Books

A selection of new and notable books of scientific interest

BACKYARD PETS: Activities for Exploring Wildlife Close to Home

CAROL A. AMATO

With the activities detailed in this guide, children discover how different species of fireflies communicate and how snails eat. They also learn how crickets sing and how to make a pizza for a bird. All this and more can be accomplished by observing animals both in captivity and in the wild, writes Amato. She gives instructions for how to capture, care for, observe, and reintroduce slugs, caterpillars, crickets, and worms to the wild. Background information and instructions for backyard investigations help young readers understand the life cycles and habits of the creatures around them. ***Wiley, 2002, 124 p., b&w illus., paperback, $12.95.***

BAD ASTRONOMY: Misconceptions and Misuses Revealed, from Astrology to the Moon Landing "Hoax"

PHILIP PLAIT

At the moment of the vernal equinox, it is possible to stand an egg on end and have it balance perfectly. By Plait's estimation, about half the U.S. population has either tried this or heard this misinformation. He sets the record straight on this matter and scores of other such misconceptions about Earth and sky, such as that stars can be seen in the daytime from the bottom of a well. Moreover, Plait's examination of faulty astronomy allows him to explain why astrology doesn't work, how small meteorites turn cold by the time they hit the ground, and what ideas are behind our understanding of the Big Bang. ***Wiley, 2002, 277 p., b&w photos/illus., paperback, $15.95.***

EL NIÑO: Unlocking the Secrets of the Master Weather-Maker

J. MADELEINE NASH

A few years ago, El Niño was big news. This occasional, disruptive warming of Pacific waters affected weather patterns around the globe, causing unusual snowfall in Mexico and a lake to form in the middle of the Sechura Desert. More importantly, El Niño killed hundreds of people by setting off landslides in Ecuador, flooding villages in Kenya and Somalia, and triggering tornadoes and snowstorms in the United States. Nash, the former senior science correspondent at *Time*, relates events of this powerful El Niño and reports what scientists are now finding about its meteorological impact. Remarkably, it's been only within the past few years that meteorologists have realized how tightly El Niños are linked to weather patterns. Nash's book is bursting with new data, but personalized accounts from survivors of the phenomenon's devastation help put El Niño's strength into perspective. Nash writes that an El Niño "turns dry places wet, wet places dry, cold places warm, and warm places cold." ***Warner, 2002, 340 p., hardcover, $25.95.***

POLITICAL NUMERACY: Mathematical Perspectives on Our Chaotic Constitution

MICHAEL I. MEYERSON

How do the logical paradoxes revealed in Kurt Gödel's incompleteness theorem explain Kenneth Star's investigation of President Clinton? How does chaos theory provide insight into rulings handed down by the Supreme Court? Meyerson reveals answers to these questions by examining the Constitution and our laws through the lens of modern mathematics. While most people wouldn't compare politics to mathematics, Meyerson proves that parallels between the two fields are many and that math influences government. He considers, for instance, how the Electoral College functions. Even before the 2000 presidential election, many people judged this method for electing our leaders as severely flawed. However, Meyerson's mathematical analysis of other methods of election shows them to be flawed as well and in fact indicates that our current system is as good as possible. Meyerson explains how the game theory of John Nash—the mathematician whose life is depicted in the current movie *A Beautiful Mind*—can help clarify some political issues unfolding today. ***Norton, 2002, 287 p., hardcover, $24.95.***

SYNAPTIC SELF: How Our Brains Become Who We Are

JOSEPH LEDOUX

In LeDoux's last book, *The Emotional Brain*, he discussed the biological foundation of memory and emotion. In *Synaptic Self*, he picks up where he left off and explores the biological mechanisms by which the brain makes the self. LeDoux provides a primer in brain science, illustrating how the transmissions between brain neurons create and maintain personality. The synapses between neurons, he believes, are not only the means by which we think, act, imagine, feel, and remember, but are also the places where combinations of these processes create memory. Synapses are responsible for encoding the essence of the individual, which allows each of us to be the same person from minute to minute and year to year. Nurture and nature both influence our synapses and ultimately construct our personality, LeDoux writes. The author doesn't argue with people who say that the self is psychological, social, moral, aesthetic, or spiritual—rather than neural—in nature. Instead, he attempts to ground these ways of understanding the self in a neurological framework. LeDoux makes clear he's offering only is a working hypothesis, but he presents it ably. ***Viking, 2002, 406 p., b&w illus., hardcover, $29.95.***

LETTERS

Rough treatment

Shame on you. "It's a rough world" (*SN: 2/2/02, p. 75*) on the importance of fractals in earth sciences never mentioned the "father" of fractals, the Polish-French scientist Benoit Mandelbrot, nor Christopher Scholz, the solid-earth scientist of Columbia University who first recognized the importance of Mandelbrot's mathematical genius.

EUGENE C. BOVEE, LAWRENCE, KAN.

Odor readers

My olfactory sense was alerted while pregnant but stayed on guard ("Women whiff men in sniff proficiency," *SN: 2/16/02, p. 110*). After 7 years, it's sharper than ever. I can smell the minutest scents, which means my taste buds are equally sensitive. In some ways, it's a blessing, but I end up smelling more than I want to: men too interested in me, a married woman, unwashed clothes and bodies, not to mention bad breath. Smokers on the sly hide nothing from me, and no restaurant can claim a fish dish is fresh when it isn't.

PHYLLIS A.S. KOCH, DECATUR, GA.

I have always been extremely sensitive to perfumes used by men and women. On the other hand, I can barely make out some smells that others can't stand, like skunk. Based on this, I must assume that the smell sense varies so much that, translated to words we use for sight, people are blind in ranges of the spectrum that are perfectly visible to others, and vice versa. It's not a case of being smell deficient but selective as to specific odors.

HEINZ GF. MATUSCHKA,
COLORADO SPRINGS, COLO.

Dropped the ball?

You missed the papers that describe our experiments that produce ball lightning in our lab ("Anatomy of a lightning ball," *SN: 2/9/02, p. 87*). We use a lightning-arc–producing apparatus.

CLINT SEWARD,
ELECTRON POWER SYSTEMS, ACTON, MASS.

The ball-lightning article makes no mention of Nicola Tesla's creation of ball lightning while generating megavolt discharges from gigantic Tesla coil arrays.

TED V. POWELL, BALDWIN, N.Y.

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