

Volume 20.1
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 First Quarter

PSF NEWS

Planetary Studies Foundation

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The Winter Lecture Series: A Huge Success

By Diane Sipiera

The sprawling northwest part of Illinois has been very welcoming to the Planetary Studies Foundation! In the cold and snowy months of January, February and March individuals saved their Saturday afternoons to learn more about the natural sciences at the **1876 Banwarth House** in Elizabeth, Illinois. These programs are scheduled on Saturday afternoons from 1:00 - 3:00 p.m. Many of the people attending are from a 90 mile radius, but since the Galena area is a tourist destination, some individuals have traveled all the way from the Chicagoland area.



The Winter Series kicked-off with **Ecosystem Services Provided by Birds** presented by Dan Wenny. Dan explained why birds are so important to the ecosystem. Many times people are unaware what the ecological roles

birds fill. Dan spoke about the cultural significance of birds, and the economics of bird conservation. Dan also explained how bird conservation was so important to the decline of the *Great Victorian Bird Hats*. His lecture and the feature article explains how rare and extinct birds were killed by the millions to ornate these hats.

How to Recognize a Meteorite from a "Meteorwong" was an hour and a half-long presentation with a question and answer session that kept people entertained. **Paul Sipiera** encouraged guests to bring in their finds. Various individuals brought in specimens that they thought were meteorites, but we're disappointed to find out that they were "meteorwongs". Other individuals brought other rocks in just to have them identified. They enjoyed each others stories which made the talk light-hearted and made people feel like they have a common interest for the love of geology.

Continued on page 10

Check out all of the topics for the Spring Lecture Series

&

Upcoming events at the 1876 Banwarth House

www.planets.org

The Links between Victorian Hats and Bird Conservation

By Dan Wenny

Over the past two years, Planetary Studies Foundation has established a new headquarters at the 1876 Banwarth House in Elizabeth, where a variety of historical and educational events are planned. In addition to the astronomical investigations planned, the Foundation's historical perspective lends itself to an understanding of how the late 1800's represented the end of a century of profound and rapid change of the American landscape. The eastern forests had been cut and replaced with a patchwork of agricultural fields. The prairies had been plowed and fenced. The transcontinental railroad had been completed. The western frontier had been largely conquered. The demise of bird species known to be extinct in the eastern US occurred largely during this time (Great Auk, Labrador Duck, Passenger Pigeon, Carolina Parakeet). Many issues and organizations prominent today can be traced back to this period. In this article I will highlight the National Audubon Society and the development of bird conservation.

To read the entire article, see page 12

PRESIDENT'S MESSAGE

On February 8th the Planetary Studies Foundation quietly celebrated its 21st birthday without the fanfare that marked last year's Gala Celebration. Reflecting back upon the often chaotic events of 2009, the first quarter of 2010 has been relatively quiet. The move into our new headquarters in Elizabeth, Illinois and the move out from the various locations that held PSF files, library, and museum specimens really stressed the administrative staff to its limit. Now, with all that behind us we can concentrate on developing educational programs and building community alliances. One of PSF's goals for 2010 is establish a presence within the Elizabeth community. With that in mind, our 1876 Banwarth House has become the focal point for PSF activities. The PSF has been the host for events that included a Halloween chili supper, the first stop on a progressive dinner sponsored by the Apple River Fort and Elizabeth Historical Society, and a visit with Santa Claus! In addition, the PSF has presented a winter lecture series on Saturdays that featured a variety of topics from bird watching to a wool spinning demonstration. These lectures were presented to capacity crowds and are held in the lower level of the Banwarth House. PSF has recently become a member of the Elizabeth Chamber of Commerce and will participate in several community events throughout the year. **Dr. Dan Wenny**, our educational specialist, has also been making off-site scientific presentations to a variety of audiences throughout Jo Daviess County. One may think that with all this community involvement that PSF has lost its "meteorite roots", not so! If anything we have become more involved in meteorite research than ever before. Our partnership with the Field Museum is working out very well. The December *Accidental Fortune* television program, that featured our involvement with the Park Forest meteorite, has generated a great deal of new public interest. As a result, the PSF has become the contact point for fielding all the meteorite inquiries generated by that program. It was also nice to hear from PSF members from all over the United States and Canada that saw *Accidental Fortune* and either phoned or e-mailed us their congratulations on a good program. Our research associates **Drs. Ted Bunch and Tony Irving** continue to work with us classifying new meteorites and presenting research papers at scientific meetings.

I would like to take this opportunity to thank all of our members who contributed to our Annual Fund campaign. In these difficult financial times it is not easy to find those extra dollars that so many deserving charities ask for each year. The goal for last year's Annual Fund campaign was to raise enough money to convert the upper level of the garage in Elizabeth into a business office. It was estimated that this could be done for \$10,000. By year's end our efforts amounted to only seventy per cent of that goal. We appreciated every contribution that came in and the decision was made to find a way to secure the shortfall by some other means. Initially we looked at cutting-back on some of the construction to work within a lower budget, but our Executive Director came up with a better idea. **Diane Szipiera** saw an advertisement in the local paper placed by the *Jo Daviess Carroll Area Vocational Center* asking for participation in construction projects that could involve their students as "on-the-job" training. They would provide the labor and the only cost to us would be for materials. What a wonderful idea, and both organizations would benefit from this cooperative effort. Construction will begin in late March, and without the cost of labor, we now have sufficient funds to complete the original design. It seems that the PSF always finds a way to overcome any difficulties that interfere with our progress. Luck has little to do with it. Our success comes from the hard work and dedication of our staff and you the membership. Please come out and see the progress we've made and enjoy the programs we have in store for you.

