

the **Rotarian**

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APRIL 2020

DEATH BY PLASTIC

**Can the planet survive our
throwaway culture?**



SPACE CRAFT

**Archaeologist Sarah Parcak's
sky-high quest**

AFTER THE FLOOD

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a hand in Paraguay**



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President's message

Dear fellow Rotarians and members of the family of Rotary,

I spend a lot of time thinking of family, not just my own or the extended family of Rotary, but also the families we are helping in the communities we serve. In many parts of the world, mothers and children face challenges to survive that most of us will never comprehend. According to the World Health Organization, the risk of a woman in a low-income country dying during pregnancy or childbirth, or from related causes, is about 120 times higher than that of a woman living in a high-income country. It is encouraging that infant mortality rates are declining globally, yet 4 million babies annually still die within the first year of life.

In April, Rotary turns its attention to maternal and child health. And when we think of what we can do to help, we can look to clubs like the Rotaract Club of Calabar South-CB, Nigeria, for inspiration. It teamed up with the Rotaract Club of Canaan City (CB) in a program focused on educating mothers on best practices to prevent infant mortality and promote postnatal health for themselves and their babies. In Bangladesh, the Rotary Club of Dhaka North provides free surgeries and medicine to pregnant women who cannot afford the hospital costs associated with giving birth. I encourage you and your club to go to ideas.rotary.org to find projects like these that are helping to save mothers and children.

We also have witnessed how millions of people — families and entire communities — have been ripped away from their homes because of conflict, poverty, and disasters during the past decade. But Rotary has not stood idly by during the global refugee crisis. During Rotary Day at the United Nations last November, we honored a Rotary Peace Fellow and five Rotarians who are taking action to help refugee communities. Among them was Ilge Karancak-Splane of the Rotary Club of Monterey Cannery Row, California. After visiting several tent camps in Turkey, she led a Rotary project that collected 1,000 pairs of children's shoes and socks for families in the camps and, later, led a global grant project to help educate refugee children. In March, Gay and I had the privilege of visiting a tent camp in Torbalı and seeing firsthand the good work that Rotarians from Turkey and California were accomplishing with Syrian refugees.

The challenges faced by mothers, their children, and refugee communities around the world are daunting. But when we remember our greatest strength — how *Rotary Connects the World* — we can begin to find solutions. Through our creativity, our resources, our dedication, and our networks, Rotary can and will open opportunities to face these challenges.



MARK DANIEL MALONEY
President, Rotary International



In April, Rotary turns its attention to maternal and child health. I encourage you and your club to go to ideas.rotary.org to find projects that are helping to save mothers and children.



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- **ROUND TRIP** The circular economy provides a framework to solve the plastic problem. Rotary Scholar Matt Kopac explains to **Diana Schoberg** how business can take the lead.
- **A WAY TO WASH THE WATER CLEAN** Ludovic Grosjean wants to rid the oceans of plastic, writes **Stephen Yafa**, and it starts with our rivers.

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Inspired in part by Indiana Jones, this space archaeologist uses futuristic airborne technology to unearth the treasures of the past.

By Diana Schoberg

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“When you have awe ...
you open yourself up
to the accomplishments
of other groups of people.”

— Sarah Parcak



ON THE COVER A plastic bottle will take about 450 years to decompose. But some new plant-based plastics, while no silver bullet, may break down more easily.

OPPOSITE Archaeologist Sarah Parcak studies satellite images for the outlines of structures long buried underground. Photography by Ian Curcio

the Rotarian

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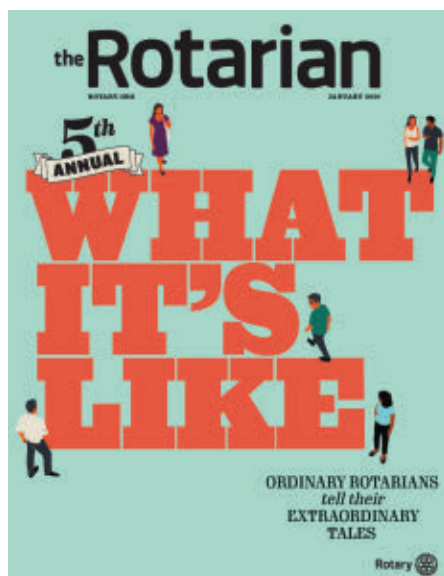
What sort of people read *The Rotarian*?

**People who make
their community
a better place.**

The Kigali Public Library, the brainchild of Rotarians, is a center for peacebuilding, education, and connection.

76% of our readers said working in their local community is their top priority.

SOURCE: 2016 *Rotarian* Reader Survey conducted by GfK MRI



Sharing feedback

Regarding “Thanks for Not Sharing” by Joe Queenan [January]: Some time ago, I stumbled across a book that looked interesting. I read it and loved it. After reading it in virtually one sitting, I thought of a group of people I knew who shared my interests and my sense of humor. They also loved it. They shared it with others. We had discovered a new author. We shared his next book. And his next. Fifteen years on, that first book remains in my top 10. And to this day I enjoy the author’s columns in *The Rotarian*, even when I don’t always agree with their premise. And, oh, the book was *If You’re Talking to Me, Your Career Must Be in Trouble* — by Joe Queenan.

SIMON BRIGHENTI, *West Springfield, Massachusetts*

No doubt we have all received a book from a well-meaning friend that didn’t meet our criteria for a good read. In some cases, we simply put the book aside or donate it to our local library. In other cases, we may start reading, trusting that our friend had a reason for giving us that particular book. Sometimes we give up partway through, recognizing that our friend made a mistake. Occasionally we may read all the way to the end, realizing that the friend was right. In any case, a recommended book gives us insight into the mind of the giver that we previously lacked. If that person is a friend, that alone is a valuable gift.

I’m afraid that Joe Queenan’s piece totally misses the point. The gift of a book says, “I see something in you that I see in myself, and I would like to share a bit of my mind with you.” In no case is that gift ever a “smack in the face ... punitive ... cruel” or “a socially acceptable form of sadism.”

My advice to Joe — if he’s truly offended by the gift of a book — is to smile, say thank you, and donate it to the library in the name of his local Rotary club.

DON HUTCHINS
Olalla, Washington

I love Joe Queenan’s writing but disagree with his opinion on sharing books or book recommen-

dations with others. Over the years, my friends, family, and acquaintances have shared books and offered book suggestions. All books deserve a chance. Occasionally I read something recommended that I love, that I can’t put down, or that makes me feel better or be better, despite Joe’s assertion that “with only a few exceptions — the Bible, the Koran — nothing important in life can be fixed by reading a book.”

I will continue to give and receive books and suggestions for books, as well as music and movies. I don’t know which ones will positively or negatively impact a person, or in what way.

JOHN BAXTER
Simi Valley, California

Giving of yourself

I usually read *The Rotarian* cover to cover, but when I saw on your January Contents page that your What It’s Like package included pieces on donating and receiving a kidney, I went right to those awesome stories. Living donors are heroes — my wife is one. Everybody should know about paired exchange, in which a living donor who is incompatible with their intended recipient can swap kidneys with another donor-recipient pair in the same situation. My wife, Heidi, did that for me four years ago. She calls it the ultimate BOGO event: Bring Organ Get Organ.

I thank God daily for the generosity and the miracle of transplantation.

SCOTT BADER
Sturgeon Bay, Wisconsin

Sustainability class

I found “The Sustainability Challenge” in the December issue to be of great value. To me, this is what Rotary is all about: Figure out what really works, what is really required, be honest when things do not go well, and keep improving. I find it refreshing to read that USAID is as interested in sustainability as is The Rotary Foundation.

We must not fool ourselves about the ingredients that are required for sustained success. As Aldous Huxley said, “Facts do not cease to exist because they are ignored.”

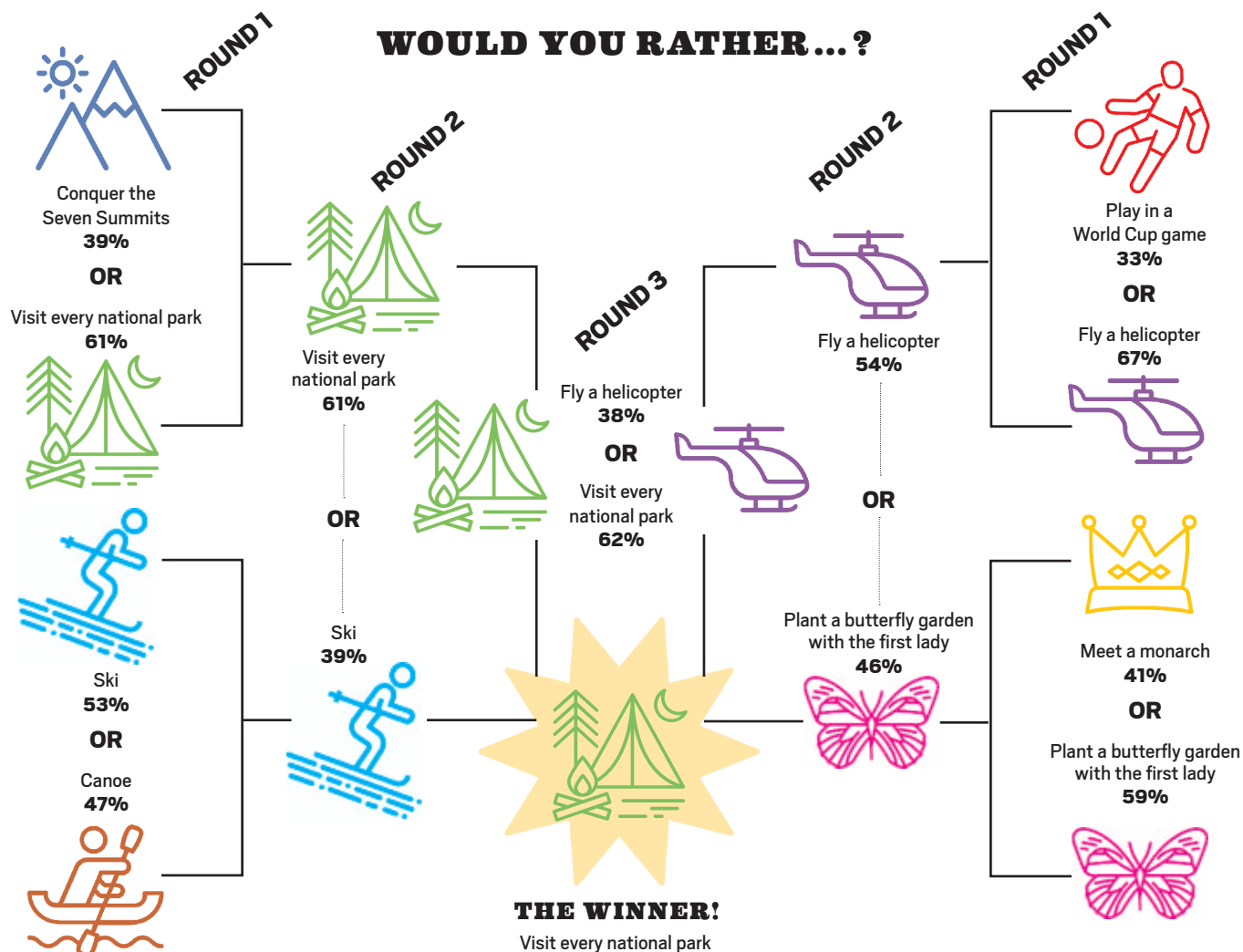
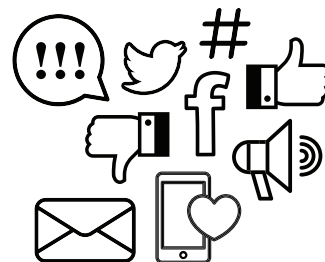
LARRY MCGEE
Chehalis, Washington

Your piece showing what worked, what didn’t, and why in Rotary water projects in Ghana should become a regular feature of *The Rotarian*. This article gives Rotarians information about the ways in which we are already improving the world, as well as advice regarding how we can improve the world even more efficiently and effectively going forward.

DAVID CHILDS
Hot Springs Village, Arkansas

Overheard on social media

Our annual What It's Like issue in January featured some Rotarians' amazing experiences. We pitted their adventures against one another on Instagram in our interactive version of **What It's Like Madness**:



Check out Rotary International's Instagram story on **15 APRIL** for an interactive poll about archaeology.

REPRINTING ARTICLES

The Rotarian frequently receives requests to reprint its articles. In the interest of raising awareness about what Rotary does, we encourage readers to share our articles in this way. Any article, in its entirety, may be reprinted in a Rotary-denominated publication such as a club or district newsletter. For other publications, both consumer and nonprofit, reprints require the expressed prior permission of the magazine.

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SERVICE ABOVE SELF

The Object of Rotary

THE OBJECT of Rotary is to encourage and foster the ideal of service as a basis of worthy enterprise and, in particular, to encourage and foster:

FIRST The development of acquaintance as an opportunity for service;

SECOND High ethical standards in business and professions, the recognition of the worthiness of all useful occupations, and the dignifying of each Rotarian's occupation as an opportunity to serve society;

THIRD The application of the ideal of service in each Rotarian's personal, business, and community life;

FOURTH The advancement of international understanding, goodwill, and peace through a world fellowship of business and professional persons united in the ideal of service

The Four-Way Test

OF THE THINGS we think, say, or do:

- 1) Is it the **TRUTH**?
- 2) Is it **FAIR** to all concerned?
- 3) Will it build **GOODWILL** and **BETTER FRIENDSHIPS**?
- 4) Will it be **BENEFICIAL** to all concerned?

Rotarian Code of Conduct

The following code of conduct has been adopted for the use of Rotarians:

AS A ROTARIAN, I will

- 1) Act with integrity and high ethical standards in my personal and professional life
- 2) Deal fairly with others and treat them and their occupations with respect
- 3) Use my professional skills through Rotary to: mentor young people, help those with special needs, and improve people's quality of life in my community and in the world
- 4) Avoid behavior that reflects adversely on Rotary or other Rotarians
- 5) Help maintain a harassment-free environment in Rotary meetings, events, and activities, report any suspected harassment, and help ensure non-retaliation to those individuals that report harassment.



