



The Charles A. and Anne Morrow

LINDBERGH • FOUNDATION

N • E • W • S • L • E • T • T • E • R

July 2010

Leadership and Responsibility are Key Themes at 2010 Lindbergh Award Event

For the first time, the Lindbergh Foundation held its annual Lindbergh Award Celebration in conjunction with Sun ‘n Fun in Lakeland, Florida. What a fun night! On April 14, 2010, Jack Pelton, Chairman, President and Chief Executive Officer of Cessna Aircraft Company accepted the Lindbergh Award, and Michael Ducker, Chief Operating Officer of FedEx Express, accepted the Corporate Award for Balance. John Burton, president of Sun ‘n Fun, welcomed everyone and introduced a special guest. Jeffrey Skiles, co-pilot on the now-famous Hudson River landing, joined us for dinner.

The Lindbergh Award is presented annually to individuals whose work over many years has made significant contributions toward the Lindbergh’s concept of balancing technology and nature. “Jack Pelton has led the charge to see that the aviation industry focuses appropriate efforts in reducing its environmental impact,” said Larry Williams, the Lindbergh Foundation Chairman, President and CEO. “Jack has been a vocal proponent for pursuing policies and practices that balance progress and technology with environmental sensitivity, a concept that resonates strongly with the Lindbergh Foundation’s values as well.”

During his remarks, Pelton expressed his sincere appreciation for being selected as a recipient of the Lindbergh Award. He also noted his pleasure in the previous Award recipients who had used Cessna aircraft in their environmental work, citing specifically, Terry and Mary Kohler from 2009, and Dr. Michael Fay from 2007.

Environmental Solutions are a Leadership Opportunity for the Aviation Industry

The heart of Pelton’s remarks centered on responsibility and leadership. “Today, this is an industry that touches every aspect of our lives – and with that comes great responsibility to each of us involved in aviation,” Pelton said. “This industry is faced with ever increasing demands to ensure we are providing environmental solutions for sustainable global industry growth.” He went on to explain that environmental solutions are a leadership opportunity for the aviation industry. “As organizations, as businesses and as individuals, we must choose to be a part of the solution,” Pelton stated. He suggested that aviators take an active role in the discussion about aviation’s impact on climate change. “To further reduce aviation’s impact on climate change, it requires partnerships between industry and government and a commitment to find realistic solutions,” Pelton said. “We must pursue policies and practices that balance progress and technology with environmental sensitivity.” He added that it takes time to educate policy makers at the state, local, national and international levels on how proposed rules could positively or negatively affect general aviation.

Pelton stated that infrastructure, operations, and technology and research are important areas to consider when studying the environmental footprint of aircraft and related equipment. He also discussed the Cessna Environmental Strategy Council, which focuses on aircraft emissions, energy conservation,



L-R: John King, Martha King, directors; and Larry Williams, Lindbergh Foundation Chariman of the Board, present the Lindbergh Award to Jack Pelton at a celebration at Sun ‘n Fun on April 14.

Inside	
Chairman’s Letter	2
Husky in Africa	2
LF Day at SnF	4
2010 Grant Projects.....	5
Wings for our World	11
Honor Roll	11
Electric Aircraft.....	Back

Letter from the Chairman

Dear Friends,



Once again, the Lindbergh Foundation enjoyed a wonderful Lindbergh Award celebration, this time at Sun 'n Fun on April 14. It was a great crowd with fabulous food, conversation, and speakers. The who's who of aviation was at this event. We were especially honored to have Jeff Skiles, the co-pilot of the now-famous Hudson River landing, join us for dinner.

Our awardees, Jack Pelton of Cessna, and Michael Ducker, representing FedEx, both gave inspiring talks about their work in support of aviation and the environment, which truly resonated with our mission.

Our visit to Sun 'n Fun also included the first ever, Lindbergh Foundation Day. We assembled a stellar line-up of industry and academic speakers to talk about aviation-environmental issues ranging from alternative fuels to shark skins in aerospace engineering. You can read more about this great day on page 4.

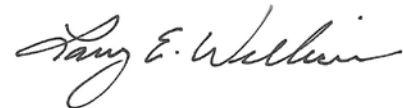
Plans are already in the works for next year's Lindbergh Award Celebration, which will return to Sun 'n Fun. We hope you will mark your calendars now for the week of March 29 - April 3, 2011, and

plan to attend this great event. Watch our web site, or sign-up for our E-Flyer for more information about the date of our event and an announcement of next year's awardees.

In recent weeks, several members of the board spent a considerable amount of time developing a strategic plan for the next five years. We are excited about this new direction, which honors our aviation roots by focusing more deliberately on aviation-environmental issues. No significant changes to the grants program have been made, however we will be more purposeful in our efforts to attract and fund aviation projects that benefit the environment or make aviation less harmful to the environment.

Although the economic downturn has hurt the Foundation financially, with giving down considerably, and significant cuts in staffing, we are committed to our mission and programs. I hope you will renew your support of the Lindbergh Foundation today.

Sincerely,



Husky Goes to Africa Update

Since we last left this story, the Lindbergh Husky was on its way to Nairobi, Kenya, to begin its life as a KWS Air Patrol plane, where it would provide invaluable service in the unending effort to curb poaching of elephants, rhinos, and other large game in Kenya's national parks and wildlife refuges.