Paul P. Szipiera

DONOR'S SPOTLIGHT

\$1,000 - \$5,000

2009 ANNUAL FUND

Lancaster Family Foundation

Paul & Diane Sipiera

Tawani Foundation

\$500 - \$999

2009 ANNUAL FUND

United Financial of Illinois, Inc.

2010

Herbert Windolf

YAHOO! Employee Matching Contribution

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Ken & Kim Thorsen

RENEWING MEMBERS

Life Membership

Jennifer Schwartz

Individual

Jan Buedel

Deborah E. Pausz

Bill Schooley

MEMBERS' CORNER

Our sincere condolences go out to:

- **Mary and Alan Becker** on the lost of Mary's father **Rex** this past October.
- The immediate family of **Lawrence Jaffe**, and to **Audrey & Albert Ratner** for the loss of her brother-in-law.
- **Janet Landato** who lost her father this past year. He was 92 years old.

News of PSF's world travelers:

- It seems that Morocco and Casablanca are becoming the latest hotspot for PSF members. Last year **Bill and Mary Sue Coates** visited Morocco and enjoyed Casablanca. This year **Herb and Ute Windolf** will be there too. Hopefully they will bring back some meteorites for us to analyze.
- **Richard and Ellie Leary** were very busy last year touring India and visiting family in Oregon and Virginia. This past January they were off to Hawaii and plan on going to Russia this May with stops in St. Petersburg & Moscow.
- **Art Mortvedt** is currently in final preparations for his anticipated April solo flight to the North Pole. Art will fly from Alaska through Canada's Yukon and Northwest Territories and then on to the North Pole. Art will land at the pole near a Russian science station where he will spend about three days conducting science experiments. We can follow Art's adventure at: www.polarflight90.com
- **Cathy Rudolph** viewed her latest total solar eclipse last year off the coast of Japan, and may be looking toward Easter Island for this year's adventure. By far, Cathy has witnessed more eclipses than any other PSF member.
- **Jennifer Schwartz** was in Hawaii for her annual whale watching experience when a major earthquake rocked Chile. Initially there were fears that it might trigger a tsunami that would cause great damage in Hawaii. Jennifer reported that she was safe and that Hawaii escaped without any serious property damage or loss of life.

Other news:

- Not that he has given up on the weather as most of us have, but **Mike Caplan** is expanding his interests. We all know Mike as WLS-TV most dynamic weatherman and as Master of Ceremonies at PSF dinners, but now we can see him in a different light. At our annual dinners we always see him taking pictures, but now he has taken that hobby to a new level. Visit Mike at Caplan Studios Photography www.caplanstudios.com. as he captures nature's hidden moments.
- Congratulations to **Nate Greiner** for his company, *The Design Mill*, being selected as the 2009 Elizabeth Chamber of Commerce Business of the Year. Nate's company has played a pivotal role in creating new job opportunities for the Elizabeth area. PSF members can learn more about *The Design Mill* at www.DESIGNMIL.com
- Since her retirement from Harper College, **Janet Landato** has been volunteering numerous hours to St. Vincent De Paul Church in Indiana. Her community appreciates all of her efforts making the community richer by her hard work. We are very proud of Janet for her community service.
- **Sindy Main**, a participant in the 2008 Tawani Antarctic Expedition has been extremely busy presenting various educational programs to schools throughout Stevenson County, Illinois and has been featured in several radio and television interviews.

Recent PSF members visiting our 1876 Banwarth House:

- Executive Board Member and Founder, **David M. Lauer** recently stopped by to see and to enjoy the amenities of the Banwarth House. Dave was extremely excited about the history of the house and the possibilities it holds for future PSF activities.
- **Art Mortvedt** literally dropped-in on his way home to Alaska. Art was on a speaking tour promoting his North Pole adventure and wanted to see our Banwarth House. During his stay he made an impromptu presentation to the Elizabeth Chamber of Commerce and enjoyed a fine pork-chop dinner.

Nighttime Sky Watch & Native American Storytelling



Join us for Native American stories and folklore around a campfire followed by viewing constellations and other objects in the night sky through telescopes.



Light snacks provided. Weather permitting. Free.

Apple River Fort State Historic Site, 311 E. Myrtle Street, Elizabeth, IL.

For more information, please call (815) 858-2014.

April 17 - May 22 - June 19 - July 17 - August 14 - September 11 - October 16

8:00 p.m. to 10:00 p.m.



Special Invitation
Education Day 2010
All 4th and 5th Graders Welcome!

Friday, May 7th in Elizabeth, Illinois

10 am - 2 pm

We are currently taking reservations from area schools to join us in a fun-filled day of learning about Early Pioneer and Native American History, the Wonders of Planetary Observation, and the Glory Days of Railroading.

Students

\$3

Teachers
Chaperones
Bus Drivers
FREE!

Reservation Deadline is March 31 - Call (815) 858-2028 or Email: sheilac@appleriverfort.org

Sponsored by

The Apple River Fort State Historic Site • The Planetary Studies Foundation • The Chicago Great Western Railway Depot Museum

www.appleriverfort.org

Trading American Preeminence for Mediocrity—or Worse

By Walt Cunningham

President Obama's budget proposal may not be a death knell for NASA, but it certainly accelerates America's downward spiral toward mediocrity in space exploration. Now it's up to NASA's leaders to put the best face possible on this nail that the administration is trying to hammer into their coffin.

This proposal is not a "bold new course for human space flight," nor is it a "fundamental reinvigoration of NASA." It is quite the opposite, and I have no doubt the people at NASA will see it for what it is—a rationalization for pursuing mediocrity. It mandates huge changes and offers little hope for the future. My heart goes out to those who have to defend it.

