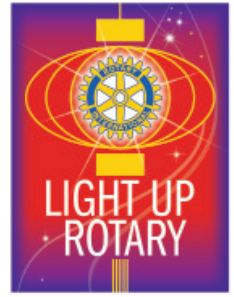




Rotary Club of Altadena

Sparks

OFF THE ROTARY WHEEL
AN AWARD-WINNING NEWSLETTER



April 30, 2015

This Week PCC Scholarship Awards & PCC Veterans' Awards Guest Program Hosts: Dennis Mehringer and Craig Cox

This Thursday we are combining the annual PCC awards program with the PCC veterans' awards. I will be chairing the PCC awards while Craig Cox is chair of the veterans program.

Five veterans who attend PCC will be awarded \$1,000 each from the funds the Altadena American Legion Post entrusted to us. Former President and District Governor Joe McMullin was instrumental in organizing this program before he moved to Maryland.

Twenty-two regular PCC scholars will be awarded \$150 each and a plaque to honor their academic achievements by our club. This program was begun and mentored by Dr. Bill Gannon before he passed away. We are expecting over 60 people to be in attendance this Thursday. ○



REFLECTIONS

by Hal Yorke, President

REFLECTIONS?

on . . . Blind Thrust Earthquaks

I had hoped to restrict my discussion of earthquakes to the two underlying physical causes of earthquakes: convective currents in the molten mantle and the different strengths of static versus kinetic friction (kinetic friction is defined as friction between moving surfaces). The recent unfortunate events in Nepal compel me to add a bit more detail to this simple picture.

The 7.8 magnitude earthquake that occurred some 20 miles ESE of Lamjung, Nepal on April 25, 2015, was deemed a *blind thrust* earthquake. Blind thrust earthquakes are generally less energetic than other types, but they are also generally more destructive. Blind thrust faults typically occur near tectonic plate boundaries, where large sections of the Earth's crust are colliding and are therefore under high compressive stresses. The crust forms a series of overlapping sliding sheets. This imparts the *thrust* part of the name. The thrusting sheets lead to a multiple hill-valley landform, whereby the valleys are the weakest parts of the crust; the hills are the stronger parts. Erosion tends to wear

down the hills and fill the valleys, covering up any surface evidence of the fault. The *blind* part of the name comes from the fact that these faults are not obviously visible and can remain hidden for centuries.

Because the accumulation of fertile topsoil, population centers are more likely to develop in the valleys. However, the soft basin soil of the valleys can amplify any seismic ground motions that occur, similar to the way that a serving of Jell-O can shake more than the plate it is on. The combination of high concentrations of population and the magnified shaking make blind thrust earthquakes some of the most deadly ones. This apparently occurred in Nepal.

Closer to home, we are uncomfortably

Please turn to Reflections, p4

Greeters

April 23

John Casci

April 30

Gary Clark

May 07

Theo Clarke

Program Review

Detecting Pathogens before They Kill



Adrian Ponce is the President and Chief Executive Officer of Verrix, LLC. Verrix

is a high-technology, bio-engineering start-up which provides a breakthrough measurement capability for rapid sterility assurance in a broad range of applications. Verrix originally was a spin-off from NASA, the Jet Propulsion Laboratory [JPL]

and Cal Tech. The need for rapid sterility assurance grows out of NASA's investment in Planetary Protection. Every NASA space vehicle that is destined for another planetary body in the Solar System that may currently sustain life today or that may have once supported life is subjected to a rigorous process of sterilization. The idea is that NASA does not want to export harmful bacteria from earth to another planet when it sends spacecraft to that planet.

The technology for rapidly assessing



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Rotary Club of Altadena - #7183

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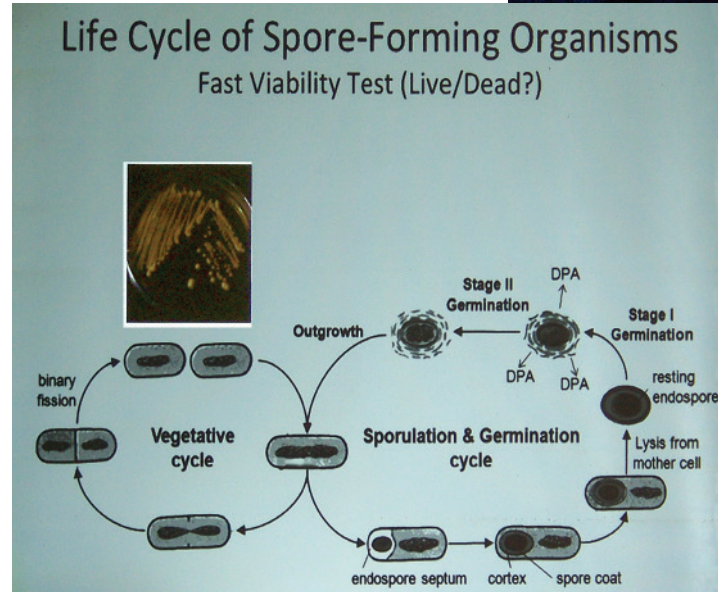
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John Frykenberg International
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Mike Zoeller Youth Projects
Ray Carlson Vocational
Tom McCurry Asst. Vocational
Craig Cox Membership

Editor, Design & Typesetting Foreman Graphics
Photography Jacque Foreman



sterility of space vehicles is also applicable to other fields of endeavor. In addition to receiving funding from NASA, the Department of Homeland Security and the Environmental Protection Agency [EPA] have also provided Verrix with capital fund-

ing. The EPA awarded Verrix with a Small

Please turn to Program, p.4

April Magazine Month

Program Chair, David Smith
April 30 - PCC Scholarship Awards - Dennis Merhinger, Guest Program Host

May No Designation

Program Chair, Ed Jasnow
May 07 - To be Announced
May 14 - To be Announced
May 21 - To be announced

Congratulations



Birthdays



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



Anniversaries



04/27 - Sterling & Olga Louviere

Time is Running Out



From John Kenny,
Foundation Trustee
Chair: "As we enter
into May, you have

two months left to ensure that you have made your contribution to Rotary's charity, our Rotary Foundation.

