Ring Tones

The bells of the carillon are pealing with renewed vigor as the University's Carillon Society brings a new generation of students to the keyboard.

By Kathleen McGarvey

The sounds of the Hopeman Memorial Carillon waft over the Eastman Quadrangle with an almost ethereal prettiness.

But behind those gentle tones is a machinery anything but delicate.

Suspended in the dome of Rush Rhees Library is a wooden box the size of a very small room. This is where the carillonneur plays the music that fills the River Campus. She—in this case, physics graduate student Bethany Little—sits on a bench before a large keyboard and pedalboard that ring the massive bells that hang high above her, in the lantern of the dome.

Playing the sweet sounds of a carillon is an intensely physical task. The 48 keys are in fact "batons," wooden levers that must be depressed with the force of the whole arm. Little's leg muscles visibly tense and relax as she exerts pressure from her thigh to her foot to push some of the 24 pedals down.

"You really have to throw yourself into it," says Kelly Guerrieri '14. "You use your whole body and your whole concentration, and you get lost in it. And then you walk out onto the quad and realize everybody heard you."

It's a paradox that has bewitched players since bells were installed in 1930, first as a chime and then, in the 1970s, as a carillon.

"You're anonymous—but everyone can hear you play," remembers David Caldwell '75, the only official carillonneur the University has ever had. "It's a wonderful instrument to play if you're young and strong."

For Guerrieri, an archaeology, technology, and historical structures major from Pittsburgh, the appeal was so strong that—after first hearing a portable carillon at a Renaissance festival—she applied only to colleges that had a carillon. "I wanted to learn to play it," she says.

Guerrieri's not alone. There is fresh appreciation for—and student interest in—the carillon these days, sparked in great part by Jeffrey Le '08 (KEY), then a music major from Henrietta, N.Y. He earned a Kaufmann Entrepreneurial Year grant to bring back a student carillon society, a successor to the Bellman Society that flour-

PREPARATION: The bells are permanently tuned, but require daily adjustments. Jeff Kabel '12 and Emily Sumner '15 modify the turnbuckles while Rachel Stuart '14 watches.

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ished at Rochester in the mid 20th century.

"Student interest was already there. There just wasn't an outlet for it," says Le, who is now working as a clinical research coordinator at the Center of Resuscitation Science at the Hospital of the University of Pennsylvania. He'll start medical school in the fall.

Le visited other campuses—including Cornell, Berkeley, and Alfred University in nearby Alfred, N.Y.—where students play their school's bells, to investigate teaching models that would fit well at Rochester. He became a proficient player, thanks to mentoring by Tiffany Ng '08E (MM), a graduate of the Royal Carillon School "Jef Denyn" in Belgium, who worked to promote the carillon while a student.

Le's primary way of publicizing the carillon was simply to play it, to make it a familiar sound of the campus and let listeners know the bells could do much more than play quarterly chimes each hour. He gave noontime concerts weekly, and arranged his own music—especially music that he knew would resonate with fellow students. A YouTube video of Le playing the theme music from the *Harry Potter* movies became a minor web sensation, picked up by outlets such as the *Huffington Post*.

"It brought about an awareness of what could be for the carillon. I would tip my hat to him—he was the spark," says Josef Hanson, manager of music performance programs in the Department of Music in the College.

Since Le's graduation, Doris Aman has taken up his work. An adjunct instructor of the carillon, she's bringing students to the carillon, organizing the University Carillon Society, and providing lessons to any interested pupil of the instrument. While the number of players is growing, most people experience the carillon, of course, as a listener.

It's a consequential role. "Part of the secret of a good chime is in the foundry, part is in the tune, and part is in the wind, but most is

in the imagination of the listener," English professor and bell player John Slater once wrote of the Hopeman Memorial Chime, the carillon's predecessor.

Listeners are found well beyond the quadrangle. "Students increasingly recognize the carillon as a community instrument," Hanson says, "and not just the campus community. Its sounds reach listeners on the grounds of the Medical Center, in the 19th Ward, in Genesee Valley Park, Mt. Hope Cemetery, and other areas nearby."

The bells also reach across years. They were born at the birth of the River Campus, when the music of bells was enjoying a revival after the metal industry was freed from the constrictions of wartime production for World War I.

Those planning the new campus imagined installing a carillon when, in 1926, they contemplated what had been Oak Hill golf course. But costs were high—import charges, for example, increased the cost of bells bought in Europe by 40 percent—and Rochester's ambitions were scaled back, and back again. Plans for a carillon—which must have 23 or more bells—became plans for a chime, which has fewer than 23 bells. At one point cost-conscious supporters discussed the possibility of buying just one bell.

