

Are We Alone?

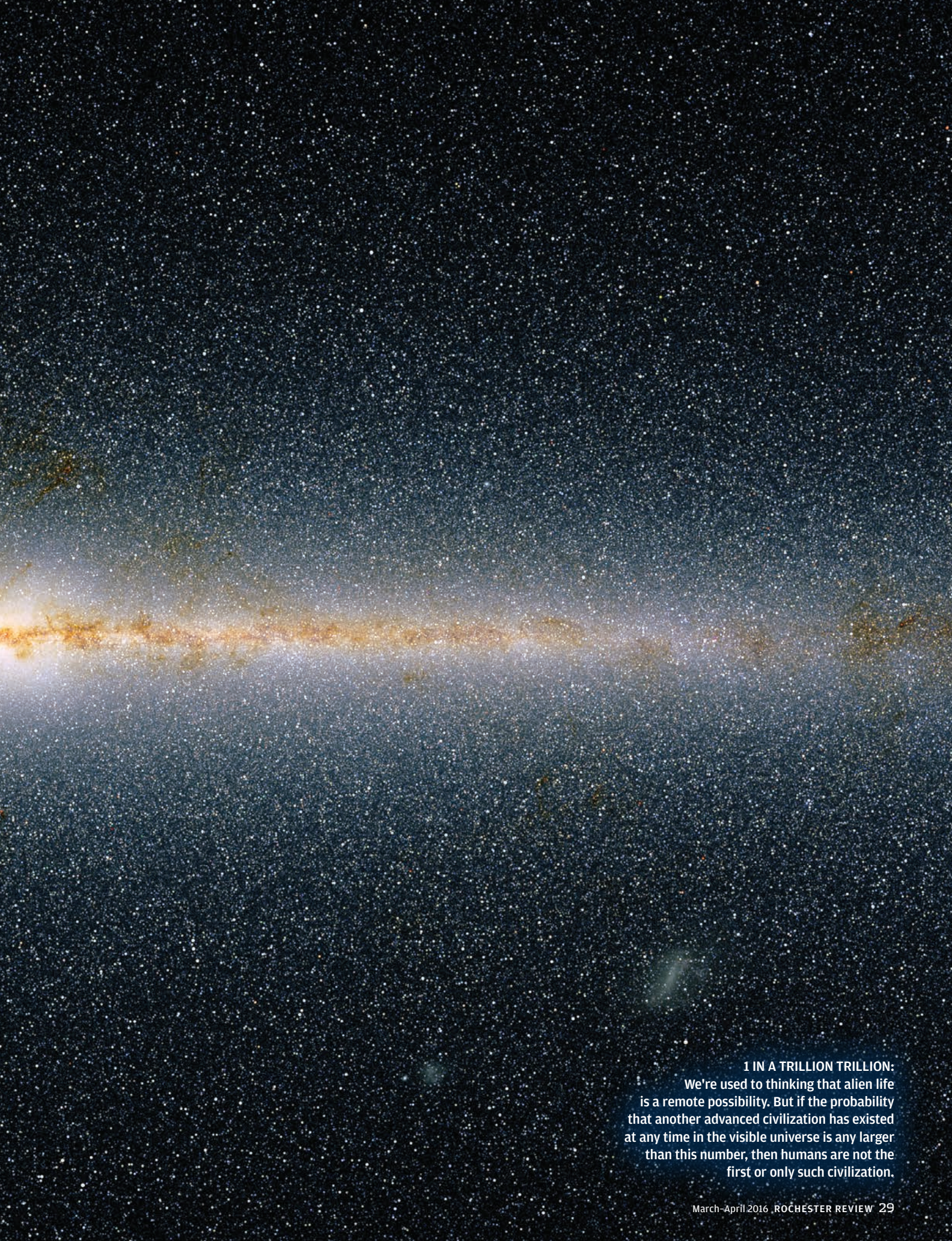
Odds are, we aren't the first advanced civilization in the universe, says a Rochester astrophysicist.

By Leonor Sierra with Karen McCally '02 (PhD)

Are humans unique and alone in the vast universe?

It's a question humans have asked for millennia. But it hasn't been until recently that there's been any scientific framework in which to even begin to posit answers.

In the early 1960s, astrophysicist Frank Drake, now professor emeritus of astronomy and astrophysics at the University of California, Santa Cruz, developed an equation that could theoretically estimate the number of advanced civilizations existing in the Milky Way galaxy. Drake intended his equation to offer a guide for research. At the time, astrophysicists didn't have nearly the knowledge it would actually take to come up with a value for the elusive N: the number of advanced civilizations (which Drake defined in practical terms as civilizations emitting detectable electromagnetic waves) that were likely to inhabit the galaxy.



1 IN A TRILLION TRILLION:
We're used to thinking that alien life is a remote possibility. But if the probability that another advanced civilization has existed at any time in the visible universe is any larger than this number, then humans are not the first or only such civilization.

Drake Equation (1961)

Tale of Two Equations

In 1961, astrophysicist Frank Drake developed an equation to estimate the number of advanced civilizations likely to exist in the Milky Way galaxy. The Drake equation has proven to be a durable framework for research, and space technology has advanced scientists' knowledge of several variables. But it's been impossible to do anything more than guess at variables such as L , the probable longevity of other advanced civilizations.

In new research, Adam Frank, a professor of physics and astronomy at Rochester, offers a new equation to address a slightly different question: What is the number of advanced civilizations likely to have developed over the history of the observable universe? Frank's equation draws on Drake's, but eliminates the need for L .

Frank Equation (2016)

$$N = R_{\star} \times f_p \times$$

The number of technologically advanced civilizations in the Milky Way galaxy

The rate of formation of stars in the galaxy

The fraction of those stars with planetary systems



$$A = N_{ast}$$

The number of technological species that have formed over the history of the observable universe

The number of habitable planets in a given volume of the universe

Among the unknowns was the number of planets in the Milky Way. And as long as that was unknown, it would also remain unknown what percentage of such planets—or exoplanets, as they're called—would likely have environments suitable for life.

Scientists have made enormous progress toward estimating both of those variables, thanks to NASA's Kepler Mission and other advances in astronomy. The Kepler space observatory was launched in March 2009 with the goal of exploring the Milky Way's planetary systems in order to find habitable planets. Using data from that mission, astrophysicists can now achieve reliable estimates for both those variables. But roadblocks remain.

And in new research, Adam Frank, a professor of physics and astronomy at Rochester, and his coauthor Woodruff Sullivan of the University of Washington have advanced a means to overcome the obstacles.

"The question of whether advanced civilizations exist elsewhere in the universe has always been vexed with three large uncertainties in the Drake equation," says Frank. "We've known for a long time approximately how many stars exist. We now know that roughly

one-fifth of stars have planets in 'habitable zones,' where temperatures could support life as we know it."

But the Drake equation requires an estimate for how often planets suitable for life actually develop life. Second, it requires an estimate for how often life evolves into intelligent life, and how often intelligent life develops into advanced civilization. And most troublesome of all, according to Frank, the Drake equation requires an estimate for how long advanced civilizations are likely to persist. "The fact that humans have had rudimentary technology for roughly 10,000 years doesn't really tell us if other societies would last that long," Frank says.

