

The common heritage

The question of who owns the sea has been a source of constant conflict and confusion among nations. It is generally agreed that a coastal nation has jurisdiction over a portion of the waters adjacent to its shores, but just how far that jurisdiction extends has never been settled to everyone's satisfaction. Two international conferences in Geneva a decade ago left this problem unresolved, and national claims to territorial seas range from 3 to 200 miles.

This uncertainty and the problems it creates has aroused growing concern among nations. In May, for example, President Nixon followed the lead of Malta and other nations and proposed that resources beyond a 200-meter isobath be declared the common heritage of mankind and be exploited only under international supervision (SN: 5/30, p. 526). Since then, the United States has been a strong supporter of measures for adoption of these principles by the United Nations. In August it submitted a draft treaty embodying them.

Last week, the United Nations took action to resolve some of the legal problems involved in use of the sea.

By a vote of 108 to zero, with 14 abstentions, the General Assembly declared the seabed and ocean floor beyond the limits of national jurisdiction to be "the common heritage of mankind." The area, said the UN, shall be reserved exclusively for peaceful purposes and "the exploration of the area and the exploitation of its resources shall be carried out for the benefit of mankind as a whole, irrespective of the geographic location of states, whether land-locked or coastal, and taking into particular consideration the interests and needs of the developing countries."

Some of the more extravagant claims to territorial seas had been made by developing countries, who fear that nations with more developed technologies will be the only ones to benefit from resources lying off their shores.

The resolution was evolved by a special UN committee under Ambassador H. S. Amerasinghe of Ceylon and came to the General Assembly with the almost unanimous approval of the Political Committee.

One provision calls upon states to cooperate in scientific research in the seabed area by participating in international programs and by publishing the results of their research. Here again the special needs of developing countries were taken into consideration: Nations are asked to cooperate in measures to strengthen the research capabilities of developing countries and

to include nationals of these countries in research programs.

The declaration also calls for establishment of an international regime (SN: 6/27, p. 613) to govern the seabed and its resources and to promote the principles of the declaration. An international treaty should be agreed upon as soon as possible, the UN said, to set up appropriate machinery for implementation of this regime.

Accordingly, in another action, the UN called for a new international conference on the law of the sea for 1973. A major purpose of this conference will be to establish a regime for the seabed, and to deal with problems involved in its implementation.

The conference will also formulate a precise definition of the seabed area and consider a broad range of related issues, such as the breadth of the

territorial sea, regimes for the high seas and the continental shelf, fishing and conservation of the living resources of the high seas, the preservation of the marine environment, scientific research, and pollution.

The United States had been pressing for such a conference and had previously submitted a draft resolution calling for one in 1972. The resolution ultimately agreed upon was a combination of several such drafts.

The same resolution provided for expansion of the UN Committee on Peaceful Uses of the Seabed and the Ocean Floor beyond the Limits of National Jurisdiction from 39 members to 81—almost two-thirds the total membership of the UN. The enlarged committee will hold two meetings in Geneva next spring to draft articles for the main convention in 1973. □

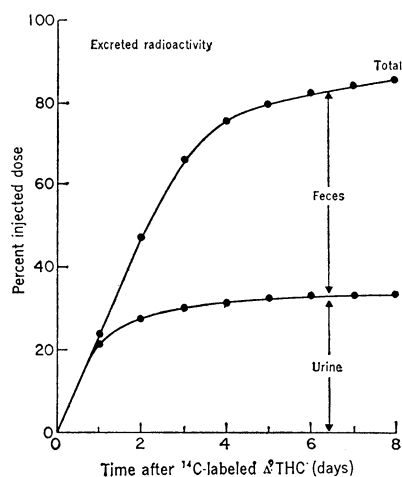
Marijuana persistence in the body

The quality of the seemingly endless debates about marijuana in today's society has not been elevated by the paucity of solid scientific information about the drug's effects. Only in the past year or so have scientists been able to obtain in pure form enough of the active component of marijuana, delta 9-THC (tetrahydrocannabinol), to begin extensive studies (SN: 1/24, p. 102).

One area of little information concerns the metabolism and disposition to THC in man. To study this question four scientists at the National Institute of Mental Health injected 0.5 milligrams of radioactively tagged THC (about one-tenth the amount absorbed by smoking one marijuana cigarette) into the bloodstream of three college-age volunteers who had not previously used marijuana. Over the next 10 days, the researchers, Drs. Louis Lemberger, Stephen D. Silberstein, Julius Axelrod and Irwin J. Kopin, measured the levels of THC and its metabolites in the blood, urine and feces of the volunteers.

A considerable amount of the THC and its products was excreted during the first day or two, but more than two days (56 hours) after injection, half the original THC still remained in the volunteers, the scientists report in the Dec. 18 SCIENCE. By the seventh day 90 percent of it had left their bodies, but small amounts of THC were still being excreted more than eight days after injection.

This slow decline presumably represents retention and slow release of the drug from body tissues,



THC is excreted for eight days.

the scientists speculate. The THC may temporarily accumulate in fat or other tissues, such as the lungs, that have an affinity for drugs, they say. If so, this may be even more significant, they point out, since inhalation is the usual route of administration.

The finding that delta 9-THC and its metabolites persist in humans for long periods indicates to the scientists that the products may accumulate in tissues when administered repeatedly. This may help explain the often-noted reverse tolerance, in which frequent users of marijuana get high more easily than novices.

"This study was on nonsmokers," says Dr. Lemberger. "We decided we needed to determine the effects on naive subjects before attempting to study chronic marijuana smokers. The processes may not be the same at all."