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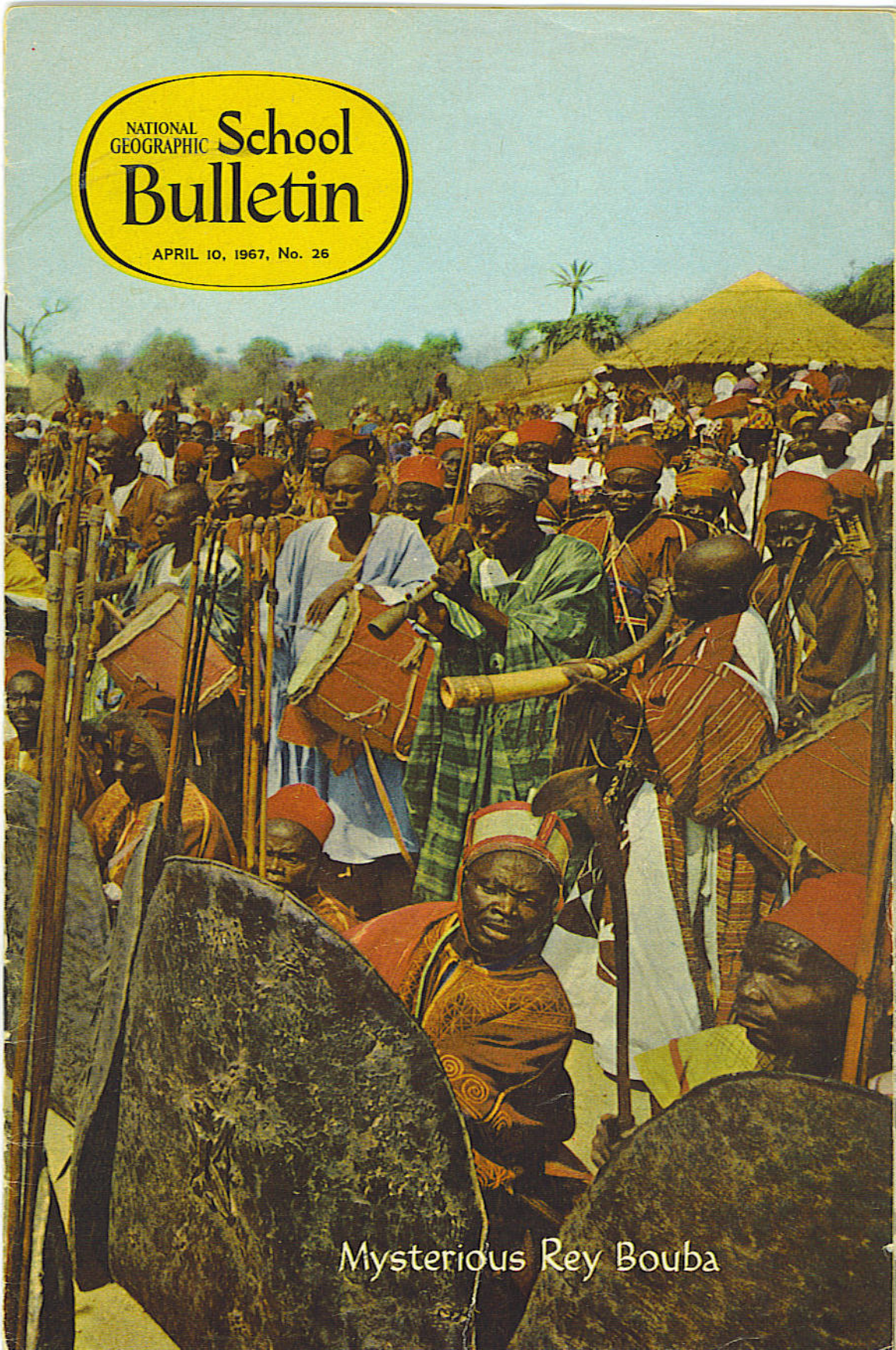


Mysterious Rey Bouba

Lapidaries Reveal Rocks' Rainbow Hues

Joe and John McIlroy polish rocks. So do their parents, and so do thousands of other people. They call themselves lapidaries, and they turn ordinary minerals into gems fit for a royal crown.