**A message from the
editor in chief
JOHN REZEK**

**Once you're
aware of the
cumulative
effect of all
this plastic,
you can't
look away.**

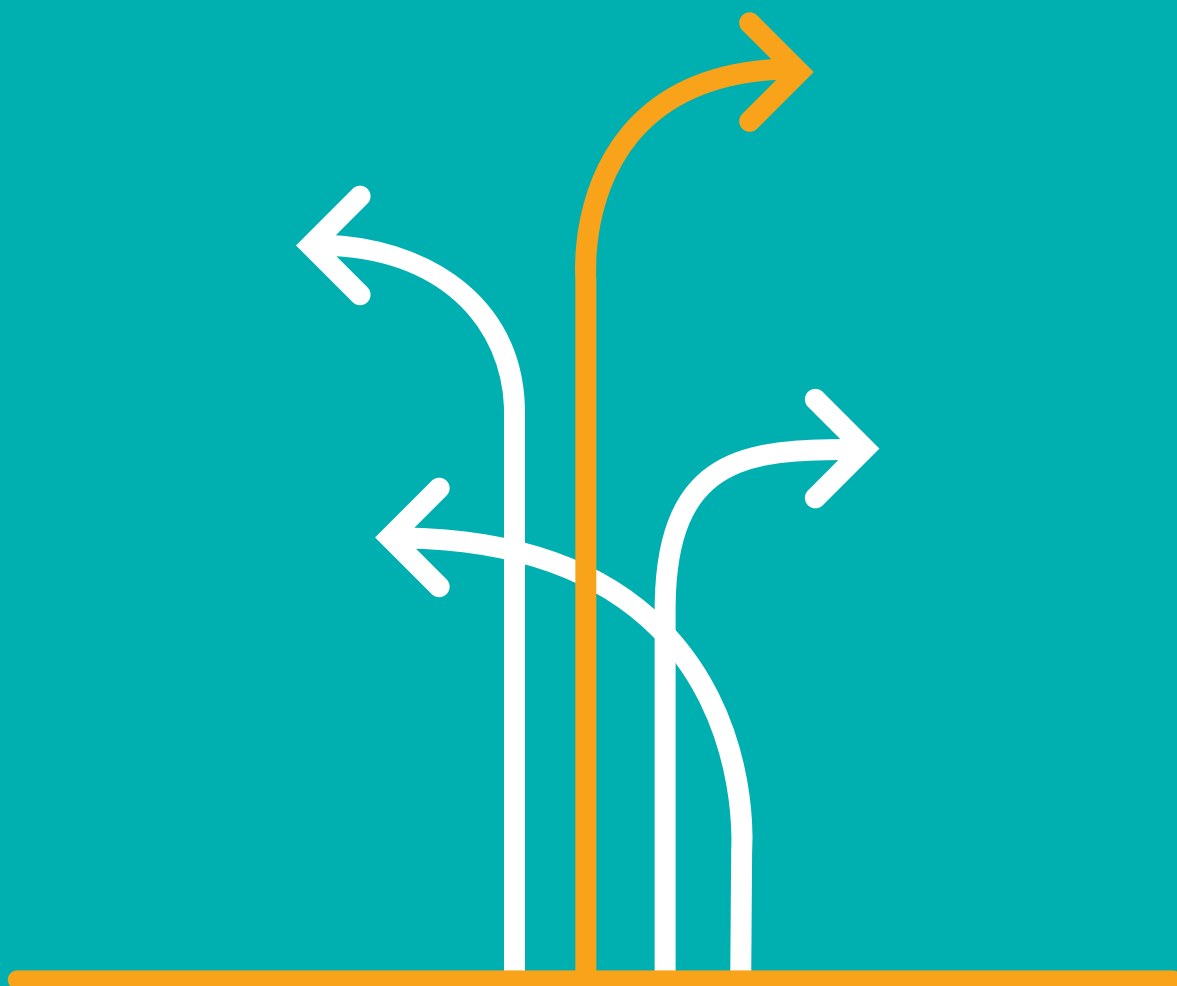
When I was first finding my way around Rotary's Evanston office, I was struck by the dozens of mugs on the shelves of the kitchen on our floor: Service Above Self, State Farm, the Woman's Club of Evanston. There was a stack of paper cups next to the coffee maker, but it didn't seem to get any smaller during the day. Rotary office culture was predicated on reducing our reliance on single-use items. I never knew which mug I was going to use each day, but that had its amusements.

We may have good intentions, but they have been overwhelmed by our 70-year infatuation with the convenient and disposable nature of plastic. This has morphed into a problem that overpowers our efforts to recycle, blighting our oceans, our food supply, and even our bloodstreams. This month's feature "The Plastic Trap" offers an overview of the problem as well as some suggestions for its remediation. I've spent the past several months obsessing about how much plastic I touch every day. And once you're aware of the cumulative effect of all this plastic, you can't look away. So what's a reasonable person to do?

In college, I liked to backpack, with Colin Fletcher's *The Man Who Walked Through Time* as a sort of practical and spiritual guide. My thought was that you should move through nature without leaving evidence that you were there — though that seemed as unattainable as some of the other goals I was chasing at the time.

Since then, I've tried to adopt a simpler intention: to live modestly. I admire artistry and craftsmanship, but I don't always feel the need to own an example. I've never considered buying a Rolex. At my father's table, I routinely enjoyed a 1947 Cheval Blanc and a 1945 Mouton Rothschild at the same meal, but I don't need to duplicate that experience at current market prices. I have a soft spot for Camille Pissarro's paintings of the Boulevard Montmartre. I can't afford one, but I know the museums where I can see them.

So now I'm tidying my side of the street. I've brought a water bottle to the office and refill it several times a day. I have my own mug and a spare. I try to do what I can. And I try to leave most things untouched. The less I need, the better for all of us.



TAKE YOUR CLUB IN A NEW DIRECTION

Is your club flexible and ready for the future?

New resources on Satellite Clubs, Passport Clubs, and Corporate Membership can help you create an experience that works for every member.

**LEARN MORE ABOUT YOUR OPTIONS
AT [ROTARY.ORG/FLEXIBILITY](https://rotary.org/flexibility)**



A man and a woman are sitting at a table, looking at a laptop screen. The man is smiling broadly and pointing at the screen. The woman is also smiling and looking at the screen. They appear to be in a casual setting, possibly a cafe or a meeting room. The background shows a brick wall and some outdoor furniture.

TOGETHER, WE

EMPOWER

Potential shines brightest when it's inspired. That's why Rotary clubs invest time and expertise in encouraging others to be the best they can be. Empowering those who have big dreams to achieve great things — that's what people of action do. **Learn more at Rotary.org.**

Rotary



PEOPLE OF ACTION

our world



Two of a kindness

ROBERTA PEVERELLI
Rotary Club of Como-Baradello, Italy

FILIPPO ARCIONI
Rotary Club of Como, Italy

When Filippo Arcioni and Roberta Peverelli tied the knot on 20 September 2018, they knew they didn't need a new blender cluttering up their kitchen. So they asked their guests to help them celebrate the occasion by donating to End Polio Now rather than

continued from page 11

buying traditional wedding gifts. Many of their guests happily obliged, and the donations amounted to \$30,000.

“I was in disbelief — and happy,” says Peverelli.

The idea seemed natural to these longtime Rotarians. “When we decided to get married, it only took looking into each other’s eyes for an instant to decide how we would incorporate Rotary into our wedding,” says Peverelli.

In addition to having served as presidents of their respective clubs, the couple are deeply involved in the philanthropic side of Rotary. Arcioni is the chair of District 2042’s fundraising subcommittee and Annual Fund subcommittee. Peverelli is her club’s Foundation chair.

The two met in 2003 at an ice-skating rink in Como. Peverelli was president of her daughter’s skating team, and Arcioni oversaw the company that manages the rink. “We were fighting over the availability of an ice rink,” says Peverelli with a laugh. Fortunately, their relationship thawed and today they are devoted to each other — and to The Rotary Foundation.

“We think the most important service of The Rotary Foundation is that it gives a lot of visibility and knowledge of Rotary to the world,” Peverelli says.

Asking for contributions to End Polio Now also saved the couple the pre-wedding stress associated with registering for gifts, and saved their guests the trouble of shopping for them. The request also brought an expression of the couple’s values into their wedding celebration.

The couple encourage others to follow their example for any happy event. “We invite other Rotarians to consider collecting donations for End Polio Now to celebrate other beautiful events in their lives,” Arcioni says. “Naturally, it doesn’t have to be just weddings.

“The joy you experience will be coupled with the knowledge that you are helping rid the world of polio and saving children from this crippling disease.”

—ANNEMARIE MANNION



Monumental respect

ON A COOL DAY IN OCTOBER, about a dozen volunteers gathered at Mount Hope Cemetery in Baker City, a community of around 10,000 in northeastern Oregon. Some were members of the Rotary Club of Baker City and some were not, but they all shared a sense of purpose: They were in the cemetery to restore veterans’ headstones.

The volunteers worked to straighten, reset, or stabilize 11 headstones. Their efforts were part of a project started in 2011, when the City Council set up an advisory committee to look at ways to address the sad state of the veterans section of the cemetery. One committee member was Rotarian Dennis Teskey, the owner of a funeral service company called Gray’s West & Co. Pioneer Chapel, which is now run by his stepson Troy Hanson. The Rotary Club of Baker City soon got involved with the project, and it has kept the idea going ever since.

Baker City has an endowment fund that covers maintenance of the cemetery grounds, but not of the gravestones. “The markers on the graves are the responsibility of the families,” Teskey says. But it would be difficult for the families to repair headstones that have shifted or sunk because of the ground’s freezing and thawing. “Most of the ones we have worked on had sunk down with the years and settled.

We pry them up and get some dirt or sand underneath the markers to bring them up to the level of the rest of the lawn.”

The materials are donated, and Teskey and Hanson bring necessary equipment. “Dennis brings his tractor out to help haul dirt and lift up what we need to lift with the front-loader bucket,” Hanson says. “And we have access to a hoist truck when we need to lift the headstones completely out of the ground.”

The veterans section at Mount Hope has about 350 graves; the volunteers have worked on around 100 of them over the years. “We’ve made great headway,” says Hanson. “Things are looking really good now.” But Teskey notes that the project is an ongoing effort and that

Volunteers have worked on restoring about 100 veterans’ graves.

veterans’ graves in the public part of the cemetery also need work.

Teskey and Hanson are confident there will be plenty of volunteers to help in the future. “We had a couple of new people show up this year,” Hanson says. “They thought it was a great cause, and they wanted to come and help. It’s kind of infectious — people want to do their part to help veterans.”

—NIKKI KALLIO

“I believe that going to a museum or seeing photocopies dilutes the interaction.”

Danny Spungen



Object lessons

In 2007, Danny Spungen, an avid stamp collector, met a man selling a collection of more than 250 letters, postcards, and other materials related to the Holocaust. It changed his life. Spungen, a member of the Rotary Club of North Chicago, Illinois, bought the collection. Since then, he has acquired thousands of additional items, and he takes a rotating selection of artifacts into schools around the world to help students find a personal connection with the Holocaust. When they see and sometimes hold these objects, the reality of the Holocaust becomes clearer. It's a controversial approach among some museum curators, who worry about preserving objects, but Spungen believes it is worth it in order to give students a stronger understanding of genocide.

THE ROTARIAN: What does your traveling exhibit look like?

SPUNGEN: Our exhibit usually has 18 long tables. It used to be set up chronologically. But kids think in categories. So now I have one table dedicated to children's drawings from concentration camps — pictures of dolls or

flowers or cars. Another table is dedicated to people who are not Jews but did things to save Jews. After the students have had a chance to see the objects, we ask them to do one of two things: They can write an essay in the voice of an artifact they have chosen, talking about how it feels to be that letter or envelope, and what that piece has seen; or they can look at a piece and write about why they are interested in it, and how it speaks to them.

TR: Do you involve Holocaust survivors in your presentations?

SPUNGEN: Every time I take the artifacts out for an exhibit, I try to bring survivors. The exhibit is the introduction. The survivors are the key. We are now recording survivors we work with, talking about pieces from the collection. When they are no longer with us, this exhibit will be incredibly important.

TR: How do you choose which objects from your collection you take into schools?

SPUNGEN: It's always changing. And the material is not chosen by me. I work with students at Carmel Catholic High School in Mundelein, Illinois. A Carmel history teacher, Jim Schuster, attended an event I had to display the collection, and that started our partnership. The Carmel students tell me what material speaks to them. They have taught me so much. For in-

stance, they told me we needed chairs around the exhibit tables. We want students to engage with the letters, which are protected in archival polyester sleeves.

TR: Students could see these things in museums. Why risk objects getting lost, stolen, or damaged by exposure?

SPUNGEN: I believe that going to a museum or seeing photocopies dilutes the interaction. I want the most direct relationship possible between the witness and the student. Museums don't give you that. If an artifact is on display at all, it is behind glass. In our exhibits, you can pick up a piece, and for that moment you and you alone are connected to that piece.

TR: Do you talk about other genocides in history?

SPUNGEN: I use the Holocaust as an example of how and why genocides occur, why humanity breaks down. The exhibit now ends with an identification card of a Tutsi man from Rwanda. He was killed when a church was fire-bombed in 1994 during the genocide. His brother retrieved the ID card. On the label for that card, we list things about him: his favorite food, his favorite sport. I spend a lot of time in discussions of the exhibition talking about other genocides.

—HANK SARTIN



People of action around the globe

More than 15 million people participate in weekly Zumba fitness classes in 186 countries.

United States

What began with a mother's request for an all-terrain wheelchair for her daughter with spina bifida has grown into an initiative spanning several high schools in Georgia. In February 2019, the robotics-oriented Interact Club of Etowah High School in Woodstock delivered its first mechanized wheelchair, created with help from Go Baby Go, a mobility project of the University of Delaware. The Interact club was soon fielding requests for more devices. Inspired by the response, the club created the Interact First Alliance, a consortium of like-minded Interact clubs in Canton, East Cobb, Tucker, and Woodstock dedicated to getting students involved in science and technology.

Argentina

Led by professional instructors brought in by the Rotary Club of Campana, about 300 Zumba enthusiasts stepped up funding for emergency responders. The gathering, in May 2019, raised a portion of the \$3,000 needed to purchase a thermal-imaging camera for volunteer firefighters in the community, says Club President Walter Waisman. The Latin-styled dance workout, held in a school gymnasium, injected energy into the club's 80th anniversary celebration. In recent years, the club's projects have funded scholarships for high school students, farming equipment for an agricultural school, and stock for an eyeglasses bank.

Italy

Since 2012, the Rotary Club of Fermo has been helping inmates of an area prison find their voice. The club equipped the prison with computers and provided professional guidance to help the inmates produce a newsletter, *L'Altra Chiave News*, translated as *The Other Key News*. Angelica Malvatani, a club member and journalist, visits the Fermo prison weekly to work with the inmates to write news articles and editorials and design the publication, which prints hundreds of copies quarterly. "Through the newsletter they feel more responsible for their choices and seek to be appreciated for what they are: men, fathers, sons, brothers, simply persons," says Malvatani.



Czech Republic

In May 2019, spectators lined the banks of the Vltava River as 27 teams made a splash during the 10th Dragon Boat Charity Challenge. The race, sponsored by the Rotary Club of Prague-International, raised \$25,000 for three charities: Život 90, a support organization for seniors; Nadace Naše dítě, which helps abused children and children with disabilities; and Výbor dobré vůle, which aids people with disabilities. The 17-person teams, with 16 paddlers and one drummer to keep the rhythm, paddled the course as fast as possible and built a little Bohemian bonhomie, notes Christian

Noll, a club member who helped organize the competition with assistance from the Czech Dragon Boat Association. Teams were formed by companies, clubs, organizations, and friends. “In terms of who won? Of course the charities won by receiving hundreds of thousands of [Czech] crowns in donations. As for the race, the Rotary Club of Praha-Staré Město won,” says Prague-International member Josef Simpartl. The 2020 race is scheduled for 23 May.

India

After heavy rainfall in August 2018 unleashed floodwaters and triggered landslides, Rotarians from clubs in southeast India’s District 3181 and around the world rallied to collect money for the victims. By June 2019, the Rebuild Kodagu Trust Committee had completed 25 houses, which cost a little more than \$7,000 each. The homes were dedicated by 2011-12 Rotary President Kalyan Banerjee, who was one of the driving forces behind the project. The beneficiaries were selected with help from Habitat for Humanity India, which also helped coordinate construction. Another 25 houses were expected to be turned over to their new owners in March.

— BRAD WEBBER

Rain-related weather events kill five people every day in India.



ShelterBox team rises to challenge

WHEN EL NIÑO caused abnormally intense rainfall in April and May 2019, Paraguay experienced massive flooding that displaced an estimated 60,000 people. In Asunción, the capital, the Paraguay River overflowed, and tens of thousands had to live in temporary settlements with inadequate shelter and poor sanitation. With the high waters persisting for months, residents needed humanitarian assistance while they figured out what to do in the long run.

That's how Ned Morris, a member of the Rotary Club of Walla Walla, Washington, found himself in Asunción for 22 days in July and August. It was Morris' fifth deployment since late 2017, when he completed his training with ShelterBox, Rotary's partner for disaster relief.

In its May 2018 issue, *The Rotarian* followed Morris, fellow Rotarian Wes Clanton, and Rotaractor Katelyn Winkworth as they trained to become members of the ShelterBox Response Team. After 11 months developing the skills needed to assist displaced people around the world, they were invited to participate in the intensive final stage of training conducted by ShelterBox in the rugged countryside in Cornwall, England. After nine days dealing with simulations of the disasters they might encounter on a deployment, ShelterBox welcomed Morris, Clanton, and Winkworth to its response team, which numbers about 200 people worldwide.

Since then, Morris has supported families in the Caribbean, Ethiopia, and Kenya

as well as Paraguay, experiencing firsthand the power of the Rotary-ShelterBox partnership. "When we hit the ground on any deployment, Rotarians and Rotaractors are our first contact," he says. "They help us identify safe and unsafe areas, the right places to set up base. They provide drivers and translators. We wouldn't have the impact we do without the partnership."

In Paraguay, members of the Rotaract clubs of Asunción and Asunción Catedral were crucial to the mission's success. Mariana Santiviago and Oliver Lugo Fatecha helped with translation, and Gabriela Grasso, Fanny Santos, and others provided logistical support.

