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From the Los Angeles Times

Science Briefing

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Ocean wants fish waste

The ocean's delicate acid balance may be getting help from an unexpected source, fish poop.

The increase in carbon dioxide in the atmosphere also raises the amount of CO₂ dissolved in ocean water, tending to make it more acidic.

Alkaline chemicals such as calcium carbonate can help balance this acid. The main source for this chemical was thought to be the shells of marine plankton, but researchers report in Friday's issue of the journal *Science* that marine fish contribute 3% to 15% of total carbonate.

Bony fish produce carbonate to dispose of the excess calcium they ingest in seawater. This forms into calcium carbonate crystals, or "gut rocks," which are then excreted.

The process is separate from digestion and production of feces.

U.S. children study is recruiting

Scientists begin recruiting mothers-to-be this week for the largest study of U.S. children ever performed -- aiming eventually to track 100,000 across the country from conception to age 21.

Nearly a decade in the planning, the ambitious National Children's Study tackles a major mystery: How the environment -- including a pregnant woman's diet and a child's exposure to various chemicals -- interacts with genetics to affect youngsters' health and development.

Microwave 'cloaks' enhanced

Researchers at Duke University, who developed a material that can "cloak" an item from detection by microwaves, report in Thursday's edition of the journal *Science* that they have expanded the number of wavelengths they can block.

The team reported in 2006 that it had developed so-called metamaterials that could deflect microwaves around a three-dimensional object, essentially making it invisible to the waves.

The system works like a mirage, in which heat causes the bending of light rays and cloaks the road ahead behind an image of the sky.

Research planes are unmanned

There will be a powerful new scientific eye in the sky come summer.

NASA and Northrop Grumman on Thursday unveiled two unmanned drones that will be used for atmospheric research. One of the two Global Hawks, a version of the Air Force's top-of-the-line unmanned spy plane, will conduct its first earth science mission in June for NASA.

The planes, which are capable of staying aloft for more than 30 hours, will sample greenhouse gases and verify measurements by NASA's Aura atmosphere research satellite.

Antidepressants may relieve pain

Antidepressants appear to relieve pain, sleep disturbances and other symptoms of fibromyalgia, a debilitating and painful ailment with no known cure, researchers reported in this week's issue of the *Journal of the American Medical Assn.*

In an analysis of 18 previously published studies, they found that tricyclic and tetracyclic antidepressants seemed to have a large effect in easing pain, fatigue and sleep disturbances while selective serotonin reuptake inhibitors such as Prozac had smaller effect for pain relief.

New, efficient rice in the works

An international team of scientists is attempting to develop a new rice strain that will use less water and fertilizer but could boost yields by up to 50% to meet growing demand.

The ambitious laboratory project, announced Wednesday by the Philippines-based International Rice Research Institute, could take a decade or more to complete.

The project aims to improve the efficiency of a rice plant's photosynthesis, the process by which plants use solar energy to capture carbon dioxide and convert it into carbohydrates.

Study finds stents may be overused

A new study gives fresh evidence that many people with clogged heart arteries are being overtreated with stents and that a simple blood-flow test might help prevent unnecessary care.

Fewer deaths, heart attacks and repeat procedures occurred when doctors implanted fewer of these tiny artery props, using the blood-flow test to decide when they were truly needed, the study found.

Results were published in Thursday's New England Journal of Medicine.

-- from times staff and wire reports

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