The plane arrived in Nairobi in late January and is now based at Meru National Park. It is being used to cover the eastern conservation area, which is 4000 square kilometers. With the exception of the rhino sanctuary, the conservation areas are not fenced, so the animals are free to move all over the area, making tracking their movements on the ground very difficult.

In a report from February 12 - April 2, 2010, the Husky had flown 150 hours.

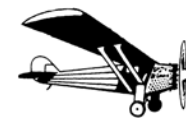
Among the highlights of activity, the Husky has been used to:

- Map the location of elephants using GPS

- Evacuate a sick ranger from Asako PAC base, which takes six hours by road (one way) and only 35 minutes by air
- Map areas of incursion by Somali herdsmen and the current location of elephant herds to assess the level of threat
- Ferry a tracker dog and its handler from Aberdare National Park to Meru National Park
- Assess flood damage to lodges and camps along the Ewaso Ngiro River, and identify the sources of flood waters to help establish an early warning system
- Resupply rations to teams covering the northern dispersal area at Garbatula airstrip
- Fly a vet to Samburu Game Reserve to attend to an Oryx sighted with a snare wire around its neck. The operation was very successful.

In June, the Lindbergh Foundation facilitated the purchase of another Husky aircraft for the KWS. It is expected that the plane will arrive in Kenya sometime this summer.





Award Celebration, continued from front

industrial emissions, waste and recycling, and recycling consumables, as well as engaging employee participation. Through this council, Cessna reached out to the City of Greensburg, Kan., and agreed to mobilize their work force to provide expertise on various projects, including a green airport development project. “Our hope is that this public-private collaboration serves as a model for other communities and businesses that wish to pursue environmental excellence,” said Pelton. “I am confident that determined, resourceful leadership on the environmental front ... will result in a better future for the aviation industry and all who rely on it.”

FedEx Believes in the Power of Innovation

The Corporate Award for Balance is given to corporations or organizations whose concern for the environment and dedication to improving quality of life are demonstrated through their business practices. Over the years FedEx has focused its efforts on recycling, minimizing its packaging, using hybrid cars in its fleet vehicles, employing solar power at its West Coast hub, and seeking ways to conserve energy in their facilities, company-wide. “FedEx has taken great strides to become an environmentally responsible corporation,” said Larry Williams. “These endeavors make FedEx an admirable choice for the 2010 Lindbergh Foundation Corporate Award for Balance and a company that so many others can look up to as an example of corporate initiative, commitment and success.”

“FedEx seeks to connect the world responsibly and resourcefully, tapping into its innovation roots, to make our business and the world more sustainable and efficient,” said Frederick W. Smith, Chairman, President and CEO of FedEx Corp., upon hearing about this award.

Michael Ducker graciously accepted the Corporate Award and expanded on the themes Mr. Smith mentioned. Concerning FedEx’s corporate stewardship, Ducker stated that they look for ways to go beyond the minimum im-

pact to look for ways to provide positive improvements and standards that they hope will become industry changing. “Like the Lindbergh Foundation, FedEx believes in the power of innovation. We have seen first hand how applying technological solutions will create positive results,” said Ducker.

With more than 1.3 billion gallons of fuel consumed in 2006 alone, FedEx has encouraged research and development of more fuel-efficient vehicles as well as alternative fuel vehicles. Ten years ago, FedEx teamed up with the Environmental Defense Fund to engineer hybrid trucks and then shared what they learned with other companies. They spoke at conferences to generate enthusiasm and testified on Capitol Hill about the need for fuel efficiency standards. By the end of this year, FedEx plans to have 1,745 hybrid delivery trucks in the U.S.

Ducker also emphasized leadership. “We must lead the adoption of the newest transportation technologies. Adopting new technologies can result in significant and immediate performance and environmental enhancements. Specifically, he said that FedEx champions innovation, and efficiencies are a core driver of success.

FedEx has established ambitious environmental goals that include reducing aircraft emissions by 20% by 2020, expanding renewable energy generation and procurement of energy credits, and an increase in vehicle efficiencies by 20% by 2020. In addition, FedEx plans to further reduce emissions from aircraft by upgrading their Boeing 727 aircraft to 757s, which will cut 36% of fuel and greenhouse emissions while adding 20% more payload.



At right, Michael Ducker accepts the Lindbergh Corporate Award for Balance from Larry Williams, Lindbergh Foundation Chariman of the Board, and John and Martha King, directors and Masters of Ceremonies for the evening’s celebration.

“Like the Lindbergh Foundation, FedEx believes in the power of innovation. We have seen first hand how applying technological solutions will create positive results.”

Michael Ducker, FedEx

Start Spreading the News: Lindbergh Foundation Day at Sun ‘n Fun Begins Focus on Aviation-Environment Vision

To some, aviation and the environment might be seen as the equivalent of oil and water. The two just don't mix. But the Lindbergh Foundation sees things differently. We believe in the need for balance, in which neither overwhelms nor suffers from the other, and the combination leads to innovation. Furthermore, we believe it is incumbent on the aviation industry to take the lead in addressing the questions of how flight and related activity may affect our environment.

Part of the Lindbergh Foundation's mission is to support the exchange of information and education on such subjects through forums, seminars, training presentations and other direct communications through the Foundation's Aviation Green Investment Program™.