NASA has always been a political football. Their lifeblood is money, and they have been losing blood for several decades. The only hope now for a life-saving transfusion to stop the hemorrhaging is Congress.

It is hard to be optimistic. President Obama has apparently decided the United States should not be in the human space flight business. He obviously thinks NASA's historic mission is a waste of time and money. Until just two months before his election, he was proposing to use the \$18 billion NASA budget as a piggy bank to fund his favored education programs. With this budget proposal, he is taking a step in that direction.

NASA is not just a place to spend money, or to count jobs. It is the agency that has given us a better understanding of our present and hope for our future; an agency that gives us something to inspire us, espe-

cially the young people.

NASA's Constellation program was not "over budget, behind schedule, and lacking in innovation due to a failure to invest in critical new technologies." It was due to perennial budget deficiencies for this program. It would have been sustainable for an annual increase equal to the amount thrown away on the "cash for clunkers" program, or just a fraction of the tens of billions of dollars expended annually on Congressional "earmarks."

It's debatable whether Constellation was the best solution to President Bush's vision of "Moon, Mars and Beyond," but it was far better than the vacuum in which we now find ourselves, and without a viable alternative in sight.

Yes, jobs will be lost and the local economy will suffer. This will hurt and be readily measured. In the long run, intangible losses (those on which we cannot put a price tag) will be far more devastating. The cancellation of Constellation will guarantee several things.

Most important, strategically, is the gap, the period during which we will be dependent on Russia to carry Americans to our own space station. With the cancellation of Constellation, that gap will grow longer, not shorter. American astronauts will not travel into space on American developed and built spacecraft until at least 2016 or 2017.

We are not trying to fix any deficiencies in Constellation; our fate will be in the hands of commercial companies with COTS (Commercial Orbital Transportation Services) program awards. They will attempt to regain our lost greatness with new

capsules and new rockets or military rockets, after man rating them. Sup-

posedly, they will do this faster and cheaper than NASA. Cheaper, maybe; faster is not going to happen. These will be companies that have never made a manned rocket and have little idea of the problems they face trying to man rate a brand new launch vehicle and space capsule.

Even under the best of circumstances, humans will not be flying to the ISS on COTS developed vehicles before 2017.

After fifty years and several hundred billion dollars, the accomplishments of NASA and the U.S. space program in science, technology and exploration are unchallenged. They are admired, respected and envied by people and countries around the world. Our space program has provided inspiration to the human spirit for young and old alike. It said proudly to the world that Americans could accomplish whatever they set their minds to. Look at the efforts of China and India in the last 30 years to emulate this success.

Young people have always been inspired with talk of sending explorers to the planets. Do you think they will have the same reaction when we speak of the new plan for "transformative technology development"?

NASA may have been backing away from the real challenge of human space flight for years, but in canceling Constellation and NASA manned vehicles, we are, in effect



abdicated our role as the leading space faring nation of the world. America will lose its preeminence in space.

The real economic impact will not be immediate.

The public at large is not fully aware of NASA's role as a principal driver in our economy for the past 50 years. They forget that much of the technology we now take for granted either originated in the space program or was utilized and improved by the space program. That is NASA's real legacy. The investments we made in NASA in the sixties are still paying off in technology applications and new businesses.

The annual investment in NASA is not simply an expenditure; it is an investment—with a payback. The payback is generated because NASA operates at the frontiers of space, exploring the frontiers of our civilization.

At the frontiers of space, be it going to Mars, or constructing the most amazing engineering project in history—the International Space Station—huge obstacles, sometimes considered insurmountable, are encountered. NASA takes these obstacles as challenges that must be overcome to reach their goals. The solution may lie in new technology, or a new application of existing technology. These solutions eventually make their way into the marketplace with applications we never even dreamed of. NASA has tens of thousands of examples of these “spinoffs.”

Now, after spending \$11 billion on the development and close out of the Ares 1 launch vehicle and the Orion space capsule, we are eliminating them. Gone! And with

them, most of NASA's human space flight program. In the ongoing struggle for leadership in science, technology and exploration, which was represented by America's pre-eminence in space, we have raised the white flag of surrender.

Who will this proposed budget please? It will please those who have opposed the Constellation Program and have a vested interest in an alternative plan; those who are against human space exploration and for unmanned exploration; and those who will benefit from the COTS Program.

None of this new “vision” sits very well with those of us who have known NASA at its best. From its inception, one of NASA's motivating forces was pride in being the very best, in displaying American leadership in human space flight, and maintaining the preeminence in space that derived from this attitude. It appears this attitude is foreign to a president who believes American preeminence should be avoided at all costs.

Mr. Obama, we do not want a space program that turns us into “just another country” among countries.

* * Ask An Expert * *

Here at the PSF, we pride ourselves with having a variety of experts in a multitude of science areas. We constantly receive questions from members and the general public who are looking for answers and come to us for help! If you have a question, please submit it to us and with your permission, we will publish it in the following newsletter because most of the time, we are not the only ones with the same question!

Q: I myself am not a birdwatcher, but we feed birds at our home and have noticed that bird movements, especially their heads, are almost all “jerky”. That is, birds do not make continuous body (and head) movements when I observe them at the feeders. It appears that birds are unable to make “continuous” movements. Mammals' body movements, however, are mostly continuous, and rarely jerky. If my observation is correct, then - why the jerky movements of birds verse mammals? What is the cause and how is it explained? And - far out - with birds being descendants of dinosaurs, might these bird ancestors also have had “jerky”, non-continuous body and head movements verse continuous ones as shown in video replications?