Frank and Sullivan respond to these dilemmas by posing a slightly different question. "Rather than asking, how many civilizations may exist now?" says Frank, "we ask, are we the only technological species that has ever arisen?"

By restating the question, Frank and Sullivan eliminate the need to know any information about civilization longevity. Frank calls the new question the "cosmic archaeological question"—how often in the history of the universe has life evolved to an advanced state?

Of course, that still leaves huge uncertainties in calculating the probability for advanced life to evolve on habitable planets. It's here

$$n_e \times f_e \times f_i \times f_c \times L$$

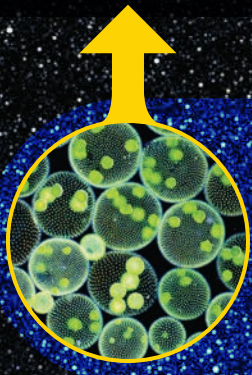
The number of planets,
per solar system,
with an environment
suitable for life

The fraction
of suitable planets
on which life
actually appears

The fraction
of life-bearing planets
on which intelligent life
emerges

The fraction of civilizations
that develop a technology that
releases detectable signs of
their existence into space

The length of time
such civilizations release
detectable signals
into space



×

$$f_{bt}$$

The likelihood of a
technological species arising
on one of these planets

that Frank and Sullivan flip the question around. Rather than guessing at the odds of advanced life developing, they calculate the odds *against* it occurring. In other words, what are the odds that humanity, here on Earth, is the only advanced civilization ever to develop in the entire history of the observable universe?

“Of course, we have no idea how likely it is that an intelligent technological species will evolve on a given habitable planet,” says Frank. “But using our method, we can tell exactly how low that probability would have to be for us to be the only civilization the universe has produced.”

So how unlikely is it in a universe consisting of an estimated 10 billion trillion stars, or even among the Milky Way’s estimated 100 billion? Applying the new exoplanet data to the universe’s 2×10 to the 22nd power stars, Frank and Sullivan find that human civilization is unique in the cosmos only if the odds of a civilization developing on a habitable planet are less than about one in a trillion trillion, or one in 10 to the 24th power.

“One in a trillion trillion is incredibly small,” says Frank. “Think of it this way: before our result you’d be considered a pessimist if you imagined the probability of evolving a civilization on a habitable

planet were one in a trillion. But according to our results, one chance in a trillion implies that what has happened here on Earth with humanity must have happened a trillion other times over cosmic history. A trillion other civilizations doesn’t sound so pessimistic.”

Frank cautions against dreams of extraterrestrial communication. “The universe is more than 13 billion years old. That means that even if there have been a thousand civilizations in our galaxy alone, if they live only as long as we have been around—roughly 10,000 years—then all of them are likely already extinct. And others won’t evolve until we are long gone.”

But that reality doesn’t diminish the profound scientific and philosophical significance of the new result.

“Given the vast distances between stars and the fixed speed of light, we might never really be able to have a conversation with another civilization anyway. If they were 50,000 light-years away, then every exchange would take 100,000 years to go back and forth. So from a fundamental perspective the question is, has it ever happened before? It’s not just, has it happened recently and nearby? Our result is the first time anyone has been able to set any empirical answer for that question. And it turns out that it’s pretty likely we are not the only time intelligence and civilization has evolved.” ^R

Lives in

Generations join forces
to bring a digital archive
of Victorian-era letters to life.

Letters

By Kathleen McGarvey

Picture an attic groaning with papers saved over more than a century.

That's the sight that greeted Glyndon Van Deusen '25, a professor of history at Rochester from 1930 to 1962, when he was invited to the top floor of the Seward family home—once the house of leading 19th-century American politician and Secretary of State William Henry Seward—in Auburn, New York, in the 1940s.

"I shall never forget the sight that met my eyes in that attic," he later wrote. "Great masses of material, largely letters to William Henry Seward, were there, some in trunks, boxes, and valises, some bound up in bundles, all covered with the dust of decades."

And that wasn't the end of it. Van Deusen—who was writing a biography of Seward's friend and political ally Thurlow Weed—began to bring University librarian John Russell with him on his visits to Seward's aged grandson, William Henry Seward III. Russell describes the papers he then encountered: "many trunks and boxes in the basement and attic of the house, and in storage rooms in the barn."

Rochester vied with Yale and the Library of Congress for the papers; ultimately, Seward's grandson chose Rochester as their home, and in 1951, at his death, the University's Department of Rare Books, Special Collections, and Preservation became the repository of the papers.

Now an intergenerational team of "citizen archivists"—led by Thomas Slaughter, the Arthur R. Miller Professor of History, and with the wide-ranging support of librarians at the River Campus Libraries—is working to bring to light the extensive holding of family papers in the collection. Slaughter calls it "one of the best Victorian-era, intact family collections in the nation."

The letters exchanged by family members are the focus of the Seward Family Digital Archive Project, now in its fourth year and supported by a grant from the Fred L. Emerson Foundation. A searchable public website is scheduled to launch in April, making available 20 years' worth of letters, from 1822 to 1842, drawn from the collection and four related manuscript collections at the University, the Seward House Historic Museum in Auburn, and a small private collection held by a Seward descendent.



TREASURE TROVE: One of the most extensive collections of 19th-century American family letters known to exist, the William Henry Seward Papers include correspondence such as an 1834 letter from Seward to his wife, Frances. The front (opposite) and back (above) show the tears that wax seals sometimes made in the paper, adding to the challenge that transcribers face. But the family often saved the seals, which can hold the missing words.



AT WORK: Retired American history librarian Margaret Becket volunteers as a transcriber and annotator for the project. She calls the language of the letters “formal, even when they’re writing to their families. It’s not stiff, but it’s dignified.”

The William Henry Seward Papers is one of the largest manuscript collections that the library holds and among the most often cited. Seward, who lived from 1801 to 1872, was a trial attorney, a New York state senator (1831–1838), governor of New York (1838–1842), U.S. senator (1849–1860), and secretary of state (1860–1869). He was the frontrunner for the Republican nomination for president in 1860, only to be sidelined in favor of someone more moderate in his support of abolition: Abraham Lincoln. Today he is best remembered for his decision to purchase Alaska—at the time, called “Seward’s Folly.” He was also attacked in the assassination plot that killed Lincoln. The collection of Seward’s papers, both professional and personal, includes 230 linear feet of materials, 150,000 items, and 375,000 pages.

When librarians first organized the papers in the 1950s—in what must have been a near-Herculean effort—archivists assumed that historians’ interest would center on the papers that relate to government. Even when portions of the collection were microfilmed in the 1980s, attention was still given, almost exclusively, to the state papers.

“The family letters themselves were separated out of the general correspondence into three cabinets and not microfilmed along with the rest of the collection,” says Alison Reynolds, the William Henry Seward Project archivist in the special collections department. “There are also 31 boxes relating to family memorabilia, personal papers, and household finances, and those weren’t microfilmed at all. So even in 1981 when they did the microfilm, they still thought the family part wasn’t going to be as interesting or as frequently used.”