To the rescue came the Hopeman family. A native of the Netherlands, where bells have long been popular, Arendt Hopeman arrived in the United States in 1868. One year later, he founded the construction company—later incorporated as A.W. Hopeman and Sons, General Contractors—that oversaw construction of the River Campus, the Eastman Theatre, and the Eastman School. He died in 1928, and to honor his memory and his Dutch heritage, his children—Margaret Hopeman, Class of 1903, who earned a master's degree in 1906, Albert, and Bertram Cornelius—made a gift of a 17-bell chime forged by Meneely & Co. In the bell business since 1826, Meneely's foundry branch of Watervliet, N.Y., had already created bells for locations such as Valley Forge, Pa., and Cornell University.

The bell lantern atop the dome of Rush Rhees library was added specifically to house the chime. The bells were so immense that they required additional heavy steel girders for the dome, a cost that the Hopeman family bore. The original bells installed in the library weighed more than 17 tons. Two more bells came in 1956, adding six more tons to the weight and giving players a greater range of tones. The largest of the bells—the second largest ever cast at the Meneely foundry—weighed 7,500 pounds. It was said to be one of the deepest-toned bells made outside Europe at the time.

The chime was played first by Slater, who served as University bellman from 1930 to 1940, during which time he arranged 200 tunes for performance. He was succeeded by Robert Metzdorf '33, '39 (PhD), later an honorary trustee and curator in the Department of Rare Books in the 1930s and '40s. When Metzdorf, who earned the first PhD granted by the English department, stepped down in 1949, students took on the role as members of the newly established Bellman Society.

It wasn't an entirely glamorous service. So as not to disturb students working in the library, the bells were sealed off from the body of the library. Consequently, players had to open a window to hear the notes they struck. In the already less than toasty dome, an open window in the small chamber that housed the chime's keyboard made for sometimes frigid conditions for the players.

That hardship didn't meet with much sympathy. Minutes of a 1959 meeting note: "Professor Canning and Dr. McCambridge severely chided all the bellmen for complaining about playing with cold hands. They pointed out how down through the ages bellmen have played with cold hands and their complaints have gotten them nowhere. Dr. McCambridge also pointed out that the chime at Cornell is not heated."

Members and former members of the Bellman Society numbered almost 100 by the time the chime was decommissioned after 40 years, due to deterioration. An inspector of the chime, James Lawson, carillonneur at Riverside Church in New York City, advised in 1966 that the University should replace the chime with a lightweight carillon—a suggestion acted on with the help of an endowment for the maintenance of the bells given by the Hopemans.

None of the chime bells was incorporated into the carillon because of limited space—and out of consideration for students at work in the library or sleeping in nearby residence halls who would be disrupted by too loud an instrument, says Aman.

Six of the 19 chime bells moved to Christ Church on East Avenue in Rochester. The others were sent to Europe to be melted down so their metal could be re-used.

The bells for the new, 50-bell carillon were also cast in Europe, at the Royal Eijsbouts Bellfoundry in the Netherlands. They were installed in November 1973 and dedicated, at a gala celebration, that December.

While Rochester's chime relied on electricity running from the keyboard to the bells, the carillon is completely mechanical, says Aman. "It's rung entirely by the player."

Those players come from across the University. "Doris has done a remarkable job in creating interdisciplinarity," says Hanson, drawing students from science departments and the medical school, as well as music and other majors. "If you don't read music, it's going to be an uphill battle. But it's open to anybody."

Emily Sumner '15, a brain and cognitive sciences major from Bedford, Mass., heard the music playing on campus and wanted to try it. A singer who plays the piano and is also learning mandolin, she's been studying with Aman since early in her freshman year.

The hardest thing, she says, is moving from the fine motor control used for other instruments to the large motions needed for playing the carillon. But she smiles at the payoff: "It's this powerful instrument, and you're controlling it."

In the carillon cabin with physics graduate student Bethany Little, Aman coaches her to adjust how high above the batons she holds her hands—the further the drop, the greater the force, and the louder and longer the bells sound.

"One of the first skills I teach students is to listen to their bells," says Aman, who learned to play on the Davis Memorial Carillon at Alfred University—one of just seven carillons in the state. She often brings two students at a time up to the dome, or to the practice keyboard in Spurrier, which is attached to something like a xylophone, so that they can distinguish the tones they strike from those of their partner.

Bells may seem fairly indestructible, but players need to stay attentive. If a clapper slams a bell and doesn't release, it makes a clunking sound. Playing the bells in temperatures below 32 degrees may crack or tear the original leather straps. And if a carillonneur forgets to turn off the automatic chime—a Westminster Chimes mechanism was a gift from the Class of 1951 and was designed and constructed by the University's chief electrician, Arthur Hughston,

then replaced by a Verdin electronic chime—the bell can be damaged by the simultaneous striking of the player's interior clapper and the chime's exterior hammer.

