

MEDICINE

Identify Crash Bodies

Special Air Force team has new use for blood groups to identify remains. Jet crashes have created a problem in identification.

► BODIES of the dead in the crash of two airliners in the Grand Canyon could probably almost all be identified from the marrow in fragments of their bones.

The identification would be done by determining the victim's blood group and subgroup. Bits of tissue other than bone can also be used for this purpose.

There is a team of specialists in this new method of identifying bodies from very small amounts of remains working at Wright-Patterson Air Force Base. The Air Force offered their services after the crash.

The method has been "very successful," W. H. Toy told SCIENCE SERVICE. Mr. Toy is chief of the Memorial Affairs Branch, AF Services Division, Air Materiel Command Headquarters at Wright-Patterson. His branch is responsible for identifying the remains.

All the Air Force specialists in this new use of blood groups for identification are located at the Wright-Patterson base. So far as known, only one other place in the nation does this work. This is the University of Michigan, where the work has only started and is done chiefly on long-dead bodies from an archaeological and anthropological point of view.

Jet crashes have created a problem for the Air Force, so it has set up the special group for adapting blood typing to identification of very small amounts of remaining human tissue or bone.

The work at Wright-Patterson is done by Dr. Margery Gray and three civilians who received training in identification in the Armed Forces during World War II and since. They are Richard L. Trask, Robert W. Ralston and George Schwaderer.

This team makes about 50 trips a year to the scene of air crashes. They helped identify the dead in the United Air Lines crash in Wyoming on Oct. 6, 1955.

Figures on the percentage of success of the method are classified, but it is officially called "very successful."

The method succeeds, Dr. Gray told SCIENCE SERVICE, for two reasons:

1. Large numbers of people now have had their blood typed either while in the Armed Forces, when giving blood to the Red Cross or as a routine when a patient in a hospital. Records of the blood types are usually easily available and often known to the families.

2. Blood types can be determined not only from blood but from bone marrow and other tissue even if only fragments are available, whereas identification from fingerprints, old scars, healed bone fractures and dental records may not be possible. Victims of a Memphis air crash were identified

when only 20 pounds of remains altogether were left.

Blood group substances are pretty thoroughly distributed throughout the body. They remain long after the blood itself has disappeared. These substances exist in different forms, so if one method of extracting them fails, another can be tried.

Extracting the blood group antigens from the remaining tissue and purifying them make up the big job in this new use of blood typing. Once this has been done, the material is tested against the standard blood typing sera in the usual way, but it may take as long as 12 hours to run one test on one piece of tissue or bone marrow.

Even when the bodies have been charred, there is usually enough uncharred tissue under the surface to do the test. This is because most of these burns are flash burns that do not burn the interior of the flesh.

Besides typing for the A, B, O blood groups, the Air Force specialists type subgroups of this system and also the M N system and are beginning to go into the Rh system. With many victims in a single crash, there might be many belonging to Group A, for example. This is where the other typing is effective.

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AGRICULTURE

Russia Boosts Food

► RUSSIA'S plans for huge agricultural increases over the next five years have been made public by the Food and Agriculture Organization of the United Nations (FAO).

Part of the Soviet Union's Sixth Five-Year Plan, the boosts in food production are target-dated for 1960 and include plans to increase the production of meat by 100%; milk by 95%; eggs by 154% and wool by 82%.

Specialists who are keeping a weather eye on Russian agriculture, call the proposed boosts "entirely unrealistic." They point out that in the past Russia has set similar "high goals" and failed to come close.

Russian weather, always problematical, coupled with a natural and institutional environment not conducive to efficiency, are cited as reasons for doubting the proposed goals will be achieved.

The specialists also point out that any comparison between what the Russians hope to produce and what this nation will produce in the same five years is invalid. The U. S., they say, has a problem of surpluses

● RADIO

Saturday, July 21, 1956, 1:45-2:00 p.m. EDT
"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Dr. Max Kleiber, professor of animal husbandry, University of California College of Agriculture, Davis, Calif., will discuss "Radioactive Nutrition."

MEDICINE

Drug Gives Shakes, May Aid Palsy Victims

► A DRUG that gives animals the shakes like the trembling or tremor of shaking palsy has been discovered. As a result, better medicines for human palsy victims may be found.

The new drug, named Tremorine, is announced by Dr. Guy M. Everett of Abbott Laboratories, North Chicago, Ill., in *Nature* (June 30).

Tremorine was found in routine screening of drugs in mice. It is one of only 10 among 10,000 compounds that produce a sustained tremor. It also produces slight muscular weakness and rigidity like that in Parkinsonism, or shaking palsy.

The symptoms last several hours, and the drug produces the same effects in mice, rats, guinea pigs, cats, dogs and monkeys. Its effects are completely antagonized by various drugs used to treat Parkinsonism.

Dr. Everett hopes that the discovery of Tremorine and its further study will provide a useful tool for investigation of tremor and the search for more effective drugs for Parkinsonism.

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and is trying to cut down production. Russia, on the other hand, has a problem of scarcities and is trying to expand production.

The Russians, FAO reports, plan to bring about increased production through changes in agricultural planning, increased mechanization of farming and greater State investment in agriculture.

Mechanization of farming, for example, calls for stepping up the annual production of tractors twofold, combines threefold, and windrowers twentyfold over 1955.

"The Soviet farm program," the FAO says, "follows the main lines of the overall Five-Year Plan, which reaffirms the principle of priority for heavy industry. Therefore fulfillment of the agricultural program would depend largely on the State's success in implementing its industrial program. In order not to go beyond the resources put at its disposal, industry would have to reduce its production costs by 17%, to increase output per worker by 50% and to increase its number of workers by 10%."

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