

News of Science

FAO Decennial

■ The Food and Agricultural Organization of the United Nations has begun its second decade of operation. A decennial celebration was held 14-16 Oct. at the Chateau Frontenac, Quebec, Canada. Participating in the observance were agricultural officials of the United States, Canada, and the FAO North American Regional Office. The Quebec site was chosen for the ceremonies because FAO's organizing conference was held there on 16 Oct. 1945.

Since that time the organization has grown from 42 to 71 member nations. It is the only international agency set up to deal directly with the immediate and long-range problems of food and farming throughout the world.

In May 1943 representatives of governments of 45 countries met at Hot Springs, Va., to seek ways to banish hunger and establish a stable world agriculture. It was thought that international cooperation might be kept alive if it was centered around urgent practical matters outside the realm of international politics—such problems as how to apply modern agricultural science more widely, how to apply modern nutrition, and how to raise living standards and conditions of rural people. Since at that time food was one of the world's greatest problems, the representatives to the Hot Springs conference decided to create a world-wide organization that would work toward adequate food supplies for all people.

FAO was the first of the permanent agencies that were born from the wartime partnership of the Allies. John Boyd Orr, nutritionist and founder and head of the Rowett Research Institute, Aberdeen, Scotland, was elected first director-general. The motto *Fiat Panis* (Let There Be Bread) was adopted.

FAO is a specialized agency of the United Nations system—that is, an organizational entity separate from the U.N. It has its own constitution and governing body made up of member nations. FAO operates, however, under an agreement with the U.N. to work cooperatively toward common objectives. Some member governments of FAO are not members of the U.N. and vice-versa. The

purpose of this agreement with the U.N. is to make possible the concentration of technical knowledge on world agricultural problems, and at the same time to provide joint action on mutual international problems.

Under FAO's constitution, member nations are pledged to carry out the following objectives: (i) to raise the levels of nutrition and standards of living of the peoples of their country and the world; (ii) to secure improvements in the efficiency of production and distribution of all food and agricultural products; (iii) to better the condition of rural populations; (iv) to contribute toward an expanding economy.

To carry out these objectives, FAO's work is divided into three principal categories: (i) it collects, analyzes, and distributes to member nations the basic facts on food and agriculture, forestry, and fisheries; (ii) it promotes concerted national and international action by recommending definite ways and means for putting the latest facts and scientific methods to use; and (iii) it gives technical assistance to member countries requesting it.

A world food survey in 1946 was one of the first jobs completed by FAO. This survey demonstrated the value of collecting basic data on just how much food different peoples are getting and how that amount compares with their need. The survey indicated that more than half the world's peoples did not have enough food to maintain normal health prior to World War II. FAO has continued to make annual reports on world food and agriculture.

When a member country requests technical assistance from FAO on its particular problems, FAO can send one or more qualified individuals to work with scientists and technicians of the country. FAO now employs several hundred specialists in virtually every phase of agriculture, forestry, and fisheries and has them working in many parts of the world.

FAO promotes and coordinates international action in many ways. Greece set up a national nutrition service on FAO's recommendation. The locust problem in several Central American countries and in the Middle East has

been minimized through a cooperative program in which FAO has assisted.

Many international commissions and study groups have been established through the aid and encouragement of FAO. An example is the International Rice Commission, whose purpose is to raise production and consumption levels in rice-eating countries. In recent years, FAO has studied the appearance of surpluses of certain crops in several countries. After the 1953 FAO conference, it created a committee to work specifically toward an orderly solution of these problems. This committee, made up of representatives of 21 member governments, including the U.S., periodically meets to discuss possible solutions to the surplus commodity situation.

FAO, in reviewing agricultural development of the past decade, says that world agricultural production was more than 25 percent greater in 1954 than it was in 1946-47 (excluding the Communist bloc). The world is now producing about 20 percent more rice, milk, and cotton than it was before the war; about 30 percent more wheat, fats, and meat; 50 percent more fruit and sugar; and 80 percent more natural rubber.

World fisheries' production, seriously reduced during the war because of loss of fishing boats, has increased 20 percent over prewar figures. At the end of the war, FAO estimated that world agricultural production was down 5 percent and that world population was up 10 percent from prewar levels, with a consequent per-capita fall in production of about 15 percent. By 1954 production was up again, however, and in some countries surpluses were beginning to develop in wheat, sugar, and cotton.

In fact, the changing picture of world trade has been striking. Until 1952, North American food exports were three to four times larger than they had been before the war, but at that time they began to decline. On the other hand, food exports from the Far East are still less than half the prewar volume. European food imports, once high, have settled down to a figure of about 10 percent lower than before the war. Latin American food imports, although they have increased sharply, remain relatively small. FAO reports that slowness in world trade of agricultural products arises largely from the drive for greater self-sufficiency.

Dorset Dwellings

Big, roofless stone houses that belonged to the Dorset people were discovered on Walrus Island in the Canadian subarctic this summer by Henry B. Collins, archeologist for the Smithsonian Institution. These houses, arranged in a

settlement and so well preserved that they can hardly be more than several hundred years old, are probably the most recent such remains ever found. Previously the Dorset people, whose ancestors were the first human beings known to have spread across arctic North America, were thought to have disappeared nearly a thousand years ago.

The discovery came almost by accident. Walrus is a small granite islet scarcely a mile long. Collins and his party visited it during a side trip from their main base on Southampton Island, northern Hudson Bay, where the expedition had been excavating the site of one of the oldest Dorset settlements known.