ShelterBox Response Teams provided shelter kits packed with tarpaulins and



OPPOSITE: Ned Morris (second from left) worked closely with ShelterBox team members and community members to ensure that displaced people were getting things they needed. **THIS PAGE, CLOCKWISE FROM TOP LEFT:** ShelterBox distributed thermal blankets for the cold nights; mosquito nets are essential for disease prevention; the ShelterBox team, including Rotarians from the UK and the United States, worked alongside local Rotaractors; solar lights make it possible to do chores and cook at night, and provide a sense of comfort.

tools to help repair homes. They also distributed solar lights, mosquito nets, and blankets to displaced people in Asunción. As for Morris, he served on a team dedicated to monitoring, evaluation, accountability, and learning (MEAL), part of ShelterBox's effort to garner knowledge from each deployment. "The purpose of the MEAL team is to make sure we're providing the right type of aid that's needed now," he explains. "And if they need other things, we want to know what those are. If it's something that we can bring in the future to improve our response, we want to know."

Community engagement is key to the partnership's success. The response teams work with local leaders and teach them to show others how to use the resources ShelterBox provides. That means the ShelterBox teams can be small, with lower deployment costs and greater ability to adapt to changing circumstances.

The response teams also work directly with the people most affected by a disaster, but they are careful not to be intrusive. "These people are in a horrible situation and they deserve to be respected, consulted, and treated with dignity," Morris says. "We

don't want to be a burden on them. They've already gone through enough."

ShelterBox is always preparing for its next deployment, without knowing where that might be. "We fundraise for the next disaster," says Morris, who also works as a ShelterBox ambassador, spreading the word about the Rotary-ShelterBox mission. "We already had the supplies in place that we're delivering now. We are ready when the next hurricane or earthquake hits, wherever that might be. Whatever it is, as soon as the next disaster hits, we are ready."

—HANK SARTIN





SNAPSHOT **Recife, Brazil**

The Capibaribe River, which flows through the heart of Recife into the Atlantic Ocean, has long been used as a dumping ground by people who live on its banks. Every year, Projeto Recapibaribe, a nonprofit organization dedicated to the preservation of the Capibaribe, holds a one-day competition for local fishermen to see who can haul the most garbage out of the river. In 2018, the Rotaract Club of Recife-Encanta Moça got involved, raising money to buy protective gear for the participants, provide food baskets for the fishermen's families, and pay a per diem to all the participants so they didn't lose the day's income. Rotaractor **BERNARDO FERREIRA**, who captured this moment from the garbage collection, notes that the 2018 edition removed 30 tons of trash.



APRIL events

4

Ready, set, race

EVENT: Southeast Regional Small School Track and Field Invitational

HOST: Rotary Club of Seneca Golden Corner, South Carolina

WHAT IT BENEFITS: GED scholarships, local charities

WHAT IT IS: Athletes from small high schools in South Carolina, Alabama, Georgia, North Carolina, and Tennessee compete in classic track and field events. The meet also includes races for elementary schoolchildren and senior citizens.

11

Hop to it

EVENT: Bunny Hop 5K

HOST: Rotary Club of Antioch, California

WHAT IT BENEFITS: High school scholarships and other youth-related programs

WHAT IT IS: Held annually on the day before Easter, this 5K race is a community event, with high school bands performing to pump up the runners beforehand, and cheerleaders rooting them on along the course.

18

Swing into spring

EVENT: Spring Swing

HOST: Rotary Club of Denver Mile High, Colorado

WHAT IT BENEFITS: Local and international projects

WHAT IT IS: This night of big band music includes dancing, drinks, and delectable appetizers. In case you need to brush up on your swing steps, a brief lesson will be provided to get everyone warmed up.

19-30

Branch out

EVENT: Tree Sale

HOST: Rotary Club of Sherwood, Oregon

WHAT IT BENEFITS: Local and international projects

WHAT IT IS: Say goodbye to winter with some spring planting. Purchase a fruit, shade, or ornamental bare-root tree donated by Oregon nurseries, and get digging!

25

Shades of blue

EVENT: Bluegrass and Blueberry Festival

HOST: Rotary Club of Avon Park, Florida

WHAT IT BENEFITS: Veterans Freedom Flights and local schools and charities

WHAT IT IS: Hear live bluegrass music and enjoy barbecue chicken, blueberry lemonade, and blueberry desserts. You can also buy fresh blueberries and blueberry plants, and shop for arts and crafts.

Tell us about your event. Write to rotarian@rotary.org with “calendar” in the subject line.

A photograph of an older man with a grey beard and a younger woman with long dark hair, both smiling as they pack food into a brown paper bag. The man is on the left, wearing a light blue long-sleeved shirt. The woman is on the right, wearing a grey t-shirt and holding a banana. In the foreground, there are wooden crates filled with fresh produce, including purple plums and yellow lemons. The background shows a blue building with a red logo, possibly a food bank or community center, under bright sunlight.

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PEOPLE OF ACTION

A photograph of three Black women sitting at a wooden desk in an office or classroom setting. The woman on the left, wearing glasses and a black top with a leopard print vest, is smiling and looking at a computer screen. The woman in the middle, also wearing glasses and a yellow top, is looking at the screen. The woman on the right, wearing a floral top, is looking at a document on the desk. In the background, there are windows and a red chair.

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Every leaf a miracle

Know a tree or poetry and life can be renewed

by GEOFFREY JOHNSON

There are 4 million trees in the Windy City. This is the story of one that got away.

Several summers ago I returned home from work and found the landscape irrevocably altered. When I'd left that morning, a broadly branching chestnut tree had stood in the backyard of the house two doors over from ours. Now it was gone. The only ones more surprised than I were the birds, who punctured the evening quiet with their profane tweets.

The birds had lost their homes; we had lost a living landmark. Since my wife and I had moved into our house, and as our children were born and grew up, the tree had stood there. From the upstairs deck off our bedroom, we could see other trees, many of them grand, but none so majestic as the chestnut, whose lush, leafy canopy might comfortably shade a bevy of brawny blacksmiths.

I never got the full story of the tree's origins, which I regret. The couple who owned the house with the chestnut tree were in their 70s when we moved into the neighborhood. Ellen, born in



1924, had lived in the house most of her life. The tree had likely been there just as long, grown from a chestnut that her father had brought from France. After the couple died — George in 2004, Ellen three years later — the house was sold to a developer. The very first thing he did was cut down the chestnut tree. A few days later he demolished the house.

A McMansion complete with gargantuan garage took its place. Little was left in the way of a yard. Over the past decade, this has become a familiar pattern

in our neighborhood. When the old homes are sold, they are replaced by structures that invariably share two distinguishing features: a deck atop the garage in lieu of a backyard, and a colonnade at the home's entryway. The latter are often composed of Doric columns, more appropriate to Thomas Jefferson's Monticello. I had always heard the South would rise again; I just did not think it would be next door.

I don't know why I have such an aversion to those columns. In the 1830s, first as a town and then as a city,

Chicago was an avid participant in architecture's Greek Revival. But the columns of the structures built then actually supported weighty pediments. The newly installed pillars in my neighborhood, more decorative than structural, are an affront here in the land of "form follows function." And the worker who shoulders one of those featherweight tubes and struts about as if he were Samson? What a doric.

There are worse things than losing a solitary chestnut tree. In 1995, we weren't the only newcomers to the

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neighborhood. Others took up residence after a journey of 7,000 miles, hitching a ride from China on the wooden crates and pallets used in a delivery to a hardware manufacturing company six blocks from our house. These Asian longhorned beetles, shiny black insects with white spots and long antennae, laid their eggs in nearby trees. The beetle larvae burrowed into the host trees, munching their way to maturity, at which point the adults chewed their way back out — not especially benign behavior from the trees' perspective.

It was a few years before the beetles were detected; by that time, they had spread across several city blocks. In 1999, the city of Chicago and private contractors cut down and destroyed 876 infested trees, the only way to effectively contain the invasive pests. "It will be years — decades, even — before these streets know shade again," observed the *Chicago Tribune*.

The first to go was a Norway maple that had been planted in 1966 to replace a tree lost to Dutch elm disease. Another homeowner bemoaned the loss of her 100-year-old ash tree; she had learned it would be coming down on the same day she brought home her newborn son. The city replanted a variety of species along those desecrated blocks, but six years later, that homeowner remained unhappy. "We had the biggest and most beautiful tree on the block and ended up with the saddest," she told the *Tribune*, referencing the sapling that had taken the ash's place.

Fortunately, our street was spared. Out front, we still have the towering tulip tree that was already ancient the day we moved in. A city worker trimming the trees along our block once tried to convince me it was a linden — "You know, like *Barney Miller*," he said, rooting about in his trove of arboreal arcana to unearth this reference to the 1970s

sitcom starring Hal Linden — but the dazzling sunbursts of color that appear each June when the tree flowers provide incontrovertible evidence of its Linnaean provenance.

I find many reasons to admire that tree, especially as I watch the Doric columns proliferate in our neighborhood. Most people are familiar with Monticello and its colonnaded porches. (If your memory needs jogging, check out the back of a nickel.) As he began compulsively remodeling in 1792, Jefferson envisioned six Doric columns holding up the west portico of his hill-top home. But for years, those pillars failed to materialize; instead, the trunks of four tulip trees served as substitutes. When the British diplomat Augustus John Foster visited Monticello in 1807, he declared the tree trunks "as beautiful as the fluted shafts of Corinthian pillars."

The Doric columns were finally installed in 1822, four years before Jefferson's death; one of his slaves, a skilled stonemason named Thrimston Hern, helped make Jefferson's dream a reality. But the tulip trees were an integral part of Monticello's design for at least 15 years — and Jack McLaughlin, the author of *Jefferson and Monticello: The Biography of a Builder*, thinks they were there even longer. We've been in our home 25 years, and I expect our tulip tree, at least as old as our 120-year-old house, will remain long after I'm gone. Those faux Dorics next door and across the street should be so lucky.

Henry Wadsworth Longfellow's "The Village Blacksmith" — which begins "Under a spreading chestnut-tree" — was once among the best-loved poems of the American people. Like everything else, people's tastes change, be it in architecture, in arboriculture, or in poets (else I need not have felt compelled to explain my earlier allusion to tree-shaded smithies). A

**Like everything else,
people's tastes change,
be it in architecture,
in arboriculture,
or in poets.**

philosopher grounded in equanimity might even find consolation in these recurring cycles of change.

In March 1842, emerging from a deep depression brought on by the death of his brother, Henry David Thoreau composed a letter to his friend Ralph Waldo Emerson. Nature, he wrote, does not recognize death. "She finds her own again under new forms without loss. ... When we look over the fields we are not saddened because these particular flowers or grasses will wither — for the law of their death is the law of new life." Even in the midst of profound loss, nature regenerative triumphs.

Years have passed, decades even, and now those beetle-devastated streets know shade again. The mother and her young son have moved on, but an oak of great promise now rises where her beloved ash once stood. As for our vanished chestnut, it will never return; even if it could, there's no longer a large swath of grass in which to plant itself.

But late last spring, as dusk overtook a May day, I sat in our backyard reading Whitman, whose sublime lament for the death of Lincoln was inspired by the sight of a newly blossomed lilac bush, its "every leaf a miracle." I set the book aside and listened. In the tiny patch of yard where the majestic chestnut once stood, a father played with his two young children. I could not see them, but I could hear their laughter as it rose through the evening quiet, a comforting sound that might provide solace to even a battalion of blacksmiths. ■

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THE PLASTIC TRAP



**How do we escape our tangled
relationship with a throwaway culture?**

Rotarians are pointing the way



Welcome to Plasticville: Population 7.8 billion

We've lived in a synthetic world for more than 70 years. How much longer can it last?

BY SUSAN FREINKEL

In 1950, a Philadelphia toy company came out with a new accessory for electric-train enthusiasts: snap-together kits of plastic buildings for a place it called Plasticville U.S.A. Sets of plastic people to populate the town were optional.

Today we all live in Plasticville. But when, exactly, did we take our first steps into this synthetic world? Some say it was in 1870, when the inventor John Wesley Hyatt patented a malleable compound that was originally conceived as a substitute for an increasingly scarce commodity: ivory. It was created from a natural polymer — the cellulose in cotton — combined with other ingredients; Hyatt's brother Isaiah dubbed the new material *celluloid*, meaning “like cellulose.”

Others fix the date to 1907, when a Belgian émigré named Leo Baekeland cooked up Bakelite; the first fully synthetic polymer, it was made entirely of molecules that couldn't be

found in nature. With the product's invention, the Bakelite Corporation boasted, humans had transcended the classic taxonomies of the natural world: the animal, mineral, and vegetable kingdoms. Now we had “a fourth kingdom, whose boundaries are unlimited.”

Bakelite was invented to replace another scarce natural substance: shellac, a product of the sticky excretions of the female lac beetle. Demand for shellac began shooting up in the early 20th century because it was an excellent electrical insulator. Yet it took 15,000 beetles six months to make enough of the amber-colored resin needed to produce a pound of shellac. To keep up with the rapid expansion of the electrical industry, something new was needed.

As it turned out, the plastic Leo Baekeland invented by combining formaldehyde with phenol (a waste product of coal) and subjecting the mixture to heat and pressure was infinitely more versatile than shellac. A dark-colored, rugged material with a

sleek, machinelike beauty, it could be precisely molded and machined into nearly anything. Contemporaries hailed its “protean adaptability” and marveled at how Baekeland had transformed something as foul-smelling and nasty as coal tar — long a discard in the coking process — into this wondrous new substance.

The 1920s and '30s saw an outpouring of new materials from labs around the world. One was cellulose acetate, a semi-synthetic product (plant cellulose was one of its base ingredients) that had the easy adaptability of celluloid but wasn't flammable. Another was polystyrene, a hard, shiny plastic that could take on bright colors, remain crystalline clear, or be puffed up with air to become the foamy polymer DuPont later trademarked as Styrofoam.

DuPont also introduced nylon, its answer to the centuries-long search for an artificial silk. When the first nylon stockings were introduced, after a campaign that promoted the material as being as “lustrous as silk” and as “strong as steel,” women went wild. Stores sold out of their stock in hours, and in some cities, the scarce supplies led to nylon riots. Across the ocean, British chemists discovered polyethylene, the strong, moisture-proof polymer that would become the sine qua non of packaging. Eventually, we'd get plastics with features nature had never dreamed of: surfaces to which nothing would stick (Teflon), fabrics that could stop a bullet (Kevlar).

Though fully synthetic like Bakelite, many of these new materials differed in one significant way. Bakelite is a thermoset plastic, meaning that its polymer chains are hooked together through the heat and pressure applied when it is molded. The molecules set the way batter sets in a waffle iron. And once those molecules are linked into a daisy chain, they can't be unlinked. You can break a piece of Bakelite, but you can't melt it down to make it into something else.

Polymers such as polystyrene and nylon and polyethylene are thermoplastics; their polymer chains are formed in chemical reactions that take place before the plastic ever gets near a mold. The bonds holding these daisy chains together are looser than those in Bakelite, and as a result these plastics readily respond to heat and cold. Unlike Bakelite, they can be molded and melted and remolded over and over again. Their shape-shifting versatility is one reason thermoplastics quickly eclipsed the thermosets.

It's understandable why many at the time saw plastics as the harbinger of a new era of abundance. Plastics, so cheaply and easily produced, offered salvation from the haphazard and uneven distribution of natural resources that had made some nations wealthy, left others impoverished, and triggered countless

Much of the plastic we've produced is with us still. Humans could disappear from the earth tomorrow, but many of the plastics we've made will last for centuries.



devastating wars. Plastics promised a material utopia, available to all. At least, that was the hopeful vision of a pair of British chemists in 1941. “Let us try to imagine a dweller in the ‘Plastic Age,’” Victor Yarsley and Edward Couzens wrote. “This ‘Plastic Man’ will come into a world of colour and bright shining surfaces ... a world in which man, like a magician, makes what he wants for almost every need.”