- **Jon Ziulkowski** discussed the new Swift Fuel;
- **George Braly** of General Aviation Modifications, discussed G100 UL;
- **Dr. Amy Lang**, Lindbergh grant recipient who received a grant in 2007 and a second grant through the Aviation Green Investment Program™ in 2008, gave a presentation on her continuing work entitled, *"Shark Skin, Butterfly Scales and Aerospace Engineering;"*
- **Robert Hackman** from AOPA concluded the day with his talk on *"Alternative Fuel Strategies."*



To start spreading the news about the Foundation's new focus, the Lindbergh Foundation participated in the first-ever Lindbergh Foundation Day at Sun 'n Fun. Set for April 15, the Foundation suggested that folks shed their tax-day blues and "go green" by visiting the Green Space and other Sun 'n Fun venues for a line-up of speakers all focused on aviation-environmental topics.

Larry Williams opened the day and introduced **Erik Lindbergh** for an announcement about his new initiative, the Lindbergh Electric Aircraft Prize.

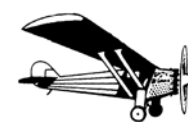
Other speakers included:

- **George Bye** of Bye Energy, who discussed hybrid aircraft;

"Last fall, the Lindbergh Foundation developed a new mission that would focus more specifically on aviation-environmental issues in our quest to become the aviation community's resource for the exchange of information on this important subject," said Foundation Chairman Larry Williams. "Lindbergh Foundation Day at Sun 'n Fun was a great launching pad for us to spread the word and open the dialog with the aviation community about our support and involvement in aviation-environmental matters."

The Lindbergh Foundation would like to extend a special thanks to Kristin Burton for her tireless efforts to develop and organize the Green Space at Sun 'n Fun. Without her dedication to this project, and the support of the entire Sun 'n Fun staff, our very first Lindbergh Foundation Day would not have been possible.

The Foundation expects this to be the first of many such programs. If there is an aviation-environmental topic of interest to you, please contact the Foundation at info@lindberghfoundation.org or visit our on-line Forum to start a conversation.



2010 Lindbergh Grant Recipients

Congratulations to the eight Lindbergh Grant recipients who received funding for their projects this year. Lindbergh Grant projects are the cornerstone of the Foundation's mission and their global reach ensures that the Lindbergh legacy of balance resonates around the world. Each grant recipient receives up to \$10,580 (the cost to build the *Spirit of St. Louis* in 1927) to support their research or education projects that use innovative ideas to foster our environment for a planet in balance.

The Foundation is deeply grateful for the financial support of the Lindbergh Grants program provided by the **Cherbec Advancement Foundation**, St. Paul, Minnesota; **Clare Hallward**, Canada; and **Reeve Lindbergh**, Vermont. Lindbergh Grants are also funded by the **Lindbergh Grant Endowment** and the **James and Maureen Lloyd Grant Endowment**.



Dr. Kristen Jellison
Lehigh University,
Bethlehem, Pa.

"Optimizing the Biosand Filter for Treating Household Drinking Water in Developing Countries."

This health and water conservation grant is sponsored by Reeve Lindbergh.



More than one in six people worldwide do not have access to safe drinking water, which translates to an estimated 443 million school days lost annually and one half of all the world's hospital beds occupied by patients suffering from water-related diseases. Diarrheal disease linked to unsafe water and sanitation leads to more than one million deaths annually, with the vast majority of these deaths among children under the age of five.

The concrete biosand filter has been an effective household water treatment option because it produces high quality drinking water, is durable, and is easy to use and maintain. However, at a cost of \$10 - \$30 USD, it is still too expensive for some of the poorest households in the developing world, and the size and weight of the filter make it difficult to transport.

In order to expand the reach of water purification to all corners of the world, Dr. Jellison plans to design and build two modified biosand filters, one using a 5-gallon bucket and the other a 2-gallon bucket. She will then test the designs for their effectiveness in removing turbidity, total coliforms, *E. coli*, parasites, and viruses to determine whether

biosand filtration can still be effective with smaller, lighter, less expensive units. The success of this project will enable more people to work and attend school, contributing to the welfare of their families and the productivity of their communities.



Dr. Lekelia "Kiki" Jenkins

University of Washington, School of Marine Affairs

"Identifying Best Practices for Promoting Cross-Cultural Adoption of Marine Conservation"

The United Nations Food and Agriculture Organization estimates that the world's fisheries discard 7.3 million tons of bycatch each year. One study estimated that in 2000 80 fishing nations set 1.4 billion longline fishing hooks and caught at least 200,000 loggerhead turtles and 50,000 leatherback turtles as bycatch. To combat this problem, innovative scientists and fishermen have produced marine conservation technologies, such as the circle hooks and turtle excluder devices (TEDs), that can reduce bycatch of sea turtles and other species while maintaining high catch levels of the target species. However, many local fishermen in foreign countries are skeptical of U.S. devices and must come to believe that these techniques won't substantially alter how they fish or affect their profit.

Clearly, marine conservation devices can only be effective if they are used. The inability to secure widespread, long-term, and proper use of these devices is a major hurdle in the race to save sea turtles and other species. In this study, Dr. Jenkins plans to examine current efforts to promote marine conservation technologies cross-culturally and will identify best practices that will facilitate foreign innovation and help illustrate that these technologies balance the desire to protect imperiled species with the fishermen's need to be profitable. In addition, increased use of circle hooks by foreign fishermen



would drastically reduce this bycatch of endangered and threatened sea turtles and help lead to their recovery.

