



Effective Science Communication: Utilizing New Media and Social Media

Jorge Salazar, Senior Producer

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EarthSky is a Science Media Company

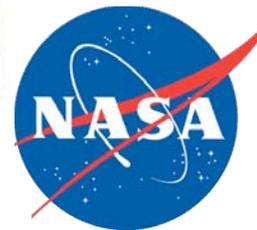
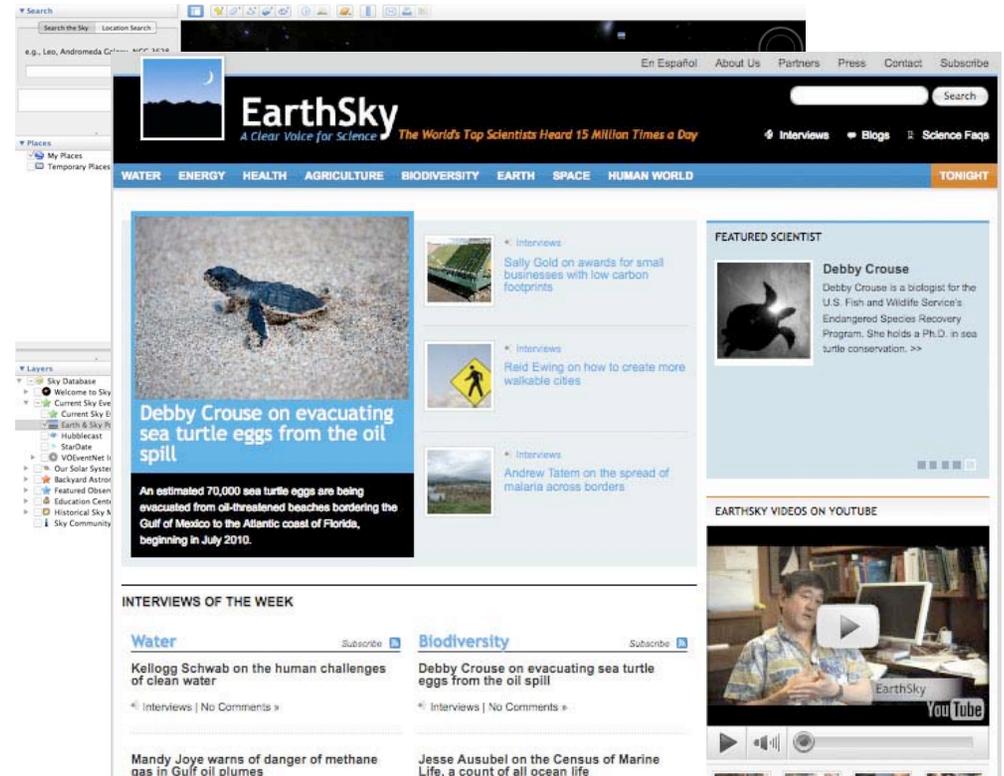
- Founded 1991 by science journalist Deborah Byrd
- Scientists describe their insights in their own words
- 600+ Global Science Advisors and Advisory Council of 10 including Nobel Prize winner
- First-ever radio award from National Science Board:

“Achievement in broadcasting explanations of research and everyday science to a worldwide audience.”

What EarthSky Does

- 15 million daily impressions*
- 80 new podcasts a month
- English and Spanish
- 7,000 podcasts to date