A. You raise an interesting question. I think what you are referring to relates to differences in skull structure and vision in birds and mammals. In most birds, especially most birds that would come to your feeder, the eyes are on the side of the head and they have a very limited area of overlap in the field of view with both eyes. Thus, many birds will move the head up and down to triangulate and judge the distance of objects because they are essentially only using one eye. The advantage of this approach is a wider field of view overall - in some birds even directly above in a hemisphere! Birds such as owls and hawks have the eyes more forward and broad overlap in the field of view with both eyes. They will have a more continuous scanning motion as they are looking for prey. As for dinosaurs, it will depend on the type. Modern birds, and in particular the passerines or songbirds, are far removed from dinosaurs and not just feathered velociraptors as they are often portrayed or implied by some proponents.

Answered by D. Wenny

Zambesi

By Herbert Windolf

Africa's third-largest river, the Zambesi, its source located in the mountains of Angola, flows almost straight east, eventually discharging its waters into the Indian Ocean, on the shores of Mozambique.

In 1997, when Zimbabwe's economy, once one of the richest in Africa, and its social fabric had not yet been destroyed by the megalomaniac Mugabe and his cohorts, my wife, Ute, and I took a safari there. We flew from the capital city of Harare to the town of Kariba, on the eastern tip of Lake Kariba, where the Zambesi had been dammed in 1959, and from there we took a boat to our first wilderness camp somewhere on the lake shore.

The center of the tented camp was the communal area with the kitchen. On one side individual tents had been pitched, while on the opposite side stood the shower and toilet facility. The shower stall was open towards the lake, so that one could enjoy the shower and view simultaneously. When a guest expressed the desire to take a shower, hot water was prepared and poured into a bucket suspended over the shower head.

Our two evenings there were spent gathering around the campfire, called bush TV. We were three couples traveling with Wilderness Travel, Christa and Steve from Chicago, Debby and Steve from Glendale, AZ, and the two of us from Prescott, AZ. In addition to various other instructions, our safari guide, Patrick, explained that, if we had to go to the look at night, a walk of about 300 feet, we should not only shine the flashlight down before us, but also scan the surrounding bushes for eye reflections from animals hiding there. When Christa asked, "And what do I do, should I see eyes?" our guide told her, "Call Herbert." Problem solved!

Bush walks took us into the sur-

rounding countryside, where we had to walk in a queue, with our guide leading, his high-powered rifle shouldered. We quickly learned from how he carried the rifle, if the air was clear, or if big game was nearby. In case of a possible threat, the rifle moved from his shoulder to his hand.

Returning to Kariba, we took another small aircraft to Mana Pools, at the time a World Heritage Site, because of its rich wildlife and scenery. It is located just south of the Zambesi River.

Driven to the river, four canoes were waiting for us. The subcontractors for the three day canoe ride down river were a young white Zimbabwean couple. She, looking terrible due to multiple bouts of malaria. While travelers can take prophylactics for malaria, all-year residents cannot and must take what comes. She, together with three native helpers, would drive along the river to set up each evening's camp prior to our arrival.

Her husband was going to join us on our river trip. Since my wife and I had canoed many times in Minnesota and Ontario, we were looking forward to this experience, but just when we boarded our canoe, a black park guard wanted to take over the helm. No way was I going to permit this, thus the 'poor' man had to sit in the middle, with Ute up front. At least I was diplomatic enough not to point out to him that, had this trip taken place a hundred years earlier, he would certainly have sat where the work had to be done.

Before taking off, we were informed that we would pass about 50



hippopotamuses per kilometer on our three days of about 40 km total, which meant a proud, or should I say, scary, total of 2000. Hippos are highly territorial, and on land, when they come out to graze in the night, kill the most people of any big African animal. We pushed off, always staying close to the riverbanks and far away from hippo pods. Except for one occasion, when a hippos suddenly surfaced near one of our canoes, we did not encounter any dangerous situations.

For lunch breaks, we stopped along the river bank, where we were provided with delicious sandwiches from the cooler. Aside from the many hippos, we saw eagles, cranes, and three foot long monitor lizards, scouting the river bank for bird eggs and small prey. We also saw various species of antelope, one of which was the water buck. This big, gray antelope has a white oval ring on its derriere, and the story goes that its progenitor happened to sit on a freshly painted toilet seat, thus the ring. Then there were all sizes

of crocodiles and, at times, some elephants crossing the river. When the water level rose above their bodies, they raised their trunks like snorkels. Several species of king fishers were darting along the river, or sitting patiently on a branch overhanging the water. When they would spot a small fish, they would dive down, snatch it and bring it up to their perch, where they whacked the fish on a branch to kill it, and then swallow it headfirst.

The Zambesi is a braided stream, not channeled as many Western rivers. This means that, at times, we traveled through a sea of grass and reeds, where the water became so shallow that our guides had to push us through. The afternoons were the most pleasant, when we got closer to our day's destination. Instead of paddling, we brought our canoes side-by-side, and held them loosely together. Then the cooler was opened, and we enjoyed either a cold beer or a chilled glass of wine. Culture and civilization on the Zambesi! Dinner on our first evening was memorable. A large table had been expertly set up under big overhanging branches of a giant tree, next to the riverbank. The table could not have been arranged any better at a five-star restaurant in Europe or the U.S., with dinner and company highly enjoyable. A full moon had risen, its light reflecting from the gently murmuring waters, and, lo and behold, there was a second reflection on the water – the light of bright Venus. All of this was accompanied by the whines, howls and 'laughter' of a hyena on the opposite river bank, which was part of Zambia.

