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## New Mexico Academy of Science Annual Symposium

FREE stage performance by noted Darwin actor Brian "Fox" Ellis of Fox Tales International ([www.foxtalesint.com](http://www.foxtalesint.com)).



*Charles Darwin And  
The Voyage Of The Beagle*

Storyteller and science teacher, Brian "Fox" Ellis steps into Darwin's shoes. Equal parts dramatic storytelling, stand-up comedy, and show and tell, the audience is immersed in the intellectual world of one of history's greatest scientific minds.

Ellis brings a wide array of fossils, insects, plants and study skins so the audience can experience the discoveries of Darwin with hands-on analysis.



Location of Domenici Center Auditorium

**November 15, 2008 2:00 - 4:00 PM**

**@ Domenici Education Center UNM Health Sciences Center**

Event Sponsored by University of New Mexico Health Sciences Center and School of Medicine Office of Research.

**THEN...please join us during the evening of November 15th for the...**

***NMAS 2008 Annual Banquet,  
Outstanding Science Teacher Awards  
and Distinguished Lecture***

***Dr. Melanie Moses***

***Assistant Professor***

***Dept. of Computer Science, UNM***

***Networks:***

***How Exchanges of Energy and Information Shape the Evolution of Organisms and Societies***

Dinner will begin at 6pm with the NM Outstanding Science Teacher awards and lecture following.

*The evening will be held at the New Mexico Museum of Natural History and Science.  
See page page 8 for the banquet registration.*



## New Mexico Academy of Science Board Members

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## NMAAS MEMBER NEWS...

### Return the NMAAS Raffle Tickets in this Newsletter

...with your check for \$40  
for each ticket...

Grand prize - a vacation week of your choosing at Mayan Palace or RCI resorts (airfare not included). 2nd prize - Museum tickets for four. 3rd prize - gift certificate to UNM bookstore. Drawing is on November 15. Need not be present to win.

Help keep NMAAS strong by participating in this fundraiser.



Plan on attending the NMAAS annual banquet/lecture on November 15.

Use the registration form in this newsletter !

NMAAS Newsletter  
Volume 94, no. 3  
October 2008

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c/o NM Museum of Natural History  
And Science  
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### NEW MEXICO ACADEMY OF SCIENCE

Founded in 1902 to foster scientific research and scientific cooperation, increase public awareness of the role of science in human progress and human welfare, and promote science education in New Mexico.

The Academy has been in continuous existence since 1915, and became formally associated with the New Mexico Museum of Natural History and Science in 1995.

*Affiliated with the American Association for the Advancement of Science (AAAS)*

*Member of the National Association of the Academies of Science (NAAS)*

### *DID YOU KNOW?*

Darwin was greatly influenced by Thomas Malthus' Essay on the Principle of Population that suggested that populations would reproduce up to the limit set by their food supply

## President's Message – October 2008

### Angela Wandinger-Ness

In this closing newsletter of 2008, I would like to take the opportunity to report on our accomplishments for the year and what we are looking forward to in the year ahead. It was my goal as President of the NMAAS to increase fundraising and visibility.

#### **Fundraising: Raffle and Other Contributions**

This year we inaugurated a fundraising raffle and hope you will help make this a success. Our goal is to sell 100 tickets (or more if possible). Raffle tickets are \$40/each. Our grand prize is a vacation week of your choosing at one of the five luxurious Mayan Palace resorts located in Mexico – Riviera Maya on the Yucatan Peninsula, Acapulco, Puerto Vallarta, Nuevo Vallarta or Puerto Peñasco. You may also choose a domestic or international RCI resort. Airfare is not included, but Puerto Peñasco on the Sea of Cortez and others are within driving distance of New Mexico! Additional prizes include a gift certificate to the UNM bookstore and admission for a party of four to one of several NM museums. The drawing will take place on November 15th at the Darwin performance. To purchase raffle tickets found in this newsletter: 1) complete the stub with your name, address and phone number; submit payment in the form of a check to the NMAAS (\$40/ticket); we will send you a receipt to confirm your entry. You may photocopy the tickets in the newsletter and enter as many times as you wish, or ask your friends or colleagues to enter. You need not be present to win.

