

ward you, then poof—he'd morph into a dewy-eyed doe or a slithery snake or even a small person. I mean tiny. Michael J. Fox tiny. Imagine if you could change your looks at will. You'd leave a few descendants in your wake, know what I mean? Talk about a social life.

Neandertals were a clannish bunch, though. They'd assume various disguises to carry on with modern humans and then go back to their homes. They still come out from time to time, usually en masse and always in disguise. The munchkins in the *The Wizard of Oz*? Neandertals. British soccer fans at the last World Cup matches? Neandertals. All the contestants except for Miss Paraguay in the 1996 Miss Universe pageant? Yup.

**That's shocking. No wonder I rooted for Miss Paraguay. Do you have any revelations about who first settled in the New World?**

*Homo erectus* used to visit the New World all the time. Hawaii, too. They were party animals. Calmed down just long enough to build and repair their pleasure rafts, then they shoved off on their party cruises with their fermented berries and those perpetu-

ally depraved grins on their faces. Never stayed in one place long enough to leave a trace. They were shameless name-droppers, too. I knew an *erectus* woman who always managed to mention having summered in the Aleutian Islands with her dear friends, the *Homo sapiens*. She was so pretentious.

**As a living embodiment of our evolutionary past, what do you think about the decision in Kansas to take evolution out of the curriculum?**

Forget about teaching. We need to ban evolution, period. It'll drive by in a red convertible and offer you a lift with a flirty smile, then bust your chops and leave you for road-kill. Evolution makes trial lawyers and Hollywood agents seem burdened by conscience.

I've seen species come and go, and believe me, each one thinks it's the last of the line, the best of breed, the big winner in the Evolutionary Clearinghouse Sweepstakes. But when the Prize Patrol van pulls up to your driveway, lock your door, baby. Those are members of a new species at the wheel, and they're about to take measurements for your glass-eyed, stuffed stand-in at a museum of natural history "Meet the Ancestors" exhibit.

**With a new millennium about to dawn, do you have any words of wisdom to pass on?**

Well, here's some practical advice. Never stand downwind from a woolly mammoth. If monkeys throw dung on you from the trees, ignore them and walk on the other side of the savanna. With the passing of every few moons, clean your clothes by beating them against a flat rock in a clear stream, even if their smell helps to drive away predators at night. Try not to blurt out, "I don't get it," when the neighbors show you their new cave paintings.

But really, why get so worked up about one measly millennium going down the tubes? Humanity just keeps stumbling along as it has for hundreds of millennia. We keep changing, and somehow we stay the same.

**Only I have a bigger brain than you do.**

It matches your bigger ego. But I've got all the punch lines, don't I? As funnyman—or is he funny Neandertal?—Steve Martin once said, "Comedy isn't pretty." Neither is evolution, my good man. □

## Notes from the authors

### Myriad Monsters Confirmed in Water Droplets, page iv

All the events included in this article are part of the historical record. Leeuwenhoek and Hooke wrote before the invention of scientific jargon, so the quotations were taken directly from their many letters. Leeuwenhoek had a draughtsman draw the animalcules pictured, years later recognized as sperm, for a letter in 1700. Portrait courtesy of the National Library of Medicine. —S.M.

### With new vaccine, scientist prevents rabies in boys, page iv

Every event described in this article happened, and every quotation was really said or written by the people quoted. Portrait from *L'Illustration*, 1895. —N.S.

### Gravity tugs at the center of a priority battle, page v

Nearly all the quotations used or paraphrased in this news report of the circumstances surrounding the publication of the *Principia* are authentic, though the timing and attribution of certain remarks were altered. Portraits courtesy of the Smithsonian Institution. —I.P.

### A million healing words flow from compendium, page vi

Historical accounts note that Ibn Sina—better known in the Western world as Avicenna—began working on the canon, his most famous work, in 1012. The text is assumed to have taken about a decade to complete because this vizier-cum-nomadic clinician alternately served as a local ruler or camped with warring troops that sponsored him. All quotes have been manufactured but convey the flavor of the historical accounts. Physicists Al-Haytham and Al-Biruni were both renowned contemporaries of Ibn Sina, and Al-Biruni corresponded with him. Portrait of Ibn Sina by Robert Thom (1953). Illustrations courtesy of the National Library of Medicine. —J.R.

### Messy pilgrims blamed for puzzling fossils, page vi

Voltaire made his suggestion in 1746, and his quote is real. Although he was sentenced to prison several times in his life for his writings, it isn't known whether this suggestion raised the royal ire. The Comte de Buffon did quarrel with Voltaire regarding his suggestions but probably did not use the words quoted here. Lister, Scheuchzer, and Leonardo all made the arguments presented in this article, and the quote from the PHILOSOPHI-

CAL TRANSACTIONS is real. Leonardo wrote his notebooks in reverse handwriting, unreadable without a mirror, and they were lost for centuries. His notebook called the *Codex Leicester* was purchased in 1994 by Bill Gates, who put it on public display and made an electronic version available. —R. de M.

### Danish astronomer argues for a changing cosmos, page vii

Tycho Brahe, the father of modern astronomy and a key figure in the Danish renaissance, was born into a noble family in 1546. All the events in the story are historically accurate. Portrait courtesy of the Smithsonian Institution. Table courtesy of the Library of Congress. —R.C.

### Weights make haste: Lighter linger, page vii

In popular lore, Galileo Galilei (1564-1642) dramatically refuted Aristotle's laws of motion by dropping unequal weights from the Leaning Tower of Pisa. In the scientist's extensive writings, however, he never claimed to have conducted that experiment. Galileo hasn't been noted to say, as quoted in the story, that he meant to conduct the same trial as Coresio. All the other quotations and descriptions of experiments are genuine, although they do not all date from the time of Coresio's test. The arguments attributed to Galileo and to Stevin reflect their attitudes and experiences but not their actual words. —P.W.

### Imagine that: Animal magnetism exposed, page viii

Quotes attributed to Benjamin Franklin and Cervase of Tilbury came from Bruce Bower's imagination. Everything else did not. —B.B.

### Monk learns secrets of heredity from pea plants, page viii

Mendel's statement that the world will one day recognize his work comes from a quote attributed to him in 1884. The other quotation from Mendel comes from his 1866 paper on pea hybridization. Mendel sent copies of the paper to Von Nägeli, and they corresponded at length. Von Nägeli's hawkweed suggestion is infamous among geneticists because the plant reproduces asexually. As a result, Mendel was unable to repeat his pea work with hawkweed and eventually abandoned the research to concentrate on his duties as abbot at the monastery. —J.T.