The McIlroys live in a suburb of Washington, D. C., but their quest for stones has taken them into nearly every state and eight of the ten provinces of Canada. Like other rockhounds, the family prowls quarries, mountainsides, stone-strewn fields—any place where minerals might be found *(GSB November 21, 1966).*

Some rockhounds simply collect and identify rough minerals, but lapidaries go one step further. Like the McIlroys, they prize dazzling arrays of specimens shaped and polished in their own shops (below). Their tools take a surprisingly small amount of space.

Lapidaries choose between two basic shapes, cabochon and faceted. Cabochons (ca-boh-SHONS), "cabs" for short, have smooth, curving silhouettes. Faceted gems show flat faces that reflect sparkling displays of dancing light.

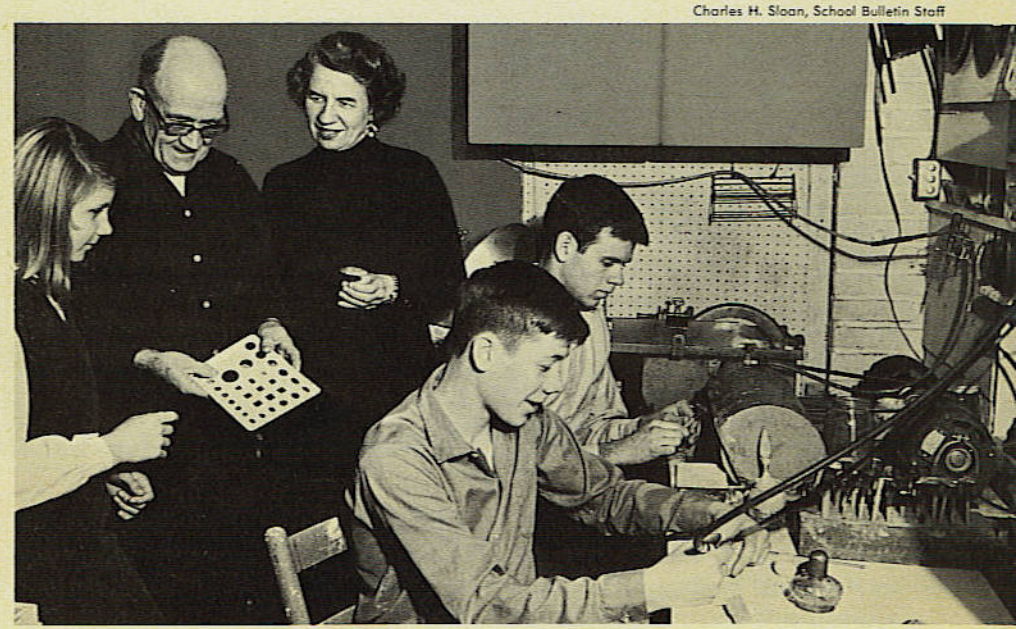
Cabs may be almost any shape, including oval, round, square, and heart-shaped. In the picture below, Mr. McIlroy shows a neighbor, Jess Sroka, a template with the outlines of various sized cabs.

The template is the beginning of the cab-making process.

A lapidary slices a slab of stone on a diamond saw, or buys a slab in a rock shop, and uses the template as a guide to trace the outline of the cab.

Grinding wheels scrape the stone until it is nearly the finished shape and size. Then the lapidary cements the stone to a "dop stick," a short rod, with special "dopping wax." The dop stick gives the lapi-

Charles H. Sloan, School Bulletin Staff



Paul Pryor

Agates in such patterns as bull's-eye and jasper-banded (in basket) and moss or landscape (foreground) once served as children's marbles. Related minerals include jasper (brown stone in basket, many-colored ones), chalcedony (rings, yellow square), sardonyx (red-and-white oval), and chrysoprase (green oval).

Left: Jess Sroka, left, visits the John McIlroys in their basement shop.

dary a firm fingerhold until the cab is finished.

With a sure grip on his dop stick, the artisan slowly rounds the cab, shifting from coarse grinding materials to finer ones until the job is done. After a final polishing, the cab is ready to mount in a piece of jewelry, or to be set in a display case alongside other prized gems.

For cabs (above), lapidaries usually pick such opaque or nearly opaque materials as agate, jade, or petrified wood. For faceting, transparent or translucent minerals like topaz, tourmaline, and some quartzes are the usual choice.

