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## This Week



## Research Notes



## Articles




Cover: Saponins, a family of compounds native to many plants, show an impressive array of health benefits when consumed in fruits and vegetables. The cover photo shows the saponin-rich plant *Siraitia grosvenorii,* used by Chinese chefs to sweeten food. (Illustration courtesy of A. Douglas Kinghorn/University of Illinois at Chicago)



## Departments





# Letters

### Shedding more light on rhythms

"Lighting up Biological Clocks" (SN: 8/12/95, p.108) says that Woodland Hastings in 1958 found a circadian rhythm in *Gonyaulax polyedra.* Beatrice Sweeney had already published this observation in 1955. After hearing Sweeney present this work, Hastings came to work in her lab on her cultures of *Gonyaulax.*

*Helen G. Hansma*
*Associate Research Biologist*
*Barbara Prezelin*
*Professor of Biology*
*University of California*
*Santa Barbara, Calif.*

*In 1955, Sweeney reported a circadian rhythm in the algae in darkness, but the rhythm died out. In 1958, Hastings reported that the algae maintained a rhythm indefinitely under constant dim light—not constant darkness, as the article states.* — J. Travis

### River ridges

I have puzzled over such phenomena as sand ridge creation ("Off the Beach," SN: 8/19/95, p.120) myself as I've traveled about as a yacht captain.

The bottom of the Columbia River near Portland, Ore., has the same sort of surface. Most yachts nowadays are equipped with color depth sounders which have a scrolling display, showing the past minute or two of bottom contour. Although the river is only 25 to 40 feet deep, the bottom contour appears as a dramatic sawtooth shape with very regular peak-to-peak intervals and a difference of as much as 4 feet from peak to valley. This condition occurs in various places in the river but especially from the Interstate 205 bridge westward about 5 miles.

If the source of this effect is essentially the same as the ocean shore ridges, which are wider apart, it might serve as a test bed for investigation. The river flow speed and depth vary seasonally, so if the bottom is soft, the peak heights and spacing might also vary seasonally.

*Norman Dahl*
*Jupiter, Fla.*

### Gravitational causes of clusters?

"Speeding into coordinated movement" (SN: 8/19/95, p.117) made me wonder if this could explain galactic clusters and other nonuniform mass distributions in space. The sentence "every particle assumes the average direction of motion of the particles in its immediate neighborhood, modified by a small, random perturbation" sounds a lot like gravitational effects on a mass in space exerted by other, nearby masses.

The young universe would resemble the high-noise, high-density illustration in the article and would evolve to resemble the low-noise, low-density illustration. The clumps shown look a lot like galactic clusters.

*Dan Wilder*
*Port Orange, Fla.*