

## DISPATCHES FROM THE FRONT LINES OF SCIENCE AND INNOVATION

## Nature's tastemaker

By studying petunias, biochemists at Purdue University have unlocked the process that forms benzaldehyde, the second most used compound in the flavor industry. The discovery could lead to all-natural versions of popular flavorings and aromas, including almond and cherry. -HICKS WOGAN



North Pole Moscoviense Lunar Orbiter 3 U.S., 1967 Lunar Orbiter 1 LADEE Orbiter 2 U.S., 1966 Impact U.S., 2014 U.S., 1967 search area. EQUATOR Lunar Orbiter 5 Hertzsprung U.S., 1968 Ranger 4 U.S., 1962 Mare Orientale FAR SIDE OF THE MOON Landing or crash site 300 mi South Pole 300 km SPACE EXPLORATION

from liberal harvesting

Shells suffer

BIODIVERSITY

Horse conchs, America's largest sea snails, are at higher risk of extinction after a century of unregulated harvesting of their shells, a new study finds.

Using chemical isotopes from conch shells to gauge age and reproductive maturity, scientists found that females spawn late in life. Overharvesting could cost many that chance.

Though the horse conch is Florida's state seashell, gathering it there isn't limited—a step that could help save it, says study author Gregory S. Herbert. -CYNTHIA BARNETT

## LUNAR TRASH LANDING

A BUS-SIZE HUNK OF SPACE JUNK HIT OUR MOON. PINPOINTING THE LOCATION IS NO SMALL FEAT.

Pow! When a wayward chunk of space junk slammed into the moon's back side on March 4, it was blown to smithereens while adding a fresh crater to an already considerable collection. We know that much because space-watchers could track the errant rocket booster with enough precision to predict its final resting place: Hertzsprung crater. But precisely where the space trash crashed in that 354-mile-wide pockmark wasn't immediately clear. Of the few spacecraft circling the moon, one well suited to search-NASA's Lunar Reconnaissance Orbiter-could take up to 12 months to find a new gouge estimated to be between 16 and 98 feet wide. As lunar exploration revs up, experts see a need for better tracking of objects in deep space and regulations for disposing of used rocket parts. "At some point in the future, an event like this isn't just going to be a curious thing to observe," says space archaeologist Alice Gorman of Australia's Flinders University. "It's going to be something which people in lunar orbit or on the surface of the moon are going to be really worried about." - NADIA DRAKE

