

INFORMATION CENTER: Read All About it!

This
Month:

Space Junk

Orbital debris is not a dental problem. Also known as space junk, this is what we call all the wayward, manmade objects in low Earth orbit, the remnants of 65 years of space exploration. And there's nowhere to dump the stuff! Let's learn more!

➤ So what exactly is floating around up there? The list includes abandoned satellites and the remains of spacecraft and mission operations, nuts and bolts, lens caps, momentum flywheels, clamp bands, auxiliary motors, launch vehicle fairings and adapter shrouds. You know, the usual garage sale stuff.

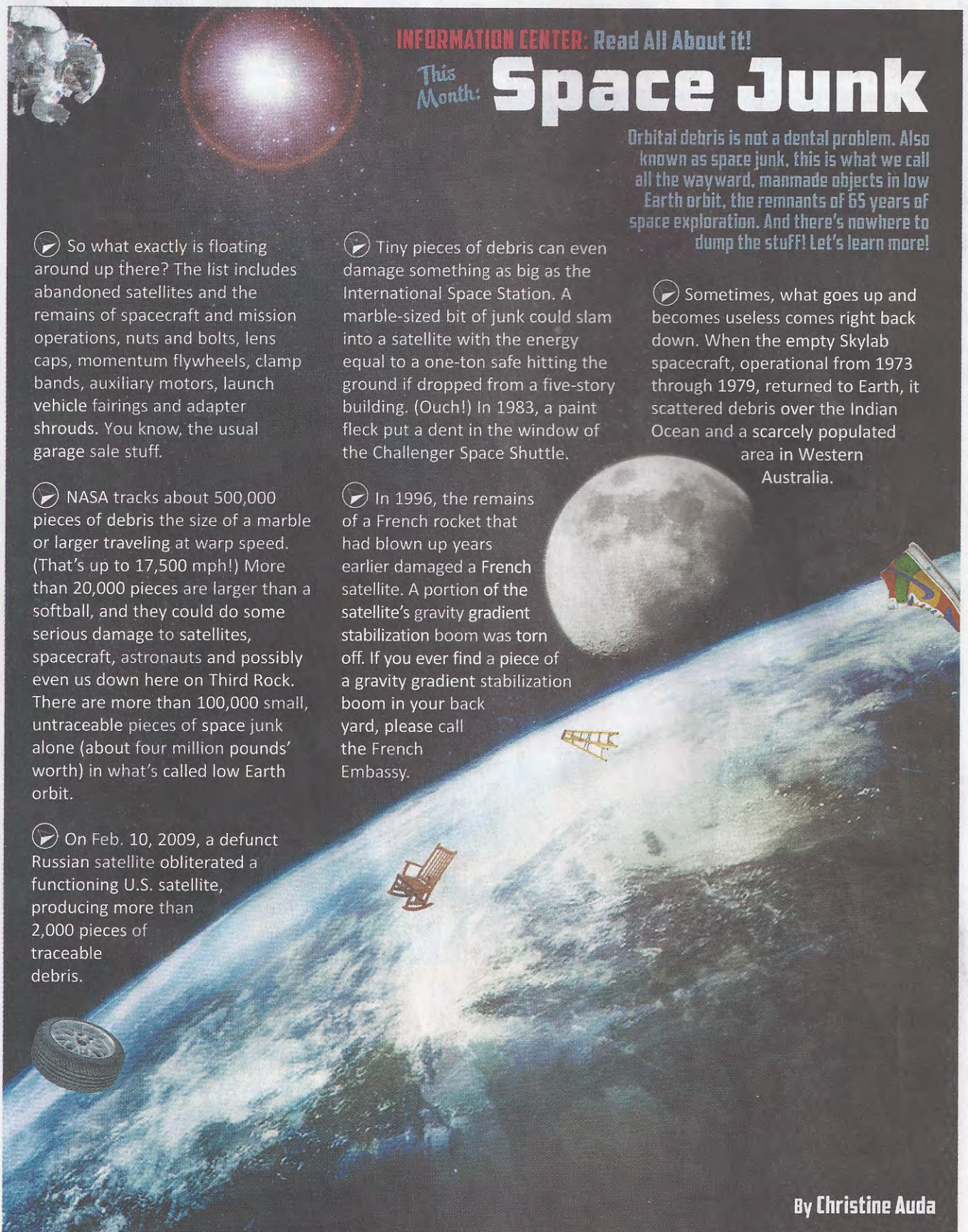
➤ NASA tracks about 500,000 pieces of debris the size of a marble or larger traveling at warp speed. (That's up to 17,500 mph!) More than 20,000 pieces are larger than a softball, and they could do some serious damage to satellites, spacecraft, astronauts and possibly even us down here on Third Rock. There are more than 100,000 small, untraceable pieces of space junk alone (about four million pounds' worth) in what's called low Earth orbit.

➤ On Feb. 10, 2009, a defunct Russian satellite obliterated a functioning U.S. satellite, producing more than 2,000 pieces of traceable debris.

➤ Tiny pieces of debris can even damage something as big as the International Space Station. A marble-sized bit of junk could slam into a satellite with the energy equal to a one-ton safe hitting the ground if dropped from a five-story building. (Ouch!) In 1983, a paint fleck put a dent in the window of the Challenger Space Shuttle.

➤ In 1996, the remains of a French rocket that had blown up years earlier damaged a French satellite. A portion of the satellite's gravity gradient stabilization boom was torn off. If you ever find a piece of a gravity gradient stabilization boom in your backyard, please call the French Embassy.

➤ Sometimes, what goes up and becomes useless comes right back down. When the empty Skylab spacecraft, operational from 1973 through 1979, returned to Earth, it scattered debris over the Indian Ocean and a scarcely populated area in Western Australia.



By Christine Auda