But since the collection arrived on campus in the mid-20th century,

historical priorities have changed, with the emergence of social and cultural history and the growth of interest in family history, gender studies, and investigations of race and class.

There are 5,000 family letters, running to a total of 20,000 pages, says Slaughter. Household account books, diaries, travel journals, scrapbooks, and other items add another 5,000 pages.

The project involves making digital images of each page of the selected letters, and transcribing and annotating them. The completed digital archive will feature in the range of 25,000 digital images, including some of the Seward family’s photographs.

Carrying out the project is a three-pronged team. The first two groups in the team are students in Slaughter’s course related to the project, and student employees of the project, including both undergraduates and graduate students. They work in a room in the Digital Humanities Center that they’ve dubbed the “War Room,” and framed photos of team members’ faces, superimposed on 19th-century figures, flank the large computer monitors around the room.

Each fall semester, the students in Slaughter’s course, *The Seward Family in Peace and War*, learn the history of the influential and extended family and gain firsthand experience with digitization and documentary editing. Mary Ann Mavrinc, vice provost and Andrew H. and Janet Dayton Neilly Dean of River Campus Libraries, calls the Seward Family Papers Project “an embodiment of the River Campus Libraries’ future in working with students” as it equips them “with 21st-century digital media skills while giving them direct access to one of our most rare and unique collections.”

The third group is less expected: volunteers, including residents of the Highlands at Pittsford, a University-affiliated retirement community. Their participation is part of a pilot program to expand the project beyond the University and into the community. The residents of the Highlands, located in the Rochester suburb of Pittsford, bring



ACROSS GENERATIONS: Collaboration manager Lauren Davis (left), a history PhD student, and Sarabeth Rambold '18 (middle) discuss transcriptions with volunteers Lyn Nelson and Allan Anderson at the Highlands at Pittsford, a University-affiliated senior community.

a singular skill to the project, one not readily found in people in their late teens and 20s: an intimate familiarity with both letter writing and reading cursive handwriting.

Students in Slaughter's course have typically struggled with the longhand they find in the letters. But the volunteers don't.

No longer widely taught in schools, cursive writing isn't second nature to undergraduates today. "A lot of them have no familiarity with it," says volunteer and retired University librarian Margaret Becket, "and even the ones who did learn it in school don't use it nearly as much, and don't even see it very much."

"We all had the Palmer Method," says volunteer Lyn Nelson, who lives at the Highlands with her husband and describes herself as "an original Katharine Gibbs girl," from the business school that, beginning in the Great Depression, trained women for careers in business, with instruction in typing, shorthand, and other office skills.

"It's hard to believe that they don't teach it anymore. It makes one feel sort of sad," says Allan Anderson, a retired hospital administrator who, in a long and geographically varied career, held several positions at Highland Hospital and was an executive director of Strong Memorial Hospital from the late 1960s through the 1970s. Retired in 1996, he and his wife, Pauline, have lived at the Highlands since 2012.

Becket, Nelson, and Anderson all note that the ease of reading the writing varies with the penmanship. And archivist Alison Reynolds observes that 19th-century handwriting isn't quite familiar cursive.

"It's a lot more extravagant. They use a lot more loops, and there's a letter that kind of looks like an 'f' but it's a double 's' [called a 'long

s'], and so that can be tricky as well. And n's and u's, or o's and e's—they all can get confusing. And it's not as neat, because they weren't using the high-quality pens we have, either."

In fact, pen technology and handwriting methods get hands-on treatment in Slaughter's course, where students try the kinds of pens that Seward family correspondents would have used. They also study handwriting primers and theory books that teach them proper posture, hand position, and letter formation.

"It gives you perspective," says Demeara Torres '18, a computer science major from New York City. "You realize this is what they had to do." She took the course—which changes its thematic focus every year—last fall. But she has worked on the project since her first day of college, after meeting Slaughter during a scholarship interview when she was still in high school.

Handwriting is only part of what makes reading the letters challenging. The paper is thin, with writing from the other side bleeding through. The ink is sometimes thick and blotchy, and big blobs of ink fell from the pen onto the page; other times, the ink is faint and spidery. To economize on paper, letter writers would occasionally cover a page in script both horizontally and vertically. Sometimes several people would write parts of a letter, or one letter would contain different sections for different recipients. There were no envelopes; instead, correspondents would fold the paper so that part of the page became the outside. And sealing wax would tear words away when the letter was opened, sometimes leaving gaping holes in the letters—though the Searws often saved the wax, which can still hold the missing words. Slaughter and his assistants digitize and transcribe those, too.

Creating a "documentary edition" according to the standards of the Association for Documentary Editing has "only ever been done with a stable staff of PhDs," Slaughter says. But this project has a transient

student staff, and now, a corps of volunteers, most of whom are new to the world of archives.

Most of the country's major documentary editorial projects began in the 1950s, says Beth Luey, past president of the American Association for Documentary Editing and a former editor of the Adams Family Papers at the Massachusetts Historical Society. They were research projects, and students weren't involved. "But Tom Slaughter has demonstrated that you can do this. There are people in the editing community who thought that was true, but couldn't prove it."

Maintaining editorial standards requires careful coordination, and that's built into the project, too. "The most important thing is transcribing accurately and annotating as fully as possible," says Slaughter. Because students are constantly graduating and moving on, or completing the course, the students involved "are always just learn-

Seeing 'Sewords'

The average undergraduate doesn't talk a lot about "victuals" or "habiliments." But for students contributing to the Seward Family Digital Archive, those are the kinds of words they encounter. To bridge the gap between the centuries, computer science major Demeara Torres '18 has devised a database, called "Sewords," that defines terms from the period that participants find in the letters.

"I treasure the eccentricity of this being a value-added vocabulary of 19- and 20-year-olds at the U of R," says Thomas Slaughter, the principal investigator for the project and Arthur R. Miller Professor of History.

Torres has collected about 300 words as of this spring and is continuing to add more, with input from other team members. Although the feature won't be part of the April launch of the project's website, eventually readers will be able to hover their cursor over a word in the letters and see its 19th-century meanings pop up.

A Seward Sampler

Accoutrements: 1) dress; equipage; furniture for the body; appropriately military dress and arms; equipage for military service; 2) in common usage, an old or unusual dress

Collops: 1) a small slice of meat; a piece of flesh

Economy: 1) primarily the management, regulation, and government of a family or the concerns of a household; 2) the management of pecuniary concerns or the expenditure of money

Inculpate: 1) to blame; to accuse

Kneecap: 1) the round bone on the fore part of the knee (kneecap)

Lethean: 1) inducing forgetfulness or oblivion

Neuralgia: 1) a disease, the chief symptom of which is acute pain that seems to be seated in a nerve

—Kathleen McGarvey

ing the history, the vocabulary, and the people," he says.

Documented best practices are the key to maintaining continuity, so that students can train the students who will replace them, without ever meeting them. That pedagogy—guidelines, resources, syllabi, and student research—will be shared, along with the documents, on the digital archive.

