edited by RICHARD STONE

Navy Specialists Go Whale Watching

The Navy recently released from active duty two specialists who never got a dime of hazard pay—nor will they get a pension—even though they spent their careers retrieving antisubmarine rockets and deactivated mines from the ocean floor. An outrage? Not so, say two groups of marine biologists who plan to put these demolition experts—a pair of California sea lions—to work this summer as underwater filmmakers.

Researchers at California's Moss Landing Marine Laboratories and Long Marine Laboratory in Santa Cruz plan to train the former Navy sea lions to film the southward migration of an estimated 22,000 California gray whales. "The idea is to observe whales using a natural component of their environment—sea lions—to obtain an unbiased view of what the whales are doing," says project director Jim Harvey, a Moss Landing marine biologist. Cameras strapped to the backs of the sea lions will give the marine biologists a glimpse of the underwater behavior of whales, of which little is known, says Harvey.

Whales bear little resemblance to rockets or mines, so Harvey and his colleagues will train the sea lions on a scale model of a gray whale. The researchers will transmit acoustic signals to the sea lions and use food rewards to teach them how to position the cameras and return the film. By the end of summer, Harvey hopes to begin work in the open ocean, where environmental distractions—not to mention a military scrap or two—may interfere with the cinematographic cues.

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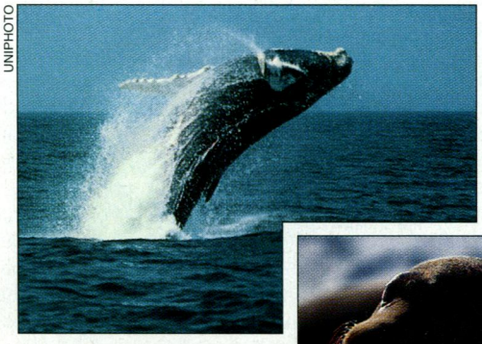
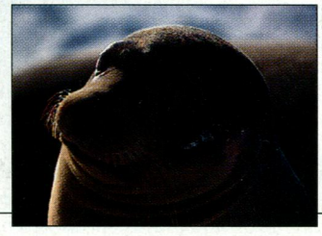




UNIPHOTO

Underwater chase scene. Former Navy sea lions will film migratory gray whales.

Magnifying Glass on Energy Research

New chiefs in the Department of Energy's (DOE) research shop—including Will Happer, director of energy research, and his deputy Robert Simon—have begun to rattle the cages this spring with an atom-by-atom review of every single project funded in the category of "basic energy sciences."

DOE now spends about $577 million on research (one-quarter at universities, the rest at national labs) and $108 million on construction each year under this heading. DOE managers are lining up 1200 experts to perform the detailed review that is expected to last 1 to 2 years. It's been 10 years since DOE has performed such a review by outside experts. One senior DOE lab official worries that because the reviewers will be examining small pieces of the programs, they might miss the big picture. He also cites as a concern the review's cost—which he estimates will run more than $5 million.

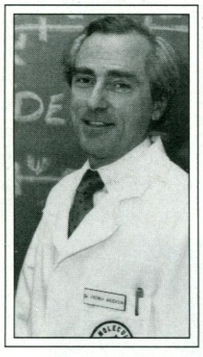
Simon disagrees. Reviewers will see the big picture, he insists, for the entire "motivation" behind the effort is to "get a look at all our programs in an integrated way." He doubts the cost will be more than "a fraction" of the $4 million annual budget of the Office of Program Analysis. And he points out that other DOE science programs—nuclear medicine, subsurface science, radon research—have recently undergone similar analyses without suffering major trauma. Simon says one big benefit will be to "lay to rest the arguments" that DOE has been less critical of its own labs (a university gripe) or less critical of universities (a lab gripe).

Anderson Likely to Leave NIH

W. French Anderson, a pioneer of gene therapy at NIH, soon may be pioneering new territory—Southern California. Last week, Anderson told his laboratory staff that he has begun negotiating with the University of Southern California, where he's looking to set up a gene therapy research institute.

Unlike some senior scientists who've abandoned the government's biomedical mecca for more pay and greater freedom, Anderson says if he leaves, it will be for love. His wife, Kathryn D. Anderson, acting chief of surgery at Children's National Medical Center in Washington, D.C., is the leading contender for the post of surgeon-in-chief at the Children's Hospital of Los Angeles. For 31 years, says Anderson, "Kathy subordinated her career to mine. It's her turn. I'll go wherever she goes. I'll find whatever is best."

In September 1990, Anderson's team at the National Heart, Lung, and Blood Institute (NHLBI) became the first to use gene therapy when it began treating children with severe combined immune deficiency, an inherited illness in which patients lack an enzyme, adenosine deaminase, that protects white blood cells from a metabolic toxin. "I'm loyal to NIH," says Anderson. "I never expected to leave. My intention was always to die at the bench in my 80s, here on the 7th floor [of NIH building 10]." Says Anderson's boss, NHLBI director Claude Lenfant, "From the viewpoint of the institute, it's a very great loss."



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W. French Anderson

Brits and EC at Odds Over Gene Patenting

One major casualty of the recent furor over DNA patenting may be the European Community's (EC) human cDNA sequencing project—a $1.2 million, 2-year effort involving groups in Britain, France, Germany, and Italy. The problem: Officials in France, Germany, and Italy oppose the UK Medical Research Council's (MRC) decision to mimic the United States and file for patents on cDNA sequences.

EC rules don't prevent the filing of patents. But officials of the European commission that oversees the sequencing project warn that the unpopular pro-patenting stance of the British MRC may cause it to lose its leadership role when the next contract for managing human cDNA sequencing is awarded next year. (The European project is now led by an MRC team at the Northwick Park Hospital in north London.) By choosing to patent, the MRC "may have ditched its long-term political future," says one commission source.

In fact, the British group technically has already breached its current contract with the commission, which demands timely release of data. Since last fall, the MRC team has been forced to keep its sequence data under wraps as British officials debated whether to patent. Moreover, future problems with data exchange loom: Although the British sequences should begin to emerge later this month—when the first MRC patents are filed—other European groups are now reluctant to add their sequences to the MRC's database, which is supposed to serve as a resource for the whole EC project. To protest the British patenting policy, Horst Domdey, a molecular biologist at the University of Munich, says that he will delay sending his sequences to London at least until late June, when the leaders of the four groups are slated to meet in Paris.