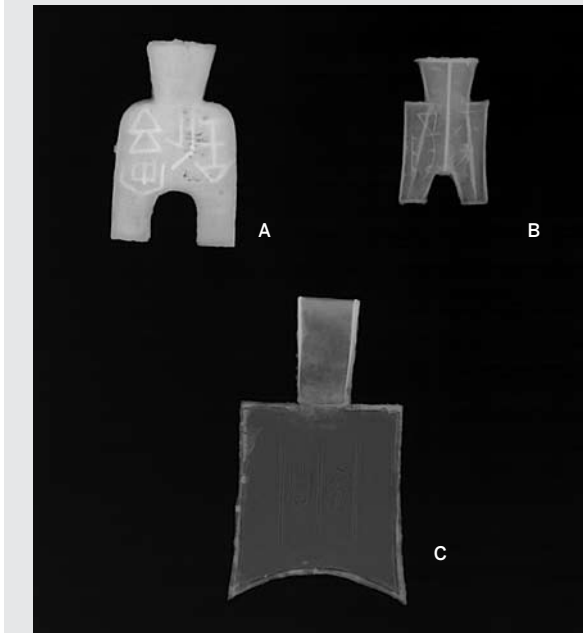
How technology helps detect fakes and frauds

The ROM's new digital X-ray machine

BY HEIDI SOBL

Digital X-ray detection is a valuable diagnostic and research tool that can help curators uncover fakes, forgeries, and fraudulent artifacts. Viewed with the naked eye, no visual differences can be easily noted in the three Chinese bronze coins pictured here. But the digital X-ray image reveals forgeries in two coins. The one at the upper left is composed of a material other than pure bronze. The bottom one is even more interesting. It is an amalgamation of two coin fragments joined together at the “neck.” The join makes this coin considerably less valuable than if it was a real, complete version, but surprisingly, it is still more valuable than each of the coin fragments. o

X-ray Vision



This digital X-ray shows three Chinese coins dating from the 5th to 3rd century BCE. With the ROM's new rapid X-ray technology, gone are the days of multiple X-rays and lengthy film processing.

A Non-bronze coin

B Genuine bronze coin

C Amalgamated bronze coin comprised of two similar fragments made to look like one rare and valuable coin

How Real is Real?

Repair and restoration in the paleo world

“Is it real?” This is possibly the most-asked question about our fossil galleries, and with good reason. In paleontological terms, “real” and “not real” are not absolute concepts. There are several grades of “not real,” ranging from repair and minor patching, to major restoration, through to reproduction and total fabrication.

Infilling of missing pieces is common when preparing real vertebrate specimens such as dinosaurs for display. The “not real” elements can include fragmentary bone that has undergone major infilling, a piece that has been sculpted to recreate the missing one of a pair of bones—an arm or a shoulder blade, for instance—or it can be a cast.

A fossil cast is actually not a fake, but a scientifically accurate copy of the original, as precise as the impression your dentist might take of your mouth. Casts of fossils are often used for research, teaching, and display, to allow multiple viewers to see the original or to reduce the amount of handling of a rare or delicate original.



Top left: Assembling a dinosaur skeleton in 1973. Missing vertebrae (in white) were reconstructed in plaster.

Top, right: The ROM's research-quality cast of the world's biggest trilobite *Isotelus rex*. The original was retained by the Manitoba Museum.



Bottom: The front dinosaur is a cast. The real bones have been set aside for research. The dinosaur at back is almost completely real fossil bone.

Amber, ROM 59296 and ROM 49367, Trilobite *Phacops*, ROM 59297 and ROM 45108, Trilobite *Acadoparadoxides briareus*, ROM 53246 and ROM 558774, gift of the Louise Hawley Stone Charitable Trust

Trilobite, ROM 56926.