Even a decade ago, annotation on such a scale would have been far more cumbersome, if possible at all. Online databases—newspapers, city directories, genealogical resources, and more—have allowed project workers to identify more than 4,000 people mentioned in the letters, along with an extensive list of Seward pets, from Brownie the canary to Snip the spaniel. The team has created a database of "Seward People and Places." It aims to be comprehensive, identifying

every person, place, and literary work mentioned in the letters.

Working on the project has "opened up a more technological aspect of history," says Sarabeth Rambold '18, a history and political science major from Manchester, Vermont. "You think of history as something that's oriented in the past, but this is very driven toward the future. It's an interesting combination."

Rambold took the course in the fall of her freshman year, and then took a job with the project. This year she has been working with the volunteers at the Highlands, especially Anderson.

"I'd never have gotten to work with people so different from myself, age-wise, if I hadn't started working here," she says.

So far, the students have mainly been helping the volunteers with technology.

While the technology learning curve for the volunteers has been steep, Lauren Davis is impressed with their determination. She's the first-year history doctoral student who is managing the volunteer arm of the project. After earning her master's degree, she taught history students for three years at Wayland Baptist University in her home state of Texas. She worked with students from their teens to their 60s.

"I became interested in what it brings to the table when you have intergenerational education," she says.

While the volunteers are adept at reading handwriting, the students bring computer savvy. "It's a balance," says Davis.

As a little girl, volunteer Lyn Nelson remembers, she'd go to the library in the summertime and fill her bag with biographies. Now she finds a direct connection to history in the Seward's correspondence.

She transcribed a letter in which Seward describes seeing the Washington Monument, already standing 15 feet above the ground.

"I adore that!" says Nelson. "It just tickled me. It gave me shivers all over."

She says that "the whole project gives me energy, delight, interest. I find it—how should I phrase this? I'm eager to get to it, and eager to learn from it, and it adds something, a new dimension, to my life."

For volunteer Allan Anderson, who was raised on a farm in Chautauqua County, New York, it also resonates with an old dimension of his life. His deep familiarity with the western New York terrain where various Seward and their friends lived and traveled is an asset to the project, says Davis. Anderson's great-great-grandfather even purchased the family farm from the Holland Land Company, which once owned most of what is now western New York. Seward was an agent for the company—but the Anderson farm was not bought "from Mr. Seward, as far as I know," he says with amusement.

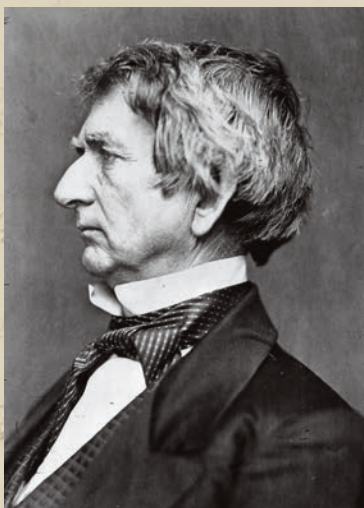
Connections, though, are at the heart of the project—between people and across time and distance. The letters give students "a whole different sense of the kinds of connections that people made with, and through, their letters," says retired librarian Margaret Becket.

In many ways, the Seward—those who even annotated the outside of letters—are an archivist's dream, says Serenity Sutherland, a doctoral candidate in history, a 2014–16 Andrew W. Mellon Fellow in the Digital Humanities, and the project manager. "If you can imagine—a whole family that saves everything from 1776 to the 1880s. They saved *everything*."

At the Seward House, home to many of the material objects they saved, "everything" includes ordinary household items, gifts from abroad, and telegrams and even bloody bed sheets from when Seward was stabbed by former Confederate soldier Lewis Powell as part of the Lincoln assassination plot. "When you combine these [objects] with the letters in which they're mentioned—it's just a really complete collection that I don't think many other paper collections have," says Sutherland.

And in their letters, the Seward discuss some of the most vital political topics of their day, including abolition and women's rights.

Seward used his governorship to bring reform to education, immigration, prisons, and law in New York. In 1850, the outspoken



William H. Seward **1801-1872**

A New York state senator, governor, U.S. senator, and secretary of state for President Abraham Lincoln, he was involved in many of the reform issues of his day. He traveled widely, even going around the world, and wrote tirelessly.

Frances Miller Seward **1805-1865**

Well-educated and with strong opinions on issues such as abolition and women's rights, she was a pointed correspondent with her husband, whom she married in 1824. She remained in Auburn, New York, while he traveled and worked in Washington, D.C.



Family of Letters

The Seward family maintained its tight connections through nearly constant correspondence, and they saved their letters and other papers with exceptional thoroughness. The result is a wealth of primary historical sources that shed light on political and domestic issues in the 19th century. A new digital archive makes the letters accessible.

I was weary of dissipation my head pained me, and as soon as I had finished my letter to you I retired hoping that I should dream of you and the boys.

—Letter from William H. Seward to Frances Miller Seward, December 5, 1834

Augustus H. Seward **1826-1876**

A West Point graduate and a veteran of the Mexican and Civil Wars, the eldest Seward child spent much of his life in the West. Along with Fanny and Frederick, he was injured protecting his father from assassin Lewis Powell in the family home.



Frederick W. Seward **1830-1915**

He served as assistant secretary of state during his father's time in office and also during the Hayes administration. He was severely injured during the attempt on his father's life that was part of the Lincoln assassination plot.

William H. Seward Jr. **1839-1920**

Ultimately a brigadier general in the Union Army, he returned to a quiet life as a banker in Auburn after the war.



Fanny Seward **1844-1866**

While her mother stayed in Auburn, she accompanied her father to live in Washington, D.C. She was an avid reader and aspiring writer, and her letters and diaries offer an eyewitness account of life in the capital city, including encounters with President Lincoln.

Feward

December 27, [1832]

Thursday evening 27th

My Dear Henry I intended to have wished you a merry Christmas on Tuesday or but was prevented by company and yesterday was prevented by ^{business} company - this evening I am quite alone and my heart is more comfortable - Monday afternoon I went out to purchase the Christmas toys for the little boys stockings it was cold and unpleasant and no slight inducement would have given me courage sufficient to venture out but the little boys are too nice to be disappointed and I could not trust Sarah's taste in the selection of the articles in demand - I found Mrs Joseph Richardson at the toy shop engaged in selecting toys for her little girls who she said had still implicit faith in the visits of the Dutch Painter - I told her I almost regretted that the illusion was dispelled from the mind of Augustus but our friend Tracy's arguments had partly convinced him and when he asked me soberly and earnestly to tell him was it so the truth was not to be disguised - I came home with a violent headache - after tea accompanied Clara to the New Church to hear Dr Knapp preach a very flat sermon which was intended to be very sublime and impressive - The Church was full because it was Christmas eve and because an Episcopalian was to preach in the Presbyterian Church - I think they will all be satisfied with this experiment - we went at half past six and came home at half past eight!! I never heard the service so miserably read - During the sermon the Dr once lost his place or his notes altogether and there was a pause of about two minutes which seemed so, in the middle of a sentence - I did not know but he had fallen in a fit for I had not ventured to raise my eyes during the

abolitionist gave his famous “higher law” speech, in which he declared that “... there is a higher law than the Constitution.” He and his wife, Frances, sheltered fugitive slaves in their Auburn home as part of the Underground Railroad and contributed financial backing to Frederick Douglass’s *North Star* newspaper, which Douglass published in Rochester.