We have received a generous donation from the University of New Mexico (UNM) Health Sciences Center Office of Research in support of our Annual Public Event.

#### **Increasing NMAAS Visibility**

We have received support for the design of a beautiful trifold brochure through the generosity of the University of New Mexico Cancer Research and Treatment Center, the artistic genius of Mr. Jim Roberts and the creative text editing of Ms. Stephanie Cartier. The new brochure will be available for download as a pdf on our webpage and hardcopies will be available for distribution at NMAAS public events, the NM Teacher Open House, through Visiting Scientists, etc. We hope the new brochure will attract attention and make more people aware of all the wonderful programs NMAAS has to offer. If you would like copies for distribution please request at [nmas@nmas.org](mailto:nmas@nmas.org) and let us know the nature of the event, how many copies you will need and where you would like them sent.

On November 15th from 2-4 PM the NMAAS will host a stage performance by Mr. Brian "Fox" Ellis at the UNM Domenici Education Center auditorium. This free event is open to the public through the sponsorship of the UNM Office of Research. A flyer is enclosed with this newsletter and is available for download on our webpage. Please post the flyer and distribute to science teachers, library, other. Bring your students, children and families to witness a dramatic and humorous reenactment of Darwin and his travels aboard the HMS Beagle.

#### **Looking Ahead to 2009**

We have a slate of talented officers who are eager to continue to carry the torch for the NMAAS in the new year. President Elect Linda Fey has worked hard in 2008 to make the plans for the Annual Banquet and evening lecture, which will be given by Dr. Melanie Moses (Dept. of Computer Sciences, UNM) on the biological networks of ant colonies. She looks forward to continued service as President in 2009. Kurt Anderson and Linda Fey will also work on a 2009 Darwin edition of the NM Journal of Science in honor of Darwin's 200th Birthday.

The NMAAS needs your continued involvement and always welcomes new members!



2008 State NMJAS Paper Competition Senior Division  
First Place Winner  
Megan D. Johnson  
Rio Rancho High School  
Rio Rancho, NM

### *Letter from an NMAAS "Visiting Scientist"*

I have been a member of the visiting scientist program for numerous years. Through the course of this time I have visited numerous schools throughout the rural northeast region (including schools participating in the NMHU Regional Science and Engineering Fair such as: Questa, Penasco, Mora, Los Alamos, Santa Fe, McCurdy, Raton, Taos, and Cimarron). Hopefully I have elicited the innate curiosity of students via the Chemical Magic Shows, Lights On After School and the science fairing process. This process has allowed me to share my expertise with teachers, students and parents alike.

Thank you,  
Ernie Lopez



Editor's Note: The NMAAS Visiting Scientist Program is administered through New Mexico Highlands University (Director, Dr. Maureen Romine) with funding from the NM State Legislature. Through the VSP, scientists and engineers visit New Mexico secondary classrooms statewide and free of charge.



The Taylor Middle School Energy Club from Lovington, NM selected as the *Junior Level School of the Year for New Mexico* and *National Junior Level Rookie of the Year*. The club attended the National Energy Education Youth Forum Awards Recognition at the Department of Energy in June in Washington, DC, with financial help from the New Mexico Academy of Science.

### *DID YOU KNOW?*

On setting out on the voyage of the HMS Beagle, in 1831, Darwin's interests seems to have been primarily in Geology. In Chile he witnessed an earthquake that was accompanied by evident changes in the elevation of the land. He found fossils of sea life in the high Andes. His observations of the growth of coral in the southern Pacific led him to recognise that the entire bed of the Ocean must be subject to significant change.

Later during the voyage Darwin's interest seems to have become more focussed on the species of birds and animals he encountered. His five years of observation and adventure left him with much scope for speculation on the subject of the diversity, change, and relationship of species. His thoughts began to increasingly challenge the assumption of the immutability of species.