Arriving at our day's destination, our camp was all set up, our laundry was returned, and we gathered for a sun-downer, a drink of our choice – but without ice. Unbelievably, a flush toilet was set up, and a shower was waiting. Our hosts carried a huge round tub for the preparation of hot water. Worried, I asked whether it served also as a cannibal pot? When at night, my wife and I had to visit the

loo, we did it together, but never encountered a wild beast.

On the eve of our third day, we arrived at Chicwenya Lodge, managed by our guide's wife. It consisted of several large, permanent tents, serving as living and sleeping rooms. Joining each was a man-high masonry structure with the sanitary facilities, wash basin, flush toilet and shower. With lions and elephants occasionally passing through the camp at night, one could step on a small stool to look over the masonry wall and watch the beasts go by. A huge dinner table, for at least twelve people, stood under giant trees, and the candelabra in its center had been built tall enough so that everyone was able to see across the table unimpeded, when conversing with each other. The lodge's symbol was the bee-eater, a small colorful bird living in flocks, which build their nests by pecking holes into the clay of the river bank.

Depending on the guests' desire, they were driven mornings or afternoons to established hides in the surrounding area, from where one could, in silence, observe the wildlife passing by. At the riverbank, these were crocs, lazing in the sun, also buffalo, elephants and baboons coming to drink. Bush walks took us to inland lagoons, remnants from the rainy season or flooding. By the time we were there, many had become large mud holes. One of them held the carcass of an old bull hippo, likely defeated by a younger rival, then expelled from the pod and to die from his injuries. On one hike, we came to the biggest baobab tree we ever saw. Twelve people would probably have had difficulties encircling it. The baobab is also called the 'upside down tree', since its branches, when not in leaf, look like roots.

We had to leave this magical place and fly to Victoria Falls, so named by Livingstone for Queen Victoria, when he 'discovered' them in 1855. Of course, he made them 'only' known to

the world; the natives knew them for a long time, calling them Mosi-oa-Tunya, the Smoke-that-Thunders. And thunder they do! We stayed in the town of Victoria Falls, and three times ventured to the park opposite the Falls to view them. They are a marvel to behold! About a mile long and 420 feet deep, the waters of the Zambesi drop straight down on the Zambian side into a gorge about 400 feet wide, to flow out at a 90 degree angle, only to turn by another 90 degrees at the end of the gorge. Three visits were not enough – we also took a helicopter tour to view this spectacle from the air.

Below the Falls, when the river has made its two 90 degree turns, it continues rushing through another winding gorge, called The Boiling Pot. Rafting trips are offered to those brave enough to run these level 5 rapids. I had seen a couple of videos of these runs and inquired with an American river runner who had been there. What I had seen and was told, made Ute and me desist from this excitement. I was not looking forward needing to be flown from there with a serious injury to an African hospital. Our fellow travelers dared it, and flipped their raft in one of the rapids. Unable to right it before the next rapids, they hung on for dear life. Christa and Debby thought that their last minute had come!

To Ute and me the repeated sight of the natural wonder of Moise-oa-Tunya sufficed and became a fitting experience before our departure from this, today, so troubled land.

Continued from front page

The Winter Lecture Series: A Huge Success

The **1876 Banwarth House** was enchanted on Valentine's Day. It was PSF's first time to host a Victorian Valentine's Day High Tea. Interpreters, **Jolene Foat**, **Grace Tindell** and **Elizabeth Myelle** were dressed in their 1876 period clothing. Guests enjoyed a tour of the



Jolene Foat

house, stories of Victorian valentines, delightful finger sandwiches, scones with homemade jam and of course various teas. Other desserts were served along with Victorian party favors and this was a paid event.

PSF interpreter and presenter, **Jolene Foat** was the lecturer for **Spinning Wheel, Round and Round**. Jolene was a wealth of information and the guests loved her presentation. Jolene wanted individuals to learn about how important to preserve the past art form of spinning wool. Jolene explained the steps in wool preparations and ways to spin wool such as a drop spool and a spinning wheel. The audience was amazed by all the various ways to dye wool, especially a method



Grace Tindell

which included dyeing wool with *Kool-aid*.

The next program that followed was **Hot Rocks on Blue Ice** presented by **Paul Szipiera**. Paul explained

PSF's search for meteorites in Antarctica along with the adventures of the various expedition teams. People were amazed by these explorers who were willing to risk their lives and investments for these rare meteorites.

The last of the winter series was entitled **Bird Migration**. **Dan Wenny**, community educator for PSF and the Jo Daviess Conservation Foundation, explained avian migration 101. Many bird enthusiasts were present because spring and the re-introduction of birds is right around the corner. Many of the individuals who attended this lecture have been bird watching since they were children.

Diane Szipiera who coordinated and hosted these events was pleased to see how a diverse group of children and adults interacted in these programs. Our PSF members who participated in or presented are much appreciated. The PSF board can never thank you enough. Diane is working on the Fall Lecture Series. If any of the PSF members are interested in presenting on a topic relating to natural history, contact Diane at dszipiera@planets.org. To view what the Spring Lectures Series holds... check out our website www.planets.org.

The 1876 Banwarth House is open Saturday from 9:00 a.m. to 3:00 p.m. The cost for a tour is a donation of \$3.00 for persons 15 years of age and older, and children are free, but they must be accompanied by an adult.

We are also looking for volunteers to serve as tour guides. If you are interested, please contact Diane Szipiera at (815) 858-2014 or dszipiera@planets.org for more information.

This Month in Exploration - March

100 Years Ago—March 28, 1910: The first powered seaplane, Le Canard ("The Duck"), flew at La Mède harbor in Martigues, France. The plane, invented by Henri Fabre, flew for a distance of about 1600 feet and a maximum height of 7 feet over the water. The seaplane resembled a giant dragonfly flying backward.