That world was delayed in coming. Most of the new plastics discovered in the 1930s were monopolized by the military over the course of World War II. Production of plastics leaped during the war, nearly quadrupling from 213 million pounds in 1939 to 818 million pounds in 1945. Come V-J Day, all that production potential had to go somewhere, and plastics exploded into consumer markets. Just months after the war's end, thousands of people lined up to get into the first National Plastics Exposition in New York, a showcase of the new products made possible by the plastics that had proven themselves in the war. For a public weary of two decades of scarcity, the show offered an exciting and glittering preview of the promise of polymers. Here was the era of plenty that the hopeful British chemists had envisioned. “Nothing can stop plastics,” the chairman of the exposition crowed.

Plastics production expanded explosively, with a growth curve that was steeper even than the fast-rising GNP's. Thanks to plastics, newly flush Americans had a never-ending smorgasbord of affordable goods to choose from. The flow of new products and applications was so constant it was soon the norm. Tupperware had surely always existed, alongside Formica counters, Naugahyde chairs, red acrylic taillights, Saran wrap, vinyl siding, squeeze bottles, push buttons, Barbie dolls, Lycra bras, Wiffle balls, sneakers, sippy cups, and countless more things. The nascent industry part-



STUDIO WARBURTON

PARADISE LOST

“Kamilo” means “twisting of currents” in Hawaiian, so it’s an apt name for the beach near the southernmost tip of the island of Hawaii. Early Hawaiians combed the white sands of Kamilo Beach for driftwood; they used the enormous evergreen logs that had traveled there on ocean currents from the American Pacific Northwest to make dugout canoes. Today, the same ocean currents bring a different kind of debris to the beach, along with a new moniker — “Plastic Beach” — and the distinction of being one of the dirtiest beaches on earth.

A clockwise pattern of ocean currents called the North Pacific Subtropical Gyre flows south along the west coast of North America, across the Pacific, north along the coast of Japan, and back across the Pacific to complete the circle. In the middle of this is a calm spot known as the Great Pacific Garbage Patch, less a trash island twice the size of Texas than a soup of microplastics — plastic from North America and Asia that has broken down into tiny pieces, like spices floating in broth. The Hawaiian Islands act as a sieve, catching the debris carried by the vortex of water. An estimated 15 to 20 tons of trash washes up annually on the 9-mile stretch of coastline that includes Kamilo Beach, 90 percent of it plastic from the Great Pacific Garbage Patch.

At just one cleanup in August, volunteers from the Rotary Club of South Hilo and other partners collected 790 pounds of marine litter: 37 bags of trash, 100 pounds of loose plastics, and 300 pounds of nets and fishing lines. Last fall, Hawaii County ended its plastics recycling program, and the club is working with the Hawai’i Wildlife Fund and other partners to find new ways to divert plastic from landfills. “As an isolated island community, we are more directly and severely impacted by our environment than many other communities,” says South Hilo Rotarian Keith Greer, who led the project. “Our footprint is constrained, and if we don’t take care of what we have, there is no place else for us to go.”

6%
Share of
global oil
consumption
used to
make plastic



42%
Share that
car tires
contribute to
microplastics
dumped into
the sea by
European rivers

**8.8 million
tons**
Amount of
plastic that
ends up
in the ocean
every year

nered with the press to sell consumers on the virtue of plastics. “Plastics are here to free you from drudgery,” *House Beautiful* promised housewives in a special 50-page issue in October 1947 titled “Plastics ... A Way to a Better, More Carefree Life.”

That proliferation of goods helped engender the rapid social mobility that took place after the war. We were a nation of consumers now, a society increasingly democratized by our shared ability to enjoy the conveniences and comforts of modern life. Through the plastics industry, we had an ever-growing ability to synthesize what we wanted or needed, which made reality seem infinitely more open to possibility, profoundly more malleable. Now full-fledged residents of Plasticville, we began to believe that we too were plastic. As *House Beautiful* assured readers in 1953: “You will have a greater chance to be yourself than any people in the history of civilization.”

It’s hard to say when the polymer rapture began to fade, but it was gone by 1967 when the movie *The Graduate* came out. Somewhere along the line, plastic’s penchant for inexpensive imitation came to be seen as cheap ersatz. So audiences knew exactly why Benjamin Braddock (as played by Dustin Hoffman) was so repelled when a family friend took him aside for some helpful career advice: “I just want to say one word to you ... Plastics!” The word no longer conjured an enticing horizon of possibility but rather a bland, airless future, as phony as Mrs. Robinson’s smile.

Today, few other materials we rely on carry such a negative set of associations or stir such visceral disgust. Norman Mailer called it “a malign force loose in the universe ... the social equivalent of cancer.” We may have

created plastic, but in some fundamental way it remains essentially alien, ever seen as somehow unnatural — though it's really no less natural than concrete, paper, steel, or any other manufactured material. One reason may have to do with its preternatural endurance. Unlike traditional materials, plastic won't dissolve or rust or break down, at least, not in any useful time frame. Those long polymer chains are built to last, which means that much of the plastic we've produced is with us still — as litter, layers of landfill, and detritus in the ocean. Humans could disappear from the earth tomorrow, but many of the plastics we've made will last for centuries. Each of them offers an object lesson on what it means to live in Plasticville, enmeshed in a web of materials that are rightly considered both the miracle and the menace of modern life.

The story of plastics is riddled with those kinds of paradoxes. We enjoy an unprecedented level of material abundance and yet it often feels impoverishing, like digging through a box packed with Styrofoam peanuts and finding nothing else there. We take natural substances created over millions of years, fashion them into products designed for a few minutes' use, and then return them to the planet as litter that we've engineered to never go away. We enjoy plastics-based technologies that can save lives as never before but that also pose insidious threats to human health. We bury in landfills the same kinds of energy-rich molecules that we've scoured the far reaches of the earth to find and excavate. We send plastic waste overseas to become the raw materials for finished products that are sold back to us.

These paradoxes contribute to our growing anguish over plastics. Yet the plastics-related issues that dominate headlines today surfaced in earlier decades. Studies that show traces of plastics in human tissue go back to the 1950s. The first report of plastic trash in the ocean was made in the 1960s. Suffolk County, New York, enacted the first ban on plastic packaging in 1988.

But the stakes are much higher now. As Plasticville sprawls farther across the landscape, we become more thoroughly entrenched in the way of life it imposes. It is increasingly difficult to believe that this pace of plasticization is sustainable, that the natural world can long endure our ceaseless "improving on nature." But can we start engaging in the problems plastics pose? Is it possible to enter into a relationship with these materials that is safer for us and more sustainable for our offspring? Is there a future for Plasticville? ■

Excerpt from Plastic: A Toxic Love Story by Susan Freinkel. Copyright © 2011 by Susan Freinkel. Reprinted by permission of Houghton Mifflin Harcourt Publishing Co. All rights reserved.

Things you can do



Pack your own toiletries when you travel instead of using the small plastic bottles in hotel rooms — or look for hotels that provide soap dispensers instead.

Carry a refillable water bottle and decline the free ones offered at meetings.

Bring takeout containers to restaurants so you can avoid using plastic foam to carry home your leftovers.



Wear microplastic-free sunscreen and cosmetics. Go to beatthemicrobead.org to find out which ones are. Buy soaps, shampoos, and lotions in bar form instead of in bottles.

An average load of laundry containing synthetic fabrics sends more than 6 million plastic fibers down the drain. Wear natural fibers instead — or buy secondhand clothes. (Clothes release the most fibers the first few times they are washed.)

Recycle plastic packaging such as newspaper bags, shipping envelopes, bubble wrap, air pillows, and zip-top bags. Find a local drop-off site in the United States at plasticfilmrecycling.org/drop-off. Consumers in North America can look for the "How2Recycle" label on many products for guidance.



Buy products with less or no packaging. Buy your fruits and vegetables loose or bring your own reusable bag.

Find more ideas at plastichealthcoalition.org/plastic-diet.



Round trip

**The circular economy provides a framework to solve the plastic problem.
Business can take the lead**

In 2018, as the recipient of an Eisenhower Fellowship, Matt Kopac spent five weeks traveling in South America and Europe. During that time, he met with leaders in government and business, as well as leaders at universities and nonprofits, discussing, as he puts it, “the future of our economy.” When he returned home, he told his fellow members of the Rotary Club of Durham, North Carolina, what he had learned.

“We take a lot for granted,” he explained in a July 2018 presentation to his club. “We imagine that the economy we have is

the one we were always meant to have, and the one that we will always have. As in prior eras, we have difficulty perceiving when we are amidst great changes.”

One of those changes was the potential shift from the wasteful linear economy of the last 200 or so years to the more sustainable circular economy he had encountered during his travels. A feature of the latter was its approach to plastic, which was once celebrated for its disposability. “Collecting and reusing consumer plastic waste is a circular practice,” he said.

Kopac got into the details of the circular economy during a recent interview with senior staff writer Diana Schoberg.

“It’s just a different way of thinking about material use, a different way of thinking about our economy,” he says. Furthermore, this new approach helps delineate the “role businesses can play proactively to create a better world.”

The sustainable business and innovation manager for Burt’s Bees (a natural health and beauty care business), Kopac received his BA from the University of Wisconsin and his MBA from the Yale School of Management. From 2001 to 2003, he was a small-enterprise development volunteer for the Peace Corps; among other endeavors, he provided support for women’s cooperatives in the Af-

rican country of Benin. In 2009, as a Rotary Ambassadorial Scholar in El Salvador, he worked with a nonprofit making low-cost eyeglasses and saw firsthand how market-driven solutions can solve problems and create jobs. “It influenced me to think about this intersection of environmental justice, social justice, and business markets,” he says.

Since then, Kopac has refined his ideas, as Schoberg learned during their conversation.

THE ROTARIAN: What do you mean by the circular economy?

KOPAC: It’s helpful to start by talking about our current economy, which we’ve had in place pretty much since the Industrial Revolution. It can be called the linear economy. That’s one where we cut stuff down and dig stuff up, use it once or twice, and then throw it away. Then we repeat that whole cycle. It’s an expectation that all this waste is inherent and necessary.

The circular economy is a framework in which we actively design waste out and keep materials in the loop. We keep using them over and over. Throughout that process, we can create jobs and protect the environment as we manage our economy and grow.

An example is with building construction. The way we tend to construct a building is to adhere together a wide variety of materials with an assumption that when we’re done using the building, we will knock it down and bury all the construction waste in the ground. Then we’ll go and dig up and cut down new materials to make a new building. In a circular framework, you would design the building so that when you’re done with its current use, you can either reconfigure it or take it apart entirely and use all the materials to make a new building. It’s almost like Legos or Lincoln Logs, where you can reassemble and reuse those materials. You design out the waste completely.

30%
Share of plastics
ever produced
that are currently
in use



110,000
Microplastic
particles that
the average
American adult
ingests
every year

450 years
Estimated time
it will take
a plastic bottle
to break down

81%
Share of
tap water
around the
world that is
contaminated
with
microplastics

A NEW LIFE

You’ve finished your bottle of water, your container of laundry detergent, your milk jug. For you, that’s the end of the story. But for your bottle, it’s only the beginning. After your recyclables are collected, they’re sorted by glass, metal, and type of plastic, then sold to intermediaries that grind the plastics into flakes or pellets the size of rice grains. The pellets, called “nurdles,” are then sold to producers that melt them and turn them into new products.

There are seven codes on the bottom of plastic containers, signifying, among other things, the temperature at which they will melt. But only two are routinely recycled. Soda and water bottles — No. 1 plastics — may eventually become carpet or fleece clothing. Milk, juice, and detergent containers — No. 2 plastics — find new lives as decks, buckets, and Frisbees. Technology exists to convert plastic into crude oil and other fuels. But globally, recycling rates hover around 14 percent.

Waste pickers are the backbone of recycling in many parts of the world; they’ve been referred to as “invisible environmentalists.” In Brazil, where waste picking is recognized as an official occupation, the hundreds of thousands of *catadores* (as they are called) are responsible for 90 percent of the country’s recycling. Brazil was the first country to incorporate waste-picking cooperatives into its national solid waste policy, and it even contracted with waste pickers to help with recycling efforts during the 2014 World Cup.

In Rio Claro, waste pickers separate plastics according to their type and sell the material to an intermediary that cleans, grinds, and dries it, then sells it at a profit. Through a Rotary Foundation global grant project of the Rotary clubs of Rio Claro-Alvorada, Brazil, and Longwood, Pennsylvania, the local waste pickers cooperative received equipment to process the plastic itself, which will mean a 50 percent income increase and an expansion in the number of *catadores* who can participate.



STUDIO WARBURTON



WASTE NOT

More plastic waste comes from product packaging than any other industry. It accounts for 65 percent of plastic waste by weight in the United States (and 59 percent in Europe). Some of this waste could be recycled — but even packaging that can be recycled often isn't because it's not collected by the municipality, it can't be sorted, or it's too stained with labels or food residue to be used.

The issue is complex, and sometimes switching to other materials can cause other unintended consequences. Glass, for example, is heavier than plastic and therefore requires more fuel to ship; single-use paper bags can have higher carbon impacts than single-use plastics.

Packaging is the first target of the New Plastics Economy Global Commitment, which has been signed by more than 400 companies, including multinationals such as Nestlé, PepsiCo, Coca-Cola, and Unilever. Its goal is to create a circular economy for plastic, which includes eliminating unnecessary plastic items; ensuring that any plastics used are reusable, recyclable, or compostable; and keeping those plastics in the economy and out of the environment. (Read more at newplasticseconomy.org.)

The Rotary Club of Vero Beach, Florida, is working on a plastic recycling project in its community. In collaboration with the county landfill, the club has placed recycling bins in commercial facilities — such as a brewery and a store at a local outlet mall — to collect the shrink-wrap that their pallets of products are wrapped in. The county then takes the shrink-wrap to a recycling center, which sells it to companies that make plastic furniture and outdoor decking. The club also puts receptacles in the county's two dozen schools where students can throw away their plastic lunch bags. Through a partnership with the Publix grocery store chain, the schools then bring the bags to a Publix store to be recycled. "If other Rotary clubs would do something similar," says Vero Beach Rotarian Daniel Compas, "we could keep a whole lot of plastic out of landfills."

STUDIO WARBURTON

15 minutes

Average time a single-use plastic bag is used



9%

Share of the 4 million tons of plastic bags produced in the U.S. each year that are recycled

32%

Share of plastic waste generated in coastal regions that is littered or improperly discarded

5 of 15

Number of top global retailers that have signed on to the New Plastics Economy Global Commitment

TR: Is there a clear link between reducing plastics and the circular economy?

KOPAC: Absolutely. Go back 65 years, to August 1955, when *Life* magazine ran a story called "Throwaway Living." There was a picture of a smiling family throwing a bunch of common, day-to-day items up into the air. The story was celebrating the convenience that came from disposability where you didn't have to wash your dishes. At that time, there was this idea that you could simply throw things away after you had used them once. As if there were this place called "away" that would never come back around to confront you again. The movement toward single-use plastics for pretty much everything was the ultimate luxury.

What we've learned in the subsequent decades, particularly in the past five to 10 years, is that there is no "away" and that these materials do come back to us. Microplastics are littering the oceans around the world; they're in the air and in our food. The average person ingests up to 5 grams of plastic a week, about a credit card's worth. It's everywhere.

That's the result of the linear economy. But what does it look like when you put this in the framework of circularity? First of all, you need to design containers to be reused to the greatest extent possible. So that's going back to the old milkman idea. You get your glass milk bottle that's refilled, rather than going to the store and buying a milk jug or one of those cartons of milk that's thrown away when you're done.

If you can't reuse it, you make sure that everything is recyclable. You avoid the sorts of components — the parts and packaging — that you can't do anything else with or that gum up the recycling systems. You design materials that can be collected, ground down, and made into something else. You invest in infrastructure. And then you use the reclaimed

materials to make the next thing and then repeat. You ultimately reduce or eliminate what's called leakage — those materials that end up out in the environment or landfill but wouldn't have to be there if you designed them differently in the first place.

TR: How did we wind up with a linear economy to begin with?

KOPAC: The benefits of the linear economy existed when we assumed that the only costs or expenses that go into making something or doing something are those that are reflected on balance sheets. We assumed that things like clean air, clean water, and renewable resources either didn't have value or would be infinitely available. And so those things were seen as being very, very cheap. We've reached a point where we understand that these other things do have value in our lives, and that there are ways for us to be able to grow and support our livelihoods and create wealth without the assumption that waste is inevitable.

TR: Why is it in the interest of businesses to convert to a circular economy?

