

Ocean death rumors premature, says UN group

The tenor of a recent scientific assessment of the health of the world's oceans is that today, if one asked the ocean how it is feeling, it might reply: "Not bad." There are aches and pains to be sure, some of which could burgeon into life-threatening conditions. But the general conclusion of a United Nations Environment Program report is that the grim fears of a decade ago have not been realized.

A group of more than 50 scientists from around the world prepared the report to mark the 10th anniversary of the U.N. Conference on the Human Environment. In a sweeping survey of research on marine pollution, they found the oceans have shown the ability to absorb "limited and controlled quantities of wastes." It appears, they said, that substances introduced into the oceans through human activity have had little effect on ecosystems in the open ocean. Even oil spills and blow-outs in the last decade, perceived as "disasters" when they occurred, inflicted no discernable damage to open ocean ecosystems, the report notes.

The group's prognosis is less encouraging on local and regional levels. Though the overall effect is not serious yet, the copious amounts of sewage and other contaminants pumped into semi-enclosed seas such as the Mediterranean and the Gulf of Mexico are leaving their mark on fisheries, causing some of them to be

closed in specific areas. The authors find that concentrations of some contaminants, such as DDT and PCBs (polychlorinated biphenyls), appear to be decreasing in high latitudes of the Northern Hemisphere and increasing in the Southern Hemisphere and lower latitudes of the Northern Hemisphere where less stringent rules apply to use of the compounds.

One of the scientists in the project remarked, "The big problem the oceans face is around the edges." The pressures imposed on the ocean by dense population, industrial discharges and recreational use are first exhibited in the coastal zone, to the detriment of sensitive habitats and ecosystems such as salt marshes, mangrove swamps and coral reefs. The study pinpoints the interchange between the nearshore zones, the remainder of the continental shelf and the open ocean as a critical research focus. It also emphasizes effects of toxic chemicals, radioactive waste disposal, energy production and deep-sea mining.

David Schink of Texas A&M concurs with the report, adding that predictions of the oceans' "death" were "tremendous exaggerations." "But," he says, "you can't just do anything you want without expecting serious consequences down the road. The oceans won't die in '2525' but little pieces of it," such as estuaries and harbors, will, he says. —C. Simon

Kerosene heater, indoor air studied

The benefit of "tightening" homes with insulation and of using supplementary heat sources is conservation of precious energy. But the cost of these measures could be a build-up of indoor air pollutants. Early this year, the Consumer Product Safety Commission (CPSC) ruled that the potential health costs of using urea-formaldehyde foam insulation outweighed the energy conservation benefits. Further installations of the product were banned (SN: 2/27/82, p. 131). Now, the CPSC is putting portable kerosene space heaters on its cost-benefit scale.

The CPSC has embarked upon an investigation to determine whether use of portable kerosene space heaters (as opposed to the usually larger ones that are connected to exhaust vents) results in the accumulation of dangerous levels of combustion products, including carbon monoxide (CO) and nitrogen oxides (NO_x). The commission's space heater investigation includes pooling all existing data from previous studies on the matter. One such study is reported in the Dec. 10 SCIENCE by Brian P. Leaderer of Yale University School of Medicine.

Leaderer measured air pollutant emissions from kerosene space heaters in a test chamber with a volume equivalent to

that of a 12-by-12-by-8-foot room. He analyzed the various emission pollutants from the heaters over a range of ventilation rates (rates at which the air in the chamber is exchanged with outside air). The resulting data, Leaderer reports, suggest that the use of a heater in residences may generate levels of air pollutants that exceed outdoor air quality standards set by the Environmental Protection Agency, and in some cases that exceed indoor occupational health standards set by the Occupational Safety and Health Administration. For example, the EPA annual average outdoor air quality standard for nitrogen dioxide (NO₂) is 0.05 parts per million. Leaderer found that a radiant space heater could maintain about 0.5 parts per million NO₂ when the test chamber ventilation rate was 1 air exchange per hour (a typical air infiltration rate for residences in the United States).

But Leaderer stresses that his experiments are too limited to indicate actual human exposure levels to the kerosene-emitted pollutants. Recognizing such limitations of existing data, the CPSC next week will begin its own, more extensive chamber tests in a Gaithersburg, Md., laboratory. Definitive results are not expected until June 1983. —L. Garmon

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The Brain: A User's Manual — The Diagram Group. Presents this remarkable organ in terms the general reader can easily understand. Simple anatomical drawings plot the parts of the brain and functions are described. The Diagram Group uses a visual approach throughout the book. Covers such areas as the nervous system, the senses, instincts and feelings, damage and disease, drugs and deception and the troubled mind. Putnam, 1982, 191 p., illus., paper, \$8.95.

Dictionary of Food Ingredients — Robert S. Igoe. Information on 996 permissible food ingredients approved by the U.S. Food and Drug Administration. An alphabetical listing gives descriptions of each ingredient's function, properties and applications. Van Nos Reinhold, 1982, 173 p., \$17.95.

Invented Worlds: The Psychology of the Arts — Ellen Winner. Dealing with the three major art forms — painting, music and literature, psychologist Winner probes the adult's ability to create and respond to works of art. Examines children's art for what it can reveal about the artistic impulse before being influenced by the adult world. To reach a better understanding of the biological bases of artistry, the author discusses art of the mentally disturbed and the neurologically impaired. Harvard U Pr, 1982, 431 p., illus., \$25.

Lion Share: The Story of a Serengeti Pride — Jeannette Hanby, foreword by Jane Goodall. "Lions who share are called a pride. This is a true story about a pride living on the open plains of Serengeti, particularly about Sonara, one of its members. Sonara is one of nine females in the Sametu pride; she embodies the experiences, affection, co-operation, skill and playfulness of the pride." The book is also about the many animals that share the plains with the lions. The author and the illustrator lived among these animals for four years coming to know the lions as individuals. Beautiful photographs and drawings by David Byggott together with the text make the Serengeti come alive for the reader. HM, 1982, 221 p., color/b&w illus., \$16.95.

The Sun, Our Star — Robert W. Noyes. In this readable book about "our star," Harvard astronomer Noyes traces the evolution of the sun and the planets, explains the structure and inner workings of the sun, discusses solar eclipses, solar flares, corona holes, solar wind, the sun and earth's climate and solar energy. Harvard U Pr, 1982, 263 p., illus., \$20.

Twins: Nature's Amazing Mystery — Kay Cas-sill. Examines the extraordinary phenomenon of multiple births—culturally, historically and scientifically. Based on the author's own experience as an identical twin and interviews with other twins, the book looks into the complex relationship twins have with each other. Discusses problems that face parents of twins and the latest scientific findings about twins. Atheneum Pubs, 1982, 308 p., \$14.95.