But Frances was perhaps even more reform-minded than her husband, and the letters are a record of their exchanges. She raised funds for antislavery causes. She raised the niece of Harriet Tubman while Tubman worked for the Union Army as a nurse and a spy. She supported the Married Woman’s Property Act, a law passed in New York state in 1848. She was “very moral and religious,” says Sutherland. “She had a lot of strong beliefs—beliefs that, when they were younger, she believed he held, too. But when he became more involved in politics, William Henry Seward lost some of the ardor that he originally had for abolitionism—or at least, he tempered it with wanting to be a good politician, and to be successful.

“Frances never did. She was always strong in her belief that it was absolutely morally wrong for a nation that espoused freedom to be enslaving people, and she never wavered from that. So she would write intellectual arguments to William Henry, telling him why he was wrong for the speech that he made about promoting leniency for slaveholders, or something like that. She did a lot of negotiating in her letters.”

Daughter Fanny’s diaries and correspondence, alongside her library, which is conserved at the Seward House, provide an unparalleled glimpse into the life of a 19th-century American teenage

SENDING NEWS: In this 1832 letter (opposite, and transcribed, right), Frances Seward tells her husband, William Henry, then in Albany, New York, about the family Christmas. He was almost always away for the holidays.

girl. “Fanny’s ambitions to be a writer, her experiences in Washington, D.C., where she had friendships with a famous actress and with the children and spouses of the leading politicians of the day, and her firsthand experience of major historical events are documented only in our collection,” Slaughter says.

The project is beginning to expand beyond the family letters, to include not just items like diaries but also the correspondence of close friends.

“We’re finding that family stories aren’t always confined to the family members. A lot of family stories get told to close friends. And so we’re thinking that we have to have the papers of these friends [which are also held in Special Collections], too, in order to really tell the family story,” says Sutherland.

The stories were read with urgency at the time, and remain almost as compelling today.

“Receiving letters was so important to the family members,” she says. “They beg each other to write to them. They say, please write to me—I haven’t heard from you. Frances especially begs William Henry all the time to write to her. She’s saying, I haven’t gotten a letter from you in one week. You must be sick; I know you’re sick because you wouldn’t not write to me. They guilt each other into writing.”

But the fear was real. Before antibiotics, a sudden fever could take a healthy person away in the time between letters. “That was part of the function of letters: letting people who love you know that you’re still OK, because people could get sick so quickly, so unexpectedly,” Becket says.

Seward maintained a punishing travel schedule in the United States and abroad that kept him away from his family frequently and for long stretches. Their lives, in a very real sense, were lived through their letters. One letter from Fanny to her mother in 1864 runs to 26 pages, as she adds the happenings of day after day after day. Sutherland calls it a “mini-novella.”

And reading the letters is, in many ways, like reading a novel, says Becket. The dramas they describe—from arguments over a nation’s

slaveholding to grief over a baby needlessly lost to smallpox to delight over the antics of squirrels, in a letter from an aunt to Seward’s youngest son—may be of interest to any reader, not just to historians of 19th-century America.

“You’re always getting surprises, and shifts in relationships,” Becket says.

“William Henry Seward was so famous, but when you read his letters, you see he’s just a normal person, dealing with normal family things,” says student Sarabeth Rambold. “I like how accessible it makes historic people.”

“To have this focus on the family papers puts [Seward] and his work in a context that we don’t have for very many other, even very important, Americans, and I think that’s the value of it,” Becket says. Through the letters, “we know more about people’s lives and how


Thursday evening 27th

My Dear Henry. I intended to have wished you a merry Christmas on Teusday [sic] w but was prevented by company and yesterday was prevented by company headache. This evening I am quite alone and my head is more comfortable. Monday afternoon I went out to purchase the Christmas toys for the little boys stockings, it was cold and unpleasant and no slight inducement would have given me courage sufficient to venture out but the little boys are too nice to be disappointed and I could not trust Sarah’s taste in the selection of the articles in demand. I found Mrs Joseph Richardson at the toy shop engaged in selecting toys for her little girls who she said had still implicit faith in the visits of the Dutch Saint. I told her I almost regretted that the illusion was dispelled from the mind of Augustus but our friend Tracy’s arguments had partly convinced him and when he asked me soberly and earnestly to tell him was it so the truth was not to be disguised. I came home with a violent headache. After tea accompanied Clary to the New Church to hear Dr. Rudd preach a very flat sermon which was intended to be very sublime and impressive. The Church was full because it was Christmas eve and because an Episcopalian was to preach in the Presbyterian Church. I think they will all be satisfied with this experiment. We went at half past six and came home at half past eight!! I never heard the service so miserably read. During the sermon the Dr once lost his place or his notes altogether and there was a pause of about two minutes which seemed 20, in the middle of a sentence. I did not know but he had fallen in a fit for I had not ventured to raise my eyes during the [end of this page; continues on next page] performance. I wish I did not always feel myself obliged to blush for the sins of the whole world as well as my own....

they got through each day. Their relationships, their priorities, can tell us so much more, not just about Seward but about people in his social class, and the value system of the whole culture.”

“We don’t usually think of historians as explorers, but they are,” says Luey. “It’s exciting to see things people haven’t seen before, or they’ve gotten wrong, or that you just see differently. We don’t get many chances to do that in our lives, and I think it’s important for someone to have the chance to do that at least once in college.

“There are a lot of ‘ah-ha’ moments” in learning, but usually they involve someone else’s discovery, she says.

“To have one that’s your very own is a treasure.” 

The Seward Family Digital Archive is scheduled to go online on April 13, at sewardproject.org.

PRINCES *of the* PALESTRA

Win a national championship?
That was ‘crazy talk’ to the 1990 Yellowjackets.
Until their attention to detail paid off.

By Jim Mandelaro

The impossible dream was casually mentioned after a preseason practice in 1989.

“You know,” then Yellowjacket basketball coach Mike Neer ’88W (MS) told his wide-eyed band of 14 young men, “national champions get rings made for them.”

The players nearly laughed.

“We were so naive,” says Chris Fite ’92, the sophomore center from Latrobe, Pennsylvania, and the team’s leading scorer. The team’s annual early season test, the Chuck Resler Invitational at the Palestra, would be enough of a challenge.

“We weren’t sure if we could win the Chuck Resler tournament, let alone a national championship,” Fite says. “To be thinking that going into the season was crazy talk.”

As junior guard Greg Krohner ’91 told reporters at the time: “I thought I’d be on the moon before I got a ring.”

On St. Patrick’s Day, 1990, Krohner and Co. were over the moon with joy. A Rochester team built on defense and grit edged DePauw University of Indiana 43–42 in Springfield, Ohio, to win what remains the program’s only NCAA Division III title.

WE ARE THE CHAMPIONS! Mark Foley ’93 and members of the men’s basketball team celebrated with fans after winning the Division III national championship in 1990, the first national title for the program.



The impossible dream had come true.