KOPAC: There are a variety of reasons. One, wasting less can be financially better for businesses. A second is that businesses need to ensure that they have continued access to raw materials and resources that are necessary for the products or services they provide. Another is that climate change and other challenges can undermine the ability of businesses and people to thrive.

In addition, you have a lot of people who work in businesses who care about the world and about the people in it — and their consumer base does too. That provides a great business opportunity for those who are able to lead and make the change to give people what they're asking for.

TR: What opportunities will there be for new entrepreneurs as the circular economy comes into being?

KOPAC: The opportunities will be unprecedented. There are going to be massive opportunities for entrepreneurs and for bigger businesses to position themselves for success in the future. Anytime you see disruption, you see innovation. It's an opportunity for new entrants to come in, to innovate, and to succeed.

If we go back to buildings, it could be the development of new materials that are healthier for people and that are demanded and used in construction. There will be opportunities for people who are laborers in the construction and deconstruction of buildings to harvest materials. In the new energy economy, renewable energy generates way more jobs than fossil fuel energy — and that includes entrepreneurs who are coming up with micro-level technologies and solutions.

TR: So the circular economy wouldn't be a job killer but a job creator?

KOPAC: One study shows nearly \$2 trillion added to the European economy by this shift. There are huge opportunities with this transition, and yet there are definitely going to be opponents to it. They may want to shift, but it's difficult because it can require some massive reinvestment to transition to a new way of operating. So you will see resistance, but that resistance is often just a way of protecting the status quo rather than supporting a healthier and more successful economy.

TR: Did you see the circular economy in action during your Eisenhower Fellowship?

KOPAC: I did my fellowship in the Netherlands and Brazil. There are a lot of exciting things happening in Brazil, but

it's clear that the Netherlands and some of the surrounding countries are the global leaders. It's part of the national economic strategy of the Dutch to promote the circular economy. The Dutch have public policy and an economy that are friendly to entrepreneurs and support them as they grow new ideas. Good public policy creates the framework within which innovation happens. When I was in the Netherlands, I saw an entire commercial district that was built knowing that there's a master plan to use the area for a different purpose within 10 years. The buildings were all built to be deconstructed so they could be moved elsewhere. It allows them to be really flexible and adaptive. That's one example.

TR: Many Rotarians are business owners. What could they or other business owners do to be a part of this transition?

KOPAC: First, they can assess their own business practices to understand their impact. They can look upstream and think about the impact of the materials they are buying. Then think downstream about what happens when whatever is left over goes "away." With that understanding, they can make improvements to their own practices and to the practices of any partners or suppliers that they work with. There are a variety of consultants and resources online that can help.

The results might not necessarily be what they think they will be. For example, there definitely is a cost to plastic ending up in the environment, and we have to do everything we can to stop that from happening. But in reality, one of the biggest environmental impacts of plastics is in the extraction of fossil fuels and their conversion into plastic. That takes an enormous amount of energy and results in a lot of greenhouse gas emissions.

Things your club can do

Clubs around the world are taking steps to reduce the amount of plastic they are using at meetings and events. Need some inspiration? Check out what these clubs have done:



The Rotary Club of Bandar Sungai Petani in Malaysia worked with its meeting venue to offer pitchers of water and reusable cups instead of plastic bottles.

Members of the Rotary E-Club of 9790 in Australia sponsored a Rotary Community Corps (RCC) focused on plastic, the Rotary Community Corps of Plasticwise Beechworth. In 2019, the RCC diverted 545 cubic feet of plastic from landfills.



The Rotary Club of Walhekarwadi, India, rents stainless steel dinnerware for its meetings and events.

The Rotary Club of Annapolis, Maryland, partnered with a local environmental organization and a composting company to make its annual crab feast zero-waste for the past seven years. The event uses compostable cups, trays, and utensils, and composts all food waste. Each year, more than 14.5 tons of waste is composted.



At its annual Ribfest, the Rotary Club of Guelph Trillium, Ontario, has a free water refilling station and sells branded reusable bottles.

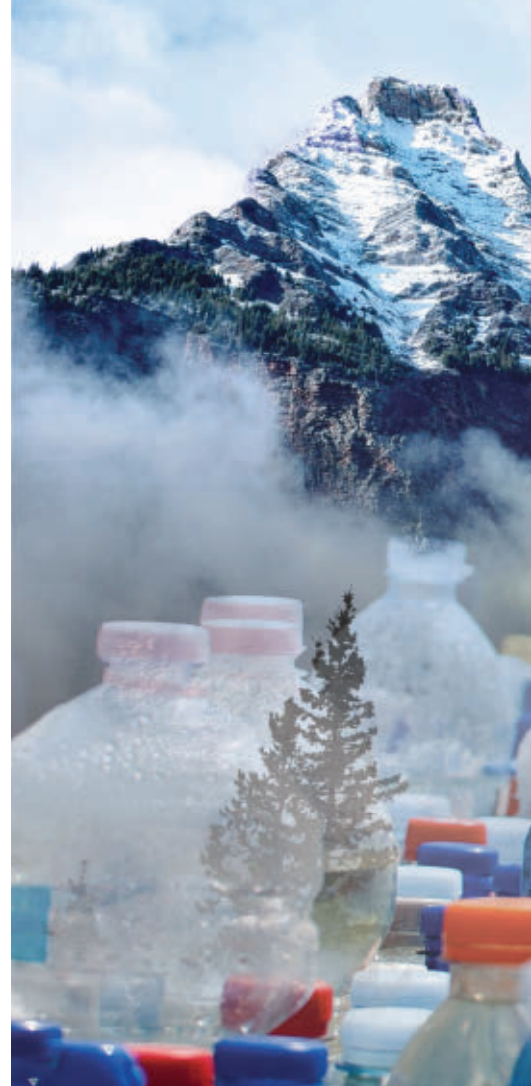
“There are some materials that just don’t break down as well as they need to in order to make the composting process efficient and profitable. It’s another indication that there aren’t necessarily simple answers.”



You don’t know that unless you do a life-cycle assessment. It highlights, for example, that when you use materials that are reclaimed — and use them again — you do away with that early phase of extraction and conversion. All of a sudden you have dramatically improved your impact on the environment. But it starts with understanding and then setting goals for improvement.

TR: What about plastics that are made of cellulose or other sorts of renewable materials?

KOPAC: Unfortunately, nothing is easy. There is a lot of exciting innovation happening to make plastic using plant material instead of fossil fuels. The result is still, for example, a clear plastic bottle,





but it's made from plants. So that eliminates that upstream issue. But you need to be careful about where the plants come from and the processes used to grow and harvest them. And you can still have the issue downstream of that plastic becoming litter. There are different types of plant-based plastics or bioplastics, some of which would break down in the environment. So one idea is if everything could just break down in the environment, then it wouldn't matter if we have plastic in the ocean because it will eventually just dissolve. In reality, it doesn't always work that way. There are some problems with biodegradability. Plant-based plastic would be an improvement. But there are other factors you have to consider in order to know if you're actually making a better choice.

TR: In Milwaukee, where I live, we participate in a municipal composting program. Recently they stopped letting us compost the plant-based plastic bags we used for collecting food scraps and the plant-based plastic cups and utensils we used when we hosted birthday parties. We were advised to use paper instead.

KOPAC: There are some materials that just don't break down as well as they need to in order to make the composting process efficient and profitable. It's another indication that there aren't necessarily simple answers. Right now, there's a big global pushback against plastic. People are really concerned about it. But if we all switch to paper bags, would that be better? The reality is that the paper could be worse, because it can lead to defores-

tation, which can damage people's livelihoods and the environment.

TR: This is getting terribly complicated.

KOPAC: There aren't always easy answers. That creates a challenge — and that's why you have to evaluate these questions carefully. It's a fine balance between making sure we're being rigorous and science based, and not having complete decision paralysis. We need businesses to lead. And we need public policy to set the parameters for innovation, so that we make the better choice the default option rather than making it so people have to make this sort of decision for everything. That just isn't going to work. Once we take those steps to understand, we can find a path that is the best choice that we all can make. ■



A way to wash the water clean

Ludovic Grosjean wants to get the plastic out of our oceans – starting with our rivers

BY STEPHEN YAFA

From his home in southeastern Australia, Ludovic Grosjean is sounding the alarm. “There are 8.8 million tons of plastic dumped into our oceans every year,” he says. “By 2050, there will be more plastics than fish in our oceans if we do not reverse the situation. Removal is critical, but the solutions start elsewhere.”

That’s because, as a 2017 study revealed, a substantial portion of the plastic that ends up in oceans travels there via rivers – up to 3 million tons annually. Shut down that plastic highway and you’ve made a significant contribution to cleaning up the oceans.

That’s where Grosjean, 31, proves himself more than a mere alarmist. An oceanographer with multiple advanced degrees, he was named one of Australia’s most innovative en-

gineers in 2019. In November 2018, when Rotary Day at the United Nations was held in Nairobi, Kenya – the headquarters of UNEP, the United Nations Environment Programme – Rotary honored Grosjean, a member of the Rotaract Club of Melbourne City, as one of six young innovators.

But for Grosjean, the awards are secondary. More interested in solutions than salutations, he’s focused on eliminating the massive accumulation of plastics and other pollutants that threaten the oceans. Which brings us back to the world’s rivers, or, more specifically, to the Niger and Nile in Africa, and the Amur, Ganges, Hai, Indus, Mekong, Pearl, Yangtze, and Yellow in Asia. According to that 2017 study, those 10 rivers account for about 90 percent of the tons of plastic trash that rivers carry into the oceans. “If we can detect and collect that plastic while it’s still drifting, we could make a huge difference,” Grosjean says.

The young innovator thinks he knows how that can be accomplished, but he also understands he can't do it on his own. To bring his ideas to fruition, he needs new technologies, financial backing, and a worldwide web of assistants as zealous as he about preserving the planet's natural resources. Grosjean is already at work on the technology, and he's not shy about soliciting the funds he needs. And that global army of environmentally concerned volunteers? That's where Rotary comes in.

Raised in France, Grosjean moved to Australia in 2013, where he is the founder of and principal consultant for OceanX Group, a Melbourne-based business that provides consulting services for water-related technologies. It's Grosjean's responsibility to set up sensors that monitor environmental activity. "For instance," he explains, "when you plan to dredge in a harbor and you want to know if that's going to impact the reefs and marine life, you install an array of data buoys with computerized probes that send back information on turbidity and temperature and so forth. You specify the parameters and monitor to see if there are changes due to human activity."

While Grosjean makes a living from his work for OceanX Group, he relies on contributions (from himself and others) to fund Ocean CleanX, his anti-plastic campaign that combines technology and crowdsourcing. "The project is linked to Rotary," he says, noting that Ocean CleanX was included as a resource in the handbook created by the Environmental Sustainability Rotarian Action Group (ESRAG) for World Environment Day last year. "I can help to get Rotarian projects launched," he says, "and my consultation is free."

> 6 million
Plastic fibers
released during
an average
laundry load
of synthetic
fabrics



\$139 billion
Annual
environmental
cost of consumer
plastic use

€6.5 billion
(€7.2 billion)
Projected savings
by 2030 from
a European Union
directive limiting
single-use
plastics

10 inches
Depth of all
the plastics
ever produced
if they were
spread across
Argentina

TRASH TO TREASURE

According to a recent report, the Philippines is one of the top three countries contributing to ocean plastic pollution, behind only China and India. And Manila, the capital, generates the most plastic litter of any urban area in the world.

The country's status as a "sachet economy" plays a major role in its plastic problem. These palm-size packets allow low-income consumers to buy single servings of nearly anything for pennies: shampoo, toothpaste, lotions, laundry soap, food, and drinking water. They give people access to higher quality products that they might not otherwise be able to afford. But sachets are made of a complex sandwich of plastic and aluminum (picture ketchup and hot sauce packets) that is nearly impossible to recycle. And the country uses nearly 60 billion of these sachets a year, enough to blanket metropolitan Manila a foot deep.

Compounding the problem are issues with waste disposal. One report found that 74 percent of plastic marine pollution in the Philippines comes from trash that has been collected but is dumped into the water by haulers to cut costs or into landfills poorly located near waterways. And garbage collection is unreliable in poorer communities, where people are most likely to use sachets.

The Rotaract Club of Tagbilaran, on the island of Bohol, is focusing on the issue of single-use plastics. Working with Fablab Bohol Philippines, the country's first state-of-the-art digital fabrication laboratory, members of the club designed prototypes for souvenir items made of recycled spoons from nearby ice cream shops. The project won an award during a national Rotaract competition. The club also is working to reduce plastic straw use by selling metal straws in a locally handcrafted pouch. "Maybe sooner or later, our country will no longer be the third-largest plastic polluter, but be the third least," says Jerome Manatad, who launched the spoon project during his year as club president. "We believe that taking simple action today can build a better future for the generations to come."



STUDIO WAREURTON

Trained to collect and analyze vast amounts of data, Grosjean can recommend technologies best suited to specific oceanic conditions. But unlike many of his peers bewitched by flashing computer nodes, Grosjean does not rely on technology alone to provide solutions. He favors a *mélange* of high and low tech, linking computerized detectors with human eyes. If you're going to collect all those riverborne plastics, you first have to see them.

To that end, Grosjean hopes to recruit local inhabitants (Rotarians among them) along those 10 notorious rivers, training them to branch out along river banks and report on the heaviest concentrations of discarded plastics and other pollutants. "We enlist people to locate the congested areas," he says. "All they need are a smartphone, an app, a good pair of shoes, and gloves. That doesn't require much funding." Once they report back, Grosjean can set his innovative smart plastic traps — floating booms fitted with monitoring sensors — to collect the plastics and then direct removal equipment to target the most problematic locations. Ultimately, Ocean CleanX would use automated platforms to remove coastal littering.

"It's not as if today's technology doesn't contribute [to solving the plastics problem] with autonomous underwater and surface vehicles, land robots, and so forth," he says. "But people are an essential part of the solution. I've seen firsthand how a river cleanup completely transforms ecology."

The inspiration for Grosjean's mission came in his adopted hometown of Melbourne. For decades, the Yarra River, which flows through that southern Australian city into Port Phillip Bay, acted as a garbage depository for cigarette butts,

Grosjean has a simple message for the villages and regions where plastics proliferate: "Tell us what you want, and we will help you by empowering local people."



plastic straws, syringes, and all manner of waste, especially plastic bottles and containers. An estimated 800 million bits of rubbish — 74 percent of them microplastics — were annually entering the bay from the Yarra and Maribyrnong rivers. While the matter warrants closer study, it's likely that fish are ingesting these plastic fragments, which are no larger than a quarter-inch in length. Grosjean participated in a cleanup of the Yarra that, between 2014 and 2017, accounted for the removal of 180 tons of litter. These days he organizes a monthly volunteer cleanup of the Yarra. "All it takes to make the world a better place is a bit of courage and tenacity," he insists.

For Grosjean, neither is in short supply, and those qualities are augmented by brains, savvy, an effulgent smile, and a gift for attracting attention to his efforts. A few years ago, he began brandishing the bright yellow flippers he uses while scuba diving. Today they have become his signature talisman, as the nearly 1,000 attendees at the 2018 Rotary Day at the UN in Nairobi can attest. "They're flashy and they're a great icebreaker," he says. "They've become my symbol of positive change in helping to save our oceans."

Still in the preliminary stages of his 10-river cleanup agenda, Grosjean is directing his ambition and abilities toward launching a pilot project. He hopes to find funding to build low-cost versions of his automated traps that capture and monitor plastics and to make the traps available to the Rotary world. "If you install them along the rivers, you can tell exactly what types of microplastic are present and monitor where they are coming from," he explains. "Then you can send in a team of Rotarians to deal with it. Just having a team help change plastic straws to bamboo straws in coffee shops along a river would have an enormous impact. Even if the water's not drinkable due to other pollutants, it's no longer choked with plastics."

As he prepares to embark on this early stage of his project, Grosjean has a simple message for the villages and regions where plastics proliferate. "Tell us what you want, and we will help you by empowering local people," he promises. "And if in the future Rotary is interested in partnering with me, I'm ready to get the project going."