Faceting takes a special skill, and Joe McIlroy is working hard to master it. Instead of being rounded, faceted stones must be shaped with flat faces of exactly the right size and shape that touch one another at exactly the right angle.

Faceting demands a sharp eye

Photographs by Joseph B. Goodwin, School Bulletin Staff

Gems Take Shape in Cellar Shop

John McIlroy examines a slab of Brazilian agate cut and polished in his family's lapidary shop. John's specialty is collecting and identifying minerals; his brother Joe prefers shaping faceted gems.

In the picture above, Joe adjusts the angle of the dop stick on a faceting machine. Special wax holds the stone tightly on the dop stick. At right he shows Jess Sroka how a polishing wheel puts a shine on a cab.

for the natural faces and angles of mineral crystals. A ruby cut one way shows a rich, fiery red. Cut in a different direction, the same stone might come out a brownish or purplish red.

A faceting machine guides the grinding, but the skilled hand of a lapidary must guide the machine (lower left).

In addition to oval and faceted stones, lapidaries tackle such projects as shaping rings, vases, bowls, and sculptured figures. Many also learn to work metal so they can fashion suitable settings for their stones.

Most amateur lapidaries grind and polish simply for the pleasure of creating with their own hands something beautiful and lasting. But there can be dollar profit in the art as well. You have only to scan the stock of a jewelry store to see that. Many people consider fine jewelry a wise investment, and for the lapidary what starts as a hobby could become a rewarding career. *C.H.S.*

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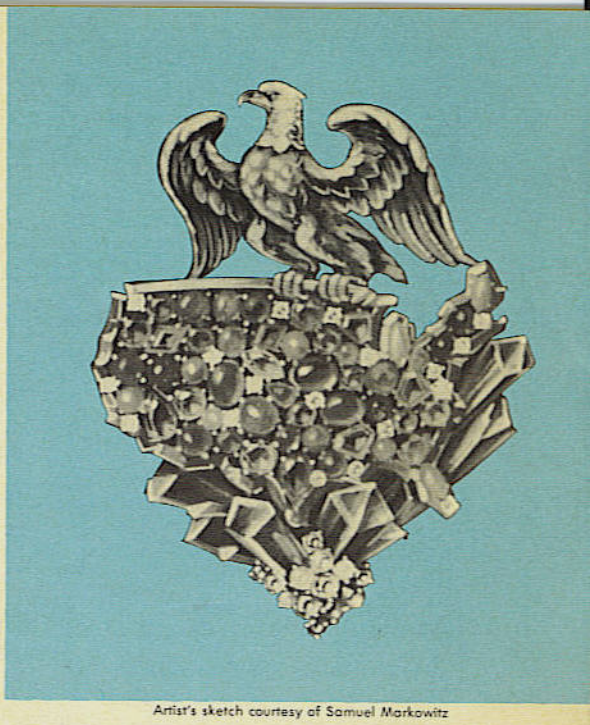
Gemstones from Every State To Sparkle for First Ladies

Mineral collectors in Washington, D. C., call the capital city "Rockhound Heaven in '67." Washington rockhounds will be the hosts for the 1967 National Gem and Mineral Show, June 29 through July 2, and they hope to make it the biggest ever.

Highlight of the show's exhibits will be a very special piece of jewelry (right). The nation's rockhounds worked together to provide stones for a brooch that reflects the show's theme, "Our Mineral Heritage." This spring they will present the brooch to Mrs. Lyndon B. Johnson. It will be passed on to future First Ladies.

The brooch contains a mineral from every state. Most of the stones came from amateurs like Joe McIlroy, who contributed a turquoise cabochon from Nevada.

During the show, collectors and lapidaries from across the United States will get together to swap stones and stories, admire the latest collecting and polishing gear, and learn more about their hobby.



Artist's sketch courtesy of Samuel Markowitz

Gift to the First Ladies of the nation, "Our Mineral Heritage" brooch contains stones from every state.

They also hope to interest more people in mineral collecting and lapidary work, and they did not wait for the show to start to begin doing it.

With the help of a local organization called the Lilliputian Foundation, they set up a poster contest and sent speakers into schools to tell what the hobby is all about.

The speakers helped add to the ranks of pebble pups—the nickname of young rockhounds—and the contest produced a design for display in store windows before the big event (left).

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Kristena Rutledge, age 14, created prize-winning poster design for the 1967 Gem and Mineral Show.