Swarm!
The New Science of Crowds Reveals How Fish, Birds—and Humans—Move in Mobs

Ice That Burns
Harvesting the Next Big Energy Source

The First Animal Ever?
Meet Your Ancestor: the Shape-Shifting Blob

Secrets from the Cave
What a Stalagmite Can Tell Us about Our Past
Smart Wheelchair for Babies and Tots

Robot-enhanced device offers mobility for children with special needs

TECHNOLOGY  Crawling and walking are ways babies learn about their world, but children with cerebral palsy, spina bifida and other disorders that affect mobility miss out on this important type of independent exploration. Now, researchers at the University of Delaware, with funding from the National Institutes of Health and the National Science Foundation, are aiming to give those early freewheeling experiences to special-needs kids, with the first power wheelchair designed for children ages six months to three years. Until now, researchers have been cautious about offering young children too much mobility for fear they would hurt themselves. So physical-therapy professor Cole Galloway and mechanical engineer Sunil Agrawal designed their prototype with sensors to detect and navigate around obstacles, or let kids bump into them safely. The second-generation model, called UD2, can also give control to an adult by a remote device. UD2 is being tested at the university's Early Learning Center, where researchers are studying how the enhanced mobility provided by the chair affects kids' social behavior.

Electric Fish Make Magic

BIOLOGY  Could electric signals emitted by some fish be a "magic trait"? Evolutionary biologists coined the whimsical term to describe a trait that helps find both food and a mate—that is, one that changes within populations to exploit ecological niches (i.e., food choices) and is used by individuals within those divergent populations to determine mate choice. Such dual-function traits may drive the emergence of some new species. Last year, a research team from several European institutions showed that male African weakly electric fish prefer males who produce the same signals as they do. These signals are also used in a process called electrolocation to find food. Because the females will choose mates based on the shape of the males' zaps, the so-called electric organ discharges have facilitated the rapid emergence of different species of electric fish, says Philine Feulner, the lead researcher and a biologist at the University of Sheffield in England, making the signals a possible magic trait.

FLASH!  Humans were using fire to refine stone tools at least 72,000 years ago in Africa, according to a new study by an international research team. The finding pushes the first known use of pyrotechnology back by 45,000 years.