Gert-Jan Van Dommelen, an environmental activist who co-founded Amsterdam's End Plastic Soup initiative, has seen Grosjean at work and is convinced that his ideas will prevail. "Ludovic has a brilliant mind and the right attitude for the environment and the world we live in, but he also has the can-do mentality," Van Dommelen says. He admires Grosjean's "think global, act local" approach and his grounding in science. "He understands the importance and value of data to focus on the priorities and go to the source of plastic pollution."

Both Van Dommelen and Grosjean are members of ESRAG, as is Karen Kendrick-Hands, its director of com-



munications. “Ludovic is totally committed to Rotary’s anti-pollution efforts,” Kendrick-Hands says. “A man of ideas and concepts, he’s a leader to follow with the social skills and drive to implement his vision and achieve his objectives.”

Kendrick-Hands and Van Dommelen speak from in-depth experience: They have engaged Rotaract clubs around the world to perform cleanup actions. “We all have a joint mission, but we translate that locally as each club organizes its own activities for awareness, action, and alliances,” Van Dommelen says. “And we can start today by using less plastic.” (See “Things You Can Do,” page 31, and “Things Your Club Can Do,” page 36.)

To Grosjean, the accumulation of plastics in the oceans represents only a small percentage of the total global pollutants that should concern us. To consider ridding the planet of all those pollutants can seem immensely daunting — especially when you consider that the Great Pacific Garbage Patch, a collection of plastic and other litter floating between California and Hawaii, now covers more than 600,000 square miles. That’s more than twice the size of Texas.

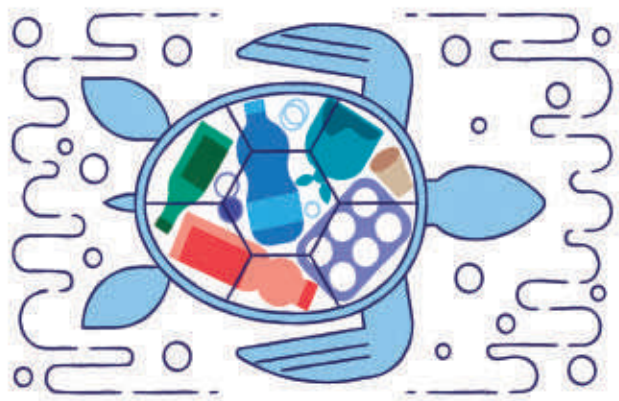
But, as Grosjean points out, the litter that can be seen in the ocean is only one part of the problem. Many tons of unseen mi-

He favors a mélange of high and low tech, linking computerized detectors with human eyes. If you’re going to collect all those riverborne plastics, you first have to see them.



croplastics, some as small as 1 millimeter long, get trapped below the water’s surface, where fish and other sea life ingest them. (Fibers from synthetic clothing, which slip through porous washing machine filters, are one of the main culprits, he explains.) Worse yet, Grosjean says, are the nonplastic “forgotten” threats. He rattles off an extensive list that includes nitrate runoff from crop plantings; pesticides; carbon emissions; heavy metals; heat; fishing; turbidity from dredging; and acoustic pollution that has an adverse effect on marine wildlife. “From my point of view, visible plastic is only the tip of the iceberg.”

Grosjean has also given considerable thought to what’s to be done with all that plastic refuse once it has been retrieved — which seems to be a direction we’re headed. After seven years of trial and error (mostly error), the Ocean Cleanup, a nonprofit founded by young Dutch innovator Boyan Slat that relies on a device resembling a gigantic folding arm to



STUDIO WARBURTON

TRICK OR TREAT

We all know plastic bags are trash, but sea turtles are often tricked into thinking they're a treat. They munch on the floating bags, mistaking them for jellyfish, or eat other bits of plastic that look like algae or seagrass. More than 50 percent of the world's sea turtles are estimated to have eaten plastic — and some of them have ingested hundreds of pieces of it.

Bags can cause intestinal blockages, sharp plastics can rupture organs, and the decomposition of debris can trap gases and make turtles more buoyant so that they have a harder time swimming to feed or to escape predators. Young turtles are most vulnerable, in part because they will eat whatever floats past them.

Large pieces of plastic aren't the only threat to turtles. Researchers in a 2018 study found microplastics in the guts of every sea turtle they looked at; potential sources of the microplastics included tires, cigarettes, clothing, and marine equipment. The effects of the microplastics on the turtles are not yet known.

When two loggerhead turtles were released on the coast of Sicily in November, members of the Rotary Club of Bagheria, Italy, helped organize an educational event attended by hundreds of local students. The two turtles, named Sira and Scheggia, had been discovered by local officials who saw that they had trouble breathing. Veterinarians at a national animal health institute treated them and discovered they had ingested plastic bags, polystyrene flakes, lollipop sticks, and other material, says Giorgio Castelli, executive secretary of the Bagheria club. Rotarians helped educate the students about the problems of marine pollution. The event was part of a broader District 2110 focus on protecting the environment in 2019-20, which included placing colorful fish-shaped plastic recycling containers throughout the region. The containers are called "flavofish" after the flavobacterium, a kind of bacteria once associated with breaking down nylon.

220 pounds

Amount of netting, rope, plastic, and other debris found inside the stomach of a dead whale that washed up on the Scottish coast



98%

Seabird chicks in one study that had ingested plastic

1 in 3

Proportion of fish caught in the English Channel that contain plastic

catch and contain waterborne plastics, has finally shown some signs of success. Other solutions are certain to follow, creating a deluge of recovered ocean debris. No worries, says Grosjean. "We can reuse that plastic to build houses and roads and more," he contends. "We need to raise awareness about those solutions and showcase them. We haven't invented everything yet. We need young innovators to design the future."

There is one characteristic that, by his own admission, Grosjean lacks: patience. "I want to enable expert groups to share their experiences across continents, starting right now," he exclaims.

He reiterated that message at the breakout session he helped conduct at last year's Rotary International Convention in Hamburg, Germany. "Getting rid of water pollution is one of the most urgent matters for the planet," he said. "It would benefit millions of people who have poor access to clean water, and it would help the environment to recover. It would also maintain the equilibrium required for a healthy food chain."

In private conversation, Grosjean makes it clear he's willing to take a leading role in that effort. "The first way for me to get involved is by educating, communicating, and informing," he says. "The second way I can help is by proposing a solution. Mine is Ocean CleanX, where you empower people with the right technology so they can achieve goals and measure their results."

Undaunted by the challenge, Grosjean reveals two more personal traits: optimism and hope. "I've seen amazing innovators create incredible technology, so I'm very hopeful," he says. "I'm very convinced we have a way to do it." ■

Based in California, Stephen Yafa is the author of three books and a longtime contributor to The Rotarian.





SARAH PARCAK

and the SECRETS of the SATELLITES

**Inspired in part by Indiana Jones,
space archaeologist Sarah Parcak uses
futuristic airborne technology
to unearth the treasures of the past**

Sarah Parcak approaches the towering 40-foot-long creature. Its flashing rows of serrated teeth are built to grab flesh and crush bones. If it could sense we're near, it would be upon us in seconds.

"There she is," whispers Parcak. "Thank you for indulging me."

Parcak inches forward. Wearing a brown leather jacket and a cream-colored scarf printed with Egyptian hieroglyphs, she widens her eyes and opens her mouth into a silent scream.

Click! Parcak snaps a selfie. In the resulting image, she appears to be fleeing in horror from Sue the T. rex, the 67 million-year-old dinosaur

skeleton that's one of the crown jewels of Chicago's Field Museum. When Parcak and I met earlier this August morning, her first request was to see this famous fossil, the most complete *Tyrannosaurus rex* ever found.

Parcak tweets the selfie to Sue, who, she explains, has her own "sassy, sassy" Twitter account. "I forgot the ham so @SUEtheTrex roared," tweets Parcak. "I'm so sorry Sue I'll do better."

Sue, she explains, likes ham.

Leaving Sue behind, we pass another prehistoric creature, a triceratops, Sarah Parcak's favorite dinosaur. Say its name aloud and you'll realize why.

Parcak's Twitter handle is @indyfromspace. That's "Indy" for Indiana Jones, the fictional archaeology professor, and "space" because Parcak, a National Geographic Explorer, TED Prize winner, and member of the Rotary Club of Birmingham, Alabama, isn't just any kind of archaeologist. She's a space archaeologist whose work begins in the heavens to help her discover what's hidden beneath the earth's surface. Using satellite photos, Parcak has identified thousands of previously unknown sites: 1,000 potential tombs, 17 potential pyramids, and 3,100 potential settlements in Egypt alone, including Tanis, the "lost city" made famous in *Raiders of the Lost Ark*, the first film of the Indiana Jones franchise. (See "A Lost City and a Childhood Dream," page 51.)

Before the Space Age, archaeologists often had few hints about where to start digging. In an ocean of sand, they looked for clues such as stone fragments that were once walls or dense concentrations of slag that may indicate a site where metal was produced. But sometimes there are no obvious signs of a vanished city or civilization. The field of space archaeology helps point the way.

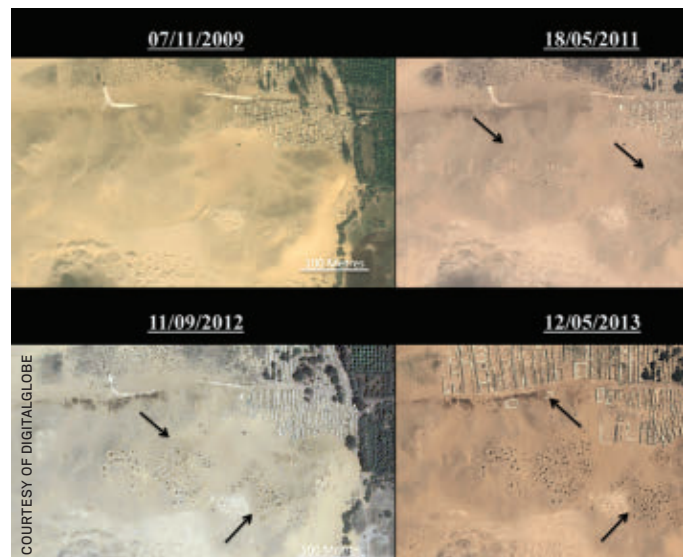
Space archaeologists such as Parcak look at satellite pictures and other remote images for the outlines of structures long buried underground. For example, plants growing over a stone structure will not be as healthy as those growing over other ground; space archaeologists can see these subtle differences in their chlorophyll levels by manipulating the light spectrum using the archaeologist version of Photoshop. Or they

"You get to the world of the living by digging in the world of the dead."

look at three-dimensional images created by pulsing lasers mounted on airplanes or helicopters, which reveal ancient sites obscured in dense jungle. Drones may soon advance the field even further.

These whiz-bang techniques might help researchers better decide where to dig, but they still have to excavate the old-fashioned way to see if they're right, a process known as "ground truthing." Parcak went on her first dig in 1999, in the Nile Delta after her second year of college, but these days, she's the excavation director in charge of a team of up to 100 people. "If I do my job right, it means everyone else does their job without being bothered," she says.

Digging happens for only a couple of months a year, so Parcak spends the vast majority of her time teaching as a professor at the University of Alabama at Birmingham, applying for permits and funding, and attending meetings. "I don't want to sound like I take it for granted, but I think a lot of the process of science never gets talked



about in the press," she says. "It's nice, but it's science and it takes time. I don't find something every five minutes. And like everyone else I know who does this work, we do our science at 10 o'clock at night after the kids are in bed."

Parcak's fascination with Sue the T. rex makes sense when you consider that Parcak has her own sassy Twitter presence. She's one of a media-savvy cohort of young archaeologists who use social media to live-tweet digs, poke at pseudoscience, and share science jokes. But dinosaurs aren't her specialty. She's an Egyptologist, after all. So we head to the Field Museum's "Inside Ancient Egypt" exhibit, where we walk into a three-story replica of a mastaba, a type of ancient Egyptian tomb.

Parcak is hyped up on caffeine and talking a little fast, and it's all I can do to keep up. She took the last flight into Chicago the night before so she could maximize time with her family, which includes husband Greg Mumford, a fellow archaeologist whom she proposed to at the Egyptian Museum in Cairo, and their son, Gabriel, whose birthday happens to be tomorrow. "I had four cups of coffee before this," she says, "because ... travel."

I can practically see the hashtag in my head.

It's a busy day at the museum, and our visit is punctuated with the sounds of children shouting as they run around among the mummies, jewelry, and ceramics. We reach two original chambers from the Old Kingdom burial site, made of limestone blocks carved 5,000 years



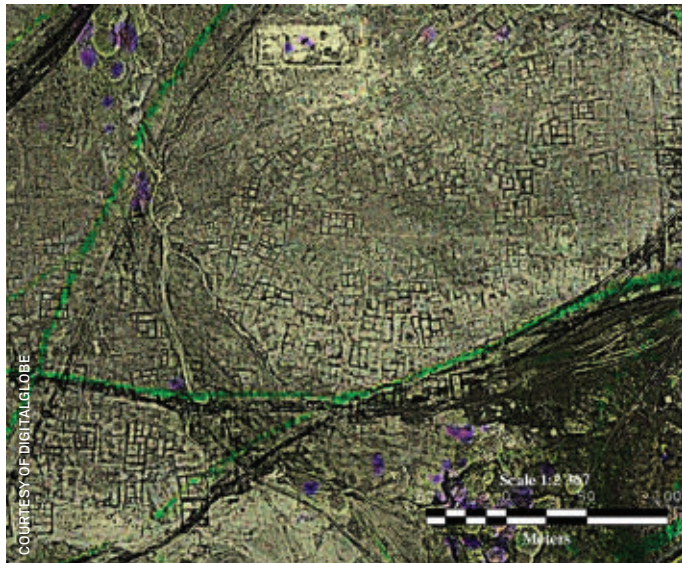
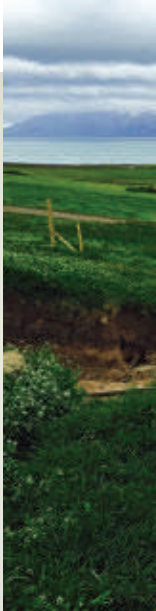
This page, counterclockwise from top: Sarah Parcak wrote her book *Archaeology from Space* to inspire kids: "I don't care if they're archaeologists. I want them to be whatever they desire. I hope it inspires them to think that they can do what they want"; digging at Lisht, Egypt, where an expedition co-led by Parcak discovered more than 800 tombs in a single field season; the completed excavation. **Opposite:** Parcak and her team used satellite images to identify looting at Saqqara, an ancient Egyptian burial ground.

ago. Hieroglyphs on the walls show servants trussing geese and bringing offerings. Parcak explains to me how the seemingly two-dimensional art is three-dimensional after all — that is, once you learn to look at it through the eyes of an Egyptian from 2400 B.C. My mind is blown.

A tour group that has been trailing us catches up. Their guide, not realizing who Parcak is, invites us to join them. We climb to the roof of the mastaba instead.

Parcak credits two major influences on her path to becoming a space archaeologist: Indiana Jones (do you sense a theme?) and her grandfather.

As a child of the 1980s, she would spend Friday nights watching movies on VHS with her family in their home in Bangor, Maine, and *Raiders of the Lost Ark* was in heavy rotation. The adventure in the movie called out to her. (After giving a TED Talk in 2016, she got to



Counterclockwise from top right: Skagafjörður in northern Iceland, where Parcak used satellite imagery to identify evidence of Viking settlements; bronze fittings (inset) excavated at Tell Tebilla, a first-millennium BCE Egyptian port town; Parcak's field is changing rapidly as computers grow more powerful: "The computers are so good now that I can go to a coffee shop and process satellite imagery"; Parcak used image processing techniques to reveal the ancient settlement of Tanis; Parcak digging at Tanis.

SARAH PARCAK



meet Harrison Ford, who plays Indiana Jones; she had brought a brown fedora, Indy's signature chapeau, and there's a photo of them fighting over the hat.) Parcak became so obsessed with Egypt that she dressed as a mummy for a school project in seventh grade, wrapping herself in toilet paper and rising out of a refrigerator box accurately decorated as a sarcophagus.

Later, when it came time to study archaeology in college, it was her grandfather Harold Young who influenced her trajectory. Young had been a paratrooper in World War II and would plot his landing positions using aerial photographs. After the war, he became a professor of forestry at the University of Maine, where he developed new techniques to map tree heights. As a child, Parcak would look through his stereoscope, a device like the old View-Master toy that created three-dimensional images by looking at two copies of a photo from slightly different perspectives. She learned more about his research after he died, and she was intrigued enough that during her senior year at Yale she took an intro class on remote sensing. That class led to a master's and a PhD at Cambridge, and to her career today.