Support Science and Science  
Education in New Mexico through

the NMAAS Endowment

*Founding Contributors to the New Mexico Academy of Science Endowment in 2007-2008*

<i>Marshall Berman</i>	<i>Maureen Romine</i>	<i>Dave Thomas</i>
<i>David Boneau</i>	<i>Harry and Mona Pomeroy</i>	<i>Marvin Moss</i>
<i>Jayne Aubele</i>	<i>Larry Crumpler</i>	<i>Glenn Kuswa</i>
<i>Robert Amai</i>	<i>Stirling Colgate</i>	<i>Arthur Guenther</i>
<i>Debra Thrall</i>	<i>Barry Clark</i>	<i>David Hsi</i>
<i>Malva Knoll</i>	<i>David Steinhaus</i>	<i>William Chambers</i>
<i>Ray Mosteller</i>	<i>Aija and Philip Thacher</i>	<i>William Moffatt</i>
<i>David Steinhaus</i>	<i>Leonard and Patricia Duda</i>	<i>David Sharp</i>
<i>Mercedes Agogino</i>	<i>David and Ruth Duggan</i>	<i>Lesha Dawn Harenberg</i>
<i>Warren Brown</i>	<i>Angela Wandinger-Ness</i>	<i>Imogene Russell</i>
<i>Hal Behl</i>	<i>Gary and Yolanda King</i>	<i>Donivan Porterfield</i>
<i>Beulah Woodfin</i>	<i>John Tyson</i>	<i>Scott Allen</i>
<i>Dee Friesen</i>	<i>Melvin and Pauline Eisenstadt</i>	

The endowment is managed by the Albuquerque Community Foundation. The NMAAS thanks the many generous individuals who have contributed one or multiple times to the endowment fund, given gifts in addition to dues, or contributed through the United Way.

Remember that your dues and contributions to the endowment are all tax deductible, as NMAAS is a 501 (c) (3) organization registered with the Internal Revenue Service. Arrangements for donations to benefit NMAAS and its endowment can also be made through a variety of methods, including trust instruments. For example, a trust can provide a guaranteed income during your life, with NMAAS as the beneficiary of the remainder after your death. There are significant tax advantages for some of these gifts. We invite interested Individuals to discuss potential options with their tax advisor, and the NMAAS

***DID YOU KNOW?***

Charles Darwin wrote:

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.

" We can allow satellites, planets, suns, universe, nay whole systems of universes, to be governed by laws, but the smallest insect, we wish to be created at once by special act."

"On the ordinary view of each species having been independently created, we gain no scientific explanation."

***DID YOU KNOW?***

Charles Darwin was only twenty-two years old when the HMS Beagle left Devonport harbour on 27th December 1831.

During the subsequent five-year long expedition the Beagle visited amongst other places the Cape Verde Islands (where there was a volcano), Brazil, Argentina and Chile (where there was an earthquake). In the Galápagos Islands, off the coast of Ecuador, Darwin observed that each island supported its own form of tortoise, mockingbird, and finch; the various forms were closely related but differed in structure and eating habits from island to island. Both observations raised the question of possible links between distinct but similar species.

# Win a fabulous vacation week and more...

Buy raffle tickets--\$40/each! Drawing November 15th 2008  
Proceeds support the New Mexico Academy of Science

## NMAS Raffle Ticket 2008

Grand prize - a vacation week of your choosing at Mayan Palace or RCI resorts (airfare not included). 2nd prize - Museum tickets for four. - 3rd prize gift certificate to UNM bookstore. Drawing is on November 15. Need not be present to win.

Please participate in our fundraiser and send one or more tickets and your check for \$40 for each ticket to:

NMAS Treasurer:  
Glenn Kuswa  
96 Juniper Hill NE  
Albuquerque, NM 87122

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Purchase one or more tickets yourself or give them to friends to purchase. Receipt will be mailed to purchaser. Photocopies of tickets are valid, but each ticket must be accompanied by \$40.

Keep this portion of the ticket

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

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Keep this portion of the ticket

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Purchase this raffle ticket....  
or both (or offer them to friends!)

