

# SCIENCE NEWS®

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## Letters

### Stuck on sweets

I have a theory that may help to explain why we all want sweet things as much as we do ("Valentine Bind," SN: 2/15/92, p.110).

I've noticed that foods that are really ripe, really fresh and of good quality are sweeter than those that are not ripe and have lost their freshness (though they may be perfectly fine to eat). This goes not just for fruit, where we expect it, but for such diverse things as seafood, eggs and especially vegetables, even ones we don't think of as being sweet, such as string beans, broccoli or squash.

You get better food value from edibles that are in peak condition, and if sweetness is a clue to their excellence, then that may explain why we like a sweet taste better than a blah or bitter taste.

Sally Campbell  
Cold Spring Harbor, N.Y.

Some years ago, Peter Johnson (then of the Monell Chemical Senses Lab in Philadelphia)

### This Week

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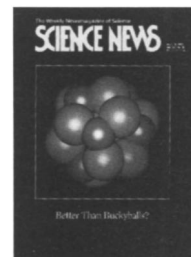
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Cover: Chemists strive to find new ways to link atoms together. This computer image shows a serendipitous success: a new, hollow molecule consisting of 12 carbon and eight titanium molecules. Its discoverers say these cage-like molecules may have at least as much potential for practical applications as buckyballs. (Illustration: Baochuan C. Guo, Kevin P. Kerns, A. Welford Castleman Jr./Penn State)



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and I wondered if plants had ever developed a means to fool hummingbirds with an artificial sweetener. From the plant's "perspective," this would free up sucrose that could go into seeds, stems or some other means of survivorship or breeding. Hummingbirds, on the other hand, depend so heavily on the energetic content of nectar that they had better be able to detect sucrose and not some cheap imitation.

So we did some experiments with black-chinned hummingbirds. The birds preferred sucrose-sweetened liquids — the sweeter the better. They also chose 20 percent sucrose solutions over those sweetened by artificial sweeteners or those thickened with substances other than sugar. They appear to have sucrose detectors, not sweetness detectors (THE CONDOR 92:606-612).

I am amazed that more folks don't use hummingbirds to assay sweetness. They have extremely sensitive and apparently fool-resistant (not foolproof) abilities to detect sucrose. If ever there was a system the food industry should examine in detail, it should be the

hummingbird/flower-nectar system. I would be very surprised if there were not several natural artificial sweeteners, which don't cause cancer, in tropical flowers pollinated by hummingbirds.

Mark R. Stromberg  
Resident Manager  
Hastings Natural History Reservation  
Carmel Valley, Calif.

### Uncle Sam wants yew

Taxol, derived from Pacific yew (*Taxus brevifolia*), has been written up in several medical publications as a very promising breast cancer therapy ("The Adjuvant Advantage," SN: 2/22/92, p.124). It is, however, in short supply. I can see future stands of yews growing on government-protected roadsides. With a little paint, highway workers could recycle available signs: "Your Government Taxus at Work."

Devin J. Starlanyl  
West Chesterfield, N.H.

APRIL 18, 1992

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