Parcak found a new focus after rumors surfaced of large-scale looting of famous Egyptian burial sites in the wake of the Arab Spring. Responding to an email discussion group of archaeologists, she wrote that the only way to know if looting had happened would be to compare before and after satellite images. The editor-in-chief of *National Geographic* took interest, and the National Geographic Society began collaborating with her to map the plundering. Soon, she and colleagues had identified 200,000 looting pits at 279 archaeological sites across Egypt. The signs were often clear: bulldozer tracks or dark squares surrounded by a doughnut of earth. On the images, they look like pimples dotting the terrain.

Parcak had an ambitious idea: to build an online platform to crowdsource the job of finding and protecting the world's heritage. That idea won her the \$1 million TED Prize for 2016 — the same year she spoke at the Rotary International Convention in Seoul, Korea — and she used the money to build GlobalXplorer.org, where citizen-scientists receive a short tutorial and then look at satellite images for telltale signs of looting and ancient structures.

The project started by looking at images from Peru because of that country's existing innovative work in archaeology. In a little over a year after the platform's launch, more than 80,000 people from over 100 countries signed up. An assessment found that these untrained members of the public, who ranged in age from young children to the elderly, have a 90 percent accuracy rate. What they find will help ensure the protection of these sites in the future.

We head downstairs to the lower level of the Field Museum and take a look at Middle Kingdom coffins and soul houses, which are like the dollhouses of the great beyond — small clay replicas that often contain sculpted foods to feed the dead in the afterlife. Researchers love them because they show what the buildings of antiquity looked like. As we're talking about why archaeologists are so interested in tombs — “The irony is you get to the world of the living by digging in the world of the dead,” Parcak explains — I notice a woman listening in. Eventually, she interrupts us. “Sarah?” she asks.

It ends up being another world-renowned Egyptolo-

***Archaeology can be
a path to peace,
as well as to the past.***

gist, Emily Teeter. The two exchange the usual pleasantries: How's the family, what are you doing here, what's next for you. “Small world,” Parcak says as we part ways. “It's such a small community of Egyptologists.” And here they are in Chicago's version of Egypt.

We meander through a marketplace scene, checking out 5,000-year-old burnished pottery. “This tends to be most of what we find on excavations: tens of thousands of pieces of pottery,” Parcak says. “There are people who are going to be born in hundreds of years, and they're going to be specialists in Tupperware.” We see mummified falcons and a pair of woven reed shoes; their backs

curve up, making the footwear look like giant commas. “The Louboutins of antiquity,” Parcak says. “Those are fancy. Someone’s wearing shoes like that, you know they’re rich.”

In the middle of the marketplace, Parcak pulls out her phone and checks Twitter.

Sue has retweeted her.

We stop at a display cabinet filled with bronze statues of the Egyptian god Osiris and chat about why we should bother studying archaeology at all. This is something that Parcak has a lot to say about.

“When you stand in front of the pyramids, or watch the kids walking around here today with big eyes, it’s because they are in awe,” she says. “When you have awe, it means you are thinking of yourself in relationship to whatever you’re seeing. You see yourself as small in the arc of time.

**“Think of life as a pendulum,
not a balance. That will
really shift your mindset.”**

You open yourself up to the accomplishments of other groups of people. It means perhaps you’re open to the idea that people today from other places have value too.”

Archaeology, in other words, can be a path to peace, as well as to the past.

One of the reasons Parcak wrote her recent book, *Archaeology from Space: How the Future Shapes Our Past*, was to underscore that point and to counter some of the pseudoscience out there. A television show called *Ancient Aliens*, which hypothesizes that aliens had a role in building the pyramids, is a frequent target for her ire. “People don’t think it’s racist, but it is,” she says. “Saying that people with darker skin didn’t have the intelligence to do something is the literal definition of racism.”

Helping people understand how ideas have morphed and been reshaped over time, through the work of not just Greek and Roman scholars, but also ancient Egyptians and Islamic scientists and scholars, can help create more tolerance and international understanding today, Parcak says. “The reality is that the whole concept of Western civilization is a lie,” she says. “There is no Western civilization: There is a long arc of time. It’s a big amalgamation of ideas, and we forget that today.”



Archaeology also teaches lessons about what happens to societies in times of great upheaval and climate change, who makes it through, and why. “I wrote my book for kids, for teens, for young students,” she says. “When people read it, they feel a little more hopeful. I don’t want them to feel like everything is going to be OK, because it’s not, but this tempered perspective is what we need more of.”

We look for a birthday gift for her son at the Field Museum’s store and then hop in a taxi to grab lunch. Over bowls of coconut curry, we chat about, in no particular order: our kids (mine is the same age as hers); our husbands; traveling for work with kids; feeding our kids; bedtime routines; anti-princess books; school gardens; tomato seeds; family-friendly workplaces; the morning’s news; the state of journalism; and the problem with the whole concept of work-life balance. “Think of life as a pendulum, not a balance,” she advises. “That will really shift your mindset.” *#workingmoms*

As we finish up, Parcak folds her napkin, sets it on the table, and looks at me. “Is there a place we can grab coffee around here?” she asks. Then, conspiratorially,



she adds: “Or ... I’m not putting any pressure on you, but I’m just saying, Shake Shack is next door. You could get a milkshake.”

I laugh in agreement, and we head over. It turns out that in addition to being an expert on ancient Egypt, Parcak is a connoisseur of frozen custard. She schools me on the flavors: “Black sesame seed if you want to go a little exotic,” she coaches. “I would say with your first one, go with something more standard. No pressure though. You do you.” I opt for salted caramel. Parcak takes my advice and gets a flavor offered only in Chicago called “Penthouse Sweet.”

As we wait for our desserts, Parcak checks her phone and smiles. She shows me her Twitter feed. A friend has posted a gif of Patrick Stewart’s head rolling toward Indiana Jones, a parody of the famous boulder scene in *Raiders*. And then she has to dash off for an interview at a local radio station. We step out onto busy Michigan Avenue, and Parcak’s cab arrives. “Call me if you’ve any questions,” she says as she tightens her hieroglyph scarf and climbs inside. With a wave of her hand she’s gone, an intrepid explorer of the past racing off to define her future. ■

A lost city and a childhood dream



As a child, Sarah Parcak was captivated by the movie *Raiders of the Lost Ark*, and her favorite part was the Tanis scene. Tanis was Egypt’s capital for about 350 years, and in the movie, it was buried by a sandstorm and rediscovered by Nazis searching for the Ark of the Covenant,

the Old Testament chest that contained the Ten Commandments. Indiana Jones eventually enters an underground room with a 3D map of the city and discovers the biblical relic.

In reality, Tanis is partially buried under the modern city of Sâh el-Hagar, about 100 miles northeast of Cairo. The site has been explored since Napoleon’s time, and French archaeologist Pierre Montet discovered the largely undisturbed tomb of Psusennes I, a find that many Egyptologists consider among the greatest of all time. But Montet made his find in 1939, and World War II rendered it a distant memory.

In her book *Archaeology from Space: How the Future Shapes Our Past*, Parcak details how she stumbled upon the city of her childhood dreams. In 2010, satellite imagery was still expensive and companies didn’t have as many satellites in orbit as they do today, so Parcak had two images of Tanis to work with: a high-resolution image in black and white, and a low-resolution color image.

Playing around with the color image first, she used different parts of the light spectrum to reveal some fuzzy lines that could be buried architecture. Then she took the black-and-white image and used a technique called “pan-sharpening,” in which she merged the two images. The low-resolution image automatically sharpened to the resolution of the high-resolution image. “I almost fell off my seat,” she writes. “I thought I was hallucinating: an entire ancient city leapt off the screen.”

She then tried other processing techniques, which, she explains, were “like tweaking the radio to get the best possible signal.” Ultimately she had a crisp image, “almost like the map room in the *Raiders of the Lost Ark* scene, with only a little more imagination needed.”

When she got home, Parcak showed her husband, fellow Egyptologist Greg Mumford. She tried to draw a map of the city using her computer. “Greg had the brilliantly simple idea of drawing the town plan by hand, the old-fashioned way,” she writes. “We would print out a massive poster of the satellite imagery for the entire central city, and then cover it with transparent plastic sheeting, to draw in every detail in pen.”

It took two months to draw it bit by bit on the map, which covered their dining room table. Parcak estimates that a traditional ground survey would have cost \$200,000 and taken 103 days to do what took them \$2,000 in images and 60 hours. A French team later confirmed through an on-site dig one of the houses she had seen in the images.

“We archaeologists have made so many assumptions about major sites around the world,” Parcak writes. “The more satellite technology advances, the more we find out how little we know.”

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our clubs



Don't knock their wurst **Rotary Club of Sheboygan,** **Wisconsin**

Situated on the shore of Lake Michigan — the fifth-largest lake in the world, with a surface area about twice that of Belgium — Sheboygan, Wisconsin, is known among surfers as the “Malibu of the Midwest.” As home to generations of German Americans, it has been declared “Bratwurst

continued from page 53

Capital of the World,” although Germans in Germany might have something to say about that. It’s also where you’ll find “America’s Best Restrooms”: at the Kohler Arts Center, where the bathrooms boast hand-painted toilets and floor-to-ceiling tile murals.

“People call it ‘the Kohler,’ like they do ‘the Guggenheim,’” says Mike Vandersteen, the city’s mayor and a Sheboygan Rotarian for more than two decades. The art museum is famous for its residency pairing artists with the Kohler Co., a plumbing fixture manufacturer located just west of the city. (The company’s founder invented one of the first modern bathtubs here in 1883.)

As Vandersteen and Sheryl Dyksterhouse, the club’s co-president, show a visitor around, the work of Sheboygan’s Rotarians is visible throughout the community. In 2006, the club funded an eco-trail through the sand dunes along the lakeshore. And back in the 1980s, the



German immigrants settled in the area and began dairy farming.

Rotarians raised \$75,000 to build River-view Park along the Sheboygan River, whose banks are lined with rustic fishing shacks that have been converted into restaurants and shops.

“This club has a lot of projects, and any one of us could talk about them for an hour, or two or three hours,” says

Tony Fessler. He talks about trees: When Ian H.S. Riseley, 2017-18 Rotary president, asked Rotarians around the world to plant 1.2 million trees, Fessler headed the fundraising for the Sheboygan club. It wasn’t a hard sell: Sheboygan has been named a “Tree City USA” by the Arbor Day Foundation for more than 40 years running. But the region is battling an infestation of an invasive beetle called the emerald ash borer, so the club also has a project to monitor ash trees and replant when needed, and to raise funds as well as awareness of the issue.

Judith Slawny talks about the club’s many projects: making deliveries for Meals on Wheels; sponsoring projects in India and Malawi; providing support for students and building homes in Guatemala; organizing a fundraiser that “leases” 3-by-5-foot American flags to local residents and installs them on lawns for national holidays; erecting an elaborate holiday light display; and assembling kits for victims of human trafficking that include clothing, toiletries, water bottles, and journals.

The club also sponsors two Interact clubs and a Rotaract club, and provides scholarships for local high school students to attend leadership programs. Stuart Schmidt, the club’s youngest member at 25, was one of those students. He attended the World Affairs Seminar, an initiative organized by District 6270 that focuses on international issues. “I left the experience changed,” he recalls, “and I needed to get involved.” He joined the Interact club at his high school and, after he returned to the city after college, the Sheboygan Rotary club. “I dove right in,” he says.

Sheboygan is believed to be a Chipewewa name meaning “passage or waterway between the lakes.” In the 1600s, French explorers encountered a large Potawatomi village at the mouth of the Sheboygan River, and beginning in the

late 18th century, fur traders set up along the river. Later, German immigrants settled in the area and began dairy farming, helping to found Wisconsin’s famous cheese industry.

In the late 1800s, Sheboygan was known as “Chair City”; although its once-booming furniture industry has all but disappeared, the Sheboygan area is still home to manufacturers including Vollrath (cookware), Sargento (cheese), and Old Wisconsin and Johnsonville (sausage). On the subject of sausage, Sheboyganites will tell you that their namesake brats are served — often two at a time — on a hard roll called a semmel, never on a hot dog bun. Appropriate toppings are mustard, ketchup, pickles, and onions. “And no sauerkraut,” says Vandersteen. “It’s a sin to put on sauerkraut here in Sheboygan.”

The Rotary Club of Sheboygan, which was chartered in 1916, meets at the Elks Lodge, where a giant mounted elk’s head looms over the buffet — today featuring chicken Kiev and baked potatoes. Even in Sheboygan, people can’t eat bratwurst every day.

As the meeting starts, Dyksterhouse and Deborah Wente share the podium. Because the two are serving successive terms as president, they decided to share the duties. It has worked very well, Wente says, and the model has allowed the club to make progress on some long-term initiatives, including launching a satellite club. Kristin Stearns, the chair of District 6270’s alumni committee, is heading that effort. Stearns first got involved with Rotary in 2005, when she participated in a Group Study Exchange trip to Australia. “I loved it. I loved everything about Rotary,” she says. No matter how busy everyone gets, she says, she can count on Rotarians to pitch in. “I know things will get done.”

— DIANA SCHOBERG

Previous page: Sheboygan Rotarians Deborah Wente (from left), Mike Roth, Sheryl Dyksterhouse, Scott Luedke, and Kristin Stearns.

4 QUESTIONS ABOUT

Diversity, equity, and inclusion

with **Maria Arcocha White**

Rotary Club of Toledo, Ohio
Founder and CEO of Inclusivity LLC



1 What does the phrase “diversity, equity, and inclusion” mean to you?

I immigrated to the United States from Cuba in 1962, when I was three years old. Growing up, I was the only person like me, and I was called names. So I’ve always been very sensitive to exclusion.

When I started my career in the 1980s, women and people of color had begun to come into the professional workforce, and U.S. businesses were starting to realize that there were growing minority populations they needed to appeal to. For me, that translated into a personal passion around diversity. But after working for almost 30 years in the diversity-training space, I realized that we were not focusing enough on creating cultures of inclusion. I started my own company to take a different approach.

I lead with inclusion, because I believe that if you create an inclusive environment, then diversity will come. If you focus only on diversity, you’re just focusing on checking boxes of people who are visibly different. You’ll never change culture because you’re not focusing on behavior.

Diversity is a fact. Inclusion is an act — it takes effort and practice. But over time, it should lead you to a more equitable place, with equal opportunity for all people.

2 How can an organization create a culture of inclusion?

It’s all about the way people behave toward one another. To be inclusive is to be open to difference. So you may need to behave in a different way than you’re used to. One sign of an inclusive culture is that people are listening for assumptions that reflect bias and they feel comfortable saying, “Why do you believe that to be true?” It’s not taken as a judgment. It’s just people trying to help each other and the organization to be successful.

Another sign is that people notice when others are excluded and then do something about it. Like noticing when somebody looks lost. You go up to them and say hi. It seems like such a little thing, but it’s huge! Be approachable. Smile at people. Learn their names. You’d be amazed at how many people don’t do those things.

3 What can Rotary members do?

First, clubs need to put this on their agenda. Even if you don’t think it applies to your club, it absolutely does. Diversity is so broad; it’s not just about race and gender. Just think about how you would describe the majority of people in your club,

and then identify people in your community who are outside that norm. If you want your club to grow, then you need to think about this, because the world is becoming a more diverse place all the time.

Second, clubs need to find ways for members to feel included and engaged. My club used to put a lot of effort into recruiting folks but not so much into getting them involved once they were there. This year we created a program in which new members are assigned an “ambassador” who gets to know them and eases them in.

4 How can we ensure a positive outcome?

Change is uncomfortable for everyone, so we need to lead gently and sensitively and to remember our mission. No organization should welcome people who don’t share its mission and values. We’re not going for diversity of values. The way we’re going to grow is with people who are aligned with the values of Rotary. But helping them all feel included is important to success. — JOHN M. CUNNINGHAM

Read Rotary’s diversity, equity, and inclusion statement at
rotary.org/diversity-equity-and-inclusion.



