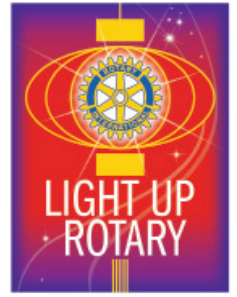


Rotary Club of Altadena

Sparks

OFF THE ROTARY WHEEL
AN AWARD-WINNING NEWSLETTER



April 16, 2016

This Week
Louise Jandura,
JPL
Program Host:
David P. Smith

Louise Jandura will be speaking about the Mars Rover — Curiosity’s — sampling system and her current project. Jandura has an in-depth knowledge of the exploration that’s taking place on Mars

As a mechanical engineer at NASA’s Jet Propulsion Laboratory, Jandura has worked on an array of flight projects, including the Shuttle Radar Topography Mission, the Genesis and Aquarius spacecraft and the Mars Science Laboratory Curiosity Rover.

Jandura received both her bachelor’s and master’s degrees in mechanical engineering from the Massachusetts Institute of Technology. Her expertise is in the field of space mechanisms and sampling systems like the ones found on Curiosity. Carrying 10 scientific instruments, the rover was designed as a mobile geologist, using a drill at the end of its robotic arm to collect rock samples and scooping soil to process in its own internal chemistry lab. The history of the red planet is written in the rock. Curiosity is the first rover to collect these kinds of samples from Mars.



REFLECTIONS

by Hal Yorke, President

REFLECTIONS?

on . . . Earthquakes

Have you ever blown across the surface of a mug of steaming hot coffee and wondered about the mottled pattern of steam that appears on the coffee’s surface? Probably not. But I have. I recently retried that simple experiment and was disappointed that present day coffee, for fear of lawsuits, is never hot enough to produce very much steam.

However, if you manage to find a mug (not a cup) of steaming hot coffee, you might try that experiment and discover the reason why there are earthquakes. The mottled pattern of steam that appears on the coffee’s surface is due to a series of convection cells that develop in the cup. The hottest coffee at the bottom of the mug rises to the surface because hot coffee is slightly lighter than cool coffee. Blowing across the surface causes the coffee there to cool. The coffee moves laterally across the surface while it cools, then it sinks to the bottom of the cup as it becomes slightly heavier and has to make room for the hotter, lighter coffee to rise. Several such cells of rising and dropping coffee can form in the mug. At the borders

between the cells, where cooler coffee is sinking, steam is more likely to form. The result is a mosaic pattern of steam that emphasizes the locations of convection cells in the coffee.

Convection — the physical movement of hot material — which then mixes with cooler material, is an important and effective method of transporting energy in gases and liquids. In a convection oven, for instance, the hotter air close to the heat source is moved around the oven by fans. As we see in the case of the coffee cup, convection can arise naturally. You don’t always need a fan; the buoyancy of hotter liquids or gases is enough to drive convection.

Pictures of the sun’s surface also show
 Please turn to Reflections, p.3

Greeters

- April 16
Ray Carlson
- April 23
John Casci
- April 29
Gary Clark

Program Review

Her Job is Deadly Serious



We were greatly entertained by Betsy Magdaleno, Coroner's Investigator, LA. County Coroner's Office as she described her role and the everyday challenges she faces in her job. Somehow, David Smith finds us these interesting people from the Coroner's Office. I'm not sure what this implies about

Smith. Magdaleno reminded us of the Importance of having an Advance Health Care Directive, and spent some time explaining them. She let us know that she faces many challenges in her job due to the lack of a health care directive in many of the difficult cases she encounters. She particularly emphasized the impact of having an Advance Health Care Directive on family members in the case of a serious accident or death.



Magdaleno gave us blank copies of an Advance Health Care Directive, and many helpful hints and instructions on how to fill one out. She particularly emphasized the need to have at least two (2) witnesses to the document — neither of whom can be a close relative, nor a health caregiver.

She also emphasized that an alternative is to have the document notarized (or even have it witnessed and notarized).

There is a Veterans' Administration Advance Health Care Directive, which is not valid in California, but is valid on the grounds of any Veterans' Administration Hospital (which is federal property). Magdaleno also took some time to explain the 5 Wishes program, which further enhances the Advance Health Care Directive document (www.agingwithdignity.org).

Finally, Magdaleno led a discussion on death certificates, who can sign them, and how many copies to order for insurance and other purposes. We learned that one's personal physician can sign a death certificate, if there has been contact with the personal physician in the six months prior to death. Otherwise, either the Coroner or Medical Examiner must sign the death certificate. She recommended that three (3) copies of the death certificate be ordered to satisfy all of the *proof of death* requirements.