Grant Recipients, continued on page 6



Dr. Ulrike Kappler

The University of Queensland, St. Lucia, Australia

“Remediating Urban Sulfur Pollution Using Extremeophilic Bacteria from Soda Lakes”

This grant in waste minimization is sponsored by the Jim and Maureen Lloyd Grant Endowment

Urban areas around the world are the most densely populated regions and they continue to grow. Currently, more than 50% of the world’s population lives in cities. By 2030, it is expected to grow to 60%, with urbanization in industrial countries reaching approximately 85%. One of the major challenges is and will be the sustainable use of the urban environment so that a high quality of living can be achieved and maintained. The major sources of pollution in urban environments are related to sewage, which often releases large amounts of volatile sulfur compounds, which are malodorous and toxic. Presently, sewer gasses are treated with chemicals or by using activated charcoal beds, which require constant replenishing or exchanging of filter material. This is expensive, and prevents their widespread use, especially in developing countries, which have the fastest growth rate of urban populations.

Dr. Kappler plans to use several species of the recently discovered alkaliphilic sulfur-oxidizing bacteria to investigate their potential for use in small scale biofilter applications, specifically designed for the treatment of sewer gas. Biofilters are low maintenance systems and are generally much cheaper to establish and operate than chemical treatments or filtering systems, making this process widely applicable in urban settings in many different countries.



Stephanie Mixson

North Carolina State University, Raleigh, NC

“Conserving Energy and Freshwater by Harnessing Novel Saltwater Algae as a Biofuel Source”

This general conservation grant is sponsored by the Lindbergh Endowment.

Two of the most important natural resources supporting modern civilization are oil and freshwater. Worldwide, there are already freshwater shortages and no substitutes for most freshwater uses including growing agricultural crops, manufacturing goods, and safeguarding human health. Furthermore, freshwater is being used to make fuel. Petroleum-based fuels are also being rapidly depleted, so scientists are turning to renewable biofuels. However, most attention has been on freshwater microalgae, which would further drain freshwater resources.

Ms. Mixson’s research will focus on a novel candidate for biofuel production the saltwater microalga *Dunaliella* spp. Using the innovative technique of synchrotron-based microspectroscopy, Ms. Mixson hopes to be able to rapidly screen samples of several strains of four species of this saltwater alga to determine how much lipid production is possible. The goal is to optimize *Dunaliella* spp. for production of lipids as a ‘drop-in’ renewable replacement for oil. As an added benefit, these marine microalgae can be mass-cultured in minimal space with readily available saltwater, and existing petroleum refineries that are located along coastal areas can be used. This pilot study will serve as the foundation for further studies to genetically modify *Dunaliella* spp. strains to produce even higher amounts of lipids, creating a



renewable source of biofuel that can help reduce net carbon emissions and be a viable alternative to the rising costs of petroleum-based fuel with minimal freshwater demand.

Thanks to the many people who volunteer on the Balance and Technical Review Panels. You are a vital piece of the success of the Lindbergh Grants Program. For more information, visit: www.lindberghfoundation.org.



**Maminirina
Randrianandrasana**

University of Illinois,
Urbana

*“Investigating Wild
Silkworm Production to Conserve
Rural Communities and Forests in
Madagascar”*

Madagascar is one of the world’s richest sources of flora and fauna. However, for the human residents poverty is widespread and the need for economic development is urgent. Currently slash-and-burn agriculture and subsistence farming are the main sources of income for the rural people of Madagascar, with 66% of rural people earning less than \$2 per day. Clearing the land for agriculture puts countless endemic species at risk, but the human need for economic independence and security often outweighs the need for conservation.

Maminirina Randrianandrasana plans to study an innovative way to join the two seemingly opposing goals of economic development and natural resource conservation by finding a way to derive economic benefits directly from the rich flora and fauna.

Wild silk production provides an ecologically compatible alternative to forest destruction and invests the rural community in conserving their natural heritage. Ms. Randrianandrasana will determine which host plants will be suitable and optimal for raising the silkworms and will recommend these plants be grown as crops, which will save the farmer money and prevent the introduction of non-native plant species into the ecosystem. Biochemical analysis will be used to evaluate regional differences in silk composition and properties that may influence its suitability for use in textile manufacture.



Dr. Joe Reczek

Denison University,
Granville, Oh.

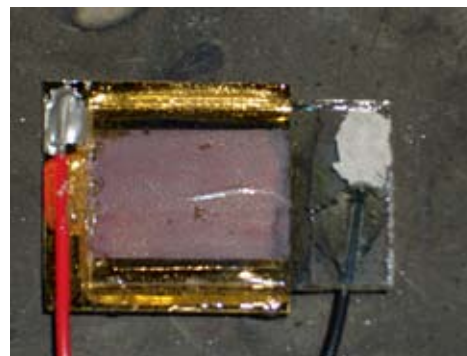
*“Developing Liquid
Crystal Solar Cells
to Promote Clean,
Efficient and Affordable
Energy”*

This general conservation grant is sponsored by the Cherbec Advancement Foundation.

The most abundant source of clean energy currently available is the sun, which provides more energy to the earth’s surface in one hour than the world uses in an entire year. Current solar energy technology, however, is either too expensive or too inefficient to be of practical use. This is particularly true for developing nations. Creative new approaches to affordable solar energy must be investigated to balance technological growth with the environment.

