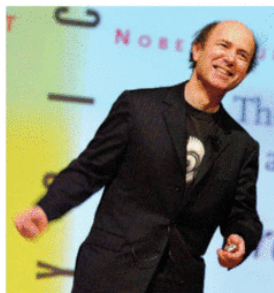


SCIENCE NOTEBOOK

Scientific Observations

“Many of us are interested in the question of is there life in the universe, and a smaller number are interested in the question of whether there is intelligent life in the universe. The striking observation so far is that there’s deafening silence. A civilization that got the jump on us by a few thousand years, in our galaxy, you would have thought could have an advanced technology that would be visible if they made a big activity. There’s no sign of it.”



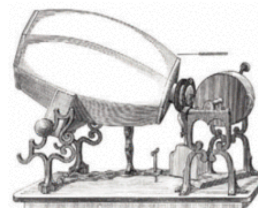
NOBEL LAUREATE AND PHYSICIST FRANK WILCZEK, ON APRIL 3 AT THE ORIGINS SYMPOSIUM AT ARIZONA STATE UNIVERSITY IN TEMPE

SN Online

www.sciencenews.org

TECHNOLOGY

Historians unveiled the first recordings – imprints made by a phonograph (illustration below) 20 years before Edison invented the phonograph. Visit “Earliest known sound recordings revealed” for audio and story.



BODY & BRAIN

Despite their hefty size, professional football players have pretty good overall cardiovascular health, a new study finds. The assessment turned up one exception, though: These athletes have higher blood pressure, on average, than nonplayers. Read “NFL heart profile good, with a caveat.”

Science Past | FROM THE ISSUE OF JUNE 20, 1959

MECHANICAL COW EATS GRASS – A mechanical “cow” has just started work at the British Agricultural Research Council’s experimental station at Rothamsted, near London. Its function is to extract protein from leaves or grass or any suitable vegetation.... Grass or other vegetation is fed into the machine from a normal elevator. After being chopped, the grass enters a press and the juice is squeezed



out of it. This juice, which contains the bulk of the protein and barely any cellulose, is then treated with steam to precipitate the protein. When the protein is made solid by the precipitation, it requires only a filtering to separate the protein from the unwanted juice. With a few minutes the “cow” has produced solid, cake-like protein from vegetation and, what is more important, has collected at least 50% of the protein in the leaves.... The protein cake then goes to [Scotland] where it is used in experimental feeding of pigs.

Science Future

June 26

Attend or watch the webcast of “Iron Science Teacher” at the Exploratorium in San Francisco. Visit www.exploratorium.edu/iron_science

July 19–26

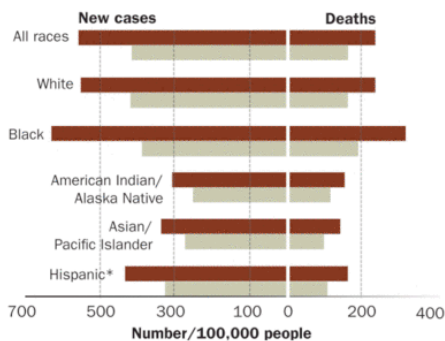
Plumb the depths of cave science at the 15th International Congress of Speleology in Kerrville, Texas. Find out more at www.ics2009.us

August 10–13

Scientists discuss the largest U.S. waterway at the Visions of a Sustainable Mississippi River conference in Collinsville, Ill. See www.conferences.uiuc.edu/mississippiriver

Science Stats | U.S. CANCER RATES

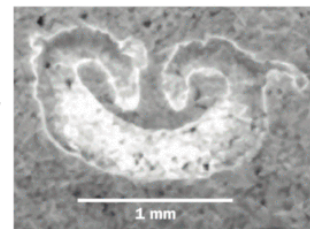
Rates of new cancer cases and deaths in the United States by race, ethnicity and sex, 2001–2005



*Hispanic is not mutually exclusive from all other race groups
SOURCE: CDC

The (-est)

A nodule unearthed from 300-million-year-old rocks in Kansas holds what scientists believe is the oldest fossilized brain, that of an ancient cartilaginous fish (illustration, top) related to modern-day ratfish. Individual slices imaged with X-ray tomography reveal an exceptionally preserved brain (frontal view shown). Microbial action inside the dead fish’s skull, as well as anoxic conditions there, may have triggered chemical changes that led to mineralization of the brain and some major nerves, researchers in the United States and France report in the March 31 *Proceedings of the National Academy of Sciences*.



CLOCKWISE FROM TOP LEFT: JUSTIN KNIGHT PHOTOGRAPHY; WWW.FIRSTSOUNDS.ORG; PHILIPPE JANVIER, PRADEL ET AL./PNAS 2009; PRADEL ET AL./PNAS 2009