95 Years Ago—March 3, 1915: A rider to the U.S. Naval Appropriations Act established the Advisory Committee for Aeronautics (later the National Advisory Committee for Aeronautics or NACA). Its purpose was to manage flight research with a focus on practical solutions to known problems. NACA provided the nation's earliest aeronautics research, helped develop important flight technologies and increased knowledge of flight safety and efficiency.

80 Years Ago—March 21, 1930: The Martin XT5M-1 Navy dive bomber met strength and performance requirements in diving tests. The carrier-based torpedo bomber was the U.S. Navy's first dive bomber and was designed to deliver a 1,000-pound aerial bomb.

75 Years Ago—March 28, 1935: Robert Goddard launched the first rocket equipped with gyroscopic controls near Roswell, N.M. The rocket attained a height of 4,800 feet, a horizontal distance of 13,000 feet and a speed of 550 mph.

65 Years Ago—March 8, 1945: The U.S. Navy launched a rocket-powered Gorgon air-to-air missile from a PBV-5A patrol bomber aircraft off Cape May, N.J. It was the first powered missile test flight. During the flight it achieved an estimated speed of 550 m.p.h.

60 Years Ago—March 3, 1950: The University of Illinois held a symposium on space medicine at its Professional Colleges in Chicago. This symposium, along with additional meetings, contributed to the realization of the medical community that an understanding of other scientific disciplines was needed in order to meet the complex medical requirements of manned flight and manned space flight. February 9, 1950: The U.S. Navy successfully launched a Martin Viking No. 3 rocket from White Sands Proving Grounds to an altitude

50 Years Ago—March 11, 1960: NASA successfully launched the PIONEER V space probe via a Thor-Able-4 rocket. PIONEER V provided information on solar flare effects, particle energy, radiation and magnetic field measurements emanating from Venus. On March 13, PIONEER V set a new communications record when it transmitted radio signals from a distance of more than 409,000 miles. That record was later broken with several more communications from even greater distances.

45 Years Ago—March 23, 1965: NASA launched Gemini III (the first operational mission of the Gemini series) via a Titan-II rocket. The primary objectives of the mission were to demonstrate manned orbital flight, evaluate the two-man design and test and evaluate the craft's systems and procedures. Former Mercury astronaut Gus Grissom commanded the mission, with John W. Young, a Naval aviator chosen as an astronaut in 1962, accompanying him.

40 Years Ago—March 5, 1970: NASA flew the first of two YF-12A Blackbirds in a joint program with the U.S. Air Force to explore high-speed, high-altitude flight. The program produced a wealth of information that is still useful today for designing future vehicles that could fly at three times the speed of sound or faster.

30 Years Ago—March 7, 1980: Research pilot John Manke made several test flights in the Gossamer Albatross, a manually operated aircraft propelled by pedals. The tests were part of a NASA project to collect data on large, lightweight aircraft. Manke reached an altitude of 20 feet and reported that the Albatross was like nothing he had ever flown before.

15 Years Ago—March 2, 1995: NASA launched the space shuttle Endeavor (STS-67) from NASA's Kennedy Space Center, Fla. The shuttle carried Astro-2, the second astronomy payload for Spacelab, and various experiments. STS-67 was the longest shuttle flight up to that point and it facilitated sustained examination of the "hidden universe" of ultraviolet light.

5 Years Ago—March 4, 2005: The Rosetta spacecraft completed the first of three Earth gravity assists on its way to rendezvous with comet 67P (Churyumov-Gerasimenko)—it used Earth's gravity to increase its momentum in its journey. Rosetta is a joint mission between NASA and the European Space Agency. It is designed to eventually land on and investigate the comet while providing insight into the origins of the solar system. The gravity assists, three with Earth and one Mars, are required for the spacecraft to gain enough orbital energy to reach the comet in 2014.

March 1, 2010—NASA will launch its GOES-P geostationary satellite via a United Launch Alliance Delta IV rocket from Cape Canaveral Air Force Station. GOES-P is the latest in a series of meteorological satellites designed to monitor storm development and weather conditions on Earth.

March 18, 2010—NASA is scheduled to launch space shuttle Discovery on mission STS-131 from NASA's Kennedy Space Center, Fla. The shuttle will carry a Multi-Purpose Logistics Module filled with science racks that will be transferred to laboratories of the International Space Station. STS-131 is the 33rd shuttle mission to the station.

The Links between Victorian Hats and Bird Conservation

By Dan Wenny

Over the past two years, Planetary Studies Foundation has established a new headquarters at the 1876 Banwarth House in Elizabeth, where a variety of historical and educational events are planned. In addition to the astronomical investigations planned, the Foundation's historical perspective lends itself to an understanding of how the late 1800's represented the end of a century of profound and rapid change of the American landscape. The eastern forests had been cut and replaced with a patchwork of agricultural fields. The prairies had been plowed and fenced. The transcontinental railroad had been completed. The western frontier had been largely conquered. The demise of bird species known to be extinct in the eastern US occurred largely during this time (Great Auk, Labrador Duck, Passenger Pigeon, Carolina Parakeet). Many issues and organizations prominent today can be traced back to this period. In this article I will highlight the National Audubon Society and the development of bird conservation.