## Membership Form New Mexico Academy of Science

New Membership [ ] Renewal 08 [ ] Membership Year other than 08 [ ] Publications [ ] Donation [ ]

Date \_\_\_\_\_ Name \_\_\_\_\_

Employer/Firm/Affiliation \_\_\_\_\_ Title \_\_\_\_\_

Primary Interest (geology, biology, chemistry, physics, science education, etc.) \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone \_\_\_\_\_ FAX \_\_\_\_\_ email \_\_\_\_\_

Check if your address is different from that on the mailing label of this newsletter [ ]

### NMAS PUBLICATIONS

<b>New Mexico Journal of Science</b> <small>Set of all available pre-1992 back issues</small>	\$10 _____
<b>From Sundaggers to Space Exploration</b> <small>(NMAS/Sigma Xi, 1986)</small>	\$4 _____
<b>Dinosaurs of New Mexico</b> <small>(NMAS Journal v. 32, 1992)</small>	\$10 _____
<b>The Importance of Agricultural Science in New Mexico's Economy</b> <small>(NMAS Journal v. 34, 1994)</small>	\$10 _____
<b>Astronomy in New Mexico: Past, Present and Future</b> <small>(NMAS Journal v. 35, 1995)</small>	\$10 _____
<b>New Mexico's Natural Heritage: Biological Diversity in the Land of Enchantment</b> <small>(NMAS Journal v. 36, 1996)</small>	\$10 _____
<b>Environmental Management: Current and Future Needs</b> <small>(NMAS Journal v. 37, 1997)</small>	\$10 _____
<b>Water Resource Issues in New Mexico</b> <small>(NMAS Journal v. 38, 1998)</small>	\$10 _____
<b>Ensuring Sustainable Development of Arid Lands Through Time</b> <small>(NMAS Journal v. 39, 1999)</small>	\$10 _____
<b>NMAS Journal v. 40, 2000</b>	\$10 _____
<b>NMAS Journal v. 41, 2001</b>	\$10 _____
<b>NMAS Journal v. 42, 2002 (Centennial CD)</b>	\$10 _____
<b>NMAS Journal v. 43, 2003</b>	\$10 _____
<b>Science on the Border</b> <small>(NMAS Journal v. 44, 2006)</small>	\$10 _____
Subtotal:	\$ _____
+ Handling:	\$ 2.00
<b>TOTAL:</b>	\$ _____

**Membership Class (check one)**

- [ ] Member \$25/year
- [ ] Student \$15/year
- [ ] Subscription \$30/year  
(Libraries only)
- [ ] Contribution to the \$ \_\_\_\_\_  
NMAS Endowment

Membership Subtotal: \$ \_\_\_\_\_  
 Donation Subtotal: \$ \_\_\_\_\_  
 Publication subtotal: \$ \_\_\_\_\_

Total: \$ \_\_\_\_\_

Membership includes 3 newsletters. and occasional special Journal of Science volumes (sent to life members and members who have paid their annual dues during the volume's year of publication).

**Send check for membership and/or publications and donations, payable to NMAS, to:**  
**New Mexico Academy of Science**  
**1801 Mountain Rd. NW**  
**Albuquerque, NM 87104**

**Please...consider making a donation to the NMAS Endowment to support our science education programs!**

NMAS Newsletter  
Volume 94 no. 3  
October, 2008

**NMAS 2008 Annual Banquet, Awards, and Lecture  
November 15, 2007**

**Registration for NMAS banquet/lecture evening event:  
\$35.00 (includes banquet and lecture)**

*NOTE: this registration is for the evening event only..the annual conference held in the afternoon is free of charge...see page 1 for information on that event.*

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Email address or phone number: \_\_\_\_\_

Registration for banquet/lecture for \_\_\_\_\_ persons = \$ \_\_\_\_\_ (@\$35.00 each)

Total Amount Enclosed = \$ \_\_\_\_\_

Please mail (or email or phone) your registration (for the banquet/lecture event) to:

New Mexico Academy of Science

96 Juniper Hill NE

Albuquerque, NM 87122

ATTN: Glenn Kuswa, Treasurer

*To register for the banquet/lecture evening event by email or phone (and pay with a check made out to NMAS when you arrive) contact [gkuswa@comcast.net](mailto:gkuswa@comcast.net) or 505-856-1953 for more information or to make reservations.*

**Don't Delay....Registration must be received by November 10th.**



**NEW MEXICO  
ACADEMY  
OF SCIENCE**

**Newsletter**

1801 Mountain Rd NW  
Albuquerque, NM 87104