"We're performing every time we're up here," says Aman, "so one of the first skills carillon students learn is to keep going when you make a mistake. You want to keep the beat and the melody going."

"She's training you from the beginning to teach other people what you know," says Guerrieri, who has recently become a mentor. Le recommended, and Aman is working to foster, a system by which students reach a certain level of proficiency and then begin instructing others.

The bells ring as students take lessons and practice; there are performances at commencement ceremonies and other celebratory or solemn occasions through the year; and on various July evenings, carillon fans spread out across the Eastman Quad to enjoy the performances of visiting carillonneurs.

That tradition flourished in the 1980s, when picnickers would compete for best costumes, best menus, and other honors. It was serious battle: one group recreated the final luncheon served aboard the *Titanic*; a Middle Eastern feast featured a belly dancer. "Picnics on the Quad" produced two cookbooks and, say those who were there, a host of happy memories.

"Those were the glory days," remembers Andrew Stalder '48, who sponsored the guest artists. A violin major at the Eastman School until he left to serve in World War II, he joined the Foreign Service after his graduation and never returned to the violin.

"Music was to be my career, but the interruption of the war changed my focus," he says.

But after returning to Rochester in 1979, he saw a photo in the paper of David Caldwell performing at the carillon keyboard, and an old love took a new form. Stalder—a lifelong student of the piano who studies still at the Eastman Community Music School—took lessons from Caldwell and ultimately became a carillonneur qualified by the Guild of Carillonneurs in North America. He performed on the Rochester instrument until 1992, when he decided at age 70 to retire from the vigorous performances and from the then rather treacherous trip to the carillon, which was reached by a catwalk in the dome.

"It was terrifying," Caldwell, too, recalls. The space has since been renovated to make it safer and easier to navigate.

Caldwell first became involved as a freshman, as a member of the Bellman Society. He played the chime in its final years, and the carillon after its installation. Trained by visiting professional Arie Abbenes, a Dutch carillonneur, at the time of the installation, Caldwell left after graduation for business school. He returned as the official carillonneur in 1978, thinking it "would be fun to play the carillon for a year."

It was more than fun, it seems—he stayed not one year but 11, working part time to maintain the carillon, teach students, and perform while also working in computing at the Eastman School.

Because Rochester's carillon is light, the sound is not as loud on the ground as that of other carillons, he says. "A lot of people don't have any idea where it comes from. My favorite memory was hearing a parent, walking across campus with a small child, telling the child that the music was the wind blowing through the bells."

So much for the carillonneurs' hard work. But newly minted biochemistry graduate Rachel Blomberg '12, from Denver, Colo., faced similar confusion before she began her lessons. "I'd been fascinated with the bells from the very first time I heard them playing, but it took me two years to realize that it was actually people up there and then to find out who to contact to get involved."

For Jim Fackenthal '83, playing the carillon at Rochester "began what is now a big part of my life." A cancer researcher at the University of Chicago, he plays the carillon professionally, maintaining an active role in the Guild of Carillonneurs in North America, performing and teaching at the University of Chicago and in the greater Chicago area, and playing at international festivals and on concert tours. "The carillon is central to my creative life and artistic identity. I owe a lot to my time with David and the Hopeman Memorial Carillon."

LESSON TIME: Jeff Kabel '12 and Rachel Stuart '14 train in the carillon cabin under Doris Aman's watchful eye as fellow students Kelly Guerrieri '14 and Emily Sumner '15 look on.

Fackenthal's story is exceptional, but Hanson hopes that all will find the carillon central in some, perhaps ineffable, way to their time on campus.

"My personal goal," he says, "is to integrate the carillon into campus life in such a way that when students leave here, they think of the bells as part of being at Rochester."

"There's a strong visual element to what people remember about being on campus"—the library dome, the quad, and other sights, says Le. "This is an acoustic side."

An exhibition, The Builder's Bells: The Hopeman Memorial Chime and Carillon, *is on display in the Great Hall at Rush Rhees Library through September 30. To learn more about this July's schedule of concerts, visit www.rochester.edu/College/MUR/concerts.*

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Hopeman Memorial Carillon

Rochester's bells are a gift of the Hopeman family in memory of Arendt Hopeman, the founder of the company that oversaw construction of the River Campus. Installed as a chime in 1930, the bells in Rush Rhees Library are now one of just seven carillons in New York. Carillons evolved in the Netherlands, Belgium, and northern France, beginning in the mid 17th century. A resurgence of interest came in the late 19th and early 20th centuries, and planners of the River Campus set their sights on bells at Rochester. Today, thanks to resurgent student interest, carillon music is an increasingly familiar sound on campus.