But first, to set the stage, recall the 2008 Summer Olympics in Beijing, China. Some of the colorful side stories involved squeamish reporters traveling down to the market to sample bizarre food items such as fried scorpion, bird nest soup, and all manner of aquatic organisms. While the implication of these stories was to highlight dietary diversity and make the joke that anything that moves is fair game in China, at one time things in the US were not so different. In the latter half of the 1800s one could still find numerous wild species for sale at local markets. For example, in 1897, Florence Merriam Bailey, pioneering naturalist and first woman member of

American Ornithologists' Union, reported over 2000 robins for sale in a Washington D.C. market. Thus, at one time it was just as risky to be a wild animal in North America as it may be in other parts of the world today.

The Victorian era was one of great advances in science and exploration. As a consequence, private natural history collections were fashionable, as were discussion groups of current topics. Collecting butterflies, bird eggs, and minerals were common pastimes and apparently some of the Banwarth family took part in at least egg collecting. Initially it was not an era in which land conservation or preservation of rare species was discussed. But the impacts of widespread collecting and unregulated hunting became apparent and the roots of the conservation ethic more common today developed. One prominent example that serves as a symbol of the larger issue revolves around hat fashions.

Reflecting the exuberance of the era women's hats became larger and more flamboyant. While feathers had long been used to adorn hats, the tradition was taken to an extreme in the late 1800's. More feathers, larger feathers, even entire birds were used in life-like poses (see figures). Some included hummingbirds visiting flowers essentially rendering some hats walking museum displays (without the educational intent). Colonial waterbirds were favored sources of feathers because it was easy to harvest many birds at one time. Egret colonies in Florida and throughout the southern US were hard hit. The delicate curling plumes of Snowy egrets were especially favored. The adults would each have a few of these feathers during the

breeding season. Colonies were decimated for feathers from adults, leaving eggs and nestlings untended. While this seems horrific by today's standards and would not be possible or tolerated now (we would hope), at the time this type of use and abuse of natural resources was not uncommon. The feather trade was very profitable and the millinery trade employed over 83,000 people in 1900 (1 in 1000 jobs). However, the very unsustainability typical of this era was noticed and led to a dramatic change in attitude and ultimately the conservation ethic many of us have today.

In 1883, the American Ornithologists' Union (AOU) was founded and is now the largest and most prestigious scientific society devoted to birds. Such scientific societies were a natural outgrowth of the Victorian era and representative of the shift from hunting to scientific inquiry (although much early work involved collecting birds). In 1886, Frank Chapman, curator of birds at the American Museum of Natural History in New York, strolled through downtown Manhattan and recorded all the species of birds noted on women's hats. He observed 39 species with the most common being Common Tern, Northern Flicker, and Cedar Waxwing. Of 700 hats, 543 had feathers or birds and 72 had no feathers. An additional 86 hats also had no feathers but were worn by elderly women or in mourning and were apparently not expected to have feathers (i.e., either the wearer was unhip or the occasion inappropriate).

Chapman wrote a summary of his findings to *Forest and Stream* magazine. This magazine was edited by George Bird Grinnell and focused on

hunting and fishing. The same year, 1886, Grinnell started *Audubon Magazine* to focus on concerns about population declines among birds. Interest in this new magazine was incredible and overwhelmed Grinnell. Nearly 40,000 people joined in the first year. He could not keep up with the demand for *Audubon* in addition to *Forest and Stream* and he had to discontinue publication a few years later. Articles advocating national parks and bird protection, however, began to appear in *Forest and Stream*. In 1896, Harriet Hemenway essentially refounded Grinnell's group and invited all fashionable ladies she knew, especially those who had hats with feathers, to join a new bird protection society. This group became the Massachusetts Audubon Society. Their early efforts included campaigns to protect egret colonies. The origins of Audubon can still be seen in its emblem of a Great Egret.

Audubon clubs filled a different niche than AOU and other ornithological societies that were heavily involved in studies based on collecting birds rather than observing (for example taxonomy and systematic) because binoculars were not nearly as well developed then as now. Audubon grew rapidly from its start as MAS and now is a national organization with state and local chapters. Many states, including Illinois, also have independent state Audubon societies. In 1899 Frank Chapman started *Bird Lore* magazine which was eventually renamed *Audubon*.

Another key event also involved Frank Chapman. He was disturbed by the tradition of Christmas side hunts in which teams competed to kill the most birds and other animals during a one-day hunt. In 1900 he suggested counting birds instead and started the Christmas Bird Counts

(CBC). The CBC has become an annual tradition among many ornithophiles and involves teams counting all the birds in a 7.5-mile radius area. Chapman's first year included 27 observers in 25 sites; the CBC on 2000-01 involved over 52,000 observers at 1823 sites in 17 countries (mostly in the US and Canada). The CBC is organized by National Audubon Society as one of its citizen science programs.

Thus, the excesses of a fashion craze led to the founding of a conservation movement that has now grown well beyond Audubon. The first national parks and wildlife refuges were established in the early 1900s by President Theodore Roosevelt, himself an accomplished naturalist and big-game hunter. In 1918 congress passed the Migratory Bird Treaty Act which protects all migratory birds in North America. This law is still in effect and continues to be the main protection for most wild

birds, their nests, eggs and feathers. Birds still adorn hats but usually as embroidery rather than taxidermy. Feathers used today in the millinery trade come mostly from farmed animals, especially chickens, pheasants, and ostriches. Unregulated hunting still occurs in some parts of the world but in many areas wildlife is a little safer today than 100 years ago.



For more information visit:

Northwest Illinois Audubon Society <http://www.nwilaudubon.org/>

Dubuque Audubon Society <http://www.audubondubuque.org/>

Illinois Audubon Society <http://www.illinoisaudubon.org/>

National Audubon Society <http://www.audubon.org/>

The Jo Daviess Conservation Foundation Properties

The Jo Daviess Conservation Foundation owns and manages five beautiful and unique properties that are open for public outdoor recreation. We encourage residents and visitors alike to tour our properties and experience some of the greatest natural wonders that Jo Daviess County has to offer! All properties are open from dawn until dusk.