That milestone season remains the program’s signature achievement, putting Rochester on the map among Division III perennial contenders. It’s something that resonates strongly with student-athletes looking for more out of college athletics than just playing time.

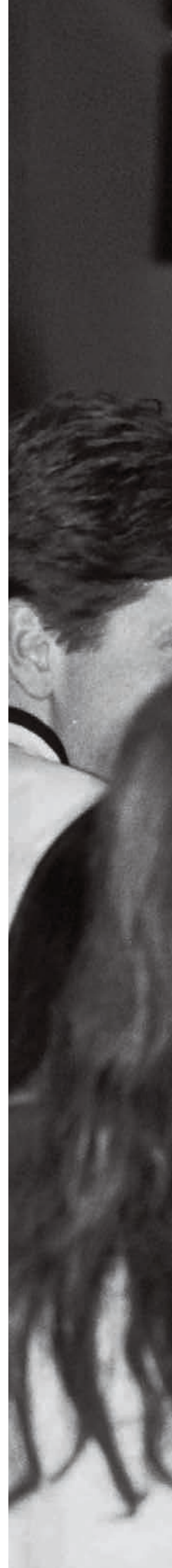
Luke Flockerzi, the Yellowjackets’ head coach for the past six seasons, says the 1990 national title is a touchstone for the program.

“Being able to point to 10 Sweet-16 appearances, four Final Fours, and a national championship gives validity to our program and motivates our team,” Flockerzi says. “Each player wants to have those experiences for himself.”

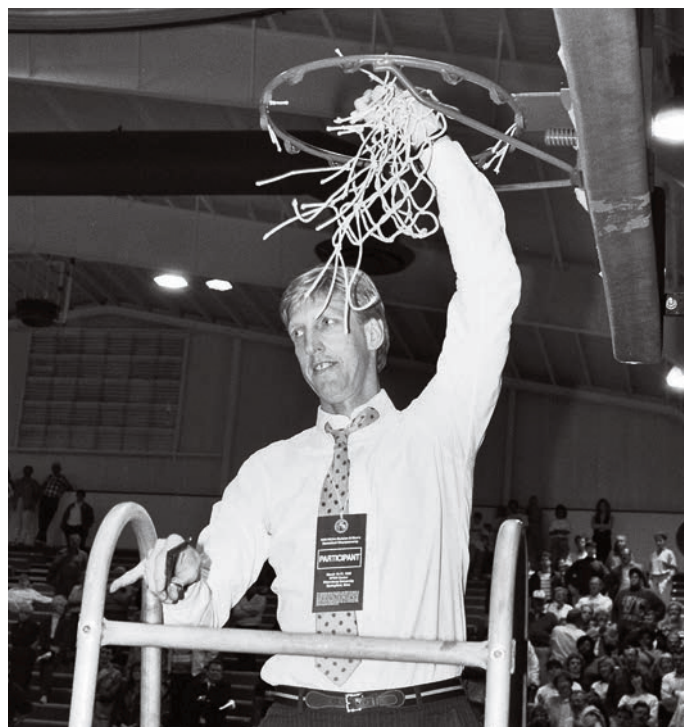
More than a quarter-century later, the special character of the 1989–90 season continues to offer many team members important lessons in teamwork, camaraderie, and friendship.

“Besides the birth of my children, winning the national championship with my amazing teammates has been the most memorable experience of my life,” says former guard Lou Palkovics ’91, a longtime history teacher and high school basketball coach in Doylestown, Pennsylvania.

“We just loved playing together,” says starting guard Chris Johnson ’90, a Seattle-based technology consultant for Microsoft. “No one ever complained about







NET VICTORY: Chris Johnson '90 (left) drives against defenders from DePauw University on the way to the Yellowjackets' national championship victory, sparking a celebration for then coach Mike Neer (right) and other members of the Yellowjacket team.

not getting the ball, not getting shots or not getting help on defense.”

Going into the 1989–90 season, Rochester had not been in national contention for close to a decade. The Yellowjackets were coming off a 17–10 finish the year before. Four starters had graduated and only two seniors remained. But there was instant chemistry.

“We had different personalities and skill sets,” says John Kelly '92, a reserve guard and a former federal prosecutor now in private practice in Washington, D.C. “But our coaches molded us into a close-knit group of friends.”

The Yellowjackets continued to win, even after losing point guard Jimmy Jordan '93 to a knee injury in the sixth game. It was point-guard-by-committee after that.

They didn't realize how good they were.

“We got to be friendly with teams in our league because we'd eat with them after games,” says Michael Coleman '92, a sophomore forward then and now a vice president of a national insurance company. “So many of them would say, ‘You guys don't get it. Nobody can get a shot off against you!’”

The Yellowjackets were No. 1 in the country in field-goal percentage defense.

“Nobody shot 50 percent against us in a game,” Neer says. “Nobody.”

Rochester finished the season 21–5, then reeled off six wins in the NCAA tournament. That included a 62–57 second-round upset of Buffalo State, the fourth-ranked team in the nation but one that Rochester had beaten in a preseason scrimmage.

“This could be our destiny,” Adam Petrosky '91 remembers thinking.

It was. The Yellowjackets won the lowest-scoring Division III final in history. Defense ruled, again.

They would knock on the championship door the next two years, losing a 1991 quarterfinal (in overtime) and the '92 final. There also would be appearances in the 2002 Final Four and 2005 national championship.

Neer retired in 2010 after 34 seasons and 563 wins. One year later, he took over at Hobart College in Geneva, New York, and went 66–20 in three seasons before retiring again.

The 1989–90 Yellowjackets left with rings, wristwatches—and life lessons.

“Coach Neer always stressed ‘attention to detail,’” Coleman says. “It drove us nuts, and we'd imitate him behind his back: ‘Attention to detail! Attention to detail!’”

Coleman now cringes when he hears himself say that phrase to his daughters, employees, and the girls basketball teams he coaches.

“I disliked it so much when Coach Neer said it,” he says. “But it inspires me. It made me who I am today.”

Petrosky—who once called himself the “most irresponsible person on the team in terms of being on time”—found a different inspiration. He's now a high school basketball coach, college counselor, and athletic director at an all-boys school in Pittsburgh.

Petrosky's father was a constant at his son's games, at home or on the road. He died in 2000, and the younger Petrosky sometimes watches the championship game just to see his dad celebrating on the court. “It's one of the few video clips I have of him,” he says.

After his father died, Petrosky moved from Northern California to Pittsburgh to care for his ailing mother. The 1990 championship kept his spirits from sinking.

“During a period when I did not feel that great, the accomplishments reminded me that I was a national champion,” he says. “Something only a relatively small group of people in this entire world can say.”

During last October's Meliora Weekend, 10 members of that team reunited for a 25th anniversary dinner hosted by Neer. When the players walked into the restaurant, they saw the same blue banner that had hung for years in the Palestra. The one with all their names listed in white.

Only now it served as a tablecloth over a long wooden table.

Fite laughs at the memory—and the irony.

“Attention to detail,” he says. 

Jim Mandelaro writes about student affairs for University Communications.

Personal Definition Michael Coleman '92

The tears were flowing for Michael Coleman.

It was March 1992, and the Rochester men's basketball team had lost to Calvin College of Michigan in the NCAA Division III tournament championship.