Largest bell
- Diameter: 40⅞ inches
- Weight: 1,411 pounds

Smallest bell
- Diameter: 7⅛ inches
- Weight: 26 pounds

Note Range

The bells of the carillon span more than four octaves, from G3 to C8. The carillon is fully chromatic between D4 and C8. The lowest pedal note, G3, is called the *sub-bourdon*. The second, A3♯, is the *bourdon*. It is unusual for a carillon to have two bourdons.

Rush Rhees Library

The lantern atop the library's signature dome was built to house the bells of the Hopeman Memorial Chime. The carillon's bells, installed in 1973, now fill the same space.

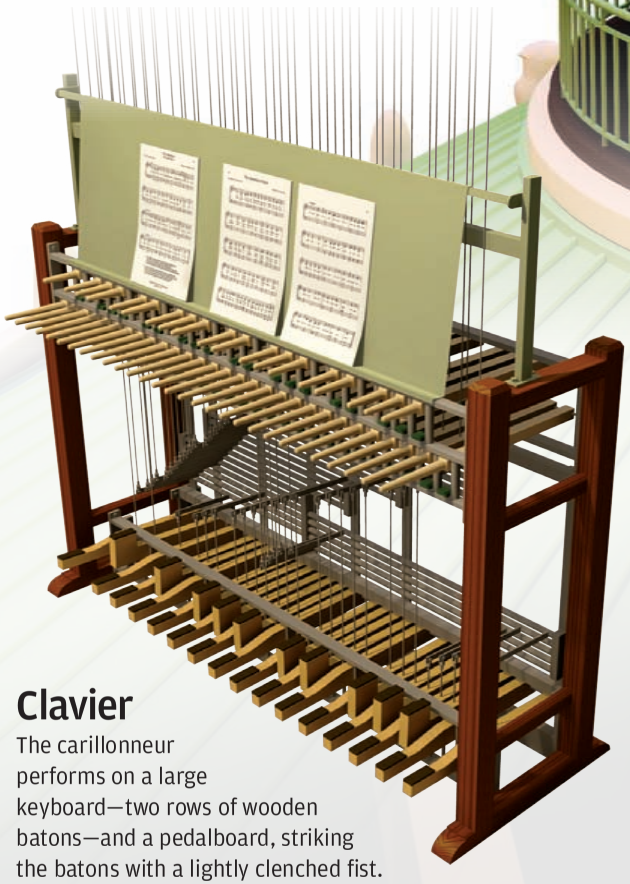
Lantern

The bells are isolated in the dome's lantern, a boon to students seeking quiet in the library. Because the bells are sealed off from the rest of the dome, however, carillonneurs must listen to themselves play through the use of microphones. Bellmen in earlier days relied on the simpler mechanism of an open window.

Bells

The carillon has 50 bells, while the chime eventually had 19—but the carillon is much lighter. The largest single bell in the chime weighed 7,800 pounds; the carillon's bells weigh a total of 6,668 pounds. The carillon's unique selection of bells was a matter of cost, available space in the lantern, and optimizing the weight of the bells for each of the eight girders.

The lantern is partly cut away to show the interior and bells.



Clavier

The carillonneur performs on a large keyboard—two rows of wooden batons—and a pedalboard, striking the batons with a lightly clenched fist.

A carillon's unique sound is the product of "overtones"—audible pitches caused by small vibrations. Like other instruments, the carillon moves from the fundamental pitch to an octave overtone, a fifth, and a superoctave. Unlike other instruments, the carillon's overtone then moves to a minor, not a major, third. The prominent minor third makes the carillon seem "out of tune" to some—but it's also the hallmark of the instrument.

Transmission Wires

Carillon bells are stationary; only their clappers move. Wires run from the keyboard and pedalboard to the clappers.

Cabin

The keyboard for the chime was in a small room at the outer edge of the dome, but the cabin that contains the carillon's clavier is suspended from the dome's ceiling, in the interior. That's why carillonneurs, unlike bellmen, require a microphone to hear themselves—there are no windows.

ILLUSTRATION: STEVE BOERNER FOR *ROCHESTER REVIEW*; SOURCES: DEPARTMENT OF MUSIC, UNIVERSITY LIBRARIES/DEPARTMENT OF RARE BOOKS, SPECIAL COLLECTIONS, AND PRESERVATION, AND CAMPUS PLANNING, DESIGN, AND CONSTRUCTION MANAGEMENT