After being asked for an example of a particularly difficult or interesting case, Magdaleno told us of a gruesome case that we won't share here. Nevertheless, it was very interesting. Tom McCurry ☉

Sparks is published 48 weeks a year and is the official publication of the Rotary Club of Altadena. The deadline for submission of articles is Friday at 6p to current editor email, fax, or delivery.

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 Mike Zoeller Youth Projects
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 Tom McCurry Asst. Vocational
 Craig Cox Membership
 Editor, Design & Typesetting Foreman Graphics
 Photography Jacque Foreman

April Magazine Month

Program Chair, David Smith

April 16 - Louise Jandura, JPL - The Mars Rover - Curiosity's sampling system and her current project
 April 23 - Adrian Ponce, JPL - Chemical and biological detectors he developed and his startup company
 April 30 - PCC Scholarship Awards - Den-

Congratulations



Birthdays



04/13 - Alice Hudson
 04/18 - John Frykenberg
 04/29 - Mike Noll

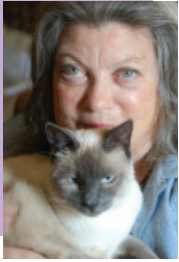


Anniversaries



04/27 - Sterling & Olga Louviere

It's Our Choice: Publicity by Accident or Publicity by Plan



If I must choose between Publicity by Accident and no publicity, the choice is clear. I choose publicity by accident. But we might work at giving ourselves *Publicity by Plan*.

In the March 5 *Glendale News Press*, Home section, we are mentioned in relation to the Bike-a-Thon/Hike-a-Thon for Bicycles 4 Orphans and the fact that we donated money for the event. This was brought to my attention by Mike Zoeller, and I reprinted the article in *Sparks*.

Just this past Friday, April 10, Altadena Rotary was mentioned in the *Around Pasadena* section of *The Star News*. The short article mentions that artwork in the form of four murals was unveiled that morning with a bit of a ceremony.

Did someone go? If so, are there some photographs to share with maybe a short article about what was donated? Since the two donors mentioned are True Value Hardware and Altadena Rotary, I am guessing that we paid for at least some of the paint and brushes needed to paint the four murals at Franklin Elementary School. The article mentions that it took volunteers two weeks to paint the four murals. Bruce brought this article to my attention and was surprised when I didn't know anything about it.

Help Needed!

Isn't it patently obvious that I need your help? No one is going to tell our story for us, so we have to start telling

our story and giving it to the local papers and news outlets and to District 5300. If we don't tell people how great we are, they'll never know. And here's a plus: just telling our story could make it easier to grow our club.

Getting our story to the District 5300 newsletter shouldn't be too difficult, but I need help with photographs of our projects and writeups. I can send them in. But sometimes I need a bit of reminding. Just like the rest of you, I tend to get bogged down with my own list of 25 things to do each day.

Getting our story out to the local media might be a bit difficult since we don't have a member who is on our local newspaper. But good news ... I did find Tami DeVine's card, and I put it in a safe place, so I can

send our story to her. If you remember, she is with Crown City Media — or at least she was last August when she was one of Gary Clark's speakers.

Proposed Plan

If we start now a little at a time telling our story to the District and to Tami Devine, maybe we can keep the momentum up as a new Rotary year begins.

While it would be nice to tell the world about everything we do, let's start slowly, so we don't burn ourselves out. Can you help me broadcast just 25 percent of what we do? That would be a good start.

Who will Volunteer?

I need someone to help keep me on track and to help nag for the stories and the photographs and maybe write an article now and then. ○

Reflections

Continued from p. 1

these characteristic patterns of convection. We are usually fascinated by the fireworks of flares from the solar surface or the complex patterns that appear in sunspots, but just look at the quiescent part of the sun, where nothing appears to be happening. You will see that mottled pattern of bright, hot convection cells with cooler, darker borders between the cells.

"So what does all of this have to do with earthquakes?" you may ask. The hot molten (i.e., liquid) interior of the Earth has developed a series of convection cells, where hotter material close to the Earth's

center rises, and cooler material near the Earth's crust sinks. The Earth's crust, on average a mere 22 miles thick or about 0.5 percent of the Earth's radius, floats on the surface of this convective liquid. As the cooling liquid moves laterally at its top, pieces of the floating crust are pushed around, and they are often pushed against each other or are forced to slide against each other. The net result: continental drift and earthquakes.

So the next time you drink a mug of hot coffee, enjoy it, and try not to think of earthquakes. ○