Dr. Reczek suggests that to succeed at balancing energy consumption with environmental conservation through solar energy, we must first balance efficiency with the cost of solar energy. To address this issue, he will use this study to test the effectiveness of starting with an inexpensive but inefficient solar cell design, Dye-Sensitized Solar Cell (DSSC), and then altering the design and materials using the novel Donor-Acceptor Columnar Liquid Crystal (DACLC) materials to improve efficiency and product life, while maintaining low cost. In addition, DACLCs have potential to make solar devices that are thinner, have less liquid electrolyte, and no toxic metals. He will test how the new solar cells hold up over time and under harsh conditions.

This research can help bring power and an improved quality of life in remote and underdeveloped regions while reducing our dependence on fossil fuels, leading to a cleaner and more sustainable world.



Grant Recipients, continued on page 8



Tom Shapland

University of California at Davis

“Conserving Global Water Resources by Developing Inexpensive Technology to Measure Crop Water Demand”

The technological innovations in crop development and agricultural intensification after World War II, known as the Green Revolution, improved the nutrition of billions of people. However, the improvements in human welfare came at the cost of depletion and pollution of global water resources. Modern agriculture relies heavily on irrigation for profitable yields and agrichemicals for crop nutrition and pest management. Inefficient and poorly informed applications of irrigation water deplete ground water and surface water resources. The run-off and deep percolation from excessive irrigation pollutes aquifers, watersheds, and coastal oceanic ecosystems. To avoid depleting and polluting water resources while still feeding the human population, farmers and water managers around the world need a better tool for assessing exactly how much water is required to produce our food.

Mr. Shapland is working on an inexpensive technique for measuring crop water use at the field scale called Surface Renewal. Since the amount of water required to produce a crop varies with local weather conditions, cropping system, soil type, water quality and irrigation regime, Mr. Shapland believes the Surface Renewal system can provide farmers around the world with remotely accessible and up-to-the-minute information about exactly how much water their fields need. This technique promises to help farmers world-wide, feed the human population while minimizing wasteful water use.



Paul Slusser

University of Utah, Salt Lake City, Utah



Daniel Geery

Hyperblimp, LLC

“Silently Recording the Behavior of Endangered Right Whales Using Radio-Controlled Hyperblimp Airships”

Since the 1970s, surveys have been made of southern right whales by flying near the shores of Peninsula Valdes, Argentina, in a light airplane, to observe and photo-identify individual whales, record their locations and the presence of calves. As flight costs have increased, aerial surveillance has decreased. Also, planes are noisy and low altitude flying is risky. Although this population has been recovering since the 1970s, more than 300 calves died along Peninsula Valdes since 2005. The need to collect information about this endangered species, and to better understand the causes for the recent deaths, is vital to their long-term survival.

Mr. Slusser, Mr. Geery, and others plan to test a new design of a radio-controlled blimp or airship (as shown at www.hyperblimp.com), with remotely operated, gimbaled cameras. This design of airship can silently hover for long periods, to observe, photograph and identify animals, causing little disturbance.

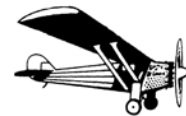
Initial trials will be conducted in Utah, on animals such as buffalo, antelope, and deer. The hyperblimp will then be used to study right whales. Southern right whales are present May through December, when researchers can document them, observe breeding habits, behavior, and demographics. If recording is successful, the next step will be collecting exhalation samples for



evidence of disease. Hyperblimps could reduce the cost of aerial surveillance in Argentina by 90% and be of great use in studying other animal species. Hyperblimp LLC intends to use these airships for

other environmental and humanitarian applications as well.

This grant in aviation and animal conservation is sponsored by Clare Hallward.



LINDBERGH FOUNDATION

2010 Aviation Certificate of Merit Designees



Joseph Vacek
University of North Dakota, Grand Forks, N.D.
“Mitigating Greenhouse Gas Emissions Through Civilian Pilot Training Programs”



Doug Doers
DeltaHawk Engines, Inc., Racine, Wisc.
“Using Compression Engine Technology for Lead Free Flying”



Jeremy Monnett
Sonex Aircraft, LLC, Oshkosh, Wisc.
“Advancing Clean High-Power Technology in Light Aircraft Using Custom Designed and Built Motor, Motor Controller, and Advanced Electron Storage Unit”

2010 Certificate of Merit Designees



Amber Kerr
University of California, Berkeley
“Investigating Drought Resilience of Agroforestry Systems for Subsistence Farming in Malawi”



Linda Klein
Washington State University, Pullman, WA
“Improving Ecosystem Function and Aesthetic Appeal in the Design of Agricultural Landscapes”



Sandra Flechas
Universidad de los Andes, Bogata, Colombia
“Determining if Anti-fungal Bacteria on the Skin of Harlequin Frogs in Colombia are a Mere Symbionts or a Cure for the Batrachochytrium dendrobatidis Fungus”

Officers

Honorary Chairman
Reeve Lindbergh

*Chairman of the Board
President & CEO*

Larry E. Williams
Chief Executive Officer
BRS Aerospace

Vice Chairman
Gregg Maryniak
Director
J.S. McDonnell Planetarium

Vice Chairman
David E. Treinis

Principal
Black Sheep Consultants, LLC

Secretary

Kate Dougherty

Owner
Dougherty Public Relations

Treasurer

Daniel E. Stoltz

President/CEO
Spire Federal Credit Union

Governing Board of Directors

Daniel Bennett

Linden Blue

Chairman
Spectrum Aeronautical, LLC

Shawn A. Dorsch

President and Co-Founder
Blackbird Holdings, Inc.

