



Courtesy of Apogee Books

Randall CHAMBERS

Human Factors Engineering
Wichita State University

2011 **SCIENCE in KANSAS**
150 years and counting

Randall CHAMBERS 1927-2007

- From 1958-1974, was a NASA Chief Life Scientist and project director for acceleration research and astronaut training for the Mercury, Gemini and Apollo programs.
- This work was a cornerstone of the U.S. space program. Very little was known about space in the 1950s. He and his team had to create the space experience for astronauts, both physical and mental. They designed and tested training gear like the centrifuge themselves before the astronauts even set foot in them. This was dangerous work.
- Their findings were used to design the training program, the control panels, space suits and the space capsule.
- In 1988, he became a Distinguished Professor of Industrial Engineering at WSU. He also continued human factors research.

EXTRA COOL: Co-wrote a book "Getting Off the Planet" about being a NASA scientist.

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Kansas Sesquicentennial 2011



Courtesy of KSU Photo Services

DAN DEVLIN

AGRONOMY

Kansas State University



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Dan Devlin current

- Grew up on a farm in Smith County. Earned degrees in agronomy at KSU.
- Most of his research centers on protecting water quality. Sediments, waste bacteria, fertilizer and pesticides are big concerns in surface water; nitrogen and salts in groundwater.
- He is also concerned with water quantity. The Ogallala Aquifer is a large shallow underground water reserve located underneath eight Great Plains States, including western Kansas. It is the main source of water for this region. This water is being drawn out faster than it is being replenished. Devlin is part of a team project to find new conservation technologies, irrigation methods and farm practices to preserve this essential aquifer.
- People in the eastern and urban parts of Kansas may not realize it, but waters and runoff from agricultural lands affect the water quality of the lakes and rivers across the state, according to Devlin.

EXTRA COOL: He has traveled to Belarus, Costa Rica, Russia and France to work with people on soil conservation and water quality in their countries.

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Photo courtesy of Gisela Dreschhoff

Gisela DRESCHHOFF

Solar Physics
University of Kansas

2011 **SCIENCE in KANSAS**
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Gisela DRESCHHOFF current

- Her work on the effects of radiation on matter led to her being a pioneer woman scientist in polar regions. Since 1976, she has been in 20 expeditions.
- For ten summers in Antarctica, working from a helicopter, she and her team used an instrument called a gamma ray spectrometer to measure radioactive elements radiating from exposed rocks to look for uranium. Also, to measure cosmic ray radiation filtering into the atmosphere from space.
- Sunspot activity follows an 11-year cycle. In between unexpected gigantic eruptions of charged particles (ions) occur. In a project for the U.S. Air Force, she has studied ice core samples and the cosmic radiation history trapped in them to help understand this solar activity. This data may help predict what radiation might be encountered on a trip to Mars.
- Her work also includes geology as she studies the effect of solar activity on our Sun-Earth system.

EXTRA COOL: A mountain in Antarctica, Dreschhoff Peak, is named for her.

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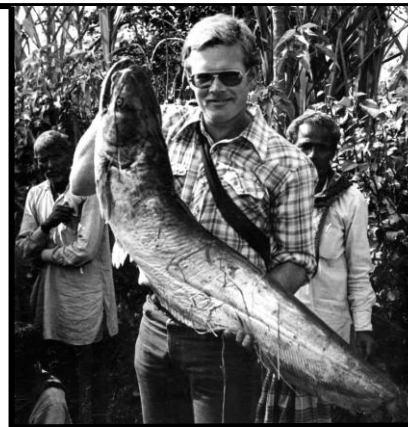


Photo courtesy of David Edds

David EDDS

Biology
Emporia State University

2011 **SCIENCE in KANSAS**
150 years and counting

David EDDS current

- Graduated from Independence High School and Independence Community College. Earned biology degree from KU.
- At ESU, he studies how human activities affect aquatic systems like rivers and lakes. One focus is ichthyology (the study of fish).
- Was a Peace Corps volunteer at fisheries in Nepal in the 1970s. Returned several times to the Himalayas, once for National Geographic. Collected over 150 different fish species. Several were catfish new to science. Two fish species have been named for him.
- Catfish live worldwide except for Antarctica. There are nearly 3,000 species and many sizes (see photo). They can range from 2-3 in. long to 10 ft. and 650 lbs.
- Also does research in Kansas on threatened aquatic species like northern map turtles, mussels and the Neosho madtom catfish.

EXTRA COOL: In the 1870s his great-great-grandparents homesteaded five miles from the real Little House on the Prairie.

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