Stepped-up service

Rotary Club of Leawood, Kansas

Chartered: 1995
Original membership: 53
Membership: 57

GUIDING LIGHTS:

Citizens of Leawood, a fast-growing suburb of about 35,000 people southwest of Kansas City, Missouri, celebrate their town as a place where neighbors help one another. That tenet has long energized members of the Rotary Club of Leawood, notable for their 15-year run mentoring students at a parochial school in Kansas City, Kansas. Three years ago, the club transitioned from a “check-writing” club to one more focused on volunteering, a strategy that has invigorated the group.

When she lost her job at a financial services company, Amanda Villarreal refused to be dispirited; instead she saw an opportunity. “I always wanted to give back to the community,” she says, but previously she had little time. The only question was where to channel her efforts. “I looked up local organizations online, and the first one that came up was Rotary,” she says. She contacted Chuck Udell, then president of the Rotary Club of Leawood, who invited her to a meeting.

“They were extremely welcoming,” she recalls. “I didn’t fit the profile. The average age is probably 60 years old, and I’m a Latina woman in my 30s.” Despite their different backgrounds, she says, “I felt comfortable. They are a fun group of people.” The club’s reduced-rate service membership made joining more manageable while Villarreal was between jobs.

The club established clear, detailed requirements for service memberships; those members have fewer obligations than regular members. “We want them to come to at least two events per quarter. That could either be a club meeting or a club social or a service project,” says Rick Robinson, the club’s current president. “We also ask them to do at least 20 service hours a year.”

The club’s signature initiative, mentoring students at Bishop Ward High School in Kansas City, Kansas, was important to Villarreal. “Over 70 percent of the students at the Catholic school are Hispanic,” she says. “A lot of them are ei-

CLUB INNOVATION:

The club introduced service and couples membership levels, at reduced fees. The Rotarians heightened their presence in town by staging an annual 5K fun run; they’ve also planted trees, adopted a stretch of a trail, and made a point of showing up at chamber of commerce meetings. Eighty-five percent of the club’s members took part in at least one service project last year.

ther immigrants or the children of immigrants. What they’re trying to do is to guide all these kids to go to college.

“It spoke to me because I was one of those kids,” says Villarreal, whose family immigrated to the United States from Mexico when she was five years old. “I feel like I can guide them and also, from my perspective, guide the Rotary club. I’ve seen both sides of the coin. That’s where I saw the opportunity.”

Though the new service membership made joining feasible for Villarreal, who has since co-founded a new company, at first the club saw it as a way to retain members who might otherwise have quit, Udell says.

“It’s not only an attraction tool; it’s a retention tool, too.”

The dues for service memberships are \$55 per quarter. Couples memberships are also an option, for \$30 per quarter. Four people currently take advantage of the couples membership; their Rotarian partners, who also serve as their Rotary “mentors,” pay the regular quarterly dues of \$250.

“The members are extremely committed,” says Villarreal. “They feel so blessed and lucky that they want to give back. They inspire me that it is possible to go do what I want. It feels like family.”

—BRAD WEBBER



From top: The club’s annual 5K run is a popular event for the entire community; club members plant trees at Ironwoods Park.

Are you looking for more ideas on how your club can reinvent itself? Go to rotary.org/flexibility.

To share your ideas with us, email club.innovations@rotary.org.



CONVENTION COUNTDOWN

Breakout sessions

At the Rotary International Convention in Honolulu, 6–10 June, you will find breakout sessions on how to be an effective leader, how to increase membership and engagement in your club, how to promote your club's work on social media, how to write an effective grant proposal, and much more.

If you are interested in the big picture of Rotary initiatives, you might want to attend "Rotary's Action Plan for the Future" or "Diversity, Equity, and Inclusion in Rotary: How Are We Doing?"

If you are thinking about how to bring new life to your club, there are sessions such as "Bring the Baby: Recruiting and Retaining Parents in Rotary" and "Bringing the Aloha Spirit into Any Club, Any Country!"

If you want to pick up practical skills for promoting your club, check out "Lights, Smartphone, Action! Telling Rotary's Story on the Go" or "Getting Your Story Covered in the News."

Or maybe you are interested in getting ideas for club projects. You might want to look into "Adopt-a-River Initiative: A Rotary & UNEP Partnership Model" and "What Can I Do as a Rotarian to Help End Alzheimer's?"

The biggest challenge may be fitting in all the sessions you want to attend. —HANK SARTIN



**Don't miss the
2020 Rotary Convention in Honolulu.
Register at riconvention.org.**



A message from **Foundation Trustee Chair** **Gary C.K. Huang**

Ni hao, Rotarians!

Perhaps the most fulfilling of all human endeavors is to give back, and Rotary offers countless opportunities to do it, such as donating to The Rotary Foundation. Each Rotarian and club can choose the level of Foundation giving that is right for them.

When you give \$100 or more per year to the Annual Fund, you can become a Rotary Foundation Sustaining Member. Multiply that gift by 10 and you are a Paul Harris Fellow — one of those who donate \$1,000 or more to the Annual Fund, the PolioPlus Fund, or approved global grants. Since 1957, there have been more than 1 million Paul Harris Fellows. And when Rotarians give \$1,000 or more to the above annually, they become Paul Harris Society members. The Rotary Club of James River (Richmond), Virginia, is just one club that reached 100 percent membership in the society, and your club can do it, too.

Let's multiply by 10 again. Rotarians who commit to future gifts of \$10,000 or more to the Foundation join the Bequest Society. Major Donors are those who have already given \$10,000 or more to our Foundation. I am still proud of how we added 106 Major Donors in Taiwan during Rotary's centennial, exceeding our goal of 100. Together with the 103 additional Major Donors recruited the following year, they contributed more than \$2 million to the Annual Fund! The gifts these donors make can change entire communities.

The Arch Klumph Society recognizes the highest level of giving at Rotary, at \$250,000 or more, touching hundreds if not thousands of lives for generations to come. This month, I salute the 11 individuals and couples recognized during this year's International Assembly for increasing their giving level within the society. These generous supporters traveled from Japan, Nigeria, Taiwan, and the United States to celebrate their philanthropy.

Now, imagine what your club can do, what contribution you would like to make, what legacy you would like to leave, and find a giving level that works for you. Whatever you choose to give, whatever goal your club sets, remember that the gifts we give today will help Rotary and the communities we serve this year, next year, and beyond, in ways we may never know.

Gary C.K. Huang
FOUNDATION TRUSTEE CHAIR



Reinvent our wheel

What is your club doing? Every month, *The Rotarian* showcases:

- NEW MEMBERSHIP MODELS
- WAYS TO ENGAGE THE COMMUNITY
- PROJECT IDEAS
- FUNDRAISERS



Share your club's great new ideas.

Email us at

club.innovations@rotary.org.

The Rotarian takes home honors

Every year, U.S. magazine publishers gather to recognize the best in the business. In 2019, *The Rotarian* won five Excel Awards, which recognize excellence in association media in the United States, from Association Media & Publishing. The magazine was also honored at the annual *Folio* Eddie and Ozzie Awards, which highlight achievements in magazine editing, design, and photography. At the *Folio* award ceremony in New York City in October, *The Rotarian* won six awards in the association/nonprofit category, including those for best magazine section and best overall art direction.

Association Media & Publishing | Excel Awards

GOLD

COLUMN

"Why We Volunteer"
November 2018

SINGLE TOPIC ISSUE

"How to Read"
December 2018

BRONZE

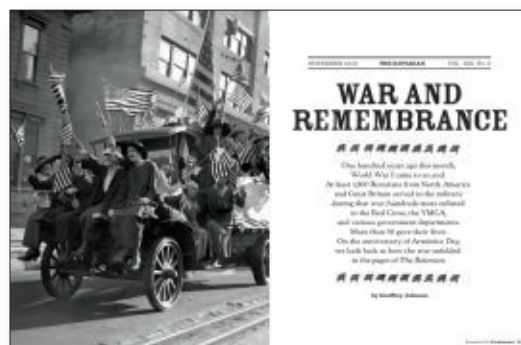
REDESIGN

2018



SILVER

SINGLE TOPIC ISSUE | "Back to Our Roots"
April 2018



SILVER

FEATURE ARTICLE | "War and Remembrance"
November 2018

Folio | Eddie and Ozzie Awards

WINNERS

MAGAZINE SECTION
Feature Well

OVERALL ART DIRECTION

COLUMN/BLOG
"Tee for One"
November 2018

COVER DESIGN
December 2018



EDITORIAL USE OF DATA | "Annotated Guide to Ending Polio"
October 2018



TYPOGRAPHY | "How to Read"
December 2018

HONORABLE MENTIONS



PROFILE OR Q&A | "Namaste, Y'all"
February 2019



FULL ISSUE
April 2019



FEATURE DESIGN | "What It's Like"
January 2019



OVERALL DESIGN | Single issue
June 2018

REDESIGN
2018

LONG-FORM FEATURE CONTENT
"War and Remembrance"
November 2018

DATA VISUALIZATION
"Annotated Guide to Ending Polio"
October 2018

COLUMN/BLOG
"The Good Shepherd"
May 2019

SERIES OF ARTICLES
"The Rotarian Conversation"



Happy birthday, Paul Harris!

19 April marks the 152nd anniversary of our founder's birth.
Celebrate with a gift to The Rotary Foundation today.

GIVE TODAY: rotary.org/donate





Assembly opens doors for governors-elect

RI PRESIDENT-ELECT HOLGER KNAACK revealed the 2020-21 presidential theme, *Rotary Opens Opportunities*, at the International Assembly in San Diego in January.

The annual training event for incoming district governors included speakers and workshops on topics including strategic priorities, financial responsibilities, new club model innovations, and young leader engagement. In a video address, Bill Gates told governors-elect that the Bill & Melinda Gates Foundation had extended its funding partnership with The Rotary Foundation; for three

more years, it will triple every contribution to End Polio Now. The International Assembly also included programs for governors' partners and for a select group of Rotaractors.

"Rotary is not just a club that you join. It is an invitation to endless opportunities," Knaack said in announcing the theme. "We believe that our acts of service, big and small, create opportunities for people who need our help." He added that Rotary creates leadership opportunities and gives members the chance to travel the world to put their service ideas into action and make lifelong connections.

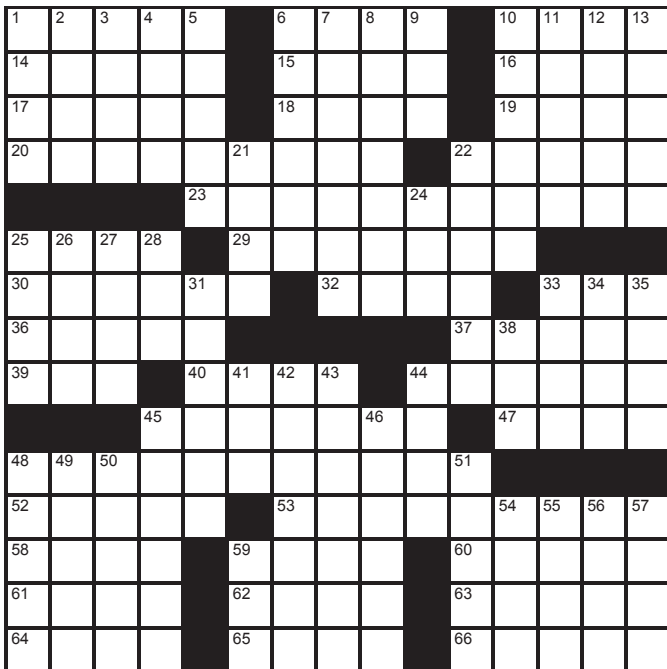


1. Incoming district governors capture the moment as Rotary President-elect Holger Knaack announces the 2020-21 theme. **2.** Birmingham, Alabama, Rotarian Jeris Gaston talks about engaging members. **3.** Henrik Thiele of the Rotaract Club of Paderborn, Germany, speaks about Rotary Youth Exchange. **4.** Dancers give a preview of the Rotary International Convention in Honolulu in June. **5.** Attendees celebrate the extension of Rotary's fundraising partnership with the Bill & Melinda Gates Foundation. **6.** Bill Gates delivers a video message announcing the partnership extension.

PARENTING TIME

by Victor Fleming

Rotary Club of Little Rock, Arkansas



Across

- 1 Top grade, often
6 10-Down, for one
10 Sorvino of movies
14 Apple of song
15 Another time
16 Crude cartel?
17 This 60-Across
18 Stuff of an eruption
19 Minnows, maybe
20 Say again
22 Bout of excessive indulgence
23 With 48- and 60-Across, what 17-Across is
25 Carve in stone
29 Bar of music
30 ___ cocktail
32 Bread for a pad
33 Flap
36 Momentary halt
37 Office courtyards
39 "No dice!"
40 Ardent enthusiasm
44 Not in class
45 Link up
47 Hardly fail
48 See 23-Across
52 Neiman known for screen prints of athletes

- 53 Federal Reserve Board employee
58 Bellicose deity
59 Autocrat until 1917
60 See 23-Across
61 All's antonym
62 Frasier actress Gilpin
63 Apt to cause the willies
64 Annoying flyer
65 Amphibious troop carriers, briefly
66 Rudder's place

Down

- 1 Distant
2 Calumet or hookah
3 Footloose Singer
4 Army division
5 The Crucible setting
6 Gourmet's sense
7 Carousing
8 Gear used when parallel parking
9 Old Pan Am rival
10 Alabama city on the Gulf of Mexico
11 Bucky Beaver's toothpaste
12 Be lordly
13 Assumed a role

- 21 Car ferry need
22 What a drinker may run
24 Sister Act character
25 Baseball Tonight carrier
26 Asian cuisine
27 Central feature
28 That guy's
31 It may be hummed
33 Domain
34 Loud commotions
35 They may be wild
38 1/6 oz.
41 Durham coll.
42 Allergic reactions
43 Food server on wheels
44 Abbr. at the top of a memo
45 Broom room
46 Leachman of movies
48 Bell noise
49 Long-legged bird
50 The Faerie Queene character
51 Cottages and cabins
54 Champagne name
55 Concerning
56 Flap
57 After that
59 GI with two stripes

Solution on page 25

CREATE.
SHARE.
CONNECT.



Create your own promotional cards to showcase your youth activities. Available now in Rotary's Brand Center.

Rotary 



UPLOAD
content to share,
INVITE
others to view,
CREATE
a list of your
favorite content.

ROTARY LEARNING CENTER

**Participate in learning topics
by visiting rotary.org/learn**



last look



ROTARY INTERNATIONAL

CELEBRATE

Paul Harris was born 152 years ago this month in Racine, Wisconsin. Mark the occasion by making a gift to The Rotary Foundation at rotary.org/donate.

How is your club celebrating Harris' birthday? Your club's project or event could be featured in the next *Paul Harris Society Resource* newsletter. Submit your project or subscribe at annualfund@rotary.org.

JOIN

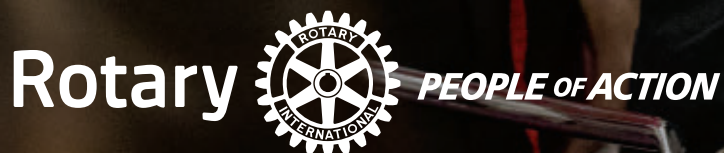
The Paul Harris Society recognizes Rotary members and friends of The Rotary Foundation who contribute \$1,000 or more each year to the Annual Fund, PolioPlus Fund, or approved global grants. This important group contributed more than \$30 million to The Rotary Foundation in 2018-19, enabling Rotarians to carry out life-changing humanitarian projects around the world. The society has more than 24,000 members in 144 countries. Learn more at rotary.org/phs.

A photograph of a man and a woman in conversation. The man, in the center, wears a red vest over a white t-shirt and has a lanyard with a badge around his neck. The woman, on the right, wears a black jacket and also has a lanyard. They are both looking towards the left. The background is a blurred indoor setting with warm lighting.

TOGETHER, WE

PROMOTE PEACE

Building a peaceful world begins in our own backyards. That's why Rotary brings communities together to learn from our differences, gain new perspectives, and form stronger connections. Promoting peace through understanding — that's what people of action do. **Learn more at [Rotary.org](https://www.rotary.org).**





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WITH 'OHANA**

Honolulu, Hawaii, USA | 6-10 June 2020
Register today at riconvention.org