Never mind that Rochester had won the national title two years earlier during Coleman's sophomore year. This was his final collegiate game, and he was inconsolable.

"It was the most heart-wrenching thing that had happened to me," the 6-foot-7 forward says. "It felt worse than winning felt good."

Today, Coleman rarely thinks about that '92 loss. He swears he can't remember the names of some teammates. But ask him about the 1990 champions, and he's a walking encyclopedia.

"It has completely changed in time," he says. "I don't dwell on '92. I only think about how we won a national championship, and how close we were. We were brothers."

Coleman lives outside of Endicott, New York, with his wife, Kristie, and five daughters. As vice president of IOA Northeast, he represents construction companies and owners who purchase insurance and surety bonds for large projects

throughout the United States. He also coaches AAU basketball.

"I'm not just a sports coach but a life coach," he says. "I've made plenty of mistakes in my life. I believe it's how quickly you get up off the floor and hustle back on defense that defines the person you are."

Coleman says the 1989-90 Yellowjackets hit it off immediately.

"Eleven of us lived on a top (dormitory) floor," says the Hornell, New York, native, who roomed with star center Chris Fite. "We played cards—harmless games of spades and pitch. We partied together, went to concerts together, and even studied together. UR wasn't a walk in the park for any of us."

Coleman graduated in 1992 with a degree in public health.

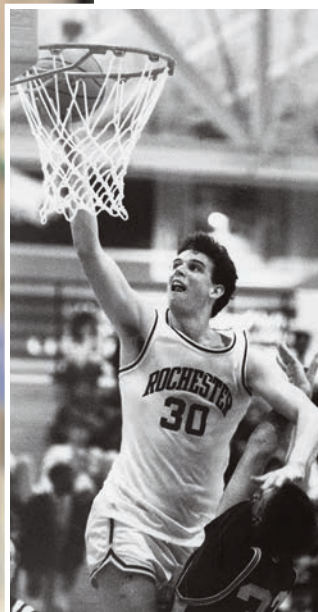
He planned to play professionally in Ireland, but the day before he was set to leave, the coach called and told him they were keeping another player instead. Coleman worked at Strong Memorial Hospital and took classes toward his master's degree. He then worked for a small law firm in Rochester before moving into his current field in 2001.

His greatest takeaway from 1990 was the lifelong friendships he made.

"Yeah, we played basketball," he says. "But more than that, we grew into adults together. And we created a memory of a lifetime that binds us together forever."

The Palestra was their home court, but the Yellowjackets called it "the palace." After all, they went 16-1 at home that year.

"We will never forget being the princes of our palace in 1990," Coleman says.



BASKETBALL BROTHERS: "Yeah, we played basketball, but more than that, we grew into adults," says Coleman, who was a sophomore when the Yellowjackets won the national championship and played on two teams that reached the quarter- and the semifinals. "We created a memory that binds us together forever."

Team Center Chris Fite '92

It was 1988, and Chris Fite was adamant. The senior basketball star from Latrobe, Pennsylvania, would visit Rochester, but he would play at a Division I school.

That was a slam dunk.

"I was set on it," the 6-foot-8 center says. "I wanted to play at the highest level and couldn't be told differently. My high school coach told me I should at least visit Rochester. I said 'I will, but I'm still going D1.'"

Fite visited the River Campus and fell in love. "I connected with the players, and the campus blew me away. From then on, Rochester was at the top of my list."

The lanky kid with the soft touch chose Rochester over Division I schools Richmond, Lehigh, and Navy. In his sophomore year, he powered the Yellowjackets to a Division III national championship. He led the Yellowjackets in scoring (18.6 per game), rebounding (8.9), assists (87), and blocked shots (42) and was named Outstanding Player of the NCAA Division III tournament.

"I remember thinking, 'How could this tall, skinny kid really be as good as everyone said?'" says former teammate Matt Parrinello '93, who's now a managing partner of the Parrinello Law Firm in Rochester. "I quickly found out how good he really was."

Fite led Rochester back to the national championship game his senior year, but the Yellowjackets lost to Calvin College of Michigan. He was runner-up for NCAA Division III Player of the Year honors that year and remains the Yellowjackets' all-time scorer (2,066) and shot blocker (179).

After graduating in 1992 with a degree in integrated sciences, Fite played professional basketball for 11 years in England, Australia, Germany, and Belgium. His wife, Susan, is a native of Liverpool, England, and they have a four-year-old daughter named Grace.

Fite's mother was a teacher, and he expected to follow that path. "I thought I'd play professionally for a year or two before I got a real job," he says with a laugh.

He has a real job now as men's basketball coach at Shippensburg University of Pennsylvania, an NCAA Division II program. He took over the Raiders in 2010 after working as an assistant coach at Saint Vincent of Pennsylvania, Rochester, and Indiana University of Pennsylvania.

During seven seasons at Indiana University of Pennsylvania, he helped the team compile a 149-65 record and reach the NCAA tournament five straight seasons. Late in his third season at Shippensburg (2015-16), the Raiders were 19-8, tying the program's record for third-most wins in a season.

Fite remains in contact with several Rochester teammates and is proud of their legacy.

"By the time we left," he says, "recruits were coming to Rochester to win national championships. It wasn't that way when guys like Mike Coleman and I got there."



POWERFUL PROGRAM: Now the head coach at Shippensburg University in Pennsylvania, Fite originally set his sights on playing for a Division I program in college, but after visiting campus and meeting members of the Yellowjacket team, he pivoted: "From then on, Rochester was at the top of my list."



Court Presence John Kelly '92

John Kelly was destined for greatness on the court: in 1988, the point guard helped McQuaid Jesuit in Rochester win a state high school basketball championship. Two years later, he was part of a Yellowjacket squad that captured the NCAA Division III national title.

His career record over five high school and college seasons was 125-18—a phenomenal .874 winning percentage. “I think it was in spite of me rather than because of me,” he says modestly.

For the past 20 years, Kelly has shined in another court. After a successful career as a federal prosecutor with the Department of Justice in Washington, D.C., he moved to the private sector seven years ago. In 2011, he was recruited to open, manage, and build the D.C. office of the Nashville-based law firm Bass, Berry & Sims, where he serves as managing partner and represents companies and executives in high-profile investigations and litigation with the Department of Justice and other enforcement agencies.

Kelly lives in Arlington, Virginia, with his wife, Sara, and their two daughters. “I think I’ve always realized how fortunate I’ve been,” he says.

His good luck took a break the summer before he enrolled at Rochester. While playing in an AAU basketball game, Kelly took a charge and felt his lower right leg snap. The injury was so devastating that his foot was torn from his ankle.

“I remember the doctor telling me, ‘There’s more to life than basketball,’” Kelly says. “He didn’t think I’d play again and said I might have a limp the rest of my life.”

Kelly underwent two surgeries, wore eight different casts, and was on crutches for six months. He spent his freshman season keeping statistics on the bench and working overtime in physical therapy.

He was given the green light his sophomore year and played in 18 games that championship season and 15 his junior year. He started all 31 games his senior season and averaged 8.9 points for a squad that lost the NCAA final.