There is still time to ensure that it is greater than it was last year — our goal for the Annual Fund is \$123 million, the highest it's ever been.

And there's still time to ensure that your contribution enables our Foundation to continue to do good in the world — and

that you can have the personal satisfaction of contributing to this in a meaningful way." If you have not already done so, please consider adding to your Paul Harris Fellowship so that our Club will be among the leaders in the District in contributions to the Foundation. ○

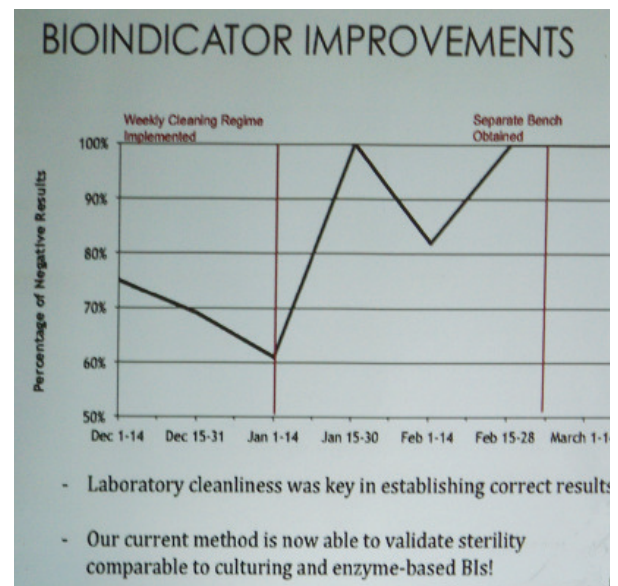
Program

Continued from p.2

Business Innovation Research grant for the development of automated monitoring of wastewater treatment efficiency. Wastewater treatments minimize the transmission of pathogens and are required by the EPA with established treatment and monitoring requirements.

Verrix has also partnered with Pasadena Huntington Memorial Hospital on an ongoing research relationship. Verrix uses a patented rapid Microscopy-based Endospore Viability Assay capable of rapidly identifying enumerating germinable endospores in 15 minutes. This technology allows medical and surgical equipment to be sterilized faster and more thoroughly than normal sterilization procedures.

Verrix is located at the Pasadena Bioscience Collaborative (PBC), which is a non-profit incubator created to support the growing number of life science start-ups located in the Los Angeles area. PBC supports new company formation by providing low-cost, high quality wet lab space and access to shared-used equipment to early stage start-ups. The collaborative also provides specialized education and training for the biotechnology workforce, as well as access to experts in business, intellectual property, law and financial planning.



The scientists from JPL and Cal Tech are doing cutting edge work. It is always a treat to learn about these scientific developments at Rotary. Boyd Hudson ○

Reflections

Continued from p. 1

aware of our local network of seismic faults, which have been well studied and well documented. In addition to the visible surface faults, Los Angeles has several blind-thrust faults under the basin and

metropolitan area. Recent JPL studies that combine satellite radar images and ground-based GPS data have revealed the type of tectonic compression across Los Angeles that will likely produce

earthquakes on one of the blind thrust fault systems: *Elysian Park* or *Puente Hills*.

Perhaps now is a good time for each of us to recheck our emergency preparedness. ○

Preparing the Flags & Brackets for Future FanFare

Saturday, April 25 dawned overcast and looking like rain. Nonetheless, Rotarians, Boy Scouts from Troop 1, their leaders and a mascot gathered at David Smith's construction workroom to assemble 48 flags. Yes, this year we are doubling the number of flags down Lake. So twelve (12) new brackets had to be placed on light poles — six on each side of Lake Street.

I pulled up to Smith's shop about 8:45 — scheduled beginning: 9a. Smith and Craig Cox were already there. Cox brought donuts and orange juice to feed the Boy Scouts and anyone else who wanted

something to eat. Mike Zoeller, Tony Hill and Gordon Seyffert arrived along with the scouts. Cox was to meet Theo Clarke at the Presbyterian Church parking lot for putting up brackets.

Smith, Hill and Seyffert stayed at the workroom — along with Scouts Jonas Bass, Jack Dudas, Anton Sobota, Nathaniel Imel, Robbie Case, David Marcus, their leaders Seth Bass and Ken Marcus and mascot Catie Bass — to assemble the flags.

Cox and Zoeller left to meet Clarke to put the brackets on the light poles. By choice, Cox and Zoeller walked from

light pole to light pole carrying the ladder, while I rode in the back seat of Clarke's car. Clarke had the brackets in the passenger seat of his car. You might be wondering how we knew on which poles Cox and Zoeller were going to install the hardware.

The simple answer is: Cox was in charge of the project. A couple of days before we were going out, Cox had marked the base of the poles with orange. This was very easy to see as we slowly drove up Lake.

By 11:30, the job was complete: The flags were rolled and in Hill's van, and brackets installed on the light poles. ○



Please torn to p. 5 for more photographs

Flags

Continued from p. 4



**THE
FLAGS GO
UP TO
CELEBRATE
MEMORIAL
DAY**