Buehler Preserve

102 Jefferson Street, Galena, IL

This 18 acre floodplain prairie sits along the banks of the Galena River and is within walking distance of downtown Galena, IL. It is a popular destination for hikers and their canine companions, bird watchers, bikers, and those wanting to throw a fishing line into the river. This property was donated by former Galena Mayor, Robert Buehler in 1999 for the purpose of public recreation. Primitive camping is available by reservation for those interested in getting a taste of the outdoors.

Casper Bluff Land & Water Reserve

870 S. Pilot Knob Road, Galena, IL

If you are interested in Native American mound building, history, and culture, and enjoy spectacular views of the Mississippi River, then Casper Bluff is for you! Along with oak savannas and hill prairies, this 85 acre site is home to a rare effigy mound in the shape of a thunderbird, along with several other types of Native American mounds and ceremonial remnants from the Woodland culture. Trails take you past mound groupings and out to the furthest edges of some of the most scenic outlooks that Jo Daviess County has to offer.

Schurmeier Teaching Forest

147 E. Reusch Road, Elizabeth, IL

Take time to enjoy our 56 acre upland forest. This teaching forest hosts an interpretive trail with accompanying brochure that will educate young and old about the importance of the native forests in Jo Daviess County. The teaching trail will also highlight forest management and its role in creating a healthy forest.

Hike or horseback ride two miles of trails or simply relax and enjoy the native flowers and local wildlife in the Mark Schurmeier Memorial Picnic Shelter.

Keough Effigy Mound Land & Water Reserve

1683 N. Cross Road Galena, IL

Where the land and water meet; this property runs continuously from Mississippi River waters edge to the bluff tops above. The 35 acre Preserve is home to many archeological features and natural resource gems including a large bear effigy mound, several linear and conical Native American mounds along with rock shelters that were occupied by archaic peoples from long ago.

Cultural history on this site also includes some of the oldest lead mining pits in the county dating back to pre-settlement.

Trails on this site are rugged and the terrain is demanding but the views and the cultural history are well worth the effort! This site is not yet open to the public but should be open in summer or fall 2010.



Bellwort at the base of tree



Schurmeier trail

Wapello Land & Water Reserve

8642 IL Route 84 S., Hanover, IL

Come and experience restoration and preservation in action. This 79 acre site is currently undergoing intense restoration activities. A prairie has been planted and the forest has been cleaned up. Come watch as the beauty of this site unfolds into fields of wildflowers!

While the land is being reclaimed, the cultural significance of the site has been preserved. This site was home to Woodland and Mississippian Native American cultures and boasts an old village site as well as a Native American mound.

There are so many treasures that this site has to offer. Be a part of the excitement!



Prescribed burn at Wapello

Upcoming Events at the JDCF Properties

Stargazing and Native American Stories

April 17, May 22, and June 19 at Apple River Fort in Elizabeth. Starting at dusk

Listen to folktales around a fire then observe objects in the night sky with telescopes and binoculars. Refreshments served. For directions see www.appleriverfort.org

River Clean-up

April 17, 8:00 AM – 3:30 PM Gear's Ferry Landing, Galena.

Help clean up a section of the Mississippi River Floodplain. Bring work gloves if you have some. Lunch provided. From Highway 20 in Galena turn south on S. West Street (left if westbound on highway 20) and follow for about 2.5 miles to the boat ramp.

Moonlight Frog Walk

April 23 7:30 PM Buehler Preserve in Galena.

What is the difference between frogs and toads? Learn to identify toads and frogs by sight and sound at this one of a kind event for all ages. Wear sturdy walking shoes and bring a flashlight if you have one. Meet at Meeker St. Footbridge off the north end of Main Street in downtown Galena.

Bird & Flower Walk

May15, 1-2:30 PM Schurmeier Teaching Forest south of Elizabeth.

Celebrate Mother's Day by learning to identify native wildflowers and migratory birds during an easy hike in the Jo Daviess Conservation Foundation's Schurmeier Teaching forest. For directions see http://www.jdcf.org/Schurmeier_Forest.aspx

Kids in the Creek

June 5, 1:00 PM Galena Territory Marina

Learn how to assess the health of a stream by the invertebrates that live there.

Birds: Nests & Beaks

June 19, 10:00 AM Casper Bluff Land & Water Reserve

Every animal eats and has a home! Come and learn about all the different types of nests birds make and discover how different beaks are adapted to eat different foods! Remember to bring your binoculars! For directions see http://www.jdcf.org/casper_bluff.aspx

Membership Form

Regular Membership	___ \$	20.00	1 year	or ___ \$	35.00	for 2 years
Family Membership	___ \$	35.00	1 year	or ___ \$	60.00	for 2 years
Sponsoring Membership	___ \$	50.00	1 year	or ___ \$	90.00	for 2 years
Contributing Membership	___ \$	100.00	1 year	or ___ \$	180.00	for 2 years
Student Membership	___ \$	10.00	1 year			
Life Membership	___ \$	500.00				
Please accept this donation	___ \$	_____				

Please fill out the form completely and return it to:

Name: _____

Address: _____

City: _____

State: _____ Zip Code: _____

Email: _____

Phone: _____

Please make checks payable to

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Please mail the membership form along with a check to the address below.

Thank you for your support!

Our mission is to promote the study of planetary science and astronomy with emphasis on meteorites; and to sponsor, encourage, and assist in the physical, astronomical, earth and environmental sciences so as to broaden our knowledge of all phases of the universe.

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