Greg Herrick

Publisher
AircraftOwner Magazine

Lorie Karnath

President
The Explorers Club

John King

Co-Chairman
King Schools, Inc

Martha King

Co-Chairman
King Schools, Inc.

Lars Lindbergh

Miles O'Brien

Miles O'Brien Productions

Michael Parfit

Mountainside Films

John L. Petersen

President and Founder
The Arlington Institute

Judith A. Schiff

Chief Research Archivist
Yale University Library

Steven R. Whitley

Wiltshire, Whitley, Richardson & English, P.A.

Honorary Board of Directors

Joseph D. Anding

International Airline Captain (Ret.)

Carrie W. Farmer

Executive Director
Open Minds, Inc.

Richard W. Foss

Executive Vice President
Gables Capital Management, Inc.

Clare Hallward

Chairman of the Board
The Thomas More Institute

Kristina Lindbergh

Writer

Wendy R. Lindbergh

Artist

Joseph S. Micallef

President of Trustees and
Chief Executive Officer
Great Northern Iron Ore Properties

Mark C. Ross

President
The Ross Company

Directors Emeriti

C. Edward Acker
Kasse Andrews-Weller
Dr. Robert B. Arnot
Orin E. Atkins
Gen. Robert D. Beckel
Gregory E. Bradbury
Gene Bratsch
John C.D. Bruno
Dr. Charles F. Brush
Hugh Downs
Robert Dragotta
Robin Chandler Duke
Dr. Sylvia A. Earle

Albert Fried, Jr.
George L. Gildred
Dr. Richard D. Gilson
Elaine Harrison
Charles G. Houghton, III
Dorothy C. Jenkins
Betty C. Jukes
Charles J. Kelly, Jr.
Peter Lawson-Johnston
Peter Lawson-Johnston, II
Dr. John M. Levinson
Erik Lindbergh
Dr. John H. Loret
Capt. James A. Lovell, Jr.

Capt. Alfred S. McLaren
Dr. Edgar D. Mitchell
William A. Nitze
Robert Pearlman
William K. Reilly
Faanya Rose
Debra S. Sears
Bradford D. Smith
Barbara Kauffman Stokes
Dr. Nicholas Sullivan
Thomas Turner
Don Walsh
Richard C. Wiese

Staff & Office

at

2150 Third Avenue North, Suite 310
Anoka, MN 55303-2200

Phone: (763) 576-1596; Fax: (763) 576-1664

info@lindberghfoundation.org

www.lindberghfoundation.org

Spotlight on Foundation Supporters

Lindbergh Foundation and Wings Over the Rockies Unite to Support Aviation and the Environment

On Saturday, May 8, several members of the Lindbergh Foundation Board of Directors traveled to Denver, Colo., to participate in the “Wings For Our World” event. This day of celebrating aviation and the environment was co-sponsored by the Lindbergh Foundation and the Wings Over the Rockies Air & Space Museum. The first event of its kind, the purpose of the day-long event was to bring organizations and individuals together to build an understanding and appreciation for how aviation can sustain the important balances between man, wildlife, energy, and the environment.

“The Lindbergh Foundation’s involvement in this event was very exciting because of the synergy between the missions of the Foundation and the Wings Over the Rockies Museum,” noted Lindbergh Foundation Chairman, President and CEO Larry Williams. “By working together, we believe we have made some significant progress in our combined

goals of bringing awareness to the issue of aviation and the environment.”

The day included an Expo, where the **Denver Zoo, Wildlife Experience, Museum of Nature and Science**, and others offered free educational activities for kids. In addition, volunteer pilots gave a number of kids **Young**

Eagles airplane rides around the area, as part of an environmental awareness flight experience.

More than 200 people attended the dinner and live auction. The Museum debuted the 10-minute inspirational film by **Harrison Ford** on the importance of aviation. **Larry Williams** showed a clip from the “Over Africa” film and told a spellbound audience how airplanes help the Kenya Wildlife Service prevent animal poaching.

Special guest **Erik Lindbergh** offered his views on getting people more interested and involved in aviation, and using aviation to motivate young people. “Aviation is a powerful tool for addressing both environmental challenges and supporting humanitarian efforts,” he observed. In addition, **George Bye** introduced the “Green Flight” project, and Lindbergh Foundation friends **Rich and Sue Sugden** offered views about their experiences in Africa with KWS, noting “We first got involved in KWS via our friend **Patty Wagstaff**. It’s a life-changing experience.”

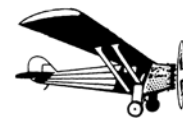
Rounding out the event was a terrific live auction, which featured such items as: a 10-day African Safari, offered by Lindbergh Foundation Honorary Director **Mark Ross**, and an aerobatic flight in the Extra 300 with **Patty Wagstaff**, three-time World Aerobatic Champion and Aviation Hall of Famer.



Young Eagles flight.



The Lindbergh Foundation’s share of the event’s proceeds will be used to support Lindbergh Foundation programs, particularly our **Aviation Green Investment Program™**, which supports Kenya Wildlife Service projects. A special note of thanks to Wings Executive Director **Greg Anderson** and his helpful staff, for their hard work and support.



