

Briefings

edited by RICHARD STONE

Failure Interrupts Venus Mapping

It wasn't the first snag in the highly productive mission, but it could be the most damaging. After 15 months of beaming detailed radar images of 95% of the cloud-shrouded Venusian surface, the Magellan spacecraft's main transmitter suddenly has fallen silent.

The transmitter failed on 4 January as Magellan was nearing completion of a second 8-month circuit aimed at mapping almost the entire planet. No amount of tweaking could get radar data from the transmitter even though it continued to broad-



On the fritz. Temperamental transmitters are threatening the Magellan mission.

cast its carrier signal, so NASA controllers switched to a backup transmitter. But the backup has its own problems—as it warms up, its signal weakens and it starts to “whistle.” Engineers plan to sidestep this problem by keeping

the whistle and the broadcast frequency from overlapping. Still, they say they're concerned about the backup's reliability.

The transmitter problems threaten to jeopardize a third circuit of the planet scheduled to begin 15 January, during which Magellan is supposed to map 60% of the surface in stereo. Such stereo-mapping and the resulting high-resolution topographic maps would “greatly enhance the value of the Magellan data set,” according to project scientist Stephen Saunders of the Jet Propulsion Laboratory.

But Saunders and his colleagues aren't without hope: Even if the backup transmitter were to fail, the fourth circuit around Venus will be devoted to measuring the subtle variations in Venus' gravitational pull caused by the deep-seated churning of the planet's interior. Such information is crucial to understanding Venus' unknown alternative to plate tectonics. For this part of the mission, all that would be required is a Doppler-shifted carrier signal, something even the speechless main transmitter seems willing to provide.

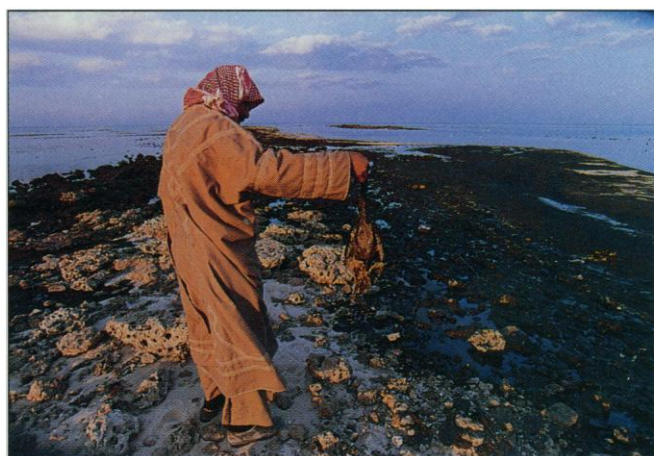
Could Creationism Be Evolving?

Classical creationists fight to get evolution out of the classroom—at least that's what many scientists think. Now comes a species that is seeking to keep it in!

In an effort to dispel the notion that good Christians and evolution don't mix, a group of evangelical scientists last month passed a resolution that calls on teachers to define evolution in a “scientific manner” and promote a “candid discussion of unsolved problems and open questions.”

“We want to help teachers sort out the religious issues from the science,” says Walter R. Hearn, a retired biochemist and newsletter editor for the American Scientific Affiliation. Hearn believes that there are enough unanswered questions about the birth of humankind to allow a supernatural creation and evo-

Raking the Gulf War's Muck



Cruel crude. Surveying the environmental disaster, a Saudi policeman dangles a dead cormorant on oil-soaked Manifah Bay.

One year after Iraqi forces dumped an estimated 6 million to 8 million barrels of oil into the Persian Gulf, a UN-sponsored team is embarking on the most comprehensive effort yet to assess the resulting environmental damage.

While about 5 million barrels of oil in the Persian Gulf either evaporated or were cleaned up soon after their release, “the spill has gone virtually untouched since then,” said Sylvia A. Earle, chief scientist of the National Oceanic and Atmospheric Administration (NOAA), at a press conference. The vast spill of oil into marine and coastal ecosystems is serving as “a terrible experiment,” Earle said. “Since it's there, there's an opportunity for us to learn.”

More than 100 scientists from 10 countries are expected to arrive in Muscat, Oman, on 15 February aboard the *Mt. Mitchell*, a research ship owned by NOAA. The researchers—who include oceanographers, ecologists, chemists, and environmental scientists—will study the health of seagrass beds, coral reefs, and shrimp, damage to turtle and sea bird nesting sites, and the effectiveness of using bacteria to degrade oil.

lution to coexist. And he says: “I think there are a lot of people using science to promote a secular or atheistic view.”

Promoters of evolution education aren't buying the argument, however. They bristle at the suggestion that teachers are trying to force-feed students with a “religious” form of evolution—called evolutionary naturalism by the creationists. “In my experience, that's just not happening,” says Eugenie Scott, director of the Berkeley-based National Center for Science Education. To Scott, the far more worrisome problem is that “there's an awful lot of teachers who don't teach evolution because they don't want to take the flak for it.”

Building a Better Beta Cell

Genetic engineers have overcome a major hurdle in their efforts to treat insulin-dependent diabetes mellitus (IDDM). And in the process they may have come closer to an improved means of testing for susceptibility to the disease. The wellspring of hope: an artificial beta cell.

In healthy people, beta cells in the pancreas secrete insulin, a hormone that regulates blood glucose levels. But in the roughly 1 million people in the United States with IDDM, beta cells are destroyed by the body's own immune system. Insulin injections used to treat IDDM often fail to prevent complications of