The houses found on Walrus Island were built of massive granite blocks and boulders piled in the form of walls around deep excavations in the frozen soil. These walls were fairly well constructed. There were houses of one, two, and three rooms. The latter were in the general shape of a clover leaf. All were roofless.

Until the present, according to Collins, the Dorset people have been one of the greatest puzzles of arctic anthropology. Little has been known of their dwellings or of their manner of living. Their harpoon heads, knives, and other implements are so different from those of other Eskimos that some had thought they might have been of Indian ancestry rather than Eskimo.

Collins reports that "These questions have been considerably clarified by our discoveries on Walrus Island and nearby Southampton this summer. The significant thing about our discovery is that it indicates the Dorset people did not mysteriously disappear as has been supposed, but that their culture persisted until fairly recently. It suggests that theirs was the dominant, basic culture of the central Arctic for over a thousand years. It also removes any doubt of the Dorset people being anything but Eskimo. Some of their culture traits and presumably their blood undoubtedly still persist among present-day Eskimos in the Canadian Arctic."

According to Collins, the outstanding characteristic of the Dorset Eskimos was their use of tiny tools made of chert; the tools are so small that a whole tool kit of knives, scrapers, side blades and burins, scarcely covers the palm of one's hand. Tools were found at both sites, but those from Southampton represent a much earlier stage of the culture. Collins believes that the earlier stage is more than 1000 years old. He considers the Southampton tools to be prototypes of the implements and weapons found on Walrus Island.

The expedition's work this summer, Collins says, throws new light on the history of human occupation of the

arctic. There were two distinct migrations out of Alaska across Canada. One migration is represented by the Thule people, whose traits constitute the most prominent element in the culture of present-day Eskimos. The Thule people used heavy weapons somewhat crudely designed. The other migration is represented by the Dorset people, whose ancestors left Alaska at a much earlier time. The path of their migration is less satisfactorily known.

In some ways the cultures of these two stone-age peoples were similar, in others quite different. Both were sea-mammal hunters and both built stone houses. But the Dorset craftsmanship is characterized by small, nicely designed weapons made of ivory, bone, and stone. The Dorset people also displayed high artistic ability; they left skillfully carved animal and human figures in ivory and bone. In the course of centuries the two peoples apparently mixed. Ways of life were borrowed and elements of Thule culture were superimposed on the Dorset, the result being the present Eskimo culture.

The expedition, Collins' second to Southampton Island, was a joint enterprise of the Smithsonian Institution, the National Museum of Canada, and the American Philosophical Society. Transportation to and from Southampton was provided by the Royal Canadian Air Force. Other members of the expedition were J. N. Emerson of the University of Toronto; William E. Taylor, Jr., of the National Museum of Canada; and James V. Wright, University of Toronto student in anthropology. The expedition brought back extensive collections of plants, insects, and fossils.

News Briefs

■ Honeybees are able to make use of an internal "clock" to gage the passage of 24 hours, according to a report by Max Renner, zoologist of the University of Munich, who this summer conducted a transoceanic experiment at the American Museum of Natural History and the University of Paris. The results of the experiment, which were made public by Theodore C. Schneirla, curator in the American Museum's department of animal behavior, indicate that a bee's memory of time intervals can function independently of regular external factors such as the rhythm of night and day.

The existence of a bee's internal clock was finally established at the conclusion of a two-phase project that was conducted under nearly identical conditions in both New York and Paris. First a colony of bees, a group of which had been trained to forage for food at a particular time each day in a specially constructed testing room in Paris, was flown

to New York between feeding periods. Three days of testing without food in an identically constructed testing room at the American Museum showed that the bees maintained their 24-hour foraging schedule, regardless of the geographic change and the 5-hour difference in sun time.

Similarly, a second group of bees trained in New York maintained their 24-hour schedule after they had been flown to Paris.

It has long been known that if food is available at a certain place at only one time of day, bees soon learn to visit that place during only that time each day. Previous experiments had also shown that bees could be trained to feed at a certain place only at 24-hour intervals, not at periods of greater or lesser frequency. Purpose of the transoceanic test was to determine whether or not the 24-hour cycle is controlled by endogenous influences—that is, intrinsic timing devices in the insect's metabolism—or by exogenous factors that might be celestial or cosmic.

Still unanswered is the question of whether or not the 24-hour feeding cycle is innate in bees or whether it is impressed on them during their early development by environmental factors and continues to function when these factors are eliminated under laboratory conditions.

■ The Department of Defense has announced that a preliminary contract for production of a satellite has been awarded to the Glenn L. Martin Company of Baltimore, Md. The department also authorized a contract with General Electric Company for a first-stage rocket motor. The Martin Company, as the primary contractor, will produce the launching vehicle.

Other private contractors will be brought into Project Vanguard as it develops. The Navy Department has been designated executive agent for the project and will award the contracts. The chief of Naval Research, F. R. Furth, will exercise general supervision over Project Vanguard and will coordinate the contributions that may be made by the Army and Air Force as well as the Navy. John P. Hagen of the Naval Research Laboratory has been designated project director.

In the initial White House announcement of the International Geophysical Year satellite program, it was officially estimated that the project would cost \$10,000,000, "exclusive of the launching operation itself." Hugh Odishaw, executive secretary of the United States National Committee for IGY has stated that approximately 10 satellites would be hurled into space into different orbits. He explained that in their elliptical