Honor Roll: November 1, 2009 - June 30, 2010

LINDBERGH GRANT SPONSOR

John and Clare Hallward, Montreal, Quebec, Canada

AVIATION GREEN INVESTMENT PROGRAM™

*Martin Abresch and Cheyenne Wolfdog, Tempe, AZ

In honor of the Kenya Wildlife Service Training Program

*Scott Drill, Minneapolis, MN

*General Aviation Manufacturers Association, Washington, DC

*Tom Haas, Portsmouth, NH

*Rustin Howard, Pensacola, FL

Walter Ingrao, Boston, MA

King Leasing Corporation, San Diego, CA

*Mark W. Lee, Blaine, MN

*Maslon Edelman Borman and Brand, LLP, Minneapolis, MN

*Mark Z. and Susan Moores, St. Paul, MN

* New Donors

UNRESTRICTED GIFTS

Charles A. Weyerhaeuser Memorial Foundation, St. Paul, MN

NEW ASSOCIATES

Travis Almeiti, Campbell, CA

Emily Brown, Cotuit, MA

In memory of Scott Harrison

Robert Hall, Port Orange, FL

Susan King

In honor of Wings of Dreams Aviation Museum and WASP

Ralph Lloyd, Dunwoody, GA

In honor of Bob Stangarone

Capt. Robert Oehl, Starke, FL

In honor of Wings of Dreams, Inc.

Bill and Debbie Peck, Alpharetta, GA

Betty Shotton, Liffort Leadership, LLC

Danny Sloop, Rockwell, NC

Stephen West, Raleigh, NC

ALL ASSOCIATES

Richard Anderson, DeLeon Springs, FL

Joe and Leslie Anding, Sanibel Island, FL

Thomas R. Arbuckle, Delray Beach, FL

John B. and Ruth L. Bean, Naples, FL

A. Scott Berg, Los Angeles, CA

Douglas M. Bielanski, Thousand Oaks, CA

Dr. Richard Bing, La Canada, CA

John G. Borger, Shippensburg, PA

Leo L. and Mary Ellen Brown,

Bloomington, MN

Virnell Bruce, Williamsburg, VA

George W. and Gloria W. Byers,

Lawrence, KS

Don M. Byrd, Lakeview, OR

Paul Campobasso, New Brighton, MN

Katherine F.C. Cary, New York, NY

Brian W. Carroll, Ossining, NY

Richard W. Carter, Fairfield, CA

George J. Ceshker, Richland Hills, TX

City Sanitation Commercial, Inc.,

Little Falls, MN

Katherine T.S. Coley, Middletown, CT

Robert F. and Julie A. Davey,

Laguna Niguel, CA

J.C. and Doris Ebertz, Woodbury, MN

John Feagin, Vail, CO

July 2010

General Mills Foundation, Minneapolis, MN

William Gerhard, Glen Mills, PA

Ken Gilpatrick, Oelwein, IA

Michael Glasscock, III, MD, Austin, TX

John Gowdy, Portsmouth, OH

Harry Frank Guggenheim Foundation,

New York, NY

Hilda E. Gurney, Woodland Hills, CA

Elaine Harrison, Ft. Pierce, FL

William G. and JoAnn T. Hemple,

St. Louis, MO

John R. Higgs Jr., McAllen, TX

Robert H. and Katherine Ann Hogan,

Riverside, CT

Margaret Hubbs, St. Paul, MN

R. J. Huntemer, Soulsbyville, CA

Grady Jensen, Redding, CT

J. William Jost, Huntington Beach, CA

Chuck Kapsner, Little Falls, MN

Gary M. King, Baton Rouge, LA

Stephen and Elinor Kline,

Punta Gorda, FL

George Konnis, Glendale, CA

Richard H. Korn, Greenport, NY

Kenneth H. Kraft Jr., Winter Park, FL

Douglas and Betsy Lake, Stillwater, MN

John S. Lane, Killington, VT

Bruce L. Larson, North Mankato, MN

Michael P. La Velle, Salt Lake City, UT

Peter Lawson-Johnston, New York, NY

Lysbeth S. Lieber, Tempe, AZ

John Lindberg, St. Paul, MN

David Loos, Pomfret Center, CT

Robert Mark, Evanston, IL

Helen McNulty, Minneapolis, MN

Joseph S. and Jane Micallef, St. Paul, MN

David Miller, Yucaipa, CA

Edward L. Miller, Santa Rosa, CA

William E. Miller, St. Paul, MN

Shelley Nehl, Circle Pines, MN

William R. Orthwein, Jr., St. Louis, MO

Ruth E. Patenge, Indialantic, FL

Jonathan Paul, Corral De Tierra, CA

Kevin R. and Mary Lynn Peterson,

Salina, KS

Barbara Hamilton Porter, Jamestown, RI

Robert Reid, Wausau, WI

David, Patricia, Jared, and Emma Reigle,

Ft. Myers, FL

Orem O. Robbins, Hopkins, MN

Jeannie Rose, Wis.