*Number of times EarthSky products are heard, seen or accessed





EarthSky Distribution Network

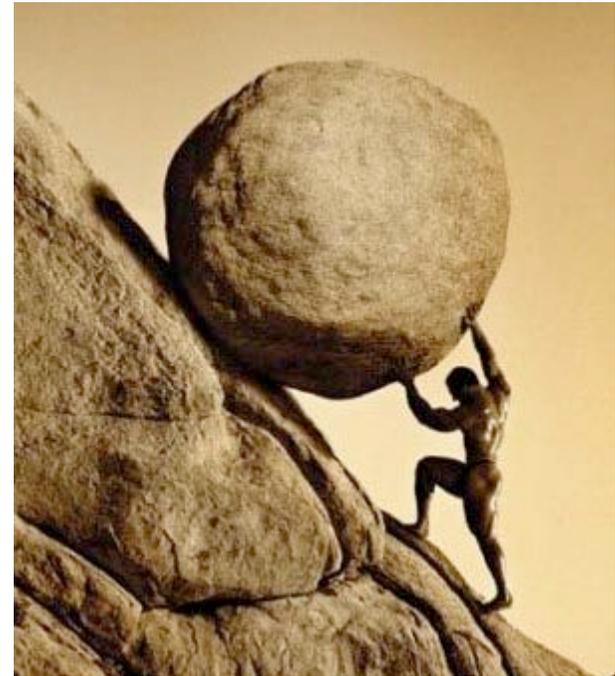
- **2000+ broadcast affiliates worldwide¹**
- **1247 Domestic Stations + 559 International Stations + 200 Spanish Stations**
- **Major broadcast distribution system - ContentDepot**
- **Domestic satellite broadcast - Sirius XM**
- **International broadcast (Satellite/short wave) - Voice of America, American Forces Radio, World Radio Network, International Community Radio Taipei, Broadcast News (Canada), Radio For Peace International**

1. EarthSky Distribution Network Analysis, Fall 2009. Conducted in part by Act 1 Systems, Inc. authorized sub-contractor of Abritron, Inc. official broadcast media evaluator.

Reaching the Public with Important Science Information



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Public Does Not Understand Science

- 100 million Americans believe astrology is a “sort of a science”
- 45 million Americans believe the ocean is a source of fresh water

1. Public Attitudes Survey, National Science Foundation, 2006
2. Environmental Literacy in America, National Environmental Education & Training Foundation, 2005

It's a Noisy, Crazy Media World

1. The average American is exposed to 600-625 advertisements or endorsements per day
2. The advertising industry spends more than 300 billion dollars on advertising in U.S. each year
3. People have about an 8-minute attention span

1. Our Rising Ad Dosage: It's Not as Oppressive as Some Think, *Media Matters*, 2/15/2007
2. Lehman Brothers 2008 Advertising Forecast Report
3. Arizona State University's NSF-funded ACCEPT Study



Public Trusts Scientists and Their Research

- 85% of people surveyed believe “scientific research is essential for improving the quality of human lives” ¹
- 80% of people surveyed perceive scientists and researchers to have a good understanding, or very best understanding, of issues such as global warming, stem cell research and GMO foods ²

1. Virginia Commonwealth University (VCU) Center for Public Policy Survey, 2001, 2006

2. University of Chicago, National Opinion Research Center, General Social Survey, 2006

Your Competition



**Sold 83 million albums
globally**

(Recording Industry Association of America)



**Newborn photos of Brad
Pitt's daughter attracted
26.5 million page views**

(Variety Fair "People who need
People" July, 6, 2006)

