Mae Jemison U.S. SCIENCE reading room

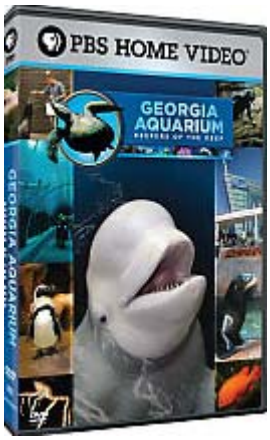
Newsletter

Volume 1, Issue 2

February 2009

FISH, NATURAL SELECTION, AND EXPLOSIONS: February Fun in the Mae Jemison Science Reading Room

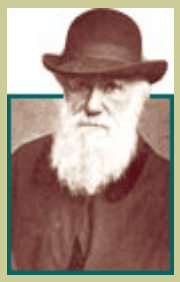
Wednesday, February 4, 2.30 p.m.
Film Show: *Georgia Aquarium: Keepers of the Deep*



Go behind the scenes to see how scientists, engineers, and veterinarians are creating and managing the Georgia Aquarium, the world's newest and largest aquarium. Management and care of the vast array of fish and mammals requires new techniques and technologies, and many species can now be studied in depth for the first time. Medicine, biology, zoology, environmental science and engineering all come to play in creating this new aquarium adventure.

Film duration: 30 minutes.

Charles Robert Darwin, February 12, 1809 to April 19, 1882



Turn to page 2 to read more about evolution and the author of *On the Origin of Species*.

Wednesday, February 11, 2 p.m.
Let's Discuss Evolution and Darwin

A biology teacher from Pretoria Girls' High, Ms. Eugenia Russell, will present what promises to be a very interesting PowerPoint slideshow on the theories of natural selection and mechanisms of evolution. Come prepared with the questions you always wanted to ask.

Darwin Day is a global celebration of science and reason held on or around Feb. 12, the birthday anniversary of evolutionary biologist Charles Darwin. This year marks the 200th anniversary of Charles Darwin's birth and the 150th anniversary of the publication of *On the Origin of Species*.

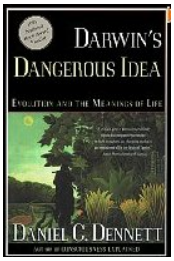
Wednesday, February 18, 2.30 p.m.
Explosive Science Teachers' Workshop

Teachers are invited to attend a workshop in which Francois Germishuizen from Experilab will demonstrate how scientific principles can be explained in a fun way to students.

(During March Gr. 11 and 12 students will have the opportunity to attend similar workshops.)

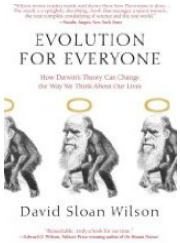
Read about evolution and Darwin

Dennett, Daniel Clement (1996) **Darwin's dangerous idea: evolution and the meanings of life.** New York : Simon & Schuster.



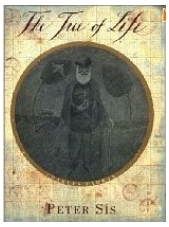
One of the best descriptions of the nature and implications of Darwinian evolution ever written, it is firmly based in biological information and appropriately extrapolated to possible applications to engineering and cultural evolution. Dennett's analyses of the objections to evolutionary theory are unsurpassed. – *Amazon.com*

Wilson, David Sloan (2007) **Evolution for everyone : How Darwin's theory can change the way we think about our lives.** New York : Delta.



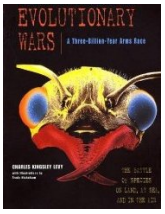
Readers who've grown weary of the usual treatment of evolution as a deadly foe to religion will find Wilson's book a cheerful antidote, breaking new ground in its sweeping breadth and offering much to think about. – *Publishers Weekly*

Sís, Peter (2003) **The tree of life : a book depicting the life of Charles Darwin, naturalist, geologist & thinker.** New York : Farrar Straus Giroux.



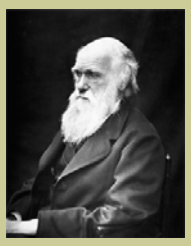
In his author's note, Caldecott Honor illustrator Peter Sis writes that Darwin always regretted not learning how to draw. However, he could and did take "dense and vivid" written notes, from which Sis drew his inspiration. Readers will spend hours poring over the gorgeous, intricately crafted pen-and-ink and watercolor illustrations depicting layer upon layer of Darwin's life as he developed his theories about the origins of life and natural selection. – *Amazon.com*

Levy, Charles K. (1999) **Evolutionary wars : a three-billion-year arms race : the battle of species on land, at sea, and in the air.** New York : W.H. Freeman.



This book explores the "extraordinary technologies" species have devised to ensure their survival. This Darwinian struggle has produced strategies, tactics, and weaponry that rival or surpass even the most sophisticated efforts produced by humans. – *School Library Journal*

Charles Darwin

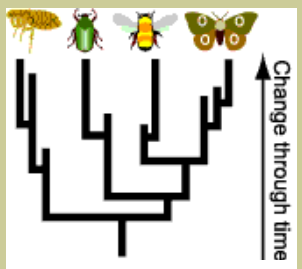


"The man who first described biological evolution via natural selection with scientific rigor." — www.darwinday.org

"The genius of Darwin, the way in which he suddenly turned all of biology upside down in 1859 with the publication of the *Origin of Species*, can sometimes give the misleading impression that the theory of evolution sprang from his forehead fully formed without any precedent in scientific history. But … the raw material for Darwin's theory had been known for decades." — evolution.berkeley.edu

Evolution

"The process by which species of organisms undergo change over a long period of time through genetic variation and natural selection, resulting in the development of a new species. The evolutionary history of a species can be traced using fossils and recent advances in DNA technology to determine the relationships between it and earlier species to which it is related." — *American Heritage Student Science Dictionary*



Over a large number of years, evolution produces tremendous diversity in forms of life.

"Biological evolution, simply put, is descent with modification. This definition encompasses small-scale evolution (changes in gene frequency in a population from one generation to the next) and large-scale evolution (the descent of different species from a common ancestor over many generations). Evolution helps us to understand the history of life." — evolution.berkeley.edu

On the World Wide Web:

Darwin Day Celebration: **http://www.darwinday.org/about/**

Darwin (American Museum of Natural History): **http://www.amnh.org/exhibitions/darwin/**

Understanding Evolution: **http://evolution.berkeley.edu**

The Complete Work of Charles Darwin Online: **http://darwin-online.org.uk/**