

## This Week

- 356 Sooty Air Cuts China's Crop Yields  
*Janet Raloff*
- 356 One down: A human chromosome sequenced  
*John Travis*
- 357 The best Leonid show is yet to come?  
*Ron Cowen*
- 358 Vibrations flit along water's fast lane  
*Peter Weiss*
- 358 Mutation causes rare gum disease  
*Nathan Seppa*
- 359 Gill net changes can prevent bird drownings  
*Susan Milius*
- 359 Gene may alter Ritalin's effects in ADHD  
*Bruce Bower*

## Articles

- 360 The Killing Fields  
What robbed the Americas of their most charismatic mammals?  
*Richard Monastersky*
- 362 Kill the Messenger  
Scientists are testing toxins that destroy the nerve cells that convey pain  
*John Travis*



**Cover:** Imperial mammoths once roamed the site of modern Los Angeles and left their bones in the famous La Brea tar pits (shown here). Scientists are trying to determine why this species and more than 100 others disappeared from North and South America after the end of the last ice age. **Page 360** (Photo: George C. Page Museum)

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## Letters

### More big, weird flowers

As a follow-up to the article "The science of big, weird flowers" (SN: 9/11/99, p. 172), we in Sarasota were treated to two *Amorphophallus titanum* blooms in May of this year. The two blooms matured about a week apart. Pollen from the first was used to fertilize the second bloom. The fruiting spadix now carries about 220 bright orange berries. I believe this successful pollination of captive *A. titanum* is a first and worthy of scientific acclaim. For those who missed the bloom of these rare flowers, the photography, art, and video exhibit "Drop Dead Gorgeous" will be on display in November at the Selby Gardens.

*Leonard Sloan  
Sarasota, Fla.*

### Say again, Dave?

I noted the quote by Hans Thomas in the article "Smart robot orbs to aid space crews" (SN: 9/25/99, p. 197): "Hopefully, we'll be able to figure out how to keep the programs from getting paranoid," he chuckles.

For fans of Sir Arthur Clarke's book *2001: A*

*Space Odyssey*, the means to keep intelligent computers from becoming paranoid is easy—simply don't lie to them. The defect in the HAL 9000 computer was not intrinsic to how the computer was constructed or programmed. The problem came out because of an intentional falsehood in its input data regarding its mission. In the story, the duplicate Earth-based computer, which had an accurate data set, did not break down as HAL did. There is a moral to be drawn from this, which programmers of real computer systems should pay attention to.

*Robert Cairone  
Crystal Lake, Ill.*

### The trouble with frogs

In "Thyroid linked to some frog defects" (SN: 10/2/99, p. 212), Douglas Fort reports that the water associated with certain specific frog deformities contained propylthiourea. I am not surprised that water containing propylthiourea may interfere with aspects of frog development that are mediated by thyroid function. Propylthiourea is closely related to propylthiouracil, which is one of the

main drugs used to treat hyperthyroidism. This drug and related compounds work by inhibiting the synthesis of thyroid hormone. I'm sorry to learn that besides flooding the environment with phytoestrogens, we are also exposing ourselves to antithyroid compounds. I wonder what will be next.

*Robert Richards  
Louisiana State University  
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New Orleans, La.*

I'm relieved knowing that scientists are still working on this mystery. I still think this is a warning sign of some sort. Whether it is water pollution, air pollution, ozone—we need some answers before it affects us.

*George R. Lewycky  
Milltown, N.J.*

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