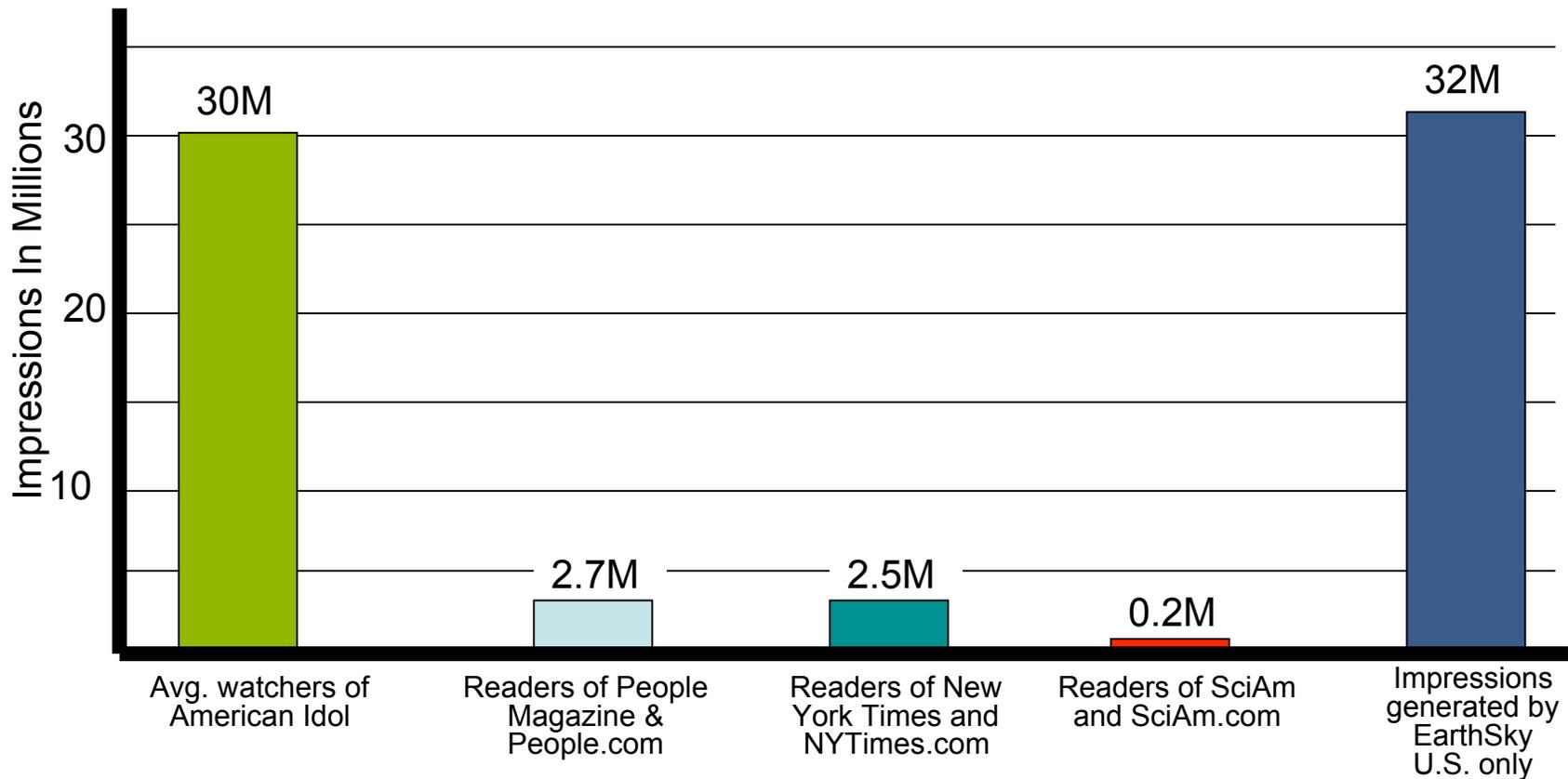
How to best reach the public regarding science

1. Mass media works
2. Don't wait for the media to come to you
3. Don't rely on earned media
4. Build outreach campaigns into what you do
5. Stick with what works



Reach is Important in Science Education

Impressions Made by Popular Media Sources



Rates based on a one week period



EarthSky- What has worked for us in the current climate

- 90-second daily podcasts
- 60-second daily podcasts
- 60-second Spanish language podcasts
- 8-minute extended podcasts
- Concise web content

Profiles in Space Health Research: From Astronauts to Ordinary People

Objective: To promote public understanding of space biomedical research.



How:

- EarthSky interviewed four scientists selected in collaboration with The National Space Biomedical Research Institute.
- Developed set of interview packages consisting of both 90-second pieces and 8-minute extended length.

Results: The series generated over **60 million impressions** where scientists described their work in their own words



EarthSky

A Clear Voice for Science

The World's Top Scientists Heard 15 Million Times a Day

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TONIGHT

EarthSky > Health > Interviews

James Cartreine is working to treat depression with Virtual Space Station



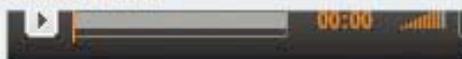
Image Credit: [iStockoff](#)

90 Second Interview



[DOWNLOAD](#) [CHECK](#)

8 Minute Interview



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James Cartreine

Dr. James Cartreine is an instructor in Psychiatry and Medicine at Harvard Medical School. Dr. Cartreine and his collaborators developed The Virtual Space Station,

interactive multimedia programs designed to help astronauts deal with psychosocial issues that come up on long space missions. Dr. James Cartreine's background includes experience as both a licensed clinical ... >>

January 25th, 2010 - [Health](#)

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James Cartreine: One of the problems that can come up on long space missions are psychological problems and social problems. They can really be show-stoppers.