After graduating in 1992, the political science major attended law school at the University at Buffalo, then spent a year working for a Rochester firm. He served as an assistant district attorney in his hometown from 1996-99, then joined the justice department as a federal prosecutor. Kelly was chief of staff and deputy director of the Executive Office for U.S. Attorneys, overseeing 94 offices nationwide.

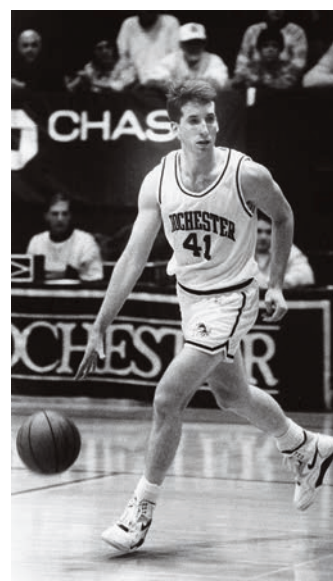
He left the justice department in 2008 to join a large international firm in Washington and moved to Bass, Berry & Sims four years ago.

Kelly attributes much of his success to what he learned as a Yellowjacket.

“There was so much preparation in practice,” he says. “We’d go over things again and again and again. But when I was in a game, I’d know what all four teammates were supposed to be doing.”

It’s the same in the court of law.

“You have to anticipate all the things that could go wrong during a trial,” he says. “Because something always does.”



FULL COURT: An off-season injury nearly derailed Kelly’s basketball career, but he was back on the court by his sophomore year. After graduation, he began a legal career that has included positions as a federal prosecutor and as an attorney in highly regarded private law firms in Washington, D.C.

High Expectations

Rodney Morrison '91, '92W (MS)

Rodney Morrison says the euphoria of winning a national college basketball championship is indescribable, even more than a quarter century later.

But his biggest reward at Rochester had nothing to do with a round ball and everything to do with a round diamond.

"My highlight was marrying the love of my life, my college girlfriend, Albania Almanzar '92," the Philadelphia native says. "I'm not sure she attended a single basketball game."

If true, Albania missed a great season. Morrison played in 16 games as a junior guard as Rochester won the 1990 NCAA Division III title. The 43-42 win over DePauw University of Indiana was Morrison's last collegiate game.

"My grades weren't where I wanted them to be, and I knew I wanted to go to graduate school," says Morrison, the first member of his family to attend college. He hit the books instead of the hardwood his senior year, then earned his master's degree from the Warner School of Education.

Today, he's associate provost for enrollment and retention at Stony Brook University on Long Island, New York. His job entails making sure Stony Brook recruits and retains excellent students. The position follows admissions jobs at Rochester, the University of Pennsylvania, Mount St. Mary College in Newburgh, New York, and Rutgers University—with a stint as vice president at the now defunct financial services firm Lehman Brothers mixed in.

Morrison credits his success to hard work, something he says was part of the daily routine during Rochester's championship season. "We battled and scrapped at practices," he says. "It was 'bring your lunch pail to practice and let's battle for two hours.'"

Morrison wasn't a starter but says that didn't matter to head coach Mike Neer.

"His expectations were the same," Morrison says. "He was tough, no nonsense. The bar was high for everybody, whether you played one minute or a lot of minutes."

Morrison was recruited by then Rochester assistant coach (and now highly successful Villanova head coach) Jay Wright out of Germantown Academy in Philadelphia.

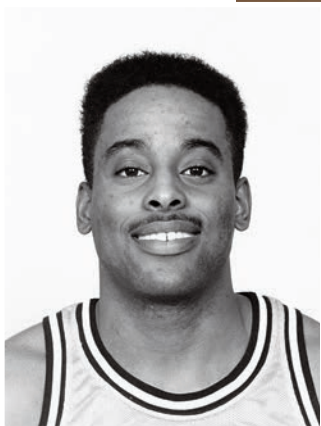
"He came to my school and said 'You should think about UR,'" Morrison says. "The next day I went to the guidance office and looked it up. I didn't even know where it was on the map."

He ended up attending the University with three classmates "and had a blast."

Most special of all, he met Albania. The two stayed together as she pursued her law degree from Brooklyn Law School and married in 1997. They live on Long Island with son Elijah and daughters Rachael and Zippy.

"Going to UR," Morrison says, "was the greatest thing to ever happen to me."

And not just because he cut down the net on March 17, 1990.



PROVOST POSITION: At Stony Brook University-SUNY, Morrison works to make sure that the Long Island college recruits and retains excellent students, part of a career in higher education that began at Rochester, where, he says, the program's emphasis on high expectations was a foundation for his approach to education.



Team Leader Erik Rausch '90, '97W (MS)

As a leader in college advancement for 25 years, Erik Rausch has been part of some great teams.

"Our campaigns have raised valuable dollars to help support research on everything from cancer to stem cells," says Rausch, a senior director of development at Stanford University's medical center. "The impact of our donors has been transformative."

Rausch's first great team was the 1989-90 Yellow-jacket basketball squad that won the NCAA Division III championship. "It was special then and it will always be special. It was the last game I ever played."

Rausch was a 6-foot-4 forward out of Long Island Lutheran High. He averaged 8.3 points and 5.3 rebounds that special season. "There were probably other UR teams with as good or better talent," he says. "We had talent and chemistry."

Being able to play at all was a minor miracle: the summer before he enrolled at Rochester, Rausch was clearing trees at a summer camp and swung an axe so forcefully that it caromed off the tree and imbedded itself in his left shin. He was rushed to a hospital and spent the summer in a cast. But he was ready when his freshman season began and became an integral part of the team.

Rausch played in 24 games his junior year—but started none.

"There was a point when he came to my office and said 'Coach, what can I do to earn more trust and get more time on the court?'" says former Yellowjackets coach Mike Neer. "Instead of saying 'I'm unhappy,' he

put a positive spin on it. I wanted to leave my desk and hug him."

Neer named Rausch the sole captain months before his senior season. "I never did it before and never did it since," Neer says. "I wanted to reward his composure, and I needed his leadership."

Rausch started all 32 games. He graduated in 1990 with dual degrees in history and political science and landed a job in the University's alumni development office. That's where he met Maura McGinnity '87, '96S (MBA), who had won an NCAA soccer title with the Yellowjackets.

"At some point, our colleagues started thinking we'd be a good match," Rausch says. "Little did they know we'd been dating for a few months already."

The two married in 1997, the year Erik took a development job at UC San Francisco. They live in Palo Alto, California, with their son, Aidan, and daughter, McKenna. Rausch moved to Stanford in 2004 and has led several major fundraising initiatives.

"The university is just a unique and exciting environment to work in," he says.

He may be 3,000 miles away, but part of Rausch always will be at Rochester. It's where he departed a national champion, where his career was launched, and where he met Maura (who also works in development at Stanford) and learned the skills that have made them successful today.

"In a way," Rausch said, "I feel like I've never left college."



DEVELOPMENT & DRIVE: Rausch was named as the team's sole captain before his senior year, an unusual move for the program at the time, but a recognition of his leadership as a player and his drive to help the Yellowjackets both on and off the court.