Judith A. Schiff, New Haven, CT

Murray M. Staples, Riverside, CA

Fredrick W. Stevens,

Manhattan Beach, CA

Daniel and Robin Stoltz, Lino Lakes, MN

Paul Stokes, Sebastopol, CA

Donald J. Swanson, Wayzata, MN

Richard Swensen, Milwaukee, WI

John Ucekaj, Albuquerque, NM

Emily Wade, Bedford, MA

William and Susan Wasch,

Middletown, CT

Steven R. Whitley, Ft. Myers, FL

Joseph F. Wilcox, Kailua-Kona, HI

Stephen Winter, Norwich, NY

MONTHLY CONTRIBUTORS

Steve Jensen, Atlanta, GA

Kristina Owens, Annapolis, MD

MEMORIAL GIFTS

A. Richard and Julie L. Boera,

Lyndonville, VT

In memory of Anne Morrow Lindbergh

Michael G. Griffin, Chattanooga, TN

In memory of Matthew Griffin

Charles G. Houghton, Rensselaerville, NY

In memory of Sandra Wright Houghton

Susan Kenney and Anthony Corrado,

Oakland, ME

In memory of Anne Morrow Lindbergh

Patricia Mincks, Redding, CA

In memory of Carl Koeppe

Devan and Brian Norris, Port Orange, FL

In memory of Virgil Kaufmann

Michael V. Scalzo, Philadelphia, PA

In memory of Vincent and Doris

Scalzo

Mr. and Mrs. Charles E. Stokes III,

Newtown, PA

In memory of Virgil Kauffman

Col. Donald Stull, San Diego, CA

In memory of Marie L. Stull Y2c USN

WWII

HONOR GIFTS

Lisa and Glenn Ricker, Tempe, AZ

In honor of the anniversary of Anne

Morrow Lindbergh's birth

2010 LINDBERGH AWARD CELEBRATION

Hosted by



VIP Host



Table Sponsors



Individual Sponsors

Walter and Hellen Driggers, Bronze

Roger Dykman, Honeywell Aerospace,

Bronze

Gary Kelley, Garmin, Bronze

Daniel Stoltz, Gold

Larry and Mary Williams, Silver

Carl Wolf, Garmin, Bronze

Individual Tickets

Joe and Leslie Anding

Ed Bannen

Dan Barks, Honeywell Aerospace

Ed Michael Bolen, NBAA

Phil and Lois Boyer

Stoney Burke

Red Berry, CAV Aerospace

Stephen Robert Champness

Dorothy Cochran

Bruce Connolly, FLTPLAN.com

Diane Doers, DeltaHawk Engines, Inc.

Kate Dougherty

Rocky Driggers

Julie Filucci

Michael G. Gaffney, Florida Tech

Paul Grubbs

Kevin Hawley, CAV Aerospace

Brad Hayden, Aspen Avionics

Greg Herrick

Jeffrey and Katrina Hess, Old NE Jewelers

Jeffrey Holden, CAV Aerospace

Col. Jack D. Howell, Teens- In- Flight

Derek Jacoby, The Jacoby Group

Jim Jacoby, The Jacoby Group

John James

Richard Michael Koenig, Flying Magazine

Jack Todaro, Oregon Aero, Inc.

Elissa Lines & Jeannie Rose, EAA

Gregg Maryniak

Bradley Mottier, GE General Aviation

Devan and Brian Norris

John Petersen

Tom and Rose Poberezny, EAA

Anais and Thierry Pouille, Air Journey

John S. Ucekaj, Aspen Avionics

Mark Voss

Bob Warner and Noel Marshall,

Wealth Educators for Aviators, LLC

Dennis Webb

Contributors

Aircraft Wheels and Brakes,

Goodrich Corporation

Brad and Diane Fowles

Philip and Shelley Nehl

Silent Auction Donors

Forward Vision

Garmin

John and Martha King

Erik Lindbergh

Mark Ross

Sean Tucker

Kermit Weeks

Auction Winners

Robert Beaty

Philip and Lois Boyer

Patrick Farrell

Walter Driggers

Michael Ducker

Rick Garcia

Jim Jacoby

Michael Lindeburg

Rose Pelton

Tom Poberezny

Volunteers

Suzanne Chisolm

Jeff Loeffler

Michael Parfit

David Treinis

Laura Williams

Mary Williams Lindbergh Foundation 11



**Sign-up for the
Lindbergh Flyer
our Free E-Newsletter**

**Visit our Website
at**

www.lindberghfoundation.org



Two-Seat Electric Plane Ready to Show at EAA



Randall Fishman

Randall Fishman has just reported that his new two-seat electric airplane, which the Lindbergh Foundation helped finance, is close to completion. Fishman received a Lindbergh Grant in 2009 for a research project entitled, *“Using Electric Propulsion in a Two-Man Aircraft to Make Extended Flight Economical and Pollution Free.”*

With just weeks before the EAA AirVenture air show, where the plane will be on display, the 50HP brushless electric motor is running, with some final programming of the electronic controller still to do. Also on the preparation list:

- Battery packs are receiving final packaging in the stainless steel boxes
- Connectors and cable routing is nearly done
- Testing with two propeller choices will begin in early July

Other Specs and Performance Details

- Maximum gross weight is designed to be the LSA specified 1320 pounds, which provides 550 pounds for pilot, passenger and baggage.
- On board auto-sensing 4kw battery charger, so the airplane can be plugged in and charged at any location with electric service.

- Charge time for the 12kwh battery system is 3 hours or less, depending on the depth of discharge
- Projected duration per charge is 2 hours at 80mph cruise speed, with two people. Since so much payload is available, the battery system capacity can be increased up to double the present level in the future.
- The 4X 3kwh battery packs weigh 40 pounds each and can be easily removed from the plane for storage or home charging
- The final check of weight and balance will be done prior to the final airworthiness inspection
- Maximum straight and level speed is approximately 120 mph
- Best L/D approximately 30:1 with the propeller feathered
- The aircraft interior and gauges are installed.



Best of all, Fishman hopes to install a rooftop solar panel array on his hangar so all flights can be made with only the power of the sun. This means zero carbon footprint!