James Cartreine is a clinical psychologist at the Harvard Medical School. He told EarthSky that astronauts on space missions must cope with long periods of isolation and close working conditions with others. That puts them at risk of depression and conflict with their crewmates. Dr. Cartreine is working with the National Space Biomedical Research Institute to develop self-help software for mental health called the Virtual Space Station.

James Cartreine: The Virtual Space Station has an interface that allows the astronaut to go into different kinds of exercises. These can be relaxing, training exercises to correct bad posture



MORE HEALTH POSTS:



[Interviews](#)

Chris Austin explains how robots could soon replace animals in toxicology testing



[Interviews](#)

Aydogan Ozcan's cell phone doubles as AIDS detection lab



[Interviews](#)

Jay Giedd on whether humans use only part of the brain



EarthSky
COMMUNICATIONS, INC.

How to best engage the public

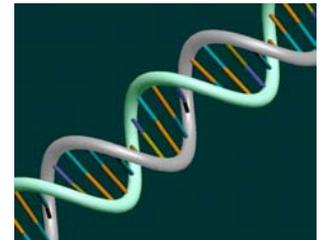
1. Tell a compelling story
2. Inspire us
 - Don't be modest!
3. Show your personality
4. Tell why your work is relevant
 - Why should the audience care?
 - Why should the audience pay attention?
5. Have fun!



Can 90 seconds of science make a difference?*

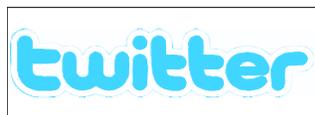
- Over a decade of independent media evaluations confirm Earth & Sky's 90-second shows are an effective learning tool for science literacy
 - 90% of listeners report learning from the series, and enjoying hearing scientists talk about their work
 - 90% of listeners report that Earth & Sky podcasts motivate them to take further action
 - Discuss a topic
 - Learn more about science

*Informal Science Learning Review (Dec, 2005)



Emerging Communication Trends & Social Media

- More people now than ever use the Internet to share ideas
- New platforms accommodate a diversity of interests
 - Social networking
 - Photography
 - Blogs
 - Video
- Viral nature of platforms push trends, ideas, and topics quickly to a wide audience



EarthSky Social Media

- Twitter
- Facebook
- YouTube/
iTunes
- Flickr

The screenshot shows the Flickr interface for the "EarthSky: A Clear Voice for Science" group. The page features a navigation bar with "Home", "The Tour", "Sign Up", and "Explore". Below the navigation, the group's name and member count (88 Members) are displayed. A "Group Pool" section shows a grid of 12 photos, each with a caption indicating its source (e.g., "From mikebaird" or "From Iowa Eyes"). A recent post from a group admin is visible, along with an "About EarthSky" section and "Additional Information" regarding group rules and accepted content types.

You will find EarthSky on



facebook®



myspace.com™
a place for friends



digg



flickr

- BlogBurst.com
- Digitalpodcast.com
- PodNova.com
- Everypodcast.com
- Folcast.com
- Podnanza.com
- Podbean.com
- Podcastdirectory.com
- Podcastalley.com
- Podcast.com
- Podfeed.net
- PublicRadioFan.com
- Odeo.com
- Odigo.com
- TruMix.com
- Podcastpickle.com

Conclusions

- **Invest in education and outreach**
 - There are no shortcuts
 - Be results oriented
- **Effective outreach is multiplatform**
 - Digital media
 - Broadcast media
- **Connect**
 - Understand your audience
 - Provide what's relevant to them
 - Be personable
- **Effective education and outreach generates goodwill and support**
- **EarthSky can help!**





Jorge Salazar

Senior Producer

jsalazar@earthsky.org

earthsky.org

espanol.earthsky.org

facebook.com/EarthSky

twitter.com/earthskyscience

512-477-4441 (V)

512-426-5904 (C)